LX International Corp. and its subsidiaries

Consolidated financial statements for the years ended December 31, 2021 and 2020 with the independent auditor's report



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Independent auditor's report

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Independent auditor's report

The Shareholders and Board of Directors LX International Corp. (formerly, LG International Corp.)

Opinion

We have audited the consolidated financial statements of LX International Corp. (formerly, 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, 2021 and 2020, and the consolidated statements of profit or loss, consolidated statements of comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows for the years then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2021 and 2020, 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 the matter below, our description of how our audit addressed the matter is provided in that context.

(1) Revenue recognition of overseas export sales

As described in Note 2 to the consolidated financial statements, the Group recognizes revenue when the performance obligation identified in contracts with customers is satisfied at the amount which it expects to receive in exchange for the goods or services. The Group's overseas export sales of goods are W6,512,085 million in total, accounting for approximately 39% of total sales. The Group recognizes revenue on overseas export sales when the control of goods, produced by the Group or purchased from suppliers, is transferred to the customers.

We identified the risk of overstatement in overseas export sales caused by errors in the judgment for the timing of identification and satisfaction of performance obligations in the contracts with customers as a significant risk.



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

- Analysis on the accounting policies of revenue recognition for major types of sales contracts and changes therein, if any
- Analysis for the contracts by type of overseas export sales (identification of performance obligation, measurement of transaction amount, allocation of transaction price, and review of the appropriateness in timing of revenue recognition)
- Testing of details on the transactions occurred during the current period by comparing the records and the related documents
- Assessment for the appropriateness of period to which the transactions occurred around the end of reporting period is attributable

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 Joon Yang Jeong.

Einst Joung Han Joung

March 16, 2022

This audit report is effective as of March 16, 2022, 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.

LX International Corp. (formerly, LG International Corp.) and its subsidiaries

Consolidated financial statements for the years ended December 31, 2021 and 2020

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

Chun-sung Yoon Chief Executive Officer LX International Corp.

LX International Corp. (formerly, LG International Corp.) and its subsidiaries Consolidated statements of financial position

as of December 31, 2021 and 2020 (Korean won in millions)

х, , , , , , , , , , , , , , , , , , ,			
	Notes	2021	2020
Assets			
Current assets			
Cash and cash equivalents	4, 5, 25, 26	∀ 841,883	₩ 689,988
Short-term financial instruments	4, 11, 15,25, 26	20,787	67,837
Trade accounts receivable, net	4, 11, 23, 25, 26	1,653,459	1,298,738
Contract assets	16	56,513	18,970
Other accounts receivable, net	4, 6, 11, 25, 26	265,274	193,442
Accrued income, net	4, 11, 25, 26	1,450	1,866
Advance payments		131,993	78,101
Prepaid expenses		213,018	90,452
Other current assets	4, 11, 28	165,081	62,760
Inventories, net	7	1,021,193	645,123
Non-current assets held-for-sale	21, 30	5,896	15,550
		4,376,547	3,162,827
Non-current assets			
Investment assets	4, 8, 11, 23, 25, 26	174,031	159,677
Investments in associates	8, 21	322,501	279,426
Property, plant and equipment, net	9, 21, 29	806,503	742,372
Investment properties, net	9	4,851	4,609
Intangible assets, net	10, 21, 28	749,645	694,846
Deferred tax assets	22	98,263	140,041
Other non-current assets	4, 5, 11, 28	214,548	212,144
		2,370,342	2,233,115
Total assets	¥	∀ 6,746,889	₩ 5,395,942

(Continued)

LX International Corp. (formerly, LG International Corp.) and its subsidiaries Consolidated statements of financial position as of December 31, 2021 and 2020 (cont'd)

(Korean won in millions)

	Notes	2021	2020
Liabilities			
Current liabilities			
Short-term borrowings	4, 12, 25, 26	₩ 415,971	₩ 106,804
Trade accounts payable	4, 23, 25, 26	1,619,765	1,547,820
Other accounts payable	4, 6, 23, 25, 26	345,214	253,885
Advance received	16	87,743	40,294
Withholdings	4, 25, 26	107,921	33,482
Current tax liabilities		124,427	31,287
Accrued expenses	4, 25, 26	130,204	117,485
Current portion of bonds			
and long-term borrowings	4, 12, 25, 26	328,656	225,630
Unearned revenue	16	173,112	73,683
Deposits received	4, 25, 26	8,512	4,707
Lease liabilities	4, 25, 26, 29	77,774	68,804
Liabilities directly associated with			
assets held for sale	30	5,655	14,434
Current portion of provisions	13	5,994	-
		3,430,948	2,518,315
Non-current liabilities			
Bonds payable	4, 12, 25, 26	269,462	359,307
Long-term borrowings	4, 12, 25, 26	343,586	506,567
Defined benefit liabilities	19	9,350	14,277
Deferred tax liabilities	22	62,124	57,329
Lease liabilities	4, 25, 26, 29	134,103	117,403
Provisions	13	99,159	41,067
Other liabilties	4, 6, 25, 26	13,913	23,346
		931,697	1,119,296
Total liabilities		4,362,645	3,637,611
Equity			
Capital stocks	14	193,800	193,800
Capital surplus	14	100,443	101,153
Other components of equity	14	(41,300)	(41,300)
Accumulated other			x
comprehensive loss	14	(201)	(102,426)
Retained earnings	14	1,522,220	1,186,951
Equity attributable to			
owners of the parent		1,774,962	1,338,178
Non-controlling interests		609,282	420,153
Total equity		2,384,244	1,758,331
Total liabilities and equity		₩ 6,746,889	₩ 5,395,942

LX International Corp. (formerly, LG International Corp.) and its subsidiaries Consolidated statements of profit or loss

for the years ended December 31, 2021 and 2020

(Korean won in millions, except earnings per share)

	Notes		2021		2020
Sales	3, 16, 23	₩	16,686,533	₩	11,282,632
Cost of sales	18, 23		(15,335,139)		(10,550,255)
Gross profit			1,351,394		732,377
Selling and administrative expenses	17, 18		(695,177)		(572,542)
Operating profit	3		656,217		159,835
Finance income	4, 20		272,414		292,143
Finance costs	4, 20		(289,033)		(358,176)
Share of profit of associates	8, 20		89,683		339,422
Other non-operating expenses, net	20		5,416		22,639
Profit before income tax			734,697		455,863
Income tax expense	22		(194,365)		(94,257)
Profit for the year		₩	540,332	₩	361,606
Attributable to:					
Owners of the parent		₩	350,069	₩	297,587
Non-controlling interests		₩	190,263	₩	64,019
Earnings per share attributable to					
owners of the parent:					
Basic earnings per share	14	₩	9,733	₩	7,932
Diluted earnings per share	14	₩	9,733	₩	7,932

LX International Corp. (formerly, LG International Corp.) and its subsidiaries Consolidated statements of comprehensive income

for the years ended December 31, 2021 and 2020

(Korean won in millions)

	Notes		2021		2020
Profit for the year		₩	540,332	₩	361,606
Other comprehensive income (loss) that may be reclassified	d				
to profit or loss in subsequent periods:					
Gain (loss) on valuation of derivatives designated as					
cash flow hedges	4, 6		5,917		(7,538)
Equity adjustments in equity method	8		10,292		742
Change in retained earnings in equity method	8		-		(21)
Exchange differences on translation of foreign operations			95,219		(50,661)
			111,428		(57,478)
Other comprehensive income (loss) that will not be reclassi	fied to				
profit or loss in subsequent periods:					
Gain (loss) on valuation of financial assets designated					
at fair value through OCI	4, 8		10,542		(39,094)
Remeasurement gain (loss) on defined benefit plans	19		(1,315)		2,678
			9,227		(36,416)
Other comprehensive income (loss) for the year, net of tax			120,655		(93,894)
Total comprehensive income					
Total comprehensive income for the year, net of tax		₩	660,987	₩	267,712
					· · · ·
Attributable to:					
Owners of the parent		₩	451,881	₩	218,055
Non-controlling interests		₩	209,106	₩	49,657

LX International Corp. (formerly, LG International Corp.) and its subsidiaries Consolidated statements of changes in equity for the years ended December 31, 2021 and 2020 (Korean won in millions)

						Attributable to owners of the parent	owners of th	ie parent						
						Other	Accun ot	Accumulated other				Non-		
	Notes	Capital	Capital stocks	Capital surplus	surplus	components of equity	compre	comprehensive loss	Retained earnings		Total	controlling interests	-	Total equity
As of January 1, 2020		₩	193,800	×	101,193	W (1,579)	M (6.	(19,173) ¥	W 897,241	₩	1,171,482	W 377,134	4 ₩	1,548,616
Profit for the year			•		•			•	297,587		297,587	64,019	6	361,606
Loss on valuation of derivatives designated as														
cash flow hedges			•		•			(7,176)			(7,176)	(362)	2)	(7,538)
Equity adjustments in equity method			•		•			735			735		7	742
Change in retained earnings in equity method			'		•			,	(21)	-	(21)			(21)
Exchange differences on														
translation of foreign operations			•		•			(37,146)			(37,146)	(13,515)	5)	(50,661)
Gain (loss) on valuation of financial assets designated														
at fair value through OCI			•		•			(39,666)			(39,666)	572	2	(39,094)
Remeasurement gain (loss) on defined benefit plans			•		•				3,742		3,742	(1,064)	4)	2,678
Total comprehensive income (loss)			•		•			(83,253)	301,308		218,055	49,657	2	267,712
Dividends	15		•		•				(11,598)	_	(11,598)	(11,515)	5)	(23,113)
Paid-in capital increase of subsidiaries and acquisiton of interests			'		(40)						(40)	7	40	
Change in the scope of consolidation			'		•						•	4,837	7	4,837
Acquisition of treasury stock			•			(39,721)	(1)				(39,721)			(39,721)
As of December 31, 2020		₩	193,800	w	101,153	W (41,300)	0) W	(102,426) ¥	W 1,186,951	₩	1,338,178	W 420,153	3 ₩	1,758,331

(Continued)

LX International Corp. (formerly, LG International Corp.) and its subsidiaries Consolidated statements of changes in equity for the years ended December 31, 2021 and 2020 (cont'd) (Korean won in millions)

					Att	ributable to ow	Attributable to owners of the parent	t					
							Accumulated						
					U	Other components	other comprehensive		Retained		Non- controlling	b	
	Notes	Capital stocks	stocks	Capital surplus		of equity	loss		earnings	Total	interests		Total equity
As of January 1, 2021		₩	193,800	W 10	101,153 W	(41,300) ₩	W (102,426) W	M ()	1,186,951 W	1,338,178	W 420	420,153 W	1,758,331
Profit for the year						'			350,069	350,069	190	190,263	540,332
Gain on valuation of derivatives designated as													
cash flow hedges			•			'	5,627			5,627		290	5,917
Equity adjustments in equity method			•			'	10,294			10,294		(2)	10,292
Exchange differences on													
translation of foreign operations			•			'	75,902			75,902	15	19,317	95,219
Gain on valuation of financial assets designated													
at fair value through OCI			•			'	10,402		9	10,408		134	10,542
Remeasurement loss on defined benefit plans			•			'			(419)	(419)		(968)	(1,315)
Total comprehensive income			•			•	102,225		349,656	451,881	209	209,106	660,987
Dividends	15		•			'			(14,387)	(14,387)	(17	(17,395)	(31,782)
Paid-in capital increase of subsidiaries and acquisiton of interests			•			'				'		757	757
Change in the scope of consolidation			•		(710)	'				(710)	(3	(3,339)	(4,049)
As of December 31, 2021		æ	193,800	W 10	100,443 W	(41,300)	W (201)	<u>(</u>	1,522,220 W	1,774,962	M 609	609,282 W	2,384,244

LX International Corp. (formerly, LG International Corp.) and its subsidiaries Consolidated statements of cash flows

for the years ended December 31, 2021 and 2020

	Notes		2021		2020
Cash flows from operating activities:					
Profit for the year		₩	540,332	₩	361,606
Non-cash adjustments to reconcile profit					
for the year to net cash flows provided by operating activities	27		344,129		(39,477)
Working capital adjustments	27		(619,354)		(23,695)
Interest received			11,487		9,353
Interest paid			(44,145)		(36,675)
Dividends received			19,663		11,821
Income taxes paid			(76,522)		(28,147)
Net cash flows provided by operating activities			175,590		254,786
Cash flows from investing activities:					
Decrease in financial instruments			46,047		10,658
Decrease in loans			8,278		5,657
Decrease in guarantee deposits			9,817		9,262
Proceeds from disposal of equity instruments held for long-term	8		2,139		-
Proceeds from disposal of investments in associates	8		3,901		333,585
Proceeds from disposal of assets held for sale	30		8,842		22,688
Proceeds from disposal of property, plant and equipment	9		18,121		62,145
Proceeds from disposal of intangible assets	10		7,935		9,208
Government grants received			837		-
Net cash flow from disposal of subsidiary			525		-
Net cash flow from business combination			798		-
Increase in financial instruments			(10,816)		(66,916)
Increase in loans			(5,105)		(14,526)
Increase in guarantee deposits			(13,253)		(15,094)
Acquisition of equity instruments held for long-term	8		(8,104)		(3,000)
Acquisition of investments in associates	8		(2,720)		-
Acquisition of property, plant and equipment	9		(71,790)		(44,193)
Acquisition of intangible assets	10		(43,793)		(43,655)
Net cash provided by (used in) investing activities			(48,341)		265,819
Cash flows from financing activities:					
Acquisition of treasury stock	14		-		(39,721)
Proceeds from finance liabilities	27		2,793,890		1,331,280
Repayment of finance liabilities	27		(2,645,976)		(1,412,102)
Payment of principal portion of lease liabilities	27, 29		(98,149)		(93,969)
Cash inflow from other financing activities			380		-
Cash outflow from other financing activities			(10,139)		-
Dividends paid			(31,782)		(23,113)
Net cash provided by (used in) financing activities			8,224		(237,625)
Net increase in cash and cash equivalents			135,473		282,980
Cash and cash equivalents as of January 1			689,988		423,582
Exchange differences on translation of cash and cash equivalents			16,422		(16,574)
Cash and cash equivalents as of December 31		₩	841,883	₩	689,988
			0.1,000		000,000

1. Organization and business

LX International Corp. ("LXI" or the "Parent Company") and its 83 subsidiaries including LX 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 Parent Company

The Parent Company was established on November 26, 1953 to engage in the import and export business. It changed its name to Bando Corporation in 1956, to Lucky Industries Co., Ltd. in 1984 and to LG International Corp. in 1995. Its current name was adopted on July 1, 2021.

LXI 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.

LXI is currently engaged in the import and export of goods, and other business activities. The LXI headquarters is located in Seoul and operates 16 overseas branch offices, 5 liaison offices and 83 subsidiaries (including 58 sub-subsidiaries) as of December 31, 2021.

As LG Corp., the largest shareholder of the Parent Company, newly established LX Holdings Corp. through the spin-off on May 1, 2021, and the Parent Company was incorporated into LX Holdings Corp. LX Holdings Corp. holds 24.69% of the Parent Company's common shares as of December 31, 2021. The remaining equity shares are held by institutional investors, overseas investors, minority shareholders, and so on.

1.2 Consolidated subsidiaries

Subsidiaries included in	Country of	Equity owne	ership (%)	Reporting		
consolidation are as follows	domicile	2021	2020	date	Principal activity	Basis of control
LX International (America) Inc. (formerly, LG		·				
International (America) Inc.) (*1)	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%
LX International (Japan) Ltd. (formerly, LG						
International (Japan) Ltd.) (*1)	Japan	100.00	100.00	Dec. 31	Export and import	Ownership over 50%
LX International (HK) Ltd. (formerly, LG					Export and import	
International (Hong Kong) Ltd.) (*1)	Hong Kong	100.00	100.00	Dec. 31		Ownership over 50%
LX International (Singapore) Pte. Ltd. (formerly,	0.	100.00	100.00	D 04	Export and import	0 1: 50%
LG International (Singapore) Pte. Ltd.) (*1)	Singapore	100.00	100.00	Dec. 31		Ownership over 50%
LX International (Deutschland) GmbH (formerly, LG International (Deutschland)					Export and import	
GmbH) (*1)	Deutschland	100.00	100.00	Dec. 31		Ownership over 50%
LX International (Shanghai) Ltd.	Deutschland	100.00	100.00	DC0. 01	Export and import	Ownership over 0070
(formerly, LG International (China) Ltd.) (*1)	China	100.00	100.00	Dec. 31		Ownership over 50%
Yantai LX International VMI Co., Ltd. (formerly,						
Yantai VMI Hub LG International Co., Ltd.) (*1)	China	100.00	100.00	Dec. 31	Hub	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%
LX International India Private Limited						
(formerly, LG International (India) Ltd.) (*1)	India	100.00	100.00	Mar. 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	100.00	95.00	Dec. 31	Palm oil	Ownership over 50%
PT. Tintin Boyok Sawit Makmur (TBSM) (*2)	Indonesia	100.00	95.00	Dec. 31	Palm oil	Ownership over 50%
PT. Tintin Boyok Sawit Makmur Dua						
(TBSMD) (*2)	Indonesia	100.00	95.00	Dec. 31	Palm oil	Ownership over 50%
PT. Green Global Utama (GGU)	Indonesia	100.00	100.00	Dec. 31	Palm oil	Ownership over 50%
PT. LX International Indonesia (LXII) (formerly,				5	. .	o I. 500/
LG International Indonesia (LGII)) (*1)	Indonesia	100.00	100.00	Dec. 31	Service	Ownership over 50%
PT. Binsar Natorang Energi (BNE)	Indonesia	95.00	95.00	Dec. 31	Hydroelectric power	Ownership over 50%
PT. Enertgy Metal Indonesia (EMI) (*3)	Indonesia	100.00	-	Dec. 31	Nickel	Ownership over 50%
PT. Global Investment Institusi (GII) (*3)	Indonesia	100.00	-	Dec. 31	Health care	Ownership over 50%
PT. Satu Gen Indonesia (SGI) (*3)	Indonesia	51.00	-	Dec.31	Health care	Ownership over 50%
Steel Flower Electric	China	100.00	100.00	Dec. 21	Steel from or	Oursership over 500/
& Machinary (Tianjin) Co., Ltd.	China	100.00	100.00	Dec. 31	Steel frames	Ownership over 50%

1.2 Consolidated subsidiaries (cont'd)

	Country of domie	Equity own 2021	ership (%) 2020	Reporting date	Principal activity	Basis of control
Philco Resources Ltd. (Rapu-Rapu)	Malaysia	60.00	60.00	 Dec. 31	Copper mining	Ownership over 50%
Resource Investment (Hong Kong)	Malaysia	00.00	00.00	DC0. 01	copper mining	Ownership over 0070
Ltd. (Xinzhen) LX International Yakutsk, LLC (formerly, LG	Hong Kong	100.00	100.00	Dec. 31	Coal mining	Ownership over 50%
International Yakutsk Ltd.) (*1)	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%
LX Pantos Logistics Co., Ltd.						·
(formerly, Pantos Logistics Co., Ltd.) (*1,4) Pantos Busan Newport Logistics	Korea	51.00	51.00	Dec. 31	Logistics	Ownership over 50%
Center Co., Ltd. (*4)	Korea	100.00	100.00	Dec. 31	Warehouse	Ownership over 50%
Helistar Air Co., Ltd (*4)	Korea	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Hanultari Co., Ltd (*4)	Korea	100.00	100.00	Dec. 31	Other food retail	Ownership over 50%
Pantos Logistics (China) Co., Ltd. (*4)	China	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics (Shanghai) Co., Ltd. (*4)	China	100.00	100.00	Dec. 31	Warehouse	Ownership over 50%
Pantos Logistics (Ningbo) Co., Ltd. (*4)	China	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
LX Pantos Logistics (Shenzhen) Co., Ltd. (formerly, Pantos Logistics (Shenzhen) Co.,						
Ltd. (*1, 4)	China	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics (H.K.) Co., Ltd. (*4)	Hong Kong	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics (Taiwan) Co., Ltd. (*4)	Taiwan	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
PT. LX Pantos Logistics Indonesia (formerly, Pantos Logistics Indonesia) (*1, 4)	Indonesia	99.00	99.00	Dec. 31	Logistics	Ownership over 50%
PT. LX Pantos Logistics Jakarta						
(formerly, Pantos Logistics Jakarta) (*1, 4) LX Pantos Logistics Singapore Pte. Ltd.	Indonesia	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
(formerly, Pantos Logistics Sngapore Pte. Ltd.) (*1, 4) LX Pantos Logistics (Thailand) Co., Ltd.	Singapore	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
(formerly, Pantos Logistics (Thailand) Co., Ltd.) (*1, 4)	Thailand	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
LX Pantos Logistics Malaysia Sdn. Bhd. (formerly, Pantos Logistics Malaysia Sdn.						
Bhd.) (*1, 4) LX Pantos Logistics (India) Pvt. Ltd. (formerly,	Malaysia	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics (India) Pvt. Ltd. (*1, 4) LX Pantos (Cambodia) Co., Ltd. (formerly,	India	100.00	100.00	Mar. 31	Logistics	Ownership over 50%
Pantos Logistics (Cambodia) Co., Ltd.) (*1, 4) LX Pantos Vietnam Co., Ltd. (formerly,	Cambodia	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics Vietnam Co., Ltd.) (*1, 4) LX Pantos Australia Pty Ltd. (formerly,	Vietnam	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics Australia Pty Ltd.) (*1, 4) LX Pantos Holdings (Thailand) Co., Ltd.	Australia	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
(formerly, Pantos Holdings (Thailand) Co., Ltd.) (*1, 4)	Thailand	48.50	48.50	Dec. 31	Logistics	De facto control
Pantos Logistics Myanmar Co., Ltd. (*4)	Myanmar	87.96	87.96	Mar. 31	Logistics	Ownership over 50%
LX Pantos U.K. Ltd (formerly, Pantos Logistics U.K. Ltd.) (*1, 4)	UK	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
LX Pantos Netherlands B. V (formerly, Pantos Logistics Benelux B.V) (*1, 4)	Netherlands	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics France (*4)	France	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
LX Pantos Poland SP.Z.O.O. (formerly,	Trance	100.00	100.00	Dec. 51	LOGISTICS	Ownership over 50%
Pantos Logistics Poland) (*1, 4)	Poland	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
LX Pantos Germany GmbH (formerly, Pantos Logistics Germany GmbH) (*1, 4)	Deutschland	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
LX Pantos Spain Slu. (formerly, Pantos	Spain	100.00	100.00	Dec. 31		Ownership over 50%
Logistics Spain S.L.) (*1, 4) LX Pantos Turkey Lojistick Ve Ticaret Ltd. Sti. (formerly, Pantos Logistics Ve Tic.Lgd.Sti)	Spain	100.00	100.00	Dec. 31	Logistics	
(10111eny, Fantos Logistics ve fic.Lgd.Str) (*1, 4)	Turkey	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics Sweden AB (*4)	Sweden	100.00	100.00	Dec. 31	Logistics	Ownership over 50%

1.2 Consolidated subsidiaries (cont'd)

	Country of	Equity own	ership (%)	Reporting		
	domie	2021	2020	date	Principal activity	Basis of control
LX Pantos Mexico, S.A. DE C.V. (formerly,						
Pantos Logistics Mexico) (*1, 4)	Mexico	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
LX Pantos Logistica Do Brasil Ltda (formerly,						
Pantos Do Brasil Logistica) (*1, 4)	Brazil	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
LX Pantos Colombia SAS (formerly, Pantos						
Logistics Colombia SAS) (*1, 4)	Colombia	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics Chile SpA (*4)	Chile	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
LX Pantos Panama, S.A (formerly, Pantos						
Logistics Panama S.A.) (*1, 4)	Panama	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics AR S.A. (*4)	Argentina	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
LX Pantos Solucoes Logisticas Do Brasil						
Ltda. (formerly, Hi Logistics Brasil Servicos						
De Logistica LTDA) (*1, 4)	Brasil	100.00	100.00	Dec. 31	Warehouse	Ownership over 50%
FNS CIS LLC (*4)	Russia	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics Kazakhstan (*4)	Kazakhstan	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics Ukraine Ltd (*4)	Ukraine	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Customs Services LLC (*4, 5)	Russia	-	100.00	Dec. 31	Customs	Ownership over 50%
Pantos Logistics L.L.C (Dubai) (*4)	Dubai	49.00	49.00	Dec. 31	Logistics	De facto control
Pantos Logistics L.L.C (Oman) (*4, 5)	Oman	-	70.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics Co., LTD. Saudi Arabia						
(*4)	Saudi Arabia	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Pantos Logistics Nigeria Limited (*4)	Nigeria	-	99.93	Dec. 31	Logistics	Ownership over 50%
LX Pantos Japan Inc. (formerly, Pantos						
Logistics Japan Inc,) (*1, 4)	Japan	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Hi Logistics (China) Co., Ltd. (*4)	China	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Hi Logistics RUS, LLC. (*4, 5)	Russia	-	100.00	Dec. 31	Logistics	Ownership over 50%
LX Pantos Solutions India Private Limited					Ū.	·
(formerly, Pantos Logistic Solutions India						
Private Limited) (*1, 4)	India	100.00	100.00	Mar. 31	Logistics	Ownership over 50%
Hi Logistics Egypt S.A.E (*4)	Egypt	99.26	99.26	Dec. 31	Logistics	Ownership over 50%
LX Pantos America, INC. (formerly, Pantos						
North America, INC.) (*1, 4)	USA	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
LX Pantos Hungary KFT. (formerly, Pantos						
Logistics Hungary KTF.) (*1, 4)	Hungary	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
Onecube International Logistics Co., Ltd. (*4)	China	100.00	100.00	Dec. 31	Logistics	Ownership over 50%
PT. Pantos Express Indonesia (*4)	Indonesia	49.00	49.00	Dec. 31	Logistics	De facto control

(*1) For the year ended December 31, 2021, name of the subsidiary was changed.

