

LG Chem, Ltd. and Subsidiaries

Consolidated Interim Financial Statements

March 31, 2021 and 2020

LG Chem, Ltd. and Subsidiaries

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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 March 31, 2021, and the related consolidated interim statements of profit or loss, comprehensive income, changes in equity and cash flows for the three-month periods ended March 31, 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 opinion, we draw attention to Note 4 to the consolidated interim financial statements. Note 4 to the interim consolidated 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.

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.

May 14, 2021
Seoul, Korea

This report is effective as of May 14, 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
March 31, 2021 and December 31, 2020

<i>(in millions of Korean won)</i>	Notes	March 31, 2021 (Unaudited)	December 31, 2020
Assets			
Current assets			
Cash and cash equivalents	3, 5, 6	5,058,435	3,274,250
Trade receivables	3, 5, 7, 31	6,081,731	5,298,365
Other receivables	3, 5, 7, 31	1,030,731	924,303
Other current financial assets	3, 5, 8	19,964	23,821
Prepaid income taxes		9,275	17,049
Other current assets	13	831,443	643,152
Inventories	9	5,890,122	5,349,688
Assets held for sale	34	26,478	789,072
Total current assets		<u>18,948,179</u>	<u>16,319,700</u>
Non-current assets			
Trade receivables	3, 5, 7	30,525	29,376
Other receivables	3, 5, 7	261,837	255,030
Other non-current financial assets	3, 5, 8	159,191	81,532
Investments in associates and joint ventures	1, 10, 33	304,546	309,329
Deferred tax assets	28	1,414,215	1,409,757
Property, plant and equipment	11	21,119,270	20,567,475
Intangible assets	12	2,350,363	2,279,917
Investment properties	36	54,514	49,433
Other non-current assets	13	70,167	87,345
Total non-current assets		<u>25,764,628</u>	<u>25,069,194</u>
Total assets		<u>44,712,807</u>	<u>41,388,894</u>
Liabilities			
Current liabilities			
Trade payables	3, 5, 31	3,792,383	3,458,526
Other payables	3, 5, 31	5,310,548	5,266,974
Borrowings	3, 5, 14	1,774,976	1,548,815
Other current financial liabilities	3, 5, 8	400	16,797
Provisions	15	1,039,951	1,041,451
Income tax payables	28	632,298	373,244
Other current liabilities	3, 5, 17, 35	1,551,427	788,029
Liabilities held for sale	34	-	130,383
Total current liabilities		<u>14,101,983</u>	<u>12,624,219</u>
Non-current liabilities			
Other payables	3, 5, 31	11,788	11,927
Borrowings	3, 5, 14	9,650,600	8,637,302
Other non-current financial liabilities	3, 5, 8	19,039	41,768
Provisions	15	305,611	328,556
Net defined benefit liabilities	16	155,838	117,959
Deferred tax liabilities	28	686,187	689,817
Other non-current liabilities	17, 35	133,685	146,906
Total non-current liabilities		<u>10,962,748</u>	<u>9,974,235</u>
Total liabilities		<u>25,064,731</u>	<u>22,598,454</u>

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

<i>(in millions of Korean won)</i>	Notes	March 31, 2021 (Unaudited)	December 31, 2020
Equity			
Share capital	1, 19	391,406	391,406
Capital surplus		2,720,829	2,692,485
Other components of equity	21	(40,696)	(54,998)
Accumulated other comprehensive income		13,951	(165,076)
Retained earnings	20	15,708,484	15,175,304
Equity attributable to owners of the Parent Company		18,793,974	18,039,121
Non-controlling interests		854,102	751,319
Total equity		19,648,076	18,790,440
Total liabilities and equity		44,712,807	41,388,894

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 Periods Ended March 31, 2021 and 2020

<i>(in millions of Korean won, except per share amounts)</i>	Notes	Period Ended March 31	
		2021	2020
		(Unaudited)	(Unaudited)
Revenue	31, 33, 35	9,650,032	6,729,169
Cost of sales	23, 31	(7,192,705)	(5,619,736)
Gross profit		2,457,327	1,109,433
Selling and administrative expenses	22, 23, 31	(1,049,183)	(903,577)
Operating profit	33	1,408,144	205,856
Finance income	5, 25	158,456	116,881
Finance costs	5, 25	(195,137)	(410,600)
Share of net profit of associates and joint ventures accounted for using the equity method	10	1,934	1,222
Other non-operating income	5, 26	315,923	625,130
Other non-operating expenses	5, 27	(262,693)	(380,920)
Profit before income tax	32	1,426,627	157,569
Income tax expense	28	(384,034)	(107,773)
Profit from continuing operations		1,042,593	49,796
Profit (loss) from discontinued operations	34	328,379	(13,449)
Profit for the period		1,370,972	36,347
Profit is attributable to:			
Owners of the Parent Company			
Profit from continuing operations		978,323	34,525
Profit (loss) from discontinued operations		328,379	(13,449)
		1,306,702	21,076
Non-controlling interests			
Profit from continuing operations		64,270	15,271
		64,270	15,271
Earnings per share for profit			
attributable to the equity holders			
of the Parent Company (in won)	29		
Basic earnings per ordinary share		16,776	274
Basic earnings per preferred share		16,788	286
Diluted earnings per ordinary share		16,776	274
Diluted earnings per preferred share		16,788	286
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		12,560	449
Basic earnings per preferred share		12,572	461
Diluted earnings per ordinary share		12,560	449
Diluted earnings per preferred share		12,572	461

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 Periods Ended March 31, 2021 and 2020

(in millions of Korean won)

	Notes	Period Ended March 31	
		2021 (Unaudited)	2020 (Unaudited)
Profit for the period		<u>1,370,972</u>	<u>36,347</u>
Other comprehensive income			
<i>Items that will not be reclassified to profit or loss</i>			
Remeasurements of net defined benefit liability	16	9,801	(1,324)
Gain on valuation of financial assets at fair value through other comprehensive income		2,297	6,276
Shares of remeasurements of net defined benefit liabilities of associates		(234)	159
Income tax relating to these items		(3,332)	(1,363)
<i>Items that may be subsequently reclassified to profit or loss</i>			
Exchange differences on translation of foreign operations		181,011	153,112
Cash flow hedge		(4,257)	(28,944)
Shares of other comprehensive income of associates and joint ventures		3,574	16,642
Income tax relating to these items		18,130	5,003
Other comprehensive income for the period, net of tax		<u>206,990</u>	<u>149,561</u>
Total comprehensive income for the period		<u>1,577,962</u>	<u>185,908</u>
Total comprehensive income for the period is attributable to:			
Owners of the Parent Company		1,492,596	154,263
Non-controlling interest		85,366	31,645

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
Three-Month Periods Ended March 31, 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	-	-	-	-	21,076	21,076	15,271	36,347
Remeasurements of net defined benefit liability	16	-	-	-	(961)	(961)	-	(961)
Exchange differences on translation of foreign operations	-	-	-	133,781	-	133,781	16,374	150,155
Gain on valuation of financial assets at fair value through other comprehensive income	-	-	-	4,550	-	4,550	-	4,550
Cash flow hedge	-	-	-	(20,985)	-	(20,985)	-	(20,985)
Others	-	-	-	16,642	160	16,802	-	16,802
Total comprehensive income for the period	-	-	-	133,988	20,275	154,263	31,645	185,908
Transactions with owners:								
Dividends	30	-	-	-	(153,608)	(153,608)	-	(153,608)
Total transactions with owners	-	-	-	-	(153,608)	(153,608)	-	(153,608)
Balance at March 31, 2020 (Unaudited)	391,406	2,274,620	(374,243)	48,492	14,665,357	17,005,632	410,457	17,416,089
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	-	-	-	-	1,306,702	1,306,702	64,270	1,370,972
Remeasurements of net defined benefit liability	16	-	-	-	7,101	7,101	-	7,101
Exchange differences on translation of foreign operations	-	-	-	176,875	-	176,875	21,096	197,971
Gain on valuation of financial assets at fair value through other comprehensive income	-	-	-	1,665	-	1,665	-	1,665
Cash flow hedge	-	-	-	(3,087)	-	(3,087)	-	(3,087)
Others	-	-	-	3,574	(234)	3,340	-	3,340
Total comprehensive income for the period	-	-	-	179,027	1,313,569	1,492,596	85,366	1,577,962
Transactions with owners:								
Disposal of treasury shares	-	28,344	14,302	-	-	42,646	-	42,646
Dividends	30	-	-	-	(778,383)	(778,383)	(91,334)	(869,717)
Increase in paid-in capital of a subsidiary	-	-	-	-	-	-	110,339	110,339
Others	-	-	-	-	(2,006)	(2,006)	(1,588)	(3,594)
Total transactions with owners	-	28,344	14,302	-	(780,389)	(737,743)	17,417	(720,326)
Balance at March 31, 2021 (Unaudited)	391,406	2,720,829	(40,696)	13,951	15,708,484	18,793,974	854,102	19,648,076

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
Three-Month Periods Ended March 31, 2021 and 2020

(in millions of Korean won)

	Notes	Period Ended March 31	
		2021 (Unaudited)	2020 (Unaudited)
Cash flows from operating activities			
Cash generated from operations	32	1,313,259	5,958
Interest received		8,773	10,647
Interest paid		(39,807)	(48,624)
Dividends received		-	10,000
Income taxes paid		(216,021)	(75,266)
Net cash inflow (outflow) from operating activities		1,066,204	(97,285)
Cash flows from investing activities			
Decrease in other receivables		412,255	45,343
Decrease in other non-current receivables		29,334	16,444
Proceeds from disposal of investments in associates		-	379,702
Proceeds from disposal of financial instruments		987	79,918
Proceeds from disposal of property, plant and equipment		81,704	778
Proceeds from disposal of intangible assets		125	810
Government grants received		163,934	113,195
Proceeds from transfer of business		584,087	-
Increase in other receivables		(18,956)	(42,675)
Increase in other non-current receivables		(20,853)	(71,992)
Acquisition of investments in associates		-	(13,611)
Acquisition of financial assets		(63,767)	(3,735)
Acquisition of property, plant and equipment		(1,178,639)	(1,827,573)
Acquisition of intangible assets		(28,521)	(18,123)
Net cash outflow from investing activities		(38,310)	(1,341,519)
Cash flows from financing activities			
Proceeds from borrowings		1,581,471	3,836,858
Capital contribution from non-controlling interests		110,339	-
Repayments of borrowings and others		(1,003,585)	(1,540,616)
Net cash inflow from financing activities		688,225	2,296,242
Net increase in cash and cash equivalents		1,716,119	857,438
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		68,066	21,321
Cash and cash equivalents at the end of the period in the consolidated interim statements of financial position		5,058,435	2,767,390

