LG International Corp. and its subsidiaries

Consolidated financial statements for the years ended December 31, 2019 and 2018 with the independent auditors' report



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Independent auditor's report

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Independent auditor's report

The Stockholders and Board of Directors LG International Corp.

Opinion

We have audited the consolidated financial statements of LG International Corp. (the "Company") and its subsidiaries (collectively referred to as the "Group"), which comprise the consolidated statements of financial position as of December 31, 2019 and 2018, and the consolidated statements of profit or loss, consolidated statements of other comprehensive income or loss, consolidated statements of changes in equity and consolidated statements of cash flows for the years then ended, and the notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2019 and 2018, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with Korean International Financial Reporting Standards (KIFRS).

Basis for opinion

We conducted our audits in accordance with Korean Auditing Standards (KGAAS). Our responsibilities under those standards are further described in the Auditor's 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 audits of the consolidated financial statements in the 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.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. For each matter below, our description of how our audit addressed the matter is provided in that context.

(1) Revenue recognition of overseas export sales

As mentioned in Note 2 to the consolidated financial statements, the Group recognizes revenue when the performance obligation identified in the contracts with the customers is fulfilled, as the amount of which is expected to be received in exchange for the goods or services. The Group's overseas export sales are \$5,522,685 million in total, accounting for approximately 52% of total sales. The Group recognizes revenue on overseas export sales when the control of goods is transferred to the customers.

Accordingly, we have selected the adequacy of the Company's revenue recognition in overseas export sales is a key audit matter since the management's judgment on the timing of revenue recognition has a significant effect on the sales revenue.



The major audit procedures we have conducted in relation to the above significant risk are as follows:

- Analyze accounting policies of revenue recognition for major types of sales contracts and changes therein, if any
- Analyze contracts by type of overseas export sales (identification of performance obligation, measurement of transaction amount, allocation of transaction price, review of the appropriateness in timing of revenue recognition)
- > Perform test of transaction by reconciling the records and the related evidences
- Assess the appropriateness of timing of revenue recognition for the transactions occurred around the reporting period end
- (2) PT. Ganda Alam Makmur ("GAM") related assets impairment assessment (valuation of property, plant, and equipment and intangible assets)

The Group engages in the exploration / development and production activities ("GAM business") of bituminous coal in Indonesia. As mentioned in Note 2 to the consolidated financial statements, the Group recognizes the expenditures incurred directly related to the exploration and development business as overseas resource development assets and property, plant, and equipment.

The operating performance of GAM is sensitive to the international price of coal, exploration / development and production technology, and potential reserves of economically producible resources, and the collection period of related overseas resource development assets and property, plant, and equipment is also generally long-term.

As of December 31, 2019, the Group has overseas resource development assets and property, plant, and equipment amounting to \Im 339,139 million, and the Group assesses at the end of each reporting period whether there is any impairment indication. If impairment is identified, the Group measures the estimated recoverable amount and recognizes impairment loss. This procedure requires professional estimation and cash flows assumptions on potential reserves of resources, economic output, and international price outlook during the recoverable period. In conclusion, we identified that there is a significant risk in the Group's assessment of impairment indication and estimation of recoverable amount for the tangible and intangible assets related to GAM considering the materiality of amounts, uncertainty of estimation and the subjectivity of the assumptions by management.

The major audit procedures we have conducted in relation to the above significant risk are as follows:

- > Analysis by understanding the Group's process related to impairment test
- > Assessment of management's evaluation on whether there is an indication of impairment
- Analysis on whether the assumptions used in the valuation report (future cash flow model) are consistent with the approved budget and business plan
- Analysis by comparing the future estimates of short-term and long-term prices used in the valuation report with the estimates conducted by an independent external institution
- Analysis for the consistency and feasibility of assumptions applied to the estimate of cash flows for the measurement of the recoverable amounts

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 KIFRS, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.



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.

Auditor's 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 auditor's 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 KGAAS 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 KGAAS 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 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 auditor's 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 auditor's 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.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.



From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in this independent auditor's report is Jung Ho Chae.

Ernst Joung Han Young

March 17, 2020

This audit report is effective as of March 17, 2020, the independent auditor's report date. Accordingly, certain material subsequent events or circumstances may have occurred during the period from the independent auditor's report date to the time this report is used. Such events and circumstances could significantly affect the accompanying consolidated financial statements and may result in modifications to this report.

LG International Corp. and its subsidiaries

Consolidated financial statements for the years ended December 31, 2019 and 2018

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

Chun-sung Yoon Chief Executive Officer LG International Corp.

LG International Corp. and its subsidiaries Consolidated statements of financial position as at December 31, 2019 and 2018 (Korean won in millions)

	Notes	2019			2018
Assets					
Current assets					
Cash and cash equivalents	4, 5, 25, 26	₩	423,582	₩	342,014
Short-term financial assets	4, 11, 25, 26		10,553		14,162
Trade accounts receivable, net	4, 11, 23, 25, 26		994,064		1,067,921
Other accounts receivable, net	4, 6, 11, 25, 26		289,084		384,169
Accrued income, net	4, 11, 25, 26		10,199		9,458
Advance payments			46,913		103,600
Prepaid expenses			63,052		68,453
Other current assets	4, 11		76,216		53,408
Inventories, net	7		519,299		514,101
Non-current assets held-for-sale	31		51,082		1,116
			2,484,044		2,558,402
Non-current assets					
Investment assets	4, 8, 11, 23, 25, 26		217,458		218,214
Investment in associates	8		316,607		368,193
Property, plant and equipment, net	9, 29		764,608		669,022
Investment properties, net	9		5,982		30,158
Intangible assets, net	10		726,860		876,123
Deferred tax assets	22		153,816		137,997
Other non-current assets	4, 5, 11		206,607		179,963
			2,391,938		2,479,670
Total assets		₩	4,875,982	₩	5,038,072

(Continued)

LG International Corp. and its subsidiaries Consolidated statements of financial position as at December 31, 2019 and 2018 (cont'd)

(Korean won in millions)

	Notes		2019	2018			
Liabilities							
Current liabilities							
Short-term borrowings	4, 12, 25, 26	₩	136,375	₩	63,318		
Trade accounts payable	4, 23, 25, 26		1,103,970		1,184,020		
Other accounts payable	4, 6, 23, 25, 26		295,439		389,072		
Advance received	16		47,152		65,891		
Withholdings	4, 25, 26		29,987		34,252		
Current tax liabilities	. ,		28,146		30,146		
Accrued expenses	4, 25, 26		110,926		92,515		
Current portion of bonds	, -, -		,				
and long-term borrowings	4, 12, 25, 26		222,880		243,582		
Deferred income	16		56,230		56,004		
Deposits received	4, 25, 26		5,090		8,555		
Lease liabilities	4, 25, 26, 29		59,148		-,		
Liabilities directly associated with	.,,,		,				
the assets held for sale	31		30,936		_		
	51		2,126,279		2,167,355		
			2,120,210		2,107,000		
Non-current liabilities							
Bonds payable	4, 12, 25, 26		319,544		389,222		
Long-term borrowings	4, 12, 25, 26		635,989		734,529		
Defined benefit liabilities	19		22,446		26,417		
Deferred tax liabilities	22		70,015		98,342		
Lease liabilities	4, 25, 26, 29		88,056		-		
Provisions	13		50,466		64,825		
Deposits received	4, 25, 26		14,571		7,844		
			1,201,087		1,321,179		
Total liabilities			3,327,366		3,488,534		
Equity							
Issued capital	14		193,800		193,800		
Share premium	14		101,193		101,163		
Other components of equity	14		(1,579)		(1,579)		
Accumulated other							
comprehensive income (loss)	14		(19,173)		(45,031)		
Retained earnings	14		897,241		880,144		
Equity attributable to					·		
the owners of the parent			1,171,482		1,128,497		
Non-controlling interests			377,134		421,041		
Total equity			1,548,616		1,549,538		
Total liabilities and equity		₩	4,875,982	₩	5,038,072		

LG International Corp. and its subsidiaries Consolidated statements of profit or loss for the years ended December 31, 2019 and 2018

(Korean won in millions, except per share amounts)

	Notes		2019		2018
Sales	3, 16, 23	₩	10,530,857	₩	9,988,225
Cost of sales	18, 23		(9,817,350)		(9,277,167)
Gross profit			713,507		711,058
Selling and administrative expenses	17, 18		(578,723)		(545,398)
Operating profit	3		134,784		165,660
Finance income	4, 20		222,796		198,621
Finance costs	4, 20		(271,967)		(247,321)
Share of profit in associates	8, 20		(6,055)		109,093
Other non-operating expenses, net	20		(154,842)		(69,457)
Profit before income tax			(75,284)		156,596
Income tax expenses	22		60,423		(192,587)
Loss for the year		₩	(14,861)	₩	(35,991)
Attributable to:					
Owners of the parent		₩	28,575	₩	(70,364)
Non-controlling interests		₩	(43,436)	₩	34,373
Earnings per share attributable to the equity owners of the parent:					
Basic earnings (loss) per share	14	₩	739	₩	(1,820)
Diluted earnings (loss) per share	14	₩	739	₩	(1,820)

LG International Corp. and its subsidiaries Consolidated statements of other comprehensive income or loss for the years ended December 31, 2019 and 2018

(Korean won in millions)

	Notes		2019		2018
Loss for the year		₩	(14,861)	₩	(35,991)
Other comprehensive income (loss) that may be reclassified	1				
to profit or loss in subsequent periods:					
Gain (loss) on valuation of derivatives designated as					
cash flow hedges	4, 6		(6,983)		1,731
Positive adjustments of equity in equity method	8		(1,690)		(1,390)
Negative adjustments of equity in equity method	8		(378)		(2,717)
Exchange differences on translation of foreign operations			55,732		10,908
			46,681		8,532
Other comprehensive income that will not be reclassified to					
profit or loss in subsequent periods:					
Gain on valuation of financial assets designated					
at fair value through OCI	4, 8		(7,879)		6,920
Re-measurement loss on defined benefit plans	19		(3,051)		(5,488)
			(10,931)		1,433
Other comprehensive income for the year, net of tax			35,751		9,964
Total comprehensive income (loss)					
for the year, net of tax		₩	20,890	₩	(26,027)
Attributable to:					
Owners of the parent		₩	52,619	₩	(60,866)
Non-controlling interests		₩	(31,729)	₩	34,839

LG International Corp. and its subsidiaries Consolidated statements of changes in equity for the years ended December 31, 2019 and 2018

(Korean won in millions)

			Attributable to the owners of the parent														
-	Notes	Issue	d capital	Share pre	mium	c	Other components of equity	C	Accumulated other omprehensive income (loss)		Retained earnings		Total		Non- ontrolling nterests	То	otal equity
As at January 1, 2018		₩	193,800	₩ .	100,931	₩	(1,579)	₩	(59,749)	₩	960,988	₩	1,194,391	₩	391,069	₩	1,585,460
Effect of adoption of new accounting standards			-		-		-		558		3,852		4,410		(53)		4,357
As at January 1, 2018(Restated)			193,800		100,931		(1,579)		(59,191)		964,840		1,198,801		391,016		1,589,817
Profit for the year			-		-		-		-		(70,364)		(70,364)		34,373		(35,991)
Gain on valuation of derivatives designated as																	
cash flow hedges			-		-		-		1,554		-		1,554		177		1,731
Positive adjustments of equity in equity method			-		-		-		(1,393)		-		(1,393)		3		(1,390)
Negative adjustments of equity in equity method			-		-		-		(2,717)		-		(2,717)		-		(2,717)
Exchange differences on																	
translation of foreign operations			-		-		-		9,596		-		9,596		1,312		10,908
Gain on valuation of financial assets designated																	
at fair value through OCI			-		-		-		7,120		-		7,120		(200)		6,920
Re-measurement loss on defined benefit plans			-		-		-		-		(4,662)		(4,662)		(826)		(5,488)
Total comprehensive income (loss)			-		-		-		14,160		(75,026)		(60,866)		34,839		(26,027)
Dividends	15		-		-		-		-		(9,665)		(9,665)		(10,433)		(20,098)
Paid in capital of subsidiaries and acquisition of equity			-		232		-		-		-		232		1,912		2,144
Non-controlling interests arising																	
on a business combination	30		-		-		-		-		-		-		3,707		3,707
Other			-		-		-		-		(5)		(5)		-		(5)
As at December 31, 2018		₩	193,800	₩ .	101,163	₩	(1,579)	₩	(45,031)	₩	880,144	₩	1,128,497	₩	421,041	₩	1,549,538

LG International Corp. and its subsidiaries Consolidated statements of changes in equity for the years ended December 31, 2019 and 2018 (cont'd)

(Korean won in millions)

			Attributable to the owners of the parent												
	Notes	Issue	d capital	Share premi	um	Other components of equity	con	ccumulated other nprehensive come (loss)	Retain			Total	Non- controlling interests	т	otal equity
As at January 1, 2019		₩	193,800	₩ 10	,163	₩ (1,579)	₩	(45,031)	₩ 8	380,144	₩	1,128,497	₩ 421,041	₩	1,549,538
Profit for the year			-		-	-		-		28,575		28,575	(43,436)		(14,861)
Gain on valuation of derivatives designated as															
cash flow hedges			-		-	-		(6,651)		-		(6,651)	(332)		(6,983)
Positive adjustments of equity in equity method			-		-	-		(1,693)		-		(1,693)	3		(1,690)
Negative adjustments of equity in equity method			-		-	-		(378)		-		(378)	-		(378)
Exchange differences on															
translation of foreign operations			-		-	-		42,502		-		42,502	13,230		55,732
Gain on valuation of financial assets designated															
at fair value through OCI			-		-	-		(7,922)		-		(7,922)	43		(7,879)
Re-measurement loss on defined benefit plans			-		-	-		-		(1,814)		(1,814)	(1,237)		(3,051)
Total comprehensive income (loss)			-		-	-	-	25,858		26,761		52,619	(31,729)		20,890
Dividends	15		-		-	-		-		(9,664)		(9,664)	(12,148)		(21,812)
Paid in capital of subsidiaries and acquisition of equity			-		30	-		-		-		30	(30)		-
As at December 31, 2019		₩	193,800	₩ 10 ⁻	,193	₩ (1,579)	₩	(19,173)	₩ 8	397,241	₩	1,171,482	₩ 377,134	₩	1,548,616

LG International Corp. and its subsidiaries Consolidated statements of cash flows

for the years ended December 31, 2019 and 2018

(Korean won in millions)

	Notes	2019	2018
Cash flows from operating activities:			
Loss for the year		₩ (14,861)	₩ (35,991)
Non-cash adjustments to reconcile profit			
for the year to net cash flows provided by operating activities	27	328,147	318,419
Working capital adjustments	27	(59,468)	(117,152)
Interest received		15,469	19,044
Interest paid		(48,762)	(45,702)
Dividends received		8,046	15,906
Income taxes paid		(3,613)	(123,735)
Net cash flows provided by operating activities		224,958	30,789
Cash flows from investing activities:			
Decrease in financial instruments		24,880	43,297
Decrease in loans		12,181	16,954
Decrease in guarantee deposits		14,569	15,485
Proceeds from disposal and capital reduction of investment			
in subsidiaries and associates		61,860	128,052
Proceeds from disposal of			
equity instruments held for long-term Proceeds from disposal of		646	2,197
property, plant and equipment Proceeds from disposal of		4,131	1,909
Investment Properties		133,547	-
Proceeds from disposal of intangible assets		2,552	509
Net cash flow from disposal of subsidiary		-	(2,182)
Net cash flow from business combination	30	-	(68,533)
Increase in financial instruments		(27,475)	(35,822)
Increase in loans		(2,653)	(17,556)
Increase in guarantee deposits		(17,122)	(18,045)
Acquisition of equity instruments held for long-term		(31,493)	(6,467)
Acquisition of investment in associates		(9)	(2,799)
Acquisition of property, plant and equipment		(64,401)	(103,045)
Acquisition of intangible assets		(33,159)	(23,222)
Net cash used in investing activities		78,054	(69,268)
Cash flows from financing activities:			
Proceeds from finance liabilities	27	2,554,985	2,947,315
Repayment of finance liabilities	27	(2,683,174)	(2,936,635)
Payment of principal portion of lease liabilities	27, 29	(79,755)	-
Dividends paid to stockholders		(21,812)	(20,098)
Net cash flows from other financing activities		-	2,100
Net cash flows used in financing activities		(229,756)	(7,318)
Net increase (decrease) in cash and cash equivalents		73,256	(45,797)
Cash and cash equivalents as at January 1		342,014	395,211
Exchange differences on translation of cash			
and cash equivalents		19,345	(7,400)
Cash equivalents of a disposal group held for sale		(11,033)	(· , · • •) -
Cash and cash equivalents as at December 31		₩ 423,582	₩ 342,014
oush and cash equivalents as at December 31		₩ 1 23,302	W 342,014

1. Organization and business

LG International Corp. ("LGI" or the "Company") and its 84 subsidiaries including LG International (America) Inc. (collectively referred to as the "Group") prepare the consolidated financial statements in accordance with KIFRS 1110 *Consolidated Financial Statements*, and general information on the Group is as follows:

1.1 The Company

The Company was established on November 26, 1953 to engage in the import and export business. It changed its name to Bando Corporation in 1956 and to Lucky Industries Co., Ltd. in 1984. Its current name was adopted on March 1, 1995.

LGI listed its common stock on the Korea Exchange in January 1976 and was designated as a general trading company by the Korean Government on November 12, 1976.

LGI is currently engaged in the import and export of goods, and other business activities. The LGI headquarters is located in Seoul and operates 19 overseas branch offices, 5 liaison offices and 85 subsidiaries (including 59 sub-subsidiaries) as of December 31, 2019.

LG Corp. holds 24.69% of the Company's common shares as of December 31, 2019.

1.2 Consolidated subsidiaries

Subsidiaries included in consolidation are as follows:

	Country of domicile	Equity ownership (%) 2019 2018		Reporting date	Principal activity	Basis of control
LG International (America) Inc.	USA	100.00	100.00	Dec. 31	Export and import	Ownership over 50%
LHC Solar LLC	USA	100.00	100.00	Dec. 31	Solar energy	Ownership over 50%
LG International (Japan) Ltd.	Japan	100.00	100.00	Dec. 31	Export and import	Ownership over 50%
LG International (Hong Kong) Ltd.	Hong Kong	100.00	100.00	Dec. 31	Export and import	Ownership over 50%
LG International (Singapore) Pte. Ltd.	Singapore	100.00	100.00	Dec. 31	Export and import	Ownership over 50%
LG International (Deutschland) GmbH	Deutschland	100.00	100.00	Dec. 31	Export and import	Ownership over 50%
LG International (China) Ltd.	China	100.00	100.00	Dec. 31	Export and import	Ownership over 50%
Nanjing LG International VMI Co., Ltd. (*1)	China	-	100.00	Dec. 31	Hub	Ownership over 50%
LG International (Shanghai) Ltd. (*1)	China	-	100.00	Dec. 31	Export and import	Ownership over 50%
Yantai VMI Hub LG International Co., Ltd.	China	100.00	100.00	Dec. 31	Hub	Ownership over 50%
Guangzhou Steel Flower	<u>.</u>			D 0/	0. 14	O
Electrical & Machinary Co., Ltd.	China	100.00	100.00	Dec. 31	Steel frames	Ownership over 50%
Bowen Investment (Australia) Pty. Ltd.	Australia	100.00	100.00	Dec. 31	Coal mining	Ownership over 50%
PT. Batubara Global Energy (BGE)	Indonesia	100.00	100.00	Dec. 31	Coal mining	Ownership over 50%
PT. Megaprima Persada (MPP)	Indonesia	75.00	75.00	Dec. 31	Coal mining	Ownership over 50%
PT. Mega Global Energy (MGE)	Indonesia	100.00	100.00	Dec. 31	Coal mining	Ownership over 50%
PT. Ganda Alam Makmur (GAM)	Indonesia	60.00	60.00	Dec. 31	Coal mining	Ownership over 50%
LG International (India) Ltd.	India	100.00	100.00	Dec. 31	Export and import	Ownership over 50%
PT. Green Global Lestari (GGL)	Indonesia	100.00	100.00	Dec. 31	Palm oil	Ownership over 50%
PT. Parna Agromas (PAM)	Indonesia	95.00	95.00	Dec. 31	Palm oil	Ownership over 50%
PT. Grand Utama Mandiri (GUM) (*2)	Indonesia	95.00	95.00	Dec. 31	Palm oil	Ownership over 50%
PT. Tintin Boyok Sawit Makmur (TBSM) (*2)	Indonesia	95.00	95.00	Dec. 31	Palm oil	Ownership over 50%
PT. Tintin Boyok Sawit Makmur (TBSMD) (*2)	Indonesia	95.00	95.00	Dec. 31	Palm oil	Ownership over 50%
PT. Indonesia Renewable Resources (IRR)	Indonesia	95.00 100.00	95.00 100.00	Dec. 31 Dec. 31	Industrial planting	Ownership over 50%
PT. Binsar Natorang Energi (BNE)	Indonesia	95.00	94.81	Dec. 31	Hydroelectric power	Ownership over 50%
Steel Flower Electric & Machinary (Tianjin) Co., Ltd.	China	100.00	100.00	Dec. 31	Steel frames	Ownership over 50%
Philco Resources Ltd. (Rapu-Rapu)	Malaysia	60.00	60.00	Dec. 31	Copper mining	Ownership over 50%
Resource Investment (Hong Kong)	ivialay3ia	00.00	00.00	Dec. 51	Copper mining	Ownership over 50%
Ltd. (Wantugou)	Hong Kong	100.00	100.00	Dec. 31	Coal mining	Ownership over 50%
LG International Yakutsk Ltd.	Russia	100.00	100.00	Dec. 31	Real estate	Ownership over 50%
Korea Carbon International Co., Ltd.						
(Shaanxi BBM)	Hong Kong	60.00	60.00	Dec. 31	Renewable plant	Ownership over 50%
Colmineral, S.A. de.C.V.	Mexico	100.00	100.00	Dec. 31	Iron ore	Ownership over 50%
Fertilizer Resources Investment Ltd.	Hong Kong	100.00	100.00	Dec. 31	Fertilizer	Ownership over 50%
Dangjin Tank Terminal Co., Ltd.	Korea	100.00	100.00	Dec. 31	Storage	Ownership over 50%
Haiphong Steel Flower Electrical						·
& Machinery Company Limited	Vietnam	100.00	100.00	Dec. 31	Steel frames	Ownership over 50%

1.2 Consolidated subsidiaries (cont'd)

	Country of	Equity ownership (%)		Reporting		
	domicile	2019	2018	date	Principal activity	Basis of control
Highland Cement International Co., Ltd.	Myanmar	51.00	51.00	Mar. 31	Cement	Ownership over 50%
Pantos Logistics Co., Ltd.	Korea	51.00	51.00	Dec. 31	Logistics	Ownership over 50%
Pantos Busan Newport Logistics	Karaa	100.00	100.00	Dec. 31	Warehouse	Ownership over 50%
Center Co., Ltd. (*3) Helistar Air Co., Ltd (*3)	Korea Korea	100.00	100.00	Dec. 31	Logistics	Ownership over 50% Ownership over 50%
Hanultari Co., Ltd (*2,3)	Korea	100.00	100.00	Dec. 31	Wholesale & Retail	Ownership over 50%
Pantos Logistics (China) Co., Ltd. (*3)	China	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
FNS (Beijing) Logistics Co., Ltd. (*3)	China	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics (Shanghai) Co., Ltd. (*3)	China	100.00	100.00	Dec. 31	Warehouse	Ownership over 50%
Pantos Logistics (Ningbo) Co., Ltd. (*3)	China	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics (Shenzhen) Co., Ltd. (*3)	China	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics (H.K.) Co., Ltd. (*3)	Hong Kong	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics (Taiwan) Co., Ltd. (*3)	Taiwan	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
PT. Pantos Logistics Indonesia (*3)	Indonesia	99.00	99.00	Dec. 31	Logistics	Ownership over 50%
PT. Pantos Logistics Jakarta (*3)	Indonesia	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics Singapore Pte. Ltd. (*3)	Singapore	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics (Thailand) Co., Ltd. (*3)	Thailand	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics Malaysia Sdn. Bhd. (*3)	Malaysia	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics (India) Pvt. Ltd. (*3)	India	100.00	100.00	Mar. 31	Logistics	Ownership over 50%
Pantos Logistics (Cambodia) Co., Ltd. (*3)	Cambodia	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics Vietnam Co., Ltd. (*3)	Vietnam	99.00	99.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics Australia Pty Ltd. (*3)	Australia	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Holdings (Thailand) Co., Ltd. (*3)	Thailand	48.50	48.50	Dec. 31	Logistics	De facto control
Pantos Logistics Myanmar Co., Ltd. (*3)	Myanmar	69.99	69.99	Mar. 31	Logistics	Ownership over 50%
Pantos Logistics U.K. Ltd (*3)	UK	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics Benelux B.V (*3)	Netherlands	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics France (*3)	France	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics Poland (*3)	Poland	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics Germany GmbH (*3)	Deutschland	100.00	100.00	Dec. 31 Dec. 31	Logistics	Ownership over 50%
Pantos Logistics Spain S.L. (*3)	Spain Turkey	100.00 100.00	100.00 100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics Ve Tic.Lgd.Sti (*3) Pantos Logistics Sweden (*2,3)	Sweden	100.00	100.00	Dec. 31	Logistics Logistics	Ownership over 50% Ownership over 50%
Pantos Logistics Oweden (2,3) Pantos Logistics Mexico (*3)	Mexico	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Do Brasil Logistica (*3)	Brazil	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics Colombia SAS (*3)	Colombia	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics Chile SpA (*3)	Chile	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics Panama S.A (*3)	Panama	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics AR S.A. (*3)	Argentina	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Hi Logistics Brasil Servicos De Logistica	5				5	
LTDA (*3)	Brasil	100.00	100.00	Dec. 31	Warehouse	Ownership over 50%
FNS CIS LLC (*3)	Russia	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics Kazakhstan (*3)	Kazakhstan	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics Ukraine Ltd (*3)	Ukraine	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Customs Services LLC (*3)	Russia	100.00	100.00	Dec. 31	Customs	Ownership over 50%
Pantos Logistics L.L.C (Dubai) (*3)	Dubai	100.00	49.00	Dec. 31	Logistics	De facto control
Pantos Logistics L.L.C (Oman) (*3)	Oman	100.00	70.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics Co., LTD. Saudi Arabia	Coudi Arabia	100.00	100.00	Dec. 31	Logistico	Ownership aver 500/
(*2, 3) Depted Logistics Nigeria Limited (*2, 2)	Saudi Arabia Nigeria	100.00	100.00		Logistics	Ownership over 50%
Pantos Logistics Nigeria Limited (*2, 3) Pantos Logistics Japan Inc. (*3)	0	99.93	99.93 100.00	Dec. 31 Dec. 31	Logistics Logistics	Ownership over 50% Ownership over 50%
Hi Logistics (China) Co., Ltd. (*3)	Japan China	100.00 100.00	100.00	Dec. 31 Dec. 31	Logistics	Ownership over 50%
Hi Logistics RUS, LLC. (*3)	Russia	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics Solutions India Private	Russia	100.00	100.00	Dec. 51	LOGISTICS	Ownership over 50%
Limited (*2, 3)	India	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Hi Logistics Egypt S.A.E (*3)	Egypt	98.00	98.00	Dec. 31	Logistics	Ownership over 50%
Pantos North America, INC. (*3, 4)	USA	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Hi Logistics Malaysia SDN. BHD. (*3, 4)	Malaysia	-	100.00	Dec. 31	Logistics	Ownership over 50%
Hi Logistics Vietnam Co., Ltd. (*3, 4)	Vietnam	-	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics Hungary KFT. (*3, 5)	Hungary	100.00	-	Dec. 31	Logistics	Ownership over 50%
Onecube International Logistics Co., Ltd.						
(*3, 5)	China	100.00	-	Dec. 31	Logistics	Ownership over 50%

(*1) During the year ended December 31, 2019, LG International (Shanghai) Ltd. (ownership interests of 100%) and Nanjing LG International VMI Co., Ltd. (ownership interests of 100%), were liquidated and excluded from the Group's subsidiaries.