- (*2) For the year ended December 31, 2021, PT.Green Global Lestari (GGL), one of the subsidiaries, acquired 5% of remaining shares in PT. Grand Utama Mandiri (GUM) and PT. Tintin Boyok Sawit Markur (TBSM), respectively. Also, PT. Tintin Boyok Sawit Markur (TBSM), one of the subsidiaries, acquired 5% of remaining shares in PT. Tintin Boyok Sawit MakmurDua (TBSMD).
- (*3) For the year ended December 31, 2021, the Group included several subsidiaries in the consolidation scope by acquiring interests of PT. Global Investment Institusi (GII) directly, interests of PT. Satu Gen Indonesia (SGI) through its subsidiary, PT. Global Investment Institusi (GII), and interest of PT. Energy Metal Indonesia (EMI) through its subsidiary, PT. Batu bara Global Energy (BGE).
- (*4) As of December 31, 2021, the entities are subsidiaries of LX Pantos Logistics Co., Ltd., and the equity ownerships presented above are simple sums of equity interests held by LX Pantos Logistics Co., Ltd. and its subsidiaries.
- (*5) For the year ended December 31, 2021, the Group excluded several subsidiaries from the consolidation scope by liquidating Pantos Logistics L.L.C (Oman), Pantos Logistics Nigeria Limited, and Hi Logistics RUS LLC. and selling Pantos Customs Services LLC.

Meanwhile, as of January 1, 2022, the Group acquired 100% of equity interests of Pantos USA, INC, a corporation operating multimodal transportation business in the United States.

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

			2021		
	Assets	Liabilities	Equity	Revenue	Profit (loss) for the year
LX International (America) Inc. (formerly, LG International (America) Inc.)	₩ 402,590	₩ 359,217 ₩	43,373	₩ 1,711,415	₩ 3,467
LHC Solar LLC	3,475	967	43,373	316	11
LX International (Japan) Ltd. (formerly, LG	-,		_,		
International (Japan) Ltd.)	100,047	95,878	4,169	482,779	63
LX International (HK) Ltd. (formerly, LG International (Hong Kong) Ltd.)	111,314	101,232	10,082	572,449	866
LX International (Singapore) Pte. Ltd. (formerly, LG International (Singapore)	639,236	620,008	19,228	2 796 012	5,724
Pte. Ltd.) LX International (Deutschland) GmbH (formerly, LG International (Deutschland)	039,230	020,000	19,220	3,786,013	5,724
GmbH)	12,580	2,377	10,203	18,251	554
LX International (Shanghai) Corp. (formerly, LG International (China) Ltd.) (*1	12,165	3,838	8,327	15,920	369
Yantai VMI Hub LX International Co., Ltd. (formerly, Yantai VMI Hub LG					
International Co., Ltd.)	6,820	1,552	5,268	3,308	753
Bowen Investment (Australia) Pty Ltd.	121,232	104,781	16,451	88,299	8,082
PT. Batubara Global Energy (BGE)	269,065	209,016	60,049	676,701	10,120
PT. Megaprima Persada (MPP)	16,116	24,196	(8,080)	5,202	(8,855)
PT. Mega Global Energy (MGE)	2,935	988	1,947	-	(1,282)
PT. Ganda Alam Makmur (GAM)	670,633	269,010	401,623	501,210	153,200
LX International (India) Ltd. (formerly, LG International (India) Ltd.)	3,250	1,412	1,838	802	(24)
	157,949	30,657	1,030	002	(24) 871
PT. Green Global Lestari (GGL)	90,166	39,924	50,242	- 64,128	9,229
PT. Parna Agromas (PAM) PT. Grand Utama Mandiri (GUM)	61,794	24,787	30,242 37,007	26,799	9,229 5,060
PT. Tintin Boyok Sawit Makmur (TBSM)	45,614	17,086	28,528	56,910	3,993
PT. Tintin Boyok Sawit Makmur Dua (TBSMD)	12,234	1,725	10,509	5,860	2,046
PT. Green Global Utama (GGU)	154,565	145,553	9,012	449,142	2,163
PT. LX International Indonesia (LXII) (formerly, LG International Indonesia					
(LGII)) (*1)	9,027	14,237	(5,030)		(5,600)
PT. Binsar Natorang Energi (BNE)	255,293	159,174	96,119	24,936	6,901 188
PT. Energy Metal Indonesia (EMI)	13,208	12,282 2,503	1,026	7,569	
PT. Global Investment institusi (GII) PT. Satu Gen Indonesia (SGI)	9,542 2,177	2,503	7,039 2,153	1,569	(678) (342)
Steel Flower Electric & Machinary (Tianjin)	2,177	24	2,133	-	(342)
Co., Ltd.	44,617	8,960	35,657	105,016	3,745
Philco Resources Ltd. (Rapu-Rapu)	597	439	158	-	(55)
Resource Investment (HongKong) Ltd. (Xinzhen)	131,915	8	131,907	-	65,684
LX International Yakutsk Ltd. (formerly, LG International Yakutsk Ltd.)	6,501	13,793	(7,292)	1,066	(416)
Korea Carbon International Co., Ltd. (Shaanxi BBM)	8,615	8,615	-	-	-
Colmineral, S.A. de.C.V.	3	-	3	-	-
Fertilizer Resources Investment Ltd.	160,660	-	160,660	-	18,684
Dangjin Tank Terminal Co., Ltd.	91,578	712	90,866	-	(2,470)
Haiphong Steel Flower Electrical & Machinery Company Limited	36,552	29,464	7,088	47,031	2,052
LX Pantos Logistics Co., Ltd. (formerly, Pantos Logistics Co., Ltd.)	1,468,001	815,919	652,482	4,486,440	142,479
Pantos Busan Newport Logistics Center Co., Ltd.	13,906	2,980	10,926	14,976	666

			2021		
	Assets	Liabilities	Equity	Revenue	Profit (loss) for the year
Helistar Air Co., Ltd.	₩ 20,051 ₩	15,804 ₩	4,247 ₩	132,552 ₩	2,581
Hanultari Co., Ltd.	392	255	137	818	6
Pantos Logistics (China) Co., Ltd.	212,246	164,558	47,688	786,792	16,585
Pantos Logistics (Shanghai) Co., Ltd.	119,740	87,763	31,977	381,744	8,885
Pantos Logistics (Ningbo) Co., Ltd.	1,887	44	1,843	615	59
LX Pantos Logistics (Shenzhen) Co., Ltd. (formerly, Pantos Logistics (Shenzhen)					
Co., Ltd.	57,370	32,454	24,916	235,030	6,877
Pantos Logistics (H.K) Co., Ltd.	71,799	22,697	49,102	134,351	6,263
Pantos Logistics (Taiwan) Co., Ltd.	10,675	7,202	3,473	33,883	767
PT. LX Pantos Logistics Indonesia					
(formerly, Pantos Logistics Indonesia)	53,112	40,844	12,268	172,770	5,811
PT. Pantos Logistics Jakarta (formerly,		a a 17		(= 0=0	(=0=)
Pantos Logistics Jakarta)	14,959	8,847	6,112	15,350	(505)
LX Pantos Singapore Pte. Ltd. (formerly, Pantos Logistics Sngapore Pte. Ltd.)	14,871	7,281	7,590	28,017	1,807
LX Pantos (Thailand) Co., Ltd. (formerly, Pantos Logistics (Thailand) Co., Ltd.)	36,713	23,515	13,198	137,618	1,365
LX Pantos Malaysia Sdn. Bhd. (formerly, Pantos Logistics Malaysia Sdn. Bhd.)	19,080	14,934	4,146	49,686	1,940
LX Pantos (India) Pvt. Ltd. (formerly,					
Pantos Logistics (India) Pvt. Ltd.	23,224	22,135	1,089	66,721	(2,711)
LX Pantos (Cambodia) Co., Ltd. (formerly, Pantos Logistics (Cambodia) Co., Ltd.)	1,902	1,536	366	5,716	148
LX Pantos Vietnam Co., Ltd. (formerly, Pantos Logistics Vietnam Co., Ltd.)	60,129	36,069	24,060	279,942	11,056
LX Pantos Australia Pty Ltd. (formerly,	,		,	,	,
Pantos Logistics Australia Pty Ltd.) LX Pantos Holdings (Thailand) Co., Ltd.	5,136	2,766	2,370	14,268	543
(formerly, Pantos Holdings (Thailand) Co., Ed.					
Ltd.)	1,657	176	1,481	717	18
Pantos Logistics Myanmar Co., Ltd.	68	54	14	-	(21)
LX Pantos U.K. Ltd. (formerly, Pantos					()
Logistics U.K. Ltd.)	13,602	9,291	4,311	38,556	1,293
LX Pantos Netherlands B.V (formerly,					
Pantos Logistics Benelux B.V)	58,230	42,464	15,766	94,308	2,185
Pantos Logistics France	28,435	25,299	3,136	36,299	1,057
LX Pantos Poland SP.Z.O.O (formerly,					
Pantos Logistics Poland)	160,624	110,694	49,930	581,883	28,774
LX Pantos Germany GmbH (formerly,					
Pantos Logistics Germany GmbH)	21,024	9,416	11,608	64,192	3,190
LX Pantos Spain Slu (formerly, Pantos	10,100				
Logistics Spain S.L.)	13,499	7,296	6,203	38,344	1,415
LX Pantos Turkey Lojistik Ve Ticaret Ltd. Sti. (formerly, Pantos Logistics Ve					
Tic.Lgd.Sti)	6,484	3,060	3,424	20,966	3,583
Pantos Logistics Sweden AB	2,816	3,489	(673)	5,208	170
LX Pantos Mexico, S.A. DE C.V. (formerly,		0 - 00 <i>1</i>	04 570	~~~~	
Pantos Logistics Mexico)	107,266	85,694	21,572	390,067	5,187
LX Pantos Logistica Do Brasil Ltda (formerly, Pantos Do Brasil Logistica)	12,230	4,504	7,726	66,646	3,421
LX Pantos Colombia S.A.S (formerly,			0.000	10 10-	
Pantos Logistics Colombia SAS)	5,760	2,960	2,800	13,183	1,214
Pantos Logistics Chile SpA	4,367	3,380	987	11,461	1,211
LX Pantos Panama S.A. (formerly, Pantos		(0 -0-	10.010	4
Logistics Panama S.A.)	7,427	4,660	2,767	13,312	1,828
Pantos Logistics AR S.A.	1,074	314	760	2,378	68

		2021					
	_	Assets	Liabilities	Equity	Revenue	Profit (loss) for the year	
LX Pantos Solucoes Logisticas Do Brasil							
Ltda. (formerly, Hi Logistics Brasil							
Servicos De Logistica LTDA)	₩	2,573 ₩	2,525 ₩	48 ₩	6,069 ₩	(894)	
FNS CIS LLC		50,229	28,832	21,397	123,506	9,339	
Pantos Logistics Kazakhstan		25	6	19	472	(93)	
Pantos Logistics Ukraine Ltd		-	-	-	-	-	
Pantos Logistics L.L.C (Dubai)		8,695	5,237	3,458	25,238	1,042	
Pantos Logistics Co., LTD. Saudi Arabia		2,901	1,270	1,631	7,002	538	
LX Pantos Japan Inc. (formerly, Pantos							
Logistics Japan Inc,)		28,919	19,230	9,689	100,711	2,618	
Hi Logistics (China) Co., Ltd.		28,612	17,119	11,493	81,434	1,348	
LX Pantos Solutions India Private Limited							
(formerly, Pantos Logistic Solutions India							
Private Limited)		11,618	8,619	2,999	76,342	249	
Hi Logistics Egypt S.A.E		4,879	1,750	3,129	13,006	855	
Pantos North America, INC. (formerly,							
Pantos North America, INC.)		38,335	15,865	22,470	130,112	4,112	
Pantos Logistics Hungary KFT. (formerly,							
Pantos Logistics Hungary KTF.)		3,715	2,671	1,044	14,474	593	
Onecube International Logistics Co., Ltd.		2,898	1,176	1,722	4,263	(477)	
PT. Pantos Express Indonesia	_	215	232	(17)	510	(193)	
	₩	6,497,615 ₩	4,028,801 ₩	2,468,814 ₩	17,596,336 ₩	562,355	

	2020				
	Assets	Liabilities	Equity	Revenue	Profit (loss) for the year
LX International (America) Inc. (formerly,					
LG International (America) Inc.)	₩ 375,562	₩ 338,831	₩ 36,731	₩ 1,376,182	₩ 4,419
LHC Solar LLC	3,323	1,032	2,291	327	21
LX International (Japan) Ltd. (formerly, LG	75.050	74 457	4 000	000.050	(0.45)
International (Japan) Ltd.)	75,659	71,457	4,202	362,350	(245)
LX International (HK) Ltd. (formerly, LG International (Hong Kong) Ltd.)	111,187	102,758	8,429	308,791	2,924
LX International (Singapore) Pte. Ltd.	111,107	102,756	0,429	500,791	2,924
(formerly, LG International (Singapore)					
Pte. Ltd.)	601,567	589,301	12,266	2,348,661	2,318
LX International (Deutschland) GmbH	,	,	,	_,_ ,_ ,_ ,_ ,	_,
(formerly, LG International (Deutschland)					
ĠmbH)	14,250	4,626	9,624	11,651	936
LX International (Shanghai) Corp.					
(formerly, LG International (China) Ltd.)	7,901	784	7,117	5,970	61
Yantai VMI Hub LX International Co., Ltd.					
(formerly, Yantai VMI Hub LG					
International Co., Ltd.)	4,834	821	4,013	3,077	798
Bowen Investment (Australia) Pty Ltd.	70,677	62,520	8,157	52,889	(20,149)
PT. Batubara Global Energy (BGE)	83,545	37,099	46,446	323,439	2,094
PT. Megaprima Persada (MPP)	14,434	14,434	-	412	849
PT. Mega Global Energy (MGE)	3,983	925	3,058	-	(2,844)
PT. Ganda Alam Makmur (GAM)	477,297	254,446	222,851	194,484	7,236
LX International (India) Ltd. (formerly, LG	0.450		4 707	4 004	040
International (India) Ltd.)	2,153	416	1,737	1,221	212
PT. Green Global Lestari (GGL)	151,428	24,451	126,977	-	3,915
PT. Parna Agromas (PAM)	80,555	42,812	37,743	93,789	3,954
PT. Grand Utama Mandiri (GUM)	50,220	20,530	29,690	18,314	(3,894)
PT. Tintin Boyok Sawit Makmur (TBSM)	41,910	18,742	23,168	39,791	(2,351)
PT. Tintin Boyok Sawit Makmur	0.000	0.404	7 700	0.000	000
Dua (TBSMD)	9,923	2,131	7,792	3,332	396
PT. Green Global Utama (GGU)	79,625	73,323	6,302	268,385	1,830
PT. LX International Indonesia (LXII)					
(formerly, LG International Indonesia (LGII))	12,258	11,503	755	4,766	370
PT. Binsar Natorang Energi (BNE)	237,492	161,327	76,165	28,341	7,553
	201,492	101,327	70,105	20,041	1,000

					2020				
		Assets	Liabilities		Equity	F	Revenue		Profit (loss) for the year
Steel Flower Electric & Machinary (Tianjin)		44 704 M	40.050	117	00,400	117	00.450	117	0.707
Co., Ltd.	₩	44,794 ₩	16,356	W	28,438	₩	66,153	Ŵ	2,767
Philco Resources Ltd. (Rapu-Rapu)		3,347	3,138		209		-		(144)
Resource Investment (HongKong) Ltd. (Xinzhen)		59,554	-		59,554		-		(6,551)
LX International Yakutsk Ltd. (formerly, LG International Yakutsk Ltd.)		6,050	12,327		(6,277)		1,057		(188)
Korea Carbon International Co., Ltd. (Shaanxi BBM)		7,909	7,909		-		-		5,535
Colmineral, S.A. de.C.V.		3	-		3		-		-
Fertilizer Resources Investment Ltd.		131,109	-		131,109		-		10,643
Dangjin Tank Terminal Co., Ltd.		92,261	626		91,635		-		(2,325)
Haiphong Steel Flower Electrical									
& Machinery Company Limited		20,318	15,847		4,471		34,558		376
LX Pantos Logistics Co., Ltd. (formerly,									
Pantos Logistics Co., Ltd.)		1,056,113	509,276		546,837		2,728,360		72,019
Pantos Busan Newport Logistics Center									
Co., Ltd.		13,432	2,825		10,607		11,377		481
Helistar Air Co., Ltd.		11,742	8,826		2,916		63,831		1,401
Hanultari Co., Ltd.		323	192		131		632		5
Pantos Logistics (China) Co., Ltd.		132,998	105,858		27,140		402,377		8,537
Pantos Logistics (Shanghai) Co., Ltd.		90,202	69,899		20,303		213,870		3,675
Pantos Logistics (Ningbo) Co., Ltd.		1,650	53		1,597		591		193
Pantos Logistics (Shenzhen) Co., Ltd.									
(formerly, Pantos Logistics (Shenzhen)		27 920	21.076		15 962		164 242		E 120
Co., Ltd.		37,839	21,976		15,863		164,343		5,139
Pantos Logistics (H.K) Co., Ltd.		62,085	22,726		39,359		105,090		13,159
Pantos Logistics (Taiwan) Co., Ltd.		5,928	3,190		2,738		22,724		461
PT. LX Pantos Indonesia (formerly, Pantos Logistics Indonesia)		37,712	31,800		5,912		76,450		(200)
PT. LX Pantos Jakarta (formerly, Pantos Logistics Jakarta)		12,802	6,441		6,361		8,794		(265)
LX Pantos Singapore Pte. Ltd. (formerly, Pantos Logistics Sngapore Pte. Ltd.)		11,931	6,352		5,579		26,471		1,296
LX Pantos (Thailand) Co., Ltd. (formerly, Pantos Logistics (Thailand) Co., Ltd.)		36,334	24,236		12,098		96,147		670
LX Pantos Malaysia Sdn. Bhd. (formerly,		,	,				,		
Pantos Logistics Malaysia Sdn. Bhd.) LX Pantos (India) Pvt. Ltd. (formerly,		8,889	6,847		2,042		24,428		512
Pantos Logistics (India) Pvt. Ltd.		14,274	10,656		3,618		37,310		(3,654)
LX Pantos (Cambodia) Co., Ltd. (formerly, Pantos Logistics (Cambodia) Co., Ltd.)		2,020	1,821		199		6,393		546
LX Pantos Vietnam Co., Ltd. (formerly, Pantos Logistics Vietnam Co., Ltd.)		35,509	22,821		12,688		142,063		4,784
LX Pantos Australia Pty Ltd. (formerly, Pantos Logistics Australia Pty Ltd.)		4,000	2,221		1,779		10,688		160
LX Pantos Holdings (Thailand) Co., Ltd. (formerly, Pantos Holdings (Thailand) Co.,									
Ltd.)		1,619	125		1,494		821		(5)
Pantos Logistics Myanmar Co., Ltd.		99	58		41		1,697		(257)
LX Pantos U.K. Ltd									
(formerly, Pantos Logistics U.K. Ltd.) LX Pantos Netherlands B. V		13,934	11,158		2,776		29,405		700
(formerly, Pantos Logistics Benelux B.V)		60,633	43,661		16,972		76,279		(261)
Pantos Logistics France		16,205	14,125		2,080		27,510		(362)

		Pantos Logistics France					
	_	Assets	Liabilities		Equity	Revenue	Profit (loss) for the year
LX Pantos Poland SP.Z.O.O. (formerly, Pantos Logistics Poland)	₩	109,546 ₩	82,296	₩	27,250 ₩	360,516 ₩	12,149
LX Pantos Germany GmbH (formerly, Pantos Logistics Germany GmbH)		16,413	7,997		8,416	46,197	1,080
LX Pantos Spain Slu. (formerly, Pantos Logistics Spain S.L.) LX Pantos Turkey Lojistick Ve Ticaret Ltd.		12,225	7,442		4,783	29,099	514
Sti.(formerly, Pantos Logistics Ve Tic.Lgd.Sti)		4,002	1,487		2,515	19,285	1,071
Pantos Logistics Sweden AB		3,276	4,127		(851)	6,589	(1,362)
LX Pantos Mexico, S.A. DE C.V.		5,270	7,121		(001)	0,000	(1,002)
(formerly, Pantos Logistics Mexico)		68,640	53,301		15,339	202,140	3,479
LX Pantos Logistica Do Brasil Ltda (formerly, Pantos Do Brasil Logistica)		9,481	5,251		4,230	70,852	2,901
LX Pantos Colombia SAS (formerly, Pantos Logistics Colombia							
SAS)		2,830	993		1,837	6,620	362
Pantos Logistics Chile SpA		1,896	2,037		(141)	5,375	104
LX Pantos Panama, S.A (formerly, Pantos		1,000	2,007		(141)	0,070	104
Logistics Panama S.A.)		6,746	5,944		802	11,081	(47)
Pantos Logistics AR S.A.		1,315	536		779	3,080	406
LX Pantos Solucoes Logisticas Do Brasil Ltda. (formerly, Hi Logistics Brasil		,				-,	
Servicos De Logistica LTDA)		1,710	780		930	5,349	(693)
FNS CIS LLC		21,861	10,917		10,944	55,566	2,270
Pantos Logistics Kazakhstan		638	147		491	3,102	(107)
Pantos Logistics Ukraine Ltd		-	-		-	-	-
Pantos Customs Services LLC		473	59		414	701	(61)
Pantos Logistics L.L.C (Dubai)		5,894	3,693		2,201	17,293	20
Pantos Logistics L.L.C (Oman)		82	-		82	-	-
Pantos Logistics Co., LTD. Saudi Arabia		3,214	1,029		2,185	5,596	339
Pantos Logistics Nigeria Limited		127	42		85	-	(13)
LX Pantos Japan Inc. (formerly, Pantos							. ,
Logistics Japan Inc,)		16,247	8,398		7,849	57,858	556
Hi Logistics (China) Co., Ltd.		26,358	17,324		9,034	63,052	1,011
Hi Logistics RUS, LLC.		543	-		543	-	(252)
LX Pantos Solutions India Private Limited (formerly, Pantos Logistic Solutions India							
Private Limited)		10,556	7,997		2,559	66,336	(47)
Hi Logistics Egypt S.A.E		3,609	1,553		2,056	9,411	423
LX Pantos America, INC. (formerly, Pantos North America, INC.)		16,584	14,559		2,025	82,926	(283)
LX Pantos Hungary KFT. (formerly, Pantos Logistics Hungary KTF.)		1,211	735		476	6,057	(433)
Onecube International Logistics Co., Ltd.		3,418	1,425		1,993	9,173	440
PT. Pantos Express Indonesia		1,113	950		163	2,105	254
	₩	4,893,409 ₩	3,058,634	₩	1,834,775 ₩	10,970,950 ₩	153,331

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):

	2021					
	Profit attributable to non- _controlling interests		Non-controlling interests		Dividends distributed to non-controlling interests	
PT. Megaprima Persada (MPP)	₩	(2,214)	₩	(2,020)	₩	-
PT. Ganda Alam Makmur (GAM)		59,998		159,174		-
PT. Binsar Natorang Energi (BNE)		345		4,806		-
Pantos Logistics Co., Ltd. and its subsidiaries		131,513		440,859		17,395

	2020					
	Profit or loss attributable to non- controlling interests		Non-controlling interests		Dividends distributed to non-controlling interests	
PT. Megaprima Persada (MPP)	₩	212	₩	45	₩	-
PT. Ganda Alam Makmur (GAM)		2,666		88,948		-
PT. Binsar Natorang Energi (BNE) Pantos Logistics Co., Ltd.		378		3,808		-
and its subsidiaries		57,877		319,322		11,515

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 auditor's 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, 2021. 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

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 Company 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 Parent Company 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.