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

March 31, 2021 and 2020 (Unaudited), and December 31, 2020

1. General Information

General information about LG Chem, Ltd. (the Parent Company) and its 51 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 March 31, 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 March 31, 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 in 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 material 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

March 31, 2021 and 2020 (Unaudited), and December 31, 2020

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

	March 31, 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.	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 Chem Life Sciences (Beijing) Co., Ltd.	100	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 ⁴	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. ⁵	100	Singapore	December	Asia BSC

LG Chem, Ltd. and Subsidiaries

Notes to the Consolidated Interim Financial Statements

March 31, 2021 and 2020 (Unaudited), and December 31, 2020

LG Chem China Tech Center ⁶	100	China	December	Research on petrochemicals
Shanjin Optoelectronics (Taiwan) Co., Ltd. ⁷	100	Taiwan	December	Others
FarmHannong Co., Ltd. ⁸	100	Korea	December	Agricultural pesticide manufacturing and sales
Farmhannong America, Inc. ⁸	100	USA	December	Agricultural pesticide sales
FarmHannong(Thailand) Ltd. ⁸	100	Thailand	December	Research and development on seeds
FARMHANNONG(MALAYSIA) SDN. BHD. ⁸	100	Malaysia	December	Agricultural pesticide licensing
PT FARM HANNONG INDONESIA ⁸	100	Indonesia	December	Agricultural pesticide licensing
LG Energy Solution (Nanjing) Co., Ltd. ¹	100	China	December	Battery manufacturing and sales
LG Energy Solution Michigan Inc. ¹	100	USA	December	Automotive battery research and manufacturing
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
Associates				
TECHWIN Co., Ltd.	20	Korea	December	Environment solution and construction of chemical plant
LG Chem BRASIL INTERMEDIACAO DE NEGOCIOS DO SETOR QUIMICO LTDA. ⁹	100	Brazil	December	Sales and trading
LG Chem Malaysia SDN.BHD. ⁹	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. ⁹	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
SEETEC Co., Ltd.	50	Korea	December	Plant utility and distribution, research assistance service

¹ These are subsidiaries, associates, and joint venture of LG Energy Solution, Ltd. As at March 31, 2021, the Parent Company owns 100% of LG Energy Solution, Ltd.'s shares.

² As at March 31, 2021, Ningbo LG Yongxing Chemical Co., Ltd. owns 100% of Ningbo Zhenhai LG Yongxing Trading Co., Ltd.'s shares.

³ As at March 31, 2021, LG Chemical India Pvt. Ltd. owns 100% of LG Polymers India Pvt. Ltd.'s shares.

⁴ During the three-month period ended March 31, 2021, the Parent Company newly acquired shares of LG CHEM FUND I LLC for ₩796 million.

⁵ LG Chem Asia Pte. Ltd. was newly established during the three-month period ended March 31, 2021, and the Parent Company acquired 100% shares of LG Chem Asia Pte. Ltd. for ₩821 million.

LG Chem, Ltd. and Subsidiaries

Notes to the Consolidated Interim Financial Statements

March 31, 2021 and 2020 (Unaudited), and December 31, 2020

⁶ LG Chem China Tech Center was newly established during the three-month period ended March 31, 2021, and the Group acquired 100% shares of LG Chem China Tech Center for ₩18,109 million.

⁷ Shanjin Optoelectronics (Taiwan) Co., Ltd. was newly established during the three-month period ended March 31, 2021, and the Group acquired 100% shares of Shanjin Optoelectronics (Taiwan) Co., Ltd. for ₩401 million.

⁸ As at March 31, 2021, FarmHannong Co., Ltd. owns 100% of Farmhannong America, Inc., FarmHannong(Thailand) Ltd., FARMHANNONG(MALAYSIA) SDN.BHD., and PT FARM HANNONG INDONESIA's shares.

⁹ 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)

	March 31, 2021			2021	
	Assets	Liabilities	Equity	Revenue	Profit (loss) for the period
Subsidiaries					
LG Energy Solution, Ltd. ^{1,2}	20,800,176	12,572,777	8,227,399	4,254,116	442,970
Ningbo LG Yongxing Chemical Co.,Ltd.	1,300,942	622,886	678,056	583,579	135,912
Ningbo Zhenhai LG Yongxing Trade Co.,Ltd.	6,254	1,034	5,220	6,713	139
LG Chem America, Inc.	313,657	270,545	43,112	194,058	3,370
LG Chemical India Pvt. Ltd.	32,732	23	32,709	-	3
LG Polymers India Pvt. Ltd.	52,458	38,938	13,520	245	(4,325)
LG Chemical (Guangzhou) Engineering Plastics Co.,Ltd.	122,087	55,175	66,912	63,230	3,297
LG Chem (Taiwan), Ltd.	112,398	44,546	67,852	28,486	870
LG Chem Display Materials (Beijing) Co.,Ltd. ²	-	-	-	-	276
Tianjin LG Bohai Chemical Co.,Ltd.	322,305	66,459	255,846	146,222	23,302
Tianjin LG BOTIAN Chemical Co.,Ltd.	40,034	16,385	23,649	28,287	360
LG Chem (China) Investment Co.,Ltd.	623,896	306,967	316,929	13,690	2,551
LG Chem (Tianjin) Engineering Plastics Co.,Ltd.	54,583	13,020	41,563	18,755	1,556
LG Chem Europe GmbH	224,966	178,267	46,699	118,937	5,910
LG Chem Poland Sp. z o.o.	81,300	31,588	49,712	36,883	4,830
LGC Petrochemical India Private Ltd.	4,008	619	3,389	934	135
HAENGBOKNURI CO., LTD.	3,741	1,328	2,413	2,838	(2)
LG CHEM TK Kimya SANAYI VE TIC. Ltd. STI.	10,813	10,178	635	6,939	(195)
LG Chem Japan Co.,Ltd.	7,452	2,430	5,022	1,519	143
LG NanoH2O, LLC ³	36,748	12,312	24,436	13,448	1,451
LG Chem (Chongqing) Engineering Plastics Co.,Ltd.	44,588	14,609	29,979	19,324	1,423
LG Chem(HUIZHOU) Petrochemical Co., Ltd.	452,516	206,451	246,065	233,520	46,974
LG Chem Life Sciences India Pvt. Ltd.	2,031	1,456	575	1,143	98
LG Chem Life Sciences (Beijing) Co.,Ltd.	1,879	432	1,447	439	20
LG Chem Life Sciences (Thailand) Ltd.	23,417	9,557	13,860	9,014	795
LG Chem Hai Phong Vietnam Company Ltd.	14,947	7,745	7,202	8,240	(606)
LG Chem Mexico S.A. de C.V.	1,131	108	1,023	415	54
LG Chem Hai Phong Engineering Plastics Ltd.	24,379	11,935	12,444	7,318	263
LG Chem (Guangzhou) Information & Electronics Materials Co.,Ltd. ²	425,733	221,310	204,423	34,978	(271)
LEYOU NEW ENERGY MATERIALS(WUXI) Co.,LTD	575,841	216,221	359,620	138,830	16,635

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LG Chem Fund I LLC	30,887	1,112	29,775	-	(1,026)
Ugimag Korea Co., Ltd. ³	37,122	15,354	21,768	5,338	(1,344)
Uniseal, Inc. ³	38,289	7,667	30,622	16,905	495
LG Chem Life Science Innovation Center, Inc.	3,376	1,784	1,592	1,403	85
LG Chem Asia Pte. Ltd.	802	27	775	-	(66)
LG Chem China Tech Center	18,039	-	18,039	-	-
FarmHannong Co., Ltd. ^{1,3}	1,136,795	739,675	397,120	210,913	20,744
Associates					
TECHWIN Co., Ltd.	153,637	63,801	89,836	-	-
LG Chem BRASIL INTERMEDIACAO DE NEGOCIOS DO SETOR Q UIMICO LTDA.	566	80	486	378	69
LG Chem Malaysia SDN.BHD.	443	2	441	155	19
FJ Composite Material Co., Ltd.	10,658	4,487	6,171	101	(58)
WUXI CL New Energy Technology Ltd.	1,899	3,004	(1,105)	-	(19)
LG Life Sciences Poland Ltd.	179	66	113	57	3
Combustion Synthesis Co., Ltd.	561	39	522	35	(115)
HUAJIN NEW ENERGY MATERIALS(QUZHOU)CO., LTD.	240,222	52,779	187,443	-	(680)
VINFAST LITHIUM BATTERY PACK LLC.	17,869	5,918	11,951	3,119	(308)
Jiangxi VL Battery.,Ltd	70,675	6,427	64,248	-	(940)
Joint ventures					
LG VINA Chemical Co., Ltd.	47,353	34,213	13,140	35,936	4,289
HL Greenpower Co., Ltd.	416,171	367,193	48,978	215,930	289
SEETEC Co., Ltd.	321,098	49,941	271,157	124,224	3,985

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)

	March 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	351,086	43,910
Ningbo Zhenhai LG Yongxing Trade Co.,Ltd.	6,224	1,303	4,921	5,455	109
LG Chem America, Inc.	237,946	208,031	29,915	197,881	539
LG Chemical India Pvt. Ltd.	32,680	19	32,661	-	-
LG Polymers India Pvt. Ltd.	56,029	38,833	17,196	49,198	1,918
LG Chemical (Guangzhou) Engineering Plastics Co.,Ltd.	107,270	33,741	73,529	37,137	1,929
LG Chem (Taiwan), Ltd.	113,717	46,372	67,345	28,929	2,291
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	120,464	13,491
Tianjin LG BOTIAN Chemical Co.,Ltd.	38,391	14,760	23,631	25,658	1,853
LG Chem (China) Investment Co.,Ltd.	703,145	392,501	310,644	14,851	1,507
LG Chem (Tianjin) Engineering Plastics Co.,Ltd.	52,446	10,440	42,006	9,025	(187)
LG Chem Europe GmbH	229,078	166,779	62,299	192,855	1,374
LG Chem Poland Sp. z o.o.	74,063	27,931	46,132	30,692	1,416
LGC Petrochemical India Private Ltd.	3,722	590	3,132	917	96
HAENGBOKNURI CO., LTD.	4,869	2,453	2,416	2,822	170
LG CHEM TK Kimya SANAYI VE TIC. Ltd. STI.	7,033	6,154	879	12,753	87
LG Chem Japan Co.,Ltd.	5,863	852	5,011	1,423	125