1.2 Consolidated subsidiaries (cont'd)

- (*2) During the year ended December 31, 2018, the Group established Hanultari Co., LTD., Pantos Logistics Nigeria Limited, and Pantos Logistics Sweden as a subsidiary to be consolidated. In addition, PT.Green Global Lestari (GGL) acquired PT.Grand Utama Mandiri (GUM), PT. Tintin Boyok Sawit Mkmur (TBSM), PT. Tintin Boyok Sawit Makmur Dua (TBSMD, subsidiary of TBSM) as a subsidiary to be consolidated.Pantos Logistics L.L.C (KSA) was renamed Pantos Logistics Co., Ltd. SaudiArabia, and Hi Logistics India Private Limited was renamed Pantos Logistics Solutions India Private Limited.
- (*3) As of December 31, 2019 and 2018, the entities are subsidiaries of Pantos Logistics Co., Ltd., and the above equity ownerships are merely the sums of equity ownership held by Pantos Logistics Co., Ltd. and its subsidiaries.
- (*4) During the year ended December 31, 2019, the Group changed the name of Hi Logistics USA, Inc. to Pantos North America, Inc. and excluded Hi Logistics Malaysia SDN. BHD. and Hi Logistics Vietnam Co., Ltd. from the consolidation scope by liquidating them.
- (*5) During the year ended December 31, 2019, the Group established Pantos Logistics Hungary KFT, Oneube International Logistics Co., Ltd. (ownership interests of 100%) and included it as a consolidated subsidiary.

1.3 Summarized financial information of consolidated subsidiaries

The summarized financial information of consolidated subsidiaries (before elimination of intra-group transactions) are as follows (Korean won in millions):

	2019								
-	Assets	Liabilities	Equity	Revenue	Profit (loss) for the year				
LG International (America) Inc.	314,388	279,809	34,579	1,265,305	6,081				
LHC Solar LLC	3,673	1,256	2,417	296	(26)				
LG International (Japan) Ltd.	125,621	120,402	5,219	474,155	802				
LG International (Hong Kong) Ltd.	83,359	77,258	6,101	178,751	(332)				
LG International (Singapore) Pte. Ltd.	309,230	298,984	10,246	2,015,920	1,486				
LG International (Deutschland) GmbH	14,132	5,704	8,428	82,527	1,840				
LG International (China) Ltd.	13,569	6,563	7,006	9,756	306				
Yantai VMI Hub LG International Co., Ltd.	3,250	40	3,210	510	215				
Guangzhou Steel Flower Electrical									
& Machinary Co., Ltd.	20,293	1,395	18,898	21,636	771				
Bowen Investment (Australia) Pty Ltd.	90,552	62,579	27,973	71,840	7,438				
PT. Batubara Global Energy (BGE)	81,208	34,532	46,676	319,162	4,333				
PT. Megaprima Persada (MPP)	29,673	29,673	-	68,563	(12,822)				
PT. Mega Global Energy (MGE)	6,869	679	6,190	-	(992)				
PT. Ganda Alam Makmur (GAM)	484,176	254,298	229,878	183,600	(94,829)				
LG International (India) Ltd.	1,756	75	1,681	1,343	193				
PT. Green Global Lestari (GGL)	143,479	21,541	121,938	-	315				
PT. Parna Agromas (PAM)	89,880	53,278	36,602	59,464	(2,659)				
PT. Grand Utama Mandiri (GUM)	51,356	15,487	35,869	11,345	(4,413)				
PT. Tintin Boyok Sawit Makmur (TBSM)	40,309	13,552	26,757	26,071	(3,379)				
PT. Tintin Boyok Sawit Makmur									
Dua (TBSMD)	10,910	2,937	7,973	2,368	(575)				
PT. Indonesia Renewable Resources (IRR)	10,509	10,039	470	702	(1,221)				
PT. Binsar Natorang Energi (BNE)	249,923	169,444	80,479	40,377	11,447				
Steel Flower Electric & Machinary (Tianjin)									
Co., Ltd.	38,448	12,902	25,546	86,418	4,269				
Philco Resources Ltd. (Rapu-Rapu)	6,749	6,394	355	-	(21)				
Resource Investment (HongKong) Ltd.									
(Wantugou)	67,610	9	67,601	-	(9,312)				
LG International Yakutsk Ltd.	7,283	12,960	(5,677)	1,262	(406)				
Korea Carbon International Co., Ltd.	0 400	12 950	(5.404)						
(Shaanxi BBM)	8,428	13,859	(5,431)	-	-				
Colmineral, S.A. de.C.V.	4	-	4	-	12 022				
Fertilizer Resources Investment Ltd.	120,466	1 110	120,465	-	13,032				
Dangjin Tank Terminal Co., Ltd.	94,071	110	93,961	-	(1,134)				

1.3 Summarized financial information of consolidated subsidiaries (cont'd)

	2019								
	Assets	Liabilities	Equity	Revenue	Profit (loss) for the year				
Haiphong Steel Flower Electrical	40.054		4.070	00 740	(445)				
& Machinery Company Limited	19,951	15,575	4,376	26,749	(415)				
Highland Cement International Co., Ltd.	10,203 954,846	20,460 455,422	(10,257) 499,424	14,285 2,480,794	(80,972) 38,563				
Pantos Logistics Co., Ltd.	904,040	455,422	499,424	2,400,794	30,303				
Pantos Busan Newport Logistics Center Co., Ltd.	11,394	1,205	10,189	9,118	737				
Helistar Air Co., Ltd.	5,390	3,844	1,546	39,472	(205)				
Hanultari Co., Ltd.	214	71	143	449	38				
Pantos Logistics (China) Co., Ltd.	87,970	62,505	25,465	281,155	5,226				
FNS (Beijing) Logistics Co., Ltd.	877	795	82	15,154	22				
Pantos Logistics (Shanghai) Co., Ltd.	59,835	43,245	16,590	172,668	2,681				
Pantos Logistics (Ningbo) Co., Ltd.	1,539	141	1,398	861	358				
Pantos Logistics (Shenzhen) Co., Ltd.	43,665	24,493	19,172	213,902	6,377				
Pantos Logistics (H.K) Co., Ltd.	41,214	12,381	28,833	63,048	7,914				
Pantos Logistics (Taiwan) Co., Ltd.	5,383	3,101	2,282	18,827	457				
PT. Pantos Logistics Indonesia	23,509	17,028	6,481	53,678	1,777				
PT. Pantos Logistics Jakarta	11,516	4,439	7,077	6,932	166				
Pantos Logistics Singapore Pte. Ltd.	11,437	6,913	4,524	26,692	(29)				
Pantos Logistics (Thailand) Co., Ltd.	34,471	22,287	12,184	83,581	3,499				
Pantos Logistics Malaysia Sdn. Bhd.	6,886	5,263	1,623	15,687	77				
Pantos Logistics (India) Pvt. Ltd.	12,947	5,271	7,676	35,322	(646)				
Pantos Logistics (Cambodia) Co., Ltd.	1,721	2,054	(333)	6,200	228				
Pantos Logistics Vietnam Co., Ltd.	24,710	15,950	8,760	108,313	3,347				
Pantos Logistics Australia Pty Ltd.	3,878	2,314	1,564	9,317	(41)				
Pantos Holdings (Thailand) Co., Ltd.	1,710	908	1,595	613	67				
Pantos Logistics Myanmar Co., Ltd.	882	53	(393)	2,507	(167)				
Pantos Logistics U.K. Ltd.	14,011	1,198	2,141	23,856	441				
Pantos Logistics Benelux B.V	61,948	10,675	16,703	76,246	(1,481)				
Pantos Logistics France	16,132	15,540	2,366	25,399	410				
Pantos Logistics Poland	99,720	8,234	16,233	283,696	7,429				
Pantos Logistics Germany GmbH	14,800	65,586	7,119	48,591	1,609				
Pantos Logistics Spain S.L.	12,057	6,670	4,142	25,008	636				
Pantos Logistics Ve Tic.Lgd.Sti	3,891	3,333	2,096	18,608	(239)				
Pantos Logistics Sweden	6,965	1,724	519	8,454	(811)				
Pantos Logistics Mexico	37,423	6	13,281	178,140	440				
Pantos Do Brasil Logistica	7,532	25,221	2,202	41,919	685				
Pantos Logistics Colombia SAS	2,897	5,249	1,613	7,376	194				
Pantos Logistics Chile SpA	1,409	1,529	(249)	8,209	(479)				
Pantos Logistics Panama S.A.	4,244	3,246	900	13,274	(133)				
Pantos Logistics AR S.A.	1,470	2,391	701	3,208	573				
Hi Logistics Brasil Servicos De Logistica LTDA	3,754	284	2,142	6,358	(1,030)				
FNS CIS LLC	22,919	2,813	11,393	50,321	382				
Pantos Logistics Kazakhstan	1,806	17,484	1,069	6,100	21				
Pantos Logistics Ukraine Ltd	-	-	-	-					
Pantos Customs Services LLC	674	76	598	884	(180)				
Pantos Logistics L.L.C (Dubai)	8,033	5,747	2,286	18,937	(832)				
Pantos Logistics L.L.C (Oman)	87	-	87	-	(1)				
Pantos Logistics Co., LTD. Saudi Arabia	2,932	939	1,993	5,028	(354)				
Pantos Logistics Nigeria Limited	260	133	127	561	(324)				
Pantos Logistics Japan Inc.	17,239	9,302	7,937	70,988	562				
Hi Logistics (China) Co., Ltd.	21,238	11,794	9,444	66,456	898				
Hi Logistics RUS, LLC.	1,018	38	980	-	7				
Pantos Logistics Solutions India Private Limited	9,821	6,979	2,842	83,819	349				
Hi Logistics Egypt S.A.E	2,836	1,678	1,158	7,543	102				
Pantos North America, INC.	2,830	8,903	2,432	7,543	(109)				
Hi Logistics Malaysia SDN. BHD.		0,303	2,402		(109)				
Pantos Logistics Hungary KFT.	1,185	235	950	237	(334)				
Onecube International Logistics Co., Ltd.	2,394	843	1,551	1,178	(108)				
	4,289,352	2,507,181	1,782,171	9,757,295	(82,219)				
	.,200,002	_,,	.,	-,· -, -	(02,210)				

1.3 Summarized financial information of consolidated subsidiaries (cont'd)

			2018		
	Assets	Liabilities	Equity	Revenue	Profit (loss) for the year
LG International (America) Inc.	₩ 343,416	₩ 315,763	₩ 27,	653 ₩ 813,702	₩ 4,514
LHC Solar LLC	3,723	1,363		360 323	31
LG International (Japan) Ltd.	218,797	210,532		265 598,376	1,477
LG International (Hong Kong) Ltd.	100,548	94,337		211 258,606	60
LG International (Singapore) Pte. Ltd.	355,719	342,790	12,		
LG International (Deutschland) GmbH	49,367	42,862		505 168,943	()
LG International (China) Ltd. Nanjing LG International VMI Co., Ltd.	9,488 2,727	5,222 147		266 10,936 580 1,471	(38)
LG International (Shanghai) Ltd.	2,727	147		580 1,471 354 2,396	374 167
Yantai VMI Hub LG International Co., Ltd.	3,005	60		945 2,390 945 876	403
Guangzhou Steel Flower Electrical					
& Machinary Co., Ltd.	23,474 90,965	4,521 63,049	18,9 27,9		(12)
Bowen Investment (Australia) Pty Ltd. PT. Batubara Global Energy (BGE)	90,903 62,652	27,158	35,4		20,252 5,645
PT. Megaprima Persada (MPP)	54,865	34,775	20,0		
PT. Mega Global Energy (MGE)	6,825	179		546 5,106	
PT. Ganda Alam Makmur (GAM)	587,512	276,929	310,		
LG International (India) Ltd.	1,616	146		470 1,533	-
PT. Green Global Lestari (GGL)	140,535	20,637	119,8		1,260
PT. Parna Agromas (PAM)	86,970	52,232	34,		
PT. Grand Utama Mandiri (GUM)	45,448	8,186	37,2		(1,550)
PT. Tintin Boyok Sawit Makmur (TBSM)	40,270	11,843	28,		(1,039)
PT. Tintin Boyok Sawit Makmur Dua (TBSMD)	9,833	1,928	7	905 497	49
PT. Indonesia Renewable Resources (IRR)	10,191	8,655		536 230	45
PT. Binsar Natorang Energi (BNE)	201,630	130,811	70,8		7,697
Steel Flower Electric & Machinary (Tianjin)	,	,	,		.,
Co., Ltd.	42,045	21,080	20,9	965 72,094	2,660
Philco Resources Ltd. (Rapu-Rapu)	401	34	:	- 367	(8)
Resource Investment (HongKong) Ltd.					
(Wantugou)	74,847	-		- 847	(173)
LG International Yakutsk Ltd.	6,649	12,331	(5,0	582) 1,165	(79)
Korea Carbon International Co., Ltd.	0 457	12 404	(E -	244)	(570)
(Shaanxi BBM) Colmineral, S.A. de.C.V.	8,157 3	13,401	(5,	244) - 3 -	(579)
Fertilizer Resources Investment Ltd.	105,566	-	105,		- 12,147
Dangjin Tank Terminal Co., Ltd.	94,707	32	94,0		(1,250)
Haiphong Steel Flower Electrical	04,101	02	04,	510	(1,200)
& Machinery Company Limited	19,840	15,222	4,0	518 19,866	(453)
Highland Cement International Co., Ltd.	78,854	13,292	65,	562 15,132	(10,716)
Pantos Logistics Co., Ltd.	871,110	387,370	483,		50,373
Pantos Busan Newport Logistics Center					
Co., Ltd.	10,166	714		452 7,555	
Helistar Air Co., Ltd.	6,363	3,312		051 40,094	
Hanultari Co., Ltd.	156	51		105 209	
Pantos Logistics (China) Co., Ltd.	75,261	55,299	19,9		
FNS (Beijing) Logistics Co., Ltd.	4,586	4,52	10	60 22,920	. ,
Pantos Logistics (Shanghai) Co., Ltd.	42,380	28,67	13,		2,712
Pantos Logistics (Ningbo) Co., Ltd.	1,843	15		589 1,046	293
Pantos Logistics (Shenzhen) Co., Ltd.	59,993 30,797	38,29 10,70		703 194,986 095 75,297	8,641
Pantos Logistics (H.K) Co., Ltd. Pantos Logistics (Taiwan) Co., Ltd.	5,573	3,28		287 16,979	2,490 572
PT. Pantos Logistics (raiwar) Co., Etd.	18,593	14,19		396 43,709	(36)
PT. Pantos Logistics Jakarta	11,260	4,84		419 6,431	(114)
Pantos Logistics Singapore Pte. Ltd.	7,692	2,46		230 22,413	533
Pantos Logistics (Thailand) Co., Ltd.	24,917	17,29		626 65,885	478
Pantos Logistics (maiarid) 60., Ed. Pantos Logistics Malaysia Sdn. Bhd.	4,438	2,96		476 16,106	105
Pantos Logistics (India) Pvt. Ltd.	11,793	6,58		212 29,810	(1,799)
Pantos Logistics (Cambodia) Co., Ltd.	1,334	1,87		42) 6,382	171
Pantos Logistics Vietnam Co., Ltd.	24,242	19,01		231 90,858	2,782
- '			-,	,	,

1.3 Summarized financial information of consolidated subsidiaries (cont'd)

	2018									
		Assets	Liabilities	;		Equity	Reve	nue		Profit (loss) for the year
Pantos Logistics Australia Pty Ltd.		2,469		908		1,561	·	8,195		11
Pantos Holdings (Thailand) Co., Ltd.		1,409		53		1,356		419		28
Pantos Logistics Myanmar Co., Ltd.		993	1	198		(205)		1,574		(137)
Pantos Logistics U.K. Ltd.		12,260	10	675		1,585		24,018		(120)
Pantos Logistics Benelux B.V		33,462	15	540		17,922		72,192		(472)
Pantos Logistics France		10,165	8	234		1,931		22,191		818
Pantos Logistics Poland		74,145	65	586		8,559	2	04,001		5,019
Pantos Logistics Germany GmbH		12,111	6	670		5,441		44,896		1,070
Pantos Logistics Spain S.L.		6,794	3	333		3,461		20,835		656
Pantos Logistics Ve Tic.Lgd.Sti		4,240	1	724		2,516		22,370		918
Pantos Logistics Sweden		1,348		6		1,342		-		7
Pantos Logistics Mexico		37,175	25	221		11,954	1	58,216		1,416
Pantos Do Brasil Logistica		5,140	5	249		(109)		36,670		(283)
Pantos Logistics Colombia SAS		2,912	1	529		1,383		7,713		186
Pantos Logistics Chile SpA		3,451	3	246		205		12,389		100
Pantos Logistics Panama S.A.		3,388	2	391		997		13,378		143
Pantos Logistics AR S.A.		676		284		392		3,784		77
Hi Logistics Brasil Servicos										
De Logistica Ltda		4,069	2	813		1,256		4,313		(598)
FNS CIS LLC		26,956	17	484		9,472		50,849		(1,338)
Pantos Logistics Kazakhstan		2,587	1	137		1,450		7,294		(376)
Pantos Logistics Ukraine Ltd.		1		-		1		-		-
Pantos Customs Services LLC		912		236		676		1,339		182
Pantos Logistics L.L.C (Dubai)		9,294	6	520		2,774		19,615		(183)
Pantos Logistics L.L.C (Oman)		106		21		85		-		(68)
Pantos Logistics co., Ltd. Saudi Arabia		2,875		611		2,264		4,238		(625)
Pantos Logistics Nigeria Limited		439		6		433		511		(120)
Pantos Logistics Japan Inc.		13,958	6	386		7,572		57,933		1,264
Hi Logistics (China) Co., Ltd.		19,619	11	212		8,407		63,649		597
Pantos Logistics Solutions										
India Private Limited		9,222	6	759		2,463		72,159		419
Hi Logistics Malaysia SDN. BHD.		511		-		511		-		(13)
Hi Logistics USA, Inc		16,211	13	758		2,453		58,834		938
Hi Logistics RUS, LLC.		1,210		372		838		299		302
Hi Logistics Egypt		2,590	1	682		908		5,461		156
Hi Logistics Vietnam Co., Ltd.		526		4		522		-		(101)
	₩	4,417,870	₩ 2,552	116	₩	1,865,754	₩ 9,0	61,726	₩	140,398

1.4 Summarized financial information of subsidiaries attributable to non-controlling interests

The summarized financial information of subsidiaries attributable to non-controlling interests which are material to the Group are as follows (Korean won in millions):

	2019			
	Profit or loss attributable to non- controlling interests	attributable to non- Non-controlling		
PT. Megaprima Persada (MPP)	₩ (3,443)	₩ -	₩ 1,977	
PT. Ganda Alam Makmur (GAM)	(38,005)	91,986	-	
PT. Binsar Natorang Energi (BNE)	573	4,024	-	
Highland Cement International Co., Ltd.	(39,676)	(5,027)	-	
Pantos Logistics Co., Ltd. and its subsidiaries	36,061	278,221	10,094	

1.4 Summarized financial information of subsidiaries attributable to non-controlling interests (cont'd)

	2018					
	Profit or loss attributable to non- controlling interests		Non-controlling interests		Dividends distributed to non-controlling interests	
PT. Megaprima Persada (MPP)	\overline{W}	2,303	₩	5,260	₩	5,533
PT. Ganda Alam Makmur (GAM)		3,573		124,342		-
PT. Binsar Natorang Energi (BNE)		447		3,678		-
Highland Cement International Co., Ltd.		(5,251)		32,125		-
Pantos Logistics Co., Ltd. and its subsidiaries		33,420		249,216		4,900

2. Significant accounting policies and basis of financial statements preparation

2.1 Basis of preparation

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

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

2.2 Basis of consolidation

The consolidated financial statements comprise the consolidated financial statements of the Group as of December 31, 2019. Control is achieved when the Group is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. Specifically, the Group controls an investee if, and only if, the Group has:

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

Generally, there is a presumption that a majority of voting rights results in control. To support this presumption and when the Group has less than a majority of the voting or similar rights of an investee, the Group considers all relevant facts and circumstances in assessing whether it has power over an investee, including:

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

2.2 Basis of consolidation (cont'd)

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

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

A change in the ownership interest of a subsidiary, without a loss of control, is accounted for as an equity transaction.

If the Group loses control over a subsidiary, it derecognizes the related assets (including goodwill), liabilities, non-controlling interest and other components of equity, while any resultant gain or loss is recognized in profit or loss. Any investment retained is recognized at fair value.

- > Derecognizes the assets (including goodwill) and liabilities of the subsidiary
- > Derecognizes the carrying amount of any non-controlling interest
- > Derecognizes the cumulative translation differences, recorded in equity
- Recognizes the fair value of the consideration received
- Recognizes the fair value of any investment retained
- Recognizes any surplus or deficit in profit or loss
- Reclassifies the parent's share of components previously recognized in other comprehensive income to profit or loss

2.3 Summary of significant accounting policies

2.3.1 Business combinations and goodwill

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred, measured at acquisition date fair value and the amount of any non-controlling interest in the acquiree. For each business combination, the acquirer measures the non-controlling interest in the acquiree either at fair value or at the proportionate share of the acquiree's identifiable net assets. Acquisition costs incurred are expensed and included in selling and administrative expenses.

When the Group acquires a business, it assesses the financial assets and liabilities assumed for appropriate classification and designation in accordance with the contractual terms, economic circumstances and pertinent conditions as of the acquisition date. This includes the separation of embedded derivatives in host contracts by the acquiree.

Any contingent consideration to be transferred by the acquirer will be recognized at fair value at the acquisition date. Subsequent changes to the fair value of the contingent consideration which is deemed to be an asset or liability will be recognized in accordance with KIFRS 1109 either in profit or loss or as change to other comprehensive income. If the contingent consideration is classified as equity, it shall not be remeasured until it is finally settled within equity. Subsequent settlement is accounted for within equity. In instances where the contingent consideration does not fall within the scope of KIFRS 1109, it is measured in accordance with the appropriate KIFRS.

