

LG Chem, Ltd. and Subsidiaries

Consolidated Interim Financial Statements

June 30, 2021 and 2020

LG Chem, Ltd. and Subsidiaries

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June 30, 2021 and 2020

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Report on Review of Interim Financial Statements

(English Translation of a Report Originally Issued in Korean)

To the Shareholders and Board of Directors of
LG Chem, Ltd.

Reviewed Financial Statements

We have reviewed the accompanying consolidated interim financial statements of LG Chem, Ltd. and its subsidiaries (collectively referred to as the "Group"). These financial statements consist of the consolidated interim statement of financial position of the Group as at June 30, 2021, and the related consolidated interim statements of profit or loss and comprehensive income for the three-month and six-month periods ended June 30, 2021 and 2020, and consolidated interim statements of changes in equity and cash flows for the six-month periods ended June 30, 2021 and 2020, and a summary of significant accounting policies and other explanatory notes, expressed in Korean won.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated interim financial statements in accordance with International Financial Reporting Standards as adopted by the Republic of Korea (Korean IFRS) 1034 *Interim Financial Reporting*, and for such internal control as management determines is necessary to enable the preparation of consolidated interim financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to issue a report on these consolidated interim financial statements based on our review.

We conducted our review in accordance with quarterly or semi-annual review standards established by the Securities and Futures Commission of the Republic of Korea. A review of interim financial information consists of making inquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with Korean Standards on Auditing and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

Conclusion

Based on our review, nothing has come to our attention that causes us to believe the accompanying consolidated interim financial statements are not presented fairly, in all material respects, in accordance with Korean IFRS 1034 *Interim Financial Reporting*.

Emphasis of Matter

Without modifying our conclusion, we draw attention to the following matters of the consolidated interim financial statements.

Uncertainty relating to COVID-19

Note 4 to the consolidated interim financial statements describes management's plans and action taken to resolve uncertainty relating to the impact of Coronavirus disease 2019 (COVID-19) on the Group's productivity and ability to satisfy customer's orders, and to solve these events or circumstances.

Settlement with SK Innovation

As described in Note 37 to the consolidated interim financial statements, on May 15, 2021, the Group and SK Innovation Co., Ltd. ("SK Innovation") have entered into an agreement to settle all legal disputes relating to trade secret infringement. In accordance with the agreement, SK Innovation agreed to pay the Group lump-sum payments of KRW 1 trillion and running royalties of KRW 1 trillion based on certain percentage of annual revenues of SK Innovation for certain periods in the future. During the six-month period ended June 30, 2021, the Group recognized operating income of KRW 992,233 million for the lump-sum payments (discounted present value of the lump-sum payments of KRW 1 trillion).

Other Matters

We have audited the consolidated statement of financial position of the Group as at December 31, 2020, and the related consolidated statements of profit or loss, comprehensive income, changes in equity and cash flows for the year then ended, in accordance with Korean Standards on Auditing. We expressed an unqualified opinion on those financial statements, not presented herein, in our audit report dated March 11, 2021. The consolidated statement of financial position as at December 31, 2020, presented herein for comparative purposes, is consistent, in all material respects, with the above audited statement of financial position as at December 31, 2020.

Review standards and their application in practice vary among countries. The procedures and practices used in the Republic of Korea to review such financial statements may differ from those generally accepted and applied in other countries.

August 17, 2021
Seoul, Korea

This report is effective as of August 17, 2021, the review report date. Certain subsequent events or circumstances, which may occur between the review report date and the time of reading this report, could have a material impact on the accompanying consolidated interim financial statements and notes thereto. Accordingly, the readers of the review report should understand that there is a possibility that the above review report may have to be revised to reflect the impact of such subsequent events or circumstances, if any.

LG Chem, Ltd. and Subsidiaries
Consolidated Interim Statements of Financial Position
June 30, 2021 and December 31, 2020

<i>(in millions of Korean won)</i>	Notes	June 30, 2021 (Unaudited)	December 31, 2020
Assets			
Current assets			
Cash and cash equivalents	3, 5, 6	4,188,541	3,274,250
Trade receivables	3, 5, 7, 31,	6,246,197	5,298,365
Other receivables	3, 5, 7, 31,37	945,974	924,303
Other current financial assets	3, 5, 8	14,682	23,821
Prepaid income taxes		7,274	17,049
Other current assets	13	831,567	643,152
Inventories	9	6,876,281	5,349,688
Assets held for sale	34	5,717	789,072
Total current assets		19,116,233	16,319,700
Non-current assets			
Trade receivables	3, 5, 7	28,503	29,376
Other receivables	3, 5, 7, 37	1,167,613	255,030
Other non-current financial assets	3, 5, 8	208,608	81,532
Investments in associates and joint ventures	1, 10, 33	309,482	309,329
Deferred tax assets	28	1,577,121	1,409,757
Property, plant and equipment	11	21,851,947	20,567,475
Intangible assets	12	2,365,168	2,279,917
Investment properties	36	54,247	49,433
Other non-current assets	13	56,087	87,345
Total non-current assets		27,618,776	25,069,194
Total assets		46,735,009	41,388,894
Liabilities			
Current liabilities			
Trade payables	3, 5, 31	3,726,771	3,458,526
Other payables	3, 5, 31	4,871,109	5,266,974
Borrowings	3, 5, 14	3,040,286	1,548,815
Other current financial liabilities	3, 5, 8	6,459	16,797
Provisions	15	1,129,614	1,041,451
Income tax payables	28	990,229	373,244
Other current liabilities	17, 35	838,194	788,029
Liabilities held for sale	34	-	130,383
Total current liabilities		14,602,662	12,624,219
Non-current liabilities			
Other payables	3, 5, 31	11,839	11,927
Borrowings	3, 5, 14	8,987,577	8,637,302
Other non-current financial liabilities	3, 5, 8	1,929	41,768
Provisions	15	624,863	328,556
Net defined benefit liabilities	16	222,976	117,959
Deferred tax liabilities	28	668,794	689,817
Other non-current liabilities	17, 35	123,310	146,906
Total non-current liabilities		10,641,288	9,974,235
Total liabilities		25,243,950	22,598,454

LG Chem, Ltd. and Subsidiaries
Consolidated Interim Statements of Financial Position
June 30, 2021 and December 31, 2020

<i>(in millions of Korean won)</i>	Notes	June 30, 2021 (Unaudited)	December 31, 2020
Equity			
Share capital	1, 19	391,406	391,406
Capital surplus		2,720,698	2,692,485
Other components of equity	21	(40,696)	(54,998)
Accumulated other comprehensive income		130,835	(165,076)
Retained earnings	20	17,194,744	15,175,304
Equity attributable to owners of the Parent Company		<u>20,396,987</u>	<u>18,039,121</u>
Non-controlling interests		1,094,072	751,319
Total equity		<u>21,491,059</u>	<u>18,790,440</u>
Total liabilities and equity		<u>46,735,009</u>	<u>41,388,894</u>

The above consolidated interim statements of financial position should be read in conjunction with the accompanying notes.

LG Chem, Ltd. and Subsidiaries
Consolidated Interim Statements of Profit or Loss
Three-Month and Six-Month Periods Ended June 30, 2021 and 2020

(in millions of Korean won, except per share amounts)

	Notes	Period Ended June 30			
		2021		2020	
		(Unaudited)		(Unaudited)	
		Three months	Six months	Three months	Six months
Revenue	31, 33, 35, 37	11,456,142	21,106,174	6,935,191	13,664,360
Cost of sales	23, 31	(7,611,233)	(14,803,938)	(5,421,815)	(11,041,551)
Gross profit		3,844,909	6,302,236	1,513,376	2,622,809
Selling and administrative expenses	22, 23, 31	(1,705,101)	(2,754,284)	(941,734)	(1,845,310)
Operating profit	33	2,139,808	3,547,952	571,642	777,499
Finance income	5, 25	171,776	330,232	89,038	205,920
Finance costs	5, 25	(98,734)	(293,871)	(135,987)	(546,588)
Share of net profit of associates and joint ventures accounted for using the equity method	10	3,517	5,451	988	2,210
Other non-operating income	5, 26	68,342	384,269	88,681	713,813
Other non-operating expenses	5, 27	(73,457)	(336,154)	(144,317)	(525,240)
Profit before income tax	32	2,211,252	3,637,879	470,045	627,614
Income tax expense	28	(646,630)	(1,030,663)	(79,219)	(186,992)
Profit from continuing operations		1,564,622	2,607,216	390,826	440,622
Profit from discontinued operations	34	1,647	330,025	28,244	14,795
Profit for the period		1,566,269	2,937,241	419,070	455,417
Profit is attributable to:					
Owners of the Parent Company					
Profit from continuing operations		1,488,625	2,466,949	354,024	388,549
Profit from discontinued operations		1,647	330,025	28,244	14,795
		1,490,272	2,796,974	382,268	403,344
Non-controlling interests					
Profit from continuing operations		75,997	140,267	36,802	52,073
		75,997	140,267	36,802	52,073
Earnings per share for profit					
attributable to the equity holders					
of the Parent Company (in won)	29				
Basic earnings per ordinary share		19,132	35,907	4,988	5,262
Basic earnings per preferred share		19,144	35,932	5,000	5,287
Diluted earnings per ordinary share		19,132	35,907	4,988	5,262
Diluted earnings per preferred share		19,144	35,932	5,000	5,287
Earnings per share for profit from continuing operations					
attributable to the equity holders					
of the Parent Company (in won)	29				
Basic earnings per ordinary share		19,111	31,670	4,620	5,069
Basic earnings per preferred share		19,123	31,695	4,632	5,094
Diluted earnings per ordinary share		19,111	31,670	4,620	5,069
Diluted earnings per preferred share		19,123	31,695	4,632	5,094

The above consolidated interim statements of profit or loss should be read in conjunction with the accompanying notes.

LG Chem, Ltd. and Subsidiaries
Consolidated Interim Statements of Comprehensive Income
Three-Month and Six-Month Periods Ended June 30, 2021 and 2020

(in millions of Korean won)

	Notes	Period Ended June 30			
		2021		2020	
		(Unaudited)		(Unaudited)	
		Three months	Six months	Three months	Six months
Profit for the period		1,566,269	2,937,241	419,070	455,417
Other comprehensive income					
<i>Items that will not be reclassified to profit or loss</i>					
Remeasurements of net defined benefit liability	16	(5,534)	4,267	(2,607)	(3,931)
Gain (loss) on valuation of financial assets at fair value through other comprehensive income		(562)	1,735	7,136	13,412
Shares of remeasurements of net defined benefit liabilities of associates		-	(234)	-	159
Income tax relating to these items		1,676	(1,656)	(1,246)	(2,609)
<i>Items that may be subsequently reclassified to profit or loss</i>					
Exchange differences on translation of foreign operations		133,291	314,302	(54,288)	98,824
Cash flow hedge		(7,040)	(11,297)	10,438	(18,506)
Shares of other comprehensive income of associates and joint ventures		1,430	5,004	15,822	32,464
Income tax relating to these items		(557)	17,573	(2,771)	2,232
Other comprehensive income for the period, net of tax		<u>122,704</u>	<u>329,694</u>	<u>(27,516)</u>	<u>122,045</u>
Total comprehensive income for the period		<u>1,688,973</u>	<u>3,266,935</u>	<u>391,554</u>	<u>577,462</u>
Total comprehensive income for the period is attributable to:					
Owners of the Parent Company		1,603,143	3,095,739	362,822	517,085
Non-controlling interest		85,830	171,196	28,732	60,377

The above consolidated interim statements of comprehensive income should be read in conjunction with the accompanying notes.

LG Chem, Ltd. and Subsidiaries
Consolidated Interim Statements of Changes in Equity
Six-Month Periods Ended June 30, 2021 and 2020

(in millions of Korean won)

Notes	Attributable to owners of the Parent Company						Non-controlling interests	Total equity
	Share capital	Capital surplus	Other components of equity	Accumulated other comprehensive income	Retained earnings	Total		
Balance at January 1, 2020	391,406	2,274,620	(374,243)	(85,496)	14,798,690	17,004,977	378,812	17,383,789
Comprehensive income								
Profit for the period	-	-	-	-	403,344	403,344	52,073	455,417
Remeasurements of net defined benefit liability	16	-	-	-	(2,851)	(2,851)	-	(2,851)
Exchange differences on translation of foreign operations	-	-	-	87,664	-	87,664	8,304	95,968
Gain on valuation of financial assets at fair value through other comprehensive income	-	-	-	9,723	-	9,723	-	9,723
Cash flow hedge	-	-	-	(13,417)	-	(13,417)	-	(13,417)
Others	-	-	-	32,463	159	32,622	-	32,622
Total comprehensive income for the period	-	-	-	116,433	400,652	517,085	60,377	577,462
Transactions with owners:								
Dividends	30	-	-	-	(153,608)	(153,608)	(24,040)	(177,648)
Increase in paid-in capital of a subsidiary	-	-	-	-	-	-	60,403	60,403
Others	-	(1)	-	-	(1,192)	(1,193)	(397)	(1,590)
Total transactions with owners	-	(1)	-	-	(154,800)	(154,801)	35,966	(118,835)
Balance at June 30, 2020 (Unaudited)	391,406	2,274,619	(374,243)	30,937	15,044,542	17,367,261	475,155	17,842,416
Balance at January 1, 2021	391,406	2,692,485	(54,998)	(165,076)	15,175,304	18,039,121	751,319	18,790,440
Comprehensive income								
Profit for the period	-	-	-	-	2,796,974	2,796,974	140,267	2,937,241
Remeasurements of net defined benefit liability	16	-	-	-	3,088	3,088	-	3,088
Exchange differences on translation of foreign operations	-	-	-	298,345	-	298,345	30,929	329,274
Gain on valuation of financial assets at fair value through other comprehensive income	-	-	-	1,258	-	1,258	-	1,258
Cash flow hedge	-	-	-	(8,696)	-	(8,696)	-	(8,696)
Others	-	-	-	5,004	(234)	4,770	-	4,770
Total comprehensive income for the period	-	-	-	295,911	2,799,828	3,095,739	171,196	3,266,935
Transactions with owners:								
Disposal of treasury shares	19	-	28,344	14,302	-	-	-	42,646
Dividends	30	-	-	-	(778,383)	(778,383)	(91,334)	(869,717)
Increase in paid-in capital of a subsidiary	-	(131)	-	-	-	(131)	264,479	264,348
Others	-	-	-	-	(2,005)	(2,005)	(1,588)	(3,593)
Total transactions with owners	-	28,213	14,302	-	(780,388)	(737,873)	171,557	(566,316)
Balance at June 30, 2021 (Unaudited)	391,406	2,720,698	(40,696)	130,835	17,194,744	20,396,987	1,094,072	21,491,059

The above consolidated interim statements of changes in equity should be read in conjunction with the accompanying notes.

LG Chem, Ltd. and Subsidiaries
Consolidated Interim Statements of Cash Flows
Six-Month Periods Ended June 31, 2021 and 2020

<i>(in millions of Korean won)</i>	Notes	2021 (Unaudited)	2020 (Unaudited)
Cash flows from operating activities			
Cash generated from operations	32	3,391,707	1,837,576
Interest received		21,731	19,949
Interest paid		(120,625)	(122,863)
Dividends received		10,016	10,545
Income taxes paid		(648,544)	(126,271)
Net cash inflow from operating activities		<u>2,654,285</u>	<u>1,618,936</u>
Cash flows from investing activities			
Decrease in other receivables		633,664	83,190
Decrease in other non-current receivables		37,804	25,427
Proceeds from disposal of investments in associates		-	379,702
Proceeds from disposal of financial instruments		3,964	83,462
Proceeds from disposal of property, plant and equipment		61,816	3,638
Proceeds from disposal of intangible assets		125	929
Government grants received		165,065	123,762
Proceeds from disposal of assets held for sale		53,672	-
Proceeds from transfer of business		907,590	184,302
Increase in other receivables		(94,908)	(54,520)
Increase in other non-current receivables		(442,176)	(89,929)
Acquisition of investments in associates		-	(13,611)
Acquisition of financial assets		(112,525)	(7,383)
Acquisition of property, plant and equipment		(2,545,482)	(3,148,050)
Acquisition of intangible assets		(66,764)	(42,476)
Net cash outflow from investing activities		<u>(1,398,155)</u>	<u>(2,471,557)</u>
Cash flows from financing activities			
Proceeds from borrowings		2,221,429	3,852,236
Capital contribution from non-controlling interests		264,479	60,403
Repayments of borrowings and others		(2,039,000)	(1,432,581)
Dividends paid		(869,258)	(153,608)
Net cash inflow (outflow) from financing activities		<u>(422,350)</u>	<u>2,326,450</u>
Net increase in cash and cash equivalents			
Cash and cash equivalents at the beginning of the period		3,274,250	1,888,631
Effects of exchange rate changes on cash and cash equivalents		80,511	1,054
Cash and cash equivalents included in disposal groups classified as held for sale		-	(171)
Cash and cash equivalents at the end of the period in the consolidated interim statement of financial position		<u>4,188,541</u>	<u>3,363,343</u>

The above consolidated interim statements of cash flows should be read in conjunction with the accompanying notes.

LG Chem, Ltd. and Subsidiaries

Notes to the Consolidated Interim Financial Statements

June 30, 2021 and 2020 (Unaudited), and December 31, 2020

1. General Information

General information about LG Chem, Ltd. (the Parent Company) and its 53 subsidiaries (collectively referred to as “the Group”) is as follows:

1.1 The Parent Company

The Parent Company was spun off on April 1, 2001, from LG Chem Investment Ltd. (now LG Corp., formerly LG Chemical Ltd.).

As at June 30, 2021, the Group has its manufacturing facilities in Yeosu, Daesan, Ochang, Cheongju, Ulsan, Naju, Iksan, Paju, Osong, Onsan, Gimcheon and overseas sites.

The Parent Company is authorized to issue 292 million shares of ordinary shares with par value of ₩5,000 per share. As at June 30, 2021, the Parent Company has issued and outstanding 70,592,343 ordinary shares (₩352,962 million) and 7,688,800 preferred shares (₩38,444 million). The largest shareholder of the Parent Company is LG Corp., which owns 33.34% of the Parent Company’s ordinary shares. Preferred shareholders have no voting rights but are entitled to receive dividends at a rate 1% more than those paid to ordinary shareholders.

1.2 Business Overview

The Group is engaged in Petrochemicals, Energy solutions, and Advanced materials business, and also engaged in Life Sciences business acquired through a merger with LG Life Sciences, Ltd. in January 2017. In addition, the Parent Company acquired 100% shares of FarmHannong Co., Ltd., in April 2016, which is engaged to manufacture crop protection products, seeds, fertilizers and others.

The Petrochemical business includes production of olefin petrochemicals, such as ethylene, propylene, butadiene from Naphtha, and aromatic petrochemicals such as benzene. It also includes production of synthetic resin and synthetic components from olefin, and aromatic petrochemicals. This business bears characteristics of a large-volume process industry. The Group’s major products are PE, PP, BPA, ABS, EP, PVC, plasticizers, acrylic, SAP, synthetic rubber, a special resin, and others.

LG Energy Solution, Ltd. which was established through the split-off of the Energy solution business from the Parent Company on December 1, 2020, and its subsidiaries mainly manufacture and supply batteries ranging from IT & New application batteries for mobile phones and laptop computers, to automotive batteries for electric vehicles and ESS (Energy Storage System) batteries. Demand of small-sized batteries for new applications such as electric tools and electric driving devices as well as traditional IT devices is increasing recently and the automotive battery business is also expected to expand rapidly due to an increasing demand of the batteries in associated with enhanced environment regulation in developed countries. Demand for ESS is expanding with an increasing importance of efficient usage of electricity and generation of renewable energy.

The Advanced materials business manufactures and supplies various kinds of IT materials such as polarizer, automotive material, OLED film, semiconductor materials, OLED materials, battery materials and others including RO membranes, which will be the next growth engine for future.

The Life Sciences business manufactures and supplies pharmaceutical products, such as human growth hormone ‘Eutropin’, diabetes drug ‘Zemiglo’, bovine somatotropin ‘Boostin’, hyaluronic acid filler ‘YVOIRE’ and others, as well as fine chemical products, such as herbicide ‘PYANCHOR’ for rice farming and others.

LG Chem, Ltd. and Subsidiaries

Notes to the Consolidated Interim Financial Statements

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FarmHannong Co., Ltd. and its subsidiaries which were acquired by the Group in 2016 manufacture and sell crop protection products, seeds, fertilizers and others. The crop protection business provides high value products such as environmentally-friendly pesticide. The fertilizer business leads developing a next generation fertilizers such as eco-friendly organic and functional fertilizers, and potting soil. The seed business puts priority on retaining various genetic resources and developing rare breeds with high profit in order to remain competitive in a future food industry.