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LG NanoH2O, LLC ²	33,155	11,117	22,038	6,602	763
LG Chem (Chongqing) Engineering Plastics Co.,Ltd.	38,629	10,973	27,656	6,020	(381)
LG Chem(HUIZHOU) Petrochemical Co., Ltd.	392,176	199,465	192,711	108,337	4,113
LG Chem Life Sciences India Pvt. Ltd.	1,295	837	458	1,284	509
LG Chem Life Sciences (Beijing) Co.,Ltd.	2,099	716	1,383	345	15
LG Chem Life Sciences (Thailand) Ltd.	22,854	9,722	13,132	8,563	(257)
LG Chem Hai Phong Vietnam Company Ltd.	14,277	6,770	7,507	4,121	(58)
LG Chem Mexico S.A. de C.V.	1,081	152	929	384	63
LG Chem Hai Phong Engineering Plastics Ltd.	23,110	11,430	11,680	2,624	(1,083)
LG Chem (Guangzhou) Information & Electronics Materials Co.,Ltd. ¹	630,513	399,728	230,785	2,337	(2,991)
LEYOU NEW ENERGY MATERIALS(WUXI) Co.,LTD	429,359	97,122	332,237	-	(18)
LG Chem Fund I LLC	28,842	31	28,811	-	(885)
Ugimag Korea Co., Ltd. ²	39,015	15,903	23,112	5,021	(1,964)
Uniseal,Inc. ^{2,3}	34,452	6,050	28,402	16,219	639
FarmHannong Co., Ltd. ^{2,3}	1,023,232	646,884	376,348	221,184	23,404
LG Chem Life Science Innovation Center, Inc.	3,314	1,868	1,446	1,237	62
LG Energy Solution (Nanjing) Co., Ltd. ¹	3,793,936	1,536,320	2,257,616	583,082	11,802
LG Energy Solution Michigan Inc.	915,288	607,065	308,223	138,827	(30,929)
LG Energy Solution Battery (Nanjing) Co., Ltd.	1,059,066	781,217	277,849	292,651	(1,432)
LG Energy Solution Wroclaw sp. z o.o.	6,526,231	5,350,936	1,175,295	850,292	(301,767)
LG Energy Solution Australia Pty Ltd	4,793	3,049	1,744	974	17
LG Energy Solution Technology (Nanjing) Co., Ltd.	1,767,706	964,689	803,017	62,463	(1,501)
Ultium Cells LLC	336,851	32,309	304,542	-	-
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	540	(167)
LG Chem Malaysia SDN.BHD.	418	2	416	150	21
FJ Composite Material Co., Ltd.	11,026	4,635	6,391	554	337
WUXI CL New Energy Technology Ltd.	1,910	2,972	(1,062)	-	366
LG Life Sciences Poland Ltd.	191	78	113	60	(27)
Combustion Synthesis Co., Ltd.	717	66	651	19	(65)
HUAJIN NEW ENERGY MATERIALS(QUZHOU)CO., LTD.	226,471	43,454	183,017	-	527
VINFAST LITHIUM BATTERY PACK LLC.	18,148	6,322	11,826	7,445	(287)
Jiangxi VL Battery.,Ltd	67,186	4,066	63,120	-	-
Joint ventures					
LG VINA Chemical Co., Ltd.	35,832	27,515	8,317	18,268	(101)
HL Greenpower Co., Ltd.	406,928	360,547	46,381	134,821	(754)
SEETEC Co., Ltd.	342,227	55,056	287,171	139,012	4,698

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.

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1.5 Changes in Scope for Consolidation

Subsidiaries newly included in the consolidation for the three-month period ended March 31, 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

Subsidiaries excluded from the consolidation for the three-month period ended March 31, 2021, is 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 three-month period ended March 31, 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 March 31, 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.

- 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.

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- 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 March 31, 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 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

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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 include 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 March 31, 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>	March 31, 2021		December 31, 2020	
	Assets	Liabilities	Assets	Liabilities
USD	5,940,668	5,014,690	4,367,761	3,805,638
EUR	507,553	4,443,965	244,382	4,479,131
JPY	22,317	514,762	20,035	303,704
CNY and others	800,345	5,203	343,749	8,199

As at March 31, 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>	March 31, 2021		December 31, 2020	
	10% Increase	10% Decrease	10% Increase	10% Decrease
USD	117,119	(117,119)	77,289	(77,289)

The above sensitivity analysis has been performed for monetary assets and liabilities denominated

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in foreign currencies other than the Group's functional currency at the reporting date.

As at March 31, 2021 and December 31, 2020, the Group entered into foreign currency forward 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)

March 31, 2021							
	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	-	4,449
	KB Kookmin Bank	USD 500	1,102.83	2020.11.24	2029.04.16	-	14,590

(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 March 31, 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.

	March 31, 2021		December 31, 2020	
	10% Increase	10% Decrease	10% Increase	10% Decrease
KOSDAQ	-	-	-	-
NASDAQ	869	(869)	997	(997)
Total	869	(869)	997	(997)

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,

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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 rate on the Group's equity and post-tax profit for the three-month periods ended March 31, 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	(37,095)	(34,442)	(37,095)	(34,442)
Decrease	37,095	34,442	37,095	34,442

(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 March 31, 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
March 31, 2021				
(trade receivables)				
Gross carrying amount	5,684,003	430,525	2,379	6,116,907
Expected loss rate	0.0%	0.1%	55.2%	0.1%
Loss allowance provision	2,755	582	1,314	4,651
December 31, 2020				
(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.

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

<i>(in millions of Korean won)</i>	Trade receivables	
	March 31, 2021	December 31, 2020
Beginning balance	4,391	5,830
Increase in (reversal of) loss allowance recognized in profit or loss	222	(480)
Receivables written off as uncollectible	-	(833)
Exchange differences	38	(126)
Ending balance	4,651	4,391

As at March 31, 2021, the carrying amount of trade receivables representing the maximum exposure to credit risk amounts to ₩6,116,907 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 three-month period ended March 31, 2021 and for the year ended December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	Other receivables	
	March 31, 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.

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

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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)

	March 31, 2021			
	Less than 1 year	Between 1-2 years	Between 2-5 years	Over 5 years
Non-derivative financial instruments				
Borrowings (excluding lease liabilities)	1,939,003	3,001,956	4,754,645	2,694,716
Lease liabilities	65,827	73,788	107,740	76,062
Trade and other payables ¹	9,102,931	10,115	1,552	121
Other current liabilities (dividends payable)	867,788	-	-	-
	<u>11,975,549</u>	<u>3,085,859</u>	<u>4,863,937</u>	<u>2,770,899</u>
Derivative instruments				
Gross settlement currency forwards				
(Inflows)	-	-	(566,750)	(566,750)
Outflows	-	-	567,800	551,415
	-	-	1,050	(15,335)
	<u>11,975,549</u>	<u>3,085,859</u>	<u>4,864,987</u>	<u>2,755,564</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
	<u>10,451,005</u>	<u>1,921,636</u>	<u>4,985,618</u>	<u>2,315,678</u>
Derivative instruments				
Gross settlement currency forwards				
(Inflows)	-	-	(544,000)	(544,000)

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Outflows	-	-	567,800	551,415
	-	-	23,800	7,415
	10,451,005	1,921,636	5,009,418	2,323,093

¹ Included ₩2,225,710 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 + 0.79~0.97%) 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 March 31, 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)	March 31, 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	~2021. 12	19,564

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

(in millions of Korean won)	March 31, 2021		December 31, 2020	
	Assets	Liabilities	Assets	Liabilities
Merchandise (raw materials) swap ¹	19,964	400	23,821	-
Total	19,964	400	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 (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 March 31, 2021 and December 31, 2020, were as follows:

(in millions of Korean won, except for ratios)	March 31, 2021	December 31, 2020
Total borrowings (Note 14) (A)	11,425,576	10,186,117
Less: cash and cash equivalents (B)	(5,058,435)	(3,274,250)
Net debt (C=A+B)	6,367,141	6,911,867

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Total liabilities (D)	25,064,731	22,598,454
Total equity (E)	19,648,076	18,790,440
Total capital (F=C+E)	26,015,217	25,702,307
Gearing ratio (C/F)	24.5%	26.9%
Debt-to-equity ratio (D/E)	127.6%	120.3%

3.3 Fair Value

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

(in millions of Korean won)

	March 31, 2021		December 31, 2020	
	Carrying amount	Fair value	Carrying amount	Fair value
Financial assets (current)				
Cash and cash equivalents	5,058,435	¹	3,274,250	¹
Deposits held by financial institutions	216,613	¹	608,039	¹
Trade receivables	6,081,731	¹	5,298,365	¹
Other receivables (excluding deposits held by financial institutions)	814,118	¹	316,264	¹
Current derivative financial assets	19,964	19,964	23,821	23,821
Financial assets (non-current)				
Deposits held by financial institutions	167,967	¹	167,054	¹
Trade receivables	30,525	¹	29,376	¹
Other receivables (excluding deposits held by financial institutions)	93,870	¹	87,976	¹
Other non-current financial assets (carried at fair value)				
Marketable financial assets	7,805	7,805	7,679	7,679
Non-marketable financial assets ²	151,386	151,386	73,853	73,853
Financial liabilities (current)				
Trade and other payables	9,102,931	¹	8,725,500	¹
Current borrowings (excluding exchangeable bonds and lease liabilities)	1,707,697	¹	1,460,926	¹
Current borrowings (exchangeable bonds)	-	-	32,500	32,763
Current lease liabilities	67,279	³	55,389	³
Current derivative financial liabilities (exchange rights)	-	-	16,797	16,797
Current derivative financial liabilities (forward contract)	400	400	-	-
Other current payables (dividends payable)	867,788	¹	-	-
Financial liabilities (non-current)				
Non-current borrowings (excluding lease liabilities)	9,424,375	9,457,417	8,508,066	8,614,889
Non-current lease liabilities	226,225	³	129,236	³

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	March 31, 2021		December 31, 2020	
	Carrying amount	Fair value	Carrying amount	Fair value
Other non-current payables	11,788	¹	11,927	¹
Other non-current derivative financial liabilities (currency forward)	19,039	19,039	41,768	41,768

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 March 31, 2021 and December 31, 2020, are as follows:

(in percentage)	March 31, 2021	December 31, 2020
Discount rate	0.87% ~ 2.80%	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 March 31, 2021 and December 31, 2020, are as follows:

(in millions of Korean won)

	March 31, 2021			
	Level 1	Level 2	Level 3	Total
Financial assets/liabilities measured at fair value				
Other non-current financial assets (marketable financial assets)	7,805	-	-	7,805
Other non-current financial assets (non-marketable financial assets)	-	-	151,386	151,386
Current derivative financial assets	-	19,964	-	19,964
Current derivative financial liabilities (forward contract)	-	400	-	400
Current derivative financial liabilities (currency forward)	-	19,039	-	19,039

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**Financial assets/liabilities
not measured at fair value**

Non-current borrowings (excluding lease liabilities)	-	9,457,417	-	9,457,417
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(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
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

¹ Movements in exchange rights are as follows.