2.3.1 Business combinations and goodwill (cont'd)

Goodwill is initially measured at cost, being the excess of the consideration transferred and the amount recognized for non-controlling interest over the net identifiable assets acquired and liabilities assumed. If the fair value of the net assets acquired is in excess of the aggregate consideration transferred, the Group reassesses whether it has correctly identified all of the assets acquired and all of the liabilities assumed and reviews the procedures used to measure the amounts to be recognized at the acquisition date. If the reassessment still results in an excess of the fair value of net assets acquired over the aggregate consideration transferred, then the gain is recognized in profit or loss.

After initial recognition, goodwill is measured at cost less any accumulated impairment losses. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the Group's cash generating units that are expected to benefit from the business combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units.

Where goodwill forms part of a cash-generating unit and part of the operation within that unit is disposed of, the goodwill associated with the operation disposed of is included in the carrying amount of the operation when determining the gain or loss on disposal of the operation. Goodwill disposed of in this circumstance is measured based on the relative values of the operation disposed of and the portion of the cash-generating unit retained.

2.3.2 Cash and cash equivalents

Cash and cash equivalents in the statement of financial position comprise cash at banks and on hand and cash equivalents with an original maturity of three months or less. These are stated as cash on the statement of cash flows.

2.3.3 Inventories

Inventories are valued at the lower of cost and net realizable value, with cost being determined using the specific identification method and moving average method. Net realizable value is the estimated selling price in the ordinary course of business, less estimated costs of completion and the estimated costs necessary to make the sale.

2.3.4 Financial instruments – initial recognition and subsequent measurement

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

2.3.4.1 Financial assets

2.3.4.1.1 Initial recognition and measurement

The classification of financial assets at initial recognition depends on the financial asset's contractual cash flow characteristics and the Group's business model for managing them. With the exception of trade receivables that do not contain a significant financing component or for which the Group has applied the practical expedient, the Group initially measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs. Trade receivables that do not contain a significant financing component or for which the Group has applied the practical expedient or for which the Group has applied the practical expedient are measured at the transaction price determined under KIFRS 1115.

In order for a financial asset to be classified and measured at amortised cost or fair value through OCI, it needs to give rise to cash flows that are 'solely payments of principal and interest (SPPI)' on the principal amount outstanding. This assessment is referred to as the SPPI test and is performed at an instrument level.

The Group's business model for managing financial assets refers to how it manages its financial assets in order to generate cash flows. The business model determines whether cash flows will result from collecting contractual cash flows, selling the financial assets, or both.

Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the market place (regular way trades) are recognised on the trade date, i.e., the date that the Group commits to purchase or sell the asset.

2.3.4.1.2 Subsequent measurement

For purposes of subsequent measurement, financial assets are classified in four categories:

- Financial assets at amortised cost (debt instruments)
- > Financial assets at fair value through OCI with recycling of cumulative gains and losses (debt instruments)
- Financial assets designated at fair value through OCI with no recycling of cumulative gains and losses upon
- Financial assets at fair value through profit or loss

Financial assets at amortised cost (debt instruments)

The Group measures financial assets at amortised cost if both of the following conditions are met:

- The financial asset is held within a business model with the objective to hold financial assets in order to collect contractual cash flows
- The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding

Financial assets at amortised cost are subsequently measured using the effective interest (EIR) method and are subject to impairment. Gains and losses are recognised in profit or loss when the asset is derecognised modified or impaired.

Financial assets at fair value through OCI (debt instruments)

The Group measures debt instruments at fair value through OCI if both of the following conditions are met:

- The financial asset is held within a business model with the objective of both holding to collect contractual cash flows and selling
- The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding

For debt instruments at fair value through OCI, interest income, foreign exchange revaluation and impairment losses or reversals are recognized in the statement of profit or loss and computed in the same manner as for financial assets measured at amortised cost. The remaining fair value changes are recognized in OCI. Upon derecognition, the cumulative fair value change recognized in OCI is recycled to profit or loss.

The Group's debt instruments at fair value through OCI includes investments in quoted debt instruments included under other non-current financial assets.

2.3.4.1.2 Subsequent measurement (cont'd)

Financial assets designated at fair value through OCI (equity instruments)

Upon initial recognition, the Group can elect to classify irrevocably its equity investments as equity instruments designated at fair value through OCI when they meet the definition of equity under KIFRS 1032 Financial Instruments: Presentation and are not held for trading.

Gains and losses on these financial assets are never recycled to profit or loss. Dividends are recognised as other income in the statement of profit or loss when the right of payment has been established, except when the Comapny benefits from such proceeds as a recovery of part of the cost of the financial asset, in which case, such gains are recorded in OCI. Equity instruments designated at fair value through OCI are not subject to impairment assessment.

The Group elected to classify irrevocably its non-listed equity investments under this category.

Financial assets at fair value through profit or loss

Financial assets at fair value through profit or loss include financial assets held for trading and financial assets designated upon initial recognition at fair value through profit or loss. Financial assets are classified as held for trading if they are acquired for the purpose of selling or repurchasing in the near term. Derivatives, including separated embedded derivatives, are also classified as held for trading unless they are designated as effective hedging instruments. Financial assets with cash flows that are not solely payments of principal and interest are classified and measured at fair value through profit or loss, irrespective of the business model.

Notwithstanding the criteria for debt instruments to be classified at amortised cost or at fair value through OCI, as described above, debt instruments may be designated at fair value through profit or loss on initial recognition if doing so eliminates, or significantly reduces, an accounting mismatch.

Financial assets at fair value through profit or loss are carried in the statement of financial position at fair value with net changes in fair value recognized in the statement of profit or loss.

This category includes derivatives and equity instruments that do not have an irrevocable choice of dealing with changes in fair value in OCI. Dividends on listed equity instruments are recognised in profit or loss at the time the rights are established.

A derivative embedded in a hybrid contract, with a financial liability or non-financial host, is separated from the host and accounted for as a separate derivative if: the economic characteristics and risks are not closely related to the host; a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and the hybrid contract is not measured at fair value through profit or loss. Embedded derivatives are measured at fair value with changes in fair value recognised in profit or loss. Reassessment only occurs if there is either a change in the terms of the contract that significantly modifies the cash flows that would otherwise be required or a reclassification of a financial asset out of the fair value through profit or loss category.

A derivative embedded within a hybrid contract containing a financial asset host is not accounted for separately. The financial asset host together with the embedded derivative is required to be classified in its entirety as a financial asset at fair value through profit or loss.

2.3.4.1.3 Derecognition of financial assets

A financial asset (or, where applicable, a part of a financial asset or part of a group of similar financial assets) is derecognized when:

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

When the Group has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if, and to what extent, it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the asset is recognized to the extent of the Group's continuing involvement in the asset. In that case, the Group also recognizes an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Group has retained.

2.3.4.2 Impairment of financial assets

Further disclosures relating to impairment of financial assets are also provided in Note 11.

The Group recognises an allowance for expected credit losses (ECLs) for all debt instruments not held at fair value through profit or loss. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate. The expected cash flows will include cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms.

ECLs are recognised in two stages. For credit exposures for which there has not been a significant increase in credit risk since initial recognition, ECLs are provided for credit losses that result from default events that are possible within the next 12-months (a 12-month ECL). For those credit exposures for which there has been a significant increase in credit risk since initial recognition, a loss allowance is required for credit losses expected over the remaining life of the exposure, irrespective of the timing of the default (a lifetime ECL).

For trade receivables and contract assets, the Group applies a simplified approach in calculating ECLs. Therefore, the Group does not track changes in credit risk, but instead recognises a loss allowance based on lifetime ECLs at each reporting date. The Group has established a provision matrix that is based on its historical credit loss experience, adjusted for forward-looking factors specific to the debtors and the economic environment.

For debt instruments at fair value through OCI, the Group applies the low credit risk simplification. At every reporting date, the Group evaluates whether the debt instrument is considered to have low credit risk using all reasonable and supportable information that is available without undue cost or effort. In making that evaluation, the Group reassesses the internal credit rating of the debt instrument. In addition, the Group considers that there has been a significant increase in credit risk when contractual payments are more than 30 days past due.

The Group's debt instruments at fair value through OCI comprise solely of quoted bonds that are graded in the top investment category and, therefore, are considered to be low credit risk investments. It is the Group's policy to measure ECLs on such instruments on a 12-month basis. However, when there has been a significant increase in credit risk since origination, the allowance will be based on the lifetime ECL. The Group uses the ratings from the external independent credit rating agency both to determine whether the debt instrument has significantly increased in credit risk and to estimate ECLs.

The Group considers a financial asset in default when contractual payments are 1 year past due. However, in certain cases, the Group may also consider a financial asset to be in default when internal or external information indicates that the Group is unlikely to receive the outstanding contractual amounts in full before taking into account any credit enhancements held by the Group. A financial asset is written off when there is no reasonable expectation of recovering the contractual cash flows.

2.3.4.3 Financial liabilities

2.3.4.3.1 Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, loans and borrowings, payables, or as derivatives designated as hedging instruments in an effective hedge, as appropriate. All financial liabilities are recognized initially at fair value and in the case of loans and borrowings, less directly attributable transaction costs.

The Group's financial liabilities include trade and other payables, bonds and borrowings and derivative financial liabilities.

2.3.4.3.2 Subsequent measurement

The subsequent measurement of financial liabilities depends on their classification as described below:

Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss includes financial liabilities held for trading and financial liabilities designated upon initial recognition as of fair value through profit or loss. Financial liabilities are classified as held for trading if they are acquired for the purpose of selling in the near term. This category includes derivative financial instruments entered into by the Group that are not designated as hedging instruments in hedge relationships as defined by KIFRS 1109. Separated embedded derivatives are also classified as held for trading unless they are designated as effective hedging instruments. Gains or losses on liabilities held for trading are recognized in the statement of profit or loss.

Borrowings

Interest-bearing borrowings are subsequently measured at amortized cost using the EIR method. Gains and losses are recognized in profit or loss when the liabilities are derecognized as well as through the EIR amortization process. Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR.

2.3.4.3.3 Derecognition of financial liabilities

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and the recognition of a new liability, and the difference in the respective carrying amounts is recognized in the statement of profit or loss.

2.3.4.4 Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount is reported in the statement of financial position if, and only if, there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, or to realize the assets and settle the liabilities simultaneously.

2.3.5 Derivative financial instruments and hedge accounting

2.3.5.1 Initial recognition and subsequent measurement

The Group uses derivative financial instruments such as forward currency contracts, swap currency and interest rate swaps to hedge its foreign currency risks and interest rate risks. Such derivative financial instruments are initially recognized at fair value on the date on which a derivative contract is entered into and are subsequently remeasured at fair value. Derivatives are carried as financial assets when the fair value is positive and as financial liabilities when the fair value is negative.

For the purpose of hedge accounting, hedges are classified as:

- Fair value hedges when hedging the exposure to changes in the fair value of a recognized asset or liability or an unrecognized firm commitment
- Cash flow hedges when hedging exposure to variability in cash flows that is either attributable to a particular risk associated with a recognized asset or liability or a highly probable forecast transaction or the foreign currency risk in an unrecognized firm commitment
- > Hedges of a net investment in a foreign operation

At the inception of a hedge relationship, the Group formally designates and documents the hedge relationship to which the Group wishes to apply hedge accounting and the risk management objective and strategy for undertaking the hedge.

The documentation includes identification of the hedging instrument, the hedged item, the nature of the risk being hedged and how the Group will assess whether the hedging relationship meets the hedge effectiveness requirements (including the analysis of sources of hedge ineffectiveness and how the hedge ratio is determined). A hedging relationship qualifies for hedge accounting if it meets all of the following effectiveness requirements:

- > There is 'an economic relationship' between the hedged item and the hedging instrument.
- > The effect of credit risk does not 'dominate the value changes' that result from that economic relationship.
- The hedge ratio of the hedging relationship is the same as that resulting from the quantity of the hedged item that the Group actually hedges and the quantity of the hedging instrument that the Group actually uses to hedge that quantity of hedged item.

Hedges which meet the strict criteria for hedge accounting are accounted for as follows:

Fair value hedges

The change in the fair value of a hedging derivative is recognized in the statement of profit or loss in finance costs. The change in the fair value of the hedged item attributable to the risk hedged is recorded as part of the carrying value of the hedged item and is also recognized in the statement of profit or loss as finance costs. For fair value hedges relating to items carried at amortized cost, any adjustment to carrying value is amortized through the statement of profit or loss over the remaining term of the hedge using the EIR method. The EIR amortization may begin as soon as an adjustment exists and no later than when the hedge item ceases to be adjusted for changes in its fair value attributable to the risk being hedged. If the hedge item is derecognized, the unamortized fair value is recognized immediately in the statement of profit or loss.

When an unrecognized firm commitment is designated as a hedged item, the subsequent cumulative change in the fair value of the firm commitment attributable to the hedged risk is recognized as an asset or liability with a corresponding gain (loss) recognized in the statement of profit or loss.

2.3.5.1 Initial recognition and subsequent measurement (cont'd)

Cash flow hedges

The effective portion of the gain or loss on the hedging instrument is recognized in other comprehensive income or loss in the cash flow hedge reserve, while any ineffective portion is recognized immediately in the statement of profit or loss. The cash flow hedge reserve is adjusted to the lower of the cumulative gain or loss on the hedging instrument and the cumulative change in fair value of the hedged item.

The Group uses forward currency contracts as hedges of its exposure to foreign currency risk in forecast transactions and firm commitments, as well as forward commodity contracts for its exposure to volatility in the commodity prices. The ineffective portion relating to foreign currency contracts is recognised as other expense and the ineffective portion relating to commodity contracts is recognised in other operating income or expenses.

The Group designates only the spot element of forward contracts as a hedging instrument. The forward element is recognised in OCI and accumulated in a separate component of equity under cost of hedging reserve.

The amounts accumulated in OCI are accounted for, depending on the nature of the underlying hedged transaction. If the hedged transaction subsequently results in the recognition of a non-financial item, the amount accumulated in equity is removed from the separate component of equity and included in the initial cost or other carrying amount of the hedged asset or liability. This is not a reclassification adjustment and will not be recognised in OCI for the period. This also applies where the hedged forecast transaction of a non-financial asset or non-financial liability subsequently becomes a firm commitment for which fair value hedge accounting is applied.

For any other cash flow hedges, the amount accumulated in OCI is reclassified to profit or loss as a reclassification adjustment in the same period or periods during which the hedged cash flows affect profit or loss.

If cash flow hedge accounting is discontinued, the amount that has been accumulated in OCI must remain in accumulated OCI if the hedged future cash flows are still expected to occur. Otherwise, the amount will be immediately reclassified to profit or loss as a reclassification adjustment. After discontinuation, once the hedged cash flow occurs, any amount remaining in accumulated OCI must be accounted for depending on the nature of the underlying transaction as described above.

Hedges of a net investment in a foreign operation

Hedges of a net investment in a foreign operation, including a hedge of a monetary item that is accounted for as part of the net investment, are accounted for in a way similar to cash flow hedges. Gains or losses on the hedging instrument relating to the effective portion of the hedge are recognized as OCI while any gains or losses relating to the ineffective portion are recognized in the statement of profit or loss. On disposal of the foreign operation, the cumulative value of any such gains or losses recorded in equity is transferred to the statement of profit or loss.

2.3.6 Investment in associates and joint venture

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

A joint venture is a type of joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint venture. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control.

The Group's investments in its associate and joint venture are accounted for using the equity method. Under the equity method, the investment in an associate or a joint venture is initially recognized at cost. The carrying amount of the investment is adjusted to recognize changes in the Group's share of net assets of the associate or joint venture since the acquisition date. Goodwill relating to the associate or joint venture is included in the carrying amount of the investment and is not tested for impairment separately.

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

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

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

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

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

2.3.7 Non-current assets held for sale (or distribution to equity holders)

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

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

Property, plant and equipment and intangible assets are not depreciated or amortized once classified as held for sale.

Assets and liabilities classified as held for sale or for distribution are presented separately as current items in the statement of financial position.

A disposal group qualifies as discontinued operation if it is:

- > A component of the group that is a CGU or a group of CGUs
- Classified as held for sale or distribution or already disposed in such a way, or
- > A major line of business or major geographical area

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

2.3.8 Property, plant and equipment

Construction in progress is carried at acquisition cost less accumulated impairment loss, and property, plant and equipment is stated at cost, net of accumulated depreciation and accumulated impairment losses, if any. Such cost includes the cost of replacing part of the plant and equipment and borrowing costs for long-term construction projects if the recognition criteria are met. When significant parts of property, plant and equipment are required to be replaced in intervals, the Group recognizes such parts as individual assets with specific useful lives and depreciates them accordingly. Likewise, when a major inspection is performed, its cost is recognized in the carrying amount of the plant and equipment as a replacement if the recognition criteria are satisfied. All other repair and maintenance costs are recognized in the statement of profit or loss as incurred. The present value of the expected cost for the decommissioning of the asset after its use is included in the cost of the respective asset if the recognition criteria for a provision are met.

Depreciation of property, plant and equipment is provided using the straight-line method over the estimated useful lives of the assets as follows:

	Useful lives	Depreciation method
Buildings	8 ~ 40	Straight-line method
Structures	8 ~ 50	"
Machinery	5 ~ 8	n
Vehicles	5 ~ 12	n
Bearer plants	20	п
Others	5	п

An item of property, plant and equipment and any significant part initially recognized is derecognized upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on derecognition of the asset is included in the statement of profit or loss when the asset is derecognized.

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

2.3.9 Leases

At inception of a contract, the Group assesses whether the contract is or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

Group as a lessee

The Group applies a single recognition and measurement approach for all leases, except for short-term leases and leases of low-value assets. The Group recognizes lease liabilities to make lease payments and right-of-use assets representing the right to use the underlying assets.

2.3.9.1 Right-of-use assets

The Group recognises right-of-use assets at the commencement date of the lease (i.e., the date the underlying asset is available for use). Right-of-use assets are measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any remeasurement of lease liabilities. The cost of right-of-use assets includes the amount of lease liabilities recognised, initial direct costs incurred, and lease payments made at or before the commencement date less any lease incentives received. Right-of-use assets are depreciated on a straight-line basis over the shorter of the lease term and the estimated useful lives of the assets as follows.

	Useful lives
	(years)
Land	30 ~ 48
Buildings	1 ~ 30
Vehicles	1 ~ 5
Others	2~4

If ownership of the leased asset transfers to the Group at the end of the lease term or the cost reflects the exercise of a purchase option, depreciation is calculated using the estimated useful life of the asset.

The right-of-use assets are also subject to impairment. Refer to the accounting policies in section 2.3.20 Impairment of non-financial assets.

2.3.9.2 Lease liabilities

At the commencement date of the lease, the Group recognises lease liabilities measured at the present value of lease payments to be made over the lease term. The lease payments include fixed payments (including insubstance fixed payments) less any lease incentives receivable, variable lease payments that depend on an index or a rate, and amounts expected to be paid under residual value guarantees. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Group and payments of penalties for terminating the lease, if the lease term reflects the Group exercising the option to terminate.

Variable lease payments that do not depend on an index or a rate are recognised as expenses (unless they are incurred to produce inventories) in the period in which the event or condition that triggers the payment occurs.

In calculating the present value of lease payments, the Group uses its incremental borrowing rate at the lease commencement date because the interest rate implicit in the lease is not readily determinable. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a modification, a change in the lease term, a change in the lease payments (e.g., changes to future payments resulting from a change in an index or rate used to determine such lease payments) or a change in the assessment of an option to purchase the underlying asset.

The Group's lease liabilities are included in Interest-bearing loans and borrowings (Refer to Note 25).

2.3.9.3 Short-term leases and Leases of low-value assets

The Group applies the short-term lease recognition exemption to its short-term leases of buildings and vehicle (i.e., those leases that have a lease term of 12 months or less from the commencement date and do not contain a purchase option). It also applies the lease of low-value assets recognition exemption to leases of office equipment that are considered to be low value. Lease payments on short-term leases and leases of low-value assets are recognised as expense on a straight-line basis over the lease term.

2.3.10 Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalized as part of the cost of the respective assets. All other borrowing costs are expensed in the period they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds.

2.3.11 Investment properties

Investment properties are measured initially at cost, including transaction costs and replacement costs which satisfied asset recognition requirements when they incurred. However, costs incurred during common maintenance activities are recognized as expenses when they occurred. Subsequent to initial recognition, investment properties are stated at cost, net of accumulated depreciation and accumulated impairment losses.

Investment properties are derecognized when either they have been disposed of or when the investment property is permanently withdrawn from use and no future economic benefit is expected from its disposal. The difference between the net disposal proceeds and the carrying amount of the asset is recognized in the statement of profit or loss in the period of derecognition.

Transfers are made to or from investment property only when there is a change in use. For a transfer from investment property to owner occupied property, the deemed cost for subsequent accounting is the carrying cost at the date of change in use. If owner occupied property becomes an investment property, the Group accounts for such property in accordance with the policy stated under property, plant and equipment up to the date of change in use.

2.3.12 Intangible assets

Intangible assets acquired separately are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is its fair value as of the date of acquisition. Following initial recognition, intangible assets are carried at cost less any accumulated amortization and any accumulated impairment losses. Internally generated intangible assets, excluding capitalized development costs, are not capitalized and expenditure is reflected in the statement of profit or loss in the year in which the expenditure is incurred.

The useful lives of intangible assets are assessed as either finite or indefinite. Intangible assets with finite lives are amortized over the useful economic life and assessed for impairment whenever there is an indication that the intangible asset may be impaired. The amortization period and the amortization method for an intangible asset with a finite useful life is reviewed at least at each financial year end. Changes in the expected useful life or the expected pattern of consumption of future economic benefits embodied in the asset is accounted for by changing the amortization period or method, as appropriate, and are treated as changes in accounting estimates. The amortization expense on intangible assets with finite lives is recognized in the statement of profit or loss in the expense category consistent with the function of the intangible assets.

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

Gains or losses arising from derecognition of an intangible asset are measured as the difference between the net disposal proceeds and the carrying amount of the asset and are recognized in the statement of profit or loss when the asset is derecognized.

2.3.12 Intangible assets (cont'd)

A summary of the policies applied to the Group's intangible assets is as follows:

	Useful lives	Amortization method
Goodwill	-	Test for impairment annually
Industrial property rights	5~15 years	Straight-line method
Overseas resources development (*)	Production period	Unit of production method
Others	5 years or production period	Straight-line method or unit
		of production method

(*) Oil, natural gas and other natural resources exploration and development expenditures are classified as overseas resource investments. When proved reserves of oil are determined and development is sanctioned, they are depreciated on a unit of production basis. Conversely, if there is any evidence or event that implies impairment of the asset, such as suspending the exploration or development before proposing its technical feasibility and possibility of commercialization, the Group commences tests on the assets for impairment. When the book value of the asset is greater than the estimated recoverable amounts for the residual period, the Group recognizes the difference as a loss on impairment.

2.3.13 Biological assets

Biological assets (excluding bearer plants) are measured at initial recognition and at the end of each reporting period at its fair value less costs to sell. Gain or loss arising on initial recognition of a biological asset at fair value less costs to sell and from a change in fair value of a biological asset shall be included in profit or loss for the period in which it arises. Agricultural products harvested from the Group's biological assets are measured at its fair value less costs to sell at the point of harvest which becomes the cost at that date. If an active market exists for a biological asset (excluding bearer plants) or agricultural products in its present location and condition, the quoted price in that market is the appropriate basis for determining the fair value of that asset. If an entity has access to different active markets, the entity uses the most relevant one. If an active market doesn't exist, the most recent market price, market price of similar asset can be used to assess fair value.

2.3.14 Pensions benefits

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

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

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

Net interest is calculated by applying the discount rate to the net defined benefit liability or asset. The Group recognizes the following changes in the net defined benefit obligation under selling and administrative expenses in the consolidated statement of profit or loss:

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

2.3.15 Provisions

Provisions are recognized when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. Where the Group expects some or all of a provision to be reimbursed, the reimbursement is recognized as a separate asset but only when the reimbursement is virtually certain. The expense relating to any provision is presented in the statement of profit or loss, net of any reimbursement.

2.3.16 Onerous contracts

If the Group has a contract that is onerous, the present obligation under the contract is recognised and measured as a provision. However, before a separate provision for an onerous contract is established, the Group recognises any impairment loss that has occurred on assets dedicated to that contract. The unavoidable costs under a contract reflect the least net cost of exiting from the contract, which is the lower of the cost of fulfilling it and any compensation or penalties arising from failure to fulfil it.

2.3.17 Treasury shares

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

2.3.18 Revenue from contracts with customers

The Group is in the business of sales of goods in the resource and infrastructure sectors, transportation brokerage and storage industry. The Group provides the supply of goods, export-import transactions, transportation arrange and storage service through contracts with customers. Revenue from contracts with customers is recognised when control of the goods or services are transferred to the customer at an amount that reflects the consideration to which the Group expects to be entitled in exchange for those goods or services.

2.3.18.1 Sales of goods

Revenue from sale of goods is recognised at the point in time when control of the asset is transferred to the customer, generally on delivery of the goods. The normal credit term is 30 to 90 days upon delivery. The Group considers whether there are other promises in the contract that are separate performance obligations to which a portion of the transaction price needs to be allocated. In determining the transaction price for the sale of goods, the Group considers principal versus agent consideration.