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. Contingent consideration classified as equity is not remeasured and its subsequent settlement is accounted for within equity. Contingent consideration classified as an asset or liability that is a financial instrument and within the scope of KIFRS 1109 Financial Instruments, is measured at fair value with the changes in fair value recognized in the statement of profit or loss in accordance with KIFRS 1109. Other contingent consideration that is not within the scope of KIFRS 1109 is measured at fair value at each reporting date with changes in fair value recognized in profit or loss.

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

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 Current versus non-current classification

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

An asset is current when it is:

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

All other assets are classified as non-current.

A liability is current when:

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

The Group classifies all other liabilities as non-current.

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

2.3.3 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.

2.3.4 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.

2.3.5 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.

2.3.5.1 Financial assets

2.3.5.1.1 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 amortized 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.

2.3.5.1.1 Initial recognition and measurement (cont'd)

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 recognized on the trade date, i.e., the date that the Group commits to purchase or sell the asset.

2.3.5.1.2 Subsequent measurement

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

- > Financial assets at amortized 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 derecognition (equity instruments)
 Financial assets at fair value through profit or loss

Financial assets at amortized cost (debt instruments)

The Group measures financial assets at amortized 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 amortized cost are subsequently measured using the effective interest rate (EIR) method and are subject to impairment. Gains and losses are recognized in profit or loss when the asset is derecognized, 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 amortized 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.

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 recognized as other non-operating income in the statement of profit or loss when the right of payment has been established, except when the Group 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.

2.3.5.1.2 Subsequent measurement (cont'd)

The Group may elect 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 amortized 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 recognized 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 recognized 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.

2.3.5.1.3 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.

2.3.5.2 Impairment of financial assets

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

The Group recognized 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 recognized 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 recognized 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.

2.3.5.3 Financial liabilities

2.3.5.3.1 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, borrowings including bonds and derivative financial liabilities.

2.3.5.3.2 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.

2.3.5.3.3 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.

2.3.5.4 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.

2.3.6 Derivative financial instruments and hedge accounting

2.3.6.1 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.

2.3.6.1 Initial recognition and subsequent measurement (cont'd)

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 hedged 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.

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 recognized as other expense and the ineffective portion relating to commodity contracts is recognized in other operating income or expenses.

The Group designates only the spot element of forward contracts as a hedging instrument. The forward element is recognized 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 recognized 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.

2.3.6.1 Initial recognition and subsequent measurement (cont'd)

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.

2.3.7 Investment in associates and joint venture

An associate is an entity over which the Parent Company 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 Parent Company. 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.

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.

2.3.8 Non-current assets held for sale (or distribution to equity holders) and discontinued operations

The Group classifies non-current assets and disposal groups as held for sale or for distribution to equity holders of the parent if their carrying amounts will be recovered principally through a sale 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.

2.3.9 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	"
Bearer plants	20	n
Others	5	n

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.

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

The Group reviews the estimated residual values and expected useful lives of assets annually. In particular, the Group considers the impact of health, safety and environmental legislation in its assessment of expected useful lives and estimated residual values.

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

2.3.10 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.

2.3.10.1 Right-of-use assets

The Group recognized 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 recognized, 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. See the accounting policies in section 2.3.21 Impairment of non-financial assets for details.

2.3.10.2 Lease liabilities

At the commencement date of the lease, the Group recognized 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 recognized as expenses (unless they are incurred to produce inventories) in the period in which the event or condition that triggers the payment occurs.

2.3.10.2 Lease liabilities (cont'd)

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 (See Note 25).

2.3.10.3 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 recognized as expense on a straight-line basis over the lease term.

2.3.11 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.

2.3.12 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.

2.3.13 Intangible assets

Intangible assets acquired separately are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is its fair value 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.

2.3.13 Intangible assets (cont'd)

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.

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.

2.3.14 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.

2.3.15 Pensions benefits and other post-employment 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

2.3.16 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.

2.3.17 Onerous contracts

If the Group has a contract that is onerous, the present obligation under the contract is recognized and measured as a provision. However, before a separate provision for an onerous contract is established, the Group recognized 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.

2.3.18 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.

2.3.19 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 recognized 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.

2.3.19.1 Sales of goods

Revenue from sales of goods is recognized 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. The Group takes into consideration whether it is principal or agency relating to the performance obligations when determining the transaction price of sales of goods.

2.3.19.2 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.

2.3.19.3 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 2.3.5.1

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 recognized when the payment is made or the payment is due (whichever is earlier). Contract liabilities are recognized as revenue when the Group performs under the contract.

2.3.20 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.

2.3.20.1 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.

2.3.20.2 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 at exchange rates prevailing at the dates of the transactions, and these exchange differences are recognized in OCI. 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.

2.3.21 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.

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.

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

Intangible assets with indefinite useful lives 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.

2.3.22 Taxes

2.3.22.1 Current income tax

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

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.

2.3.22.2 Deferred tax

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

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

- 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

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.

2.3.22.2 Deferred tax (cont'd)

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.

2.3.22.3 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.

2.3.23 Crypto assets

As there is no standard applicable to KIFRS for Crypto assets (e. g. "Klay"), the Group developed an accounting policy by applying *mutatis mutandis* to KIFRS 1038 in accordance with the interpretation announced by the IFRIC in June 2019.

2.3.23.1 Initial recognition of crypto assets

The Group recognizes crypto assets as an asset because it meets the definition of an asset in the *Conceptual Framework for Financial Reporting* (a resource controlled by an entity as a result of past events or transactions; and from which future economic benefits are expected to flow to the entity). The Group determines that crypto assets meet the definition of an intangible asset as an identifiable non-monetary asset without physical substance and records crypto assets as intangible assets.

2.3.23.2 Subsequent measurement of crypto assets

The Group applies the cost method to subsequent measurements of crypto assets by applying *mutatis mutandis* to KIFRS 1038.

2.3.23.3 Derecognition of crypto assets

As the Group is obligated to transfer rights to crypto assets or pays all cash flows received under pass-through contracts to third parties without significant delay, the Group derecognizes the crypto assets when it transfers most of the risks and rewards arising from ownership of the crypto assets to others, or otherwise, when it transfers control over the crypto assets to others although it does not either transfer or retain such assets.

When disposing of crypto assets, the difference between the cash flow received or the cash flow to be received and the book value of the assets disposed is recognized as profit or loss upon disposal, but if any obligation arising from the ownership of the crypto assets has not been fulfilled, it is recognized as profit or loss when the obligation is satisfied.

2.4 New and amended standards and interpretations

The Group applied for the first-time certain standards and amendments, which are effective for annual periods beginning on or after January 1, 2022. The Group has not early adopted any standards, interpretations or amendments that have been issued but are not yet effective.

2.4.1 Interest Rate Benchmark Reform – Phase 2: Amendments to KIFRS 1109, KIFRS 1039, KIFRS 1107, KIFRS 1104 and KIFRS 1116

The amendments provide temporary reliefs which address the financial reporting effects when an interbank offered rate (IBOR) is replaced with an alternative nearly risk-free interest rate (RFR). The amendments include the following practical expedients:

- Require contractual changes, or changes to cash flows due directly to the Reform, to be treated as changes to a floating interest rate, akin to a movement in a market rate of interest;
- Permit changes required by the IBOR Reform to be made to hedge designations and hedge documentation without discontinuing the hedging relationship; and
- Provide temporary relief to entities from having to meet the separately identifiable requirement when an RFR instrument is designated as a hedge of a risk component.

These amendments had no impact on the consolidated financial statements of the Group. The Group intends to use the practical expedients in future periods if they become applicable.

2.4.2 Amendments to KIFRS 1116 Covid-19 Related Rent Concessions beyond June 30, 2021

On May 28, 2020, the IASB issued *Covid-19-Related Rent Concessions* - amendment to KIFRS 1116 *Leases*. The amendments provide relief to lessees from applying KIFRS 1016 guidance on lease modification accounting for rent concessions arising as a direct consequence of the Covid-19 pandemic. As a practical expedient, a lessee may elect not to assess whether a Covid-19 related rent concession from a lessor is a lease modification. A lessee that makes this election accounts for any change in lease payments resulting from the Covid-19 related rent concession the same way it would account for the change under KIFRS 1116 if the change were not a lease modification.

The amendment was intended to apply until June 30, 2021, but as the impact of the Covid-19 pandemic is continuing, on March 31, 2021, the IASB extended the period of application of the practical expedient to June 30, 2022. The amendment applies to annual reporting periods beginning on or after April 1, 2021. The Group has not received Covid-19-related rent concessions, but plans to apply the practical expedient if it becomes applicable within allowed period of application.

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 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. Refer to Note 21 for information on the specific details of main assumptions.

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 analyzed.

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).

2.5.2.6 Deferred tax assets

Deferred tax assets are recognized for unused tax losses to the extent that it is probable that taxable profit will be available against which the losses can be utilized. Significant management judgment is required to determine the amount of deferred tax assets that can be recognized, based upon the likely timing and the level of future taxable profits together with future tax planning strategies. The Group has W76,796 million (2020: W78,323 million) of tax credits carried forward which can be used to offset future taxable income but with time constraint. Among the total tax credits carried forward, the Group has determined not to recognize deferred tax assets on W32,507 million of tax credits carried forward, due to lack of probability of occurrence. Refer to Note 22 for details.

2.5.2.7 Special tax provisions for promoting investment and collaborative cooperation

In accordance with the *special tax provision for promoting investment and collaborative cooperation*, the Group shall pay an additional income tax calculated under the applicable tax law, if the use of corporate earnings on qualifying investments, wage increase and collaborative cooperation falls below a certain portion of its taxable income. As the Group reflects the surtax imposed due to the special tax provisions for promoting investment and collaborative cooperation when computing its income tax, the Group's income tax may change arising from changes in investment, wage increase, or dividend payouts.

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 KIFRS 1117 Insurance Contracts

In May 2017, the IASB issued IFRS 17 *Insurance Contracts*, a comprehensive new accounting standard for insurance contracts covering recognition and measurement. Once effective, KIFRS 1117 will replace KIFRS 1104 *Insurance Contracts* that was issued in 2005. KIFRS 1117 applies to all types of insurance contracts (i.e., life, non-life, direct insurance and re-insurance), regardless of the type of entities that issue them, as well as to certain guarantees and financial instruments with discretionary participation features. A few of exceptions will apply. The overall objective of KIFRS 1117 is to provide an accounting model for insurance contracts that is more useful and consistent for insurers. In contrast to the requirements in KIFRS 1104, which are largely based on grandfathering previous local accounting policies, KIFRS 1117 provides a comprehensive model for insurance contracts, covering all relevant accounting aspects. The core of KIFRS 1117 is the general model, supplemented by:

- > A specific adaptation for contracts with direct participation features (the variable fee approach), and
- > A simplified approach (the premium allocation approach) mainly for short-duration contracts.

KIFRS 1117 is effective for reporting periods beginning on or after January 1, 2023, with comparative figures required. Early application is permitted, provided the entity also applies KIFRS 1109 and KIFRS 1115 on or before the date it first applies KIFRS 1117. This standard is not applicable to the Group.

2.6.2 Amendments to KIFRS 1001: Classification of Liabilities as Current or Non-current

The amendments to paragraphs 69 to 76 of KIFRS 1001 specify the requirements for classifying liabilities as current or non-current. The amendments clarify:

- > What is meant by a right to defer settlement
- > That a right to defer must exist at the end of the reporting period
- > That classification is unaffected by the likelihood that an entity will exercise its deferral right
- That only if an embedded derivative in a convertible liability is itself an equity instrument would the terms of a liability not impact its classification

The amendments are effective for annual reporting periods beginning on or after January 1, 2023 and must be applied retrospectively. The Group is currently assessing the impact the amendments will have on current practice and whether existing loan agreements may require renegotiation.

2.6.3 Reference to the Conceptual Framework – Amendments to KIFRS 1103

The amendments are intended to replace a reference to the Framework for the Preparation and Presentation of Financial Statements, issued in 1989, with a reference to the Conceptual Framework for Financial Reporting issued in March 2018 without significantly changing its requirements. The Board also added an exception to the recognition principle of KIFRS 1103 to avoid the issue of potential 'day 2' gains or losses arising for liabilities and contingent liabilities that would be within the scope of KIFRS 1037 or KIFRS 2121 *Levies,* if incurred separately. At the same time, the Board decided to clarify existing guidance in KIFRS 1103 for contingent assets that would not be affected by replacing the reference to the Framework for the Preparation and Presentation of Financial Statements. The amendments are effective for annual reporting periods beginning on or after January 1, 2022 and apply prospectively.

2.6.4 Property, Plant and Equipment: Proceeds before Intended Use – Amendments to KIFRS 1016

The amendment prohibits entities deducting from the cost of an item of property, plant and equipment, any proceeds from selling items produced while bringing that asset to the location and condition necessary for it to be capable of operating in the manner intended by management. Instead, an entity recognizes the proceeds from selling such items, and the costs of producing those items, in profit or loss.

The amendment is effective for annual reporting periods beginning on or after January 1, 2022 and must be applied retrospectively to items of property, plant and equipment made available for use on or after the beginning of the earliest period presented when the entity first applies the amendment. The amendments are not expected to have a material impact on the Group.

2.6.5 Onerous Contracts – Costs of Fulfilling a Contract – Amendments to KIFRS 1037

The amendments to KIFRS 1037 specify which costs an entity needs to include when assessing whether a contract is onerous or loss-making.

The amendments apply a "directly related cost approach". The costs that relate directly to a contract to provide goods or services include both incremental costs and an allocation of costs directly related to contract activities. General and administrative costs do not relate directly to a contract and are excluded unless they are explicitly chargeable to the counterparty under the contract.

The amendments are effective for annual reporting periods beginning on or after January 1, 2022. The Group will apply these amendments to contracts for which it has not yet fulfilled all its obligations at the beginning of the annual reporting period in which it first applies the amendments.

2.6.6 KIFRS 1101 *First-time Adoption of International Financial Reporting Standards* – Subsidiary as a first-time adopter

The amendment permits a subsidiary that elects to apply paragraph D16(1) of KIFRS 1101 to measure cumulative translation differences using the amounts reported by the parent, based on the parent's date of transition to KIFRS. This amendment is also applied to an associate or joint venture that elects to apply paragraph D16(1) of KIFRS 1101.

The amendment is effective for annual reporting periods beginning on or after January 1, 2022 with earlier adoption permitted.

2.6.7 KIFRS 1109 *Financial Instruments* – Fees in the ''10 per cent' test for derecognition of financial liabilities

The amendment clarifies the fees that an entity includes when assessing whether the terms of a new or modified financial liability are substantially different from the terms of the original financial liability. These fees include only those paid or received between the borrower and the lender, including fees paid or received by either the borrower or lender on the other's behalf. The Group applies the amendment to financial liabilities that are modified or exchanged on or after the beginning of the annual reporting period in which the entity first applies the amendment.

The amendment is effective for annual reporting periods beginning on or after January 1, 2022 with earlier adoption permitted. The Group will apply the amendments to financial liabilities that are modified or exchanged on or after the beginning of the annual reporting period in which the entity first applies the amendment. The amendments are not expected to have a material impact on the Group.

2.6.8 KIFRS 1041 Agriculture – Taxation in fair value measurements

The amendment removes the requirement in paragraph 22 of KIFRS 1041 that entities exclude cash flows for taxation when measuring the fair value of assets within the scope of KIFRS 1041. An entity applies the amendment prospectively to fair value measurements on or after the beginning of the first annual reporting period beginning on or after January 1, 2022 with earlier adoption permitted. The amendments are not expected to have a material impact on the Group.

2.6.9 Definition of Accounting Estimates – Amendment to KIFRS 1008

The amendments clarify the distinction between changes in accounting estimates and accounting policies and the correction of errors. Also, they clarify how entities use measurement techniques and inputs to develop accounting estimates. The amendments are effective for annual reporting periods beginning on or after January 1, 2023 and apply to changes in accounting policies and changes in accounting estimates that occur on or after the start of that period. Earlier application is permitted. The amendments are not expected to have a material impact on the Group.

2.6.10 Disclosure of Accounting Policies - Amendments to KIFRS 1001

The amendments provide guidance and examples to help entities apply materiality judgements to accounting policy disclosures. The amendments aim to help entities provide accounting policy disclosures that are more useful by replacing the requirement for entities to disclose their 'significant' accounting policies with a requirement to disclose their 'material' accounting policies and adding guidance on how entities apply the concept of materiality in making decisions about accounting policy disclosures. The amendments to KIFRS 1001 are applicable for annual periods beginning on or after January 1, 2023 with earlier application permitted. The amendments are not expected to have a material impact on the Group.

2.6.11 Amendments to KIFRS 1012 *Income Taxes* – Narrowing the scope of the initial recognition exception of deferred taxes

The amendments narrowed the scope of the initial recognition exemption so that it no longer applies to transactions that, on initial recognition, give rise to equal taxable and deductible temporary difference, thus to resolve accounting diversity in the recognizing of deferred tax assets and liabilities. Paragraphs 15 and 24 (initial recognition exemption of deferred taxes) of KIFRS 1012 were amended to include an additional condition (3) where a deferred tax asset and liability shall be recognized for a temporary difference that arises on initial recognition of an asset or liability in a single transaction if that transaction give rise to equal amounts of taxable and deductible temporary differences. The amendments are effective for annual reporting periods beginning on or after January 1, 2023 with earlier adoption permitted. The amendments are not expected to have a material impact on the Group.