(in millions of Korean won)	USD		EUR		Total	
	2021	2020	2021	2020	2021	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 March 31, 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%

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(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 March 31, 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:

<i>(in millions of Korean won)</i>	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)

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 during 2021 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 March 31, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	March 31, 2021			
	Financial assets at	Financial assets at fair	Financial assets at fair value	Other financial
Financial assets				Total

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	amortized cost	value through profit or loss	through other comprehensive income	assets ¹	
Cash and cash equivalents	5,058,435	-	-	-	5,058,435
Trade receivables	5,614,341	-	467,390	-	6,081,731
Non-current trade receivables	30,525	-	-	-	30,525
Other receivables	1,021,719	-	9,012	-	1,030,731
Other non-current receivables	261,837	-	-	-	261,837
Other current financial assets	-	-	-	19,964	19,964
Other non-current financial assets	-	44,563	114,628	-	159,191
Total	11,986,857	44,563	591,030	19,964	12,642,414

(in thousands of Korean won)

	March 31, 2021		
Financial liabilities	Financial liabilities at amortized cost	Other financial liabilities²	Total
Trade payables	3,792,383	-	3,792,383
Other payables	5,310,548	-	5,310,548
Borrowings (current)	1,707,697	67,279	1,774,976
Other current payables (dividends payable)	867,788	-	867,788
Other current financial liabilities	-	400	400
Other non-current financial liabilities	-	19,039	19,039
Other non-current payables	11,788	-	11,788
Borrowings (non-current)	9,424,375	226,225	9,650,600
Total	21,114,579	312,943	21,427,522

(in millions of Korean won)

	December 31, 2020				
Financial assets	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	Total
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)

	December 31, 2020			
Financial liabilities	Financial liabilities at fair value through profit or loss	Financial liabilities at amortized cost	Other financial liabilities²	Total

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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 periods ended March 31, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021	2020
Dividend income		
Financial assets at fair value through other comprehensive income	378	-
Interest income		
Financial assets at amortized cost	10,852	13,191
Interest expense		
Financial liabilities at amortized cost	(55,616)	(67,416)
Other financial liabilities	(2,093)	(936)
Financial assets at amortized cost ¹	-	(685)
Financial assets at fair value through other comprehensive income ¹	(62)	(1,132)
Gain (loss) on valuation		
Financial assets at fair value through profit or loss	10,973	-
Financial assets at fair value through other comprehensive income	2,297	6,276
Derivative instruments	10,394	(35,715)
Exchange differences		
Financial assets at amortized cost	244,512	254,920
Financial liabilities at amortized cost	(239,164)	(528,495)
Other financial liabilities	-	(572)

¹ Fees paid to financial institutions for factoring.

6. Cash and Cash Equivalents

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

<i>(in millions of Korean won)</i>	March 31, 2021	December 31, 2020
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Bank deposits and cash on hand	1,945,247	1,704,420
Deposits held by financial institutions and others	3,113,188	1,569,830
Total	5,058,435	3,274,250

As at March 31, 2021, cash and cash equivalents include ₩64,803 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 March 31, 2021 and December 31, 2020, are as follows:

(in millions of Korean won)

	March 31, 2021		
	Gross amount	Provision for impairment	Carrying amount
Trade receivables	6,086,382	(4,651)	6,081,731
Non-current trade receivables	30,525	-	30,525
Other current receivables	1,032,896	(2,165)	1,030,731
Other non-current receivables	261,837	-	261,837
Total	7,411,640	(6,816)	7,404,824

(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 March 31, 2021 and December 31, 2020, are as follows:

(in millions of Korean won)

	March 31, 2021	December 31, 2020
Current		
Non-trade receivables	780,661	271,651
Deposits held by financial institutions	216,613	608,039
Accrued income	4,877	2,567
Loans	177	-
Guarantee deposits provided	28,403	42,046
	1,030,731	924,303
Non-current		
Non-trade receivables	24,910	24,910
Deposits held by financial institutions ¹	167,967	167,054
Loans	1,276	831
Guarantee deposits provided	67,684	62,235
	261,837	255,030
Total	1,292,568	1,179,333

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¹ As at March 31, 2021, ₩166,100 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, ₩966 million is withdrawal restricted in connection with maintaining checking accounts (December 31, 2020: ₩928 million).

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

<i>(in millions of Korean won)</i>	March 31, 2021		December 31, 2020	
	Trade receivables	Other receivables	Trade receivables	Other receivables
Receivables not past due	5,684,003	1,082,425	4,835,299	1,134,863
Past due but not impaired				
Up to 3 months	227,273	205,873	333,522	41,780
Between 3-6 months	67,229	1,694	69,272	353
Over 6 months	136,023	2,577	90,577	2,337
	430,525	210,144	493,371	44,470
Impaired receivables	2,379	2,164	3,462	2,165
Total	6,116,907	1,294,733	5,332,132	1,181,498

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

<i>(in millions of Korean won)</i>	March 31, 2021			
	Trade receivables		Other receivables	
	Current	Non-current	Current	Non-current
Beginning balance	4,391	-	2,165	-
Additions	222	-	-	-
Write-off	-	-	-	-
Exchange differences	38	-	-	-
Ending balance	4,651	-	2,165	-

<i>(in millions of Korean won)</i>	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	4,391	-	2,165	-

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

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8. Other Financial Assets and Liabilities

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

<i>(in millions of Korean won)</i>	March 31, 2021	December 31, 2020
Other financial assets		
Derivative financial assets (forward contract) (current)	19,964	23,821
Financial assets at fair value through other comprehensive income (excluding forward contract) (non-current)	114,628	52,216
Financial assets at fair value through profit or loss (excluding forward contract) (non-current)	44,563	29,316
	<u>179,155</u>	<u>105,353</u>
Other financial liabilities		
Derivative liabilities (forward contract) (current)	400	-
Financial liabilities at fair value through profit or loss (exchange rights) (current)	-	16,797
Financial liabilities at fair value through profit or loss (forward contract) (non-current)	19,039	41,768
	<u>19,439</u>	<u>58,565</u>

Changes in equity and debt instruments included in other financial assets for the three-month periods ended March 31, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021	2020
Beginning balance	81,532	149,463
Acquisitions / transfer	64,096	18,120
Disposals	(960)	(91,251)
Gain on valuation (before income tax effects) through other comprehensive income	2,297	3,024
Gain on valuation (before income tax effects) through profit or loss	10,973	3,898
Others	1,253	(1,722)
Ending balance	<u>159,191</u>	<u>81,532</u>

During the three-month periods ended March 31, 2021 and 2020, the Group did not recognize impairment for other financial assets.

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9. Inventories

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

(in millions of Korean won)

	March 31, 2021		
	Gross amount	Valuation allowance	Carrying amount
Merchandise	135,376	(3,366)	132,010
Finished / Semi-finished products	3,344,028	(121,117)	3,222,911
Work-in-process	18,743	-	18,743
Raw materials	1,441,777	(19,812)	1,421,965
Supplies	200,131	-	200,131
Materials-in-transit	894,362	-	894,362
Total	6,034,417	(144,295)	5,890,122

(in millions of Korean won)

	December 31, 2020		
	Gross amount	Valuation allowance	Carrying amount
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 three-month period ended March 31, 2021, the cost of inventories recognized as expense and included in 'cost of sales' amounted to ₩4,698,413 million (2020: ₩4,100,592 million).

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10. Investments in Associates and Joint Ventures

Changes in investments in associates and joint ventures for the three-month periods ended March 31, 2021 and for the year ended December 31, 2020, are as follows:

(in millions of
Korean won)

	March 31, 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	-	-	1,619	(360)	-	-	7,134
HL Greenpower Co., Ltd.	22,710	-	-	1,315	-	-	(234)	23,791
TECHWIN Co., Ltd.	20,113	-	-	(1,225)	(5)	-	-	18,883
SEETEC Co., Ltd	140,116	-	(10,000)	1,992	-	-	-	132,108
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	-	-	(602)	523	-	-	2,658
WUXI CL New Energy Technology Ltd ¹	-	-	-	-	-	-	-	-
LG Life Sciences Poland Ltd.	17	-	-	-	-	-	-	17
Combustion Synthesis Co., Ltd.	1,867	-	-	310	(83)	-	(57)	2,037
HUAJIN NEW ENERGY MATERIALS(QUZHOU)C O., LTD.	89,525	-	-	(882)	2,655	-	-	91,298
VINFAST LITHIUM BATTERY PACK LIMITED LIABILITY COMPANY	4,179	-	-	(285)	141	-	-	4,035
Jiangxi VL Battery Co.,Ltd	21,461	-	-	(308)	703	-	-	21,856
	<u>309,329</u>	<u>-</u>	<u>(10,000)</u>	<u>1,934</u>	<u>3,574</u>	<u>-</u>	<u>(291)</u>	<u>304,546</u>

(in millions of
Korean won)

	December 31, 2020							
	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.	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	579	-	-	-	-	-	-	579

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INTERMEDIACAO DE NEGOCIOS DO SETOR QUIMICO LTDA.								
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 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 March 31, 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 ₩326 million.