2.3.18.2 Principal versus agent consideration

When another party is involved in providing goods or services to its customer, the Group determines whether it is a principal or an agent in these transactions by evaluating the nature of its promise to the customer. The Group is a principal and records revenue on a gross basis if it controls the promised goods or services before transferring them to the customer. However, if the Group's role is only to arrange for another entity to provide the goods or services, then the Group is an agent and will need to record revenue at the net amount that it retains for its agency services.

2.3.18.3 Contract balance

Trade receivables

A receivable represents the Group's right to an amount of consideration that is unconditional. Refer to accounting policies of financial assets in the Note 2.3.4.1

Contract liabilities

A contract liability is the obligation to transfer goods or services to a customer for which the Group has received consideration (or an amount of consideration is due) from the customer. If a customer pays consideration before the Group transfers goods or services to the customer, a contract liability is recognised when the payment is made or the payment is due (whichever is earlier). Contract liabilities are recognised as revenue when the Group performs under the contract.

2.3.19 Foreign currency translation

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

2.3.19.1 Transactions and balances

Transactions in foreign currencies are initially recorded by the Group entities at their respective functional currency spot rates at the date the transaction first qualifies for recognition.

Monetary assets and liabilities denominated in foreign currencies are retranslated at the functional currency spot rate of exchange at the reporting date. All differences are taken to the statement of profit or loss with the exception of all monetary items that are designated as part of the hedge of the Group's net investment of a foreign operation. These are recognized in other comprehensive income until the net investment is disposed, at which time, the cumulative amount is reclassified to the statement of profit or loss. Tax charges and credits attributable to exchange differences on those monetary items are also recorded in other comprehensive income.

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

2.3.19.2 Translation of foreign operations

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

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 are treated as assets and liabilities of the foreign operations and translated at the spot rate of exchange at the reporting date.

2.3.20 Impairment of non-financial assets

The Group assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Group estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or CGU's fair value less costs of disposal and its value in use. The recoverable amount is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs of disposal, recent market transactions are taken into account. If no such transactions can be identified, an appropriate valuation model is used. These calculations are corroborated by valuation multiples, quoted share prices for publicly traded companies or other available fair value indicators.

The Group bases its impairment calculation on detailed budgets and forecast calculations, which are prepared separately for each of the Group's CGUs to which the individual assets are allocated. These budgets and forecast calculations generally cover a period of five years. A long-term growth rate is calculated and applied to project future cash flows after the fifth year.

Impairment losses of continuing operations, including impairment on inventories, are recognized in the statement of profit or loss and other comprehensive income in expense categories consistent with the function of the impaired asset, except for properties previously revalued with the revaluation taken to OCI. For such properties, the impairment is recognized in OCI up to the amount of any previous revaluation.

2.3.20 Impairment of non-financial assets (cont'd)

For assets excluding goodwill, an assessment is made at each reporting date as to whether there is any indication that previously recognized impairment losses may no longer exist or may have decreased. If such indication exists, the Group estimates the asset's or cash-generating unit's recoverable amount. A previously recognized impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognized. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognized for the asset in prior years. Such reversal is recognized in the statement of profit or loss and other comprehensive income unless the asset is carried at a revalued amount, in which case, the reversal is treated as a revaluation increase.

The following criteria are also applied in assessing impairment of specific assets:

Goodwill

Goodwill is tested for impairment annually (at certain time) and when circumstances indicate that the carrying value may be impaired.

Impairment is determined for goodwill by assessing the recoverable amount of each cash-generating unit (or group of cash-generating units) to which the goodwill relates. Where the recoverable amount of the cash generating unit is less than their carrying amount an impairment loss is recognized. Impairment losses relating to goodwill cannot be reversed in future periods.

Intangible assets excluding goodwill

For intangible assets with indefinite useful lives, the Group performs the impairment test for an individual asset or a cash-generating unit to which the asset has been allocated, annually or at any indication of impairment.

2.3.21 Taxes

2.3.21.1 Current income tax

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

Current income tax relating to items recognized directly in equity is recognized in equity and not in the statement of profit or loss. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

2.3.21.2 Deferred tax

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

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

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

2.3.21.2 Deferred tax (cont'd)

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

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

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

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

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

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

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

2.3.21.3 Sales tax

Expenses and assets are recognized net of the amount of sales tax, except:

- When the sales tax incurred on a purchase of assets or services is not recoverable from the taxation authority, in which case, the sales tax is recognized as part of the cost of acquisition of the asset or as part of the expense item, as applicable
- > When receivables and payables are stated with the amount of sales tax included

The net amount of sales tax recoverable from, or payable to, the taxation authority is included as part of receivables or payables in the statement of financial position.

2.4 New and amended standards and interpretations

The Group applied KIFRS 1116 *Leases* for the first time. The nature and effect of the changes as a result of adoption of this new accounting standard is described below.

Several other amendments and interpretations apply for the first time in 2019, but do not have an impact on the consolidated financial statements of the Group. The Group has not early adopted any standards, interpretations or amendments that have been issued but are not yet effective.

2.4.1 KIFRS 1116 Leases

KIFRS 1116 supersedes KIFRS 1017 Leases, KIFRS 2104 Determining whether an Arrangement contains a Lease, KIFRS 2015 Operating Leases-Incentives and KIFRS 2027 Evaluating the Substance of Transactions Involving the Legal Form of a Lease. The standard sets out the principles for the recognition, measurement, presentation and disclosure of leases and requires lessees to recognize most leases on the balance sheet.

Lessor accounting under KIFRS 1116 is substantially unchanged from KIFRS 1017. Lessors will continue to classify leases as either operating or finance leases using similar principles as in KIFRS 1017. Therefore, KIFRS 1116 does not have an impact for leases where the Group is the lessor.

The Group adopted KIFRS 1116 using the full retrospective method of adoption, with the date of initial application of January 1, 2019. The Group elected to use the transition practical expedient to not reassess whether a contract is, or contains, a lease at January 1, 2019. Instead, the Group applied the standard only to contracts that were previously identified as leases applying KIFRS 1017 and KIFRS 2104 at the date of initial application. The Group also elected to use the recognition exemptions for lease contracts that, at the commencement date, have a lease term of 12 months or less and do not contain a purchase option (short-term leases), and lease contracts for which the underlying asset is of low value (low-value assets).

The adoption effect of KIFRS 1116 as of January 1, 2019 is, as follows (Korean won in millions):

	Increa	se (Decrease)
Assets		
Current assets	$\overline{\mathbf{W}}$	(120)
Non-current assets		167,306
Total assets	W	167,186
Liabilities		
Current liabilities	\overline{W}	73,080
Non-current liabilities		94,106
Total liabilities	W	167,186

The Group has lease contracts for various items of building, vehicles etc. Before the adoption of KIFRS 1116, the Group classified each of its leases (as lessee) at the inception date as either a finance lease or an operating lease.

Upon adoption of KIFRS 1116, the Group applied a single recognition and measurement approach for all leases except for short-term leases and leases of low-value assets. Refer to Note 2.3.9 Leases for the accounting policies applied beginning on 1 January 2019. The standard provides specific transition requirements and practical expedients, which have been applied by the Group.

Leases previously classified as finance leases

The Group has not early classified leases as finance leases.

2.4.1 KIFRS 1116 *Leases* (cont'd)

Leases previously classified as operating leases

The Group recognized right-of-use assets and lease liabilities for those leases previously classified as operating leases, except for short-term leases and leases of low-value assets. The right-of-use assets for most leases were recognized based on the carrying amount as if the standard had always been applied, apart from the use of incremental borrowing rate at the date of initial application. In some leases, the right-of-use assets were recognized based on the amount equal to the lease liabilities, adjusted for any related prepaid and accrued lease payments previously recognized. Lease liabilities were recognized based on the present value of the remaining lease payments, discounted using the incremental borrowing rate at the date of initial application.

The Group also applied the available practical expedients wherein it:

- > Used a single discount rate to a portfolio of leases with reasonably similar characteristics
- Relied on its assessment of whether leases are onerous immediately before the date of initial application
- Applied the short-term leases exemptions to leases with lease term that ends within 12 months of the date of initial application
- Excluded the initial direct costs from the measurement of the right-of-use asset at the date of initial application
- Used hindsight in determining the lease term where the contract contained options to extend or terminate the lease

The lease liabilities as of 1 January 2019 can be reconciled to the operating lease commitments as of 31 December 2018, as follows (Korean won in million):

		Total
Operating leases as of December 31, 2018	\mathbb{W}	214,509
The weighted average incremental borrowing rate at the January 1, 2019		2.27%~3.91%
Contract discount at the January 1,2019		204,629
Less:		
Contract relevant to short-term leases		(33,139)
Contract relevant to leases of low-value assets		(4,304)
Lease liabilities as of January 1, 2019	\mathbb{W}	167,186
Current lease liabilities	₩	73,080
Non-current lease liabilities		94,106

2.4.2 KIFRS 2123 Uncertainty over Income Tax Treatment

The Interpretation addresses the accounting for income taxes when tax treatments involve uncertainty that affects the application of KIFRS 1012 *Income Taxes*. It does not apply to taxes or levies outside the scope of KIFRS 1012, nor does it specifically include requirements relating to interest and penalties associated with uncertain tax treatments. The Interpretation specifically addresses the following:

- Whether an entity considers uncertain tax treatments separately
- > The assumptions an entity makes about the examination of tax treatments by taxation authorities
- How an entity determines taxable profit (tax loss), tax bases, unused tax losses, unused tax credits and tax rates
- > How an entity considers changes in facts and circumstances

The Group determines whether to consider each uncertain tax treatment separately or together with one or more other uncertain tax treatments and uses the approach that better predicts the resolution of the uncertainty.

The Group applies significant judgement in identifying uncertainties over income tax treatments. Since the Group operates in a complex multinational environment, it assessed whether the Interpretation had an impact on its consolidated financial statements.

2.4.2 KIFRS 2123 Uncertainty over Income Tax Treatment (cont'd)

Upon adoption of the Interpretation, the Group considered whether it has any uncertain tax positions, particularly those relating to transfer pricing. The Company's and the subsidiaries' tax filings in different jurisdictions include deductions related to transfer pricing and the taxation authorities may challenge those tax treatments. The Group determined, based on its tax compliance and transfer pricing study, that it is probable that its tax treatments (including those for the subsidiaries) will be accepted by the taxation authorities. The Interpretation did not have an impact on the consolidated financial statements of the Group.

2.4.3 Amendments to KIFRS 1109: Prepayment Features with Negative Compensation

Under KIFRS 1109, a debt instrument can be measured at amortised cost or at fair value through other comprehensive income, provided that the contractual cash flows are 'solely payments of principal and interest on the principal amount outstanding' (the SPPI criterion) and the instrument is held within the appropriate business model for that classification. The amendments to KIFRS 1109 clarify that a financial asset passes the SPPI criterion regardless of an event or circumstance that causes the early termination of the contract and irrespective of which party pays or receives reasonable compensation for the early termination of the contract. These amendments had no impact on the consolidated financial statements of the Group.

2.4.4 Amendments to KIFRS 1019: Plan Amendment, Curtailment or Settlement

The amendments to KIFRS 1019 address the accounting when a plan amendment, curtailment or settlement occurs during a reporting period. The amendments specify that when a plan amendment, curtailment or settlement occurs during the annual reporting period, an entity is required to determine the current service cost for the remainder of the period after the plan amendment, curtailment or settlement, using the actuarial assumptions used to remeasure the net defined benefit liability (asset) reflecting the benefits offered under the plan and the plan assets after that event. An entity is also required to determine the net interest for the remainder of the period after the plan and the plan assets after that event, curtailment or settlement using the net defined benefit liability (asset) reflecting the benefits offered under the plan and the plan assets after that event, and the plan assets after that event the plan and the plan assets after that event the plan and the plan assets after that event the plan and the plan assets after that event the plan and the plan assets after that event the plan and the plan assets after that event the plan and the plan assets after that event, and the discount rate used to remeasure that net defined benefit liability (asset). The amendments had no impact on the consolidated financial statements of the Group as it did not have any plan amendments, curtailments, or settlements during the period.

2.4.5 Amendments to KIFRS 1028: Long-term interests in associates and joint ventures

The amendments clarify that an entity applies KIFRS 1109 to long-term interests in an associate or joint venture to which the equity method is not applied but that, in substance, form part of the net investment in the associate or joint venture (long-term interests). This clarification is relevant because it implies that the expected credit loss model in KIFRS 1109 applies to such long-term interests.

The amendments also clarified that, in applying KIFRS 1109, an entity does not take account of any losses of the associate or joint venture, or any impairment losses on the net investment, recognized as adjustments to the net investment in the associate or joint venture that arise from applying KIFRS 1028 *Investments in Associates and Joint Ventures* The amendments are retrospectively applicable at the beginning of the first annual reporting period beginning on or after January 1, 2019, with early application permitted. These amendments had no impact on the consolidated financial statements.

2.4.6 Annual Improvements 2015-2017 Cycle

> KIFRS 1103 Business Combinations

The amendments clarify that, when an entity obtains control of a business that is a joint operation, it applies the requirements for a business combination achieved in stages, including remeasuring previously held interests in the assets and liabilities of the joint operation at fair value. In doing so, the acquirer remeasures its entire previously held interest in the joint operation.

An entity applies those amendments to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after January 1, 2019, with early application permitted.

These amendments had no impact on the consolidated financial statements of the Group as there is no transaction where joint control is obtained

> KIFRS 1111 Joint Arrangements

An entity that participates in, but does not have joint control of, a joint operation might obtain joint control of the joint operation in which the activity of the joint operation constitutes a business as defined in KIFRS 1103. The amendments clarify that the previously held interests in that joint operation are not remeasured.

An entity applies those amendments to transactions in which it obtains joint control on or after the beginning of the first annual reporting period beginning on or after January 1, 2019, with early application permitted.

These amendments had no impact on the consolidated financial statements of the Group as there is no transaction where a joint control is obtained.

> KIFRS 1012 Income Taxes

The amendments clarify that the income tax consequences of dividends are linked more directly to past transactions or events that generated distributable profits than to distributions to owners. Therefore, an entity recognizes the income tax consequences of dividends in profit or loss, other comprehensive income or equity according to where it originally recognised those past transactions or events.

An entity applies the amendments for annual reporting periods beginning on or after January 1, 2019, with early application permitted. When the entity first applies those amendments, it applies them to the income tax consequences of dividends recognised on or after the beginning of the earliest comparative period.

Since the Group's current practice is in line with these amendments, they had no impact on the consolidated financial statements of the Group.

> KIFRS 1023 Borrowing Costs

The amendments clarify that an entity treats as part of general borrowings any borrowing originally made to develop a qualifying asset when substantially all of the activities necessary to prepare that asset for its intended use or sale are complete.

The entity applies the amendments to borrowing costs incurred on or after the beginning of the annual reporting period in which the entity first applies those amendments. An entity applies those amendments for annual reporting periods beginning on or after January 1, 2019, with early application permitted.

Since the Group's current practice is in line with these amendments, they had no impact on the consolidated financial statements of the Group.

2.5 Significant accounting judgments, estimates and assumptions

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

Other disclosures relating to the Group's exposure to risks and uncertainties includes:

- Financial instruments risk management and policies Note 25
- Sensitivity analyses disclosures

2.5.1 Judgments

In the process of applying the Group's accounting policies, management has made the following judgments, which have the most significant effect on the amounts recognized in the consolidated financial statements:

Note 19, 25

Determining the lease term of contracts with renewal and termination options – Group as lessee The Group determines the lease term as the non-cancellable term of the lease, together with any periods

The Group determines the lease term as the non-cancellable term of the lease, together with any periods covered by an option to extend the lease if it is reasonably certain to be exercised, or any periods covered by an option to terminate the lease, if it is reasonably certain not to be exercised.

The Group applies judgement in evaluating whether it is reasonably certain whether or not to exercise the option to renew and recognizes right-of-use assets and lease liabilities.

2.5.2 Estimates and assumptions

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

The Group based its assumptions and estimates on parameters available when the consolidated financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising beyond control of the Group. Such changes are reflected in the assumptions when they occur.

2.5.2.1 Impairment of non-financial assets

The Group assesses at each reporting date whether there is any objective evidence that a non-financial asset is impaired. Goodwill and intangible assets with indefinite useful lives are tested when there are indications. Other non-financial asset is tested when there are indications that carrying amount is not to be collected. In assessing value in use, management estimates future cash flows from certain assets or CGUs and selects the appropriate discount rate to calculate the present value of future cash flow.

2.5.2.2 Defined benefit pension plan

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

In determining the appropriate discount rate, management considers the interest rates of corporate bonds in currencies consistent with the currencies of the post-employment benefit obligation with at least an 'AA' rating or above, as set by an internationally acknowledged rating agency. The mortality rate is based on publicly available mortality tables for the specific countries. Future salary increases and pension increases are based on expected future inflation rates for the respective countries.

2.5.2.3 Fair value measurement of financial instruments

When the fair values of financial assets and financial liabilities recorded in the statement of financial position cannot be measured based on quoted prices in active markets, their fair value is measured using valuation techniques including the discounted cash flow (DCF) model. The inputs to these models are taken from observable markets where possible, but where this is not feasible, a degree of judgement is required in establishing fair values. Judgements include considerations of inputs such as liquidity risk, credit risk and volatility. Changes in assumptions relating to these factors could affect the reported fair value of financial instruments.

2.5.2.4 Provision for expected credit losses of trade receivables

The Group uses a provision matrix to calculate ECLs for trade receivables. The provision rates are based on days past due for groupings of various customer segments that have similar loss patterns (i.e., by geography, product type, customer type and rating, and coverage by letters of credit and other forms of credit insurance).

The provision matrix is initially based on the Group's historical observed default rates. The Group will calibrate the matrix to adjust the historical credit loss experience with forward-looking information. For instance, if forecast economic conditions (i.e., gross domestic product) are expected to deteriorate over the next year which can lead to an increased number of defaults in the manufacturing sector, the historical default rates are adjusted. At every reporting date, the historical observed default rates are updated and changes in the forward-looking estimates are analysed.

The assessment of the correlation between historical observed default rates, forecast economic conditions and ECLs is a significant estimate. The amount of ECLs is sensitive to changes in circumstances and of forecast economic conditions. The Group's historical credit loss experience and forecast of economic conditions may also not be representative of customer's actual default in the future.

2.5.2.5 Leases - Estimating the incremental borrowing rate

The Group cannot readily determine the interest rate implicit in the lease, therefore, it uses its incremental borrowing rate (IBR) to measure lease liabilities. The IBR is the rate of interest that the Group would have to pay to borrow over a similar term, and with a similar security, the funds necessary to obtain an asset of a similar value to the right-of-use asset in a similar economic environment. The IBR therefore reflects what the Group 'would have to pay', which requires estimation when no observable rates are available or when they need to be adjusted to reflect the terms and conditions of the lease.

The Group estimates the IBR using observable inputs (such as market interest rates) when available and is required to make certain entity-specific estimates (such as the subsidiary's stand-alone credit rating).

2.6 Standards issued but not yet effective

The new and amended standards and interpretations that are issued, but not yet effective, up to the date of issuance of the Group's financial statements are disclosed below. The Group intends to adopt these new and amended standards and interpretations, if applicable, when they become effective.

2.6.1 Amendments to KIFRS 1003: Definition of a Business

In October 2018, the KASB issued amendments to the definition of a business in KIFRS 1003 *Business Combinations* to help entities determine whether an acquired set of activities and assets is a business or not. They clarify the minimum requirements for a business, remove the assessment of whether market participants are capable of replacing any missing elements, add guidance to help entities assess whether an acquired process is substantive, narrow the definitions of a business and of outputs, and introduce an optional fair value concentration test. New illustrative examples were provided along with the amendments.

Since the amendments apply prospectively to transactions or other events that occur on or after the date of first application, the Group will not be affected by these amendments on the date of transition.

2.6.2 Amendments to KIFRS 1001 and KIFRS 1008: Definition of Material

In October 2018, the IASB issued amendments to KIFRS 1001 *Presentation of Financial Statements* and KIFRS 1008 *Accounting Policies, Changes in Accounting Estimates and Errors* to align the definition of 'material' across the standards and to clarify certain aspects of the definition. The new definition states that, 'Information is material if omitting, misstating or obscuring it could reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements, which provide financial information about a specific reporting entity.'

The amendments to the definition of material is not expected to have a significant impact on the Group's consolidated financial statements.

3. Segment information

For management purposes, the Group is organized into business units based on its products and services and has four reportable operating segments as follows:

Segment	Principal business activity
Resources	Coal, palm, metals, oil & gas
Infra-business	IT, chemical, project and others
Logistics	Shipping, air transport, land transport, international courier, customs, warehousing, distribution consulting and others
Collectively grouped	Common group management

3.1 Segment sales and operating income

Segment sales and operating income of the Group are as follows (Korean won in millions):

		20		2018				
		Operating						Operating
		Sales	inc	ome (loss)		Sales		income
Resources	₩	1,197,068	₩	(8,771)	₩	1,059,085	₩	28,252
Infra-business		5,222,086		31,616		5,029,815		41,460
Logistics		4,111,703		111,939		3,899,325		95,947
	\mathbb{W}	10,530,857	₩	134,784	₩	9,988,225	₩	165,659

3.2 Segment assets and liabilities

Segment assets and liabilities of the Group are as follows (Korean won in millions):

		20		2018					
		Assets Liabilities				Assets	Liabilities		
Resources	₩	1,310,548	₩	662,105	₩	1,487,996	₩	714,979	
Infra-business		1,437,958		1,251,764		1,661,317		1,454,316	
Logistics		1,099,304		854,316		997,123		726,341	
Collectively grouped (*)		1,028,172		559,181		891,636		592,899	
	₩	4,875,982	₩	3,327,366	₩	5,038,072	₩	3,488,535	

(*) Assets and liabilities that individually do not have a material effect to a specific operating segment have been collectively grouped. These include cash and cash equivalents, investment assets, property, plant and equipment, and intangible assets.

3.3 Sales by geographic region

Sales by geographic region of the Group are as follows (Korean won in millions):

		2019		2018
Korea	\mathbb{W}	4,641,192	₩	4,955,796
Americas		1,805,336		612,531
Europe		1,312,315		690,359
Asia		4,601,772		5,740,235
Others		69,566		4,315
Consolidation adjustments		(1,899,324)		(2,015,011)
	\overline{W}	10,530,857	₩	9,988,225

One major customer (LG Electronics) accounts for more than 10% of the Group's total sales for the year ended December 31, 2019, and two major customers (LG Electronics, LG Chem) accounted for more than 10% of the Group's total sales for the year ended December 31, 2018 (Refer to Note 23).