1.3 Consolidated Subsidiaries, Associates and Joint Ventures

	June 30, 2021			
	Percentage of ownership (%)	Business location	Closing month	Business activities
Consolidated subsidiaries				
LG Energy Solution, Ltd. ¹	100	Korea	December	Battery manufacturing and sales
Ningbo LG Yongxing Chemical Co., Ltd. ²	75	China	December	ABS/SBL manufacturing and sales
Ningbo Zhenhai LG Yongxing Trade Co., Ltd. ²	75	China	December	ABS sales
LG Chem America, Inc	100	USA	December	Sales and trading
LG Chemical India Pvt. Ltd. ³	100	India	December	Synthetic resin manufacturing and sales
LG Polymers India Pvt. Ltd. ³	100	India	December	PS manufacturing and sales
LG Chemical (Guangzhou) Engineering Plastics Co., Ltd.	100	China	December	EP manufacturing and sales
LG Chem (Taiwan), Ltd.	100	Taiwan	December	Polarizer manufacturing and sales
Tianjin LG Bohai Chemical Co., Ltd.	75	China	December	PVC, VCM, EDC manufacturing and sales
Tianjin LG BOTIAN Chemical Co., Ltd.	58	China	December	SBS manufacturing and sales
LG Chem (China) Investment Co., Ltd. ⁴	100	China	December	China holding company
LG Chem (Tianjin) Engineering Plastics Co., Ltd.	100	China	December	EP manufacturing and sales
LG Chem Europe GmbH	100	Germany	December	Sales and trading
LG Chem Poland Sp. z o.o.	100	Poland	December	EP manufacturing and sales
LGC Petrochemical India Private Ltd.	100	India	December	Synthetic resin manufacturing and sales
HAENGBOKNURI CO., LTD.	100	Korea	December	Facility management and general cleaning
LG CHEM TK Kimya SANAYI VE TIC. Ltd. STI.	100	Turkey	December	Sales and trading
LG Chem Japan Co., Ltd.	100	Japan	December	Sales and trading
LG NanoH2O, LLC	100	USA	December	Water processing membrane sales
LG Chem (Chongqing) Engineering Plastics Co., Ltd.	100	China	December	EP manufacturing and sales
LG Chem(HUIZHOU) Petrochemical Co., Ltd.	70	China	December	ABS manufacturing and sales
LG Chem Life Sciences India Pvt. Ltd.	100	India	December	Pharmaceutical products sales
LG Jiansheng Life Sciences (Beijing) Co., Ltd. ⁵	60	China	December	Pharmaceutical products sales
LG Chem Life Sciences (Thailand) Ltd.	100	Thailand	December	Pharmaceutical products sales
LG Chem Hai Phong Vietnam Co., Ltd.	100	Vietnam	December	Polarizer manufacturing and sales
LG Chem Mexico S.A. de C.V.	100	Mexico	December	Sales and trading
LG Chem Hai Phong engineering Plastics LLC.	100	Vietnam	December	EP manufacturing and sales
LG Chem (Guangzhou) Information & Electronics Materials Co., Ltd.	100	China	December	Polarizer manufacturing and sales
LEYOU NEW ENERGY MATERIALS(WUXI) Co., LTD	51	China	December	Battery materials manufacturing and sales
LG Chem Fund I LLC ⁶	100	USA	December	Investments in venture companies
Ugimag Korea Co., Ltd.	100	Korea	December	Electronic parts manufacturing and sales
Uniseal, Inc.	100	USA	December	Adhesive manufacturing and sales
LG Chem Life Science Innovation Center, Inc.	100	USA	December	Pharmaceutical products research
LG Chem Asia Pte. Ltd. ⁷	100	Singapore	December	Asia BSC

LG Chem, Ltd. and Subsidiaries

Notes to the Consolidated Interim Financial Statements

June 30, 2021 and 2020 (Unaudited), and December 31, 2020

LG Chem China Tech Center ⁴	100	China	December	Research on petrochemicals
Shanjin Optoelectronics (Taiwan) Co., Ltd. ⁸	100	Taiwan	December	Others
LG PETRONAS CHEMICALS Malaysia Sdn.Bhd. ⁹	51	Malaysia	December	NBL manufacturing and sales Agricultural pesticide manufacturing and sales
FarmHannong Co., Ltd. ¹⁰	100	Korea	December	sales
Farmhannong America, Inc. ¹⁰	100	USA	December	Agricultural pesticide sales
FarmHannong(Thailand) Ltd. ¹⁰	100	Thailand	December	Research and development on seeds
FARMHANNONG(MALAYSIA) SDN. BHD. ¹⁰	100	Malaysia	December	Agricultural pesticide licensing
PT FARM HANNONG INDONESIA ¹⁰	100	Indonesia	December	Agricultural pesticide licensing
LG Energy Solution (Nanjing) Co., Ltd. ¹	100	China	December	Battery manufacturing and sales Automotive battery research and manufacturing
LG Energy Solution Michigan Inc. ¹	100	USA	December	Automotive battery manufacturing and sales
LG Energy Solution Battery (Nanjing) Co., Ltd. ¹	50	China	December	Automotive battery manufacturing and sales
LG Energy Solution Wroclaw sp. z o.o. ¹	100	Poland	December	Automotive battery manufacturing and sales
LG Energy Solution Australia Pty Ltd ¹	100	Australia	December	ESS sales
LG Energy Solution Technology (Nanjing) Co., Ltd. ¹	100	China	December	Battery manufacturing and sales
Ultium Cells LLC ¹	50	USA	December	Automotive battery manufacturing and sales
LG Energy Solution Europe GmbH ¹	100	Germany	December	Sales and trading
LG Energy Solution (Taiwan), Ltd. ¹	100	Taiwan	December	Sales and trading
Aremnuri. Co. Ltd ¹	100	Korea	December	Facility management and general cleaning
LG Energy Solution Fund I LLC ¹	100	USA	December	Investments in venture companies
Associates				
TECHWIN Co., Ltd.	20	Korea	December	Environment solution and construction of chemical plant
LG Chem BRASIL INTERMEDIACAO DE NEGOCIOS DO SETOR QUIMICO LTDA. ¹¹	100	Brazil	December	Sales and trading
LG Chem Malaysia SDN.BHD. ¹¹	100	Malaysia	December	Sales and trading
FJ Composite Material Co., Ltd.	30	Japan	May	Heat diffuser research and manufacturing
WUXI CL New Energy Technology Ltd. ¹	30	China	December	ESS manufacturing and sales
LG Chem Life Sciences Poland Ltd. ¹¹	100	Poland	December	Pharmaceutical products sales
Combustion Synthesis Co., Ltd.	36	Japan	December	Nitride-based ceramic powder production
HUAJIN NEW ENERGY MATERIALS(QUZHOU)CO., LTD.	49	China	December	Battery materials manufacturing and sales
VINFAST LITHIUM BATTERY PACK LLC. ¹	35	Vietnam	December	Battery manufacturing and sales
Jiangxi VL Battery., Ltd. ¹	34	China	December	Battery manufacturing and sales
Joint ventures				
LG VINA Chemical Co., Ltd.	50	Vietnam	December	DOP production and sales
HL Greenpower Co., Ltd. ¹	49	Korea	December	Automotive battery manufacturing and sales Plant utility and distribution, research assistance service
SEETEC Co., Ltd.	50	Korea	December	

¹ These are subsidiaries, associates, and joint venture of LG Energy Solution, Ltd. As at June 30, 2021, the Parent Company owns 100% of LG Energy Solution, Ltd.'s shares.

² As at June 30, 2021, Ningbo LG Yongxing Chemical Co., Ltd. owns 100% of Ningbo Zhenhai LG Yongxing Trading Co., Ltd.'s shares.

³ As at June 30, 2021, LG Chemical India Pvt. Ltd. owns 100% of LG Polymers India Pvt. Ltd.'s shares.

⁴ As at June 30, 2021, LG Chem (China) Investment Co., Ltd. owns 100% of LG Chem China Tech Center's shares. LG Chem China Tech Center was newly established during the six-month period ended June 30, 2021, and the Group newly acquired 100% shares of LG Chem China Tech Center for ₩18,109 million.

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⁵ During the six-month period ended June 30, 2021, the Parent Company additionally acquired shares of LG Jiansheng Life Sciences (Beijing) Co., Ltd. for ₩2,257 million. The entity name of LG Jiansheng Life Sciences (Beijing) Co., Ltd. has been changed from LG Chem Life Sciences (Beijing) Co., Ltd. and the percentage of ownership of the Parent Company has decreased to 60%.

⁶ During the six-month period ended June 30, 2021, the Parent Company additionally acquired shares of LG CHEM FUND I LLC for ₩2,095 million.

⁷ LG Chem Asia Pte. Ltd. was newly established during the six-month period ended June 30, 2021, and the Parent Company acquired 100% shares of LG Chem Asia Pte. Ltd. for ₩821 million.

⁸ Shanjin Optoelectronics (Taiwan) Co., Ltd. was newly established during the six-month period ended June 30, 2021, and the Parent Company acquired 100% shares of Shanjin Optoelectronics (Taiwan) Co., Ltd. for ₩55,297 million.

⁹ LG PETRONAS CHEMICALS Malaysia Sdn.Bhd. was newly established during the six-month period ended June 30, 2021, and the Parent Company acquired 51% shares of LG PETRONAS CHEMICALS Malaysia Sdn.Bhd. for ₩18,422 million.

¹⁰ As at June 30, 2021, FarmHannong Co., Ltd. owns 100% of Farmhannong America, Inc., FarmHannong(Thailand) Ltd., FARMHANNONG(MALAYSIA) SDN.BHD., and PT FARM HANNONG INDONESIA's shares.

¹¹ Classified as an investment in associate due to its small size.

1.4 Summarized Financial Information of Subsidiaries, Associates and Joint Ventures

Summarized financial information (before elimination of intercompany transactions and adjustments for differences in accounting policies) of subsidiaries, associates and joint ventures is as follows:

(in millions of Korean won)

	June 30, 2021			2021	
	Assets	Liabilities	Equity	Revenue	Profit (loss) for the period
Subsidiaries					
LG Energy Solution, Ltd. ^{1,2}	22,177,466	13,098,995	9,078,471	9,385,132	1,063,893
Ningbo LG Yongxing Chemical Co.,Ltd.	1,129,505	295,713	833,792	1,253,467	280,721
Ningbo Zhenhai LG Yongxing Trade Co.,Ltd.	6,508	1,100	5,408	13,356	251
LG Chem America, Inc.	392,905	345,389	47,516	437,948	16,272
LG Chemical India Pvt. Ltd.	32,719	24	32,695	-	5
LG Polymers India Pvt. Ltd.	38,724	32,034	6,690	2,205	(10,939)
LG Chemical (Guangzhou) Engineering Plastics Co.,Ltd.	117,053	46,027	71,026	136,944	6,419
LG Chem (Taiwan), Ltd.	102,951	33,502	69,449	53,436	1,312
LG Chem Display Materials (Beijing) Co.,Ltd. ²	-	-	-	-	276
Tianjin LG Bohai Chemical Co.,Ltd.	376,730	74,140	302,590	327,098	65,994
Tianjin LG BOTIAN Chemical Co.,Ltd.	45,075	19,165	25,910	65,235	2,264
LG Chem (China) Investment Co.,Ltd.	773,342	455,168	318,174	27,840	3,454
LG Chem (Tianjin) Engineering Plastics Co.,Ltd.	54,321	11,636	42,685	39,100	2,075
LG Chem Europe GmbH	305,459	253,509	51,950	281,594	10,629
LG Chem Poland Sp. z o.o.	90,280	31,433	58,847	81,227	11,838
LGC Petrochemical India Private Ltd.	4,121	681	3,440	2,050	234
HAENGBOKNURI CO., LTD.	3,910	1,316	2,594	4,871	177
LG CHEM TK Kimya SANAYI VE TIC. Ltd. STI.	11,530	10,532	998	19,111	206
LG Chem Japan Co.,Ltd.	6,951	1,843	5,108	3,018	255
LG NanoH2O, LLC ³	34,162	8,476	25,686	21,637	2,765
LG Chem (Chongqing) Engineering Plastics Co.,Ltd.	46,398	15,420	30,978	40,856	1,981
LG Chem(HUIZHOU) Petrochemical Co., Ltd.	481,916	174,328	307,588	508,720	104,498
LG Chem Life Sciences India Pvt. Ltd.	2,533	1,831	702	2,679	234

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LG Jiansheng Life Sciences (Beijing) Co., Ltd.	6,763	766	5,997	1,345	26
LG Chem Life Sciences (Thailand) Ltd.	22,755	8,895	13,860	17,165	1,186
LG Chem Hai Phong Vietnam Company Ltd.	13,700	5,109	8,591	16,405	771
LG Chem Mexico S.A. de C.V.	1,277	177	1,100	925	133
LG Chem Hai Phong Engineering Plastics Ltd.	27,996	14,585	13,411	16,584	1,220
LG Chem (Guangzhou) Information & Electronics Materials Co.,Ltd. ²	350,740	151,741	198,999	76,780	(8,621)
LEYOU NEW ENERGY MATERIALS(WUXI) Co.,LTD	705,144	318,894	386,250	343,087	37,875
LG Chem Fund I LLC	32,133	1,450	30,683	-	(1,330)
Ugimag Korea Co., Ltd. ³	34,964	15,386	19,578	10,301	(3,534)
Uniseal,Inc. ³	37,481	7,642	29,839	31,396	(188)
LG Chem Life Science Innovation Center, Inc.	3,321	1,605	1,716	2,568	213
LG Chem Asia Pte. Ltd.	1,762	966	796	421	(44)
LG Chem China Tech Center	18,548	194	18,354	105	54
Shanjin Optoelectronics (Taiwan) Co., Ltd.	55,886	2	55,884	-	(15)
LG PETRONAS CHEMICALS Malaysia Sdn.Bhd.	36,119	-	36,119	-	(10)
FarmHannong Co., Ltd. ^{1,3}	1,085,461	678,084	407,377	420,885	31,103
Associates					
TECHWIN Co., Ltd.	122,352	33,596	88,756	26,704	(1,088)
LG Chem BRASIL INTERMEDIACAO DE NEGOCIOS DO SETOR Q UIMICO LTDA.	694	101	593	764	96
LG Chem Malaysia SDN.BHD.	463	2	461	338	41
FJ Composite Material Co., Ltd.	10,821	4,396	6,425	941	233
WUXI CL New Energy Technology Ltd.	1,855	3,044	(1,189)	-	(86)
LG Chem Life Sciences Poland Ltd.	190	72	118	85	4
Combustion Synthesis Co., Ltd.	461	45	416	75	(218)
HUAJIN NEW ENERGY MATERIALS(QUZHOU)CO., LTD.	287,816	100,196	187,620	21,700	(3,184)
VINFAST LITHIUM BATTERY PACK LLC.	18,964	7,150	11,814	1,127	(409)
Jiangxi VL Battery.,Ltd	73,431	10,076	63,355	-	(2,744)
Joint ventures					
LG VINA Chemical Co., Ltd.	61,114	42,504	18,610	83,955	9,755
HL Greenpower Co., Ltd.	344,859	294,788	50,071	537,684	1,374
SEETEC Co., Ltd.	333,234	57,464	275,770	263,459	8,596

¹ Represent financial information of intermediate parent company consolidating its subsidiaries.

² LCD polarizer business of these entities was classified as discontinued operations and profit or loss from the business was included in profit from discontinued operations (Note 34).

³ Fair value adjustments due to business combination recorded in the consolidated financial statements are not included in the above information.

(in millions of Korean won)

	December 31, 2020			2020	
	Assets	Liabilities	Equity	Revenue	Profit (loss) for the period
Subsidiaries					
LG Energy Solution, Ltd.	12,342,717	5,090,619	7,252,098	-	-
Ningbo LG Yongxing Chemical Co.,Ltd.	1,092,905	219,173	873,732	749,640	111,830
Ningbo Zhenhai LG Yongxing Trade Co.,Ltd.	6,224	1,303	4,921	9,803	190
LG Chem America, Inc.	237,946	208,031	29,915	352,773	377
LG Chemical India Pvt. Ltd.	32,680	19	32,661	-	14
LG Polymers India Pvt. Ltd.	56,029	38,833	17,196	59,918	(21,259)
LG Chemical (Guangzhou) Engineering Plastics Co.,Ltd.	107,270	33,741	73,529	80,997	5,123
LG Chem (Taiwan), Ltd.	113,717	46,372	67,345	67,556	4,828

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LG Chem Display Materials (Beijing) Co.,Ltd. ¹	40,417	13,171	27,246	-	-
Tianjin LG Bohai Chemical Co.,Ltd.	282,683	53,113	229,570	237,809	37,629
Tianjin LG BOTIAN Chemical Co.,Ltd.	38,391	14,760	23,631	57,509	4,789
LG Chem (China) Investment Co.,Ltd.	703,145	392,501	310,644	29,016	2,888
LG Chem (Tianjin) Engineering Plastics Co.,Ltd.	52,446	10,440	42,006	22,560	968
LG Chem Europe GmbH	229,078	166,779	62,299	345,013	165
LG Chem Poland Sp. z o.o.	74,063	27,931	46,132	51,034	3,434
LGC Petrochemical India Private Ltd.	3,722	590	3,132	1,909	174
HAENGBOKNURI CO., LTD.	4,869	2,453	2,416	5,668	498
LG CHEM TK Kimya SANAYI VE TIC. Ltd. STI.	7,033	6,154	879	24,413	362
LG Chem Japan Co.,Ltd.	5,863	852	5,011	2,955	260
LG NanoH2O, LLC ²	33,155	11,117	22,038	12,631	2,322
LG Chem (Chongqing) Engineering Plastics Co.,Ltd.	38,629	10,973	27,656	17,577	879
LG Chem(HUIZHOU) Petrochemical Co., Ltd.	392,176	199,465	192,711	284,745	23,388
LG Chem Life Sciences India Pvt. Ltd.	1,295	837	458	3,384	708
LG Jiansheng Life Sciences (Beijing) Co., Ltd.	2,099	716	1,383	593	25
LG Chem Life Sciences (Thailand) Ltd.	22,854	9,722	13,132	14,403	(200)
LG Chem Hai Phong Vietnam Company Ltd.	14,277	6,770	7,507	5,939	(356)
LG Chem Mexico S.A. de C.V.	1,081	152	929	666	107
LG Chem Hai Phong Engineering Plastics Ltd.	23,110	11,430	11,680	5,073	(1,555)
LG Chem (Guangzhou) Information & Electronics Materials Co.,Ltd. ¹	630,513	399,728	230,785	11,584	(24,902)
LEYOU NEW ENERGY MATERIALS(WUXI) Co.,LTD	429,359	97,122	332,237	-	(1,039)
LG Chem Fund I LLC	28,842	31	28,811	-	(1,941)
Ugimag Korea Co., Ltd. ²	39,015	15,903	23,112	7,896	(3,653)
Uniseal,Inc. ^{2,3}	34,452	6,050	28,402	24,830	(474)
LG Chem Life Science Innovation Center, Inc.	3,314	1,868	1,446	2,429	129
FarmHannong Co., Ltd. ^{2,3}	1,023,232	646,884	376,348	399,052	28,943
LG Energy Solution (Nanjing) Co., Ltd. ¹	3,793,936	1,536,320	2,257,616	1,441,751	161,392
LG Energy Solution Michigan Inc.	915,288	607,065	308,223	273,129	(35,082)
LG Energy Solution Battery (Nanjing) Co., Ltd.	1,059,066	781,217	277,849	625,799	23,802
LG Energy Solution Wroclaw sp. z o.o.	6,526,231	5,350,936	1,175,295	1,722,550	(217,033)
LG Energy Solution Australia Pty Ltd	4,793	3,049	1,744	3,645	177
LG Energy Solution Technology (Nanjing) Co., Ltd.	1,767,706	964,689	803,017	319,349	17,770
Ultium Cells LLC	336,851	32,309	304,542	-	9
LG Energy Solution Europe GmbH	49,626	14,814	34,812	-	-
Associates					
TECHWIN Co., Ltd.	134,405	38,746	95,659	-	-
LG Chem BRASIL INTERMEDIACAO DE NEGOCIOS DO SETOR Q UIMICO LTDA.	528	80	448	890	299
LG Chem Malaysia SDN.BHD.	418	2	416	331	43
FJ Composite Material Co., Ltd.	11,026	4,635	6,391	903	387
WUXI CL New Energy Technology Ltd.	1,910	2,972	(1,062)	118	264
LG Chem Life Sciences Poland Ltd.	191	78	113	121	3
Combustion Synthesis Co., Ltd.	717	66	651	54	(195)
HUAJIN NEW ENERGY MATERIALS(QUZHOU)CO., LTD.	226,471	43,454	183,017	-	593
VINFAST LITHIUM BATTERY PACK LLC.	18,148	6,322	11,826	10,697	(693)
Jiangxi VL Battery.,Ltd	67,186	4,066	63,120	-	-
Joint ventures					
LG VINA Chemical Co., Ltd.	35,832	27,515	8,317	37,185	(266)
HL Greenpower Co., Ltd.	406,928	360,547	46,381	517,343	(1,556)
SEETEC Co., Ltd.	342,227	55,056	287,171	244,088	7,946

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¹ LCD polarizer business of these entities was classified as discontinued operations and profit or loss from the business was included in profit from discontinued operations (Note 34).