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11. Property, Plant and Equipment

Changes in property, plant and equipment for the three-month periods ended March 31, 2021 and for the year ended December 31, 2020, are as follows:

(in millions of Korean won)	March 31, 2021											
	Land	Buildings	Structures	Machinery	Vehicles	Tools	Equipment	Others	Right-of- use assets	Construction -in-progress	Machinery -in-transit	Total
Beginning balance	1,772,039	4,821,014	985,190	7,573,016	9,920	645,341	185,213	112,295	230,854	3,886,682	345,911	20,567,475
Cost	1,808,991	5,794,729	1,677,231	18,812,951	36,372	1,579,923	511,358	413,150	348,412	3,968,793	345,911	35,297,821
Accumulated depreciation	-	(931,321)	(667,122)	(11,062,720)	(26,346)	(922,831)	(322,812)	(294,937)	(117,522)	-	-	(14,345,611)
Accumulated impairment	(36,952)	(42,394)	(24,919)	(177,215)	(106)	(11,751)	(3,333)	(5,918)	(36)	(82,111)	-	(384,735)
Acquisitions/ transfer	15,937	256,817	190,870	562,409	224	48,105	19,775	3,217	132,653	1,125,028	15,219	2,370,254
Disposals/ transfer	(7,843)	(1,725)	(291)	(16,992)	(15)	(3,124)	(29)	-	(5,900)	(1,192,523)	(12,589)	(1,241,031)
Exchange differences	(407)	(27,607)	3,988	(6,349)	(44)	2,602	1,697	-	2,258	27,472	-	3,610
Depreciation	-	(36,524)	(16,094)	(414,254)	(673)	(49,422)	(13,703)	(28,282)	(18,569)	-	-	(577,521)
Impairment	-	(102)	(1,270)	(1,662)	-	(385)	(75)	-	(23)	-	-	(3,517)
Ending balance	<u>1,779,726</u>	<u>5,011,873</u>	<u>1,162,393</u>	<u>7,696,168</u>	<u>9,412</u>	<u>643,117</u>	<u>192,878</u>	<u>87,230</u>	<u>341,273</u>	<u>3,846,659</u>	<u>348,541</u>	<u>21,119,270</u>
Cost	1,781,881	6,022,651	1,871,494	19,227,573	36,430	1,609,083	531,642	416,366	468,738	3,928,990	348,541	36,243,389
Accumulated depreciation	-	(969,043)	(683,181)	(11,384,711)	(26,911)	(955,786)	(335,379)	(323,218)	(127,441)	-	-	(14,805,670)
Accumulated impairment	(2,155)	(41,735)	(25,920)	(146,694)	(107)	(10,180)	(3,385)	(5,918)	(24)	(82,331)	-	(318,449)

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	December 31, 2020											
	Land	Buildings	Structures	Machinery	Vehicles	Tools	Equipment	Others	Right-of-use assets	Construction -in-progress	Machinery -in-transit	Total
Beginning balance	1,759,528	3,890,961	957,739	6,348,867	6,261	601,958	163,470	175,122	319,620	4,210,088	160,028	18,593,642
Cost	1,796,480	4,769,924	1,583,401	17,044,880	33,056	1,457,840	467,293	378,823	380,814	4,300,788	160,028	32,373,327
Accumulated depreciation	-	(839,904)	(609,282)	(10,486,289)	(26,648)	(843,955)	(301,041)	(197,978)	(61,119)	-	-	(13,366,216)
Accumulated impairment	(36,952)	(39,059)	(16,380)	(209,724)	(147)	(11,927)	(2,782)	(5,723)	(75)	(90,700)	-	(413,469)
Acquisitions/ transfer	14,436	1,137,678	106,976	3,243,373	6,365	282,554	87,682	39,256	109,307	5,168,221	258,957	10,454,805
Disposals/ transfer	(681)	(18,922)	(1,655)	(66,721)	(38)	(25,298)	(4,352)	(2,398)	(8,165)	(5,421,750)	(72,815)	(5,622,795)
Exchange differences	(1,244)	29,214	887	(63,136)	(192)	(873)	108	1	(1,353)	(55,703)	-	(92,291)
Depreciation	-	(145,120)	(60,365)	(1,510,695)	(2,390)	(190,550)	(51,930)	(99,491)	(70,534)	-	-	(2,131,075)
Impairment	-	(5,542)	(8,639)	(47,769)	(57)	(10,148)	(627)	(195)	(86)	(2,716)	(259)	(76,038)
Reversal of impairment	-	-	-	-	-	-	-	-	-	220	-	220
Transfer to assets held for sale	-	(67,255)	(9,753)	(330,903)	(29)	(12,302)	(9,138)	-	(117,935)	(11,678)	-	(558,993)
Ending balance	1,772,039	4,821,014	985,190	7,573,016	9,920	645,341	185,213	112,295	230,854	3,886,682	345,911	20,567,475
Cost	1,808,991	5,794,729	1,677,231	18,812,951	36,372	1,579,923	511,358	413,150	348,412	3,968,793	345,911	35,297,821
Accumulated depreciation	-	(931,321)	(667,122)	(11,062,720)	(26,346)	(922,831)	(322,812)	(294,937)	(117,522)	-	-	(14,345,611)
Accumulated impairment	(36,952)	(42,394)	(24,919)	(177,215)	(106)	(11,751)	(3,333)	(5,918)	(36)	(82,111)	-	(384,735)

During the three-month ended March 31, 2021, the Group capitalized ₩17,360 million of borrowing costs (2020: ₩9,880 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 1.53% (2020: 1.62%).

Line items including depreciation in the consolidated statements of profit or loss for the three-month periods ended March 31, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021	2020
Cost of sales	521,414	427,268
Selling and administrative expenses	54,474	44,823
Others	325	612
Discontinued operations	1,308	20,767
Total	577,521	493,470

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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>	March 31, 2021	December 31, 2020
Right-of-use assets ¹		
Real-estate	290,875	183,136
Machinery	25,624	26,541
Vehicles	20,959	17,026
Tools	3,164	3,535
Equipment	651	616
	<u>341,273</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 three-month ended March 31, 2021, were ₩132,653 million (2020: ₩26,981 million).

<i>(in millions of Korean won)</i>	March 31, 2021	December 31, 2020
Lease liabilities ¹		
Current	67,279	55,389
Non-current	<u>226,225</u>	<u>129,236</u>
	<u>293,504</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	13,475	11,985
Machinery	1,403	1,204
Vehicles	3,202	3,370
Tools	366	34
Equipment	<u>123</u>	<u>113</u>
	<u>18,569</u>	<u>16,706</u>
Interest expense relating to lease liabilities (included in finance cost)	2,093	936
Expense relating to short-term leases (included in cost of goods sold and	6,879	9,470

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administrative expenses)		
Expense relating to leases of low-value assets that are not short-term leases (included in cost of goods sold and administrative expenses)	3,213	3,363
Expense relating to variable lease payments not included in lease liabilities (included in cost of goods sold and administrative expenses)	-	5

Total cash outflow for leases during the three-month period ended March 31, 2021, was ₩29,500 million (2020: ₩26,996 million).

12. Intangible Assets

Changes in intangible assets for the three-month periods ended March 31, 2021 and for the year ended December 31, 2020, are as follows:

(in millions of Korean won)	March 31, 2021						Total
	Development costs	Software	Industrial property rights	Goodwill	Memberships	Others	
Beginning balance	55,857	466,358	604,661	887,037	31,589	234,415	2,279,917
Separate acquisitions/transfer	-	73,971	19,070	-	2,458	20,063	115,562
Additions – internal development	199	-	-	-	-	-	199
Disposals/transfer	-	(104)	(1,164)	-	(110)	(2,591)	(3,969)
Exchange differences	-	1,067	1,249	6,568	16	(65)	8,835
Amortization	(1,305)	(30,914)	(13,915)	-	-	(4,033)	(50,167)
Impairment	-	(14)	-	-	-	-	(14)
Ending balance	54,751	510,364	609,901	893,605	33,953	247,789	2,350,363

(in millions of Korean won)	December 31, 2020						Total
	Development costs	Software	Industrial property rights	Goodwill	Memberships	Others	
Beginning balance	56,832	267,377	569,129	1,010,534	47,329	255,028	2,206,229
Separate acquisitions/transfer	-	302,054	123,062	-	867	9,336	435,319
Additions – internal development	4,282	-	-	-	-	-	4,282
Disposals/transfer	-	(1,976)	(4,098)	-	(16,611)	(7,900)	(30,585)
Exchange differences	-	4,885	(864)	(11,711)	4	(32)	(7,718)
Amortization	(5,257)	(102,989)	(50,710)	-	-	(22,017)	(180,973)
Impairment	-	(26)	(26,735)	(111,786)	-	-	(138,547)
Transfer to assets held for sale (Note 34)	-	(2,967)	(5,123)	-	-	-	(8,090)

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Ending balance	55,857	466,358	604,661	887,037	31,589	234,415	2,279,917
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Line items including amortization of intangible assets for the three-month periods ended March 31, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021	2020
Cost of sales	11,978	8,437
Selling and administrative expenses	38,035	28,109
Discontinued operations	154	195
Total	50,167	36,741

Total research and development costs recognized as expenses amounted to ₩280,032 (2020: ₩256,417 million) for the three-month periods ended March 31, 2021 and 2020.