4. Classification of financial instruments

4.1 Financial instruments by category

4.1.1 Financial assets

Financial assets by category as of December 31, 2019 and 2018 are as follows (Korean won in millions):

				2	019				
	asset value	ancial ts at fair through t or loss	Financial assets at fair value through OCI	as	nancial sets at tised cost	acco	edge unting- d assets		Total
Cash and cash equivalents Short term financial asset Equity instruments held for	₩	31,000 -	₩ -	₩	392,582 10,553	₩	-	₩	423,582 10,553
long-term		11,140	173,016		-		-		184,156
Trade accounts receivable		-	-		994,064		-		994,064
Other accounts receivable		1,153	-		287,931		-		289,084
Long-term loans		-	-		33,302		-		33,302
Other financial assets		-			240,165		1,261		241,426
	₩	43,293	₩ 173,016	₩	1,958,597	₩	1,261	₩	2,176,167
				2	018				
	asse value	ancial ts at fair through	Financial assets at fair value through	Fii as	nancial ssets at	acco	edge unting-		
Cash and each aquivalanta	asse value profit	ts at fair	assets at fair value through OCI	Fii as amor	nancial sets at rtised cost	acco relateo	0	117	Total
Cash and cash equivalents Short term financial asset	asse value	ts at fair through	assets at fair value through	Fii as	nancial ssets at	acco	unting-	₩	Total 342,014 14,162
•	asse value profit	ts at fair through	assets at fair value through OCI	Fii as amor	nancial sets at <u>tised cost</u> 342,014	acco relateo	unting-	₩	342,014
Short term financial asset Equity instruments held for	asse value profit	ts at fair through t or loss - -	assets at fair value through OCI ₩ -	Fii as amor	nancial sets at <u>tised cost</u> 342,014	acco relateo	unting-	₩	342,014 14,162
Short term financial asset Equity instruments held for long-term	asse value profit	ts at fair through t or loss - -	assets at fair value through OCI ₩ -	Fii as amor	nancial sets at tised cost 342,014 14,162	acco relateo	unting-	₩	342,014 14,162 161,655
Short term financial asset Equity instruments held for long-term Trade accounts receivable	asse value profit	ts at fair through or loss - - 10,501 -	assets at fair value through OCI ₩ -	Fii as amor	nancial ssets at 342,014 14,162 - 1,067,921	acco relateo	unting-	₩	342,014 14,162 161,655 1,067,921
Short term financial asset Equity instruments held for long-term Trade accounts receivable Other accounts receivable	asse value profit	ts at fair through or loss - - 10,501 -	assets at fair value through OCI ₩ - 151,154 - - -	Fii as amor ₩	nancial ssets at 342,014 14,162 - 1,067,921 382,718	acco relateo	unting-	₩	342,014 14,162 161,655 1,067,921 384,169
Short term financial asset Equity instruments held for long-term Trade accounts receivable Other accounts receivable Long-term loans	asse value profit	ts at fair through or loss - - 10,501 -	assets at fair value through OCI ₩ -	Fii as amor	nancial ssets at 342,014 14,162 - 1,067,921 382,718 56,559	acco relateo	unting- d assets - - - - - -	₩	342,014 14,162 161,655 1,067,921 384,169 56,559

4.1.2 Financial liabilities

Financial liabilities by category as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	20	19	
Financial liabilities at fair value through profit or loss	Financial liabilities measured at amortized cost	Hedge accounting-related liabilities	Total
₩ -	₩ 1,103,970	₩ -	₩ 1,103,970
1,890	293,549	-	295,439
-	772,364	-	772,364
-	319,544	-	319,544
-	222,880 299,551	- 8,228	222,880 307,779
₩ 1,890	₩ 3,011,858		
Financial liabilities at fair value	Financial liabilities	Hedge	
	at fair value through profit or loss ₩ - 1,890 - - - - - - - - - - - - - - - - - - -	Financial liabilities at fair value through profit or loss Financial liabilities measured at amortized cost ₩ - ₩ 1,103,970 1,890 293,549 - 772,364 - 319,544 - 299,551 ₩ 1,890 299,551 ₩ 3,011,858 - 20 Financial liabilities at fair value Financial liabilities	at fair value through profit or lossFinancial liabilities measured at amortized costHedge accounting-related liabilities₩-1,103,970₩-1,890293,5491,890293,549772,364222,880299,5518,228₩1,8903,011,858₩₩3,011,858₩8,228Financial liabilities at fair valueFinancial liabilities Financial liabilitiesHedge

	loss		amortized cost	liabilities	Total
Trade accounts payable	₩	-	₩ 1,184,020	₩ -	₩ 1,184,020
Other accounts payable		574	388,498	-	- 389,072
Borrowings		-	797,846	-	- 797,846
Bonds payable		-	389,222	-	- 389,222
Current portion of bonds payable and long-term					
borrowings		-	243,582	-	- 243,582
Other financial liabilities		-	141,169	1,998	<u> </u>
	₩	574	₩ 3,144,337	₩ 1,998	3,146,909

4.2 Gains and losses on financial instruments

4.2.1 Gains and losses on financial assets

Gains and losses on financial assets by category for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

					2	2019				
	asset value	ancial s at fair through or loss	asse value	nancial ets at fair e through OCI	a	inancial ssets at rtised cost	acc	ledge counting- ed assets		Total
Net income:										
Interest income	₩	-	₩	-	₩	15,974	₩	-	₩	15,974
Dividend income		-		6,176		-		-		6,176
Gain and loss on foreign										
currency transactions		-		-		27,249		-		27,249
Gain and loss on foreign										
currency translation		-		-		35		-		35
Gain and loss on settlement of										
currency forwards		12,740		-		-		-		12,740
Gain and loss on valuation of										
currency forwards		1,153		-		-		-		1,153
Gain and loss on settlement of								4 400		4 400
currency swaps		-		-		-		1,493		1,493
Gain and loss on valuation of								0.070		0.070
currency swaps		-		-		-		2,978		2,978
Bad debt expenses		-		-		(2,475)		-		(2,475)
Other bad debt expenses		-		-		(2,442)		-		(2,442)
Loss on disposal of receivables		-		-		(19,880)		-		(19,880)
Other comprehensive income (*):										
Loss on valuation of financial assets at fair value through OCI		-		(10,452)		-		-		(10,452)
Loss on valuation of derivatives designated as										,
cash flow hedges		-		-		-		(70)		(70)
	₩	13,893	₩	(4,276)	₩	18,461	₩	4,401	₩	(70)

(*) Other comprehensive income is the amount before income tax effect.

4.2.1 Gains and losses on financial assets (cont'd)

					2	2018				
	asset value	ancial s at fair through or loss	asse value	nancial ets at fair e through OCI	а	inancial ssets at ortised cost	accou	edge unting- d assets		Total
Net income:										
Interest income	₩	-	₩	-	₩	20,077	₩	-	₩	20,077
Dividend income		203		6,604		-		-		6,807
Gain and loss on foreign										·
currency transactions		-		-		14,897		-		14,897
Gain and loss on foreign										
currency translation		-		-		5,962		-		5,962
Gain and loss on settlement of										
currency forwards		10,016		-		-		-		10,016
Gain and loss on valuation of										
currency forwards		1,451		-		-		-		1,451
Gain and loss on valuation of										
currency swaps		-		-		-		4,670		4,670
Reversal of allowances for										
doubtful accounts		-		-		1,094		-		1,094
Other bad debt expenses		-		-		(3,196)		-		(3,196)
Loss on disposal of receivables		-		-		(18,872)		-		(18,872)
Other comprehensive income (*):										
Gain on valuation of financial assets at fair value through OCI				8,426		-		-		8,426
Loss on valuation of derivatives designated as				0, .20						
cash flow hedges		-	117	-		-		(148)		(148)
	₩	11,670	₩	15,030	₩	19,962	₩	4,522	₩	51,184

(*) Other comprehensive income is the amount before income tax effect.

4.2.2 Gains and losses on financial liabilities

Gain and loss on financial liabilities by category for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	20)19	
fair value	Financial liabilities measured at amortized cost	Hedge accounting-related liabilities	Total
-	₩ (49,068)	₩ -	₩ (49,068)
-	(30,049)	-	(30,049)
-	(1,933)	-	(1,933)
(14,386)	-	-	(14,386)
(1,890)	-	-	(1,890)
_	_	(8 704)	(8,704)
(16,276)	₩ (81,050)		₩ (106,030)
	(14,386)	ncial liabilities fair value ugh profit or lossFinancial liabilities measured at amortized cost-₩(49,068)-(30,049)-(1,933)(14,386)-(1,890)-	ncial liabilities fair value ugh profit or lossFinancial liabilities measured at amortized costHedge accounting-related liabilities-₩(49,068)₩(30,049)(1,933)-(14,386)(8,704)

(*) Other comprehensive loss is the amount before income tax effect.

			20	18		
	Financial liabilitie at fair value through profit or loss	Finano me	cial liabilities asured at rtized cost	Hedge accounting-related liabilities		Total
Net loss:						
Interest expenses	\mathbb{W}	-₩	(49,825)	₩ -	₩	(49,825)
Loss on foreign currency transactions Loss on foreign currency		-	(22,697)	-		(22,697)
translation		-	(11,125)	-		(11,125)
Loss on settlement of currency forwards Loss on valuation of	(10,04	5)	-	-		(10,045)
currency forwards	(57-	4)	-	-		(574)
Other comprehensive income (*): Gain on valuation of derivatives designated as cash flow hedges		_	-	2,198		2,198
U U	₩ (10,61	9) ₩	(83,647)	₩ 2,198	₩	(92,068)

(*) Other comprehensive income is the amount before income tax effect.

5. Cash and cash equivalents

Details of cash and cash equivalents as of December 31, 2019 and 2018 are as follows (Korean won in millions):

		2019		2018
Cash on hand	\overline{W}	747	₩	2,999
Short-term deposits		422,835		339,015
	\overline{W}	423,582	₩	342,014

Outstanding balances on restricted deposits included in long-term financial instruments as of December 31, 2019 amounted to #3,398 million (#5,370 million in 2018) which consisted of mine restoration deposits and others.

6. Derivative financial instruments

6.1 Valuation of derivative financial instruments

Valuation gains and losses arising from derivative financial instruments included in other accounts receivable and payable as of December 31, 2019 and 2018 are presented as follows (Korean won in millions):

	2019						2018					
	Gain on Loss on valuation				Other comprehensive Gain on income (*1) valuation			-	ss on uation	Other comprehensive income (*1)		
Currency forwards	₩	1,153	₩	1,890	₩	-	₩	1,451	₩	574	₩	-
Currency swaps		2,978		-		(378)		4,670		-		(400)
Interest rate swaps	_	<u> </u>			(8,326)		-		-	_	2,451	
	₩	4,131	₩	1,890	₩	(8,704)	₩	6,121	₩₽	574	₩	2,051

(*1) Other comprehensive income is the amount before income tax effect.

6.2 Currency forwards

As of December 31, 2019 and 2018, gains and losses on unsettled currency forward contracts are as follows (Korean won in millions and other currencies in thousands):

			2019					
Position-buy	Buying amount	Position-sell	Selling amount	Contracted exchange rate	Gain o	n valuation	Loss or	valuation
KRW	121,605	USD	104,266	1,162.50 ~ 1,184.50	₩	1,140	₩	-
KRW	735	CNY	4,395	167.24		9		-
EUR	400	KRW	515	1287.95		4		-
USD	104,843	KRW	122,427	1,152.70 ~ 1,176.00		-		1,890
					₩	1,153	₩	1,890
			2018					
			2010	Contracted				
Position-buy	Buying amount	Position-sell	Selling amount	exchange rate	Gain o	n valuation	Loss or	valuation
KRW	66,827	USD	59,401	1,109,10 ~ 1,130.50	₩	499	₩	-
KRW	19	JPY	1,840	10.10		-		-
USD	94,922	KRW	104,935	1,055.60 ~ 1,127.17		952		(553)
KRW	6,130	EUR	4,800	1,277.00		-		(21
					₩	1,451	₩	(574)

6.3 Currency swaps

As of December 31, 2019 and 2018, gains and losses on unsettled currency swap contracts are as follows (Korean won in millions and other currencies in thousands):

				201	9					
Contracted party	Buying amount	Selling amount	Contracted exchange rate	Receivable interest rate	Payment interest rate	Contracted term	Gain c	on valuation	Other	comprehensive loss
The Export Import Bank	USD			3ML +		2016.4.1 ~				
of Korea	75,000	₩ 85,838	1,144.5	2.30%	3.20%	2021.4.1	₩	2,978	₩	(378)

				201	8					
			Contracted		Payment					
Contracted party	Buying amount	Selling amount	exchange rate	Receivable interest rate	interest rate	Contracted term	Gain o	n valuation	Other	comprehensive loss
The Export Import Bank of Korea	USD 100,000	₩ 114,450	1,144.5	3ML + 2.30%	3.20%	2016.4.1 ~ 2021.4.1	₩	4,670	₩	(400)

6.4 Interest rate swaps

As of December 31, 2019 and 2018, gains and losses on unsettled interest rate swap contracts are as follows (Korean won in millions and foreign currencies in thousands):

			2	019				
Contracted party		ractual ncipal	Receivable interest rate	Payment interest rate	Contracted term	Other comprehensive income (loss)		
Korea Development Bank	USD	102,620	LIBOR	2.77%	2017.02.27 ~ 2034.09.25	₩	(8,326) (8,326)	
			2	018				
Contracted party		ractual ncipal	Receivable interest rate	Payment interest rate	Contracted term	compi	Other Tehensive ne (loss)	
Shinhan Bank	₩	20,000	CD (91 days)	1.21%	2016.06.30 ~ 2019.07.01	₩	(138)	
Korea Development Bank	USD	99,713	LIBOR	2.77%	2017.02.27 ~ 2034.09.25		2,589	
						₩	2,451	

7. Inventories

Details of inventories as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	2019							
	Valuation							
	Acquis	sition cost	al	lowance	Book value			
Merchandise	₩	212,223	₩	(3,003)	₩	209,220		
Finished goods		23,847		(3,424)		20,423		
Raw materials		12,175		(126)		12,049		
Stored goods		2,902		-		2,902		
Materials in transit		274,705		-		274,705		
	₩	525,852	₩	(6,553)	₩	519,299		

	2018								
			Va	luation					
	Acqui	isition cost	allowance		Book value				
Merchandise	₩	188,700	₩	(435)	₩	188,265			
Finished goods		27,017		(2,363)		24,654			
Raw materials		13,380		(57)		13,323			
Stored goods		2,306		-		2,306			
Materials in transit		285,553				285,553			
	₩	516,956	₩	(2,855)	₩	514,101			

8. Investment assets and Investment in associates

8.1 Investment assets

Details of investment assets as of December 31, 2019 and 2018 are as follows (Korean won in millions):

		2019	_	2018
Equity instruments held for long-term:				
Financial assets at fair value through profit or loss	₩	11,140	₩	10,501
Financial assets at fair value through OCI		173,016		151,154
Long-term loans receivable		33,302		56,559
	₩	217,458	₩	218,214

8.2 Equity instruments held for long-term

As of December 31, 2019, details of equity instruments held for long-term are as follows (Korean won in millions):

	Number of shares	Equity ownership (%)	Acquisition cost	Book value
Financial assets at fair value				
through profit or loss		1.00	₩ 4779	W 4.770
Aromatics Oman LLC	- E 206 250	15.50	1,110	
EIC Properties Pte. Ltd.	5,296,350	15.50	3,589	6,361
Financial assets at fair value			8,368	11,140
through OCI (*1)				
Korea Ras Laffan LNG Co.,				
Ltd. (Qatar LNG project)	1,558,666	5.60	2,410	33,853
Vietnam Korea Exchange Ltd.	-	10.00	322	322
LG Int'l (Saudi) LLC (*2)	-	90.00	118	118
Oilhub Korea Yeosu Co., Ltd.	131,000	5.00	7,205	9,707
GS E&R Co., Ltd.	1,654,445	9.52	95,585	96,961
Tianjin LG Bohai Chemical	-	10.00	11,737	19,358
Cobalt blue holdings Ltd.	7,093,959	4.70	6,467	805
PT Resources Alam Indonesia				
Tbk.	250,000,000	5.00	9,497	4,879
Tangshan Caofeidian Steam				
Coal Storage & Blending Co., Ltd.		1.50	1.075	1.074
RedcapTour Co., Ltd.	250,000	2.91	428	3,913
Chosun Broadcasting	250,000	2.91	420	3,913
Corporation	420,000	0.68	2,100	1,509
Kumkang Logistics		-	60	-
iPort Co., Ltd.	4,523	5.26	500	500
Information & Communication	,			
Financial Cooperative	42	-	15	17
Hanmi Flexible Co.,Ltd.	21	0.03	6	-
Liveron Co.,Ltd.	30	0.11	6	
			137,531	173,016
			₩ 145,899	₩ 184,156

(*1) Financial assets measured at fair value through OCI include investments in shares of non-listed companies held as non-controlling interests. As the Group holds these investments for the purpose of business strategy, fair value changes are presented as OCI and the Group irrevocably elected to classify as financial asset at fair value through OCI.

(*2) The Group's equity interest in the entity has been excluded from investments in subsidiaries and associates as the entity is undergoing liquidation procedures and therefore has no substantial business operations.

8.2 Equity instruments held for long-term(cont'd)

Changes in the net book value of equity instruments held for long-term as of December 31, 2019 and 2018 are as follows (Korean won in millions):

		2019								
	Equity		Acquisition		Translation gain					
	ownership (%)	Jan. 1	(disposal)	Valuation	(loss)	Dec. 31				
Financial assets at fair value										
through profit or loss										
Aromatics Oman LLC	1.00		₩ -	₩ -	₩ -	₩ 4,779				
EIC Properties Pte. Ltd.	15.50	5,722	-	439	200	6,361				
		10,501		439	200	11,140				
Financial assets at fair value through OCI										
Korea Ras Laffan LNG Limited										
(Qatar LNG project)	5.60	38,255	-	(4,402)	-	33,853				
Vietnam Korea Exchange Ltd.	10.00	322	-	-	-	322				
LG Int'l (Saudi) LLC	90.00	118	-	-	-	118				
Minera Corocobre S.A (*1)	11.18	586	(586)	-	-	-				
Oilhub Korea Yeosu Co., Ltd.	5.00	7,848	-	1,859	-	9,707				
GS E&R Co, Ltd. (*2)	9.52	78,844	21,931	(3,814)	-	96,961				
Tianjin LG Bohai Chemical	10.00	17,109	-	2,249	-	19,358				
Cobalt blue holdings Ltd. (*3)	4.73	1,146	-	(341)	-	805				
PT Resources Alam		,		· · · · · ·						
Indonesia Tbk (*4)	5.00	-	9,561	(4,649)	(33)	4,879				
Tangshan Caofeidian Steam										
Coal Storage & Blending Co., Ltd.	1.50	1,056	_	_	19	1,075				
RedcapTour Co., Ltd.	2.91	3,788		125	19	3,913				
Chosun Broadcasting	2.91	3,700	-	125	-	3,913				
Corporation	0.68	1,507	-	2	-	1,509				
Kumkang Logistics (*4)	-	60		-	-	-				
iPort Co., Ltd.	5.26	500	· · ·	-	-	500				
Information & Communication	0.20	000				000				
Financial Cooperative	-	15	-	1	-	16				
Hanmi Flexible Co.,Ltd. (*4)	0.03	-	6	-	(6)	-				
Liveron Co.,Ltd. (*4)	0.11	-	6	-	(6)	-				
		151,154		(8,970)	(26)	173,016				
		₩ 161,655		₩ (8,531)	₩ 174	₩ 184,156				

8.2 Equity instruments held for long-term(cont'd)

	Equity ownership (%)	Jan.1		Effect of change in accounting policy (*6)	Acquisitio (disposa		Valuation	Translation gain (loss)	[Dec. 31
Financial assets at fair value										
through profit or loss LS VINA Industrial										
System Co., Ltd. (*5)	10.00	₩	-	₩ 223	₩ (2	223)	₩ -	₩ -	₩	
LG VINA Chemical	10.00				(2	20)				
JV Co., Ltd. (*5)	10.00		-	299	(2	299)	-	-		-
Aromatics Oman LLC	1.00		-	4,779	ι-		-	-		4,779
EIC Properties Pte. Ltd.	15.50		-	5,525		-	(44)	241		5,722
	10100		-	10.826	(5	522)	(44)	241		10,501
Financial assets at fair value				.0,020	(//			·	
through OCI										
Korea Ras Laffan LNG Limited										
(Qatar LNG project)	5.60		-	41,747		-	(3,492)	-		38,255
Vietnam Korea Exchange Ltd.	10.00		-	322		-	-	-		322
LG Int'I (Saudi) LLC	90.00		-	118		-	-	-		118
Minera Corocobre S.A. (*1)	11.10		-	586		-	-	-		586
Oilhub Korea Yeosu Co., Ltd.	5.00		-	6,810		-	1,038	-		7,848
GS E&R Co, Ltd.	7.50		-	61,602		-	17,242	-		78,844
Tianjin LG Bohai Chemical	10.00		-	16,909		-	200	-		17,109
Cobalt blue holdings Ltd.	6.11		-	-	6,4	167	(5,321)	-		1,146
Tangshan Caofeidian Steam										
Coal Storage & Blending										
Co., Ltd.	1.50		-	1,062		-	-	(6)		1,056
RedcapTour Co., Ltd.	2.97		-	3,876		-	(88)	-		3,788
Chosun Broadcasting										
Corporation	0.68		-	1,956		-	(449)	-		1,507
Kumkang Logistics	3.43		-	60		-	-	-		60
iPort Co., Ltd.	5.26		-	500		-	-	-		500
Information & Communication										
Financial Cooperative	-		-	15		-		-		15
			-	135,563		167	9,130	(6)		151,154
	_	₩	-	₩ 146,389	₩ 5,9	945	₩ 9,086	₩ 235	₩	161,655

(*1) Minera Corocobre S.A. was liquidated during the year ended December 31, 2019.

- (*2) The Group acquired additional shares of 2.02% in GS E&R Co., Ltd. from GS Holdings Corp. by exercising the right to purchase 351,111 shares for ₩62,463 per share if GS E&R Co., Ltd. cannot undergo an initial public offering of its ordinary shares by February 28, 2019.
- (*3) During the year ended December 31, 2018, the Group acquired 6.11% of ownership interests of Cobalt blue holdings Ltd. During the year ended December 31, 2019, the ownership interests decreased by the allotment to the third party based on the issuance of new shares.
- (*4) During the year ended December 31, 2019, the Group acquired 5.0% of ownership interests of PT. Resources Alam Indonesia Tbk. and ownership interests of Hanmi Flexible Co., Ltd. and Liveron Co., Ltd. The Group disposed all of its equity ownership of Kumkang Logistics.
- (*5) During the year ended December 31, 2018, the Group disposed all of its equity ownership of VINA Industrial System, LG VINA Chemical Joint Venture Co., Ltd.
- (*6) In accordance with the adoption of KIFRS 1109, available-for-sale financial assets were reclassified as financial assets at fair value through profit or loss and financial assets at fair value through OCI.

8.3 Investment in associates

As of December 31, 2019 and 2018, details of investments in associates are as follows.

	Country of	Equity owners	hip (%)		Principal business
	domicile	2019	2018	Reporting date	activity
Global Dynasty Natural Resources Private Equity Fund (*1)	Korea	7.46	7.46	12.31	Overseas resources development
Heungkuk Highclass Private Special Asset PEF E1 POSCO-IPPC (India Pune	Korea	50.00	50.00	12.31	" Processing and
Processing Center) POSCO-PWPC (Poland	India	35.00	35.00	12.31	selling steel
Wroclaw Processing Center)	Poland	40.00	40.00	12.31	"
LG Holdings (HK) Ltd.	Hong Kong	25.00	25.00	12.31	Leasing real estate
Kernhem B.V.	Netherland	30.00	30.00	12.31	Oil and gas
ADA Oil LLP (*1) GS HP Sunflower Village	Kazakhstan	12.50	12.50	12.31	'n
Int'l Corp.	Vietnam	30.00	30.00	12.31	Leasing real estate Mining and selling
Sal de Vida Korea Corp. United Copper & Moly LLC	Korea	33.33	33.33	12.31	lithium Mining and selling
(Rosemont) (*2) Oman International	USA	-	50.00	12.31	cooper
Petrochemical Industry Company LLC Musandam Power Company	Oman	30.00	30.00	12.31	Manufacturing and selling PTA, PET Thermal power
SAOC (*1,3) Gansu Wuwei Cogeneration	Oman	18.00	30.00	12.31	plant Generating
Power Plant KM Resources Ltd.	China	30.00	30.00	12.31	cogeneration Mining and selling
(Rapu-Rapu) (*4) Mongolia Boyuan Coal Co., Ltd.	Malaysia	70.00	70.00	12.31	cooper Mining and selling
(Wantugou) Shaanxi BBM Biomass Power	China	30.00	30.00	12.31	coal Generating new &
Generation Co., Ltd. Inner Mongolia BDSD	China	30.00	30.00	12.31	renewable energy Manufacturing
Chemical Co., Ltd. Pantos Logistics Philippines Inc. PT. Pantos Express Indonesia	China Philippine Indonesia	29.00 39.99 49.00	29.00 39.99 49.00	12.31 12.31 12.31	fertilizer Logistics

(*1) The entity is classified as an associate even though the Group holds less than 20% equity ownership. As the Group has rights to elect the directors of the entity and its executive participates in management as a director, it is considered that the Group has significant influence over the entities.

- (*2) For the year ended December 31, 2019, it has been excluded from investments in associates due to liquidation.
- (*3) For the year ended December 31, 2019, the Group disposed 12% of the equity shares in the investee.
- (*4) As major decision making is decided unanimously, it is difficult to judge that control is held, so it has been classified as associate.