² Fair value adjustments due to business combination recorded in the consolidated financial statements are not included in the above information.

³ Represent financial information of intermediate parent company consolidating its subsidiaries.

1.5 Changes in Scope for Consolidation

Subsidiaries newly included in the consolidation for the six-month period ended June 30, 2021, are as follows:

Subsidiary	Reason
LG Chem Asia Pte. Ltd.	Newly established
LG Chem China Tech Center	Newly established
Shanjin Optoelectronics (Taiwan) Co., Ltd.	Newly established
LG Energy Solution (Taiwan), Ltd.	Newly established
Aremnuri. Co. Ltd	Newly established
LG PETRONAS CHEMICALS Malaysia Sdn.Bhd.	Newly established
LG Energy Solution Fund I LLC	Newly established

Subsidiaries excluded from the consolidation for the six-month period ended June 30, 2021, are as follows:

Subsidiary	Reason
LG Chem Display Materials (Beijing) Co.,Ltd.	Disposed
Uniseal Europe Ltd.	Liquidated

2. Summary of Significant Accounting Policies

The principal accounting policies applied in the preparation of these consolidated interim financial statements are set out below. These policies have been consistently applied to all the periods presented, unless otherwise stated.

2.1 Basis of Preparation

The Group maintains its accounting records in Korean won and prepares statutory financial statements in the Korean language (Hangul) in accordance with International Financial Reporting Standards as adopted by the Republic of Korea (Korean IFRS). The accompanying consolidated interim financial statements have been condensed, restructured and translated into English from the Korean language financial statements.

The Group's consolidated interim financial statements for the six-month period ended June 30, 2021, have been prepared in accordance with Korean IFRS 1034 *Interim Financial Reporting*. These consolidated interim financial statements have been prepared in accordance with Korean IFRS which is effective or early adopted as at June 30, 2021.

(a) New and amended standards adopted by the Group

The Group has applied the following standards for the first time for their annual reporting period commencing January 1, 2021.

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- Amendments to Korean IFRS 1116 Lease – Practical expedient for COVID-19 - Related Rent Concessions

As a practical expedient, a lessee may elect not to assess whether a rent concession occurring as a direct consequence of the COVID-19 pandemic is a lease modification. A lessee that makes this election shall account for any change in lease payments resulting from the rent concession the same way it would account for the change applying this Standard if the change were not a lease modification. The amendment does not have a significant impact on the consolidated interim financial statements.

- Amendments to Korean IFRS 1109 Financial Instruments, Korean IFRS 1039 Financial Instruments: Recognition and Measurement, Korean IFRS 1107 Financial Instruments: Disclosure, Korean IFRS 1104 Insurance Contracts and Korean IFRS 1116 Lease – Interest Rate Benchmark Reform (Phase 2 amendments)

In relation to interest rate benchmark reform, the amendments provide exceptions including adjust effective interest rate instead of book amounts when interest rate benchmark of financial instruments at amortized costs is replaced, and apply hedge accounting without discontinuance although the interest rate benchmark is replaced in hedging relationship. The amendment does not have a significant impact on the financial statements.

(b) New and amended standards not yet adopted by the Group

The following new and amended accounting standards and interpretations that have been published that are not mandatory for June 30, 2021 reporting periods and have not been early adopted by the Group.

- Amendment to Korean IFRS 1116 - Covid-19 - Related Rent Concessions beyond June 30, 2021

The application of the practical expedient, where a lessee may elect not to assess whether a rent concession occurring as a direct consequence of the COVID-19 pandemic is a lease modification, is extended to lease payments originally due on or before 30 June 2022. A lessee shall apply the practical expedient consistently to eligible contracts with similar characteristics and in similar circumstances. The amendment should be applied for annual periods beginning on or after April 1, 2021, and earlier application is permitted. The Group does not expect that these amendments have a significant impact on the financial statements.

- Amendments to Korean IFRS 1103 Business Combination – Reference to the Conceptual Framework

The amendments update a reference of definition of assets and liabilities qualify for recognition in revised Conceptual Framework for Financial Reporting. However, the amendments add an exception for the recognition of liabilities and contingent liabilities within the scope of Korea IFRS 1037 *Provisions, Contingent Liabilities and Contingent Assets*, and Korean IFRS 2121 *Levies*. The amendments also confirm that contingent assets should not be recognized at the acquisition date. The amendments should be applied for annual periods beginning on or after January 1, 2022, and earlier application is permitted. The Group does not expect that these amendments have a significant impact on the financial statements.

- Amendments to Korean IFRS 1016 Property, Plant and Equipment - Proceeds before intended use

The amendments prohibit an entity from deducting from the cost of an item of property, plant and equipment any proceeds from selling items produced while the entity is preparing the asset for its intended use. Instead, the entity will recognize the proceeds from selling such items, and the costs of producing those items, in profit or loss. The amendments should be applied for annual periods

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beginning on or after January 1, 2022, and earlier application is permitted. The Group is in review for the impact of these amendments on the financial statements.

- Amendments to Korean IFRS 1037 Provisions, Contingent Liabilities and Contingent Assets - Onerous Contracts: Cost of Fulfilling a Contract

The amendments clarify that the direct costs of fulfilling a contract include both the incremental costs of fulfilling the contract and an allocation of other costs directly related to fulfilling contracts when assessing whether the contract is onerous. The amendments should be applied for annual periods beginning on or after January 1, 2022, and earlier application is permitted. The Group does not expect that these amendments have a significant impact on the financial statements.

- Annual improvements to Korean IFRS 2018-2020

Annual improvements of Korean IFRS 2018-2020 Cycle should be applied for annual periods beginning on or after January 1, 2022, and earlier application is permitted. The Group does not expect that these amendments have a significant impact on the financial statements.

- Korean IFRS 1101 *First time Adoption of Korean International Financial Reporting Standards* – Subsidiaries that are first-time adopters
- Korean IFRS 1109 *Financial Instruments* – Fees related to the 10% test for derecognition of financial liabilities
- Korean IFRS 1116 *Leases* – Lease incentives
- Korean IFRS 1041 *Agriculture* – Measuring fair value

- Amendments to Korean IFRS 1001 Presentation of Financial Statements - Classification of Liabilities as Current or Non-current

The amendments clarify that liabilities are classified as either current or non-current, depending on the substantive rights that exist at the end of the reporting period. Classification is unaffected by the likelihood that an entity will exercise right to defer settlement of the liability or the expectations of management. Also, the settlement of liability includes the transfer of the entity's own equity instruments, however, it would be excluded if an option to settle them by the entity's own equity instruments if compound financial instruments is met the definition of equity instruments and recognized separately from the liability. The amendments should be applied for annual periods beginning on or after January 1, 2023, and earlier application is permitted. The Group is in review for the impact of these amendments on the financial statements.

2.2 Significant Accounting Policies

Significant accounting policies and method of computation used in the preparation of the condensed consolidated interim financial statements are consistent with those of the consolidated financial statements for the year ended December 31, 2020, except for the changes due to the application of amendment and enactments of standards described in Note 2.1.(a) and the ones described below.

2.2.1 Income Tax Expense

Income tax expense for the interim period is recognized based on management's best estimate of the weighted average annual income tax rate expected for the full financial year. The estimated average annual tax rate is applied to the pre-tax income.

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3. Financial Risk Management

3.1 Financial Risk Factors

The Group's activities expose it to a variety of financial risks: market risk, credit risk and liquidity risk. The Group's overall risk management program focuses on the unpredictability of financial markets and seeks to minimize potential adverse effects on the financial performance of the Group. The Group uses derivative financial instruments to hedge certain risk exposures.

Risk management is carried out by the Group's finance team under policies approved by the Corporate Management Committee. The finance team identifies, evaluates and hedges financial risks in close co-operation with the Group's operating units. The Corporate Management Committee reviews and approves written principles for overall risk management, as well as written policies covering specific areas, such as foreign exchange risk, interest rate risk, and credit risk, use of derivative financial instruments and non-derivative financial instruments, investment of excess liquidity.

(1) Market risk

1) Foreign exchange risk

The Group operates internationally and is exposed to foreign exchange risk arising from foreign currency exposures, primarily with respect to the US dollar. Foreign exchange risk arises from future commercial transactions, recognized assets and liabilities.

Management has set up a policy to require group companies to manage their foreign exchange risk against their functional currency. The Group manages maximum loss for currency risk exposures within acceptable range by using currency risk management model and hires employees who are exclusively responsible for currency risk management.

The Group has certain investments in foreign operations, whose net assets are exposed to foreign currency translation risk. Currency exposure arising from the net assets of the Group's foreign operations is managed primarily through borrowings denominated in the relevant foreign currencies.

As at June 30, 2021 and December 31, 2020, the Group's monetary assets and liabilities denominated in currencies other than its functional currency, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2021		December 31, 2020	
	Assets	Liabilities	Assets	Liabilities
USD	5,973,383	5,137,463	4,367,761	3,805,638
EUR	393,421	4,407,926	244,382	4,479,131
JPY	21,780	102,653	20,035	303,704
CNY and others	207,469	4,038	343,749	8,199

As at June 30, 2021 and December 31, 2020, if the Group's functional currency had weakened / strengthened by 10% against the US dollar with all other variables held constant, profit before income tax would have been affected as follows:

<i>(in millions of Korean won)</i>	June 30, 2021		December 31, 2020	
	10% Increase	10% Decrease	10% Increase	10% Decrease
USD	118,218	(118,218)	77,289	(77,289)

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The above sensitivity analysis has been performed for monetary assets and liabilities denominated in foreign currencies other than the Group's functional currency at the reporting date.

As at June 30, 2021 and December 31, 2020, the Group entered into foreign currency forward contracts and currency swap contracts to manage risk from changes in exchange rates and the details are as follows:

(in millions of Korean won and in millions of US dollars)

June 30, 2021							
	Contractor	Contract amount	Contract exchange rate	Contract inception date	Contract maturity	Book amount	
						Assets	Liabilities
Currency forward	KDB	USD 35	1,135.60	2021.06.24	2022.06.24	-	181
	Shinhan Bank	USD 500	1,135.60	2020.10.14	2024.10.15	-	1,273
	KB Kookmin Bank	USD 500	1,102.83	2020.11.24	2029.04.16	887	-
	Citi	EUR 150	4.5900	2021.05.12	2022.04.29	-	1,670
	SC	EUR 250	4.5861	2021.05.14	2022.04.29	-	2,469
Currency swap	SMBC	USD 200	1,118.00	2021.05.28	2024.05.28	2,740	-
	KDB	USD 130	1,135.60	2021.06.24	2025.06.24	-	492
	KDB	USD 35	1,135.60	2021.06.24	2026.06.24	-	164

(in millions of Korean won and in millions of US dollars)

December 31, 2020							
	Contractor	Contract amount	Contract exchange rate	Contract inception date	Contract maturity	Book amount	
						Assets	Liabilities
Currency forward	Shinhan Bank	USD 500	1,135.60	2020.10.14	2024.10.15	-	23,115
	KB Kookmin Bank	USD 500	1,102.83	2020.11.24	2029.04.16	-	18,653

2) Price risk

The Group is exposed to equity securities price risk arises from investments held by the Group and classified in the consolidated interim statement of financial position as non-current financial assets. The Group's equity investments are publicly traded and are related to the KOSDAQ and NASDAQ index.

The table below summarizes the impact of increases/decreases of the listed stock price index on the Group's equity before tax effects as at June 30, 2021 and December 31, 2020. The analysis is based on the assumption that the equity index has increased/decreased by 10% with all other variables held constant, and that all the Group's equity instruments moved in line with the index.

(in millions of Korean won)

	June 30, 2021		December 31, 2020	
	10% Increase	10% Decrease	10% Increase	10% Decrease
KOSDAQ	-	-	-	-
NASDAQ	811	(811)	997	(997)
Total	811	(811)	997	(997)

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3) Interest rate risk

Interest rate risk is defined as the risk that the interest income or expenses arising from deposits and borrowings will fluctuate because of changes in future market interest rate. The interest rate risk mainly arises through floating rate deposits and borrowings. The objective of interest rate risk management lies in maximizing corporate value by minimizing uncertainty in interest rates fluctuations and net interest expense.

The Group adequately minimizes risks from interest rate fluctuations through various policies, such as sharing excess cash within the Group (internal cash sharing) to minimize external borrowings, avoiding high rate borrowings, reforming capital structure, managing an appropriate ratio of fixed rate borrowings and floating rate borrowings, monitoring a fluctuation of domestic and foreign interest rates daily, weekly and monthly, establishing alternatives, and balancing floating rate short-term borrowings with floating rate deposits.

The table below summarizes the impact of increases/decreases of interest rate¹ on the Group's equity and post-tax profit for the six-month periods ended June 30, 2021 and 2020. The analysis is based on the assumption that the interest rate has increased/decreased by 1% (100 basis points) with all other variables held constant.

<i>(in millions of Korean won)</i>	Impact on post-tax profit		Impact on equity	
	2021	2020	2021	2020
Increase	(37,374)	(41,346)	(37,374)	(41,346)
Decrease	37,374	41,346	37,374	41,346

¹ The Group has entered into a currency interest rate swap contract amounting to USD 165 million (equivalent to ₩186,450 million) to hedge interest rate risk of floating rate borrowings.

(2) Credit risk

Credit risk arises from trade receivables and that the Group holds, as well as debt instruments at amortized cost or fair value through other comprehensive income.

1) Trade receivables

The Group applies the simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for trade receivables. To measure the expected credit losses, trade receivables have been grouped based on shared credit risk characteristics and the days past due. The loss allowance provision as at June 30, 2021 is as follows. Expected credit losses include forward-looking information.

<i>(in millions of Korean won)</i>	Receivables not past due¹	Receivables past due but not impaired¹	Impaired receivables²	Total
June 30, 2021				
(trade receivables)				
Gross carrying amount	5,794,906	481,315	2,440	6,278,661
Expected loss rate	0.0%	0.1%	64.3%	0.1%
Loss allowance provision	1,817	576	1,568	3,961

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(trade receivables)				
Gross carrying amount	4,835,299	493,371	3,462	5,332,132
Expected loss rate	0.0%	0.1%	54.7%	0.1%
Loss allowance provision	2,032	467	1,892	4,391

¹ See Note 7.(3) for aging analysis.

² Impaired receivables are those for which impairment indicators have been confirmed, such as significant lack of collectability.

Movements in the loss allowance provision for trade receivables for the six-month period ended June 30, 2021 and for the year ended December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	Trade receivables	
	June 30, 2021	December 31, 2020
Beginning balance	4,391	5,830
Increase in (reversal of) loss allowance recognized in profit or loss	56	(480)
Receivables written off as uncollectible	(404)	(833)
Exchange differences	(82)	(126)
Ending balance	3,961	4,391

As at June 30, 2021, the carrying amount of trade receivables representing the maximum exposure to credit risk amounts to ₩6,278,661 million (December 31, 2020: ₩5,332,132 million).

2) Other financial assets at amortized cost

Movements in loss allowance provision for other financial assets at amortized cost for the six-month period ended June 30, 2021 and for the year ended December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	Other receivables	
	June 30, 2021	December 31, 2020
Beginning balance	2,165	2,109
Increase in loss allowance recognized as 'other non-operating expenses' in profit or loss	-	2
Exchange differences	-	54
Ending balance	2,165	2,165

All of the financial assets at amortized costs are considered to have low credit risk, and the loss allowance recognized during the period was, therefore, limited to 12 months expected losses.

The Group has established the following policies and procedures to manage credit risks.

To manage credit risks relating to trade receivables, the Group evaluates the credit rating of customers and determines credit limit for each customer based on the information provided by credit rating agencies and other available financial information before commencing business with new customers. The credit risks relating to trade receivables are also mitigated by insurance contracts, collateral as well as payment guarantees.

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The Group has entered into export bond insurance contracts with Korea Trade Insurance Corporation to mitigate credit risks relating to export trade receivables to overseas customers. The Group is also provided with collateral by customers depending on their credit rating or payment guarantees from the customers' financial institutions if necessary.

The Group has deposited its cash and cash equivalents and other long-term deposits in several financial institutions, such as Woori Bank and others. The Group has also entered into derivative contract with several financial institutions. The Group maintains business relationship with those financial institutions with high credit ratings evaluated by independent credit rating agencies and accordingly, credit risks associated with these financial institutions are limited.

(3) Liquidity risk

Finance team of the Group monitors rolling forecasts of the Group's liquidity requirements to ensure it has sufficient cash to meet operational needs while maintaining sufficient headroom on its undrawn committed borrowing facilities at all times so that the Group does not breach borrowing limits or covenants (where applicable) on any of its borrowing facilities. The Group's liquidity management policy involves projecting cash flows in major currencies and considering the level of liquid assets necessary to meet these, monitoring balance sheet liquidity ratios against internal and external regulatory requirements and maintaining debt financing plans.

The table below analyzes the Group's financial liabilities into relevant maturity groupings based on the remaining period at the reporting period to the contractual maturity date. Cash flows presented below are gross cash flows before discount, and includes cash flows for interests.

(in millions of Korean won)

	June 30, 2021			
	Less than 1 year	Between 1-2 years	Between 2-5 years	Over 5 years
Non-derivative financial instruments				
Borrowings (excluding lease liabilities)	3,143,832	2,215,645	4,545,483	2,676,693
Lease liabilities	52,474	28,888	60,260	122,513
Trade and other payables ¹	8,597,880	10,168	1,551	120
	<u>11,794,186</u>	<u>2,254,701</u>	<u>4,607,294</u>	<u>2,799,326</u>
Derivative instruments				
Gross settlement currency forwards and swaps				
(Inflows)	(582,387)	(4,966)	(984,630)	(565,000)
Outflows	591,830	6,153	988,338	551,415
	<u>9,443</u>	<u>1,187</u>	<u>3,708</u>	<u>(13,585)</u>
	<u>11,803,629</u>	<u>2,255,888</u>	<u>4,611,002</u>	<u>2,785,741</u>

(in millions of Korean won)

	December 31, 2020			
	Less than 1 year	Between 1-2 years	Between 2-5 years	Over 5 years
Non-derivative financial instruments				
Borrowings (excluding lease liabilities)	1,665,869	1,876,344	4,941,527	2,239,926
Lease liabilities	59,636	33,536	44,091	75,581
Trade and other payables ¹	8,725,500	11,756	-	171

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	10,451,005	1,921,636	4,985,618	2,315,678
Derivative instruments				
Gross settlement currency forwards				
(Inflows)	-	-	(544,000)	(544,000)
Outflows	-	-	567,800	551,415
	-	-	23,800	7,415
	10,451,005	1,921,636	5,009,418	2,323,093

¹ Included ₩2,099,613 million (December 31, 2020: ₩2,099,936 million) of financial liabilities due to a financial institution relating to reverse factoring arrangement. The Group has entered into reverse factoring arrangement (interest rate CD 91 days + 0.78~0.92%) with a financial institution whereby suppliers receive payments from the financial institution on the due date of each invoice and the Group pays to the financial institution at the end of extended credit period as agreed in the reverse factoring arrangement.

As at June 30, 2021, the Group has entered into swap contracts for which cash flow hedge accounting is applied, to avoid market price fluctuation of raw materials.

(in millions of Korean won)	June 30, 2021				
	Purpose of the contracts	Hedged items	Financial institution	Maturity	Fair value
Merchandise (raw materials) swap ¹	Cash flow hedge	Non-ferrous metal	Citi bank and others	~2021. 12	12,543

Details of derivative assets and liabilities as at June 30, 2021 and December 31, 2020, are as follows:

(in millions of Korean won)	June 30, 2021		December 31, 2020	
	Assets	Liabilities	Assets	Liabilities
Merchandise (raw materials) swap ¹	14,682	2,139	23,821	-

¹ Gain (loss) resulting from the contracts to avoid cash flow fluctuation risk of expected future transaction is accounted for as accumulated other comprehensive income, which corresponds to an effective portion of the hedges (Note 5).

3.2 Capital Risk Management

The Group's objectives for managing capital are to safeguard the Group's ability to continue as a going concern, so the Group can continue to provide returns for shareholders and benefits for other stakeholders, and to maintain an optimal capital structure to reduce the cost of capital.

Consistent with others in the industry, the Group monitors capital on the basis of the gearing ratio. This ratio is calculated as net debt divided by total capital. Net debt is calculated as total borrowings less cash and cash equivalents. Total capital is calculated as 'equity' as shown in the consolidated statement of financial position plus net debt.