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 three-month period ended March 31, 2021 and for the year ended December 31, 2020, are as follows:

(in thousands of tons and millions of Korean won)

	March 31, 2021							
	2020		2021		2022		2023	
	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount
Beginning balance / Allocation with nil consideration	7,507	-	9,371	-	9,371	-	9,371	-
Exchange	100	-	(100)	-	-	-	-	-
Ending balance	7,607	-	9,271	-	9,371	-	9,371	-

(in thousands of tons and millions of Korean won)

	March 31, 2021					
	2024		2025		Total	
	Quantity	Amount	Quantity	Amount	Quantity	Amount
Beginning balance / Allocation with nil consideration	9,283	-	9,283	-	54,186	-
Exchange	-	-	-	-	-	-
Ending balance	9,283	-	9,283	-	54,186	-

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(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	-	-	7,507	-	9,371	-	9,371	-

(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	9,371	-	9,283	-	9,283	-	54,186	-

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

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13. Other Current and Non-Current Assets

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

<i>(in millions of Korean won)</i>	March 31, 2021	December 31, 2020
Current		
Prepayments to suppliers and prepaid expenses	206,107	174,885
Prepaid value added tax	479,847	428,303
Others	145,489	39,964
Total	831,443	643,152
Non-current		
Long-term prepayments and long-term prepaid expenses	70,067	87,247
Others	100	98
Total	70,167	87,345

14. Borrowings

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

<i>(in millions of Korean won)</i>	March 31, 2021	December 31, 2020
Current		
Short-term borrowings	1,141,036	879,757
Current portion of long-term borrowings of bank loans	306,875	341,203
Current-portion of debentures	259,786	272,466
Lease liabilities	67,279	55,389
	1,774,976	1,548,815
Non-current		
Long-term borrowings	2,999,238	3,131,254
Debentures	6,425,137	5,376,812
Lease liabilities	226,225	129,236
	9,650,600	8,637,302
Total	11,425,576	10,186,117

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

<i>(in millions of Korean won)</i>	Bank	Latest maturity date	Interest rate(%)	March 31, 2021	December 31, 2020
Bank loans	Citi and others	December 9, 2021	2.60 and others	1,141,036	879,757
Total				<u>1,141,036</u>	<u>879,757</u>

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

<i>(in millions of Korean won)</i>	March 31, 2021				
	Bank	Annual interest rate (%)	Amount in Korean won	Current	Non-current
Borrowings in Korean won	KDB ¹	(1Y) + 1.45 ~ 1.99	6,222	1,845	4,377
	KB Kookmin Bank	24M MOR + 1.89	1,757	740	1,017
Borrowings in foreign currencies	HSBC	USD: 3M LIBOR+1.40 CNY: PBOC×0.95, LPR-33.75%	73,508	59,287	14,221
	SMBC	0.32~0.48	199,361	-	199,361
	Construction Bank of China	LPR(1Y)+0.36~0.46	80,863	38,708	42,155
	Communications Bank of China	3M LIBOR + 1.15%	5,692	5,692	-
	Citi	USD: 3M LIBOR + 0.95 EUR: 3M EURIBOR + 0.62~0.70	237,861	38,501	199,360
	ING	6M EURIBOR + 0.70 ~0.83	159,489	-	159,489
	Standard Chartered Bank	USD: 3M LIBOR + 1.20 CNY: PBOC×0.95	38,779	25,853	12,926
	CNOOC Finance	PBOC×0.90	10,341	10,341	-
	EBRD	6M EURIBOR + 0.62	332,268	-	332,268
	MUFG	EUR: 3M EURIBOR + 0.60~0.80	132,908	66,454	66,454
	Industrial and Commercial Bank of China	PBOC ×1.00	45,345	11,886	33,459
	KEB Hana Bank	3M EURIBOR + 0.62	265,814	-	265,814
	KDB	USD: 3M LIBOR + 0.93 EUR: 3M EURIBOR+1.50	506,450	47,568	458,882
	The Export-Import Bank of Korea	3M EURIBOR+1.50	292,396	-	292,396
	NongHyup Bank	3M EURIBOR+1.50	146,198	-	146,198
	EIB	3M EURIBOR + 0.47	637,954	-	637,954
	DBS	6M EURIBOR + 0.60	132,907	-	132,907
Total			<u>3,306,113</u>	<u>306,875</u>	<u>2,999,238</u>

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

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(in millions of Korean won)	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	HSBC	USD: 3M LIBOR + 0.95~1.40 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	-
	Citi	USD: 3M LIBOR + 0.95 EUR: EURIBOR + 0.62~0.70	241,354	39,212	202,142
	ING	6M EURIBOR + 0.70 ~0.83	161,714	-	161,714
	Standard Chartered Bank	USD: 3M LIBOR + 1.20 CNY: PBOC ×0.95	92,036	79,514	12,522
	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
	KDB	USD: 3M LIBOR + 0.93 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			3,472,457	341,203	3,131,254

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

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

(in millions of Korean won)

	Financial institution	March 31, 2021				
		Annual interest rate (%)	Latest maturity date	Amount in Korean won	Current	Non-current
50-2 nd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	2.28	2022.5.19	400,000	-	400,000
50-3 rd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	2.53	2024.5.19	280,000	-	280,000
51-2 nd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	2.88	2023.2.20	240,000	-	240,000
51-3 rd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	3.07	2025.2.20	270,000	-	270,000
51-4 th Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	3.29	2028.2.20	300,000	-	300,000
52-1 st Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	2.02	2022.3.13	160,000	160,000	-
52-2 nd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	2.11	2024.3.13	240,000	-	240,000
1 st Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	2.21	2026.03.13	200,000	-	200,000
52-4 th Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	2.40	2029.3.13	400,000	-	400,000
53-1 st Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	1.57	2023.2.19	350,000	-	350,000
53-2 nd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	1.65	2025.2.19	250,000	-	250,000
53-3 rd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	1.72	2027.2.19	50,000	-	50,000
53-4 th Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	1.91	2030.2.19	250,000	-	250,000
54-1 st Debenture (non-guaranteed/public)	KB SECURITIES CO.,LTD and others	1.14	2024.2.19	350,000	-	350,000
54-2 nd Debenture (non-guaranteed/public)	KB SECURITIES CO.,LTD and others	1.51	2026.2.19	270,000	-	270,000
54-3 rd Debenture (non-guaranteed/public)	KB SECURITIES CO.,LTD and others	1.76	2028.2.19	200,000	-	200,000
54-4 th Debenture (non-guaranteed/public)	KB SECURITIES CO.,LTD and others	2.14	2031.2.19	260,000	-	260,000
54-5 th 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	566,750	-	566,750
USD foreign currency debenture with maturity in 2029	Citi and others	3.63	2029.4.15	566,750	-	566,750
EUR foreign currency debenture with maturity in 2023	Citi and others	0.50	2023.4.15	664,145	-	664,145
1-2 nd EUR Overseas Exchangeable bonds ¹	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
	NH Investment & Securities Co., Ltd.	2.22	2025.2.14	30,000	-	30,000

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NH Investment & Securities Co., Ltd.	1.56	2024.2.8	70,000	-	70,000
Less: discount on debentures			(22,722)	(214)	(22,508)
Total			6,684,923	259,786	6,425,137

(in millions of Korean won)

		December 31, 2020				
	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
51-1st 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
	NH Investment & Securities Co., Ltd.	2.71	2021.3.2	50,000	50,000	-
	NH Investment & Securities Co., Ltd.	3.00	2023.3.2	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

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Less: discount on debentures	(20,629)	(321)	(20,308)
Total	5,649,278	272,466	5,376,812

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 three-month period ended March 31, 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 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

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Call option by the issuer	<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - 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 March 31, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>					
March 31, 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	293,504	67,279	226,225
<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 three-month periods ended March 31, 2021 and for the year ended December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>					
March 31, 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)	64,626	(922)	2,459	3,131	69,294
Used	(84,296)	-	-	(9,443)	(93,739)
Ending balance	1,224,347	3,953	10,745	106,517	1,345,562
Less: current portion	(987,247)	(3,953)	-	(48,751)	(1,039,951)
Total	237,100	-	10,745	57,766	305,611
<i>(in millions of Korean won)</i>					
December 31, 2020					
	Warranty¹	Greenhouse gas emission²	Legal claims³	Restoration⁴	Total
Beginning balance	596,251	25,157	370	114,950	736,728
Additions (reversal)	942,425	(12,382)	8,885	22,112	961,040
Used	(294,659)	(7,900)	(969)	(24,233)	(327,761)
Ending balance	1,244,017	4,875	8,286	112,829	1,370,007
Less: current portion	(1,000,312)	(4,875)	-	(36,264)	(1,041,451)
Total	243,705	-	8,286	76,565	328,556

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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 included.

² Greenhouse gas emission provisions have been accrued for estimated expenditures to be obligated for any excess emission. The estimated emission as at March 31, 2021 amounts to 2,150 thousand tons (March 31, 2020: 2,238 thousand tons).

³ Lawsuit provisions have been accrued for certain pending cases.

⁴ As at March 31, 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 March 31, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	March 31, 2021	December 31, 2020
Present value of defined benefit obligations ¹	1,476,443	1,454,596
Fair value of plan assets	<u>(1,320,605)</u>	<u>(1,336,637)</u>
Liabilities in the consolidated statement of financial position	<u>155,838</u>	<u>117,959</u>

¹ The present value of retirement benefit obligations is net of existing contributions to the National Pension Plan of ₩691 million as at March 31, 2021 (December 31, 2020: ₩734 million).

The amounts recognized in the consolidated statements of profit or loss for the three-month periods ended March 31, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021	2020
Current service cost ¹	47,527	45,978
Interest cost	<u>698</u>	<u>1,057</u>
Total, included in employee benefit expenses	<u>48,225</u>	<u>47,035</u>

¹ The above amounts excluded ₩1,027 million (2020: ₩950 million) of expenses capitalized to construction in progress and development costs.

Post-employment benefits recognized for defined contribution plan for the three-month period ended March 31, 2021, amounted to ₩2,972 million (2020: ₩2,345 million).

Post-employment benefits recognized in the consolidated statements of profit or loss for the three-month periods ended March 31, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021	2020
Cost of sales	30,833	28,468
Selling and administrative expenses	20,140	18,659
Discontinued operations	<u>224</u>	<u>2,253</u>
Total	<u>51,197</u>	<u>49,380</u>

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Movements in the present value of defined benefit obligations for the three-month periods ended March 31, 2021 and for the year ended December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	March 31, 2021	December 31, 2020
Beginning balance	1,454,596	1,343,553
Transfer in	5,200	7,190
Transfer out	(2,679)	(1,690)
Current service cost	48,554	202,276
Interest expense	8,941	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	(1,776)	(14,637)
Payments from plans	(24,238)	(83,812)
Ending balance	1,476,443	1,454,596

Movements in the fair value of plan assets for the three-month periods ended March 31, 2021 and for the year ended December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	March 31, 2021	December 31, 2020
Beginning balance	1,336,637	1,164,393
Transfer out	(100)	(725)
Interest income	8,242	27,307
Remeasurements:		
Return on plan assets (excluding amounts included in interest income)	(2,428)	(5,069)
Contributions:		
Employers	498	227,555
Payments from plans	(21,896)	(76,458)
Administrative costs	(348)	(366)
Ending balance	1,320,605	1,336,637

The actual return on plan assets for the three-month period ended March 31, 2021, was ₩5,814 million (2020: ₩22,238 million).