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
Energy/Palm	Development and sales of coal, development of metals, Agro&Food, Indonesia palm
Industrial	
material/Solution	IT, chemicals, metal material, project, IT, platform 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		2020					
			Operating			C	perating		
		Sales income				Sales	income (loss)		
Energy/Palm	₩ 2,466,789		₩	259,889	₩	1,427,826	₩	(21,349)	
Industrial material/Solution		6,466,760		35,862		5,179,166		21,294	
Logistics	_	7,752,984		360,496		4,675,640		159,890	
	₩	16,686,533	₩	656,217	₩	11,282,632	₩	159,835	

3.2 Segment assets and liabilities

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

		20							
		Assets		Liabilities		Assets	Liabilities		
Energy/Palm	₩	2,260,959	₩	957,423	₩	1,641,270	₩	730,006	
Industrial material/Solution		1,260,799		1,103,756		1,117,152		1,208,870	
Logistics		1,934,459		1,513,339		1,278,748		1,040,777	
Collectively grouped (*1)		1,290,672		788,127		1,358,772		657,958	
	₩	₩ 6,746,889		4,362,645		5,395,942	₩	3,637,611	

(*1) 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):

		2021	2020		
Korea	₩	6,612,195	₩	4,650,143	
Americas		3,293,025		2,227,598	
Europe		2,219,122		1,564,957	
Asia		9,369,791		5,613,407	
Others		192,739		85,290	
Consolidation adjustments		(5,000,339)		(2,858,763)	
	\mathbb{W}	16,686,533	₩	11,282,632	

One major customer (LG Electronics Inc.) accounts for more than 10% of the Group's total sales for the year ended December 31, 2021 and 2020 (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, 2021 and 2020 are as follows (Korean won in millions):

					2	021				
	Financial assets at fair value through profit or loss		Financial assets at fair value through OCI		Financial assets at amortized cost		Hedge accounting- related assets			Total
Cash and cash equivalents	₩	117,708	₩	-	₩	724,175	₩	-	₩	841,883
Short-term financial										
instruments		-		-		20,787		-		20,787
Equity instruments held for										
long-term		18,209		133,472		-		-		151,681
Trade accounts receivable		-		-		1,653,459		-		1,653,459
Other accounts receivable		198		-		263,334		1,743		265,275
Long-term loans		-		-		22,350		-		22,350
Other financial assets		587		_		259,203		-		259,790
	₩	136,702	₩	133,472	₩	2,943,308	₩	1,743	₩	3,215,225

					2	2020			
	Financial assets at fair value through profit or loss		Financial assets at fair value through OCI		Financial assets at amortized cost		Hedge accounting- related assets		Total
Cash and cash equivalents	₩	233,273	₩	-	₩	456,715	₩ -	₩	689,988
Short-term financial									
instruments		-		-		67,837	-		67,837
Equity instruments held for									
long-term		14,082		121,103		-	-		135,185
Trade accounts receivable		-		-		1,298,738	-		1,298,738
Other accounts receivable		6,096		-		187,346	-		193,442
Long-term loans		-		-		24,492	-		24,492
Other financial assets		_		-		238,710			238,710
	₩	253,451	₩	121,103	₩	2,273,838	₩ -	₩	2,648,392

4.1.2 Financial liabilities

Financial liabilities by category as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021										
	Financial at fair through los	value profit or	m	ncial liabilities easured at ortized cost	acc	Hedge ounting-related liabilities	Total				
Trade accounts payable	\mathbb{W}	-	₩	1,619,765	₩	-	₩	1,619,765			
Other accounts payable		1,240		343,974		-		345,214			
Borrowings		-		759,556		-		759,556			
Bonds payable Current portion of bonds payable and long-term		-		269,462		-		269,462			
borrowings		-		328,656		-		328,656			
Other financial liabilities		_		459,638		9,449		469,087			
	₩	1,240	₩	3,781,051	₩	9,449	₩	3,791,740			

4.1.2 Financial liabilities (cont'd)

		2020							
	Financial lial at fair val through pro loss	mea	al liabilities sured at tized cost		Hedge Inting-related iabilities	Total			
Trade accounts payable	₩	-	₩	1,547,820	₩	-	₩	1,547,820	
Other accounts payable		578		246,769		6,538		253,885	
Borrowings		-		613,370		-		613,370	
Bonds payable Current portion of bonds payable and long-term		-		359,307		-		359,307	
borrowings		-		225,630		-		225,630	
Other financial liabilities		-		348,019		17,212		365,231	
	₩	578	₩	3,340,915	₩	23,750	₩	3,365,243	

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, 2021 and 2020 are as follows (Korean won in millions):

						2021			
	Financial assets at fair value through profit or loss		Financial assets at fair value through OCI		Financial assets at amortized cost		Hedge accounting- related assets		Total
Profit or loss:									
Interest income	₩	705	₩	-	₩	9,508	₩	- ₩	10,213
Dividend income		-		7,285		-		-	7,285
Gain and loss on foreign									
currency transactions		-		-		61,924		-	61,924
Gain and loss on foreign									
currency translation		-		-		16,055		-	16,055
Gain on currency forwards		7,537		-		-		-	7,537
Gain on currency swaps		-		-		-	3,684	ŀ	3,684
Bad debt expenses		-		-		(1,107)		-	(1,107)
Other bad debt expenses		-		-		(19,366)		-	(19,366)
Loss on disposal of receivables		-		-		(8,902)		-	(8,902)
Gain on valuation equity									
options		565		-		-		-	565
Gain on financial asset									
valuation		9		-		-		-	9
Other comprehensive income (*1): Loss on valuation of financial assets at fair value through									
OCI Loss on valuation of derivatives designated as		-		13,927		-		-	13,927
cash flow hedges		_		_		_	17	,	17
sach now nougos	₩	8,816	₩	21,212	₩	58,112	₩ 3,70		91,841
	v v	0,010	V V	Z1,Z1Z	V V	50,112		V V	51,011

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

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

	2020								
	Financial assets at fair value through profit or loss		Financial assets at fair value through OCI		Financial assets at amortized cost		Hedge accounting- related assets		Total
Profit or loss:				<u> </u>					
Interest income	₩	-	₩	-	₩	10,404	₩ -	₩	10,404
Dividend income		-		4,376		-	-		4,376
Gain and loss on foreign									
currency transactions		-		-		(54,358)	-		(54,358)
Gain and loss on foreign									
currency translation		-		-		(19,163)	-		(19,163)
Gain on currency forwards		13,738		-		-	-		13,738
Gain on currency swaps		-		-		-	1,688		1,688
Bad debt expenses		-		-		(742)	-		(742)
Other bad debt expenses		-		-		(385)	-		(385)
Loss on disposal of receivables		-		-		(10,118)	-		(10,118)
Other comprehensive income (*): Loss on valuation of financial assets at fair value through									
OCI		-		(51,584)		-	-		(51,584)
	₩	13,738	₩	(47,208)	₩	(74,362)	₩ 1,688	₩	(106,144)

(*) 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, 2021 and 2020 are as follows (Korean won in millions):

	2021								
	Financial liabilities at fair value through profit or loss	Financial liabilities measured at amortized cost	Hedge accounting-related liabilities	Total					
Profit or loss:									
Interest expenses	₩ -	₩ (34,101)	₩ -	₩ (34,101)					
Loss on foreign currency transactions	-	(52,552)	-	(52,552)					
Loss on foreign currency translation	-	(8,535)	-	(8,535)					
Loss on currency forwards	(19,228)	-	-	(19,228)					
Loss on currency swaps Gain on exemption from	-	-	-	-					
debt	-	14,659	-	14,659					
Other comprehensive loss (*1):									
Loss on valuation of derivatives designated as			7 579	7 570					
cash flow hedges	₩ (19.228)	₩ (80,529)	7,573 ₩ 7,573	<u>7,573</u> ₩ (92,184)					
	₩ (19,228)	₩ (80,529)	₩ 7,573	₩ (92,184)					

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

	2020									
	Financial liabilities at fair value through profit or loss	Financial liabilities measured at amortized cost	Hedge accounting-related liabilities	Total						
Profit or loss:										
Interest expenses	₩ -	₩ (42,754)	₩ -	₩ (42,754)						
Loss on foreign currency										
transactions	-	29,709	-	29,709						
Loss on foreign currency										
translation	-	18,915	-	18,915						
Loss on currency forwards	(9,919)	-	-	(9,919)						
Loss on currency swaps Gain on exemption from	-	-	(8,552)	(8,552)						
debt		7,067								
Other comprehensive loss (*1):										
Loss on valuation of derivatives designated as cash flow hedges	_	_	(8,984)	(8,984)						
each non nougeo	₩ (9,919)	₩ 12,937	₩ (17,536)	₩ (21,585)						
	(0,010)	12,001	(17,000)	(21,000)						

(*1) 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, 2021 and 2020 are as follows (Korean won in millions):

		2021		2020
Cash on hand	\mathbb{W}	3,356	₩	2,068
Short-term deposits		838,527		687,920
	W	841,883	₩	689,988

Outstanding balances on restricted deposits included in financial instruments as of December 31, 2021 amounted to #30,658 million (#25,210 million in 2020) 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, 2021 and 2020 are presented as follows (Korean won in millions):

				2021			_			2020		
	Gain on Loss on c valuation valuation			Other prehensive come (*1)	Gain on valuation		Loss on valuation		comp	Other prehensive ome (*1)		
Currency forwards	₩	198	₩	1,240	₩	-	₩	6,096	₩	578	₩	-
Currency swaps		1,726		-		18		-		8,220		(409)
Interest rate swaps		-		-		7,428		-		-		(8,575)
Equity options (*2)		565		-				-		-		-
	₩	2,489	₩	1,240	₩	7,445	₩	6,096	₩	8,798	₩	(8,984)

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

(*2) This is a put option purchase agreement for PT. Global Investment Institusi's stake in PT. Pyridam Farma.

6.2 Currency forwards

As of December 31, 2021 and 2020, gains and losses on unsettled currency forward contracts are as follows (Korean won in millions and other currencies in thousands):

			2021			
Position-buy	Buying amount	Position-sell	Selling amount	Contracted exchange rate	Gain on valuation	Loss on valuation
AED	1,602	KRW	522	325.68	₩ -	₩ 3
CNY	3,130	KRW	582	186.00	1	-
EUR	674	KRW	903	1,340.20	4	-
KRW	35,379	AUD	41,629	849.50 ~ 852.50	-	501
KRW	12,878	EUR	9,573	1,336.76 ~ 1,350.20	3	47
KRW	209,744	USD	176,919	1,160.50 ~ 1,192.00	190	399
USD	50,114	KRW	59,868	1,187.50 ~ 1,197.10		290
					₩ 198	₩ 1,240

			2020					
				Contracted				
Position-buy	Buying amount	Position-sell	Selling amount	exchange rate	Gain o	on valuation	Loss on	valuation
KRW	149,116	USD	131,493	1,087.00 ~ 1,192.30	₩	6,095	₩	1
USD	27,143	KRW	30,096	1,087.00 ~ 1,180.80		1		568
AED	1,602	KRW	483	301.55		-		9
					₩	6.096	₩	578

6.3 Currency swaps

As of December 31, 2021 and 2020, gains and losses on unsettled currency swap contracts are as follows (Korean won in millions and other currencies in thousands):

				202	21					
Contracted party	Buying amount	Selling amount	Contracted exchange rate	Receivable interest rate	Payment interest rate	Contracted term	Gain	on valuation		Other nensive gain
Shinhan Bank	USD 20,000	₩ 21,984	1,099.20	3ML + 0.90%	1.08%	2021.1.21 ~ 2022.1.18	₩	1,726	₩	17
				202	20					
Contracted party	Buying amount	Selling amount	Contracted exchange rate	Receivable interest rate	Payment interest rate	Contracted term	Loss o	n valuation		nprehensive oss
The Export Import Bank of Korea	USD 25,000 USD	₩ 28,613	1,144.50	3ML + 2.30% 3ML +	3.20%	2016.4.1 ~ 2021.4.1 2020.4.29 ~	₩	(1,745)	₩	(346)
Hana Bank	50,000	₩ 60,875	1,217.50	1.50%	1.80%	2021.2.15	₩	(6,475) (8,220)	₩	(63)

6.4 Interest rate swaps

As of December 31, 2021 and 2020, gains and losses on unsettled interest rate swap contracts are as follows (Korean won in millions and foreign currencies in thousands):

			2	021		
Contracted party		ractual ncipal	Receivable interest rate	Payment interest rate	Contracted term	Other comprehensive gain
Korea Development Bank	USD	102,620	LIBOR	2.77%	2017.02.27 ~ 2034.09.25	7,428
			2	020		
Contracted party		ractual ncipal	Receivable interest rate	Payment interest rate	Contracted term	Other comprehensive loss
Korea Development Bank	USD	102,620	LIBOR	2.77%	2017.02.27 ~ 2034.09.25	(8,575)

7. Inventories

Details of inventories as of December 31, 2021 and 2020 are as follows (Korean won in millions):

				2021				
				Valuation				
	Acquisition cost			allowance		Book value		
Merchandise	\mathbb{W}	640,545	₩	(2,441)	₩	638,104		
Finished goods		48,848		-		48,848		
Raw materials		16,815		(7)		16,808		
Stored goods		2,313		-		2,313		
Materials in transit		315,120		-		315,120		
	₩	1,023,641	₩	(2,448)	₩	1,021,193		
	2020							
	Valuatior							
	Acqu	uisition cost		allowance	Book value			
Merchandise	₩	296,810	₩	(3,448)	₩	293,362		
Finished goods		23,854		-		23,854		
Raw materials		12,139		(6)		12,133		
Stored goods		1,294		-		1,284		
Materials in transit		314,490		-		314,490		
	₩	648,577	₩	(3,454)	₩	645,123		

For the year ended December 31, 2021, the Group recognized ₩1,006 million (2020: ₩3,099 million) as a reversal of loss on valuation of inventories carried at net realizable value. This is recognized in cost of sales.

8. Investment assets and Investments in associates

8.1 Investment assets

Details of investment assets as of December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021		2020
Equity instruments held for long-term:				
Financial assets at fair value through profit or loss	₩	18,209	₩	14,082
Financial assets at fair value through OCI		133,472		121,103
Long-term loans receivable		22,350		24,492
	₩	174,031	₩	159,677

8.2 Equity instruments held for long-term

As of December 31, 2021, 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 VL Future				
Environment Industry Fund	_	14.16	₩ 2,900	₩ 2,900
Pablo Airline	2,408	5.84	,	2,499
Futureplay Co.	15,730	2.98	3,000	3,003
Global Dynasty Natural	10,100	2.00	0,000	0,000
Resources Private Equity				
Fund. (*1)	-	7.46	2,242	-
EIC Properties Pte. Ltd.	5,296,350	15.50	3,589	7,337
PT. Pyridam Farma	29,429,400	1 5.50	2,705	2,470
			16,935	18,209
Financial assets at fair value				
through OCI (*2) Korea Ras Laffan LNG Co.,				
Ltd. (Qatar LNG project)	1,558,666	5.60	2,410	18,637
Vietnam Korea Exchange Ltd.	-	10.00	322	322
LX Int'l (Saudi) LLC (*3)	-	90.00	118	118
Oilhub Korea Yeosu Co., Ltd.	131,000	5.00	7,205	
GS E&R Co., Ltd.	1,654,445	9.52	95,585	54,043
Tianjin LG Bohai Chemical				
Co., Ltd	-	10.00	11,737	37,629
Cobalt blue holdings Ltd.	7,093,959	2.35	6,467	3,016
PT Resources Alam Indonesia	050 000 000	F 00	0.407	F 474
Tbk. Tangshan Caofeidian Steam	250,000,000	5.00	9,497	5,474
Coal Storage & Blending Co.,				
Ltd.	-	1.50	1,075	1,208
RedcapTour Co., Ltd.	250,000	2.91	428	5,200
iPort Co., Ltd.	4,523	5.26	500	500
Liveron Co.,Ltd.	30	0.11	6	-
Woongjin Energy Co., Ltd	754	0.01	8	8
			135,358	133,472
			₩ 152,293	₩ 151,681

(*1) For the year ended December 31, 2021, the Group lost significant influence over the investee and classified it as financial assets at fair value through profit or loss.

(*2) 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.

(*3) 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, 2021 and 2020 are as follows (Korean won in millions):