The gearing ratio and debt-to-equity ratio as at June 30, 2021 and December 31, 2020, were as follows:

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<i>(in millions of Korean won, except for ratios)</i>	June 30, 2021	December 31, 2020
Total borrowings (Note 14) (A)	12,027,863	10,186,117
Less: cash and cash equivalents (B)	<u>(4,188,541)</u>	<u>(3,274,250)</u>
Net debt (C=A+B)	<u>7,839,322</u>	<u>6,911,867</u>
Total liabilities (D)	25,243,950	22,598,454
Total equity (E)	<u>21,491,059</u>	<u>18,790,440</u>
Total capital (F=C+E)	<u>29,330,381</u>	<u>25,702,307</u>
Gearing ratio (C/F)	26.7%	26.9%
Debt-to-equity ratio (D/E)	117.5%	120.3%

3.3 Fair Value

(1) Carrying amount and fair value of financial instruments by category as at June 30, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2021		December 31, 2020	
	Carrying amount	Fair value	Carrying amount	Fair value
Financial assets (current)				
Cash and cash equivalents	4,188,541	¹	3,274,250	¹
Deposits held by financial institutions	9,126	¹	608,039	¹
Trade receivables	6,246,197	¹	5,298,365	¹
Other receivables (excluding deposits held by financial institutions)	936,848	¹	316,264	¹
Current derivative financial assets (commodity swap)	14,682	14,682	23,821	23,821
Financial assets (non-current)				
Deposits held by financial institutions	268,002	¹	167,054	¹
Trade receivables	28,503	¹	29,376	¹
Other receivables (excluding deposits held by financial institutions)	899,611	¹	87,976	¹
Other non-current financial assets (carried at fair value)				
Marketable financial assets	7,430	7,430	7,679	7,679
Non-marketable financial assets ²	197,551	197,551	73,853	73,853
Non-current derivative financial assets (currency forward)	887	887	-	-
Non-current derivative financial assets (currency swap)	2,740	2,740	-	-
Financial liabilities (current)				
Trade and other payables	8,597,880	¹	8,725,500	¹
Current borrowings (excluding exchangeable bonds and lease liabilities)	2,982,979	¹	1,460,926	¹
Current borrowings (exchangeable bonds)	-	-	32,500	32,763
Current lease liabilities	57,307	³	55,389	³
Current derivative financial liabilities	-	-	16,797	16,797

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<i>(in millions of Korean won)</i>	June 30, 2021		December 31, 2020	
	Carrying amount	Fair value	Carrying amount	Fair value
(exchange rights)				
Current derivative financial liabilities (currency forward)	4,320	4,320	-	-
Current derivative financial liabilities (commodity swap)	2,139	2,139	-	-
Financial liabilities (non-current)				
Non-current borrowings (excluding lease liabilities)	8,789,735	8,751,065	8,508,066	8,614,889
Non-current lease liabilities	197,842	³	129,236	³
Other non-current payables	11,839	¹	11,927	¹
Non-current derivative financial liabilities (currency forward)	1,273	1,273	41,768	41,768
Non-current derivative financial liabilities (currency swap)	656	656	-	-

¹ Fair values for these financial assets and liabilities are not disclosed above as their carrying amounts are reasonable approximation of their fair values.

² Acquisition costs of these financial assets approximate their fair values.

³ Fair values for these financial assets and liabilities are not disclosed above in accordance with related Korean IFRS.

(2) Fair value for measurement and disclosure are determined based on the following method:

Fair values of financial liabilities (non-current) are based on cash outflows discounted by using Korean won currency note yield in the same credit grade with the Parent Company (AA+), and the applied discount rates as at June 30, 2021 and December 31, 2020, are as follows:

<i>(in percentage)</i>	June 30, 2021	December 31, 2020
Discount rate	0.99% ~ 2.84%	0.97% ~ 2.27%

(3) Fair value hierarchy

Items that are measured at fair value are categorized by the fair value hierarchy levels, and the defined levels are as follows:

- Quoted prices (unadjusted) in active markets for identical assets or liabilities that an entity can access at the measurement date (Level 1).
- All inputs other than quoted prices included in level 1 that are observable (either directly that is, prices, or indirectly that is, derived from prices) for the asset or liability (Level 2).
- Unobservable inputs for the asset or liability (Level 3).

Fair value hierarchy of the financial instruments that are either measured at fair value or their fair values are disclosed for as at June 30, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2021			
	Level 1	Level 2	Level 3	Total
Financial assets/liabilities				

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measured at fair value				
Other non-current financial assets (marketable financial assets)	7,430	-	-	7,430
Other non-current financial assets (non-marketable financial assets)	-	-	197,551	197,551
Current derivative financial assets (commodity swap)	-	14,682	-	14,682
Non-current derivative financial assets (currency forward)	-	887	-	887
Non-current derivative financial assets (currency swap)	-	2,740	-	2,740
Current derivative financial liabilities (currency forward)	-	4,320	-	4,320
Current derivative financial liabilities (commodity swap)	-	2,139	-	2,139
Non-current derivative financial liabilities (currency forward)	-	1,273	-	1,273
Non-current derivative financial liabilities (currency swap)	-	656	-	656
Financial assets/liabilities not measured at fair value				
Non-current borrowings (excluding lease liabilities)	-	8,751,065	-	8,751,065

(in millions of Korean won)

	December 31, 2020			
	Level 1	Level 2	Level 3	Total
Financial assets/liabilities measured at fair value				
Other non-current financial assets (marketable financial assets)	7,679	-	-	7,679
Other non-current financial assets (non-marketable financial assets)	-	-	73,853	73,853
Current derivative financial assets	-	23,821	-	23,821
Current derivative financial liabilities (exchange rights) ¹	-	-	16,797	16,797
Non-current derivative financial liabilities (currency forward)	-	41,768	-	41,768
Financial assets/liabilities not measured at fair value				
Current borrowings (exchangeable bonds)	-	-	32,763	32,763
Non-current borrowings (excluding lease liabilities)	-	8,614,889	-	8,614,889

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¹ Movements in exchange rights are as follows.

<i>(in millions of Korean won)</i>	USD		EUR		Total	
	June 30, 2021	December 31, 2020	June 30, 2021	December 31, 2020	June 30, 2021	December 31, 2020
Beginning Balance	-	42	16,797	888	16,797	930
Exchange	-	(89,961)	(24,835)	(188,303)	(24,835)	(278,264)
Redemption	-	(70)	(2,440)	-	(2,440)	(70)
Evaluation	-	89,989	10,478	204,212	10,478	294,201
Ending Balance	-	-	-	16,797	-	16,797

(4) Valuation technique and the inputs

As at June 30, 2021, there are no fair value measurements categorized as level 3 of the fair value hierarchy, except for non-marketable financial assets. Valuation techniques and inputs used in level 3 fair value measurements as at December 31, 2020, are as follows:

(in millions of Korean won)

	December 31, 2020				
	Fair value	Level	Valuation Technique	Inputs	Coverage of Level 3 inputs
Financial liabilities					
Exchangeable Bond	32,763	3	Binominal option pricing model	Annual rates of credit volatility	-0.5%p ~ +0.5%p
Exchange right	16,797	3	Binominal option pricing model	Annual rates of credit volatility Underlying asset (equity) volatility	-0.5%p ~ +0.5%p -5.0% ~ +5.0%

(5) Sensitivity analysis for recurring fair value measurements categorized within Level 3

Sensitivity analysis of financial instruments is performed to measure favorable and unfavorable changes in the fair value of financial instruments which are affected by the unobservable parameters, using a statistical technique. When the fair value is affected by more than two input parameters, the most favorable or most unfavorable amounts are presented. Changes in exchange right is recognized in profit or loss.

As at June 30, 2021, there are no exchangeable bonds categorized as level 3. The results of the sensitivity analysis for the effect on profit or loss from changes in inputs for exchangeable bonds categorized as level 3 and subject to sensitivity analysis as at December 31, 2020, are as follows:

(in millions of Korean won)

	December 31, 2020	
	The effect on profit	The effect on loss
Financial liabilities		
- Exchangeable Bond		
Annual rates of credit volatility	47	(48)
Financial liabilities		
- Exchange right		
Annual rates of credit volatility	40	(41)
Underlying asset (equity) volatility	44	(129)

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4. Critical Accounting Estimates and Assumptions

The preparation of financial statements requires the Group to make estimates and assumptions concerning the future. Management also needs to exercise judgement in applying the Group's accounting policies. Estimates and assumptions are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. The resulting accounting estimates may differ from the related actual results.

Significant accounting estimates and assumptions applied in the preparation of these condensed consolidated interim financial statements are the same as those applied to the consolidated financial statements for the year ended December 31, 2020, except for the estimates used to determine income tax expense.

The spread of COVID-19 has a significant impact on the domestic and international economies. This may affect the Group's financial position and business performance, and the impact is expected to be continued to the consolidated annual financial statements in 2021.

Significant accounting estimates and assumptions used in the preparation of consolidated interim financial statements may be adjusted according to fluctuations in uncertainty arising from COVID-19, and the ultimate impact of COVID-19 on the Group's business, financial position, and performance is currently unpredictable.

5. Financial Instruments by Category

Categorizations of financial instruments as at June 30, 2021 and December 31, 2020, are as follows:

(in millions of Korean won)

	June 30, 2021				Total
	Financial assets at amortized cost	Financial assets at fair value through profit or loss	Financial assets at fair value through other comprehensive income	Other financial assets¹	
Financial assets					
Cash and cash equivalents	4,188,541	-	-	-	4,188,541
Trade receivables	5,685,863	-	560,334	-	6,246,197
Non-current trade receivables	28,503	-	-	-	28,503
Other receivables	944,679	-	1,295	-	945,974
Other non-current receivables	1,167,613	-	-	-	1,167,613
Other current financial assets	-	-	-	14,682	14,682
Other non-current financial assets	-	86,876	118,105	3,627	208,608
Total	12,015,199	86,876	679,734	18,309	12,800,118

(in thousands of Korean won)

	June 30, 2021		Total
	Financial liabilities at amortized cost	Other financial liabilities²	
Financial liabilities			
Trade payables	3,726,771	-	3,726,771
Other payables	4,871,109	-	4,871,109
Borrowings (current)	2,982,979	57,307	3,040,286
Other current financial liabilities	-	6,459	6,459
Other non-current financial	-	1,929	1,929

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liabilities			
Other non-current payables	11,839	-	11,839
Borrowings (non-current)	8,789,735	197,842	8,987,577
Total	20,382,433	263,537	20,645,970

(in millions of Korean won)

Financial assets	December 31, 2020				Total
	Financial assets at amortized cost	Financial assets at fair value through profit or loss	Financial assets at fair value through other comprehensive income	Other financial assets ¹	
Cash and cash equivalents	3,274,250	-	-	-	3,274,250
Trade receivables	4,876,565	-	421,800	-	5,298,365
Non-current trade receivables	29,376	-	-	-	29,376
Other receivables	904,640	-	19,663	-	924,303
Other non-current receivables	255,030	-	-	-	255,030
Other current financial assets	-	-	-	23,821	23,821
Other non-current financial assets	-	29,316	52,216	-	81,532
Total	9,339,861	29,316	493,679	23,821	9,886,677

(in millions of Korean won)

Financial liabilities	December 31, 2020			Total
	Financial liabilities at fair value through profit or loss	Financial liabilities at amortized cost	Other financial liabilities ²	
Trade payables	-	3,458,526	-	3,458,526
Other payables	-	5,266,974	-	5,266,974
Borrowings (current)	-	1,493,426	55,389	1,548,815
Other current financial liabilities	16,797	-	-	16,797
Other non-current financial liabilities	-	-	41,768	41,768
Other non-current payables	-	11,927	-	11,927
Borrowings (non-current)	-	8,508,066	129,236	8,637,302
Total	16,797	18,738,919	226,393	18,982,109

¹ Other financial assets include derivative assets that are not subject to the categorizations.

² Other financial liabilities include lease liabilities and derivative liabilities that are not subject to the categorizations.

Net gains or losses on each category of financial instruments for the three-month and six-month periods ended June 30, 2021 and 2020, are as follows:

(in millions of Korean won)

Dividend income	2021		2020	
	Three months	Six months	Three months	Six months
Financial assets at fair value through other comprehensive	710	1,088	12	12

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income				
Interest income				
Financial assets at amortized cost	11,649	22,501	7,664	20,855
Interest expense				
Financial liabilities at amortized cost	(60,689)	(116,305)	(61,160)	(128,576)
Other financial liabilities	(1,638)	(3,731)	(3,418)	(4,354)
Financial assets at amortized cost ¹	-	-	(194)	(879)
Financial assets at fair value through other comprehensive income ¹	(771)	(833)	(1,196)	(2,328)
Gain (loss) on valuation				
Financial assets at fair value through profit or loss	808	11,779	-	-
Financial assets at fair value through other comprehensive income	(562)	1,735	7,136	13,412
Derivative instruments	9,334	19,728	(43,911)	(79,626)
Exchange differences				
Financial assets at amortized cost	(87,964)	156,548	(128,692)	126,228
Financial liabilities at amortized cost	202,602	(36,562)	195,350	(333,145)
Other financial liabilities	(20)	(20)	(4,983)	(5,555)

¹ Fees paid to financial institutions for factoring.

6. Cash and Cash Equivalents

Details of cash and cash equivalents as at June 30, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2021	December 31, 2020
Bank deposits and cash on hand	1,812,154	1,704,420
Deposits held by financial institutions and others	2,376,387	1,569,830
Total	4,188,541	3,274,250

As at June 30, 2021, cash and cash equivalents include ₩60,401 million which is subject to a restriction on the use in association with the national R&D projects.

7. Trade and Other Receivables

Trade and other receivables and its provisions for impairment, as at June 30, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2021		
	Gross amount	Provision for impairment	Carrying amount
Trade receivables	6,250,158	(3,961)	6,246,197
Non-current trade receivables	28,503	-	28,503

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Other current receivables	948,139	(2,165)	945,974
Other non-current receivables	1,167,613	-	1,167,613
Total	8,394,413	(6,126)	8,388,287

(in millions of Korean won)

	December 31, 2020		
	Gross amount	Provision for impairment	Carrying amount
Trade receivables	5,302,756	(4,391)	5,298,365
Non-current trade receivables	29,376	-	29,376
Other current receivables	926,468	(2,165)	924,303
Other non-current receivables	255,030	-	255,030
Total	6,513,630	(6,556)	6,507,074

Details of other receivables as at June 30, 2021 and December 31, 2020, are as follows:

(in millions of Korean won)

	June 30, 2021	December 31, 2020
Current		
Non-trade receivables	846,598	271,651
Deposits held by financial institutions	9,126	608,039
Accrued income	3,626	2,567
Loans	61,980	-
Guarantee deposits provided	24,644	42,046
	<u>945,974</u>	<u>924,303</u>
Non-current		
Non-trade receivables	517,748	24,910
Deposits held by financial institutions ¹	268,002	167,054
Loans	312,367	831
Guarantee deposits provided	69,496	62,235
	<u>1,167,613</u>	<u>255,030</u>
Total	2,113,587	1,179,333

¹ As at June 30, 2021, ₩266,100 million (December 31, 2020: ₩166,100 million) is withdrawal restricted in relation to large, small and medium-sized companies cooperation agreement and others. In addition, ₩963 million is withdrawal restricted in connection with maintaining checking accounts (December 31, 2020: ₩928 million). Also, PLN 3 million is withdrawal restricted in relation to overseas transportation of hazardous waste.

The aging analysis of trade and other receivables as at June 30, 2021 and December 31, 2020, is as follows:

(in millions of Korean won)

	June 30, 2021		December 31, 2020	
	Trade receivables	Other receivables	Trade receivables	Other receivables
Receivables not past due	<u>5,794,906</u>	<u>2,070,037</u>	<u>4,835,299</u>	<u>1,134,863</u>
Past due but not impaired				
Up to 3 months	337,347	38,054	333,522	41,780
Between 3-6 months	45,623	2,735	69,272	353

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Over 6 months	98,345	2,761	90,577	2,337
	<u>481,315</u>	<u>43,550</u>	<u>493,371</u>	<u>44,470</u>
Impaired receivables	2,440	2,165	3,462	2,165
Total	<u>6,278,661</u>	<u>2,115,752</u>	<u>5,332,132</u>	<u>1,181,498</u>

Movements on the provision for impairment of trade and other receivables for the six-month period ended June 30, 2021 and for the year ended December 31, 2020, are as follows:

(in millions of Korean won)

	June 30, 2021			
	Trade receivables		Other receivables	
	Current	Non-current	Current	Non-current
Beginning balance	4,391	-	2,165	-
Additions	56	-	-	-
Write-off	(404)	-	-	-
Exchange differences	(82)	-	-	-
Ending balance	<u>3,961</u>	<u>-</u>	<u>2,165</u>	<u>-</u>

(in millions of Korean won)

	December 31, 2020			
	Trade receivables		Other receivables	
	Current	Non-current	Current	Non-current
Beginning balance	5,830	-	2,109	-
Additions (reversal)	(480)	-	2	-
Write-off	(833)	-	-	-
Exchange differences	(126)	-	54	-
Ending balance	<u>4,391</u>	<u>-</u>	<u>2,165</u>	<u>-</u>

As at June 30, 2021 and December 31, 2020, the carrying amounts of trade and other receivables are approximation of their fair values.

8. Other Financial Assets and Liabilities

Details of other financial assets and liabilities as at June 30, 2021 and December 31, 2020, are as follows:

(in millions of Korean won)

	June 30, 2021	December 31, 2020
Other financial assets		
Financial assets at fair value through other comprehensive income (derivative instruments) (current)	14,682	23,821
Financial assets at fair value through other comprehensive income (excluding derivative instruments) (non-current)	118,105	52,216
Financial assets at fair value through profit or loss (derivative instruments) (non-current)	3,627	-
Financial assets at fair value through profit or loss (excluding derivative instruments) (non-current)	<u>86,876</u>	<u>29,316</u>
	<u>223,290</u>	<u>105,353</u>

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Other financial liabilities		
Financial liabilities at fair value through profit or loss (derivative instruments) (current)	2,139	-
Financial liabilities at fair value through profit or loss (exchange rights) (current)	-	16,797
Financial liabilities at fair value through profit or loss (derivative instruments) (current)	4,320	-
Financial liabilities at fair value through profit or loss (derivative instruments) (non-current)	1,929	41,768
	<u>8,388</u>	<u>58,565</u>

Changes in equity and debt instruments included in other financial assets for the six-month period ended June 30, 2021 and for the year ended December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2021	December 31, 2020
Beginning balance	81,532	149,463
Acquisitions / transfer	111,958	18,120
Disposals	(3,399)	(91,251)
Gain on valuation (before income tax effects) through other comprehensive income	1,735	3,024
Gain on valuation (before income tax effects) through profit or loss	11,780	3,898
Others	1,375	(1,722)
Ending balance	<u>204,981</u>	<u>81,532</u>

During the six-month period ended June 30, 2021 and during the year ended December 31, 2020, the Group did not recognize impairment for other financial assets.

9. Inventories

Details of inventories as at June 30, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2021		
	Gross amount	Valuation allowance	Carrying amount
Merchandise	149,161	(2,471)	146,690
Finished / Semi-finished products	3,849,373	(122,209)	3,727,164
Work-in-process	22,486	-	22,486
Raw materials	1,618,986	(24,556)	1,594,430
Supplies	228,567	-	228,567
Materials-in-transit	1,156,944	-	1,156,944
Total	<u>7,025,517</u>	<u>(149,236)</u>	<u>6,876,281</u>

<i>(in millions of Korean won)</i>	December 31, 2020		
	Gross amount	Valuation allowance	Carrying amount

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Merchandise	130,457	(3,486)	126,971
Finished / Semi-finished products	3,087,998	(129,308)	2,958,690
Work-in-process	23,570	-	23,570
Raw materials	1,277,855	(17,100)	1,260,755
Supplies	188,503	-	188,503
Materials-in-transit	791,199	-	791,199
Total	5,499,582	(149,894)	5,349,688

During the six-month period ended June 30, 2021, the cost of inventories recognized as expense and included in 'cost of sales' amounted to ₩11,141,132 million (2020: ₩8,160,491 million).