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

	March 31, 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%

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The sensitivity analysis for changes in key actuarial assumptions as at March 31, 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	(111,639)	129,765
Salary growth rate:		
Increase (decrease) in defined benefit obligations	125,810	(110,184)

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 March 31, 2021 and December 31, 2020, consist of:

<i>(in millions of Korean won)</i>	March 31, 2021		December 31, 2020	
	Amount	Composition (%)	Amount	Composition (%)
Insurance contracts with guaranteed yield	1,297,584	98.3	1,314,072	98.3
Equity linked bonds	21,366	1.6	20,855	1.6
Time deposits	1,655	0.1	1,710	0.1
	1,320,605	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 March 31, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	March 31, 2021	December 31, 2020
Current		
Advances from customers	301,061	203,507
Dividends payable	867,788	-
Withholdings	69,931	128,754
Unearned revenues	103,435	62,286
Accrued expenses	209,212	393,482
Total	1,551,427	788,029
Non-current		
Long-term accrued expenses	63,104	63,019
Long-term unearned revenues	7,485	14,952
Long-term advanced received	63,096	68,935
Total	133,685	146,906

18. Commitments and Contingencies

- (1) The Parent Company is jointly liable for liabilities of LG Energy Solution, Ltd. as at December 1, 2020, a newly established company through the split-off from the Parent Company.
- (2) As at March 31, 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 March 31, 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	356	-	303	5,582	-	777	-
Limit of discount of notes from export	-	397	-	135	-	-	-	-
Limit of guaranteed payments in other foreign currency	-	41	-	56	-	-	-	-
Limit of loan arrangements	-	-	82,480	2,563	3,774	2,475	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 55 million.

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- (4) As at March 31, 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 and other loans with limit of USD 55 million.
- (5) As at March 31, 2021, the Parent Company has reverse factoring agreements, and utilized the facility for ₩696,879 million provided by Shinhan Card and utilized the facility for ₩1,528,831 million provided by Woori Card.
- (6) As at March 31, 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 March 31, 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 March 31, 2021, the Parent Company and certain subsidiaries have been named as a plaintiff in 13 and 22 legal actions, respectively, involving ₩33,970 million and ₩9,091 million in claims, respectively. They have been named as a defendant in 8 and 210 legal actions, respectively, with ₩5,773 million and ₩7,806 million in claims, respectively. The ultimate outcome of these cases cannot be determined at the reporting date.
- (9) As at March 31, 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 March 31, 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 March 31, 2021, the Parent Company has entered into payment guarantee contract of USD 7 million, and certain subsidiaries have entered into payment guarantee contracts of USD 2 million, EUR 2 million and ₩5,373 million with financial institutions to guarantee the warrant of certain installed products. Also, certain subsidiaries have entered into payment guarantee contract of CNY 190 million with financial institutions in relation to custom of imported raw materials.

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

<i>(in millions of Korean won)</i>	March 31, 2021			Secured party
	Secured amount	Borrowings / Loan	Limit	
Factory	20,880	Current and non-current borrowings	6,222	KDB
	<u>20,880</u>		<u>6,222</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>	March 31, 2021	December 31, 2020
Property, plant and equipment	3,270,057	2,428,411

(15) After the reporting period, General Motors Company has issued a recall for the Chevrolet Bolt EV to investigate fire risk. Investigation on the cause of the fire is being conducted by related authorities and the exact cause of fire has not been determined yet at the reporting date. As such, the Group cannot make reasonable expectation of the timing and amount of an outflow from the Group of resources due to the uncertainty of the cause of the accident.

(16) As of March 31, 2021, the Group has entered into an agreement with General Motors Company 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 three-month periods ended March 31, 2021 and 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
March 31, 2021	70,592,343	352,962	7,688,800	38,444	2,014,036

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Changes in treasury shares for the three-month periods ended March 31, 2021 and for the year ended December 31, 2020, are as follows:

(in millions of Korean won and in shares)	Number of shares		Carrying amount	Gain on disposal of treasury shares
	Ordinary shares	Preferred 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
March 31, 2021	373,614	16,368	21,397	460,063

20. Retained Earnings

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

(in millions of Korean won)	March 31, 2021	December 31, 2020
Legal reserve ¹	416,618	401,574
Discretionary reserve ²	12,945,537	13,780,609
Retained earnings before appropriation	2,346,329	993,121
Total	15,708,484	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 March 31, 2021 and December 31, 2020, are as follows:

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

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 periods ended March 31, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021	2020
Wages and salaries	252,518	221,574
Post-employment benefits (Note 16)	20,140	18,658
Employee benefits	54,209	45,103
Travel expense	7,282	10,733
Water & utilities	18,653	15,789
Packaging expense	1,438	1,381
Rental expenses	28,484	18,260
Commission expenses	171,721	189,298
Depreciation	54,781	45,137
Advertising expense	5,600	4,360
Freight expenses	208,745	160,115
Training expense	3,930	2,566
Amortization (Note 12)	38,035	28,110
Sample expense	3,245	4,264
Development costs	50,869	53,734
Others	129,533	84,495
Total	1,049,183	903,577

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23. Classification of Expenses by Nature

Cost of sales, and selling and administrative expenses by nature for the three-month periods ended March 31, 2021 and 2020, consist of:

<i>(in millions of Korean won)</i>	2021	2020
Changes in inventories of merchandise, finished goods, semi-finished goods and work in process	(276,969)	(352,221)
Raw materials and consumables used	4,663,888	4,248,519
Purchase of merchandise	311,494	204,294
Employee benefit expenses (Note 24)	727,273	678,430
Advertising expenses	5,850	4,585
Freight expenses	219,256	169,298
Commission expenses	304,404	280,947
Depreciation and amortization	626,208	508,950
Rent expenses and usage fee	18,765	16,366
Other expenses	1,641,719	764,144
Total	8,241,888	6,523,312

24. Employee Benefit Expenses

Details of employee benefit expenses for the three-month periods ended March 31, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021	2020
Salaries	609,977	568,221
Post-employment benefits – Defined benefit plan (Note 16)	48,001	44,782
Post-employment benefits – Defined contribution plan (Note 16)	2,972	2,345
Others	66,323	63,082
Total	727,273	678,430

25. Finance Income and Costs

Details of finance income and costs for the three-month periods ended March 31, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021	2020
Finance income		
Interest income ¹	10,852	13,191
Dividend income	378	-
Exchange differences	113,523	103,690
Gain related to derivative instruments	22,730	-
Others	10,973	-
Total	158,456	116,881
Finance costs		
Interest expense ²	40,411	60,536
Exchange differences	146,645	343,293
Loss related to derivative instruments	8,079	6,771
Others	2	-

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Total	<u>195,137</u>	<u>410,600</u>
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¹ Details of interest income for the three-month periods ended March 31, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021	2020
Deposits held by financial institutions	8,016	7,435
Other loans and receivables	2,836	5,756
Total	<u>10,852</u>	<u>13,191</u>

² Details of interest expense for the three-month periods ended March 31, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021	2020
Interest on financial institutions	8,381	23,389
Interest on lease liabilities	2,093	935
Interest on debentures	36,695	37,938
Other interest expenses	10,602	7,906
Capitalized interest for qualifying assets	(17,360)	(9,632)
Total	<u>40,411</u>	<u>60,536</u>

26. Other Non-Operating Income

Details of other non-operating income for the three-month periods ended March 31, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021	2020
Exchange differences	274,785	286,836
Gain on disposal of property, plant and equipment	24,977	666
Gain on disposal of intangible assets	15	112
Gain on disposal of investments in associates	-	328,634
Others	16,146	8,882
Total	<u>315,923</u>	<u>625,130</u>

27. Other Non-Operating Expenses

Details of other non-operating expenses for the three-month periods ended March 31, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021	2020
Exchange differences	236,314	321,381
Loss on disposal of property, plant and equipment	8,686	5,882
Loss on disposal of intangible assets	103	113
Impairment loss on property, plant and equipment	2,931	32,453
Impairment loss on intangible assets	14	-
Donations	561	2,694
Others	14,084	18,397
Total	<u>262,693</u>	<u>380,920</u>

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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 26.9% (the estimated tax rate for the year ended December 31, 2020: 24.2%).

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 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 periods ended March 31, 2021 and 2020, are computed as follows:

Basic earnings per ordinary share from continuing operations

<i>(in millions of Korean won and in number of shares)</i>	2021	2020
Profit from continuing operations attributable to ordinary shares ¹	881,864	30,982
Weighted average number of ordinary shares outstanding ²	<u>70,213,855</u>	<u>68,939,926</u>
Basic earnings per ordinary share from continuing operations <i>(in won)</i>	<u>12,560</u>	<u>449</u>

Basic earnings per ordinary share

<i>(in millions of Korean won and in number of shares)</i>	2021	2020
Profit attributable to ordinary shares ¹	1,177,894	18,879
Weighted average number of ordinary shares outstanding ²	<u>70,213,855</u>	<u>68,939,926</u>
Basic earnings per ordinary shares <i>(in won)</i>	<u>16,776</u>	<u>274</u>

Basic earnings per preferred share from continuing operations

<i>(in millions of Korean won and in number of shares)</i>	2021	2020
Profit from continuing operations attributable to preferred share ¹	96,459	3,543
Weighted average number of preferred shares outstanding ²	<u>7,672,433</u>	<u>7,672,433</u>
Basic earnings per preferred share from continuing operations <i>(in won)</i>	<u>12,572</u>	<u>461</u>

Basic earnings per preferred share

<i>(in millions of Korean won and in number of shares)</i>	2021	2020
Profit attributable to preferred shares ¹	128,807	2,197

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Weighted average number of preferred shares outstanding ²	7,672,433	7,672,433
Basic earnings per preferred shares (<i>in won</i>)	16,788	286

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

(<i>in millions of Korean won</i>)	2021	2020
Profit from continuing operations attributable to the equity holders of the Parent Company	978,323	34,525
Ordinary shares dividends (A)	175,535	34,470
Preferred shares dividends (B)	19,277	3,932
Undistributed earnings from continuing operation for the period	783,511	(3,877)
Undistributed earnings available for ordinary shares (C)	706,329	(3,488)
Undistributed earnings available for preferred shares (D)	77,182	(389)
Profit from continuing operations for the period attributable to ordinary shares (A+C)	881,864	30,982
Profit from continuing operations for the period attributable to preferred shares (B+D)	96,459	3,543