8.3 Investment in associates (cont'd)

Details of the investments in associates as of December 31, 2019 and 2018 are as follows (Korean won in millions):

				2019			2018
	Acqu	isition cost	Net	asset value	Net book value	Net b	oook value
Global Dynasty Natural Resources Private Equity Fund	₩	2,242	₩	(1,808)	₩ -	₩	-
Heungkuk Highclass Private Special Asset PEF E1		4,566		(8,959)	-		-
POSCO-IPPC (India Pune Processing Center)		9,184		25,327	8,864		9,637
POSCO-PWPC (Poland Wroclaw Processing Center)		5,244		15,222	6,113		6,355
LG Holdings (HK) Ltd.		37,983		178,639	44,660		55,168
Kernhem B.V.		2,005		(69,410)	-		-
ADA Oil LLP		22,011		(71,894)	-		3,302
GS HP Sunflower Village Int'l Corp.		2,911		14,500	4,350		3,561
Sal de Vida Korea Corp.		6,300		160	30		2,418
United Copper & Moly LLC (Rosemont)		39,627		-	-		37,406
Oman International Petrochemical Industry Company LLC		19,766		64,587	-		-
Musandam Power Company SAOC		6,535		25,315	4,939		8,850
Gansu Wuwei Cogeneration Power Plant		55,932		185,804	56,190		53,049
KM Resources Ltd.(Rapu-Rapu)		40,493		3,666	-		-
Mongolia Boyuan Coal Co., Ltd. (Wantugou)		54,801		120,785	62,609		74,790
Shaanxi BBM Biomass Power Generation Co., Ltd.		8,255		27,973	8,392		8,104
Inner Mongolia BDSD Chemical Co., Ltd.		97,837		383,246	120,381		105,474
Pantos Logistics Philippines Inc.		1,273		203	79		79
PT. Pantos Express Indonesia		2,212		(273)			-
	₩	419,177	₩	893,083	₩ 316,607	₩	368,193

The summarized financial information of associates which were material to the Group as of December 31, 2019 and 2018 is as follows (Korean won in millions):

				2019			
	Current assets	Non-current assets	Current liabilities	Non-current liabilities	Sales	Profit (loss) for the year	Dividends paid by associates
LG Holdings (HK) Ltd.	₩ 23,199	₩ 155,440	₩ -	₩ - ₩	-	₩ 12,307	₩ -
Kernhem B.V.	785			136,867	-	445	-
ADA Oil LLP	10,098	72,127	1,301	152,818	43,116	3,866	-
Mongolia Boyuan Coal Co., Ltd. (Wantugou)	75,485	210,822	162,423	3,099	22,937	(29,685)	4,886
Inner Mongolia BDSD Chemical Co., Ltd.	149,994	637,374	344,785	59,337	308,977	45,149	-
				2018			
	_	Non-current	Current	Non-current		Profit (loss) for	Dividends paid
	Current assets		liabilities	liabilities	Sales	the year	by associates
LG Holdings (HK) Ltd.	₩ 24,133	8 ₩ 196,562	₩ -	₩ 24 ₩	-	₩ 18,578	₩ -
Kernhem B.V.	774	67,000	-	134,940	-	(3,587)	-
ADA Oil LLP	9,698	65,572	1,249	146,699	46,444	(1,228)	-
United Copper & Moly LLC.							
(Rosement)	•	- 74,814	-	2	-	(11)	-
Mongolia Boyuan Coal Co., Ltd. (Wantugou) Inner Mongolia BDSD Chemical Co.,	69,457	209,134	130,203	1,113	82,689	883	16,276
Ltd.	220,517	646,048	486,284	47,348	299,213	41,921	-

8.3 Investment in associates (cont'd)

Changes in the net book value of investments in associates for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	2019													
		Jan.1		uisition sposal)	Dividenc	ls	adjus	e in equity stment in / method		nare of it or loss		mpairment and others		Dec. 31
POSCO-IPPC (India Pune														
Processing Center)	₩	9,637	₩	-	₩	-	₩	163	₩	(936)	₩	-	₩	8,864
POSCO-PWPC (Poland Wroclaw Processing Center)		0.055						450		(404)				0.440
LG Holdings (HK) Ltd.		6,355		-		-		159		(401)		-		6,113
(LG Building Ltd.)		55,168		(14,893)		-		1,309		3,076		-		44,660
Kernhem B.V. (*1)		-		14.247		-		(807)		121		(13,561)		-
ADA Oil LLP (*1)		3,302		7,232		-		(385)		(342)		(9,807)		-
GS HP Sunflower Village										. ,		,		
Int'l Corp.		3,561		-	(197)		125		861		-		4,350
Sal de Vida Korea Corp.		2,418		-		-		-		-		(2,388)		30
United Copper & Moly														
LLC (Rosemont)		37,406		(39,909)		-		216		12		2,275		-
Musandam Power		0.050		(7.050)	(0	400				0 7 4 0		0.000		4.000
Company SAOC Gansu Wuwei Cogeneration		8,850		(7,050)	(3,	139)		303		2,746		3,229		4,939
Power Plant		53,049			(777)		923		2,995				56,190
Mongolia Boyuan Coal Co., Ltd.		55,049		-	(,,,,		923		2,995		-		50,190
(Wantugou)		74,790		-	(4	886)		(796)		(9,218)		2,719		62,609
Shaanxi BBM Biomass Power		,			(,	000)		(100)		(0,210)		_,		02,000
Generation Co., Ltd.		8,104		-		-		-		-		288		8,392
Inner Mongolia BDSD														
Chemical Co., Ltd.		105,474		-		-		(2,097)		13,044		3,960		120,381
Pantos Logistics Philippines Inc.		79		-		-		6		(6)		-		79
	₩	368,193	₩	(61,852)	₩ (8,	999)	₩	(881)	₩	11,952	₩	8,194	₩	316,607

8.3 Investment in associates (cont'd)

		2018												
		Jan.1		uisition posal)	C	ividends	Chan equ adjustn equity r	uity nent in	Share profit or I		Impairr and ot		De	ec. 31
Global Dynasty Natural Resources Private Equity Fund Heungkuk Highclass Private	₩	1,495	₩	-	₩	-	₩	-	₩ (1,	495)	₩	-	₩	-
Special Asset PEF E1 POSCO-IPPC (India Pune		2,624		-		-		-	(2,	624)		-		-
Processing Center) POSCO-PWPC (Poland		8,166		-		-		(370)	1	841		-		9,637
Wroclaw Processing Center) LG Holdings (HK) Ltd.		6,367		-		-		(186)		174		-		6,355
(LG Building Ltd.) Kernhem B.V.		50,607		-		-		(84) 1,991		645 091)		- (900)		55,168 -
ADA Oil LLP GS HP Sunflower Village		3,324		-		-		1,090	(1,	112)		-		3,302
Int'l Corp.		2,756		-		(262)		111		956		-		3,561
Sal de Vida Korea Corp. United Copper & Moly		2,418		-		-		-		-		-		2,418
LLC (Rosemont)		35,844		5		-		1,562		(5)		-		37,406
Dongbu Thai Steel Co., Ltd. (*2)		1,564		(1,514)		-		212		262)		-		-
GeoPark Chile S.A. (*2)		2,011		1,508		-		(831)	(2,	688)		-		-
GeoPark TdF S.A (*2) GeoPark Colombia (*2)		-		-		-		-		-		-		-
Cooperate U.A.		31,220		(50,488)		(8,717)		389	27	596		-		-
Elvatec Co., Ltd. (*3) Oman International Petrochemical Industry		207		(225)		-		26		(8)		-		-
Company LLC (*1) Musandam Power		15,142		2,794		-		714	(458)	(1	8,192)		-
Company SAOC Gansu Wuwei Cogeneration		7,337		-		-		339	1,	174		-		8,850
Power Plant Mongolia Boyuan Coal Co., Ltd.		53,677		-		-		(282)	(346)		-		53,049
(Wantugou) Shaanxi BBM Biomass Power		74,135		-		-		(2,483)	(173)		3,311		74,790
Generation Co., Ltd. Inner Mongolia BDSD		7,765		-		-		-		-		339		8,104
Chemical Co., Ltd.		93,670		-		-		(4,745)	12	157		4,392		105,474
Pantos Logistics Philippines Inc.		189		-		-		6		116)		-		79
	₩	400,518	XXZ	(47,920)	337	(8,979)	337	(2,541)		165		1,050)	₩	368,193

(*1) Refer to Note 21

(*2) For the year ended December 31, 2018, the Group disposed its equity ownership of Dongbu Thai Steel Co., Ltd, GeoPark Chile S.A., GeoPark TdF S.A. and GeoPark Colombia Cooperate U.A.

(*3) For the year ended December 31, 2018, it has been excluded from investments in associates due to liquidation.

9. Property, plant and equipment and investment properties

9.1 Property, plant and equipment

Details of property, plant and equipment as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	2019											
	Acq	uisition cost	Accumulated depreciation	Accumulated impairment loss	Net book value							
Land	₩	126,154	-	-	126,154							
Buildings		248,390	(38,026)	(38,251)	172,113							
Structures		170,032	(27,688)	(607)	141,737							
Machinery and equipment		116,595	(50,317)	(32,089)	34,189							
Vehicles		31,089	(15,125)	(543)	15,421							
Mature biological assets		115,140	(29,274)	-	85,866							
Non-mature biological assets		88	-	-	88							
Others		65,225	(49,355)	(697)	15,173							
Construction-in-progress		25,113	-	-	25,113							
Right-of-use assets		209,446	(60,692)	-	148,754							
	₩	1,107,272	(270,477)	(72,187)	764,608							

	Acqui	sition cost		mulated eciation		mulated ment loss	Net book value		
Land	₩	130,963	₩	-	₩	-	₩	130,963	
Buildings		264,394		(42,543)		-		221,851	
Structures		176,638		(31,791)		-		144,847	
Machinery and equipment		104,763		(46,365)		(9,349)		49,049	
Vehicles		28,600		(13,831)		-		14,769	
Mature biological assets		103,125		(21,610)		-		81,515	
Non-mature biological assets		2,110		-		-		2,110	
Others		56,529		(44,687)		-		11,842	
Construction-in-progress		12,076		-		-		12,076	
	₩	879,198	₩	(200,827)	₩	(9,349)	₩	669,022	

9.1 **Property, plant and equipment (cont'd)**

Changes in the net book value of property, plant and equipment for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

										20	19								
				nanges in			_			leld for								_	
		lau d		counting			I	ransfer (*1)		le recla-	_			Im	pairment	(Others	De	ecember
		Jan.1		policies		Addition		(./		ified (*2)		isposals	Depreciation		(*3)		(*4)		31
Land	₩	130,963	₩	-	₩	29	₩	(4,394)	₩	(1,260)	₩	-	₩ -	₩	-	₩	816	₩	126,154
Buildings		221,851		-		5,849		(8,938)		(6,016)		(85)	(8,209)		(38,251)		5,912		172,113
Structures		144,847		-		1,793		1,088		-		(922)	(7,324)		(607)		2,862		141,737
Machinery and																			
equipment		49,049		-		7,764		9,100		(752)		(1,672)	(9,377)		(22,740)		2,817		34,189
Vehicles		14,769		-		3,525		(17)		-		(74)	(2,725)		(544)		487		15,421
Mature biological		ŗ				ŗ		. ,					(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		. ,				,
assets		81,515		-		-		3,526		-		-	(5,842)		-		6,667		85,866
Non-mature biological																			
assets		2,110		-		1,317		(3,482)		-		(12)	-		-		155		88
Others		11,842		-		13,486		20		(11)		(425)	(9,860)		(697)		818		15,173
Construction-																			
in- progress		12,076		-		30,638		(16,155)		-		(402)	-		(1,318)		274		25,113
Right-of-use						,		/				. ,			/				
assets (*5)		-		167,306		98,292		1,061		(1,449)		(43,777)	(77,408)		-		4,729		148,754
	₩	669,022	₩	167,306	₩	162,693	₩	(18,191)	₩	(9,488)	₩	(47,369)	₩(120,745)	₩	(64,157)	₩	25,537	₩	764,608

	2018															
		Jan.1		Addition	Т	ransfer		Disposals		Depreciation /Impairment		Business Combination		Others (*2)		Dec. 31
Land	₩	120,953	₩	4,894	₩	-	₩	-	₩		₩	5,103	₩	13	₩	130,963
Buildings		144,496		451		80,262		(3)		(6,364)		5,915		(2,906)		221,851
Structures		143,869		1,379		1,948		(55)		(7,256)		344		4,618		144,847
Machinery and equipment		37,292		8,979		4,489		(499)		(5,582)		6,352		(1,982)		49,049
Vehicles		14,536		3,583		(38)		(634)		(2,673)		404		(409)		14,769
Mature biological assets		46,913		-		3,931		-		(3,469)		34,435		(295)		81,515
Non-mature																
biological assets		4,608		1,462		(3,828)		(22)		-		-		(110)		2,110
Others		11,209		8,606		542		(865)		(6,122)		80		(1,608)		11,842
Construction-in- progress		28,645	_	73,691		(89,724)		(13)		-		76		(599)		12,076
	₩	552,521	₩	103,045	₩	(2,418)	₩	(2,091)	₩	4 (31,466)	₩	52,709	₩	(3,278)	₩	669,022

(*1) For the years ended December 31, 2019, ₩16,381 million were transferred to investment property, and in accordance with the introduction of KIFRS 1116 Leases, intangible assets of ₩1,061 million were transferred to right-of-use assets.

(*2) Refer to Note 31.

(*3) Refer to Note 21.

(*4) Includes the effects of fluctuation in foreign currency exchange rates.

(*5) Refer to Note 29.

(*6) Refer to Note 30.

The details of the assets provided as collateral as of December 31, 2019 are as follows (Korean won in millions):

	Net b	ook value	Agree	ed debt limit	Security holde	er Description
Land and Duildings	W	102.006	117	02 400	KDD	Mortgages
Land and Buildings	VV	102,906	VV	92,400	KDB	payable

9.2 Investment properties

Details of investment properties as of December 31, 2019 and 2018 are as follows (Korean won in millions):

				2019		
			Ac	cumulated		
	Acquis	sition cost	de	epreciation		Net book value
Land	\overline{W}	-	₩	-	₩	-
Buildings		7,285		(1,303)		5,982
	₩	7,285	₩	(1,303)	₩	5,982
				i		
				2018		
			Ac	cumulated		
	Acquis	sition cost	de	preciation		Net book value
Land	\overline{W}	6,672	₩	-	₩	6,672
Buildings		38,554		(15,058)		23,486
	\mathbb{W}	45,216	₩	(15,058)	₩	30,158

Changes in the net book value of investment properties for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

		2018			
Jan. 1	\mathbb{W}	30,158	\mathbb{W}	31,824	
Transfer		16,381		101	
Disposals /					
held for sale reclassified		(40,890)		-	
Depreciation		(474)		(985)	
Others		807		(782)	
Dec. 31	₩	5,982	₩	30,158	

10. Intangible assets

Details of intangible assets as of December 31, 2019 and 2018 are as follows (Korean won in millions):

		2019		2018
Goodwill	₩	180,408	₩	178,711
Industrial property rights		31		31
License		25,142		24,971
Overseas resources development		296,237		406,741
Others		225,042		265,669
	₩	726,860	₩	876,123

Changes in the net book value of intangible assets for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

										2019								
	Ja	anuary 1	Ac	quisitions	D	isposals		Transfer (*1)		eld for sale eclassified (*2)	An	nortization	Ir	mpairment (*3)		Others (*5)	Dec	ember 31
Goodwill	₩	178,711	₩	-	₩	-	₩	-	₩	-	₩	-	₩	(175)	₩	1,872	₩	180,408
Industrial property rights		31		-		-		-		-		-		-		-		31
License Overseas resources		24,971		1,615		(1,418)		1,610		-		-		(120)		(1,516)		25,142
development		406,741		5,868		-		-		-		(20,483)		(114,849)		18,960		296,237
Others		265,669		25,677		(1,751)		6,418		(2,448)		(15,155)		(58,681)		5,313		225,042
	₩	876,123	₩	33,160	₩	(3,169)	₩	8,028	₩	(2,448)	₩	(35,638)	₩	(173,825)	₩	24,629	₩	726,860

									2018								
	Ja	anuary 1	Acquisitions	;	Disposals		Transfer (*1)	An	nortization	In	npairment (*3)		Business ombination (*4)		Others (*5)	Dec	ember 31
Goodwill Industrial	₩	168,062	₩	-	₩ -	₩	-	₩	-	₩	-	₩	10,944	₩	(295)	₩	178,711
property rights		35		-	-		-		-		-		-		(4)		31
License Overseas resources		23,165	1,40)6	(651)		1,058		-		(49)		-		42		24,971
development		437,069	11,76	68	-		-		(24,286)		(29,066)		-		11,256		406,741
Others		253,452	10,04	18	(24)		12,940		(15,256)		-		-	_	4,509		265,669
	₩	881,783	₩ 23,22	22	₩ (675)	₩	13,998	₩	(39,542)	₩	(29,115)	₩	10,944	₩	15,508	₩	876,123

(*1) Represents amounts transferred from property, plant and equipment (i.e. construction-in-progress).

(*2) Refer to Note 31.

(*3) Refer to Note 21.

(*4) Refer to Note 30.

(*5) Represents the effects of fluctuation in foreign currency exchange rates.

11. Trade and other receivables

Details of trade and other receivables as of December 31, 2019 and 2018 are as follows (Korean won in millions):

			AI	2019 lowance for			Allowance for							
				doubtful						doubtful				
_	To	tal amount		accounts		Net value	_	Total amount		accounts		Net value		
Current:														
Trade accounts										<i></i>				
receivable	₩	1,038,780	₩	(44,716)	₩	994,064	t	₩ 1,112,858	₩	(44,937)	₩	1,067,921		
Short-term loans		10,717		(6,780)		3,937		15,049		(5,700)		9,349		
Other accounts														
Receivable (*1)		301,215		(13,284)		287,931		399,366		(15,197)		384,169		
Accrued income		20,592		(10,393)		10,199		20,537		(11,079)		9,458		
Short-term deposits		3,578		-		3,578	_	898		-		898		
		1,374,882		(75,173)		1,299,709		1,548,708		(76,913)		1,471,795		
Non-current:							_							
Long-term														
receivables		162,357		-		162,357		143,402		-		143,402		
Long-term loans		122,046		(88,744)		33,302		123,071		(66,512)		56,559		
Long-term other														
accounts receivable (*2	2)	18,628		(173)		18,455		4,997		(45)		4,952		
Long-term bank														
deposits		3,398		-		3,398		5,425		-		5,425		
Long-term deposits		30,550		(4,290)		26,260		27,540		(1,491)		26,049		
		336,979		(93,207)		243,772	_	304,435		(68,048)		236,387		
	₩	1,711,861	₩	(168,380)	₩	1,543,481	ł	₩ 1,853,143	₩	(144,961)	₩	1,708,182		

(*1) As of December 31, 2019, other receivables related to derivatives of ₩1,153 million were excluded.

(*2) As of December 31, 2019, the present value discount of long-term receivables is ₩3,960 million.

Changes in the net book value of allowance for doubtful accounts for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

		20	19		2018							
	Trade I	receivables	Othe	r receivables	Trade	e receivables	Othe	er receivables				
Jan. 1	₩	44,937	₩	100,024	₩	50,076	₩	97,479				
Bad debt expenses		2,475		2,442		-		3,197				
Reversal of allowance for												
doubtful accounts		-		-		(1,094)		-				
Others (*3)		(2,696)		21,198		(4,045)		(652)				
Dec. 31	₩	44,716	₩	123,664	₩	44,937	₩	100,024				

(*3) Impairment loss in relation to Kernhem B.V. And ADA Oil LLP., which amounts are ₩21,479 million, is included (Refer to Note 21).

Aging analyses of trade receivables as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	-	ess than months	3 to 6 months		6 to 12 months		1 to 3 years		More than 3 years		Total	
2019	₩	955,713	₩	18,276	₩	2,500	₩	7,874	₩	54,417	₩	1,038,780
2018		1,031,298		15,170		2,943		10,700		52,747		1,112,858

11. Trade and other receivables (cont'd)

Derecognition of financial instruments

As of December 31, 2019 and 2018, details of trade receivables transferred or factored but not derecognized are as follows (Korean won in millions):

	2019	2018		Description
Trade accounts receivable	₩	- ₩	82	Recourse

12. Borrowings and bonds

12.1 Short-term borrowings

Details of short-term borrowings as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	Description	Annual interest rate as of Dec. 31, 2019		2019		2018
Short-term operating loans	KDB and others	2.49% and others	₩	98,930	₩	54,898
Banker's usance	KEB Hana Bank	1.88% ~ 2.00%		528		383
Commercial	Woori Bank and	-				
paper discount (*)	others			-		82
Others	-	-		36,917		7,955
			₩	136,375	₩	63,318

(*) The Group has contracts of commercial paper discount with Woori, Shinhan, KEB Hana and KDB bank. Amounts that have not reached maturity after discounts and do not meet the requirements of financial asset derecognition are accounted as short-term borrowings.

The Group has signed individual and comprehensive loan agreements (credit limit of #34,861 million) with Shinhan Bank and three other banks in relation to bank overdraft facilities as of December 31, 2019. In relation to the bank overdraft facilities above, long-term financial instruments are provided as collateral.

12.2 Long-term borrowings

Details of long-term borrowings as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	Financial institution	Annual interest rate as of Dec. 31, 2019	2019	2018
Local currency	Woori International the 1 st Co., Ltd and others	2.89% and others	₩ 547,965	₩ 588,863
Foreign currency	The Export-Import Bank of Korea and others	6ML+(2.32% ~ 2.49%) and others	240,920	200 222
	others		788,885	299,323 888,186
Less: current portion			(152,896) ₩ 635,989	,

12.3 Bonds

Details of bonds as of December 31, 2019 and 2018 are as follows (Korean won in millions):

			Annual					
Series	Issue date	Maturity date	interest rate		2019		2018	Warranty
115th	Mar. 03, 2015	Mar. 03, 2022	2.74%		50,000		50,000	Non-warranty
116-2nd	May. 28, 2015	May. 28, 2020	2.43%		70,000		70,000	"
116-3rd	May. 28, 2015	May. 28, 2022	2.86%		90,000		90,000	"
117-1st	Sep. 05. 2016	Sep. 05. 2019	1.74%		-		90,000	"
117-2nd	Sep. 05. 2016	Sep. 05. 2021	2.02%		30,000		30,000	"
118-1st	Jan. 23. 2018	Jan. 22. 2021	2.57%		70,000		70,000	"
118-2nd	Jan. 23. 2018	Jan. 20. 2023	2.95%		30,000		30,000	"
Pantos bond	Jun. 15. 2018	Jun. 15. 2021	3.11%		50,000		50,000	
Less: discount	on bonds				(472)		(853)	
Less: current p	ortion of bonds				(70,000)		(90,000)	
Less: current p								
discount	on bonds				16		75	
				₩	319,544	₩	389,222	

13. Provisions

Details of provisions as of December 31, 2019 and 2018 are as follows (Korean won in millions):

						2019				
		Jan. 1	Re	cognition		Used		Others		Dec. 31
Rehabilitation provisions (*1) Onerous contracts (*2) Provisions for litigation Others	₩	26,719 38,099 - <u>7</u> 64,825	₩	7,894 2,994 516 <u>377</u> 11,781	₩	(5,951) (3,076) - (383) (9,410)	₩	(18,057) 1,337 (11) <u>1</u> (16,730)	₩	10,605 39,354 505 <u>2</u> 50,466
						2018				
-		Jan. 1	Re	cognition		Used		Others		Dec. 31
Rehabilitation provisions	₩	19,013	₩	8,006	₩	(1,118)	₩	818	₩	26,719
Ónerous contracts (*2)		-		38,099		-		-		38,099
Others		2,020		2,539		(2,043)		(2,509)		7
	₩	21,033	₩	48,644	₩	(3,161)	₩	(1,691)	₩	64,825

(*1) Refer to Note 31.

(*2) Refer to Note 21.

14. Issued capital and others

14.1 Issued capital

Details of issued capital as of December 31, 2019 and 2018 are as follows (Korean won in millions, except per share amounts):

		2019		
Ordinary shares issued		38,760,000		38,760,000
Par value per share	\mathbb{W}	5,000	₩	5,000
	₩	193,800	₩	193,800

14.2 Share premium

Details of share premium as of December 31, 2019 and 2018 are as follows (Korean won in millions):

		2019		2018
Paid-in capital in excess of par value	₩	47,106	₩	47,106
Asset revaluation reserves (*1)		37,286		37,286
Other capital reserves		16,801		16,771
	₩	101,193	₩	101,163

(*1) The Group revalued its property, plant and equipment on July 1, 1998 in accordance with the Assets Revaluation Act, and the revaluation difference amounted to ₩87,151 million. The revaluation reserve was calculated by deducting the revaluation tax and the exchange rate adjustment difference from the revaluation difference.

14.3 Other components of equity

Details of other components of equity as of December 31, 2019 and 2018 are as follows (Korean won in millions):

		2019	2018
Treasury stock	\mathbb{W}	(968) ₩	(968)
Other capital adjustments		(611)	(611)
	\mathbb{W}	(1,579) ₩	(1,579)

14.4 Accumulated other comprehensive income or loss

Details of accumulated other comprehensive income or loss as of December 31, 2019 and 2018 are as follows (Korean won in millions):

		2019	2018
Gain on valuation of financial assets at fair value through OCI Gain(loss) on valuation of derivatives	₩	22,060	₩ 29,983
designated as cash flow hedges		(5,921)	729
Changes in equity arising from equity method investments		13,113	14,805
Negative changes in equity arising from equity method investments		(42,883)	(42,505)
Exchange differences on translation of foreign operations		(4,070)	(48,044)
Equity directly associated with the assets held for sale		(1,472)	-
	₩		₩ (45,032)

14.5 Retained earnings

Details of retained earnings as of December 31, 2019 and 2018 are as follows (Korean won in millions):

		2019	2018
Legal reserve	₩	41,988 ₩	40,900
Business rationalization reserve		1,511	1,511
Improvement of financial structure reserve		13,693	13,693
Other legal reserve		2,211	2,211
Retained earnings before appropriations		837,838	821,829
	₩	897,241 ₩	880,144

14.6 Earnings per share

Earnings per share attributable to the owners of the parent for the years ended December 31, 2019 and 2018 are computed as follows (Korean won):

		2019		2018
Profit (loss) for the year attributable to the owners of the parent Weighted-average number of ordinary	₩	28,575,012,358	₩	(70,364,878,626)
shares outstanding (*1)		38,659,249		38,659,249
Basic and diluted earnings (loss) per share	₩	739	₩	(1,820)

(*1) The weighted-average number of ordinary shares outstanding for the years ended December 31, 2019 and 2018 are as follows:

	2019	2018
Number of ordinary shares issued	38,760,000	38,760,000
Weighted-average number of treasury shares (*2)	100,751	100,751
Weighted-average number of ordinary shares outstanding	38,659,249	38,659,249

(*2) For the years ended December 31, 2019 and 2018, there are no changes in the treasury shares.