10. Investments in Associates and Joint Ventures

Changes in investments in associates and joint ventures for the six-month period ended June 30, 2021 and for the year ended December 31, 2020, are as follows:

(in millions of Korean won)

	June 30, 2021							
	Beginning balance	Acquisitions / transfer	Dividends	Share of profit (loss) of associates and joint ventures	Share of other comprehensive income (loss) of associates and joint ventures	Impairment / disposals	Others	Ending balance
LG VINA Chemical Co., Ltd.	5,875	-	-	4,352	(358)	-	-	9,869
HL Greenpower Co., Ltd.	22,710	-	-	1,847	-	-	(234)	24,323
TECHWIN Co., Ltd.	20,113	-	-	(1,455)	(2)	-	-	18,656
SEETEC Co., Ltd	140,116	-	(10,000)	4,298	-	-	-	134,414
LG Chem BRASIL INTERMEDIACAO DE NEGOCIOS DO SETOR QUIMICO LTDA.	579	-	-	-	-	-	-	579
LG Chem Malaysia SDN.BHD	150	-	-	-	-	-	-	150
FJ Composite Materials Co., LTD.	2,737	-	-	(512)	358	-	-	2,583
WUXI CL New Energy Technology Ltd ¹	-	-	-	-	-	-	-	-
LG Chem Life Sciences Poland Ltd.	17	-	-	-	-	-	-	17
Combustion Synthesis Co., Ltd.	1,867	-	-	273	(103)	-	(68)	1,969
HUAJIN NEW ENERGY MATERIALS(QUZHOU)C O., LTD.	89,525	-	-	(2,110)	3,968	-	-	91,383
VINFAST LITHIUM BATTERY PACK LIMITED LIABILITY COMPANY	4,179	-	-	(321)	128	-	-	3,986
Jiangxi VL Battery Co.,Ltd	21,461	-	-	(921)	1,013	-	-	21,553
	309,329	-	(10,000)	5,451	5,004	-	(302)	309,482

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	December 31, 2020							Ending balance
	Beginning balance	Acquisitions / transfer	Dividends	Share of profit (loss) of associates and joint ventures	Share of other comprehensive income (loss) of associates and joint ventures	Impairment / disposals	Others	
LG VINA Chemical Co., Ltd.	4,403	-	-	1,782	(310)	-	-	5,875
HL Greenpower Co., Ltd.	23,366	-	-	(664)	-	-	8	22,710
LG Holdings (HK) Ltd.	40,973	-	-	436	(369)	(41,040)	-	-
TECHWIN Co., Ltd.	19,376	-	(314)	1,053	(2)	-	-	20,113
SEETEC Co., Ltd	142,554	-	(10,000)	7,205	-	-	357	140,116
LG Chem BRASIL INTERMEDIACAO DE NEGOCIOS DO SETOR QUIMICO LTDA.	579	-	-	-	-	-	-	579
LG Chem Malaysia SDN.BHD	150	-	-	-	-	-	-	150
FJ Composite Materials Co., LTD.	2,171	-	-	(142)	(162)	-	870	2,737
WUXI CL New Energy Technology Ltd	-	-	-	-	-	-	-	-
LG Chem Life Sciences Poland Ltd.	17	-	-	-	-	-	-	17
Combustion Synthesis Co., Ltd.	2,042	-	-	(88)	(68)	-	(19)	1,867
HUAJIN NEW ENERGY MATERIALS(QUZHOU)C O., LTD.	67,058	22,191	-	151	125	-	-	89,525
VINFAST LITHIUM BATTERY PACK LIMITED LIABILITY COMPANY	4,888	-	-	(461)	(248)	-	-	4,179
Jiangxi VL Battery Co.,Ltd	-	21,815	-	71	(425)	-	-	21,461
	<u>307,577</u>	<u>44,006</u>	<u>(10,314)</u>	<u>9,343</u>	<u>(1,459)</u>	<u>(41,040)</u>	<u>1,216</u>	<u>309,329</u>

¹ As at June 30, 2021, the Group discontinued recognizing its share of further losses as its share of losses of an associate exceeds the carrying amount of its interest in the associate. Unrecognized accumulated losses amounted to ₩346 million.

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11. Property, Plant and Equipment

Changes in property, plant and equipment for the six-month period ended June 30, 2021 and for the year ended December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2021	December 31, 2020
Beginning balance	20,567,475	18,593,642
Acquisitions/ transfer	6,660,746	10,454,805
Disposals/ transfer	(4,448,648)	(5,622,795)
Exchange differences	286,760	(92,291)
Depreciation	(1,207,255)	(2,131,075)
Impairment	(7,131)	(76,038)
Reversal of impairment	-	220
Transfer to assets held for sale (Note 34)	-	(558,993)
Ending balance	<u>21,851,947</u>	<u>20,567,475</u>

During the six-month ended June 30, 2021, the Group capitalized ₩33,651 million of borrowing costs (2020: ₩18,422 million) in relation to acquisition of property, plant and equipment, on property, plant and equipment. The capitalization rate of borrowings used to determine the amount of borrowing costs eligible for capitalization is 1.51% (2020: 1.53%).

Line items including depreciation in the consolidated statements of profit or loss for the three-month and six-month periods ended June 30, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021		2020	
	Three months	Six months	Three months	Six months
Cost of sales	568,708	1,090,122	444,599	871,867
Selling and administrative expenses	60,181	114,655	47,690	92,513
Others	268	593	522	1,134
Discontinued operations	577	1,885	23,213	43,980
Total	<u>629,734</u>	<u>1,207,255</u>	<u>516,024</u>	<u>1,009,494</u>

Lease

(i) Amounts recognized in the consolidated statement of financial position

Details of right-of-use assets in consolidated statement of financial position are as follows:

<i>(in millions of Korean won)</i>	June 30, 2021	December 31, 2020
Right-of-use assets ¹		
Real-estate	260,536	183,136
Machinery	24,514	26,541
Vehicles	18,597	17,026
Tools	2,802	3,535

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Equipment	588	616
	<u>307,037</u>	<u>230,854</u>

¹ Included in the line item 'Property, plant and equipment' in the consolidated statements of financial position.

Additions to the right-of-use assets during the six-month period ended June 30, 2021, were ₩118,819 million (2020: ₩44,372 million).

<i>(in millions of Korean won)</i>	June 30, 2021	December 31, 2020
Lease liabilities ¹		
Current	57,307	55,389
Non-current	<u>197,842</u>	<u>129,236</u>
	<u>255,149</u>	<u>184,625</u>

¹ Included in the line item 'borrowings' in the consolidated statements of financial position.

(ii) Amounts recognized in the consolidated statement of profit or loss

Lease related expenses recognized in the consolidated statement of profit or loss are as follows:

<i>(in millions of Korean won)</i>	2021	2020
Depreciation of right-of-use assets		
Real-estate	28,179	25,120
Machinery	2,811	2,437
Vehicles	5,440	7,113
Tools	730	205
Equipment	<u>247</u>	<u>250</u>
	<u>37,407</u>	<u>35,125</u>
Interest expense relating to lease liabilities (included in finance cost)	3,731	4,354
Expense relating to short-term leases (included in cost of goods sold and administrative expenses)	13,321	19,374
Expense relating to leases of low-value assets that are not short-term leases (included in cost of goods sold and administrative expenses)	6,753	8,621
Expense relating to variable lease payments not included in lease liabilities (included in cost of goods sold and administrative expenses)	-	-

Total cash outflow for leases during the six-month period ended June 30, 2021, was ₩62,141 million (2020: ₩63,198 million).

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12. Intangible Assets

Changes in intangible assets for the six-month period ended June 30, 2021 and for the year ended December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2021	December 31, 2020
Beginning balance	2,279,917	2,206,229
Acquisitions/ transfer	182,507	435,319
Disposals/ transfer	205	4,282
Exchange differences	(4,905)	(30,585)
Amortization	16,177	(7,718)
Impairment	(108,359)	(180,973)
Reversal of impairment	(14)	(138,547)
Transfer to assets held for sale (Note 34)	(360)	(8,090)
Ending balance	<u>2,365,168</u>	<u>2,279,917</u>

Line items including amortization of intangible assets for the three-month and six-month periods ended June 30, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021		2020	
	Three months	Six months	Three months	Six months
Cost of sales	18,470	30,448	10,419	18,856
Selling and administrative expenses	39,722	77,757	31,662	59,771
Discontinued operations	-	154	207	402
Total	<u>58,192</u>	<u>108,359</u>	<u>42,288</u>	<u>79,029</u>

Total research and development costs recognized as expenses amounted to ₩617,022 (2020: ₩537,587 million) for the six-month period ended June 30, 2021.

Details of greenhouse gas emission permits included in other intangible assets are as follows:

Greenhouse gas emission permits held for the purpose of fulfilling obligations

The number of greenhouse gas emission permits received at free of charge for the 3rd planning period (2021 to 2025) is as follows:

<i>(in thousands of tons)</i>	2021	2022	2023	2024	2025	Total
Allocation with nil consideration	9,371	9,371	9,371	9,283	9,283	46,679

Changes in greenhouse gas emission permits during the six-month period ended June 30, 2021 and for the year ended December 31, 2020, are as follows:

(in thousands of tons and millions of Korean won)

June 30, 2021							
2020		2021		2022		2023	
Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount

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Beginning balance								
/Allocation with nil consideration	8,667	-	9,371	-	9,371	-	9,371	-
Purchase/Sale	(116)	403	-	-	-	-	-	-
Exchange	100	-	(100)	-	-	-	-	-
Surrendered to the government	(290)	-	-	-	-	-	-	-
Ending balance	<u>8,361</u>	<u>403</u>	<u>9,271</u>	<u>-</u>	<u>9,371</u>	<u>-</u>	<u>9,371</u>	<u>-</u>

(in thousands of tons and millions of Korean won)

	June 30, 2021						
	2024		2025		Total		
	Quantity	Amount	Quantity	Amount	Quantity	Amount	
Beginning balance / Allocation with nil consideration							
	9,283	-	9,283	-	55,346	-	
Purchase/Sale	-	-	-	-	(116)	403	
Exchange	-	-	-	-	-	-	
Surrendered to the government	-	-	-	-	(290)	-	
Ending balance	<u>9,283</u>	<u>-</u>	<u>9,283</u>	<u>-</u>	<u>54,940</u>	<u>403</u>	

(in thousands of tons and millions of Korean won)

	December 31, 2020							
	2019		2020		2021		2022	
	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount
Beginning balance								
/Allocation with nil consideration	8,554	4,375	7,548	-	9,371	-	9,371	-
Purchase/Sale	138	3,525	-	-	-	-	-	-
Borrowings/Carry forwards between years	41	-	(41)	-	-	-	-	-
Surrendered to the government	(8,733)	(7,900)	-	-	-	-	-	-
Ending balance	<u>-</u>	<u>-</u>	<u>7,507</u>	<u>-</u>	<u>9,371</u>	<u>-</u>	<u>9,371</u>	<u>-</u>

(in thousands of tons and millions of Korean won)

	December 31, 2020							
	2023		2024		2025		Total	
	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount
Beginning balance								
/Allocation with nil consideration	9,371	-	9,283	-	9,283	-	62,781	4,375
Purchase/Sale	-	-	-	-	-	-	138	3,525
Borrowings/Carry forwards between years	-	-	-	-	-	-	-	-
Surrendered to the government	-	-	-	-	-	-	(8,733)	(7,900)
Ending balance	<u>9,371</u>	<u>-</u>	<u>9,283</u>	<u>-</u>	<u>9,283</u>	<u>-</u>	<u>54,186</u>	<u>-</u>

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During the six-month period ended June 30, 2021 and for the year ended December 31, 2020, there are no greenhouse gas emission permits held for short-term trading purpose.

13. Other Current and Non-Current Assets

Details of other current and non-current assets as at June 30, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2021	December 31, 2020
Current		
Prepayments to suppliers and prepaid expenses	235,021	174,885
Prepaid value added tax	405,618	428,303
Others	190,928	39,964
Total	<u>831,567</u>	<u>643,152</u>
Non-current		
Long-term prepayments and long-term prepaid expenses	55,989	87,247
Others	98	98
Total	<u>56,087</u>	<u>87,345</u>

14. Borrowings

Borrowings as at June 30, 2021 and December 31, 2020, consist of:

<i>(in millions of Korean won)</i>	June 30, 2021	December 31, 2020
Current		
Short-term borrowings	1,227,243	879,757
Current portion of long-term borrowings of bank loans	1,096,109	341,203
Current portion of debentures	659,627	272,466
Current portion of financial lease liabilities	57,307	55,389
	<u>3,040,286</u>	<u>1,548,815</u>
Non-current		
Long-term borrowings	2,608,680	3,131,254
Debentures	6,181,055	5,376,812
Lease liabilities	197,842	129,236
	<u>8,987,577</u>	<u>8,637,302</u>
Total	<u>12,027,863</u>	<u>10,186,117</u>

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Details of short-term borrowings as at June 30, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	Bank	Latest maturity date	Interest rate(%)	June 30, 2021	December 31, 2020
Bank loans	Citi and others	June 24, 2022	0.92 and others	1,227,243	879,757
Total				1,227,243	879,757

Details of long-term borrowings as at June 30, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	Bank	June 30, 2021			
		Annual interest rate (%)	Amount in Korean won	Current	Non-current
Borrowings in Korean won	KDB ¹	(1Y) + 1.45 ~ 1.99	5,823	1,688	4,135
	KB Kookmin Bank	24M MOR + 1.89	1,513	1,000	513
Borrowings in foreign currencies		USD: 3M LIBOR+1.40			
	HSBC	CNY: PBOC×0.95, LPR-33.75	56,700	56,700	-
		USD: 3M			
	SMBC	LIBOR+1.20~1.30	427,056	3,362	423,694
		EUR: 0.32~0.48			
	Construction Bank of China	LPR(1Y)+0.36~0.46	58,500	41,016	17,484
	Communications Bank of China	3M LIBOR + 1.15	-	-	-
		USD: 3M LIBOR + 0.95~1.20			
	Citi	EUR: 3M EURIBOR + 0.62~0.70	240,110	38,396	201,714
		6M EURIBOR + 0.70 ~-0.83			
	ING		161,371	-	161,371
		USD: 3M LIBOR + 1.20			
	Standard Chartered Bank	CNY: PBOC×0.95	26,226	26,226	-
	CNOOC Finance	PBOC×0.90	10,490	10,490	-
	EBRD	6M EURIBOR + 0.62	336,189	47,066	289,123
		EUR: 6M EURIBOR + 0.60~0.80			
	MUFG		134,476	67,238	67,238
	Industrial and Commercial	PBOC ×1.00	43,806	13,057	30,749

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Bank of China					
KEB Hana Bank	3M EURIBOR + 0.62	268,951	-	268,951	
	USD: 3M LIBOR +				
	0.80~0.93				
KDB	EUR: 3M	709,850	346,101	363,749	
	EURIBOR+0.75~1.50				
The Export-Import Bank of Korea	3M	295,846	295,846	-	
	EURIBOR+0.75~1.50				
	3M				
NongHyup Bank	EURIBOR+0.75~1.50	147,923	147,923	-	
EIB	3M EURIBOR + 0.47	645,483	-	645,483	
DBS	6M EURIBOR + 0.60	134,476	-	134,476	
Total		3,704,789	1,096,109	2,608,680	

¹ Manufacturing facilities are pledged as collateral for the above long-term borrowings (Note 18).

<i>(in millions of Korean won)</i>		December 31, 2020			
	Bank	Annual interest rate (%)	Amount in Korean won	Current	Non-current
Borrowings in Korean won	KDB ¹	(1Y) + 1.45 ~ 1.99	6,622	1,597	5,025
	KB Kookmin Bank	24M MOR + 1.89	2,000	980	1,020
Borrowings in foreign currencies		USD: 3M LIBOR +			
		0.95~1.40			
	HSBC	CNY: PBOC×0.95, LPR(5Y)-0.3375	87,806	60,541	27,265
	SMBC	3M LIBOR + 0.32~0.48	202,142	-	202,142
	Construction Bank of China	LPR(1Y)+0.36~0.46	81,673	35,315	46,358
	Communications Bank of China	PBOC ×1.00	5,676	5,676	-
		USD: 3M LIBOR + 0.95			
	Citi	EUR: EURIBOR + 0.62~0.70	241,354	39,212	202,142
		6M EURIBOR + 0.70			
	ING	~0.83	161,714	-	161,714
	Standard Chartered Bank	USD: 3M LIBOR + 1.20	92,036	79,514	12,522

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	CNY: PBOC ×0.95			
CNOOC Finance	PBOC ×0.90	10,018	10,018	-
EBRD	6M EURIBOR+0.62	336,903	-	336,903
Bank of China	3M LIBOR + 1.15	5,475	5,475	-
MUFG	EUR:3M EURIBOR + 0.60~0.80	134,761	-	134,761
Industrial and Commercial Bank of China	PBOC ×1.00	46,024	10,473	35,551
CIMB	3M LIBOR + 1.50	49,021	49,021	-
KEB Hana Bank	3M EURIBOR + 0.62	269,523	-	269,523
	USD: 3M LIBOR + 0.93			
KDB	EUR: 6M EURIBOR+1.50	513,380	43,381	469,999
The Export-Import Bank of Korea	6M EURIBOR + 1.50	296,475	-	296,475
NongHyup Bank	6M EURIBOR + 1.50	148,238	-	148,238
EIB	3M EURIBOR + 0.47	646,855	-	646,855
DBS	6M EURIBOR + 0.60	134,761	-	134,761
Total		<u>3,472,457</u>	<u>341,203</u>	<u>3,131,254</u>

¹ Manufacturing facilities are pledged as collateral for the above long-term borrowings (Note 18).

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Details of debentures as at June 30, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>		June 30, 2021				
Financial institution	Annual interest rate (%)	Latest maturity date	Amount in Korean won	Current	Non-current	
50-2nd Debenture (non-guaranteed/public) NH Investment & Securities Co., Ltd. and others	2.28	2022.5.19	400,000	400,000	-	
50-3rd Debenture (non-guaranteed/public) NH Investment & Securities Co., Ltd. and others	2.53	2024.5.19	280,000	-	280,000	
51-2nd Debenture (non-guaranteed/public) NH Investment & Securities Co., Ltd. and others	2.88	2023.2.20	240,000	-	240,000	
51-3rd Debenture (non-guaranteed/public) NH Investment & Securities Co., Ltd. and others	3.07	2025.2.20	270,000	-	270,000	
51-4th Debenture (non-guaranteed/public) NH Investment & Securities Co., Ltd. and others	3.29	2028.2.20	300,000	-	300,000	
52-1st Debenture (non-guaranteed/public) NH Investment & Securities Co., Ltd. and others	2.02	2022.3.13	160,000	160,000	-	
52-2nd Debenture (non-guaranteed/public) NH Investment & Securities Co., Ltd. and others	2.11	2024.3.13	240,000	-	240,000	
1st Debenture (non-guaranteed/public) NH Investment & Securities Co., Ltd. and others	2.21	2026.3.13	200,000	-	200,000	
52-4th Debenture (non-guaranteed/public) NH Investment & Securities Co., Ltd. and others	2.40	2029.3.13	400,000	-	400,000	
53-1st Debenture (non-guaranteed/public) NH Investment & Securities Co., Ltd. and others	1.57	2023.2.19	350,000	-	350,000	
53-2nd Debenture (non-guaranteed/public) NH Investment & Securities Co., Ltd. and others	1.65	2025.2.19	250,000	-	250,000	
53-3rd Debenture (non-guaranteed/public) NH Investment & Securities Co., Ltd. and others	1.72	2027.2.19	50,000	-	50,000	
53-4th Debenture (non-guaranteed/public) NH Investment & Securities Co., Ltd. and others	1.91	2030.2.19	250,000	-	250,000	
54-1st Debenture (non-guaranteed/public) KB Securities Co., Ltd and others	1.14	2024.2.19	350,000	-	350,000	
54-2nd Debenture (non-guaranteed/public) KB Securities Co., Ltd and others	1.51	2026.2.19	270,000	-	270,000	
54-3rd Debenture (non-guaranteed/public) KB Securities Co., Ltd and others	1.76	2028.2.19	200,000	-	200,000	
54-4th Debenture (non-guaranteed/public) KB Securities Co., Ltd and others	2.14	2031.2.19	260,000	-	260,000	
54-5th Debenture (non-guaranteed/public) KB Securities Co., Ltd and others	2.22	2036.2.19	120,000	-	120,000	
USD foreign currency debenture with maturity in 2024 Citi and others	3.25	2024.10.15	565,000	-	565,000	
USD foreign currency debenture with maturity in 2029 Citi and others	3.63	2029.4.15	565,000	-	565,000	
EUR foreign currency debenture with maturity in 2023 Citi and others	0.50	2023.4.15	672,210	-	672,210	
1-2nd EUR Overseas Exchangeable bonds¹ Credit Suisse	-	2021.1.14	-	-	-	
Debentures in Korean won (non-guaranteed) NH Investment & Securities Co., Ltd.	2.26	2022.2.16	100,000	100,000	-	
NH Investment & Securities Co., Ltd.	3.00	2023.3.02	40,000	-	40,000	
NH Investment & Securities Co., Ltd.	1.95	2023.2.14	80,000	-	80,000	

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	NH Investment & Securities Co., Ltd.	2.22	2025.2.14	30,000	-	30,000
	NH Investment & Securities Co., Ltd.	1.56	2024.2.08	70,000	-	70,000
55-1st Debenture (non-guaranteed/private)	KB Securities Co., Ltd and others	2.39	2031.5.7	90,000		90,000
55-2nd Debenture (non-guaranteed/private)	KB Securities Co., Ltd and others	2.52	2036.5.7	60,000		60,000
Less: discount on debentures				(21,528)	(373)	(21,155)
Total				<u>6,840,682</u>	<u>659,627</u>	<u>6,181,055</u>

(in millions of Korean won)

December 31, 2020

		Annual interest rate (%)	Latest maturity date	Amount in Korean won	Current	Non-current
50-2nd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	2.28	2022.5.19	400,000	-	400,000
50-3rd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	2.53	2024.5.19	280,000	-	280,000
51-1st Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	2.56	2021.2.20	190,000	190,000	-
51-2nd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	2.88	2023.2.20	240,000	-	240,000
51-3rd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	3.07	2025.2.20	270,000	-	270,000
51-4th Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	3.29	2028.2.20	300,000	-	300,000
52-1st Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	2.02	2022.3.13	160,000	-	160,000
52-2nd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	2.11	2024.3.13	240,000	-	240,000
52-3rd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	2.21	2026.3.13	200,000	-	200,000
52-4th Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	2.40	2029.3.13	400,000	-	400,000
53-1st Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	1.57	2023.2.19	350,000	-	350,000
53-2nd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	1.65	2025.2.19	250,000	-	250,000
53-3rd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	1.72	2027.2.19	50,000	-	50,000
53-4th Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	1.91	2030.2.19	250,000	-	250,000
USD foreign currency debenture with maturity in 2024	Citi and others	3.25	2024.10.15	544,000	-	544,000
USD foreign currency debenture with maturity in 2029	Citi and others	3.63	2029.4.15	544,000	-	544,000
EUR foreign currency debenture with maturity in 2023	Citi and others	0.50	2023.4.15	669,120	-	669,120
1-1st USD Overseas Exchangeable bonds^{1,2}	Credit Suisse	-	2020.10.7	-	-	-
1-2nd EUR Overseas Exchangeable bonds^{1,3}	Credit Suisse	-	2020.1.14	32,787	32,787	-
Debentures in Korean won (non-guaranteed)	NH Investment & Securities Co., Ltd.	2.26	2022.2.16	100,000	-	100,000

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NH Investment & Securities Co., Ltd.	2.71	2021.3.02	50,000	50,000	-
NH Investment & Securities Co., Ltd.	3.00	2023.3.02	40,000	-	40,000
NH Investment & Securities Co., Ltd.	1.95	2023.2.14	80,000	-	80,000
NH Investment & Securities Co., Ltd.	2.22	2025.2.14	30,000	-	30,000
Less: discount on debentures			(20,629)	(321)	(20,308)
Total			<u>5,649,278</u>	<u>272,466</u>	<u>5,376,812</u>

¹ As the conditions for the execution of call options have been satisfied during the year ended December 31, 2020, exchangeable bonds of USD 219,800,000 were exchanged with 509,113 treasury shares and the remaining exchangeable bonds of USD 200,000 have been early repaid on October 7, 2020. Also, exchangeable bonds of EUR 290,700,000 were exchanged with 714,856 treasury shares. During the six-month period ended June 30, 2021, exchangeable bonds of EUR 22,300,000 were additionally exchanged with 54,834 treasury shares and the remaining exchangeable bonds of EUR 2,200,000 have been early repaid.