Equity Acquisition Translation gain Dec. 31 Financial assets at fair value idisposal) Valuation (loss) Dec. 31 Financial assets at fair value idisposal) Valuation (loss) Dec. 31 Financial assets at fair value idisposal 2,499 - - 2,499 QQ Aromatics LLC (formerly, Aromatics Oman LLC) (*2) 1.00 4,779 - - 4,779 Futureplay Co. (*1) 2,98 3,003 - - - 3,003 EIC Properties Pite. Ltd. 15,50 6,301 - 456 580 7,337 PT. Pyridam Farma (*1) 5.50 - 2,705 (448) 213 2,470 Intrologin OCI Korea Ras Laffan LNG Limited 14,063 8,104 8 (3,986) 18,209 Vietnam Korea Res Laffan LNG Limited 0.00 322 - - 322 Utati Suddi LLC 90.00 118 - - 118 Oilhub Korea Res Laffan LNG Limited 0.					2021		
Financial assets at fair value W W W W W W W W Q, 2,000 Environment Industry Fund 14.16 W W 2,499 - 2,499 - 2,499 QQ Aromatics LLC (formerly, Aromatics Onnan LLC) (*2) 1.00 4,779 - - 4,779 - - 3,003 EIC Properties Pte, Ltd. 15.50 6,301 - - 3,003 - - - 3,003 FT. Pyridam Farma (*1) 5.50 - - 2,705 (448) 213 2,470 Financial assets at fair value - - - - 3,023 - - - 3,023 Financial assets at fair value - - - - 18,637 - - 3,220 - - - 18,637 - 18,637 - - - 118,037 - - - 118,037 - - - 118,037 - - - 118,037 - - - 118,037 - <th>_</th> <th>Equity</th> <th>.lan 1</th> <th></th> <th>Valuation</th> <th></th> <th>Dec. 31</th>	_	Equity	.lan 1		Valuation		Dec. 31
$\begin{array}{c c c c c c c c c c c c c c c c c c c $				(diopodal)	Valuation	(1000)	200.01
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $							
Pablo Airline (*1) 5.84 - 2,499 - - 2,499 QQ Aromatics LLC (formerly, Aromatics Oman LLC) (*2) 1.00 4,779 - - (4,779) Futureplay Co. (*1)) 2.98 3,003 - - - 3,003 EIC Properties Pte. Ltd. 15.50 6,301 - 456 580 7,337 PT. Pyridam Farma (*1) 5.50 2,1500 - (448) 213 2,470 Imough OCI Korea Ras Laffan LNG Limited 10.00 322 - - 322 LX Int' (Saudi) LLC 9.00 118 - - 118 Ollhub Korea Yeosu Co., Ltd. 5.00 7,530 - (213) - 7,317 GE E&R Co, Ltd. 9.52 55,100 - (1,057) - 54,043 Tianjin LG Bohai Chemical Co., Ltd 2.00 7,535 - (59) 448 5,474 Tangshan Corielian Steam Cool Storage & Blending - - 125 1,208 Redcap Tour Co., Ltd. 2.26 500 - -			117	117 0.000	117	117	117 0.000
QQ Aromatics LLC LLO LLO LLO LLO LLO (formerly, Aromatics Oman LLC) (*2) 1.00 4,779 - - (4,779) - Futureplay Co. (*1) 2.98 3,003 - - - 3,003 EIC Properties Pte. Ltd. 15.50 6,301 - 456 580 7,337 PT. Pyridam Farma (*1) 5.50 2,705 (448) 213 2,470 Kroea Ras Laffan LNG Limited (Qatar LNG project) 5.60 21,500 - (2,863) - 18,637 Vietnam Korea Exchange Ltd. 10.00 3222 - - - 3222 LX Int't (Saudi) LLC 90.00 118 - - - 3222 Cohat blue holdings Ltd. 5.00 7,530 - (213) - 7,317 GS E&R Co, Ltd. 9.52 55,100 - (1,057) - 54,043 Tangin LG Bohai Chemical Co., Ltd 10.00 21,819 - 1,5810 - 37				2,000	-		_,
(formerly, Aromatics Oman LLC) (*2) 1.00 4,779 - - (4,779) - Futureplay Co. (*1)) 2.98 3,003 - - - 3,003 EIC Properties Pte. Ltd. 15.50 6,301 - 456 580 7,337 PT. Pyridam Farma (*1) 5.50 - 2,705 (448) 213 2,470 Financial assets at fair value 14,083 8,104 8 (3,986) 18,209 Korea Ras Laffan LNG Limited - - 2,800 - 322 (Qatar LNG project) 5.60 21,500 - (2,863) - 18,637 Vietnam Korea Exchange Ltd. 10.00 322 - - 322 LX Int! (Saudi) LLC 90.00 118 - - 118 Oihub Korea Yeosu Co., Ltd. 5.00 7,530 - (1,057) 54,043 Tianjin LG Bohai Chemical Co., Ltd 10.00 21,819 - 1,947 - 3,016 PT Resources Alam - 1,947 - 5,005 - (59) 448		5.84	-	2,499	-	-	2,499
Futureplay Co. (*1)) 2.98 3,003 - - - - 3,003 EIC Properties PLe. Ltd. 15.50 6,301 - 456 580 7,337 PT. Pyridam Farma (*1) 5.50 - 2,705 (448) 213 2,470 Financial assets at fair value 14,083 8,104 8 (3,986) 18,209 Financial assets at fair value 14,083 8,104 8 (3,986) 18,209 Korea Ras Laffan LNG Limited (Qatar LNG project) 5.60 21,500 - (2,863) - 18,637 Vietnam Korea Exchange Ltd. 10.00 3222 - - 18,637 Cik Id Counce 90.00 118 - - 118 Oilhub Korea Yeosu Co., Ltd. 9.00 7,530 - (213) - 7,317 GS E&R Co, Ltd. 9.52 55,100 - (1,057) - 54,043 Tinajin LG Bohai Chemical Co., Ltd 0.00 21,819 - 1,947 - <) (*2) 1.00	1 770	1		(4 770)	
EIC Properties Pte. Ltd. 15.50 6,301 - 456 580 7,337 PT. Pyridam Farma (*1) 5.50 - 2,705 (448) 213 2,470 Financial assets at fair value through OCI - 14,083 8,104 8 (3,986) 18,209 Financial assets at fair value through OCI - - 2,663 - 18,637 Korea Ras Laffan LNG Limited (Qatar LNG project) 5.60 21,500 - (2,863) - 18,637 Olihub Korea Yeosu Co., Ltd. 5.00 7,530 - (213) - 7,317 GS E&R Co, Ltd. 9,52 55,100 - (1,057) - 54,043 Tainjin LG Bohai Chemical Co., Ltd 10,00 21,819 - 15,810 - 37,629 Cobal blue holdings Ltd. 2.35 1,069 - (59) 448 5,474 Tangshan Caofeidian Steam Coal Storage & Blending Co., Ltd. 1,083 - - 125 1,208 RedcapTour Co., Ltd. 5.26			,		-	(4,775)	3 003
PT. Pyridam Farma (*1) 5.50 2,705 (448) 213 2,470 Financial assets at fair value through OCI 14,083 8,104 8 (3,986) 18,209 Korea Ras Laffan LNG Limited (Qatar LNG project) 5.60 21,500 - (2,863) - 18,637 Vietnam Korea Exchange Ltd. 10.00 322 - - 322 LX Int'l (Saudi) LLC 90.00 118 - - 118 Oilhub Korea Yeosu Co., Ltd. 5.00 7,530 - (213) - 7,317 GS E&R Co, Ltd. 9.52 55,100 - (1,057) - 54,043 Tianjin LG Bohai Chemical Co., Ltd 10.00 21,819 - 1,947 - 3,016 PT Resources Alam - - 1947 - 3,016 - 5,200 - - - 2,200 - - - 2,200 - - - 3,016 - - 1,208 - - - - - - - - - - - <td></td> <td></td> <td></td> <td></td> <td>456</td> <td>- 580</td> <td>,</td>					456	- 580	,
Financial assets at fair value through OCI 14,083 8,104 8 (3,986) 18,209 Korea Ras Laffan LNG Limited (Qatar LNG project) 5.60 21,500 - (2,863) - 18,637 Vietnam Korea Exchange Ltd. 10.00 322 - - 322 XI ntfl (Saudi) LLC 90.00 118 - - 118 Oilhub Korea Yeosu Co., Ltd. 5.00 7,530 - (213) - 7,317 GS E&R Co, Ltd. 9.52 55,100 - (1,057) - 54,043 Tianjin LG Bohai Chemical Co., Ltd 10.00 21,819 - 1,947 - 3,016 PT Resources Alam - - 125 1,028 - 1,208 Coal Storage & Blending - - 125 1,208 - - 5,200 Chosun Broadcasting - - - - 5,000 - - 5,000 Information & Communication - - - - <td>•</td> <td></td> <td>0,501</td> <td></td> <td></td> <td></td> <td></td>	•		0,501				
Financial assets at fair value through OCI Image: Constraint of the system	r ri r ynadir r dinid (r)	0.00	14 083				
(Qatar LNG project) 5.60 21,500 - (2,863) - 18,637 Vietnam Korea Exchange Ltd. 10.00 322 - - 322 LX Int'l (Saudi) LLC 90.00 118 - - 118 Oilhub Korea Yeosu Co., Ltd. 5.00 7,530 - (213) - 7,317 GS E&R Co, Ltd. 9.52 55,100 - (1,057) - 54,043 Tianjin LG Bohai Chemical Co., Ltd 10.00 21,819 - 15,810 - 37,629 Cobalt blue holdings Ltd. 2.35 1,069 - 1,947 - 3,016 PT Resources Alam - 10.00 5,085 - (59) 448 5,474 Tangshan Caofeidian Steam - - 125 1,208 - <td></td> <td></td> <td></td> <td>0,.01</td> <td></td> <td>(0,000)</td> <td></td>				0,.01		(0,000)	
Vietnam Korea Exchange Ltd. 10.00 322 - - 322 LX Int'l (Saudi) LLC 90.00 118 - - 118 Oilhub Korea Yeosu Co., Ltd. 5.00 7,530 - (213) - 7,317 GS E&R Co., Ltd. 9.52 55,100 - (1,057) - 54,043 Tianjin LG Bohai Chemical Co., Ltd 10.00 21,819 - 15,810 - 37,629 Cobalt blue holdings Ltd. 2.35 1,069 - 1,947 - 3,016 PT Resources Alam - - 125 1,208 - - 125 1,208 Tangshan Caofeidian Steam - - 125 1,208 - - - 5,200 Co., Ltd. 1.50 1,083 - - 125 1,208 RedcapTour Co., Ltd. 2.91 4,800 - 400 - 5,200 Corporation - 2,160 (2,121) (39) - - - iPort Co., Ltd. 5.26 500 -	Korea Ras Laffan LNG Limited						
LX Int'l (Saudi) LLC 90.00 118 118 Oilhub Korea Yeosu Co., Ltd. 5.00 7,530 - (213) - 7,317 GS E&R Co, Ltd. 9.52 55,100 - (1,057) - 54,043 Tianjin LG Bohai Chemical Co., Ltd 10.00 21,819 - 15,810 - 37,629 Cobalt blue holdings Ltd. 2.35 1,069 - 1,947 - 3,016 PT Resources Alam Indonesia Tbk 5.00 5,085 - (59) 448 5,474 Tangshan Caofeidian Steam Coal Storage & Blending Co., Ltd. 1.50 1,083 125 1,208 RedcapTour Co., Ltd. 2.91 4,800 - 400 - 5,200 Chosun Broadcasting Corporation - 2,160 (2,121) (39) iPort Co., Ltd. 5.26 500 500 Information & Communication Financial Cooperative (*3) - 17 (17) 500 Information & Communication Financial Cooperative (*3) - 17 (17) Hanmi Flexible Co., Ltd. 0.11		5.60	21,500) -	(2,863)	-	18,637
Oilhub Korea Yeosu Co., Ltd. 5.00 7,530 - (213) - 7,317 GS E&R Co, Ltd. 9.52 55,100 - (1,057) - 54,043 Tianjin LG Bohai Chemical Co., Ltd 10.00 21,819 - 15,810 - 37,629 Cobalt blue holdings Ltd. 2.35 1,069 - 1,947 - 3,016 PT Resources Alam Indonesia Tbk 5.00 5,085 - (59) 448 5,474 Tangshan Caofeidian Steam - 1.50 1,083 - - 125 1,208 RedcapTour Co., Ltd. 2.91 4,800 - 400 - 5,000 Corporation - 2,160 (2,121) (39) - - iPort Co., Ltd. 5.26 500 - - 500 - - 500 Information & Communication - 17 (17) - - - - - Financial Cooperative (*3)	5	10.00	322		-	-	322
GS E&R Co, Ltd. 9.52 55,100 - (1.057) - 54,043 Tianjin LG Bohai Chemical Co., Ltd 10.00 21,819 - 15,810 - 37,629 Cobalt blue holdings Ltd. 2.35 1,069 - 1,947 - 3,016 PT Resources Alam Indonesia Tbk 5.00 5,085 - (59) 448 5,474 Tangshan Caofeidian Steam Coal Storage & Blending - 125 1,208 Co., Ltd. 1.50 1,083 - - 125 1,208 RedcapTour Co., Ltd. 2.91 4,800 - 400 - 5,200 Chosun Broadcasting - 2,160 (2,121) (39) - - Corporation - 2,160 (2,121) (39) - - - Information & Communication - 17 (17) -	()	90.00	118		-	-	118
Tianjin LG Bohai Chemical Co., Ltd 10.00 21,819 - 15,810 - 37,629 Cobalt blue holdings Ltd. 2.35 1,069 - 1,947 - 3,016 PT Resources Alam - 1,947 - 3,016 Indonesia Tbk 5.00 5,085 - (59) 448 5,474 Tangshan Caofeidian Steam - 125 1,208 Co., Ltd. 2.91 4,800 - 400 - 5,200 Chosun Broadcasting - - 125 1,208 Corporation - 2,160 (2,121) (39) - - Information & Communication - 17 (17) - - - Financial Cooperative (*3) - 17 (17) - - - Liveron Co., Ltd. 0.11 - - - - - - Woongjin Energy Co., Ltd. (*1) 0.01 - 8 - - 8 - - 8 - - 8 - -		5.00	7,530) –	(213)	-	7,317
Cobalt blue holdings Ltd. 2.35 1,069 - 1,947 - 3,016 PT Resources Alam Indonesia Tbk 5.00 5,085 - (59) 448 5,474 Tangshan Caofeidian Steam Coal Storage & Blending Co., Ltd. 1.50 1,083 - - 125 1,208 RedcapTour Co., Ltd. 2.91 4,800 - 400 - 5,200 Chosun Broadcasting Corporation - 2,160 (2,121) (39) - - iPort Co., Ltd. 5.26 500 - - 500 - - iPort Co., Ltd. 5.26 500 - - - 500 Information & Communication Financial Cooperative (*3) - 17 (17) - - - Liveron Co., Ltd. 0.11 - - - - - - Woongjin Energy Co., Ltd. (*1) 0.01 - 8 - - 8 - 8 - 8 - 8	,		55,100) –	(1,057)	-	54,043
PT Resources Alam Indo In		Ltd 10.00	21,819) –	15,810	-	37,629
Indonesia Tbk 5.00 5,085 - (59) 448 5,474 Tangshan Caofeidian Steam Coal Storage & Blending 1.50 1,083 - - 125 1,208 RedcapTour Co., Ltd. 2.91 4,800 - 400 - 5,200 Chosun Broadcasting - 2,160 (2,121) (39) - - Corporation - 2,160 (2,121) (39) - - IPort Co., Ltd. 5.26 500 - - 500 - Information & Communication - 17 (17) - - - Hanmi Flexible Co.,Ltd. (*3) - - - - - - Liveron Co.,Ltd. 0.11 - - - - - - Woongjin Energy Co.,Ltd. (*1) 0.01 - 8 - - 8 121,103 (2,130) 13,926 573 133,472	Cobalt blue holdings Ltd.	2.35	1,069) –	1,947	-	3,016
Tangshan Caofeidian Steam Coal Storage & Blending Co., Ltd. 1.50 1,083 - - 125 1,208 RedcapTour Co., Ltd. 2.91 4,800 - 400 - 5,200 Chosun Broadcasting Corporation - 2,160 (2,121) (39) - - IPort Co., Ltd. 5,26 500 - - 500 Information & Communication Financial Cooperative (*3) - 17 (17) - - Hanmi Flexible Co., Ltd. 0.11 - - - - - Liveron Co., Ltd. 0.11 - 8 - - 8 121,103 (2,130) 13,926 573 133,472							
Coal Storage & Blending 1.50 1,083 - - 125 1,208 RedcapTour Co., Ltd. 2.91 4,800 - 400 - 5,200 Chosun Broadcasting - 2,160 (2,121) (39) - - Corporation - 2,160 (2,121) (39) - - Information & Communication 5.26 500 - - 500 Financial Cooperative (*3) - 17 (17) - - - Hanmi Flexible Co.,Ltd. (*3) - - - - - - Liveron Co.,Ltd. 0.11 - - - - - - Woongjin Energy Co.,Ltd. (*1) 0.01 - 8 - - 8 121,103 (2,130) 13,926 573 133,472		5.00	5,085	; -	(59)	448	5,474
Co., Ltd. 1.50 1,083 - - 125 1,208 RedcapTour Co., Ltd. 2.91 4,800 - 400 - 5,200 Chosun Broadcasting - 2,91 4,800 - 400 - 5,200 Chosun Broadcasting - - 2,160 (2,121) (39) - - iPort Co., Ltd. 5.26 500 - - - 500 Information & Communication - 17 (17) - - - Financial Cooperative (*3) - 17 (17) - - - - Hanmi Flexible Co.,Ltd. (*3) -							
RedcapTour Co., Ltd. 2.91 4,800 - 400 - 5,200 Chosun Broadcasting - 2,160 (2,121) (39) - 500 - - - - - 500 - - - 500 - - - 500 - - - 500 - - - 500 - - - 500 - - - 500 -		1 50	1 093	,		105	1 209
Chosun Broadcasting Corporation - 2,160 (2,121) (39) - <td></td> <td></td> <td>,</td> <td></td> <td>400</td> <td>125</td> <td>,</td>			,		400	125	,
Corporation - 2,160 (2,121) (39) - - - - - - - - - - - - 500 - - - - 500 - - - 500 - - - 500 - - - 500 - - 500 - - - 500 - - - 500 - - - 500 - - - 500 - <td>•</td> <td>2.91</td> <td>4,000</td> <td>-</td> <td>400</td> <td>-</td> <td>5,200</td>	•	2.91	4,000	-	400	-	5,200
iPort Co., Ltd. 5.26 500 - - 500 Information & Communication - 17 (17) -	0	-	2 160	(2 121)	(39)	-	-
Information & Communication - 17 (17) - - <t< td=""><td></td><td>5.26</td><td>,</td><td>(, ,</td><td>(00)</td><td>-</td><td>500</td></t<>		5.26	,	(, ,	(00)	-	500
Hanmi Flexible Co.,Ltd. (*3) - <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>							
Liveron Co.,Ltd. (*1) 0.11	Financial Cooperative (*3)	-	17	· (17)	-	-	-
Woongjin Energy Co.,Ltd. (*1) 0.01 8 8 121,103 (2,130) 13,926 573 133,472	Hanmi Flexible Co.,Ltd. (*3)	-	-	· · ·	-	-	-
<u>121,103</u> (2,130) <u>13,926</u> <u>573</u> <u>133,472</u>	Liveron Co.,Ltd.	0.11	-		-	-	-
	Woongjin Energy Co.,Ltd. (*1)	0.01	-	. 8	-	-	8
			121,103	3 (2,130)	13,926	573	133,472
			₩ 135,186	8 ₩ 5,974	₩ 13,934	₩ (3,413)	₩ 151,681

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

				2020		
-	Equity		Acquisition		Translation gain	
	ownership (%)	Jan. 1	(disposal)	Valuation	(loss)	Dec. 31
Financial assets at fair value						
through profit or loss						
Futureplay Co. (*1)	3.05	₩ -	₩ 3,000	₩ 3	₩ -	₩ 3,003
QQ Aromatics LLC						
formerly, Aromatics Oman LLC		4,779	-	-	-	4,779
EIC Properties Pte. Ltd.	15.50	6,361		351	(412)	6,300
		11,140	3,000	354	(412)	14,082
Financial assets at fair value through OCI						
Korea Ras Laffan LNG Limited						
(Qatar LNG project)	5.60	33,853	-	(12,353)	-	21,500
Vietnam Korea Exchange Ltd.	10.00	322	-	-	-	322
LX Int'l (Saudi) LLC	90.00	118	_	_	-	118
Oilhub Korea Yeosu Co., Ltd.	5.00	9,707	_	(2,177)	_	7,530
GS E&R Co, Ltd.	9.52	96,961		(41,861)		55,100
Tianjin LG Bohai Chemical Co.		19,358	-	2,461	-	21,819
Cobalt blue holdings Ltd.	10100	,	-	,	-	,
PT Resources Alam	2.92	805	-	264	-	1,069
Indonesia Tbk	5.00	4,879		543	(337)	5,085
Tangshan Caofeidian Steam	5.00	4,079	-	545	(337)	5,065
Coal Storage & Blending						
Co., Ltd.	1.50	1,075	_	_	8	1,083
RedcapTour Co., Ltd.	2.91	3,913		888	0	4,801
Chosun Broadcasting	2.51	5,915	-	000	-	4,001
Corporation	0.68	1.509	_	651	-	2.160
iPort Co., Ltd.	5.26	500		001		500
Information & Communication	5.20	500	-	-	-	500
Financial Cooperative	_	16	_	_	_	16
Hanmi Flexible Co.,Ltd.	0.03	10				10
Liveron Co.,Ltd.		-	-	-	-	-
Enveron Co., Etd.	0.11				-	
		173,016		(51,584)	(329)	121,103
		₩ 184,156	₩ 3,000	₩ (51,230)	₩ (741)	₩ 135,185

(*1) For the year ended December 31, 2021, the Group acquired 5.5% of equity interests of PT. Pyridam Farma, 14.16% of equity interests of VL Environmental Future Private Equity Fund and 5.84% of equity interests of Pablo Air Co., Ltd. and classified them as financial assets at fair value through profit or loss. During the year ended December 31, 2020, the Group acquired 3.23% of equity interests of Futureplay Co., Ltd. and classified it as financial assets at fair value through profit or loss.

(*2) For the year ended December 31, 2021, the Group classified the equity interests of QQ Aromatics LLC in entirety as non-current assets held for sale (See Note 30).

(*3) For the year ended December 31, 2021, the Group disposed the equity interests of Chosun Broadcasting Corporation and Information & Communication Financial Cooperative in entirety.

8.3 Investments in associates

As of December 31, 2021 and 2020, det	tails of investments in associates are as follows.	
Country of	Equity ownership (%)	Princi

	Country of	Equity owne	rship (%)		Principal business
	domicile	2021	2020	Reporting date	activity
Heungkuk Highclass Private Special Asset PEF E1	Korea	50.00	50.00	12.31	Overseas resources development Manufacturing and
Bio Friends INC. (*1, 3) POSCO-IPPC (India Pune	Korea	11.36	-	12.31	selling clean energy Processing and
Processing Center) POSCO-PWPC (Poland	India	35.00	35.00	.31	selling steel
Wroclaw Processing Center)	Poland	40.00	40.00	12.31	"
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	"
Int'l Corp. Oman International	Vietnam	30.00	30.00	12.31	Leasing real estate
Petrochemical	Omen	30.00	30.00	12.31	Manufacturing and
Industry Company LLC Musandam Power Company	Oman	30.00	30.00	12.51	selling PTA, PET Thermal power
SAOC (*1)	Oman	18.00	18.00	12.31	plant
Gansu Wuwei Cogeneration	01.1	00.00	00.00	10.01	Generating
Power Plant KM Resources Ltd.	China	30.00	30.00	12.31	cogeneration Mining and selling
(Rapu-Rapu) (*2)	Malaysia	70.00	70.00	12.31	cooper
Inner Mongolia Diamond Coal Industry Co., Ltd (formerly,					
Mongolia Boyuan Coal Co., Ltd.					Mining and selling
(Wantugou)) (*4)	China	30.00	30.00	12.31	coal
Shaanxi BBM Biomass Power	<u>.</u>			10.01	Generating new &
Generation Co., Ltd. Inner Mongolia BDSD	China	30.00	30.00	12.31	renewable energy Manufacturing
Chemical Co., Ltd.	China	29.00	29.00	12.31	fertilizer
LX Pantos Philippines, Inc. (formerly, Pantos Logistics					
Philippines Inc.) (*4)	Philippine	39.99	39.99	12.31	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) As major decision making is decided unanimously, it is difficult to judge that control is held, so it has been classified as associate.
- (*3) For the year ended December 31, 2021, the Group acquired and classified the equity interests of the entity as investments in associates.
- (*4) For the year ended December 31, 2021, the name of associates were changed.

8.3 Investments in associates (cont'd)

Details of the investments in associates as of December 31, 2021 and 2020 are as follows (Korean won in millions):

			2020				
	Acqu	isition cost	Net	asset value	Net book value	Net	book value
Heungkuk Highclass Private Special Asset PEF E1	₩	4,566	₩	(8,998)	₩ -	₩	-
Bio Friends INC.		2,720		17,881	2,550		-
POSCO-IPPC (India Pune Processing Center)		9,184		41,290	14,451		9,769
POSCO-PWPC (Poland Wroclaw Processing Center)		5,244		22,227	8,915		6,752
Kernhem B.V. ADA Oil LLP		2,005 22,011		(65,890) (60,619)	-		-
GS HP Sunflower Village Int'l Corp. Oman International Petrochemical Industry Company L.L.C (*1)		2,911 19,766		17,732 64,587	5,320		4,395 -
Musandam Power Company SAOC		6,535		34,790	6,662		5,409
Gansu Wuwei Cogeneration Power Plant		55,932		196,788	59,485		59,647
KM Resources Ltd.(Rapu-Rapu) (*1) Inner Mongolia Diamond Coal Industry Co., Ltd		40,493		3,666	-		-
(formerly, Mongolia Boyuan Coal Co., Ltd. (Wantugou))		54,801		100,661	56,005		54,528
Shaanxi BBM Biomass Power Generation Co., Ltd.		8,255		28,640	8,592		7,886
Inner Mongolia BDSD Chemical Co., Ltd. LX Pantos Philippines, Inc		97,837		520,769	160,484		131,040
(formerly, Pantos Logistics Philippines Inc.)		1,273		92	37		-
	₩	333,533	₩	913,526	₩ 322,501	₩	279,426

(*1) The entity has discontinued its operations, and the Group has not received recent financial statements of the entity.

The summarized financial information of associates which were material to the Group as of December 31, 2021 and 2020 is as follows (Korean won in millions):

								2021						
	0			Non-current		Current		lon-current	-		Profit (loss) for the year		Dividends paid by associates	
	Curre	ent assets		assets		liabilities		liabilities		Revenue		ie year	by ass	ociates
POSCO-IPPC (India Pune Processing Center) POSCO-PWPC (Poland Wroclaw	₩	161,741	₩	29,017	₩	137,571	₩	11,897	₩	403,314	₩	11,044	₩	-
Processing Center)		73,142		7,791		58,701		5		125,524		5,481		-
Musandam Power Company SAOC Gansu Wuwei Cogeneration Power		84,929		215,252		65,909		199,482		77,836		10,021		1,041
Plant Inner Mongolia Diamond Coal		98,877		429,488		57,824		273,753		191,269		(7,496)		4,381
Industry Čo., Ltd (formerly, Mongolia Boyuan Coal Co., Ltd. (Wantugou)) Inner Mongolia BDSD Chemical Co.,		80,974		453,705		347,316		86,702		390,189		217,914		70,135
Ltd.		141,943		627,551		207,242		41,483		380,922		65,288		5,089
								2020						
			N	on-current		Current	N	lon-current				t (loss) for	Dividen	ds paid
	Curre	ent assets		assets		liabilities		liabilities	F	Revenue	tł	ne year	by ass	ociates
POSCO-IPPC (India Pune Processing Center) POSCO-PWPC (Poland Wroclaw	₩	96,289	₩	38,821	₩	85,426	₩	21,772	₩	267,760	₩	5,060	₩	-
Processing Center) Gansu Wuwei Cogeneration Power		50,541		10,778		41,873		2,626		108,292		2,325		-
Plant Inner Mongolia Diamond Coal		95,422		404,354		39,820		262,628		176,972		18,771		2,490
Industry Co., Ltd (formerly, Mongolia Boyuan Coal Co., Ltd. (Wantugou)) Inner Mongolia BDSD Chemical Co.,		78,996		372,262		275,037		75,625		86,094		(21,575)		-
Ltd.		114,004		604,481		270,429		26,092		275,431		36,735		-

8.3 Investments in associates (cont'd)

Changes in the net book value of investments in associates for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

						2021						
	Ja	an.1	Acquisition (disposal)			Change in equity adjustment in equity method		Share of profit or loss		airment others	[Dec. 31
Bio Friends INC.	₩	-	₩ 2,720	₩	-	₩	-	₩ (206)	₩	36	₩	2,550
POSCO-IPPC (India Pune												
Processing Center)		9,769		-	-	81	17	3,865		-		14,451
POSCO-PWPC (Poland												
Wroclaw Processing Center)		6,752		-	-	•	29)	2,192		-		8,915
Kernhem B.V.		-		-	-	(25	51)	153		98		-
ADA OII LLP		-		-	-	(12	24)	660		(536)		-
GS HP Sunflower Village												
Int'l Corp.		4,395		-	(50)	48	30	495		-		5,320
Musandam Power												
Company SAOC		5,409		-	(1,041)	49	90	1,804		-		6,662
Gansu Wuwei Cogeneration												
Power Plant		59,647		-	(4,381)	6,46	57	(2,248)		-		59,485
Inner Mongolia Diamond Coal Industry Co., Ltd (formerly, Mongolia												
Boyuan Coal Co., Ltd. (Wantugou))		54,528		-	(70,135)	50)3	64,633		6.476		56,005
Shaanxi BBM Biomass Power		01,020			(10,100)			01,000		0,110		00,000
Generation Co., Ltd.		7,886		-	-		-	-		706		8,592
Inner Mongolia BDSD		.,										0,002
Chemical Co., Ltd.		131,040		-	(5,089)	3,25	57	18,934		12,342		160,484
LX Pantos Philippines, Inc		- ,			(-,,	-, -		-,		, -		, -
(formerly, Pantos Logistics												
Philippines Inc.).		-		-	-		(4)	41		-		37
	₩	279,426	₩ 2,720	₩	(80,696)	-	<u> </u>	₩ 90,323	₩	19,122	₩	322,501

Jan.1	Acquisition (disposal)	Dividends	Change in equity adjustment in equity method	Share of profit or loss	Impairment and others	Dec. 31
₩ 8,864	₩ -	₩ -	₩ (866)	₩ 1,771	₩ -	₩ 9,769
6 1 1 3	_	_	(201)	030	_	6,752
0,113	-	-	(231)	330	-	0,752
44,660	(32,690)	-	(12,367)	397	-	-
-	-	-	2,437	(1,310)	(1,127)	-
-	-	-	1,419	(545)	(874)	-
,		(183)	(268)	517	(21)	4,395
30	(30)	-	-	-	-	-
		(4.070)	(00.4)	4 0 - 0		= 100
4,939	-	(1,079)	(324)	1,873	-	5,409
56 100		(2.400)	316	5 631		59,647
50,190	-	(2,490)	510	5,051	-	59,047
62,609	-	-	2,160	(6,912)	(3,329)	54,528
8,392	-	-	-	-	(506)	7,886
100 001			0.040	40.050	(0,000)	101 010
120,381	-	-	8,342	10,653	(8,336)	131,040
79	-	-	15	(94)	-	-
		₩ (3,752)			₩ (14,193)	₩ 279,426
	₩ 8,864 6,113 44,660 - 4,350 30 4,939 56,190 62,609 8,392 120,381 79	Jan. 1 (disposal) ₩ 8,864 ₩ - 6,113 - 44,660 (32,690) - - 4,350 - 30 (30) 4,939 - 56,190 - 62,609 - 120,381 - 79 -	Jan. 1 (disposal) Dividends ₩ 8,864 ₩ - ₩ - 6,113 - - - 44,660 (32,690) - - - - - - 44,660 (32,690) - - - - - - 4,350 - (183) 30 (30) - 4,939 - (1,079) 56,190 - (2,490) 62,609 - - 120,381 - -	Jan.1 Acquisition (disposal) Dividends adjustment in equity method W 8,864 W W W W (866) 6,113 - - (291) 44,660 (32,690) - (12,367) - - 2,437 - - 2,437 - - 1,419 4,350 - (183) (268) 30 (30) - - 4,939 - (1,079) (324) 56,190 - (2,490) 316 62,609 - - 2,160 8,392 - - - 120,381 - - 8,342	Jan.1 Acquisition (disposal) Dividends adjustment in equity method Share of profit or loss W 8,864 W	Jan.1Acquisition (disposal)Dividendsadjustment in equity methodShale of profit or lossImpairment and others W 8,864 W $ W$ W (866) W 1,771 W $-$ 6,113 $ -$ (291)930 $ (291)$ 930 $-$ 44,660(32,690) $ (12,367)$ 397 $ 2,437$ $(1,310)$ $(1,127)$ $ 2,437$ $(1,310)$ $(1,127)$ $ 1,419$ (545)(874)4,350 $ (183)$ (268) 517 (21) 30 (30) $ 4,939$ $ (1,079)$ (324) $1,873$ $ 62,609$ $ 2,160$ $(6,912)$ $(3,329)$ $8,392$ $ (506)$ $120,381$ $ 8,342$ $10,653$ $(8,336)$

(*1) See Note 21.