15. Dividends

For the years ended December 31, 2019 and 2018, dividends attributable to the owners of the parent are as follows (Korean won in millions, except per share amounts):

	:	2019	2018
Dividend per share	₩	250 ₩	250
Dividends paid		9,665	9,665

As of December 31, proposed dividends to be approved at the general meeting of shareholders are as follows (Korean won in millions, except per share amounts):

		2019	2018		
Dividend per share	₩	300 ₩	250		
Dividends paid		11,598	9,665		

16. Sales

Revenue from contracts with customers for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

		2019					2018					
	R	esources	Infr	a-business		Logistics	R	esources	Infr	a-business	L	ogistics
Revenue recognized at a point of time												
Sales of goods Sales of services	₩	1,189,533 6,862	₩	5,153,156 24,790	₩	17,637 -	₩	1,046,342 10,746	₩	4,910,607 26,510	₩	16,441 -
		1,196,395		5,177,946		17,637		1,057,088		4,937,117		16,441
Revenue recognized over period												
Sales of services		718		44,095		4,094,066		1,996		92,698		3,882,885
	₩	1,197,113	₩	5,222,041	₩	4,111,703	₩	1,059,084	₩	5,029,815	₩	3,899,326

Details of contract assets and liabilities arising from contracts with customers as of December 31, 2019 are as follows (Korean won in millions):

	Segment	. <u> </u>	Jan. 1		Increase	D	ecrease		Dec. 31
Contract assets	Logistics	₩	7,316	₩	10,324	₩	(7,316)	₩	10,324
		₩	7,316	₩	10,324	₩	(7,316)	₩	10,324
Contract liabilities									
Advance received	Resources	₩	4,593	₩	17,476	₩	(14,567)	₩	7,502
	Infra-business		60,867		4,562		(50,906)		14,523
			65,460		22,038		(65,473)		22,025
Deferred income	Resources		-		3		-		3
	Infra-business		-		129		(129)		-
	Logistics		55,998		28,376		(28,153)		56,221
			55,998		28,508		(28,282)		56,223
		₩	121,458	₩	50,546	₩	(93,755)	₩	78,249

17. Selling and administrative expenses

Details of selling and administrative expenses for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

		2019		2018
Salaries	₩	234,502	₩	217,355
Pension benefits		16,942		15,612
Employee welfare benefits		52,122		54,029
Travel		13,401		12,533
Taxes and dues		4,609		9,513
Rents		19,030		24,470
Depreciation		21,921		9,009
Amortization		24,030		20,210
Advertising and marketing		1,803		2,116
Insurance		5,582		5,812
Custody		2,145		1,699
Freight		69,364		60,415
Loading and unloading expenses		1,732		333
Service		80,452		82,745
Bad debt expenses				
(reversal of allowance for doubtful accounts)		2,475		(1,094)
Expenses for overseas branch office		8,483		11,357
Others		20,130		19,285
	₩	578,723	₩	545,399

18. Expenses classified by nature

Expenses classified by nature for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	2019		2018	
Cost of merchandise sales	₩	5,580,342	₩	5,257,462
Use of raw materials and supplies		449,774		395,846
Employee benefits (salaries, retirement benefits) Distribution costs (custody charges,		336,989		307,005
packaging costs, transportation expenses)		77,347		67,777
Depreciation and amortization		156,858		71,993
Others		3,794,763		3,722,483
	₩	10,396,073	₩	9,822,566

19. Pension benefits

The Group operates both defined contribution and defined benefit pension plans.

Details of employee benefit liabilities as of December 31, 2019 and 2018 are as follows (Korean won in millions):

		2019		2018
Present value of defined benefit obligation	₩	127,118	₩	114,563
Fair value of plan assets		(104,672)		(88,146)
	₩	22,446	₩	26,417

Expenses recognized in respect of the defined benefit plans for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

		2019		2018
Current service costs	₩	15,920	₩	14,524
Net interest costs		488		268
Management cost of plan assets		295		172
	₩	16,703	₩	14,964

Changes in the present value of defined benefit obligation for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	_	2019		2018
January 1	₩	114,563	₩	98,091
Current service costs		15,920		14,524
Interest costs		2,583		2,589
Benefits paid		(11,912)		(8,027)
Transfer out		221		541
Re-measurement gain on defined benefit plans		3,740		6,659
Others		2,003		186
December 31	₩	127,118	₩	114,563

Changes in the fair value of plan assets for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

		2019		2018
January 1	₩	88,146	₩	82,495
Return on plan assets		2,094		2,321
Contribution payable		23,809		11,590
Benefits paid		(8,789)		(7,186)
Transfer in (out)		-		(50)
Re-measurement loss on defined benefit plans		(308)		(809)
Management costs of plan assets		(295)		(172)
Others		15		(43)
December 31	₩	104,672	₩	88,146

The principal assumptions used in actuarial calculation as of December 31, 2019 and 2018 are as follows:

	2019	2018
Salary increase rate	4.80% ~ 5.99%	4.80% ~ 6.29%
Discount rate	1.99% ~ 2.22%	2.39% ~ 2.55%

19. Pension benefits (cont'd)

Sensitivity analyses on the principal assumptions used in actuarial calculation as of December 31, 2019 are as follows (Korean won in millions):

		Defined benefit obligation					
		Dec. 31 Increase by 1%		Decrease by 1%			
Salary increase rate	\mathbb{W}	127,118 🗄	√ 132,143	₩ 113,074			
Discount rate		127,118	112,965	132,508			

The Group operates defined contribution plans for certain employees of which expenses amounting to #670 million and #581 million were recognized in 2019 and 2018, respectively.

20. Other non-operating income and costs

20.1 Finance income

Details of finance income for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

		2019	2018	
Interest income	₩	15,974	₩	20,077
Gain on foreign currency transactions		137,603		110,977
Gain on foreign currency translation		44,441		44,066
Gain on settlement of currency forwards		12,740		10,016
Gain on valuation of currency forwards		1,153		1,451
Gain on settlement of currency swaps		1,493		-
Gain on valuation of currency swaps		2,978		4,670
Dividend income		6,176		6,807
Commission revenue from guarantees		238		557
	₩	222,796	₩	198,621

20.2 Finance costs

Details of finance costs for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

		2019	20	18
Interest expenses	₩	49,068	₩	49,825
Loss on foreign currency transactions		140,403		118,776
Loss on foreign currency translation		46,340		49,229
Loss on settlement of currency forwards		14,386		10,045
Loss on valuation of currency forwards		1,890		574
Loss on disposal of trade accounts receivable		19,880		18,872
	₩	271,967	₩	247,321

20.3 Share of profit or loss in associates

Details of share of profit or loss in associates for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

		2019		2018
Share of profit in associates	₩	22,849	₩	48,425
Share of loss in associates		(10,897)		(10,261)
Gain on disposal of investment in				
subsidiaries or associates		5,504		89,161
Loss on disposal of investment in				
subsidiaries or associates		(143)		(40)
Impairment loss on investment in associates (*1)		(23,368)		(18,192)
	₩	(6,055)	₩	109,093

(*1) Refer to Note 21.

20.4 Other non-operating income and expenses

Other non-operating income and expenses for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

		2019		2018
Gain on disposal of investment properties	₩	92,657	₩	-
Impairment loss on property, plant and equipment		(64,157)		-
Other bad debt expenses		(2,442)		(3,196)
Impairment loss on intangible assets (*1)		(173,825)		(29,116)
Loss on disposal of other investments (*2)		-		(35,825)
Impairment loss on assets held for sale		(10,018)		-
Others		2,943		(1,320)
	₩	(154,842)	₩	(69,457)

(*1) Refer to Note 21.

(*2) This is the loss on disposal of the long-term loan to GeoPark Chile S.A. during the year ended December 31, 2018.

21. Impairment

2019 Property, plant Property, plant and equipment/ and equipment/ Investment in Intangible assets Intangible assets Intangible assets associates (*) Intangible assets Segment Infra-business Resources Logistics Decline in Decline in Decline in Decline in Cause of impairment business business business business Significant performances performances performances performances decrease in price ₩ ₩ ₩ 23,268 ₩ ₩ 72,826 165,036 10,018 Impairment loss 120 Fair value less Fair value less Measuring of Fair value less Fair value less recoverable amount costs to sell costs to sell Value in use costs to sell costs to sell Zero-Growth / Zero-Growth / Zero-Growth / Basis of estimates DCF DCF DCF Discount rate 14.55% 9.03% 10.66% _ _

Details of impairment recognized for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

(*) Refer to Note 31

			2010		
Investment	Investment in associates Intangible assets (*)		Inta	ngible assets	
Infra-b	ousiness		Resources		Logistics
				Significar	t decrease in price
₩	18,192	₩	29,06	6 ₩	49
Value	e in use 		Value in use - -	Fair value	e less costs to sell - -
	Infra-b Decline i perfor ₩	Infra-business Decline in business performances ₩ 18,192 Value in use -	Infra-business Decline in business Decline in business performances ₩ 18,192 ₩ Value in use - - -	Investment in associates Intangible assets (*) Infra-business Resources Decline in business Decline in business performances Performances W 18,192 Value in use Value in use	Investment in associates Intangible assets (*) Inta Infra-business Resources Inta Decline in business Decline in business Significan W 18,192 W 29,066 Value in use Value in use Fair value

2018

(*) The Group has recognized a provision amounting to ₩39,353 million (2018: ₩38,099 million) as the present value of expected net loss to observe the onerous contracts related to the impaired assets, the contributed amount of which was recognized as cost of sales considering its business relatedness.

22. Income tax

The major components of income tax expenses for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

		2019		2018
Current income tax (*1)	₩	(15,821)	₩	117,180
Changes in deferred tax (*2)		(44,146)		80,070
Deferred tax related to items recognized in other comprehensive income		(456)		(4,663)
Income tax expenses (benefit) reported in the statement of profit or loss	₩	(60,423)	₩	192,587

(*1) The 2018 amounts include the imposed tax amount of ₩71,129 million resulting from the periodic tax investigation for the years from 2012 to 2016 and the related local income tax amount. The 2019 amounts include refund of ₩47,547 million and related local income taxes by the resolution of Tax Tribunal.

(*2) The 2018 changes include decrease in deferred tax assets (₩ 55,187 million) related to the un-deducted and carried over foreign tax paid.

22. Income tax (cont'd)

Reconciliations between income tax expense at the effective income tax rate and profit before tax at the Korea statutory tax rate for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

		2019		2018
Profit (loss) before income tax	₩	(75,284)	₩	156,595
Statutory income tax at the tax rate (23.9% in 2018)		-		37,434
Adjustments:				
Effect of unrecognized deferred tax for temporary differences		(9,234)		55,119
Current year adjustment related to the income tax on previous years		(58,443)		74,475
Effect of non-deductible expenses for tax purposes		1,121		1,544
Tax credit		(8,134)		(9,307)
Foreign income tax directly charged		2,418		6,583
Others		11,849		26,739
Income tax expenses reported in the statement of profit or loss	₩	(60,423)	₩	192,587
Effective tax rate (income tax expenses/ profit before income tax)		-		122.98%

The major components of deferred income tax charged directly to equity for the years ended December 31, 2019 and 2018 are follows (Korean won in millions):

		2019		2018
Gain (loss) on valuation of financial assets at fair value through OCI	₩	1,050	₩	(3,315)
Changes in equity arising from equity method investment Negative changes in equity arising from		(3,440)		312
equity method investment Exchange differences on translation of foreign		(23)		(3,522)
operations		(1,121)		(39)
Gains and losses on valuation of derivatives		2,123		130
Re-measurement loss on defined benefit plans		955		1,771
	₩	(456)	₩	(4,663)

22. Income tax (cont'd)

Temporary differences and deferred taxes for the years ended December 31, 2019 and 2018 consist of the following (Korean won in millions):

	Accumi	lated temporary diff	erences	Deferred tax as	ssets (liabilities)	
	Jan. 1, 2019	Net changes	Dec. 31, 2019	Jan. 1, 2019	Dec. 31, 2019	
Deferred income tax		¥	i		. <u></u>	
due to temporary						
differences:						
Impairment of available-	W	W (07.005	W (04 500	W 7 440	W 07.000	
for-sale financial assets	₩ 34,383	₩ 127,205	₩ 161,588	₩ 7,110	₩ 37,893	
Stock dividend	12,999	-	12,999	3,146	3,146	
Allowance for doubtful accounts	123,775	26,754	150,529	28,737	35,136	
Bad debt expenses	3,492	20,754	3,492	845	845	
Accrued income		-				
	(4)		(3)	(1)	(1)	
Interest income Allowance for	2,704	171	2,875	654	696	
inventories	<u>-</u>	23	23	_	6	
Gain on commodity		20	20		0	
futures	(712)	448	(264)	(172)	(64)	
Reserve fund of	, , , , , , , , , , , , , , , , , , ,		· · · · ·	()	· · · ·	
compressed						
register(land)	(8,601)	8,601	-	(2,081)	-	
Accrued expenses	1,553	(153)	1,400	376	339	
Admission and denial						
on depreciation cost	6,240	(910)	5,330	1,510	1,290	
Bonus	6,251	(1,011)	5,240	1,513	1,268	
Interest related to	(400)		(400)	(4 4 7)	(447)	
loans or construction	(483)	-	(483)	(117)	(117)	
Brand loyalty Present value of	(78)	11	(67)	(19)	(16)	
defined benefit						
obligation	40,214	503	40,717	9,732	9,854	
Fair value of plan	10,211	000	10,111	0,102	0,001	
assets	(32,447)	98	(32,349)	(7,852)	(7,828)	
Gain (loss) on foreign						
currency translation	(17,220)	143	(17,077)	(4,167)	(4,133)	
Interest and translation						
of debt related on	2 0 2 2	140	4 074	0.40	005	
success Rewards for long term	3,923	148	4,071	949	985	
employee	950	291	1,241	230	300	
Impairment right of	000	201	.,	200	000	
membership	3,249	(572)	2,677	786	648	
Investment in						
subsidiaries and						
associates	9,410	(77,707)	(68,297)	(17,387)	(25,988)	
Financial assets at fair	(44 750)	4 450	(07.000)	(44.202)	(0,007)	
value through OCI.	(41,752)	4,450	(37,302)	(11,392)	(9,027)	
Impairment loss	212,325	(133,170)	79,155	51,383	19,155	
Provisions	44,400	7,022	51,422	10,745	12,444	
Taxes and dues	5,253	1,310	6,563	796	1,114	
Guarantee commission	21,819	-	21,819	375	375	
Deemed dividend	6,916	19,769	26,685	1,673	6,458	

22. Income tax (cont'd)

	Accumula	ated temporary diffe	Deferred tax as	sets (liabilities)	
	Jan. 1, 2019	Net changes Dec. 31, 2019		Jan. 1, 2019	Dec. 31, 2019
Gains from assets contributed Amount exceeding limit	1,529	-	1,529	370	370
of donation	567	(567)	-	137	-
Transfer price	7,423	-	7,423	-	-
Capital lease	-	121	121	-	29
Commission fees	8,425	(375)	8,050	654	591
Others	(365,640)	128,928	(236,712)	(88,485)	(57,285)
	90,863	111,532	202,395	(9,952)	28,483
Tax credits Tax losses carried	27,586	39,012	66,598	23,913	29,967
forward	106,174	(1,417)	104,757	25,694	25,351
				₩ 39,655	₩ 83,801

Temporary differences for which the deferred tax assets (liabilities) have not been recognized for the years ended December 31, 2019 and 2018 consist of the following (Korean won in millions):

		2019	2018
Investment in subsidiaries,			
associates or joint ventures (*)	\mathbb{W}	93,506 ₩	129,722
Commissions and others		29,653	29,653
	\mathbb{W}	123,159 ₩	159,375

(*) The Group did not recognize deferred tax assets (liabilities) related to temporary differences due to accumulated other comprehensive income and accumulated losses from investment in subsidiaries or associates in which the Group has no plan for disposal in the foreseeable future.

23. Related party disclosures

Transactions with related parties for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

,	2019						2018				
		Sales	P	urchase		Service	Sales		Purchase	S	ervice
Corporations that have significant influence on the Group at the end of the current year:											
LG Corp. (*1)	₩	133,915	₩	-	₩	13,436	₩ 5	₩	-	₩	7,446
		133,915		-		13,436	5		-		7,446
Associates:											
POSCO-IPPC (India Pune Processing											
Center)		62		-		-	147		-		-
POSCO-PWPC (Poland Wroclaw Steel Processing Center)		-		-		-	-		-		13
LG Holdings(HK) Ltd.(LG Building Ltd.)		-		-		-	7		-		-
Kernhem B.V.		2,695		-		-	2,627		-		-
ADA Oil LLP		586		-		-	639		-		-
GeoPark Chile S.A. (*2)		-		-		-	1,993		-		-
GeoPark Colombia Cooperate U.A (*2)		-		-		-	140		-		24
Musandam Power Company SAOC		140		-		-	244		-		-
Pantos Logistics Philippines Inc.		3,352		-		1,679	2,623		-		2,353
PT. Pantos Express Indonesia		189		-		26	161		-		55
		7,024		-		1,705	8,581		-		2,445
Other related parties (*3):		-									<u> </u>
LG Electronics Inc. and its subsidiaries		5,094,222		113,632		5,465	4,786,683		101,152		5,403
LG Display Co., Ltd. and its subsidiaries		426,419		628,546		89	578,582		723,285		263
LG Chem. Ltd. and its subsidiaries		1,018,836		185,364		707	1,003,271		289,995		640
Others		126,007		1,547		37,239	129,766		2,862		39,948
		6,665,484		929,089		43,500	6,498,302		1,117,294		46,254
	₩	6,806,423	₩	929,089	₩	58,641	₩ 6,506,888	₩	1,117,294	₩	56,145

(*1) During the year ended December 31, 2019, the participation interests of Yeouido Twin Tower, an investment property owned by the Company, were sold to LG Corp. for ₩133,909 million.

(*2) During the year ended December 31, 2018, the shares of GeoPark Chile S.A. and GeoPark Columbia Cooperate U.A. were sold and excluded from the list of associates.

(*3) It is not included in the scope of related parties per K-IFRS 1024, Disclosure of Related Parties, but it belongs to the same large-scale business groups under the Act on Monopoly Regulation and Fair Trade.

23. Related party disclosures (cont'd)

Outstanding balances from transactions with the related parties as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	Accounts receivable		Loans	Other receivables	Accounts payable	Other payables
Corporations that have significant influence on the Group at the end of the current year:						
LG Corp.	₩ -	₩	-	₩ 7,054	₩ -	₩ -
	-		-	7.054	-	
Associates:				,		
ADA Oil LLP	-		11,444	451	-	-
Gansu Wuwei Cogeneration Power Plant	-		-	767	-	-
Kernhem B.V. POSCO-IPPC(India Pune Steel	-		46,107	6,895	-	-
Processing Center)	-		-	-	-	1
Musandam Power Company SAOC	-		-	1,055	-	-
PT. Pantos Express Indonesia	14		-	7	1	3
Pantos Logistics Philippines Inc.	429		-	29	119	
	443		57,551	9,204	120	4
Other related parties:						
LG Electronics Inc. and its subsidiaries	307,083		-	77,081	15,197	14,135
LG Display Co., Ltd. and its subsidiaries LG Chem. Ltd. and its subsidiaries	33,198		-	45,339 24	94,220	12,424
Others	104,886 12,514		-	24 10.936	13,215 53	643 10,148
Others	457,681		-	133,380	122,685	37,350
	₩ 458,124	W	57,551	₩ 149.638		
			57,551	143,030	122,000	
				2018		
	Accounts					
• • • • • • •	receivable		Loans	Other receivables	Accounts payable	Other payables
Corporations that have significant influence on the Group at the end of the current year:						
LG Corp.	₩ 1	₩	-	₩ 4,695	₩ -	₩ 63
F	1		-	4,695	-	63
Associates:						
Kernhem B.V.	-		44,526	6,680	-	-
ADA Oil LLP	-		11,051	731	-	-
Musandam Power Company SAOC	-		2,663	23	-	-
PT. Pantos Express Indonesia	10		1,359	16	9	-
Pantos Logistics Philippines Inc.	660		152	23	189	
	670		59,751	7,473	198	
Other related parties:						
LG Electronics Inc. and its subsidiaries	376,041		-	97,129	17,463	16,897
LG Display Co., Ltd. and its subsidiaries	63,644		-	84,427	122,528	61,878
LG Display Co., Ltd. and its subsidiaries LG Chem. Ltd. and its subsidiaries	63,644 98,841		-	84,427 1,782	122,528 43,355	61,878 728
LG Display Co., Ltd. and its subsidiaries	63,644 98,841 12,217		- - -	84,427 1,782 10,753	122,528 43,355 953	61,878 728 10,191
LG Display Co., Ltd. and its subsidiaries LG Chem. Ltd. and its subsidiaries	63,644 98,841		- - - - 59,751	84,427 1,782	122,528 43,355	61,878 728

The Group recognized reversal of allowance for doubtful accounts of $\mathbb{W}475$ million for the year ended December 31, 2019 (2018: $\mathbb{W}4,139$ million) and recognized allowance for doubtful accounts of $\mathbb{W}35,092$ million as of December 31, 2019 (2018: $\mathbb{W}21,320$ million) for the trade accounts and other receivables from the related parties.

23. Related party disclosures (cont'd)

Transfers under finance arrangements with the related parties for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

				20	19		
	Di	vidends	Investm	ent in cash	Loans	(Collection
Associates:							
United Copper & Moly LLC (Rosemont)	\mathbf{W}	39,918	₩	8	₩	- W	-
Musandam Power Company SAOC		3,139		-		-	2,861
GS HP Sunflower Village Int'l Corp.		197		-		-	-
Mongolia Boyuan Coal (Wantugou)		4,886		-		-	-
Gansu Wuwei Cogeneration Power Plant		777		-		-	-
		48,917		8		-	2,861
Other related parties:							
Others		-		-		-	-
	₩	48,917	₩	8	₩	- ₩	2,861
		10,011					2,001
				20	18		
	Di	vidends	Investm	ent in cash	Loans	(Collection
Associates:							
United Copper & Moly LLC (Rosemont)	\mathbf{W}	-	₩	5	₩	- ₩	-
GeoPark Colombia Cooperate U.A.		8,717		-		-	-
GeoPark Chile S.A.		-		-		-	1,130
Oman International Petrochemical							
Industry Company L.L.C		-		2,794		-	-
GS HP Sunflower Village Int'l Corp.		262		-		-	-
Musandam Power Company SAOC		-		-		-	2,908
		8,979		2,799		-	4,038
Other related parties:							
Others		203		-		-	-
	₩	9,182	₩	2,799	₩	- ₩	4,038

Details of compensation for key management personnel are as follows (Korean won in millions):

	:	2019	2018
Short-term employee benefits	\mathbb{W}	13,734 ₩	13,840
Pension benefits		5,408	1,935
	\overline{W}	19.142 ₩	15.775

24. Commitments and contingencies

24.1 Guarantees provided

The Company is contingently liable for payment guarantees issued on behalf of a subsidiary, PT. Ganda Alam Markmur (GAM), amounting to W47,074 million (equivalent to the Company's proportion of equity interest) and each stockholder of this subsidiary is jointly liable to provide additional capital related to guarantees.

24.2 Major agreements such as opening letters of credit

As of December 31, 2019, the agreements concluded for the establishment of L / C with financial institutions are as follows (Korean won in millions and foreign currencies in thousands):

Description	Financial institution	Contrac	ct amount
Bills bought	Shinhan Bank and others	USD	255,000
Letter of credits	KEB Hana Bank and others	USD	208,530
Payment guarantee	KEB Hana Bank and others	USD	37,000
		KRW	18,064
Bank overdrafts	KEB Hana Bank and others	KRW	29,861
Line of credit	HSBC and others	USD	35,000
		KRW	144,000
Trade financing	Woori Bank and others	USD	394,000
-		KRW	78,000
B2B purchase loan	Shinhan Bank	KRW	15,000
		USD	929,530
		KRW	284,925

24.3 Guarantees received

Guarantees received by the Group as of December 31, 2019 and 2018 are as follows (Korean won in millions and foreign currencies in thousands):

	Financial institution	Guarant	ee amount	Description
Bonds	Korea Development Bank	₩	6,809	KRW 6,809
	Others		304,965	KRW 36,401, USD 12,160, EUR 1,163, HKD 3,811,
				SGD 572, AUD 1,000, PHP 48,600, VND 50,000,000
		₩	311,774	

24.4 Pledged notes and checks

The Group pledged 23 notes and 15 checks as collateral to its customers, creditors and guarantors related to various guarantees and borrowings as of December 31, 2019.

24.5 License agreement

As of December 31, 2019, the Group maintains a license agreement with LG Corp. for the use of the "LG" brand name.

24.6 Joint and several liability on guarantees

The Group and newly incorporated entity, LF Corp. (formerly LG Fashion Corporation), are jointly and severally liable for the obligations of LGI existing prior to the spin-off.