² Details of 1-1st USD overseas exchangeable bonds are as follows:

	Details
Aggregate principal amount	USD 220,000,000
Issue price	USD 220,000,000
Coupon rate (%)	0.00
Issue date	April 16, 2018
Maturity date	April 16, 2021
Redemption	- Redemption at maturity: Outstanding bond principal, which is not repaid early or which call option is not exercised on, is repaid at maturity as a lump sum. - Prepayment: The issuer has a call option.
Underlying shares	509,606 registered ordinary shares (treasury shares)
Exchange price (Korean won/shares)	460,000
Exchange period	From May 27, 2018 to April 6, 2021
Call option by the issuer	- Share price (based on closing price) is higher than 130% of exchange price for more than 20 trading days during 30 consecutive trading days in a row, after 1 year from the closing date. - The amount of outstanding bonds is less than 10% in aggregate principal amount of the bonds originally issued (clean up call). - As a result of changes relating to tax laws in Korea, the issuer becomes obliged to pay any additional amounts.
Call option by bondholders	- The shares cease to be listed or admitted to trading or are suspended for a period equal to or exceeding 30 consecutive trading days. - The occurrence of a change of control

³ Details of 1-2nd EUR overseas exchangeable bonds are as follows:

	Details
Aggregate principal amount	EUR 315,200,000
Issue price	EUR 315,200,000
Coupon rate (%)	0.00
Issue date	April 16, 2018
Maturity date	April 16, 2021
Redemption	- Redemption at maturity: Outstanding bond principal, which is not

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	repaid early or which call option is not exercised on, is repaid at maturity as a lump sum.
	- Prepayment: The issuer has a call option.
Underlying shares	775,128 registered ordinary shares (treasury shares)
Exchange price (Korean won/shares)	533,600
Exchange period	From May 27, 2018 to April 6, 2021
Call option by the issuer	- Share price (based on closing price) is higher than 130% of exchange price for more than 20 trading days during 30 consecutive trading days in a row, after 1 year from the closing date. - The amount of outstanding bonds is less than 10% in aggregate principal amount of the bonds originally issued (clean up call). - As a result of changes relating to tax laws in Korea, the issuer becomes obliged to pay any additional amounts.
Call option by bondholders	- The shares cease to be listed or admitted to trading or are suspended for a period equal to or exceeding 30 consecutive trading days. - The occurrence of a change of control

Details of lease liabilities as at June 30, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>		June 30, 2021			
Leaser	Annual interest rate (%)	Latest maturity date	Total amount	Current	Non-current
Hyundai Oil Bank and others	1.98 ~ 3.01	2068.3.31	255,149	57,307	197,842

<i>(in millions of Korean won)</i>		December 31, 2020			
Leaser	Annual interest rate (%)	Latest maturity date	Total amount	Current	Non-current
Hyundai Oil Bank and others	1.98 ~ 3.01	2068.12.31	184,625	55,389	129,236

15. Provisions

Changes in provisions for the six-month period ended June 30, 2021 and for the year ended December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>		June 30, 2021			
	Warranty¹	Greenhouse gas emission²	Legal claims³	Restoration⁴	Total
Beginning balance	1,244,017	4,875	8,286	112,829	1,370,007
Additions (reversal)	661,722	(4,338)	6,315	4,388	668,087
Used	(260,690)	-	(3)	(22,924)	(283,617)
Ending balance	1,645,049	537	14,598	94,293	1,754,477
Less: current portion	(1,082,581)	(537)	-	(46,496)	(1,129,614)
Total	562,468	-	14,598	47,797	624,863

<i>(in millions of Korean won)</i>		December 31, 2020			
	Warranty¹	Greenhouse gas emission²	Legal claims³	Restoration⁴	Total

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Beginning balance	596,251	25,157	370	114,950	736,728
Additions (reversal)	942,425	(12,382)	8,885	22,112	961,040
Used	<u>(294,659)</u>	<u>(7,900)</u>	<u>(969)</u>	<u>(24,233)</u>	<u>(327,761)</u>
Ending balance	1,244,017	4,875	8,286	112,829	1,370,007
Less: current portion	<u>(1,000,312)</u>	<u>(4,875)</u>	-	<u>(36,264)</u>	<u>(1,041,451)</u>
Total	<u>243,705</u>	<u>-</u>	<u>8,286</u>	<u>76,565</u>	<u>328,556</u>

¹ Warranty provisions have been accrued based on historical experience for the estimated warranty costs to be incurred due to quality control, exchange, refunds with regard to products. In addition, provisions related to replacement costs for ESS and voluntary automotive battery recalls are determined based on the best estimate and included in the above warranty provision. The provisions are adjusted to reflect the current best estimate.

² Greenhouse gas emission provisions have been accrued for estimated expenditures to be obligated for any excess emission. The estimated emission as at June 30, 2021 amounts to 4,253 thousand tons (June 30, 2020: 4,296 thousand tons).

³ Lawsuit provisions have been accrued for certain pending cases.

⁴ As at June 30, 2021, restoration provisions have been accrued for the estimated expenses to restore land pollutions and others.

16. Net Defined Benefit Liabilities

Details of net defined benefit liabilities recognized in the consolidated statements of financial position as at June 30, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2021	December 31, 2020
Present value of defined benefit obligations ¹	1,513,808	1,454,596
Fair value of plan assets	<u>(1,290,832)</u>	<u>(1,336,637)</u>
Liabilities in the consolidated statement of financial position	<u>222,976</u>	<u>117,959</u>

¹ The present value of retirement benefit obligations is net of existing contributions to the National Pension Plan of ₩692 million as at June 30, 2021 (December 31, 2020: ₩734 million).

The amounts recognized in the consolidated statements of profit or loss for the three-month and six-month periods ended June 30, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021		2020	
	Three months	Six months	Three months	Six months
Current service cost ¹	47,830	95,357	46,299	92,227
Interest cost	<u>428</u>	<u>1,126</u>	<u>1,035</u>	<u>2,092</u>
Total, included in employee benefit expenses	<u>48,258</u>	<u>96,483</u>	<u>47,334</u>	<u>94,319</u>

¹ The above amounts excluded ₩1,637 million (2020: ₩1,091 million) of expenses capitalized to construction in progress and development costs.

Post-employment benefits recognized for defined contribution plan for the six-month period ended June 30, 2021, amounted to ₩4,962 million (2020: ₩3,767 million).

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Post-employment benefits recognized in the consolidated statements of profit or loss for the three-month and six-month periods ended June 30, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021		2020	
	Three months	Six months	Three months	Six months
Cost of sales	28,987	59,820	28,659	57,127
Selling and administrative expenses	21,239	41,379	18,471	37,130
Discontinued operations	22	246	1,493	3,880
Total	50,248	101,445	48,623	98,137

Movements in the present value of defined benefit obligations for the six-month period ended June 30, 2021 and for the year ended December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2021	December 31, 2020
Beginning balance	1,454,596	1,343,553
Transfer in	21,878	7,190
Transfer out	(4,377)	(1,690)
Current service cost	96,994	202,276
Interest expense	18,379	31,314
Remeasurements:		
Actuarial loss from change in demographic assumptions	-	7,943
Actuarial gain from change in financial assumptions	(31,454)	(28,735)
Actuarial loss (gain) from experience adjustments	18,556	(10,239)
Others	743	1,433
Exchange differences	(1,993)	(14,637)
Payments from plans	(59,514)	(83,812)
Ending balance	1,513,808	1,454,596

Movements in the fair value of plan assets for the six-month period ended June 30, 2021 and for the year ended December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2021	December 31, 2020
Beginning balance	1,336,637	1,164,393
Transfer in	977	-
Transfer out	(100)	(725)
Interest income	17,253	27,307
Remeasurements:		
Return on plan assets (excluding amounts included in interest income)	(7,904)	(5,069)
Contributions:		
Employers	503	227,555
Payments from plans	(55,679)	(76,458)
Administrative costs	(855)	(366)
Ending balance	1,290,832	1,336,637

The actual return on plan assets for the six-month period ended June 30, 2021, was ₩9,349

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million (December 31, 2020: ₩22,238 million).

The significant actuarial assumptions as at June 30, 2021 and December 31, 2020, are as follows:

	June 30, 2021	December 31, 2020
Discount rate	2.4% ~ 2.9%	2.4% ~ 2.5%
Salary growth rate	4.0% ~ 5.0%	4.0% ~ 5.0%

The sensitivity analysis for changes in key actuarial assumptions as at June 30, 2021, is as follows:

<i>(in millions of Korean won)</i>	Increase by 0.5%	Decrease by 0.5%
Discount rate:		
Increase (decrease) in defined benefit obligations	(141,483)	100,706
Salary growth rate:		
Increase (decrease) in defined benefit obligations	96,739	(140,022)

A decrease in corporate bond yields may lead most significantly to an increase in defined benefit liabilities.

The above sensitivity analyses are based on a change in an assumption while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated. The sensitivity of the defined benefit obligation to changes in principal actuarial assumptions is calculated using the projected unit credit method, the same method applied when calculating the defined benefit obligations recognized on the statement of financial position.

The methods and types of assumptions used in preparing the sensitivity analysis did not change compared to the prior period.

Plan assets as at June 30, 2021 and December 31, 2020, consist of:

<i>(in millions of Korean won)</i>	June 30, 2021		December 31, 2020	
	Amount	Composition (%)	Amount	Composition (%)
Insurance contracts with guaranteed yield	1,268,245	98.3	1,314,072	98.3
Equity linked bonds	20,984	1.6	20,855	1.6
Time deposits	1,603	0.1	1,710	0.1
	1,290,832	100.0	1,336,637	100.0

Plan assets consist of various debt instruments with principal and interest protection and others which have no quoted market prices in an active market.

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17. Other Current and Non-Current Liabilities

Details of other current and non-current liabilities as at June 30, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2021	December 31, 2020
Current		
Advances from customers	282,509	203,507
Withholdings	86,599	128,754
Unearned revenues	50,610	62,286
Accrued expenses and others	418,476	393,482
Total	<u>838,194</u>	<u>788,029</u>
Non-current		
Long-term accrued expenses	65,487	63,019
Long-term advanced received	57,823	83,887
Total	<u>123,310</u>	<u>146,906</u>

18. Commitments and Contingencies

- (1) The Parent Company is jointly liable for liabilities of LG Energy Solutions Co., Ltd. as at December 1, 2020, a newly established company through the split-off from the Parent Company.
- (2) As at June 30, 2021, the Parent Company and certain subsidiaries have been guaranteed from Seoul Guarantee Insurance Company for the execution of contracts and others.
- (3) As at June 30, 2021, the Parent Company and certain subsidiaries have various specific line of credit agreements with several financial institutions, as follows:

(unit: Korean won in millions, foreign currencies in millions)

Classification	The Parent Group		Certain Overseas Subsidiaries					
	KRW	USD	KRW	USD	CNY	EUR	INR	THB
Limit of bank overdraft	20,400		8,700	300	1,800	29	-	10
Limit of the letter of credit	22,000	386	-	297	2,227	-	777	-
Limit of discount of notes from export	-	347	5,500	221	2,900	-	-	-
Limit of guaranteed payments in other foreign currency	-	146	-	51	400	-	-	-
Limit of loan arrangements	-	-	75,336	2,881	3,504	2,940	2,857	-

The Group also entered into comprehensive credit line agreements with other financial institutions relating to trade finance and import/export amounting to ₩20,000 million (including bank overdraft of ₩5,000 million) and USD 285 million. Certain subsidiaries entered into factoring agreements with limit of USD 150 million.

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- (4) As at June 30, 2021, the Parent Company and certain subsidiaries have B2B purchase arrangements with several financial institutions with limit of ₩330,000 million and ₩167,818 million, respectively, as well as enterprise general fund arrangement with limit of ₩350,000 million.
- (5) As at June 30, 2021, the Parent Company has reverse factoring agreements, and utilized the facility for ₩584,429 million provided by Shinhan Card and utilized the facility for ₩1,515,184 million provided by Woori Card.
- (6) As at June 30, 2021, in connection with styrene monomer gas leakage accident, several law suits against LG Polymer India Pvt. Ltd., a subsidiary, have been filed with National Green Tribunal of India (NGT) and Andhra Pradesh High Court (APHC). The ultimate outcome of these cases cannot be determined at the reporting date. NGT has ordered LG Polymer India Pvt. Ltd. to deposit INR 500 million in connection with this accident and the manufacturing facility is currently closed with limited access in accordance with APHC's order.
- (7) As at June 30, 2021, in relation to price fixing of mobile batteries, the consumers in Israel have filed one class action against a certain subsidiary. However, the ultimate outcome of these cases cannot be determined at the reporting date.
- (8) In addition, as at June 30, 2021, the Parent Company and certain subsidiaries have been named as a plaintiff in 10 and 20 legal actions, respectively, involving ₩29,303 million and ₩9,138 million in claims, respectively. They have been named as a defendant in 11 and 170 legal actions, respectively, with ₩6,513 million and ₩5,674 million in claims, respectively. The ultimate outcome of these cases cannot be determined at the reporting date.
- (9) As at June 30, 2021, the Parent Company is under investigation by the related authorities in relation to the manipulation of the emission of fine dust-causing substance in the Yeosu Industrial Complex, and the final outcome of these investigations cannot be determined at the reporting date. As at June 30, 2021, the Parent Company shut down the relevant production facilities.
- (10) The Parent Company has entered into manufacture and production technical contracts with ExxonMobil and others.
- (11) The Parent Company has entered into a license agreement with LG Corp. to use trademarks on the products that the Group manufactures and sells, and on the services the Group provides in relation to its business.
- (12) As at June 30, 2021, the Parent Company has entered into payment guarantee contract of USD 65 million, and certain subsidiaries have entered into payment guarantee contracts of USD 6 million, EUR 2 million and ₩6,748 million with financial institutions to guarantee the warrant of certain installed products. Also, certain subsidiaries have entered into payment guarantee contract of CNY 260 million with financial institutions in relation to custom of imported raw materials.

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(13) As at June 30, 2021 and December 31, 2020, assets pledged as collateral for the borrowings are as follows:

<i>(in millions of Korean won)</i>	June 30, 2021			Secured party
	Secured amount	Borrowings / Loan	Limit	
Factory	20,880	Current and non-current borrowings	5,823	KDB
	<u>20,880</u>		<u>5,823</u>	

<i>(in millions of Korean won)</i>	December 31, 2020			Secured party
	Secured amount	Borrowings / Loan	Limit	
Factory	20,880	Current and non-current borrowings	6,622	KDB
	<u>20,880</u>		<u>6,622</u>	

(14) Capital expenditure arrangement that has not incur at the end of the reporting period is as follows:

<i>(in millions of Korean won)</i>	June 30, 2021	December 31, 2020
Property, plant and equipment	3,493,882	2,428,411

(15) As at June 30, 2021, the Group has entered into an agreement with General Motors (GM) regarding joint investment in Ultium Cells LLC, whereby each party can sell its shares to third parties in 8 years after the inception of the contract. In addition, if one party defaults, the other party has the right to purchase shares from the other party. The Group is in the process of approval by the government for the use of core technologies according to the Industrial Technology Protection Act.

19. Share Capital

Changes in share capital and share premium for the six-month period ended June 30, 2021 and for the year ended December 31, 2020, are as follows:

<i>(in millions of Korean won and in shares)</i>	Ordinary shares		Preferred shares		Share premium
	Number of shares	Share capital	Number of shares	Share capital	
January 1, 2020	70,592,343	352,962	7,688,800	38,444	2,014,036
December 31, 2020	70,592,343	352,962	7,688,800	38,444	2,014,036
June 30, 2021	<u>70,592,343</u>	<u>352,962</u>	<u>7,688,800</u>	<u>38,444</u>	<u>2,014,036</u>

Changes in treasury shares for the six-month period ended June 30, 2021 and for the year ended December 31, 2020, are as follows:

<i>(in millions of Korean won and in shares)</i>	Number of shares		Carrying amount	Gain on disposal of
	Ordinary	Preferred		

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	shares	shares		treasury shares
January 1, 2020	1,652,417	16,367	354,945	13,855
Treasury shares reduction due to the exercise of exchange rights	(1,187,575)	-	(319,246)	417,864
Others	-	1	-	-
December 31, 2020	464,842	16,368	35,699	431,719
Treasury shares reduction due to the exercise of exchange rights	(91,228)	-	(14,302)	28,344
June 30, 2021	373,614	16,368	21,397	460,063

20. Retained Earnings

Retained earnings as at June 30, 2021 and December 31, 2020, consist of:

<i>(in millions of Korean won)</i>	June 30, 2021	December 31, 2020
Legal reserve ¹	416,618	401,574
Discretionary reserve ²	12,945,537	13,780,609
Retained earnings before appropriation	3,832,589	993,121
Total	17,194,744	15,175,304

¹ The Commercial Code of the Republic of Korea requires the Parent Company to appropriate for each financial period, as a legal reserve, an amount equal to a minimum of 10% of cash dividends paid until such reserve equals 50% of its issued share capital. The reserve is not available for cash dividends payment, but may be transferred to share capital or used to reduce accumulated deficit. When the accumulated legal reserves (the sum of capital reserves and earned profit reserves) are greater than 1.5 times the paid-in capital amount, the excess legal reserves may be distributed in accordance with a resolution of the shareholders' meeting.

² The Group separately accumulates a discretionary reserve for research and human resource development through appropriation of retained earnings, which has been included as deductible expense for the corporate income tax return according to the Special Tax Treatment Law. The reserve could be reversed in accordance with the terms of related tax laws.

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21. Other Components of Equity

Details of other components of equity as at June 30, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2021	December 31, 2020
Treasury shares (Note 19)	(21,397)	(35,699)
Capital transactions within the Group ¹	(19,299)	(19,299)
Total	<u>(40,696)</u>	<u>(54,998)</u>

¹ Includes gain or loss on disposal of investments and investment differences due to changes in equity, net of deferred tax.