9. Property, plant and equipment and Investment properties

9.1 Property, plant and equipment

Details of property, plant and equipment as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021								
			Accu	mulated					
	Acqu	depr	eciation	Book value					
Land	₩	107,424	₩	-	₩	107,424			
Buildings		219,611		(45,907)		173,703			
Structures		189,044		(53,952)		135,092			
Machinery and equipment		111,525		(55,109)		56,416			
Vehicles		26,915		(14,496)		12,419			
Mature biological assets		115,205		(41,304)		73,901			
Non-mature biological assets		3,914		-		3,914			
Others		70,785		(50,748)		20,037			
Construction-in-progress		16,589		-		16,589			
Right-of-use assets		339,330		(132,323)		207,007			
	₩	1,200,342	₩	(393,839)	₩	806,503			

	2020									
	Acqu	isition cost		Accumulated depreciation		Accumulated mpairment loss	Net book value			
Land	₩	105,670	₩	-	₩	-	₩	105,670		
Buildings		213,400		(36,017)		-		177,383		
Structures		164,383		(32,685)		-		131,698		
Machinery and equipment		89,705		(51,233)		(9,349)		29,123		
Vehicles		31,658		(15,947)		-		15,711		
Mature biological assets		107,330		(32,902)		-		74,428		
Non-mature biological assets		1,448		-		-		1,448		
Others		61,248		(44,805)		-		16,443		
Construction-in-progress		4,809		-		-		4,809		
Right-of-use assets		271,344		(85,685)		-		185,659		
	₩	1,050,995	₩	(299,274)	₩	(9,349)	₩	742,372		

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, 2021 and 2020 are as follows (Korean won in millions):

	2021										
		Jan.1	Addition	Transfer (*1)		Disposals	Depreciation	Change in the scope of consolidation		Others (*2)	Dec. 31
Land	₩	105,670	₩ -	₩ -	₩	(706) 1	₩ -	₩ -	₩	2,460 ₩	107,424
Buildings		177,383	254	949		(1,738)	(8,281)	-		5,137	173,704
Structures		131,698	1,607	1,205		(443)	(6,594)	-		7,619	135,092
Machinery and equipment		29,123	26,311	13,862		(1,022)	(12,636)	-		778	56,416
Vehicles		15,711	5,654	(26)		(7,068)	(2,606)	-		754	12,419
Mature biological assets		74,428	-	(132)		(24)	(5,764)	-		5,393	73,901
Non-mature biological assets Others		1,448 16,443	2,368 12,562			(148) (2,112)	- (10,710)	-		193 (302)	3,914 20,037
Construction-in- progress Right-of-use		4,809	23,160	(12,377)		(42)	-	377		662	16,589
Assets		185,659	129,921			(12,238)	(100,034)			3,699	207,007
	₩	742,372	₩ 201,837	₩ 7,690	₩	(25,541)	₩ (146,625)	₩ 377	₩	26,393 ₩	806,503

		2020														
		Jan.1	A	ddition	Trar	nsfer (*1)		Disposals		Depreciation	:	ange in the scope of nsolidation		Others (*2)		Dec. 31
Land	₩	126,154	₩	-	₩	-	₩	(18,974)	₩	-	₩	-	₩	(1,510)	₩	105,670
Buildings		172,113		1,244		37,667		(21,509)		(6,864)		-		(5,268)		177,383
Structures Machinery and		141,737		763		895		(41)		(6,632)		7		(5,031)		131,698
equipment		34,189		2,539		850		(390)		(7,347)		41		(759)		29,123
Vehicles		15,421		3,763		11		(49)		(2,820)		18		(633)		15,711
Mature biological assets Non-mature		85,866		-		174		-		(5,919)		-		(5,693)		74,428
biological assets		88		1,604		(144)		(107)		-		-		7		1,448
Others Construction-in-		15,173		10,161		1,445		(787)		(9,432)		20		(137)		16,443
progress Right-of-use		25,113		24,118		(44,181)		-		-		(361)		120		4,809
Assets		148,754		146,254		-		(14,626)		(90,263)		(4,915)		455		185,659
	₩	764,608	₩	190,446	₩	(3,283)	₩	(56,483)	₩	(129,277)	₩	(5,190)	₩	(18,449)	₩	742,372

(*1) For the year ended December 31, 2020, construction-in-progress which are amounting to $\mathbb{W}3,219$ million was transferred to the intangible assets.

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

9.2 Investment properties

Details of investment properties as of December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021		2020
		Buildings		Buildings
Acquisition cost Accumulated	₩	6,257	₩	5,734
depreciation		(1,406)		(1,125)
Net book value	₩	4,851	₩	4,609

Changes in the net book value of investment properties for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021	2020
Jan. 1	\mathbf{W}	4,609 ₩	5,982
Depreciation		(157)	(165)
Others		399	(1,208)
Dec. 31	₩	4,851 ₩	4,609

The fair value of investment properties held by the Group cannot be reliably estimated.

9.3 Assets provided as collateral

The details of the assets provided as collateral as of December 31, 2021 are as follows (Korean won in millions):

	Net book value		Agreed de	bt limit	Security holder	Description
Land and Buildings	₩	98,161	₩	92,400	Korea Development Bank	Mortgages payable
Land and Buildings	₩	6,139	₩	4,268	Kashikorn Bank	Mortgages payable

9.4 Insurance

As of December 31, 2021, the assets covered by insurance policies are as follows (Korean won in millions):

Insurance type	Covered assets		Insured up to	Insurance institutions		
	Inventories and					
	property, plant			KB Insurance Co., Ltd.		
Property insurance	and equipment	₩	279,775	And others		

In addition, the Group carries liability insurance for loads, warehousing liability insurance, and international transport liability insurance.

10. Intangible assets

Details of intangible assets as of December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021	2020		
Goodwill	₩	180,409	₩	180,080	
Industrial property rights		10		19	
License		19,042		18,731	
Overseas resources development		257,040		256,667	
Others		239,144		239,349	
	₩	749,645	₩	694,846	

Changes in the net book value of intangible assets for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

								2021						
		Jan.1	A	Addition [Disposals				Amortization /Impairment (*2)		Others (*3)		Dec. 31
Goodwill	₩	180,080	₩	1	₩	-	₩	-	₩	-	₩	328	₩	180,409
Industrial property rights		19		-		-		-		(9)		-		10
License		18,731		2,302		(2,682)		-		540		151		19,042
Overseas resources														
development		256,667		-		(4,657)		-		(22,400)		27,430		257,040
Others		239,349		29,305		(1,476)		822		(18,057)		43,201		293,144
	₩	694,846	₩	31,608	₩	(8,815)	₩	822	₩	(39,926)	₩	71,110	₩	749,645

		2018												
		Jan.1		Addition	Di	sposals		Transfer (*1)		Amortization /Impairment (*2)	Change in the scope of consolidation		Others (*3)	Dec. 31
Goodwill	₩	180,408	₩	40	₩	-	₩	-	₩	-	₩ -	₩	(328) ₩	180,080
Industrial														
property rights		31		1,016		-		-		(6,364)	-		(419)	19
License		25,142		1,479		(8,990)		1,259		(7,256)	-		(59)	18,731
Overseas														
resources development		296,237		4,745		-		-		(5,582)	-		(12,415)	256,667
Others		225,042		36,375		(90)		3,355		(2,673)	27		(9,864)	239,349
	₩	726,860	₩	43,655	₩	(9,080)	₩	4,614	₩	(31,466)	₩ 27	₩	(23,085) ₩	694,846

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

(*2) See Note 21.

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

The Group participates as the Klaytn Blockchain Platform Operator (General Council Officer) and is acquiring the cryptocurrency, Klay. Acquisition of the asset does not require significant acquisition costs; therefore, it is treated as a non-retained asset. As of December 31, 2021, the Group has 6,615,173 Klay (2020: 5,681,108 Klay).

11. Trade and other receivables

Details of trade and other receivables as of December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021					2020					
	Т	tal amount	c	wance for loubtful		Netvolue	т.	tal amount	c	wance for loubtful	Notivelue	
Current:	10	otal amount	a	ccounts		Net value	10	tal amount	a	ccounts		Net value
Trade accounts												
receivable	₩	1,697,509	₩	(44,050)	₩	1,653,459	₩	1,341,905	₩	(43,167)	₩	1,298,738
Short-term loans		8,123		(7,350)		773		11,818		(6,706)		5,112
Other accounts		0,125		(7,550)		115		11,010		(0,700)		5,112
Receivable (*1)		283,270		(19,936)		263,334		198,405		(11,059)		187,346
Current portion of		200,270		(10,000)		200,004		100,400		(11,000)		107,040
Long-term other												
accounts												
receivable		5,928		-		5,928		-		-		-
Present value		- ,				- ,						
discount		(210)		-		(210)		-		-		-
Accrued income		5,558		(4,108)		1,450		4,570		(2,704)		1,866
Short-term deposits		13,950		-		13,950		3,081		-		3,081
Current portion of		10,000				10,000		0,001				0,001
long-term other												
accounts receivable		23,583		-		23,583		21,644		-		21,644
Finance lease		-,				-,		, -				, -
receivable		1,260		-		1,260		-		-		-
		2,038,971		(75,444)		1,963,527		1,581,423		(63,636)		1,517,787
Non-current:				· · ·						· · · ·		
Long-term												
receivables	₩	159,015	₩	-	₩	159,015	₩	151,381	₩	-	₩	151,381
Long-term loans		132,010		(109,660)		22,350		122,501		(97,009)		24,492
Long-term other		,		(, ,		,		,		(, ,		,
accounts receivable (*1)	14,297		(119)		14,178		19,367		(193)		19,174
Present value discou	nt	(1,585)		-		(1,585)		(2,644)		-		(2,644)
Long-term accrued						(, ,						
income		12,842		(8,218)		4,624		15,924		(7,407)		8,517
Long-term bank												
deposits (*2)		9,705	-	-		9,705		3,556	-	-		3,556
Long-term deposits		00 704		(4.000)		05 474		00.404		(4.000)		00.404
Finance laces		29,764		(4,290)		25,474		36,424		(4,290)		32,134
Finance lease receivable		1,546				1,546						
receivable				-				-		-		-
	***	357,594	117	(122,287)	117	235,307	117	345,509	117	(108,899)	117	236,610
	₩	2,396,565	₩	(197,731)	₩	2,198,834	₩	1,926,932	₩	(172,535)	₩	1,754,397

- (*1) As of December 31, 2021, other receivables related to derivatives of ₩1,941 million (₩6,096 million in 2020) and equity options of ₩587 million were excluded.
- (*2) As of December 31, 2021, it presents the amount after excluding ₩993 million of excessive amount of plan assets (see Note 19).

Changes in the net book value of allowance for doubtful accounts for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

		20	21			202	20		
	Trade	receivables	Other	receivables	Trade I	receivables	Other receivables		
Jan. 1	₩	43,167	₩	129,368	₩	44,716	₩	123,664	
Bad debt expenses		1,107		19,366		742		385	
Others (*1)		(224)		4,947		(2,291)		5,319	
Dec. 31	₩	44,050	₩	153,681	₩	43,167	₩	129,368	

(*1) Reversal of allowance for doubtful accounts in relation to Kernhem B.V. and ADA Oil LLP., which amounts to ₩9,072 million (Impairment loss in 2020: ₩9,611 million), is included.

11. Trade and other receivables (cont'd)

Aging analyses of trade receivables as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	Less than 3 months	3 to 6 months	6 to 12 months	1 to 3 years	More than 3 years	Total
2021	₩ 1,627,536	₩ 15,697	₩ 6,776	₩ 1,401	₩ 46,099	₩ 1,697,509
2020	1,279,617	12,806	1,298	3,176	45,008	1,341,905

Derecognition of financial instruments

As of December 31, 2021, there are no trade accounts receivable that were transferred or factored but not derecognized because the requirements for financial instrument derecognition are not met.

12. Borrowings and bonds

12.1 Short-term borrowings

Details of short-term borrowings as of December 31, 2021 and 2020 are as follows (Korean won in millions):

		Annual interest rate as of Dec. 31,				
	Description	2020		2021		2020
Short-term operating loans	Woori Bank and others	3ML + 1.00% and others	₩	397,079	₩	102,661
Banker's usance	Hana Bank	0.38% ~ 0.45%		2,375		652
Others	-	-		16,517		3,491
			₩	415,971	₩	106,804

(*) The Group has contracts of commercial paper discount with Woori, Shinhan, Hana and Korea Development 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 #53,587 million) with Shinhan Bank and three other banks in relation to bank overdraft facilities as of December 31, 2021. 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, 2021 and 2020 are as follows (Korean won in millions):

	Financial institution	Annual interest rate as of Dec. 31, 2020	_	2021		2020
Local currency	Woori International the 1 st Co., Ltd and	2.89% and others				
	others		₩	500,167	₩	469,744
Foreign currency	Korea Energy	Representative loan				
	Agency and others	interest rate -2.25%		32,094		112,492
				532,261		582,236
Less: current portion				(188,675)		(75,669)
			₩	343,586	₩	506,567

12.3 Bonds

Details of bonds as of December 31, 2021 and 2020 are as follows (Korean won in millions):

			Annual					
Series	Issue date	Maturity date	interest rate		2021		2020	Warranty
115th	Mar. 03, 2015	Mar. 03, 2022	2.74%		50,000		50,000	Non-warranty
116-3rd	May. 28, 2015	May. 28, 2022	2.86%		90,000		90,000	"
117-2nd	Sep. 05, 2016	Sep. 05, 2021	2.02%		-		30,000	"
118-1st	Jan. 23, 2018	Jan. 22, 2021	2.57%		-		70,000	"
118-2nd	Jan. 23, 2018	Jan. 20, 2023	2.95%		30,000		30,000	"
119th	May. 13, 2020	May. 13, 2030	3.10%		50,000		50,000	"
120-1st	May. 27, 2020	May. 27, 2023	1.80%		90,000		90,000	"
120-2nd	May. 27, 2020	May. 27, 2025	2.07%		50,000		50,000	"
121-1st	Aug. 06, 2021	Aug. 06, 2026	2.29%		20,000		-	"
121-2nd	Aug. 06, 2021	Aug. 06, 2031	3.10%		30,000		-	"
Pantos bond	Jun. 15, 2018	Jun. 15, 2021	3.11%		-		50,000	"
Less: discount	on bonds				(557)		(733)	
Less: current p	ortion of bonds				(140,000)		(150,000)	
Less: current p	ortion of							
discount	on bonds				19		40	
				₩	269,462	₩	359,307	

As of the January 28, 2022, the Group additionally issued a total of \mathbb{W} 300 billion in the 122-1st, 122-2nd and 122-3rd bonds.

13. Provisions

Details of provisions as of December 31, 2021 and 2020 are as follows (Korean won in millions):

		20	2020						
	С	urrent	Non	-Current	Current			Non	-Current
Rehabilitation provisions	₩	8	₩	80,597	₩		-	₩	15,681
Onerous contracts		5,986		13,396			-		24,873
Provisions for litigation		-		5,152			-		475
Others		-		14			-		38
	₩	5,994	₩	99,159	₩		-	₩	41,067

Changes in provisions for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021									
-		Jan. 1	Re	cognition		Used		Others	Dec. 31	
Rehabilitation										
provisions	₩	15,681	₩	15,638	₩	(2,350)	₩	51,636	₩	80,605
Onerous contracts		24,873		(1,785)		(5,864)		2,158		19,382
Provisions for litigation		475		4,635		-		42		5,152
Others		38		686		(691)		(19)		14
	₩	41,067	₩	19,174	₩	(8,905)	₩	53,817	₩	105,153
						2020				
		Jan. 1	Re	cognition		Used		Others		Dec. 31
Rehabilitation										
provisions	₩	10,605	₩	6,951	₩	(1,160)	₩	(715)	₩	15,681
Onerous contracts		39,354		(7,663)		(4,889)		(1,929)		24,873
Provisions for litigation		505		-		-		(30)		475
Others		2		566		(509)		(21)		38
	₩	50,466	₩	(146)	₩	(6,558)	₩	(2,695)	₩	41,067

14. Capital stocks and others

14.1 Capital stocks

Details of capital stocks as of December 31, 2021 and 2020 are as follows (Korean won in millions, except per share amounts):

		2021	2020		
Ordinary shares issued		38,760,000		38,760,000	
Par value per share	₩	5,000	₩	5,000	
	₩	193,800	₩	193,800	

14.2 Capital surplus

Details of capital surplus as of December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021		2020
Paid-in capital in excess of par value	₩	47,106	₩	47,106
Asset revaluation reserves (*1)		37,286		37,286
Other capital surplus		16,052		16,761
	₩	100,444	₩	101,153

(*1) The Parent Company 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, 2021 and 2020 are as follows (Korean won in millions):

		2021		2020
Treasury stock (*1)	₩	(40,689)	₩	(40,689)
Other capital adjustments		(611 <u>)</u>		(611)
	₩	(41,300)	₩	(41,300)

(*1) The Parent Company signed the contract of acquisition of treasury stocks with KB Securities (for up to: #100 billion), and during the year ended December 31, 2020, acquired 2,691,323 shares of treasury stocks. As of December 31, 2021, the Parent Company has 2,792,098 shares of treasury stocks.

14.4 Accumulated other comprehensive loss

Details of accumulated other comprehensive loss as of December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021		2020
Loss on valuation of financial assets at fair value through OCI	₩	(7,203)	₩	(17,605)
Loss on valuation of derivatives designated as cash flow hedges		(7,471)		(13,097)
(Negative) changes in equity arising from equity method investments		(18,742)		(29,036)
Exchange differences on translation of foreign operations		33,215		(42,688)
	₩	(201)	₩	(102,426)

14.5 Retained earnings

Details of retained earnings as of December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021	2020
Legal reserve	₩	45,607 ₩	43,741
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		1,459,198	1,125,795
	₩	1,522,220 ₩	1,186,951

14.6 Earnings per share

Earnings per share attributable to the owners of the Parent Company for the years ended December 31, 2021 and 2020 are computed as follows (Korean won):

	2021			2020
Profit for the year attributable				
to the owners of the Parent Company	₩	350,069,144,537	₩	297,586,971,040
Weighted-average number of ordinary				
shares outstanding (*1)		35,967,920		37,517,383
Basic and diluted earnings per share	₩	9,733	₩	7,932

(*1) The weighted-average number of ordinary shares outstanding for the years ended December 31, 2021 and 2020 are as follows:

	202	.1	2020			
	Number of shares	Number of shares*days of holding	Number of shares	Number of shares*days of holding		
Number of common shares issued	38,760,000	14,147,400,000	38,760,000	14,186,160,000		
Treasury shares	(2,792,074)	(1,019,109,218)	(2,792,074)	(454,797,807)		
Number of ordinary shares outstanding	35,967,902	13,128,290,782	35,967,926	13,731,362,193		
Days of holding		365 days		366 days		
Weighted-average number of ordinary shares outstanding		35,967,920		37,517,383		

15. Dividends

For the years ended December 31, 2021 and 2020, dividends attributable to the owners of the Parent Company are as follows (Korean won in millions, except per share amounts):

		2021	2020		
Dividend per share	₩	400 ₩	300		
Dividends paid		14,387	11,598		

As of December 31, 2021 and 2020, proposed dividends to be approved at the general meeting of shareholders are as follows (Korean won in millions, except per share amounts):

		2021	2020		
Dividend per share	₩	2,300 ₩	400		
Dividends paid		82,726	14,387		

16. Sales

Revenue from contracts with customers for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021					2020					
		Industrial ma-					Industrial ma-					
	En	iergy/Palm	teri	al/Solution		Logistics	En	ergy/Palm	teria	l/Solution	L	ogistics
Revenue recognized at a point of time												
Sales of goods	₩	2,446,867	₩	6,441,676	₩	23,327	₩	1,397,778	₩	5,155,148	₩	19,820
Sales of services		1,768		21,842		-		4,326		20,876		-
		2,448,635		6,463,518		23,327		1,402,104		5,176,024		19,820
Revenue recognized over period												
Sales of services		18,154		3,242		7,729,657		25,722		3,142		4,655,820
	₩	2,466,789	₩	6,466,760	₩	7,752,984	₩	1,427,826	₩	5,179,166	₩	4,675,640

Details of contract assets and liabilities arising from contracts with customers as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	Segment		2021		2020
Contract assets	Logistics	₩	56,513	₩	18,970
		₩	56,513	₩	18,970
Contract liabilities					
Advance received	Energy/Palm	₩	77,281	₩	32,617
	Industrial material/Solution		5,091	_	2,054
			82,372		34,671
Unearned revenue	Energy/Palm		2		2
	Logistics		173,104		73,674
			173,106		73,676
		₩	255,478	₩	108,347

16. Sales (cont'd)

Changes in the contract assets and contract liabilities for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