24.7 Pending lawsuits

The Group is a defendant in various lawsuits with claims aggregating to \$98,813 million, and as of December 31, 2019, the outcomes of litigation cannot be reliably determinable.

Among the above cases, The Group are in the process of arbitration with Oman's Ministry of Petroleum, Board of Audit and Inspection and the Prosecutors in relation to the termination of Oman's oil business. The amount charged by Oman's Ministry of Petroleum, Board of Audit and Inspection and the prosecution is W78,718 million as of the end of the current term, and the outcomes of litigation cannot be reliably determinable.

25. Financial risk management objectives and policies

The Group's principal financial liabilities, other than derivatives, comprise loans and borrowings, trade and other payables. The main purpose of these financial liabilities is to finance the Group's operations. The Group has loans and other receivables, trade and other receivables, and cash and short-term deposits that derive directly from its operations. The Group also holds financial assets at fair value through profit or loss and financial assets at fair value through OCI and enters into derivative transactions.

The Group is exposed to market risk, credit risk and liquidity risk.

The Board of Directors reviews and agrees policies for managing each of these risks which are summarized below. It is the Group's policy that no trading in derivatives for speculative purposes is to be undertaken.

25.1 Market risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market prices comprise three types of risk: interest rate risk and translation on currency risk, commodity price risk and other price risk, such as equity risk. Financial instruments affected by market risk include loans and borrowings, deposits, equity instruments held for long-term, and derivative financial instruments

The sensitivity analysis in the following sections relates to the financial position as of December 31, 2019 and 2018.

The sensitivity analysis has been prepared on the basis that the amount of net debt, the ratio of fixed to floating interest rates of the debt and derivatives and the proportion of financial instruments in foreign currencies are all held constant and on the basis of the hedge designations in place at December 31, 2019.

The analysis excludes the impact of movements in market variables on the carrying value of pension and other post-retirement obligations, provisions and on the non-financial assets and liabilities of foreign operations.

The following assumptions have been made in calculating the sensitivity analyses:

- > The statement of financial position sensitivity relates to derivatives and available-for-sale debt instruments.
- The sensitivity of the relevant income statement item is the effect of the assumed changes in respective market risks. This is based on the financial assets and financial liabilities held at December 31, 2019 and 2018 including the effect of hedge accounting.
- The sensitivity of equity is calculated by taking into account the effect of any associated cash flow hedges and hedges of a net investment in a foreign subsidiary at December 31, 2019 associate with changes in underlying assets.

25.1.1 Interest rate risk

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

The Group is exposed to interest rate risk due to its long-term debt. The Group is exposed to cash flow interest rate risk due to its borrowings with floating interest rates and fair value interest rate risk due to its borrowings with fixed interest rates.

The Group's position with regard to interest rate risk exposure is mainly related to debt obligations such as bonds, loans and interest-bearing deposits and investments. The Group has a risk management program in place to monitor and actively manage such risks.

The Group manages its interest rate risk by establishing regional and global working capital sharing systems, regularly monitoring market interest rates, and preparing action plans.

Interest rate sensitivity

The following table demonstrates the sensitivity to a reasonably possible change in interest rates on that portion of loans and borrowings, after the impact of hedge accounting. With all other variables held constant, the Group's profit before tax is affected through the impact on floating rate borrowings as follows. The Group's exposure to interest rate risk is considered to have an immaterial impact on equity (Korean won in millions).

	_	20	19			20	18	
	Increa	Increase by 1% Decrease by 1%			Incre	ease by 1%	De	crease by 1%
Interest income	₩	1,584	₩	(1,584)	₩	2,871	₩	(2,871)
Interest expenses		(4,018)		4,018		(4,742)		4,742
Net effect	₩	(2,434)	₩	2,434	₩	(1,871)	₩	1,871

The assumed movement in basis points for interest rate sensitivity analysis is based on the currently observable market environment.

25.1.2 Foreign currency risk

Foreign currency risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. The Group's exposure to the risk of changes in foreign exchange rates relates primarily to the Group's operating activities (when revenue or expense are denominated in a different currency from the Group's functional currency) and the Group's net investments in foreign subsidiaries.

The Group is exposed to foreign exchange risk arising from international operations and transactions with different foreign currencies. The most prevalent foreign currencies used are the US Dollar, Euro, Japanese Yen and others.

The Group manages its foreign currency risk for each subsidiary. Each subsidiary manages its foreign currency risk by entering into hedge agreements such as, a forward contract or foreign currency loans with the Group. Exposure to currency translation risk is largely dependent on the accounting standards of the local jurisdiction and the translation methods required by such jurisdiction.

25.1.2 Foreign currency risk (cont'd)

Foreign currency sensitivity

The following table demonstrates the sensitivity to a reasonably possible change in the exchange rate, with all other variables held constant, on the Group's profit before tax (due to changes in the fair value of monetary assets and liabilities including non-designated foreign currency derivatives) (Korean won in millions):

		20	19			20	18	
	Increase b	y 10%	Decrease	e by 10%	Increas	se by 10%	Decreas	se by 10%
Gain (loss) on foreign currency translation Gain (loss) on valuation of	₩	(3,816)	₩	3,816	₩	(5,964)	₩	5,964
derivative financial instruments		10,603		(10,603)		3,278		(3,278)
Net effect (*)	₩	6,787	₩	(6,787)	₩	(2,686)	₩	2,686

(*) The Group manages its exchange rate risk arising from assets and liabilities denominated in foreign currencies through derivative contracts.

25.2 Credit risk

Credit risk is the risk that a counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Group is exposed to credit risk from its operating activities (primarily for trade receivables and loan notes) and from its financing activities, including deposits with banks and financial institutions, foreign exchange transactions and other financial instruments.

The book value of financial assets represents maximum exposure to credit risk. The maximum exposures to credit risk as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	_	2019	2018	
Cash equivalents (*1)	₩	422,835	\mathbb{W}	339,015
Short-term financial instruments		10,553		14,162
Equity instruments held for long-term:				
Financial assets at fair value through profit or loss		11,140		10,501
Financial assets at fair value through OCI		173,016		151,154
Trade accounts receivable		994,064		1,067,921
Other accounts receivable (*2)		287,931		384,169
Long-term loans		33,302		56,559
Other financial assets		240,165		190,183
	₩	2,173,006	₩	2,213,664

(*1) Excludes cash on hand

(*2) Excludes other receivables in relation to derivatives

25.4 Maturity profile of financial assets

The table below summarizes the maturity profile of the Group's financial assets based on contractual undiscounted payments (Korean won in millions):

	2019									
	L	ess than	1 to 3			3 to 5		ore than		
		1 year		years		years	5 years			Total
Cash and cash equivalents	₩	423,582	₩	-	₩	-	₩	-	₩	423,582
Short-term financial instruments		10,553		-		-		-		10,553
Trade accounts receivable		990,677		2,982		405		-		994,064
Other accounts receivable		283,537		5,547		-		-		289,084
Long-term loans		-		33,019		283		-		33,302
Other financial assets		34,916		40,732		3,421		162,357		241,426
	₩	1,743,265	₩	82,280	₩	4,109	₩	162,357	₩	1,992,011
						2018				
	L	ess than		1 to 3		3 to 5	Μ	ore than		
		1 year		years		years	5	5 years		Total
Cash and cash equivalents	₩	342,014	₩	-	₩	-	₩	-	₩	342,014
Short-term financial instruments		14,162		-		-		-		14,162
Trade accounts receivable		1,049,984		17,122		424		391		1,067,921
Other accounts receivable		374,252		9,917		-		-		384,169
Long-term loans		-		51,817		4,742		-		56,559
Other financial assets		10,356		30,979		5,446		143,402		190,183
	117	1,790,768	₩	109,835	₩	10,612	₩	143,793	₩	2,055,008

25.5 Liquidity risk

Liquidity risk refers to the risk that the Group may default on the contractual obligations that become due.

The table below summarizes the maturity profile of the Group's financial liabilities based on contractual undiscounted payments (Korean won in millions):

			2019		
	Less than	1 to 3	3 to 5	More than	
	1 year	years	years	5 years	Total
Trade accounts payable	₩ 1,103,970	₩ -	₩ -	₩ -	₩ 1,103,970
Other accounts payable	295,439	-	-	-	295,439
Borrowings	289,271	165,615	134,103	336,271	925,260
Bonds	69,984	289,631	29,913	-	389,528
Lease liabilities	59,148	41,051	17,626	29,379	147,204
Other financial liabilities	146,003	14,572			160,575
	₩ 1,963,815	₩ 510,869	₩ 181,642	₩ 365,650	₩ 3,021,976

			2018		
	Less than	1 to 3	3 to 5	More than	
	1 year	years	years	5 years	Total
Trade accounts payable	₩ 1,184,020	₩ -	₩ -	₩ -	₩ 1,184,020
Other accounts payable	389,072	-	-	-	389,072
Borrowings	216,974	193,397	158,364	382,768	951,503
Bonds	89,925	219,572	169,650	-	479,147
Other financial liabilities	135,323	7,844			143,167
	₩ 2,015,314	₩ 420,813	₩ 328,014	₩ 382,768	₩ 3,146,909

The table above represents the maturities of the financial liabilities at each reporting date.

25.6 Capital management

The primary objective of the Group's capital management is to ensure that it maintains a strong credit rating and healthy capital ratios in order to support its business and maximize its shareholders' value.

The Group manages its capital structure and makes adjustments to it in light of changes in economic conditions. To maintain or adjust the capital structure, the Group may adjust dividend distributions, return capital or issue new shares.

The Group monitors capital using a gearing ratio including debt and net debt ratios. The Group includes within total borrowings, interest bearing loans and borrowings, trade and other payables.

Details of gearing ratios as of December 31, 2019 and 2018 are as follows (Korean won in millions):

		2019	2018
Total liabilities (A)	₩	3,327,366	₩ 3,488,535
Total equity (B)		1,548,616	1,549,538
Cash and cash equivalents (C)		423,582	342,014
Total borrowings (D)		1,314,788	1,430,650
Debt ratio (A / B)		214.86%	225.13%
Net borrowing ratio ((D-C) / B)		57.55%	70.26%

26. Fair value

26.1 Fair value of financial instruments

The book value and fair value of financial instruments as of December 31, 2019 and 2018 are as follows (Korean won in millions):

		2019			2018			
	B	ook value		Fair value	В	ook value	F	air value
Financial assets:								
Financial assets measured at amortized cost:								
Cash and cash equivalents	₩	392,582	₩	392,582	₩	342,014	₩	342,014
Short-term financial assets		10,553		10,553		14,162		14,162
Trade accounts receivable		994,064		994,064		1,067,921		1,067,921
Long-term loans		33,302		33,302		56,559		56,559
Other accounts receivable		287,931		287,931		382,718		382,718
Other financial assets		240,165		240,165		189,686		189,686
		1,958,597		1,958,597		2,053,060		2,053,060
Financial assets recognized at fair value:								
Cash and cash equivalents Other accounts receivable related		31,000		31,000		-		-
derivatives		1,153		1,153		1,451		1,451
Equity instruments held for long-term		184,156		184,156		161,655		161,655
Other financial assets		1,261		1,261		497		497
		217,570		217,570		163,603		163,603
	₩	2,176,167	₩	2,176,167	₩	2,216,663	₩	2,216,663

	2019					2018			
	Book value		F	Fair value		Book value		air value	
Financial liabilities: Financial liabilities measured at amortized cost:									
Borrowings	₩	772,364	₩	772,364	₩	797,846	₩	797,846	
Bonds Current portion of bonds and		319,544		319,544		389,222		389,222	
long-term borrowings		222,880		222,880		243,582		243,582	
Other financial liabilities		1,697,070		1,697,070		1,713,687		1,713,687	
		3,011,858		3,011,858		3,144,337		3,144,337	
Financial liabilities recognized at fair value:									
Accounts payable related derivatives		1,890		1,890		574		574	
Others		8,228		8,228		1,998		1,998	
		10,118		10,118		2,572		2,572	
	₩	3,021,976	₩	3,021,976	₩	3,146,909	₩	3,146,909	

26.2 Fair value measurement of assets and liabilities on the statements of financial position

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

- > Level 1: quoted (unadjusted) prices in active markets for identical assets or liabilities
- Level 2: other techniques for which all inputs which have a significant effect on the recorded fair value are observable, either directly or indirectly
- Level 3: techniques which use inputs that have a significant effect on the recorded fair value that are not based on observable market data.

As of December 31, 2019 and 2018, the Group holds assets and liabilities measured at fair value on the statements of financial position, and assets and liabilities for which the fair values were disclosed as following (Korean won in millions):

	2019				
		Level 1	Level 2	Level 3	
Assets and liabilities measured at fair value:					
Financial assets at fair value through profit or loss:					
Cash and cash equivalents	₩	31,000 ∛	₩ -	₩ -	
Accounts receivable related to derivatives		-	1,153	-	
Equity securities (*)		-	-	6,361	
Financial assets at fair value through OCI:					
Equity securities (*)		9,597	-	161,386	
Financial liabilities at fair value through profit or loss:					
Accounts payable related to derivatives		-	1,890	-	
Derivatives related to hedge accounting:					
Other financial assets		-	1,261	-	
Other financial liabilities		-	8,228	-	
Assets and liabilities for which fair values are disclosed:					
Cash and cash equivalents	₩	392,582 [₩]	₩ -	₩ -	
Short-term financial assets			10,553	-	
Trade accounts receivable		-	-	994,064	
Long-term loans		-	-	33,302	
Other accounts receivable		-	-	287,931	
Other financial assets		-	-	240,165	
Borrowings		-	772,364	-	
Bonds		-	319,544	-	
Current portion of bonds payable					
and long-term borrowings		-	222,880	-	
Other financial liabilities		-	-	1,697,070	

(*) Equity securities whose fair value cannot be measured reliably was measured at cost after recognizing the impairment loss. Accordingly, it has been excluded from the above fair value hierarchy.

There were no movements between the levels of the fair value hierarchy for the year ended December 31, 2019.

26.2 Fair value measurement of assets and liabilities on the statements of financial position (cont'd)

			2018	
		Level 1	Level 2	Level 3
Assets and liabilities measured at fair value:				
Financial assets at fair value through profit or loss:				
Accounts receivable related to derivatives	₩	- ₩	1,451	₩ -
Equity securities (*)		-	-	5,722
Financial assets at fair value through OCI:				
Equity securities (*)		4,934	-	143,564
Financial liabilities at fair value through profit or loss:				
Accounts payable related to derivatives		-	574	-
Derivatives related to hedge accounting:				
Other financial assets		-	497	-
Other financial liabilities		-	1,998	-
Assets and liabilities for which fair values are disclosed:				
Cash and cash equivalents	₩	342,014 ₩	-	₩ -
Short-term financial assets		-	14,162	-
Trade accounts receivable			-	1,067,921
Long-term loans		-	-	56,559
Other accounts receivable		-	-	382,718
Other financial assets		-	-	189,686
Investment properties		-	-	121,280
Borrowings		-	797,846	-
Bonds		-	389,222	-
Current portion of bonds payable				
and long-term borrowings		-	243,582	-
Other financial liabilities		-	-	1,713,687

(*) Equity securities whose fair value cannot be measured reliably was measured at cost after recognizing the impairment loss. Accordingly, it has been excluded from the above fair value hierarchy.

Valuation method and interest rate used to determine fair value

Equity securities within level 1 are traded in active markets (such as the Korea Exchange) for marketable equity securities, which were evaluated based on the closing price as of the end of the reporting period.

Derivative instruments within level 2, after calculating the expected cash flow by using the current exchange rate at the end of the reporting period, were measured at present value, and the discount rate applied was 1.53% during the period (2018: 1.93%).

Equity securities within level 3 were evaluated using the DCF as an active market does not exist for nonmarketable equity securities. The discount rate applied was 5.89~14.35% during the period (2018: 5.80~10.75%).

27. Statements of cash flows

Non-cash adjustments to reconcile profit for the year to net cash flows for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

		2019		2018
Depreciation	₩	121,219	₩	32,451
Amortization		35,638		39,542
Pension benefits		16,703		14,964
Bad debt expenses		4,917		2,103
Interest income		(15,974)		(20,077)
Gain on foreign currency translation		(44,441)		(44,066)
Interest expenses		49,068		49,825
Loss on foreign currency translation		46,340		49,229
Impairment loss on investments in associates		23,368		18,192
Impairment loss on property, plant and equipment		64,157		-
Impairment loss on intangible assets		173,825		29,116
Impairment loss on assets held for sale		10,018		-
Gain on disposal of investment properties		(92,657)		-
Others		(64,034)		147,140
	₩	328,147	₩	318,419

Working capital adjustments for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

		2019		2018
Decrease (increase) in trade accounts receivable	₩	41,497	₩	(72,752)
Decrease in other accounts receivable		93,813		22,778
Decrease (increase) in advance payments		52,990		(23,494)
Increase in inventories		(11,731)		(78,341)
Increase in other operating assets		(37,247)		(42,852)
Increase (decrease) in trade accounts payable		(78,078)		194,080
Decrease in other accounts payable		(87,357)		(116,638)
Increase (decrease) in advance received		(18,722)		20,449
Pension benefits paid		(11,692)		(7,486)
Increase in plan assets		(15,019)		(4,353)
Decrease in provisions		(8,554)		(853)
Increase (decrease) in other operating liabilities		20,632		(7,690)
	₩	(59,468)	₩	(117,152)

The adjustment of liabilities arising from financing activities for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	2019									
	Non-cash changes									
	lan d		Cash flows in financing		Foreign currency		Others			D 04
		Jan. 1		activities translation		inslation	Others		Dec. 31	
Short-term borrowings	\mathbb{W}	63,318	₩	76,671	₩	(4,072)	₩	458	₩	136,375
Long-term borrowings		888,186		(114,861)		14,629		931		788,885
Bonds payable		479,147		(90,000)		-		381		389,528
Lease liabilities		-		(79,755)		2,863		224,096		147,204
	₩	1,430,651	₩	(207,945)	₩	13,420	₩	225,866	₩	1,461,992

27. Statements of cash flows (cont'd)

						2018				
						Non-cash changes				
		Cash flows in		F	oreign					
			financing		currency					
	Ja	Jan. 1 activities		translation		Others		Dec. 31		
Short-term borrowings	\mathbf{W}	130,692	₩	(59,196)	₩	796	₩	(8,974)	₩	63,318
Long-term borrowings		846,610		20,426		20,241		909		888,186
Bonds payable		429,281		49,450		-		416		479,147
	₩ 1,-	406,583	₩	10,680	₩	21,037	₩	(7,649)	₩	1,430,651

28. Service concession arrangements

As of December 31, 2019, details of Service Concession Arrangements of the Group are as follows:

Content of contract	The Group entered into a contract to build a hydroelectric power plant in Sumatra, Indonesia, and to conduct electricity sales business which is generated by the facility.
Project period	In accordance with this agreement, for 30 years from the commencement date of electricity sales (based on electricity sales contract)
Classification	BOO (Build-Own-Operate)
Accounting standard	KIFRS 2112 Service Concession Arrangements
Others	 The Group has recognized the minimum guaranteed price and operating rights of the facility as financial assets and intangible assets, respectively, which are acquired in exchange for the construction services for the hydroelectric power plants. Revenue and costs recognized as construction services in 2019 amounted to ₩25,129 million and ₩25,129 million, respectively.

29. Lease

Changes in right-of-use assets for the years ended December 31, 2019 are as follows (Korean won in millions):

		Land		Buildings		Vehicles		Others		Total
Jan.1 (*1) Additions Depreciation Disposals Transfer (*2) Held for sale	₩	4,223 77 (190) - 1,061	₩	124,729 89,793 (58,228) (25,474)	₩	16,254 6,423 (13,195) (373) -	₩	22,100 1,999 (5,795) (17,930) -	₩	167,306 98,292 (77,408) (43,777) 1,061
reclassified (*3) Others		- 387		(153) 2,912		(71) 564		(1,225) 866		(1,449) 4,729
Dec. 31	₩	5,558	₩	133,579	₩	9,602	₩	15	₩	148,754
Acquisition cost Accumulated		5,753		186,895		16,782		16		209,446
depreciation		(195)		(53,316)		(7,180)		(1)		(60,692)

(*1) The adoption effect of KIFRS 1116.

- (*2) In accordance with the first introduction of KIFRS 1116 Leases, intangible assets of ₩1,061 million were replaced with right-of-use assets.
- (*3) PT. Megaaprima Persada (MPP) and Guangzhou Steel Flower Electrical & Machinery & Machinery Co., Ltd., were scheduled to sell, the right-of-use assets were reclassified to those related to non-current assets held for sale.

The details of changes in lease liabilities for the years ended December 31, 2019 are as follows (Korean won in millions):

		2019
Effect of adopting new accounting standards	\overline{W}	167,186
Additions		95,884
Interest expense		5,069
Payment		(79,755)
Termination		(44,043)
Others (*1)		2,863
Dec. 31	W	147,204
Current		59,148
Non-current		88,056
	\overline{W}	147,204

(*) PT. Megaaprima Persada (MPP) and Guangzhou Steel Flower Electrical & Machinery & Machinery Co., Ltd., were scheduled to sell, the lease liabilities were reclassified to those related to non-current assets held for sale.

Details of expenses came from short-term leases and leases of low-value assets for the years ended December 31, 2019 are #46,094 million and #2,239 million, respectively.

30. Business combination

The Group acquired 95% stock of PT.Grand Utama Mandiri (GUM) and PT. Tintin Boyok Sawit Makmur (TBSM) respectively on September 30, 2018, which are located in Indonesia, in order to enhance the Palm Oil business and transferred it to the consolidated subsidiary.

The Group has selected to measure the non-controlling interests of the entity at fair value.

The details of PT. Grand Utama Mandiri (GUM) and Tintin Boyok Sawit Makmur (TBSM)'s fair value of the identifiable assets and acquired debt are as follows (Korean won in millions):

		GUM	TBSM	Total	
Assets					
Current assets	\mathbf{W}	16,916 🗄	₩ 17,795	₩ 34,711	
Cash and cash equivalents		2,481	3,114	5,595	
Trade accounts receivable, net		-	131	131	
Other accounts receivable, net		11,199	5,802	17,001	
Advance payments		34	26	60	
Prepaid expenses		88	9	97	
Other current assets		2,336	6,424	8,760	
Inventories, net		778	2,289	3,067	
Non-current assets		28,328	24,407	52,735	
Property, plant and equipment, net		28,313	24,397	52,710	
Other non-current assets		15	10	25	
Total assets		45,244	42,202	87,446	
Liabilities					
Current liabilities		4,766	9,671	14,437	
Trade accounts payable		2,270	2,306	4,576	
Other accounts payable		172	780	952	
Accrued expenses		68	78	146	
Other current liabilities		2,256	6,507	8,763	
Non-current liabilities		2,790	3,327	6,117	
Long-term borrowings		2,790	3,327	6,117	
Total liabilities		7,556	12,998	20,554	
Total identifiable net assets	\mathbb{W}	37,688 \	₩ 29,204	₩ 66,892	
Portion of controlling interest	₩	35,804 +	₩ 27,381	₩ 63,185	
Purchase consideration transferred		41,883	32,246	74,129	
Goodwill	₩		<i>32,240</i> <i>₹</i> 4,865	₩ 10,944	
GOOdwiii	* *	0,019	4,005	10,944	

31. Non-current assets held for sale

As of December 31, 2019, the capital directly related to non-current assets held for sale and non-current assets held for sale are as follows (Korean won in millions):

		Assets			Liabilities		Equity
Subsidiaries	Guangzhou Steel Flower Electrical & Machinary Co., Ltd.	₩	20,293	₩	1,262	₩	(1,472)
"	PT. Megaprima Persada(MPP)		29,673		29,673		-
Associates	ZAO CONTRANS		1,116		-		-

- (*1) On October 11, 2019, the Group decided to sell 100% of its stake in Guangzhou Steel Flower Electrical & Machinery & Machinery Co., Ltd., which operates steel processing and sales business in China, to Guangzhou Development District Investment Group Limited, and the sale price is about ₩22.6 billion.
- (*2) After reclassification of non-current assets held for sale, the asset was reduced to its fair value less costs to sell and an impairment loss of ₩10,018 million was recognized.
- (*3) During the year ended December 31, 2017, the Group has decided to sell 51% of its equity in ZAO CONTRANS. Accordingly, the assets recognized as investment assets on associate are reclassified as non-current assets held for sale. Although the period has been extended to complete the sale during the current term, the management of the Group still has specific plans for the sale.

32. Events after reporting period

On February 10, 2020, the Group decided to sell 25% of participation interests in LG Holdings (HK) Limited, which operates the real estate rental business in China, to Reco Changan Private Limited, and the sale price is about W341.2 billion.

Meanwhile, on October 11, 2019, the Group decided to dispose its 100% stake in Guangzhou Steel Flower Electrical & Machinery & Machinery Co., Ltd., which operates the steel processing and sales business in China, to Guangzhou Development District Investment Group Limited, and the disposal process was completed on January 17, 2020. The sale price is about \Im 22.6 billion.

33. Approval of financial statements

The consolidated financial statements of the Group for the year ended December 31, 2019 were approved by the Board of Directors on January 30, 2020.