22. Selling and Administrative Expenses

Selling and administrative expenses for the three-month and six-month periods ended June 30, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021		2020	
	Three months	Six months	Three months	Six months
Wages and salaries	312,010	564,528	240,093	461,668
Post-employment benefits (Note 16)	21,239	41,379	18,471	37,130
Employee benefits	59,072	113,281	49,486	94,590
Travel expense	10,724	18,006	6,475	17,208
Water & utilities	15,719	34,372	12,511	28,300
Packaging expense	1,810	3,248	2,301	3,682
Rental expenses	31,839	60,323	21,584	39,844
Commission expenses	190,917	362,638	168,820	358,118
Depreciation	60,504	115,285	48,019	93,157
Advertising expense	10,832	16,432	5,899	10,259
Freight expenses	208,602	417,347	144,632	304,747
Training expense	7,390	11,320	3,282	5,849
Amortization (Note 12)	39,722	77,757	31,662	59,771
Sample expense	6,311	9,556	7,111	11,375
Development costs	60,754	111,623	59,664	113,398
Others	667,656	797,189	121,724	206,214
Total	<u>1,705,101</u>	<u>2,754,284</u>	<u>941,734</u>	<u>1,845,310</u>

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23. Classification of Expenses by Nature

Cost of sales, and selling and administrative expenses by nature for the three-month and six-month periods ended June 30, 2021 and 2020, consist of:

(in millions of Korean won)

	2021		2020	
	Three months	Six months	Three months	Six months
Changes in inventories of merchandise, finished goods, semi-finished goods and work in process	(522,676)	(799,645)	369,266	17,045
Raw materials and consumables used	6,673,782	11,337,670	3,379,340	7,627,859
Purchase of merchandise	291,613	603,107	311,293	515,587
Employee benefit expenses (Note 24)	899,550	1,626,823	699,833	1,378,263
Advertising expenses	11,168	17,018	6,023	10,608
Freight expenses	220,225	439,481	153,496	322,794
Commission expenses	352,261	656,665	268,803	549,750
Depreciation and amortization	687,404	1,313,612	534,702	1,043,652
Rent expenses and usage fee	19,925	38,690	13,715	30,081
Other expenses	683,082	2,324,801	627,078	1,391,222
Total	9,316,334	17,558,222	6,363,549	12,886,861

24. Employee Benefit Expenses

Details of employee benefit expenses for the three-month and six-month periods ended June 30, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021		2020	
	Three months	Six months	Three months	Six months
Salaries	767,987	1,377,964	591,429	1,159,650
Post-employment benefits – Defined benefit plan (Note 16)	48,236	96,237	45,708	90,490
Post-employment benefits – Defined contribution plan (Note 16)	1,990	4,962	1,422	3,767
Others	81,337	147,660	61,274	124,356
Total	899,550	1,626,823	699,833	1,378,263

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25. Finance Income and Costs

Details of finance income and costs for the three-month and six-month periods ended June 30, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021		2020	
	Three months	Six months	Three months	Six months
Finance income				
Interest income ¹	11,649	22,501	7,664	20,855
Dividend income	710	1,088	12	12
Exchange differences	137,135	250,658	81,362	185,053
Gain related to derivative instruments	21,392	44,122	-	-
Gain on valuation of financial instruments	890	11,863	-	-
Total	171,776	330,232	89,038	205,920
Finance costs				
Interest expense ²	46,807	87,218	57,178	117,714
Exchange differences	46,827	193,472	24,460	367,754
Loss related to derivative instruments	5,018	13,097	54,349	61,120
Loss on valuation of financial instruments	82	84	-	-
Total	98,734	293,871	135,987	546,588

¹ Details of interest income for the three-month and six-month periods ended June 30, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021		2020	
	Three months	Six months	Three months	Six months
Deposits held by financial institutions	8,084	16,100	6,076	13,511
Other loans and receivables	3,565	6,401	1,588	7,344
Total	11,649	22,501	7,664	20,855

² Details of interest expense for the three-month and six-month periods ended June 30, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021		2020	
	Three months	Six months	Three months	Six months
Interest on financial institutions	11,892	20,273	13,443	36,832
Interest on lease liabilities	1,638	3,731	3,419	4,354
Interest on debentures	38,102	74,797	38,745	76,683
Other interest expenses	11,466	22,068	10,361	18,267
Capitalized interest for qualifying assets	(16,291)	(33,651)	(8,790)	(18,422)
Total	46,807	87,218	57,178	117,714

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26. Other Non-Operating Income

Details of other non-operating income for the three-month and six-month periods ended June 30, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021		2020	
	Three months	Six months	Three months	Six months
Exchange differences	53,998	328,783	91,041	377,876
Gain on disposal of property, plant and equipment	6,847	31,824	720	1,385
Gain on disposal of intangible assets	-	15	34	147
Gain on disposal of investments in associates (Note 10)	-	-	(18,096)	310,538
Others	7,497	23,647	14,982	23,867
Total	68,342	384,269	88,681	713,813

27. Other Non-Operating Expenses

Details of other non-operating expenses for the three-month and six-month periods ended June 30, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021		2020	
	Three months	Six months	Three months	Six months
Exchange differences	29,688	266,003	86,268	407,647
Loss on disposal of property, plant and equipment	24,188	32,874	13,281	19,162
Loss on disposal of intangible assets	6	109	-	113
Impairment loss on property, plant and equipment (Note 11)	3,637	6,568	15,910	48,364
Impairment loss on intangible assets (Note 12)	-	14	41	41
Donations	7,189	7,750	2,480	5,175
Others	8,749	22,836	26,337	44,738
Total	73,457	336,154	144,317	525,240

28. Tax Expense and Deferred Tax

Income tax expense is recognized based on the best estimate of weighted average annual income tax rate expected for the full financial year. The estimated average annual income tax rate used for the year ending December 31, 2021, is 28.8% (the estimated tax rate for the year ended December 31, 2020: 22.2%).

29. Earnings per Share

Basic earnings per share is calculated by dividing the profit attributable to equity holders of the Parent Company by the weighted average number of shares in issue excluding shares purchased by the Parent Company and held as treasury shares. As at the reporting date, the Parent Company has no potential ordinary shares. Preferred shares have a right to participate in the

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profits of the Group. These participation rights have been considered in presenting the earnings per share information for the both of ordinary shares and preferred shares.

Basic earnings per share for profit from continuing operations and earnings per share attributable to the equity holders of the Parent Company for the three-month and six-month periods ended June 30, 2021 and 2020, are computed as follows:

Basic earnings per ordinary share from continuing operations

*(in millions of Korean won and
in number of shares)*

	2021		2020	
	Three months	Six months	Three months	Six months
Profit from continuing operations attributable to ordinary shares ¹	1,341,902	2,223,769	318,483	349,465
Weighted average number of ordinary shares outstanding ²	<u>70,216,305</u>	<u>70,216,305</u>	<u>68,939,926</u>	<u>68,939,926</u>
Basic earnings per ordinary share from continuing operations <i>(in won)</i>	<u>19,111</u>	<u>31,670</u>	<u>4,620</u>	<u>5,069</u>

Basic earnings per ordinary share

*(in millions of Korean won and
in number of shares)*

	2021		2020	
	Three months	Six months	Three months	Six months
Profit attributable to ordinary shares ¹	1,343,386	2,521,285	343,899	362,778
Weighted average number of ordinary shares outstanding ²	<u>70,216,305</u>	<u>70,216,305</u>	<u>68,939,926</u>	<u>68,939,926</u>
Basic earnings per ordinary shares <i>(in won)</i>	<u>19,132</u>	<u>35,907</u>	<u>4,988</u>	<u>5,262</u>

Basic earnings per preferred share from continuing operations

*(in millions of Korean won and
in number of shares)*

	2021		2020	
	Three months	Six months	Three months	Six months
Profit from continuing operations attributable to preferred share ¹	146,723	243,180	35,540	39,084
Weighted average number of preferred shares outstanding ²	<u>7,672,432</u>	<u>7,672,432</u>	<u>7,672,433</u>	<u>7,672,433</u>
Basic earnings per preferred share from continuing operations <i>(in won)</i>	<u>19,123</u>	<u>31,695</u>	<u>4,632</u>	<u>5,094</u>

Basic earnings per preferred share

*(in millions of Korean won and
in number of shares)*

	2021		2020	
	Three months	Six months	Three months	Six months

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Profit attributable to preferred shares ¹	146,886	275,689	38,369	40,566
Weighted average number of preferred shares outstanding ²	<u>7,672,432</u>	<u>7,672,432</u>	<u>7,672,433</u>	<u>7,672,433</u>
Basic earnings per preferred shares (<i>in won</i>)	<u>19,144</u>	<u>35,932</u>	<u>5,000</u>	<u>5,287</u>

¹ Profit attributable to ordinary and preferred shares are as follows:

(*in millions of Korean won*)

	2021		2020	
	Three months	Six months	Three months	Six months
Profit from continuing operations attributable to the equity holders of the Parent Company	1,488,625	2,466,949	354,023	388,549
Ordinary shares dividends (A)	175,541	351,081	34,470	68,940
Preferred shares dividends (B)	19,277	38,554	3,932	7,864
Undistributed earnings from continuing operation for the period	1,293,807	2,077,314	315,621	311,745
Undistributed earnings available for ordinary shares (C)	1,166,361	1,872,688	284,013	280,525
Undistributed earnings available for preferred shares (D)	127,446	204,626	31,608	31,220
Profit from continuing operations for the period attributable to ordinary shares (A+C)	1,341,902	2,223,769	318,483	349,465
Profit from continuing operations for the period attributable to preferred shares (B+D)	146,723	243,180	35,540	39,084

(*in millions of Korean won*)

	2021		2020	
	Three months	Six months	Three months	Six months
Profit attributable to the equity holders of the Parent Company	1,490,272	2,796,974	382,268	403,344
Ordinary shares dividends (A)	175,540	351,081	34,470	68,940
Preferred shares dividends (B)	19,278	38,554	3,932	7,864
Undistributed earnings for the period	1,295,454	2,407,339	343,866	326,540
Undistributed earnings available for ordinary shares (C)	1,167,846	2,170,204	309,429	293,838
Undistributed earnings available for preferred shares (D)	127,608	237,135	34,437	32,702
Profit for the period attributable to ordinary shares (A+C)	1,343,386	2,521,285	343,899	362,778
Profit for the period attributable to preferred shares (B+D)	146,886	275,689	38,369	40,566

² Weighted average numbers of shares are calculated as follows:

Ordinary shares outstanding	Period	2021		
		Number of shares	Number of days	Number of shares x days
Beginning balance	2021. 1. 1 - 2021. 6. 30	70,163,895	181	12,699,664,995
Conversion of treasury shares	2021. 1. 9 - 2021. 6. 30	54,834	173	9,486,282
Total				<u>12,709,151,277</u>

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Weighted average number of ordinary shares outstanding: $12,709,151,277 / 181 = 70,216,305$ shares

Preferred shares outstanding	Period	2021		
		Number of shares	Number of days	Number of shares x days
Beginning balance	2021. 1. 1 - 2021. 6. 30	7,672,432	181	1,388,710,192
Total				1,388,710,192

Weighted average number of preferred shares outstanding: $1,388,710,192 / 181 = 7,672,432$ shares

Ordinary shares outstanding	Period	2020		
		Number of shares	Number of days	Number of shares x days
Beginning balance	2020. 1. 1 - 2020. 6. 30	68,939,926	182	12,547,066,532
Total				12,547,066,532

Weighted average number of ordinary shares outstanding: $12,547,066,532 / 182 = 68,939,926$ shares

Preferred shares outstanding	Period	2020		
		Number of shares	Number of days	Number of shares x days
Beginning balance	2020. 1. 1 - 2020. 6. 30	7,672,433	182	1,396,382,806
Total				1,396,382,806

Weighted average number of preferred shares outstanding: $1,396,382,806 / 182 = 7,672,433$ shares

For the six-month periods ended June 30, 2021 and 2020, the Parent Company did not calculate diluted earnings per share due to antidilution.

Basic and diluted earnings (losses) per share attributable to ordinary and preferred shares from discounted operations for the three-month and six-month periods ended June 30, 2021 and 2020, are as follows:

(in millions of Korean won and in number of shares)

	2021		2020	
	Three months	Six months	Three months	Six months
Basic earnings per ordinary share from discounted operations	21	4,237	368	193
Basic earnings per preferred share from discounted operations	21	4,237	368	193
Diluted earnings per ordinary share from discounted operations	21	4,237	368	193
Diluted earnings per preferred share from discounted operations	21	4,237	368	193

30. Dividends

The ₩778,383 million (2020: ₩153,608 million) of dividends for the year ended December 31, 2020, was paid to the shareholders of the Parent Company in April 2021.

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31. Related Party Transactions

As at June 30, 2021 and December 31, 2020, LG Corp. is an entity exercising a significant influence over the Group, which owns 33.34% of the Parent Company's ordinary shares.

Details of associates and other related parties that have sales and other transactions with the Group or have receivables and payables balances as at June 30, 2021 and December 31, 2020, are as follows, and the details of investments in subsidiaries, associates and joint ventures are described in Note 1.3:

Related party	Related party's subsidiary (Domestic)	Related party's subsidiary (Overseas)	Details
S&I Corp.	S&I CM	S&I CM NANJING Co., Ltd. and others	Subsidiary of LG Corp.
LG CNS Co., Ltd.	Biz Tech Partners Co., Ltd. and others	LG CNS America Inc. and others	Subsidiary of LG Corp.
LG Management Development Institute	-	-	Subsidiary of LG Corp.
LG Sports Ltd.	-	-	Subsidiary of LG Corp.
LG Holdings Japan	-	-	Subsidiary of LG Corp.
LX MMA Corporation	-	-	Joint venture of LG Corp.
LG Display Co., Ltd.	-	LG Display (China) Co., Ltd. and others	LG Enterprise group ¹
LG Electronics Inc.	LG Innotek Co., Ltd. and others	Inspur LG Digital Mobile Communications Co., Ltd. and others	LG Enterprise group ¹
LX International Corp.	LX Pantos Co., Ltd. and others	LX International (Japan) Ltd. and others	LG Enterprise group ¹
LX Hausys, Ltd.	-	LG Hausys Tianjin Co., Ltd. and others	LG Enterprise group ¹
LG Household & Health Care Ltd.	Coca-Cola Beverage Co. and others	-	LG Enterprise group ¹
LG Uplus Corp.	LG HelloVision Corp.	-	LG Enterprise group ¹
G II R Inc.	HS AD Inc.	Beijing Yuanzhimeng Advertising Co., Ltd.	LG Enterprise group ¹

¹ Although these entities are not the related parties of the Group in accordance with K-IFRS 1024, these entities belong to a large enterprise group in accordance with the Monopoly Regulation and Fair Trade Act.

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Sales and purchases with related parties for the six-month periods ended June 30, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021					
	Sales and others	Purchase and others				
		Purchase of raw materials /merchandises	Acquisition of property, plant and equipment and intangible assets	Acquisition of right-of-use assets	Interest expense	Others
Entity with a significant influence over the Group						
LG Corp.	-	-	-	-	101	43,012
Associates and joint ventures						
SEETEC Co., Ltd.	25,861	75,717	13	92	212	33,248
TECWIN Co., Ltd.	5	11	826	-	-	25
HL Greenpower Co., Ltd.	324,164	440	-	-	-	-
Others	220	18,817	-	-	-	1,289
Other related parties						
LX MMA Corporation ¹	59,327	101,157	-	-	-	1,690
S&I Corp. and its subsidiaries	39	6,386	252,631	-	-	54,107
LG CNS Co., Ltd. and its subsidiaries	6,539	2,220	155,401	-	10	73,283
Others	88	-	-	-	-	16,202
Others						
LG Display Co., Ltd. and its subsidiaries	314,115	65	-	-	8	2
LG Electronics Inc. and its subsidiaries	804,447	597,131	148,384	-	19	16,499
LX International Corp. and its subsidiaries	45,334	201,440	11,760	-	1	474,519
LX Hausys, Ltd. and its subsidiaries	132,048	-	29,924	-	-	662
Others	4,882	15,639	928	9	33	2,262
Total	1,717,069	1,019,023	599,867	101	384	716,800

(in millions of Korean won)

	2020					
	Sales and others	Purchase and others				
		Purchase of raw materials /merchandises	Acquisition of property, plant and equipment and intangible assets	Acquisition of right-of-use assets	Interest expense	Others
Entity with a significant influence over the Group						
LG Corp.	-	-	-	-	126	29,308
Associates and joint						

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ventures						
SEETEC Co., Ltd.	14,703	62,090	9	618	16	41,563
TECWIN Co., Ltd.	-	237	906	-	-	66
HL Greenpower Co., Ltd.	457,259	-	-	-	-	2,797
Others	36	869	-	-	-	1,239
Other related parties						
LX MMA Corporation ¹	52,378	65,328	-	-	-	1,803
S&I Corp. and its subsidiaries	119	11,457	327,469	-	-	28,633
LG CNS Co., Ltd. and its subsidiaries	3,136	1,589	148,183	-	10	49,122
Others	-	-	-	584	1	7,726
Others						
LG Display Co., Ltd. and its subsidiaries	406,676	70	868	821	-	201
LG Electronics Inc. and its subsidiaries	475,095	352,888	234,544	-	-	21,692
LX International Corp. and its subsidiaries	28,763	168,987	33,827	187	-	283,468
LX Hausys, Ltd. and its subsidiaries	81,826	1,106	1,985	-	-	3,857
Others	4,129	11,011	131	1,605	17	2,846
Total	1,524,120	675,632	747,922	3,815	170	474,321

¹ Net sales and purchase amounts after offsetting for Raffinate transactions with LX MMA Corporation.

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Balances of receivables and payables arising from sales and purchases of goods and services as at June 30, 2021 and December 31, 2020, are as follows:

(in millions of Korean won)

	June 30, 2021			
	Receivables			Total
	Trade receivables and others	Loan receivables	Other receivables	
Entity with a significant influence over the Group				
LG Corp.	-	-	9,969	9,969
Associates and joint ventures				
SEETEC Co., Ltd.	5,186	-	192	5,378
TECWIN Co., Ltd.	-	-	-	-
HL Greenpower Co., Ltd.	155,094	-	6,528	161,622
Others	-	-	62	62
Other related parties				
LX MMA Corporation	11,211	-	549	11,760
S&I Corp. and its subsidiaries ¹	-	-	9,578	9,578
LG CNS Co., Ltd. and its subsidiaries	5,788	-	27	5,815
Others	-	-	6,742	6,742
Others				
LG Display Co., Ltd. and its subsidiaries	104,535	-	355	104,890
LG Electronics Inc. and its subsidiaries	324,337	-	97,688	422,025
LG International Corp. and its subsidiaries	1,270	-	378	1,648
LG Hausys, Ltd. and its subsidiaries	55,839	-	30	55,869
Others	22	-	1,509	1,531
Total	663,282	-	133,607	796,889

(in millions of Korean won)

	June 30, 2021			
	Payables			Total
	Trade payables	Borrowings	Lease liabilities	
Entity with a significant influence over the Group				
LG Corp.	-	-	5,964	9,312
Associates and joint ventures				
SEETEC Co., Ltd.	15,602	-	25,336	9,583
TECWIN Co., Ltd.	-	-	-	37
HL Greenpower Co., Ltd.	-	-	-	543
Others	9,707	-	-	439
Other related parties				
LX MMA Corporation	17,878	-	-	-
S&I Corp. and its subsidiaries ¹	-	-	-	165,788
LG CNS Co., Ltd. and its subsidiaries	-	-	603	96,364
Others	-	-	-	1,029
Others				
LG Display Co., Ltd. and its subsidiaries	42	-	651	46
LG Electronics Inc. and its subsidiaries	184,569	-	1,766	188,614
LG International Corp. and its subsidiaries	37,772	-	82	129,315
LG Hausys, Ltd. and its subsidiaries	-	-	15	4,887
Others	3,106	-	3,779	5,289
Total	268,676	-	38,196	611,246

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	December 31, 2020			
	Receivables			Total
	Trade receivables and others	Loan receivables	Other receivables	
Entity with a significant influence over the Group				
LG Corp.	-	-	12,420	12,420
Associates and joint ventures				
SEETEC Co., Ltd.	3,820	-	201	4,021
TECWIN Co., Ltd.	-	-	-	-
HL Greenpower Co., Ltd.	277,326	-	-	277,326
Others	-	-	22	22
Other related parties				
LX MMA Corporation	3,186	-	534	3,720
S&I Corp. and its subsidiaries ¹	6	-	8,783	8,789
LG CNS Co., Ltd. and its subsidiaries	7,048	-	85	7,133
Others	606	-	4,360	4,966
Others				
LG Display Co., Ltd. and its subsidiaries	152,152	-	27,792	179,944
LG Electronics Inc. and its subsidiaries	245,176	-	111,549	356,725
LX International Corp. and its subsidiaries	4,710	-	-	4,710
LX Hausys, Ltd. and its subsidiaries	34,977	-	31	35,008
Others	128	-	1,163	1,291
Total	729,135	-	166,940	896,075

(in millions of Korean won)

	December 31, 2020				
	Payables			Total	
	Trade payables	Borrowings	Lease liabilities		Other payables
Entity with a significant influence over the Group					
LG Corp.	-	-	11,934	4,013	15,947
Associates and joint ventures					
SEETEC Co., Ltd.	14,977	-	26,014	9,884	50,875
TECWIN Co., Ltd.	-	-	-	574	574
HL Greenpower Co., Ltd.	-	-	-	330	330
Others	194	-	-	272	466
Other related parties					
LX MMA Corporation	13,272	-	-	-	13,272
S&I Corp. and its subsidiaries ¹	30	-	-	265,647	265,677
LG CNS Co., Ltd. and its subsidiaries	4	-	1,206	164,632	165,842
Others	-	-	92	289	381
Others					
LG Display Co., Ltd. and its subsidiaries	-	-	703	115	818
LG Electronics Inc. and its subsidiaries	133,330	-	1,792	254,868	389,990
LX International Corp. and its subsidiaries	23,654	-	575	74,267	98,496
LX Hausys, Ltd. and its subsidiaries	-	-	-	3,965	3,965
Others	1,869	-	1,101	6,224	9,194
Total	187,330	-	43,417	785,080	1,015,827

¹ Other receivables to S&I Corp. include the amount of deposits which are classified as memberships in the financial statements of the Group.