					2021				
	Segment		Jan. 1		Increase	C)ecrease		Dec. 31
Contract assets	Logistics	₩	18,970	₩	56,513	₩	(18,970)	₩	56,513
		₩	18,970	₩	56,513	₩	(18,970)	₩	56,513
Contract liabilities									
Advance received	Energy/Palm Industrial	₩	32,617	₩	69,832	₩	(25,168)	₩	77,281
	material/Solution		2,054		8,348		(5,311)		5,091
			34,671		78,180		(30,479)		82,372
Unearned revenue	Energy/Palm		2		-		-		2
	Logistics		73,674		161,713		(62,283)		173,104
			73,676		161,713		(62,283)		173,106
		₩	108,347	₩	239,893	₩	(92,762)	₩	255,478
					2020				
					2020				
	Segment		Jan. 1		Increase	C	ecrease		Dec. 31
Contract assets	Segment Logistics	₩	Jan. 1 10,324	₩		C ₩	ecrease (10,324)	₩	Dec. 31 18,970
Contract assets		₩			Increase			₩	
Contract assets Contract liabilities			10,324		Increase 18,970	₩	(10,324)		18,970
			10,324	₩	Increase 18,970	₩₩	(10,324)		18,970
Contract liabilities	Logistics Energy/Palm	₩	10,324 10,324	₩	Increase 18,970 18,970	₩₩	(10,324) (10,324)	₩	18,970 18,970
Contract liabilities Advance received	Logistics Energy/Palm Industrial	₩	10,324 10,324 7,715	₩	Increase 18,970 18,970 41,466	₩₩	(10,324) (10,324) (16,564)	₩	<u>18,970</u> <u>18,970</u> 32,617
Contract liabilities	Logistics Energy/Palm Industrial material/Solution Energy/Palm	₩	<u>10,324</u> <u>10,324</u> 7,715 <u>14,310</u> 22,025 3	₩	Increase 18,970 18,970 41,466 4,012 45,478 51	₩₩	(10,324) (10,324) (16,564) (16,268) (32,832) (52)	₩	<u>18,970</u> <u>18,970</u> 32,617 <u>2,054</u> 34,671 2
Contract liabilities Advance received	Logistics Energy/Palm Industrial material/Solution	₩	10,324 10,324 7,715 14,310 22,025 3 56,221	₩	Increase 18,970 18,970 41,466 4,012 45,478 51 61,242	₩₩	(10,324) (10,324) (16,564) (16,268) (32,832) (32,832) (52) (43,789)	₩	18,970 18,970 32,617 2,054 34,671 2 73,674
Contract liabilities Advance received	Logistics Energy/Palm Industrial material/Solution Energy/Palm	₩	<u>10,324</u> <u>10,324</u> 7,715 <u>14,310</u> 22,025 3	₩	Increase 18,970 18,970 41,466 4,012 45,478 51	₩₩	(10,324) (10,324) (16,564) (16,268) (32,832) (52)	₩	<u>18,970</u> <u>18,970</u> 32,617 <u>2,054</u> 34,671 2

17. Selling and administrative expenses

Details of selling and administrative expenses for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021		2020
Salaries	\overline{W}	303,082	₩	245,829
Pension benefits		17,200		16,091
Employee welfare benefits		69,798		50,690
Travel		5,594		4,726
Taxes and dues		8,647		10,300
Rents		9,356		10,619
Depreciation		31,568		30,192
Amortization		23,291		21,063
Insurance		5,349		4,686
Custody		1,682		1,387
Freight		93,717		72,783
Load and unload		214		365
Service		94,037		70,479
Bad debt expenses		1,107		742
Expenses for overseas branch office		8,097		7,411
Others		22,438		25,178
	₩	695,177	₩	572,541

18. Expenses classified by nature

Expenses classified by nature for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	_	2021	2020
Cost of goods sales	₩	7,732,952	₩ 5,880,310
Use of raw materials and supplies		539,435	399,068
Employee benefits (salaries, retirement benefits) Distribution costs (custody charges,		430,835	355,137
packaging costs, transportation expenses)		105,941	80,468
Cost of logistics sales		6,341,192	3,721,182
Depreciation and amortization		187,247	163,624
Others		692,714	523,008
	₩	16,030,316	₩ 11,122,797

19. Pension benefits

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

Details of employee benefit liabilities as of December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021		2020
Present value of defined benefit obligation	₩	148,578	₩	135,298
Fair value of plan assets (*1)		(140,222)		(121,021 <u>)</u>
	₩	8,356	₩	14,277

(*1) As of December 31, 2021, the Group classified #993 million of excessive amount of plan assets as other non-current assets.

Expenses recognized in respect of the defined benefit plans for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021	2020
Current service costs	₩	18,645 ₩	18,278
Net interest costs		145	328
Management cost of plan assets		313	184
	₩	19,103 ₩	18,790

Changes in the present value of defined benefit obligation for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021		2020
January 1	₩	135,298	₩	127,118
Current service costs		18,645		18,278
Interest costs		2,592		2,489
Benefits paid		(8,516)		(8,472)
Transfer out		(661)		(283)
Re-measurement gain on defined benefit plans		1,100		(3,415)
Change in the scope of consolidation		-		35
Others		120		(452)
December 31	₩	148,578	₩	135,298

Changes in the fair value of plan assets for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021		2020
January 1	₩	121,021	₩	104,672
Return on plan assets		2,447		2,161
Contribution payable		24,286		22,511
Benefits paid		(6,841)		(8,190)
Re-measurement loss on defined benefit plans		(411)		56
Management costs of plan assets		(313)		(184)
Others		33		(5)
December 31	₩	140,222	₩	121,021

The principal assumptions used in actuarial calculation as of December 31, 2021 and 2020 are as follows:

	2021	2020
Salary increase rate	5.00%	5.00%
Discount rate	1.75% ~ 2.80%	1.75% ~ 2.25%

19. Pension benefits (cont'd)

Sensitivity analyses on the principal assumptions used in actuarial calculation as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	Defined benefit obligation					
	Dec. 31		Increase by 1%		Decrease by 1%	
Salary increase rate	₩	148,578	₩	160,939	₩	137,569
Discount rate		148,578		137,520		161,272

The Group operates defined contribution plans for certain employees of which expenses amounting to #436 million and #264 million were recognized in 2021 and 2020, respectively.

20. Other non-operating income and costs

20.1 Finance income

Details of finance income for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021	2020
Interest income	₩	10,213 ₩	10,404
Gain on foreign currency transactions		206,017	214,517
Gain on foreign currency translation		37,678	47,420
Gain on currency forwards		7,537	13,738
Gain on currency swaps		3,684	1,688
Dividend income		7,285	4,376
	₩	272,414 ₩	292,143

20.2 Finance costs

Details of finance costs for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021		2020
Interest expenses	₩	34,101	₩	42,753
Loss on foreign currency transactions		196,644		239,166
Loss on foreign currency translation		30,158		47,668
Loss on currency forwards		19,228		9,919
Loss on currency swaps		-		8,552
Loss on disposal of trade accounts receivable		8,902		10,118
	₩	289,033	₩	358,176

20.3 Share of profit or loss of associates

Details of share of profit or loss of associates for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021		2020
Share of profit of associates	₩	92,778	₩	21,772
Share of loss of associates		(2,455)		(8,861)
Gain on disposal of investments in associates (*1) Loss on disposal of investments in		36		336,764
associates (*2)		(676)		(642)
Impairment loss on investments in associates (*3)		-		(9,611)
	₩	89,683	₩	339,422

(*1) During the year ended December 31, 2020, gains on disposal of investment in LG Holdings(HK) Ltd.(LG Building Ltd.) are included.

(*2) See Note 30.

(*3) See Note 21.

20.4 Other non-operating income and expenses

Other non-operating income and expenses for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	_	2021		2020
Other bad debt expenses	₩	(19,366)	₩	(385)
Gain on disposal of property, plant and equipment		6,030		18,969
Gain on disposal of intangible assets		804		605
Impairment loss on intangible assets (*1)		-		(13,963)
Impairment loss on assets held for sale		-		(783)
Gain on exemption from debt		14,659		7,067
Others		3,289		11,129
	₩	5,416	₩	22,639

(*1) See Note 21.

21. Impairment

Details of impairment recognized for the year ended December 31, 2020 are as follows (Korean won in millions):

			2020			
	Intangible assets	Investment in associates	Assets held for sale (*1)	Intangible assets	Intangible assets	
Segment	Energy/Palm	Industrial material/Solution	Energy/Palm	Logistics	Collectively grouped	
Nature of asset	Coal mining	Palm oil	Coal mining	Logistics	License	
Related region	Oceania	Asia	Asia	Asia	Asia	
Impairment loss	₩ 13,816	₩ 9,611	₩ 783	₩ 40	₩ 107	
Measuring of			Fair value less	Fair value less		
recoverable amount	Value in use	Value in use	costs to sell	costs to sell	Value in use	
	Zero-Growth /	Zero-Growth /				
Basis of estimates	DCF	DCF	-			
Discount rate	5.04%	9.96%	-	-	_	

(*1) See Note 30.

22. Income tax

The major components of income tax expenses for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021		2020
Current income tax (*1)	₩	164,602	₩	78,845
Changes in deferred tax Deferred tax related to items recognized		46,573		1,089
in other comprehensive income		(16,810)		14,323
Income tax expenses (benefit) reported in the statement of profit or loss	₩	194,365	₩	94,257

(*1) The refund of ₩1,394 million related to claim for corporate tax correction with regards to an increase in foreign tax payment credit due to gain on exemption of debt are included for the year ended December 31, 2021. The refunds with regards to the local income tax correction claims and adjustment due to administrative litigation of ₩ 15,969 million were included for the year ended December 31, 2020.

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, 2021 and 2020 are as follows (Korean won in millions):

		2021		2020
Profit before income tax	₩	734,697	₩	455,863
Statutory income tax at the tax rate				
(24.1% in 2021)		177,335		109,857
Adjustments:				
Effect of unrecognized deferred tax				
for temporary differences		36,123		(3,153)
Current year adjustment related to the income tax				
on previous years		(1,107)		(18,781)
Effect of non-deductible expenses		(293)		2 720
for tax purposes Tax credit		· · ·		2,730
Foreign income tax directly charged		(8,686)		(8,967)
		3,938		4,155
Income tax on non-recirculation		1,834		3,737
Others		(14,779)		4,679
Income tax expenses reported	117	101.005	117	04.057
in the statement of profit or loss	₩	194,365	₩	94,257
Effective tax rate (income tax expenses/ profit before income tax)		26%		21%

The major components of deferred tax charged directly to equity for the years ended December 31, 2021 and 2020 are follows (Korean won in millions):

		2021		2020
Loss (gain) on valuation of financial assets at fair value through OCI	₩	(3,385)	₩	12,615
Equity adjustments in equity method Exchange differences on translation of foreign		(1,315)		169
operations		(10,634)		886
Loss (gain) on valuation of derivatives		(1,673)		1,446
•	s	197		(793)
	₩	(16,810)	₩	14,323

22. Income tax (cont'd)

Temporary differences and deferred taxes for the years ended December 31, 2021 and 2020 consist of the following (Korean won in millions):

	Accum	ulated temporary dif	ferences	Deferred tax as	ssets (liabilities)
	Jan. 1, 2021	Net changes	Dec. 31, 2021	Dec. 31, 2020	Dec. 31, 2021
Deferred income tax	`		· · · · · · · · · · · · · · · · · · ·	· · · · · ·	
due to temporary					
differences:					
Impairment of available-					
for-sale financial	₩ 147.608	₩ -	₩ 147,608	₩ 34.510	₩ 34.510
assets Steels dividend	,		,	0.,0.0	0 1,0 10
Stock dividend Allowance for doubtful	12,999	-	12,999	3,146	3,146
accounts	157,039	17,962	175,001	36,570	39,468
Bad debt expenses	3,492		3,492	845	845
Accrued income	(5		(2)	(1)	0+0
Interest income	3,038		(2) 3,213	735	- 778
Allowance for	3,030	175	3,213	755	110
inventories	_	508	508	_	123
Gain on commodity		000	000		120
futures		- (17)	(17)	-	(4)
Loss on commodity			()		
futures	145	(145)	-	35	-
Accrued expenses	1,581	(5)	1,576	383	381
Admission and denial					
on depreciation cost	4,863	· · · · · · · · · · · · · · · · · · ·	1,015	1,177	246
Bonus	2,113	15,481	17,594	511	4,258
Interest related to					
loans or construction	(483	•	(483)	(117)	(117)
Brand loyalty	62	(62)	-	15	-
Present value of					
defined benefit	34,304	128	24 422	8,302	8,332
obligation Fair value of plan	54,504	120	34,432	0,302	0,332
assets	(32,619) (1,387)	(34,006)	(7,894)	(8,229)
Gain (loss) on foreign	(02,010) (1,001)	(01,000)	(1,001)	(0,220)
currency translation	(16,938) 7,283	(9,655)	(4,099)	(2,337)
Interest and translation	•	,			
of debt related on					
success	3,997	1,129	5,126	967	1,241
Rewards for long term		(74)	4 070	077	050
employee	1,144	(74)	1,070	277	259
Impairment right of membership	2,022	(540)	1,482	489	359
Investment in	2,022	(0+0)	1,402	-03	000
subsidiaries and					
associates	(100,765) (437,631)	(538,396)	(29,392)	(75,153)
Financial assets at fair	•	, , ,			
value through OCI	16,362	(13,625)	2,737	3,960	662
Impairment loss	79,155	(25,517)	53,638	19,155	12,980
Provisions	31,648	(5,448)	26,200	7,659	6,340
Taxes and dues	4,016	3,589	7,605	498	1,366
Guarantee commission	21,569	-	21,569	375	373
Deemed dividend	40,126	2,065	42,191	9,710	10,210

22. Income tax (cont'd)

		Accum	lated	temporary dif	ference	es	De	ferred tax as	sets (li	abilities)
	_	Jan. 1, 2021	Net	t changes	Dec	. 31, 2021	Dec.	. 31, 2020	Dec	. 31, 2021
Gains from assets contributed Transfer price	₩	1,529 7.423	₩	-	₩	1,529 7,423	₩	370	₩	370
Capital lease		138		45		183		34		44
Commission fees		7,414		68		7,482		573		590
Others	_	(186,013)		(9,680)		(195,693)		(45,015)		(47,358)
	_	246,964		(449,543)		(202,579)		43,778		(6,317)
Tax credits Charged income tax due to non-recirculation	•							38,934		44,289 (1,833)
							₩	82,712	₩	36,139
Reflected on the statements of financial position:										
Deferred tax assets								140,041		98,263
Deferred tax liabilities								57,329		62,124
Deferred tax assets, net							₩	82,712	₩	36,139

Temporary differences for which the deferred tax assets (liabilities) have not been recognized for the years ended December 31, 2021 and 2020 consist of the following (Korean won in millions):

		2021	2020
Investment in subsidiaries,			
associates or joint ventures (*1)	\mathbb{W}	191,847	₩ 264,839
Commissions and others		29,411	29,403
	₩	221,258	₩ 294,242

(*) The Group did not recognize deferred tax assets related to temporary differences due to accumulated other comprehensive loss 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

As of December 31, 2021, LX Holdings Corp., the largest shareholder of the Parent Company, holds 24.69% of the Parent Company's common shares and has significant influence over the Parent Company.

Transactions with related parties for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021						2020					
		Sales	P	urchase		Service		Sales	Р	urchase		Service
Associates:												
Kernhem B.V	₩	1,972	₩	-	₩	-	₩	1,088	₩	-	₩	-
ADA OII LLP		327		-		-		319		-		-
Musandam Power Company SAOC		31		-		3		72		-		-
LX Pantos Philippines, Inc. (formerly,												
Pantos Logistics Philippines Inc.)		3,082		-		2,059		3,806		-		1,492
POSCO-PWPC(Poland Wroclaw												
Processing Center)		918		-		-		209		-		-
Bio Friends INC.		1,392		-		-		-		-		-
		7,722		-		2,062		5,494		-		1,492
Other related parties (*1):												
LG Corp.		572		-		9,996		4		-		10,707
LG Electronics Inc. and its subsidiaries		7,516,838		45,641		9,111		5,575,189		66,536		7,804
LG Chem. Ltd. and its subsidiaries		1,552,070		96,234		290		953,301		57,801		1,031
LG Display Co., Ltd. and its subsidiaries		286,689		574,645		2,866		261,007		381,200		255
Others		218,518		390		44,723		130,521		751		42,602
		9,574,687		716,910		66,986		6,920,022		506,288		62,399
	₩	9,582,409	₩	716,910	₩	69,048	₩	6,925,516	₩	506,288	₩	63,891

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

Outstanding balances from transactions with the related parties as of December 31, 2021 and 2020 are as follows (Korean won in millions):

			2021		
	Accounts receivable	Loans	Other receivables	Accounts payable	Other payables
Corporations that have significant influence on the Group at the end of the current year:					
LX Corp.	₩ -	₩ -		₩ -	₩ 4,065
			2		4,065
Associates:					
ADA OII LLP	-	11,246	26	-	-
Kernhem B.V	-	47,210	4,847	-	-
KM Resources Ltd.(Rapu-Rapu) POSCO-PWPC(Poland Wroclaw	-	9,279	-	-	-
Processing Center) POSCO-IPPC(India Pune Processing	904	-	-	-	-
Center)	-	-	-	-	1
Gansu Wuwei Cogeneration Power Plant	-	-	1	-	-
LX Pantos Philippines, Inc (formerly, Pantos Logistics Philippines Inc.) Inner Mongolia Diamond Coal Indusrty Co., Ltd (formerly, Mongolia Boyuan	121	2,785	24	96	-
Coal(Wantugou))	-	-	75,791	-	-
BIO Friends INC.	221	-			<u> </u>
	1,246	70,520	80,689	96	1
Other related parties:					
LG Corp.	-	-	6,846	-	8,130
LG Electronics Inc. and its subsidiaries	526,053	-	9,757	4,753	33,267
LG Chem. Ltd. and its subsidiaries	191,105	-	5,708	2,652	33,241
LG Display Co., Ltd. and its subsidiaries	36,144	-	23,786	93,052	3,057
Others	23,493		4,421	108	11,414
	776,795		50,518	100,565	89,109
	₩ 778,041	₩ 70,520	₩ 131,209	₩ 100,661	₩ 93,175

23. Related party disclosures (cont'd)

					2020				
	-	ccounts ceivable		Loans	Other receivab	les	Accounts payable	Oth	er payables
Corporations that have significant influence on the Group at the end of the current year:									
LG Corp.	₩		₩		,	957	₩ -	₩	8,403
		-			6,9	957			8,403
Associates:									
ADA OII LLP		-		10,754	-	650	-		-
Kernhem B.V		-		43,328	7,9	984	-		-
KM Resources Ltd.(Rapu-Rapu)		-		4,352		-	-		-
POSCO-PWPC(Poland Wroclaw		197							
Processing Center) POSCO-IPPC(India Pune Processing		197		-		-	-		-
Center)		-		-		-	-		1
Musandam Power Company SAOC		-		-		2	-		-
GS HP Sunflower Village Int'l Corp. Inner Mongolia Diamond Coal Indusrty Co., Ltd (formerly, Mongolia Boyuan		-		-		49	-		-
Coal(Wantugou)) LX Pantos Philippines, Inc (formerly,					5,0	017			
Pantos Logistics Philippines Inc.)		174		2,557		15	182		-
		371		60,991	13,7	717	182		1
Other related parties:									
LG Electronics Inc. and its subsidiaries		537,503		-	65,3	387	4,212		5,778
LG Chem. Ltd. and its subsidiaries		99,482		-	4,4	130	168		4,909
LG Display Co., Ltd. and its subsidiaries		22,265		-	4,9	997	81,001		360
Others		11,009		-	6,0)96	345		16,030
		670,259		-	80,9	910	85,726		27,077
	₩	670,630	₩	60,991	₩ 101,5	584	₩ 85,908	₩	35,481

The Group recognized allowance for doubtful accounts of W48,819 million as of December 31, 2021 (2020: W53,402 million) for the trade and other receivable from the related parties.

Transfers under finance arrangements with the related parties for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021									
	Di	vidends	Investm	ent in cash	Loans		Collection			
Associates:		<u> </u>								
ADA OII LLP	₩	-	₩	-	₩	-	₩	466		
GS HP Sunflower Village Int'l Corp.		50	₩	-		-		-		
KM Resources Ltd.(Rapu-Rapu)		-		-		4,303		-		
Musandam Power Company SAOC		1,041		-		-		-		
Gansu Wuwei Cogeneration Power Plant		4,382		-		-		-		
Inner Mongolia BDSD Chemical Co., Ltd		5,089		-		-		-		
Inner Mongolia Diamond Coal Indusrty Co., Ltd (formerly, Mongolia Boyuan Coal(Wantugou))		70,135		-		-		-		
Bio Friends INC.		-		2,720				-		
		80,697		2,720		4,303		466		
Other related parties:										
LG Chem. Ltd. and its subsidiaries		453		-				-		
		453						-		
	₩	81,150	₩	2,720	₩	4,303	₩	466		

				20	20			
		Dividends	Investme	ent in cash		Loans		Collection
Associates:								
GS HP Sunflower Village Int'l Corp.	₩	183	₩	-	₩	-	₩	-
KM Resources Ltd.(Rapu-Rapu)		-		-		4,798		-
Musandam Power Company SAOC		1,079		-		-		-
Gansu Wuwei Cogeneration Power Plant		2,490		-		-		-
LX Pantos Philippines, Inc. (formerly, Pantos								
Logistics Philippines Inc.)		-		-		1,523		-
	₩	3,752	₩	-	₩	6,321	₩	-

23. Related party disclosures (cont'd)

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

		2021		2020
Short-term employee benefits	\mathbb{W}	14,358	₩	9,584
Pension benefits		2,745		4,439
	\mathbb{W}	17,103	₩	14,023

24. Commitments and contingencies

24.1 Guarantees provided

	Financial institution	Object	Limit	Used
Subsidiaries:				
	KEXIM and			
PT.Ganda Alam Makmur (*1)	others	Local finance	USD 40,500	USD 40,500
Associates:				
	Bank Muscat			
Musandam Power Company S.A.O.C	Oman	Local finance	OMR 941	OMR 941

(*1) The Parent Company is contingently liable for payment guarantees issued on behalf of a subsidiary, PT. Ganda Alam Markmur (GAM) 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, 2021, the agreements concluded for the establishment of Letter of credits and other financial arrangement with financial institutions are as follows (Korean won in millions and foreign currencies in thousands):

Description	Financial institution	Conti	ract amount
Bills bought	Korea Development Bank and others	USD	60,500
Letter of credits	Shinhan Bank and others	USD	93,530
Payment guarantee	KB Kookmin Bank and others	USD	90,500
		AUD	1,000
		KRW	39,692
Bank overdrafts	Hana Bank and others	KRW	21,400
		GBP	800
		EUR	4,000
		CNY	100,000
		INR	120,000
Line of credit	Hana Bank China and others	USD	252,400
		EUR	7,000
		AUD	22,000
		CNY	200,000
		IDR	677,425,000
		VND	450,920,000
		KRW	101,800
B2B purchase loan	Shinhan Bank	KRW	17,000
Trade financing	Woori Bank and others	USD	1,239,400
		JPY	13,100,000
		AUD	50,692
		CNY	210,000
		KRW	129,800
		USD	1,736,330
		KRW	309,692
		GBP	800
T .(1)		AUD	73,692
Total		EUR	11,000
		JPY	13,100,000
			510,000
			120,000
		VND	450,920,000
		IDR	677,425,000

24.3 Guarantees received

Guarantees received by the Group as of December 31, 2021 and 2020 are as follows (Korean won in millions and foreign currencies in thousands):

2021	Financial institution	Guarantee amount	Description
Bonds	Hana Bank and others		KRW 50,690, USD 11,798, EUR 618, HKD 7,756, SGD 757, VND 317,440,000, OMR 941, IDR
		₩ 91,457	55,969,500
2020	Financial institution	Guarantee amount	Description
Bonds	Hana Bank and others		KRW 54,098, USD 8,186, EUR 669, HKD 6,314,
			SGD 727, AUD 22, PHP 48,600, VND 60,530,000,
		₩ 72,982	OMR 942, IDR 12,459,532

24.4 Pledged notes and checks

The Group pledged 18 notes and 9 checks as collateral to its customers, creditors and guarantors related to various guarantees and borrowings as of December 31, 2021.