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Fund transactions with related parties for the six-month periods ended June 30, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021						
	Dividends received	Dividends paid	Equity contributions in cash (capital reduction)	Loans		Borrowings ¹	
Loans				Repayment	Borrowings	Repayment	
Entity with a significant influence over the Group							
LG Corp.	-	235,342	-	-	-	-	5,958
Associates and joint ventures							
SEETEC Co., Ltd.	10,000	-	-	-	-	92	4,463
Other related parties							
LG CNS Co., Ltd.	-	-	-	-	-	-	2,408
LG Holdings Japan Co.,Ltd.	-	-	-	-	-	-	91
Others							
LG Display America, Inc.	-	-	-	-	-	-	71
Pantos Logistics France	-	-	-	-	-	-	357
Pantos Logistics Spain S.L.	-	-	-	-	-	-	137
LG Electronics Deutschland GmbH	-	-	-	-	-	-	141
LX Hausys, Ltd.	-	-	-	-	-	-	562
LG HOUSEHOLD & HEALTH CARE LTD	-	-	-	-	-	9	718
Total	10,000	235,342	-	-	-	101	14,906

(in millions of Korean won)

	2020						
	Dividends received	Dividends paid	Equity contributions in cash (capital reduction)	Loans		Borrowings ¹	
Loans				Repayment	Borrowings	Repayment	
Entity with a significant influence over the Group							
LG Corp.	-	47,068	-	-	-	-	7,306
Associates and joint ventures							
SEETEC Co., Ltd.	10,000	-	-	-	-	618	999
TECWIN Co., Ltd.	314	-	-	-	-	-	-
HUAJIN NEW ENERGY MATERIALS(QUZHOU) CO.,Ltd	-	-	13,611	-	-	-	-
Other related parties							

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LG CNS Co., Ltd.	-	-	-	-	-	-	593
LG Holdings Japan Co., Ltd.	-	-	-	-	-	584	292
Others							
LG Display America, Inc.	-	-	-	-	-	821	10
Pantos Logistics (China) Co., Ltd.	-	-	-	-	-	-	11
Pantos Logistics France	-	-	-	-	-	187	80
LX Hausys, Ltd.	-	-	-	-	-	-	36
LG HOUSEHOLD & HEALTH CARE LTD	-	-	-	-	-	1,605	351
Total	10,314	47,068	13,611	-	-	3,815	9,678

¹ The amounts represent lease liabilities that were recognized or repaid for the six-month ended June 30, 2021.

Compensation for key management of the Group for the six-month periods ended June 30, 2021 and 2020, consists of:

<i>(in millions of Korean won)</i>	2021	2020
Short-term employee benefits	41,502	41,562
Post-employment benefits	7,275	3,556
Total	48,777	45,118

Key management includes directors and audit committee members having duties and responsibilities over planning, operations and controlling of the Group's business activities.

There are no provisions recognized against receivables from related parties as at June 30, 2021 and December 31, 2020; therefore, there are no impairment losses recognized against the receivables from related parties for the six-month period ended June 30, 2021 and for the year ended December 31, 2020.

As at June 30, 2021, there are no payment guarantees provided by the Group for related parties.

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32. Cash Generated from Operations

Reconciliation between profit before income tax and cash generated from operations for the six-month periods ended June 30, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021	2020
Profit before income tax		
Profit before income tax from continuing operations	3,637,879	627,614
Profit before income tax from discontinued operations	412,095	27,634
	<u>3,049,974</u>	<u>655,248</u>
Adjustments for:		
Depreciation	1,207,292	1,009,005
Amortization	108,359	79,029
Post-employment benefits	96,483	93,618
Finance income	(181,503)	(45,260)
Finance costs	144,850	389,990
Foreign exchange differences	(1,853)	2,906
Reversal of loss on valuation of inventories	(658)	(26,730)
Gain on disposal of property, plant and equipment	(38,313)	(1,833)
Gain on disposal of intangible assets	(15)	(149)
Loss on disposal of property, plant and equipment	32,874	19,407
Loss on disposal of intangible assets	109	116
Impairment loss on property, plant and equipment	7,130	50,420
Impairment loss on intangible assets	14	76
Gain on disposal of investments in associates	-	(310,538)
Gain on disposal of business	(396,144)	-
Additions to provisions	668,087	180,515
Other income	(2,042)	(1,254)
Decrease (increase) in inventories	(1,354,597)	155,222
Increase in trade receivables	(768,003)	(1,222,762)
Increase in other receivables	(1,066,447)	(116,119)
Increase in other current assets	(114,638)	(26,258)
Increase in trade payables	398,860	411,795
Increase in other payables	990,248	602,374
Increase (decrease) in other current liabilities	(97,039)	151,000
Decrease in provisions	(283,617)	(179,373)
Increase (decrease) in net defined benefit liabilities	13,142	(2,546)
Other cash flows from operations	(20,846)	(30,323)
Cash generated from operations	<u><u>3,391,707</u></u>	<u><u>1,837,576</u></u>

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Changes in liabilities arising from financial activities for the six-month period ended June 30, 2021, are as follows:

<i>(in millions of Korean won)</i>	2021						At June 30, 2021
	At January 1, 2021	Cash flows from financing activities	Reclassifi- cation of current portion	Amortization	Lease liabilities	Others	
Short-term borrowings	1,276,349	55,865	986,269	-	-	62,176	2,380,659
Long-term borrowings	3,260,490	435,297	(986,269)	-	106,590	(9,586)	2,806,522
Debentures	5,649,278	1,172,947	-	2,888	-	15,569	6,840,682
Exchange rights	16,797	-	-	-	-	(16,797)	-
Other payables for the reverse factoring arrangement	2,081,307	(1,481,680)	-	-	-	1,484,058	2,083,685
Total	12,284,221	182,429	-	2,888	106,590	1,535,420	14,111,548

Significant non-cash transactions for the six-month periods ended June 30, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021	2020
Reclassification of construction-in-progress	4,082,536	2,938,596
Reclassification of machinery-in-transit	289,710	38,685
Reclassification of long-term borrowings into current portion	1,645,697	1,230,269
Other payables related to acquisitions of property, plant and equipment and intangible assets	1,468,746	1,851,933
Reclassification of other payables under the reverse factoring arrangement	1,484,058	1,343,254
Exchange of treasury stocks such as exchangeable bonds	54,383	-

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33. Segment Information

General information about the Group's reportable segments is as follows:

Segment	Products or services	Major customers
Petrochemicals ¹	ABS, PC, PE, PP, Acrylic, Alcohol, SAP, PVC, Synthetic rubber, Special resin, BPA, Ethylene, Propylene and others	LG Electronics Inc., OCI Group Co. Ltd., Mitsubishi Corp. and others
Energy solution	Mobile batteries, Automotive batteries, Electricity storage batteries and others	Hewlett-Packard Co., General Motors Corp., and others
Advanced materials ¹	Automotive components, LCD Photoresist, OLED materials, Battery materials and others	LG Display Co., Ltd., Samsung Display Co., Ltd., BOE, AUO and others
Life sciences ¹	Growth hormone, Vaccine, Antidiabetic, agricultural chemicals and others	HUADONG NINGBO, UNICEF, Intervet and others
Common and others ¹	Crop protection products, Seeds, Fertilizers, General management, sales and R&D and others	National Agriculture Cooperative Federation and others

¹ Certain divisions have been regrouped to reflect the reorganization of the Group. The information for the comparative period has been restated to reflect these changes.

Segment information on revenue, profit and loss for the six-month periods ended June 30, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021					
	Petro-chemicals	Energy solutions	Advanced materials	Life sciences	Common and others ³	Total
Total segment revenue	9,702,583	9,379,593	2,468,858	364,855	507,563	22,423,452
Inter-segment revenue	305,608	3,964	922,434	30,734	54,538	1,317,278
Revenue from external customers ¹	9,396,975	9,375,629	1,546,424	334,121	453,025	21,106,174
Operating profit (loss) ²	2,308,482	1,065,200	182,848	51,538	(60,116)	3,547,952
<i>(in millions of Korean won)</i>	2020					
	Petro-chemicals	Energy solutions	Advanced materials	Life sciences	Common and others ³	Total
Total segment revenue	6,972,736	5,083,897	1,729,732	316,043	463,477	14,565,885
Inter-segment revenue	265,681	(32)	571,269	1,653	62,954	901,525
Revenue from external customers ¹	6,707,055	5,083,929	1,158,463	314,390	400,523	13,664,360
Operating profit (loss) ²	660,745	103,717	78,941	37,037	(102,941)	777,499

¹ Revenue from external customers consists of sales of goods. Interest income and dividend income are included in finance income.

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² Management assesses the performance of the operating segments based on a measurement of operating profit of segment.

³ Common and other segments include operating segments not qualifying as a reportable segment, supporting divisions as well as R&D divisions.

During the six-month period ended June 30, 2021, revenue of energy solutions segment includes the lump-sum payments in accordance with the settlement agreement with SK Innovation as described in Note 37.

Segment information on assets and liabilities as at June 30, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2021					
	Petro-chemicals	Energy solutions	Advanced materials	Life sciences	Common and others	Total
Reportable segment asset ¹	14,020,968	22,204,848	4,446,625	1,902,396	4,160,172	46,735,009
Investments in associates and joint ventures	10,598	49,862	91,383	17	157,622	309,482
Reportable segment liability ¹	4,380,446	13,113,841	1,406,211	243,863	6,099,589	25,243,950

<i>(in millions of Korean won)</i>	December 31, 2020					
	Petro-chemicals	Energy solutions	Advanced materials	Life sciences	Common and others	Total
Reportable segment asset ¹	11,668,671	19,577,416	3,137,926	1,928,129	5,076,752	41,388,894
Investments in associates and joint ventures	6,604	48,350	89,525	17	164,833	309,329
Reportable segment liability ¹	3,544,622	12,024,260	1,182,052	211,806	5,635,714	22,598,454

¹ Assets and liabilities are measured in a manner consistent with those in the financial statements, and allocated on the basis of segment operation.

External sales and non-current assets by geographical segments from continuing operations for the six-month periods ended June 30, 2021 and 2020, and as at June 30, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	Sales		Non-current assets¹	
	2021	2020	June 30, 2021	December 31, 2020
	Korea ²	5,425,186	4,203,528	15,090,034
China	5,636,309	3,840,617	4,164,804	3,690,486
Asia	2,494,895	1,673,593	57,841	34,876
America	2,063,687	1,273,869	1,028,761	656,190
Europe	5,267,800	2,505,927	3,929,922	3,859,016
Others	218,297	166,826	-	-
Total	21,106,174	13,664,360	24,271,362	22,896,825

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¹ Represents aggregate amount of property, plant and equipment, intangible assets and investment properties.

² Domestic sales include the exports made through local letters of credit.

There is no single external customer who contributes over 10% of the Group's revenue for the six-month periods ended June 30, 2021 and 2020.

34. Assets and Liabilities Held for Sale and Discontinued Operations

34.1 Assets and Liabilities Held for Sale

Upon the approval of management, the Group decided to dispose of six lines of small pouch assembly facilities and others (June 2019), acrylic film business (December 2020), and LCD polarizer business (June 2020). The related assets and liabilities were reclassified as assets and liabilities held for sale. The disposal of acrylic film business and assets held for sale acquired as part of acquisition of Farm Hannong Co., Ltd. is expected to be completed in the second half of 2021. The disposal of LCD polarizer business and the disposal of small pouch assembly facility business have been completed in February 2021 and June 2021, respectively.

Details of assets and liabilities of disposal group classified as held for sale as at June 30, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2021	December 31, 2020
Assets of disposal group		
Inventories	-	185,693
Property, plant and equipment	5,357	570,374
Intangible assets	360	8,086
Others	-	24,919
Total	<u>5,717</u>	<u>789,072</u>
Liabilities of disposal group		
Borrowings and others	-	130,383
Total	<u>-</u>	<u>130,383</u>

Assets of the disposal group were measured at net fair value immediately before the initial classification as assets as held for sale and there are no other non-operating expenses (income) recognized from the measurement for the six-month periods ended June 30, 2021 and 2020.

34.2 Discontinued Operations

The Group decided to discontinue Glass substrate business with the resolution of the Board of Directors in January 2020 and substantially discontinued the related business as of March 2020. In addition, the Group decided to dispose of LCD polarizer business with the resolution of the Board of Directors in June 2020, and the disposal has been completed in February 2021. Accordingly, the profit and loss from the related operations are presented as discontinued operations and the comparative consolidated statements of profit or loss have been restated.

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Comprehensive income information from discontinued operation for the six-month periods ended June 30, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021		
	LCD polarizer	Glass substrate	Total
Revenue	622,636	8,228	630,864
Expense	(212,249)	(6,520)	(218,769)
Gain before income tax of discontinued operation	410,387	1,708	412,095
Income tax expense	(81,668)	(402)	(82,070)
Gain after income tax of discontinued operations	328,719	1,306	330,025

(in millions of Korean won)

	2020		
	LCD polarizer	Glass substrate	Total
Revenue	773,320	20,565	793,885
Expense	(712,812)	(53,439)	(766,251)
Gain (loss) before income tax of discontinued operation	60,508	(32,874)	27,634
Income tax benefits (expense)	(19,184)	6,345	(12,839)
Gain (loss) after income tax of discontinued operations	41,324	(26,529)	14,795

Net cash flows from discontinued operations for the six-month periods ended June 30, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021		
	LCD polarizer	Glass substrate	Total
Net cash inflow from operating activities	326,700	(2,886)	323,814
Net cash inflow from investing activities	896,261	7,591	903,852
Net cash outflow from financing activities	(1,235,461)	(4,705)	(1,240,166)

(in millions of Korean won)

	2020		
	LCD polarizer	Glass substrate	Total
Net cash outflow from operating activities	24,532	1,834	26,366
Net cash outflow from investing activities	(93,000)	1,057	(91,943)
Net cash inflow from financing activities	68,318	(2,891)	65,427

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35. Assets and Liabilities related to Contracts with Customers

Assets and liabilities related to contracts with customers as at June 30, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2021	December 31, 2020
Contract assets	-	-
Total contract assets	-	-
Contract liabilities		
Advances in relation to revenue from the Group's main business activities	270,327	265,688
Expected services to be transferred	-	-
Expected customer incentives	3,707	5,394
Unearned revenue	22,781	26,036
Total contract liabilities	296,815	297,118

Revenue recognized in relation to contract liabilities

The following table shows how much of the revenue recognized in the current reporting period relates to carried-forward contract liabilities and how much relates to performance obligations that were satisfied in the prior periods.

<i>(in millions of Korean won)</i>	2021	2020
Revenue recognized in the current period from the contract liability balance at the beginning of the period	151,074	128,394
Advances in relation to revenue from the Group's main business activities	147,598	118,576
Unearned revenue	3,476	6,818
Expected services to be transferred	-	3,000
Revenue recognized from performance obligations satisfied in previous periods	-	-

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36. Investment Properties

Details of investment properties as at June 30, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2021				December 31, 2020			
	Cost	Accumulated depreciation	Accumulated impairment	Book amount	Cost	Accumulated depreciation	Accumulated impairment	Book amount
Land	4,211	-	-	4,211	4,211	-	-	4,211
Buildings	62,832	(12,749)	(47)	50,036	54,457	(9,225)	(10)	45,222
Total	67,043	(12,749)	(47)	54,247	58,668	(9,225)	(10)	49,433

Changes in investment properties for the six-month periods ended June 30, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021			2020		
	Land	Building	Total	Land	Building	Total
Beginning balance	4,211	45,222	49,433	4,368	48,960	53,328
Acquisitions/transfers	-	5,494	5,494	-	2,644	2,644
Disposals/transfers	-	(50)	(50)	(157)	(5,221)	(5,378)
Depreciation	-	(630)	(630)	-	(1,161)	(1,161)
Ending balance	4,211	50,036	54,247	4,211	45,222	49,433

The fair value of investment properties is measured either by independent professional appraisers with certified qualification or measured based on official appraised value of land and available information from recent transactions of similar properties, and it is classified as 'level 3' of the fair value hierarchy. The fair value of investment properties as at June 30, 2021, is ₩60,291 million (December 31, 2020: ₩51,625 million).

During the six-month period ended June 30, 2021, rental income from investment properties under operating lease is ₩3,271 million (2020: ₩3,628 million), and operating expenses incurred for investment properties that generated rental income (including maintenance and repair expenses) are ₩623 million (2020: ₩619 million). During the six-month period ended June 30, 2021, operating expenses incurred for investment properties that do not generate rental income (including maintenance and repair expenses) are ₩6 million (2020: ₩6 million).

Operating lease

Investment properties are leased to tenants under operating leases with monthly rent payments. Where considered necessary to reduce credit risk, the Group may obtain bank guarantees for the term of the lease.

Although the Group is exposed to changes in the residual value at the end of the current leases, the Group typically enters into new operating leases and therefore will not immediately realize any reduction in residual value at the end of these leases. Expectations about the future residual values are reflected in the fair value of investment properties.

The future minimum lease payments expected to be received in relation to the above operating lease agreement for investment properties as at June 30, 2021 and December 31, 2020, are as follows:

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2021 and 2020 (Unaudited), and December 31, 2020

<i>(in millions of Korean won)</i>	June 30, 2021	December 31, 2020
Within one year	6,496	503
Within two years	6,015	172
Within five years	3,008	500
Total	15,519	1,175

37. Revenue from Contracts with Customers

(a) On February 11, 2021, the U.S. International Trade Commission (ITC) issued its final determination that SK Innovation had infringed the Group's trade secrets. On May 15, 2021, the Group and SK Innovation entered into an agreement to settle all legal disputes relating to the trade secret infringement. As a consideration for the settlement, SK Innovation agreed to pay the Group lump-sum payments of KRW 1 trillion and running royalties of KRW 1 trillion based on certain percentage of annual revenues of SK Innovation for certain periods in the future.

(b) In accordance with the agreement, the Group and SK Innovation agreed to grant permanent licenses, withdraw all pending domestic and international legal disputes and also not to sue for the next 10 years. The Group determined that all payments to be received from SK Innovation are consideration in exchange for the licenses granted.

(c) Licensing is a major operating activity of the Group and the nature of the license provided by the Group to SK Innovation is a right to use and there is no performance obligation to be provided additionally after the settlement.

(d) As such, the Group recognized operating income of KRW 992,233 million for the lump-sum payments(discounted present value of the lump-sum payments of KRW 1 trillion) during the six-month period ended June 30, 2021.

38. Events after the Reporting Period

(a) In July 2021, the Group has sold all of its shares of Ugimag Korea Co., Ltd.

(b) On July 29, 2021, the Board of Directors of the Parent Company approved the acquisition of CEM (Chemical Electronics Material) business of LG Electronics Inc. to lead competitive battery separator business through external collaboration model.

(c) The Group decided to issue global Green Bond at the corporate Management Committee held on June 21, 2021. In accordance with the decision, foreign currency debentures of USD 1,000 million were issued on July 7, 2021.

<i>(in millions of US dollars)</i>	Expiry date	Amount
USD foreign currency debenture with five years of maturity	July 7, 2026	USD 500
USD foreign currency debenture with ten years of maturity	July 7, 2031	USD 500

(d) In July 2021, the Group has sold all of its shares of HL Greenpower Co., Ltd.

(e) In July 2021, the Group entered into an agreement to acquire 7.5% shares of Queensland Pacific Metals, a nickel/cobalt refining company.