24.5 License agreement

The Group terminated a license agreement with LG Corp. for the use of the "LG" brand on June 30, 2021.

24.6 Joint and several liability on guarantees

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

24.7 Pending lawsuits

The Group is a defendant in various lawsuits with claims aggregating to #14,419 million, and as of December 31, 2021, the outcomes of litigation are not reliably determinable. However, in some litigation cases, it was determined that there is a possibility of an outflow of resources and that the effect can be measured reliably. In this regard, the effect is already reflected in the consolidated financial statements (see Note 13).

In the case of arbitration with Oman's government in relation to the termination of the oil business operated in Oman, which was disclosed as contingent liabilities for the year ended December 31, 2020, the Group has excluded the case from the litigation amount due to the conclusion of the arbitration agreement and the fulfillment of agreement for the year ended December 31, 2021.

24.8 Other commitments

As of December 31, 2021, the commitments the Group has entered into with customers other than financial institutions are as follows:

Type of commitment	Counterparty	Description
Put option	Inner Mongolia BDSD Chemical Co., Ltd.	As of August 27, 2013, the Group signed a put option contract with Inner Mongolia BERUN Holding Group Co., Ltd. to acquire a 29% of equity interests of Inner Mongolia BDSD Chemical Co., Ltd., which has a coal chemical plant in Inner Mongolia, China.
Put option	Gansu Wuwei Cogeneration Power Plant	As of October 10, 2015, the Group signed a put option contract with Gansu Province Electricity Investment Group Co., Ltd. to acquire 30% of equity interests of Gansu Wuwei Cogeneration Power Plant for a capital increase.
Put option	Bio Friends INC.	As of May 20, 2021, the Group signed a put option contract with Bio Friends INC. and its stakeholder, Won-Jun Jo, to acquire equity shares of Bio Friends INC.
Put option	Pablo Air Co., Ltd.	As of December 1, 2021, the Group signed two contracts for the acquisition of convertible preferred stocks of Pablo Air Co., Ltd. with Pablo Air Co., Ltd. and its stakeholder, Young-Jun Kim, and signed a put option contract for the new stocks to be acquired.

24.9 Uncertainty regarding the influence of COVID-19

The spread of the pandemic Covid-19 is exerting major impact on not only the national economy, but also the global economy. Also, various forms of governmental support policies are being announced in order to cope with Covid-19.

The accounts that are influenced by Covid-19 are mostly the recoverability of accounts receivable (see Note 11), impairment of the investment in associates (see Note 8, 21) and so on. The Group has prepared the consolidated financial statements by reasonably estimating the impact of Covid-19. However, the spread or termination of Covid-19 may affect the Group's estimation and assumptions, but the ultimate therefrom is not reasonably estimable as of December 31, 2020.

24.10 Uncertainty regarding the Russia-Ukraine war

Armed conflicts in Ukraine, which began in February 2022, and related sanctions against Russia by the international community thereafter could affect companies subject to sanctions, as well as companies directly or indirectly operating with Ukraine or Russia, and those directly or indirectly exposed to industry or the economy of Ukraine or Russia. This event is a non-adjusting event after the reporting period. The Group cannot reasonably estimate the future financial impact of the Russia-Ukraine war.

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 trade receivables, loans 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.

The sensitivity analysis in the following sections relates to the financial position as of December 31, 2021 and 2020.

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, 2021.

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, 2021 and 2020 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, 2021 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	21			20	20	
	Increa	ise by 1%	Decre	ease by 1%	Incre	ase by 1%	Dec	crease by 1%
Interest income	₩	2,112	₩	(2,112)	₩	3,311	₩	(3,311)
Interest expenses		(1,458)		1,458		(2,534)		2,534
Net effect	₩	654	₩	(654)	₩	777	₩	(777)

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

Interest rate benchmark reform

The following table demonstrates the nominal amount and weighted average maturity of derivatives as of December 31, 2021 and 2020 with hedging relationships that will be affected by interest rate reform as financial instruments are converted to risk-free interest rates (RFR), which are analyzed by interest rate criteria. Derivatives as a hedging instrument provide a close approximation of the level of risk exposure that banks manage through a hedging relationship.

·			(Korean won in millions)
		2021	
Interest rate		Valuation amount	Average maturity (Year)
LIBOR USD (6M)	\mathbb{W}	7,428	12.7
LIBOR USD (3M)		21,984	0.1
		2020	
Interest rate		Valuation amount	Average maturity (Year)
LIBOR USD (6M)	₩	(8,575)	13.7
LIBOR USD (3M)		(8,629)	0.2
	LIBOR USD (6M) LIBOR USD (3M) Interest rate LIBOR USD (6M)	LIBOR USD (6M) W LIBOR USD (3M)	Interest rateValuation amountLIBOR USD (6M)₩7,428LIBOR USD (3M)21,98420202020Interest rateValuation amountLIBOR USD (6M)₩(8,575)

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.

25.1.2 Foreign currency risk (cont'd)

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.

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)21	20	20
	Increase by 10%	Decrease by 10%	Increase by 10%	Decrease by 10%
Gain (loss) on foreign currency translation Gain (loss) on valuation of derivative financial	₩ 61,837	₩ (61,837)	₩ 14,713	₩ (14,713)
instruments Net effect (*1)	(20,702) ₩ 41,135	<u>20,702</u> ₩ (41,135)	(3,139) ₩ 11,574	3,139 ₩ (11,574)

(*1) 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, 2021 and 2020 are as follows (Korean won in millions):

		2021	2020
Cash equivalents (*1)	₩	838,527	₩ 687,920
Short-term financial instruments		20,787	67,837
Equity instruments held for long-term:		151,681	135,185
Financial assets at fair value through profit or			
loss		18,209	14,082
Financial assets at fair value through			
OCI		133,472	121,103
Trade accounts receivable		1,653,459	1,298,738
Other accounts receivable (*2)		263,333	187,346
Long-term loans		22,350	24,492
Other financial assets (*2)		259,790	238,710
	₩	3,209,927	₩ 2,640,228

(*1) Excludes cash on hand

(*2) Excludes other receivables in relation to derivatives

25.3 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):

						2021				
	L	ess than		1 to 3		3 to 5	M	ore than		
		1 year		years		years	5	5 years		Total
Cash and cash equivalents	₩	841,883	₩	-	₩	-	₩	-	₩	841,883
Short-term financial instruments		20,787		-		-		-		20,787
Trade accounts receivable		1,651,200		2,259		-		-		1,653,459
Other accounts receivable		265,138		137		-		-		265,275
Long-term loans		-		22,350		-		-		22,350
Other financial assets		45,962		39,890		11,102		162,836		259,790
	₩	2,824,970	₩	64,636	₩	11,102	₩	162,836	₩	3,063,544
						2020				
	—	ess than		1 to 3		2020 3 to 5	M	ore than		
	L	ess than 1 year		1 to 3 years				ore than 5 years		Total
Cash and cash equivalents	L ₩		W		₩	3 to 5			W	Total 689,988
Cash and cash equivalents Short-term financial instruments		1 year	₩		₩	3 to 5	5		₩	
•		<u>1 year</u> 689,988	₩		₩	3 to 5	5		₩	689,988
Short-term financial instruments		<u>1 year</u> 689,988 67,837	₩	years - -	₩	3 to 5 years -	5	ō years - -	₩	689,988 67,837
Short-term financial instruments Trade accounts receivable		<u>1 year</u> 689,988 67,837 1,295,023	₩	<u>years</u> - - 3,334	₩	3 to 5 years -	5	ō years - -	₩	689,988 67,837 1,298,738
Short-term financial instruments Trade accounts receivable Other accounts receivable		<u>1 year</u> 689,988 67,837 1,295,023	₩	years - 3,334 501	₩	3 to 5 years - - 381	5	ō years - -	₩	689,988 67,837 1,298,738 193,442

25.4 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):

			2021		
	Less than	1 to 3	3 to 5	More than	
	1 year	years	years	5 years	Total
Trade accounts payable	₩ 1,619,765	-₩	₩ -	₩ -	₩ 1,619,765
Other accounts payable	345,214	-	-	-	345,214
Borrowings	604,646	140,300	37,564	165,721	948,231
Bonds payable	139,981	119,831	69,819	79,812	409,443
Lease liabilities	77,774	83,097	30,194	20,811	211,876
Other financial liabilities	246,637	10,574	-	-	257,211
	₩ 3,034,017	₩ 353,802	₩ 137,577	₩ 266,344	₩ 3,791,740
			2020		
	Less than	1 to 3	3 to 5	More than	
	1 year	years	years	5 years	Total
Trade accounts payable	1 year ₩ 1,547,820		years ₩ -	<u>5 years</u> ₩ -	Total ₩ 1,547,820
Trade accounts payable Other accounts payable	,	₩ -			
	₩ 1,547,820	₩ -	₩ -		₩ 1,547,820
Other accounts payable	₩ 1,547,820 253,885	₩ - - 156,998	₩ - - 76,241	₩ -	₩ 1,547,820 253,885
Other accounts payable Borrowings	₩ 1,547,820253,885182,473	₩ - 156,998 259,608	₩ - - 76,241 49,826	₩ - 273,328	₩ 1,547,820253,885689,040
Other accounts payable Borrowings Bonds payable	 ₩ 1,547,820 253,885 182,473 149,961 	₩ - 156,998 259,608 71,244	₩ - - 76,241 49,826	₩ - 273,328 49,872	 ₩ 1,547,820 253,885 689,040 509,267

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

25.5 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, 2021 and 2020 are as follows (Korean won in millions):

		2021	2020		
Total liabilities (A)	\overline{W}	4,362,645	₩ 3,637,611		
Total equity (B)		2,384,244	1,758,331		
Cash and cash equivalents (C)		841,883	689,988		
Total borrowings (D)		1,569,550	1,383,514		
Debt ratio (A / B)		182.98%	206.88%		
Net borrowing ratio ((D-C) / B)		30.52%	39.50%		

26. Fair value of financial instruments

26.1 Fair value of financial instruments

The book value and fair value of financial instruments as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021					2020			
	B	ook value		Fair value	Book value		F	air value	
Financial assets: Financial assets measured at amortized cost:									
Cash and cash equivalents Short-term financial instruments	₩	724,175 20,787	₩	724,175 20,787	₩	456,715 67,837	₩	456,715 67,837	
Trade accounts receivable		1,653,459		1,653,459		1,298,738		1,298,738	
Long-term loans		22,350		22,350		24,492		24,492	
Other accounts receivable		263,334		263,334		187,346		187,346	
Other financial assets		259,203		259,203		238,710		238,710	
		2,943,308		2,943,308		2,273,838		2,273,838	
Financial assets recognized at fair value:		<u> </u>		i				<u> </u>	
Cash and cash equivalents Other accounts receivable related		117,708		117,708		233,273		233,273	
derivatives		1,941		1,941		6,096		6,096	
Equity instruments held for long-term		151,681		151,681		135,185		135,185	
Other financial assets		587		587		-		-	
		271,917		271,917		374,554		217,570	
	₩	3,215,225	₩	3,215,225	₩	2,648,392	₩	2,176,167	
		2	02 [.]		2020				
	B	ook value		Fair value	Bo	ook value	F	air value	
Financial liabilities: Financial liabilities measured at amortized cost:									
Borrowings	₩	759,556	₩	759,556	₩	613,370	₩	613,370	
Bonds payable		269,462		269,462		359,307		359,307	
Current portion of bonds and long-term borrowings		328,656		328,656		225,630		225,630	
Other financial liabilities		2,423,377		2,423,377		2,142,608		2,142,608	
		3,781,051		3,781,051		3,340,915		3,340,915	
Financial liabilities recognized at fair value: Other accounts payable related									
derivatives		1,240		1,240		7,116		7,116	
Others		9,449		9,449		17,212		17,212	
		10,689		10,689		24,328		24,328	
	₩	3,791,740	₩	3,791,740	₩	3,365,243	₩	3,365,243	

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, 2021 and 2020, 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):

	2021						
	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	₩	-	₩	117,708	₩	-	
Other accounts receivable related to derivatives		-		198		-	
Other financial assets related to derivatives		-		587			
Long-term equity securities (*1)		2,470		-		15,740	
Financial assets at fair value through OCI:							
Long-term equity securities (*1)		13,690		-		117,626	
Financial liabilities at fair value through profit or loss:							
Other accounts payable related to derivatives		-		1,240		-	
Derivatives related to hedge accounting:							
Other financial assets		-		1,743		-	
Other financial liabilities		-		9,449		-	
Assets and liabilities for which							
fair values are disclosed:							
Cash and cash equivalents	₩	3,356	₩	720,819	₩	-	
Short-term financial instruments		-		20,014		773	
Trade accounts receivable		-		-		1,653,459	
Long-term loans		-		-		22,350	
Other accounts receivable		-		-		263,334	
Other financial assets		-		9,988		249,215	
Borrowings		-		759,556		-	
Bonds payable		-		269,462		-	
Current portion of bonds payable							
and long-term borrowings		-		328,656		-	
Other financial liabilities		-		-		2,423,377	

(*) 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, 2021.

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

	2020							
	Le	evel 1	Le	vel 2	L	evel 3		
Assets and liabilities measured at fair value:								
Financial assets at fair value through profit or loss:								
Cash and cash equivalents	₩	-	₩	233,273	₩	-		
Other accounts receivable related to derivatives		-		6,096		-		
Equity securities (*1)		-		-		9,303		
Financial assets at fair value through OCI:								
Equity securities (*1)		10,953		-		108,109		
Financial liabilities at fair value through profit or loss:								
Other accounts payable related to derivatives		-		578		-		
Derivatives related to hedge accounting:								
Other financial assets		-		6,538		-		
Other financial liabilities		-		17,212		-		
Assets and liabilities for which								
fair values are disclosed:								
Cash and cash equivalents	₩	2,068	₩	454,647	₩	-		
Short-term financial instruments		-		62,725		5,112		
Trade accounts receivable		-		-		1,298,738		
Long-term loans		-		-		24,492		
Other accounts receivable		-		-		187,346		
Other financial assets		-		3,556		235,154		
Borrowings		-		613,370		-		
Bonds payable		-		359,307		-		
Current portion of bonds payable								
and long-term borrowings		-		225,630		-		
Other financial liabilities		-		-		2,142,608		

(*1) 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 1.29% during the period (2020: 0.66%).

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 6.93~12.99% during the period (2020: 7.34~14.62%).

27. Statements of cash flows

Non-cash adjustments to reconcile profit for the year to net cash flows for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021		2020
Depreciation	₩	146,781	₩	129,442
Amortization		40,466		34,181
Pension benefits		19,103		18,791
Bad debt expenses		20,473		1,127
Interest income		(10,213)		(10,452)
Gain on foreign currency translation		(37,678)		(47,420)
Interest expenses		34,101		42,754
Loss on foreign currency translation		30,158		47,668
Loss (gain) on disposal of investments in associates		640		(336,764)
Impairment loss on investments in associates		-		9,611
Impairment loss on intangible assets		-		13,963
Share of profit of associates		(92,778)		(21,772)
Share of loss of associates		2,455		8,861
Income tax expenses		194,365		94,257
Gain on exemption from debt		(14,659)		(7,067)
Dividend income		(7,285)		(4,376)
Increase in provisions (reversal)		17,803		(833)
Others		397		(11,448)
	₩	344,129	₩	(39,477)

Working capital adjustments for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021		2020
Increase in trade accounts receivable	₩	(195,889)	₩	(314,616)
Decrease (increase) in other accounts receivable		(11,288)		95,126
Increase in advance payments		(55,029)		(31,190)
Increase in inventories		(339,138)		(128,780)
Increase in other operating assets		(121,583)		(11,193)
Increase (decrease) in trade accounts payable		(111,365)		426,667
Increase (decrease) in other accounts payable		103,759		(45,489)
Increase (decrease) in advance received		45,938		(6,857)
Pension benefits paid		(9,177)		(8,755)
Decrease in plan assets		(17,445)		(14,321)
Decrease in provisions		(8,903)		(7,335)
Increase in other operating liabilities		100,766		23,048
	₩	(619,354)	₩	(23,695)

27. Statements of cash flows (cont'd)

Significant non-cash transactions for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021	2020		
Other accounts receivable related to disposal of investment assets	₩ -	₩ 9,325		
Other accounts receivable related to disposal of property, plant and equipment	(185)	9		
Other accounts payable related to acquisition of property, plant and equipment	(234)	510		
Other accounts receivable related to acquisition of intangible assets	(11,825)	10,245		
Transfer construction-in-process (property, plant and equipment) to account	11,555	40,962		
Transfer construction-in-process (intangible assets) to account	822	3,219		
Transfer inventories to property, plant and equipmen Acquisition of right-of-use assets	t 8,512 129,921	68 146,254		

The adjustment of liabilities arising from financing activities for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021												
		Non-cash changes											
		. .	oreign rrency										
	Jan. 1	0	,	thers (*1)	Dec. 31								
Short-term borrowings	₩ 106,804	₩ 297,825 ₩	11,342 ₩	-	₩ 415,971								
Long-term borrowings	582,236	(49,785)	12,554	(12,744)	532,261								
Bonds payable	509,267	(100,126)	-	302	409,443								
Lease liabilities	186,207	(98,149)	5,903	117,915	211,876								
	₩ 1,384,514	₩ 49,765 ₩	29,799 ₩	105,473	₩ 1,569,551								

(*1) Including the decrease of liabilities owing to the exemption of debt .

	2020											
					Non-cash							
			Cash flows in			Foreign						
			f	financing		currency						
		Jan. 1		activities		translation		Others		Dec. 31		
Short-term borrowings	₩	136,375	₩	(12,537)	₩	(10,005)	₩	(7,029)	₩	106,804		
Long-term borrowings		788,885		(187,643)		(22,470)		3,464		582,236		
Bonds payable		389,528		119,359		-		380		509,267		
Lease liabilities		147,204		(93,969)		(70)		133,042		186,207		
	₩	1,461,992	₩	(174,790)	₩	(32,545)	₩	129,857	₩	1,384,514		

28. Service concession arrangements

As of December 31, 2021, 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. For the year ended December 31, 2021, there was no revenue or cost recognized as construction services.

29. Leases

As of December 31, 2021 and 2020, details of right-of-use assets of the Group are as follows (Korean won in millions):

						2021				
	Land			Buildings		Vehicles		Others	Total	
Acquisition cost Accumulated	₩	1,314	₩	314,818	₩	23,181	₩	17	₩	339,330
depreciation	_	(84)		(118,599)		(13,632)		(8)	_	(132,323)
Net book value	₩	1,230	₩	196,219	₩	9,549	₩	9	₩	207,007
						2020				
		Land		Buildings		Vehicles		Others		Total
Acquisition cost Accumulated	₩	1,103	₩	248,256	₩	21,970	₩	15	₩	271,344
depreciation		(48)		(72,614)		(13,019)		(4)		(85,685)
Net book value	₩	1,055	₩	175,642	₩	8,951	₩	11	₩	185,659

Changes in right-of-use assets for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021										
	Land			Buildings		Vehicles		Others		Total	
Jan.1	₩	1,055	₩	175,642	₩	8,951	₩	11	₩	185,659	
Additions		92		115,539		14,290		-		129,921	
Depreciation		(29)		(83,156)		(16,846)		(3)		(100,034)	
Disposals		-		(11,923)		(315)		-		(12,238)	
Others		112		117		3,469		1		3,699	
Dec. 31	₩	1,230	₩	196,219	₩	9,549	₩	9	₩	207,007	

	2020									
		Land	E	Buildings		Vehicles		Others		Total
Jan.1	₩	5,558	₩	133,579	₩	9,602	₩	15	₩	148,754
Additions (*1)		29		129,723		16,502		-		146,254
Depreciation		(165)		(73,996)		(16,099)		(3)		(90,263)
Disposals Held for sale		-		(13,794)		(832)		-		(14,626)
reclassified (*2)		(4,915)		-		-		-		(4,915)
Others		548		130		(222)		(1)		455
Dec. 31	₩	1,055	₩	175,642	₩	8,951	₩	11	₩	185,659

(*1) For the year ended December 31, 2020, the Group signed sales and leaseback contracts, and the related right-of-use assets is ₩2,829 million as of December 31, 2021 (2020 : ₩3,698 million). Loss on disposal of property, plant and equipment of ₩3,698 million was recognized for the year ended December 31, 2020.

(*2) See Note 30.

29. Leases (cont'd)

The details of changes in lease liabilities for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021	2020)
Jan.1	₩	186,207	₩	147,204
Additions (*1)		130,157		146,103
Interest expense		6,316		6,834
Payment		(104,465)		(93,969)
Termination		(12,333)		(14,961)
Held for sale reclassified (*2)		-		(5,015)
Others		5,994		11
Dec. 31		211,876		186,207

(*1) During the year ended December 31, 2021, the Group signed sale and leaseback contracts, and the related lease liabilities amounted to ₩3,737 million. (2020 : ₩5,534 million)

(*2) See Note 30.

Details of expenses came from short-term leases and leases of low-value assets for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021	2	020
Short-term leases	₩	55,740	₩	47,480
Leases of low-value assets		2,567		2,176
		58.307		49,656

For the year ended December 31, 2021, the Group signed sub-lease contracts, and the amount of finance lease receivables thereof is $\frac{1}{2}$,806 million.

30. Non-current assets held for sale

As of December 31, 2021 and 2020, 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):

		2021					
		Assets	Liabilities	Equity			
Equity instruments held for long-term Associates	OQ Aromatics LLC (formerly, Aromatics Oman LLC) (*1) ZAO CONTRANS (*2)	4,779 1,116	5,655 -		-		
		2020					
		Assets	Liabilities	Equity	_		
Subsidiaries	PT. Megaprima Persada(MPP) (*3)	14,434	14,434		_		
Associates	ZAO CONTRANS (*2)	1,116	-		-		

- (*1) For the year ended December 31, 2021, the Group decided to dispose 1% of its stake in QQ Aromatics LLC, which had been classified as equity instruments held for long-term, and reclassified the related assets and liabilities as non-current assets held for sale and non-current liabilities held for sale, respectively.
- (*2) For 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.
- (*3) For the year ended December 31, 2021, the Group has changed the classification to the existing assets, liabilities and equity due to the cancellation of the sale plan. As of December 31, 2021, the amount was remeasured from the amount before classification as held for sale to the amount reflecting changes that occurred during the period of classification as held for sale.

Meanwhile, for the year ended December 31, 2020, the Group sold 100% of its stake in Guangzhou Steel Flower Electrical & Machinary Co., Ltd., which had been classified as held for sale, and recognized gain on disposal of W2,216 million. Also, the Group sold 100% of its stake in Highland Cement International Co., Ltd., which was classified as held for sale, and recognized loss on disposal of W612 million.

31. Approval of consolidated financial statements

The consolidated financial statements of the Group for the year ended December 31, 2021 were approved by the Parent Company's Board of Directors on January 28, 2022.