(<i>in millions of Korean won</i>)	2021	2020
Profit attributable to the equity holders of the Parent Company	1,306,701	21,076
Ordinary shares dividends (A)	175,535	18,879
Preferred shares dividends (B)	19,277	2,197
Undistributed earnings for the period	1,111,889	-
Undistributed earnings available for ordinary shares (C)	1,002,359	-
Undistributed earnings available for preferred shares (D)	109,530	-
Profit for the period attributable to ordinary shares (A+C)	1,177,894	18,879
Profit for the period attributable to preferred shares (B+D)	128,807	2,197

² Weighted average numbers of shares are calculated as follows:

Ordinary shares outstanding	2021			
	Period	Number of shares	Number of days	Number of shares x days
Beginning balance	2021. 1. 1 - 2021. 3. 31	70,163,895	90	6,314,750,550
Conversion of treasury shares	2021. 1. 9 - 2021. 3. 31	54,834	82	4,496,388
Total				6,319,246,938

Weighted average number of ordinary shares outstanding: 6,319,246,938 / 90 = 70,213,855 shares

Preferred shares outstanding	2021			
	Period	Number of shares	Number of days	Number of shares x days
Beginning balance	2021. 1. 1 - 2021. 3. 31	7,672,433	90	690,518,970
Total				690,518,970

Weighted average number of preferred shares outstanding: 690,518,970 / 90 = 7,672,433 shares

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Ordinary shares outstanding	2020			
	Period	Number of shares	Number of days	Number of shares x days
Beginning balance	2020. 1. 1 - 2020. 3. 31	68,939,926	91	6,273,533,266
Total				6,273,533,266

Weighted average number of ordinary shares outstanding: $6,273,533,266 / 91 = 68,939,926$ shares

Preferred shares outstanding	2020			
	Period	Number of shares	Number of days	Number of shares x days
Beginning balance	2020. 1. 1 - 2020. 3. 31	7,672,433	91	698,191,403
Total				698,191,403

Weighted average number of preferred shares outstanding: $698,191,403 / 91 = 7,672,433$ shares

For the three-month periods ended March 31, 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 periods ended March 31, 2021 and 2020, are as follows:

<i>(in Korean won)</i>	2021	2020
Basic earnings (losses) per ordinary share from discounted operations	4,216	(175)
Basic earnings (losses) per preferred share from discounted operations	4,216	(175)
Diluted earnings (losses) per ordinary share from discounted operations	4,216	(175)
Diluted earnings (losses) per preferred share from discounted operations	4,216	(175)

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 March 31, 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 March 31, 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.
LG 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
LG International Corp.	Pantos Logistics Co., Ltd. and others	LG International (Japan) Ltd. and others	LG Enterprise group ¹
LG 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 three-month periods ended March 31, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021					
	Purchase and others					
	Sales 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.	-	-	-	-	58	19,587
Associates and joint ventures						
SEETEC Co., Ltd.	11,145	36,645	-	41	107	16,741
TECWIN Co., Ltd.	1	2	367	-	-	8
HL Greenpower Co., Ltd.	201,596	440	-	-	-	10
Others	-	3,024	-	-	-	635
Other related parties						
LG MMA Corporation ¹	21,307	42,881	-	-	-	832
S&I Corp. and its subsidiaries	20	2,928	135,667	-	-	28,519
LG CNS Co., Ltd. and its subsidiaries	1,266	897	68,484	-	6	42,331
Others	44	-	-	-	-	7,580
Others						
LG Display Co., Ltd. and its subsidiaries	170,367	24	-	-	4	-
LG Electronics Inc. and its subsidiaries	398,613	273,498	91,524	-	10	54,610
LG International Corp. and its subsidiaries	19,327	97,018	2,099	-	1	240,054
LG Hausys, Ltd. and its subsidiaries	58,216	-	10,956	-	-	660
Others	1,957	6,247	766	9	17	1,111
Total	883,859	463,604	309,863	50	203	412,678

(in millions of Korean won)

	2020					
	Purchase and others					
	Sales 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.	-	-	-	-	73	14,444
Associates and joint ventures						

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SEETEC Co., Ltd.	4,703	37,380	-	71	6	22,329
TECWIN Co., Ltd.	-	34	39	-	-	57
HL Greenpower Co., Ltd.	182,987	-	-	-	-	1,629
Others	14	82	1	-	-	723
Other related parties						
LG MMA Corporation ¹	22,907	37,350	-	-	-	878
S&I Corp. and its subsidiaries	56	5,516	154,164	-	-	14,214
LG CNS Co., Ltd. and its subsidiaries	1,220	783	80,690	-	6	19,580
Others	-	-	-	583	1	2,653
Others						
LG Display Co., Ltd. and its subsidiaries	213,632	24	-	-	-	95
LG Electronics Inc. and its subsidiaries	253,271	161,351	82,574	-	-	57,786
LG International Corp. and its subsidiaries	8,202	91,441	26,108	854	-	144,476
LG Hausys, Ltd. and its subsidiaries	43,188	368	649	-	-	1,861
Others	2,449	6,377	87	1,605	1	1,470
Total	732,629	340,706	344,312	3,113	87	282,195

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

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

(in millions of Korean won)

	March 31, 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.	3,311	-	193	3,504
TECWIN Co., Ltd.	-	-	-	-
HL Greenpower Co., Ltd.	209,932	-	4,305	214,237
Others	-	-	43	43
Other related parties				
LG MMA Corporation	10,665	-	596	11,261
S&I Corp. and its subsidiaries ¹	-	-	8,762	8,762
LG CNS Co., Ltd. and its subsidiaries	1,062	-	348	1,410
Others	-	-	6,746	6,746
Others				
LG Display Co., Ltd. and its subsidiaries	177,704	-	10,478	188,182
LG Electronics Inc. and its subsidiaries	301,946	-	177,673	479,619
LG International Corp. and its subsidiaries	4,881	-	384	5,265
LG Hausys, Ltd. and its subsidiaries	57,504	-	46	57,550
Others	45	-	1,170	1,215
Total	767,050	-	220,713	987,763

(in millions of Korean won)

	March 31, 2021				
	Payables				Total
	Trade payables	Borrowings	Lease liabilities	Other payables	
Entity with a significant influence over the Group					
LG Corp.	-	-	8,947	244,540	253,487
Associates and joint ventures					
SEETEC Co., Ltd.	12,515	-	25,678	9,083	47,276
TECWIN Co., Ltd.	-	-	-	414	414
HL Greenpower Co., Ltd.	-	-	-	558	558
Others	549	-	-	230	780
Other related parties					
LG MMA Corporation	16,729	-	-	-	16,729
S&I Corp. and its subsidiaries ¹	1	-	-	254,460	254,461
LG CNS Co., Ltd. and its subsidiaries	-	-	904	148,865	149,769
Others	-	-	-	1,076	1,076
Others					
LG Display Co., Ltd. and its subsidiaries	24	-	693	58	775
LG Electronics Inc. and its subsidiaries	188,133	-	1,824	305,442	495,399
LG International Corp. and its subsidiaries	34,746	-	326	139,591	174,663
LG Hausys, Ltd. and its subsidiaries	-	-	31	7,812	7,843
Others	2,108	-	3,975	4,045	10,128
Total	254,805	-	42,378	1,116,174	1,413,358

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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				
LG 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
LG International Corp. and its subsidiaries	4,710	-	-	4,710
LG 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	
Entity with a significant influence over the Group				
LG Corp.	-	-	11,934	4,013
Associates and joint ventures				
SEETEC Co., Ltd.	14,977	-	26,014	9,884
TECWIN Co., Ltd.	-	-	-	574
HL Greenpower Co., Ltd.	-	-	-	330
Others	194	-	-	272
Other related parties				
LG MMA Corporation	13,272	-	-	-
S&I Corp. and its subsidiaries ¹	30	-	-	265,647
LG CNS Co., Ltd. and its subsidiaries	4	-	1,206	164,632
Others	-	-	92	289
Others				
LG Display Co., Ltd. and its subsidiaries	-	-	703	115
LG Electronics Inc. and its subsidiaries	133,330	-	1,792	254,868
LG International Corp. and its subsidiaries	23,654	-	575	74,267
LG Hausys, Ltd. and its subsidiaries	-	-	-	3,965
Others	1,869	-	1,101	6,224
Total	187,330	-	43,417	785,080

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 three-month periods ended March 31, 2021 and 2020, are as follows:

(in millions of Korean won)

				2021			
				Loans		Borrowings ¹	
	Dividends received	Dividends paid	Equity contributions in cash (capital reduction)	Loans	Repayment	Borrowings	Repayment
Entity with a significant influence over the Group							
LG Corp.	-	-	-	-	-	-	2,972
Associates and joint ventures							
SEETEC Co., Ltd.	10,000	-	-	-	-	41	1,981
Other related parties							
LG CNS Co., Ltd.	-	-	-	-	-	-	1,914
LG Holdings Japan Co.,Ltd.	-	-	-	-	-	-	92
Others							
LG Display America, Inc.	-	-	-	-	-	-	35
Pantos Logistics France	-	-	-	-	-	-	178
Pantos Logistics Spain S.L.	-	-	-	-	-	-	68
LG Electronics Deutschland GmbH	-	-	-	-	-	-	70
LG Hausys, Ltd.	-	-	-	-	-	-	652
LG HOUSEHOLD & HEALTH CARE LTD	-	-	-	-	-	9	478
Total	10,000	-	-	-	-	50	8,440

(in millions of Korean won)

				2020			
				Loans		Borrowings ¹	
	Dividends received	Dividends paid	Equity contributions in cash (capital reduction)	Loans	Repayment	Borrowings	Repayment
Entity with a significant influence over the Group							
LG Corp.	-	-	-	-	-	-	3,644
Associates and joint ventures							
SEETEC Co., Ltd.	10,000	-	-	-	-	71	500
HUAJIN NEW ENERGY MATERIALS(QUZHOU) CO.,Ltd	-	-	13,611	-	-	-	-
Other related parties							
LG CNS Co., Ltd.	-	-	-	-	-	-	296

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LG Holdings Japan Co., Ltd.	-	-	-	-	-	583	146
Others							
LG Display America, Inc.	-	-	-	-	-	-	2
Pantos Logistics (China) Co., Ltd.	-	-	-	-	-	-	6
Pantos Logistics France	-	-	-	-	-	830	40
LG Hausys, Ltd.	-	-	-	-	-	-	21
LG HOUSEHOLD & HEALTH CARE LTD	-	-	-	-	-	1,605	187
Total	<u>10,000</u>	<u>-</u>	<u>13,611</u>	<u>-</u>	<u>-</u>	<u>3,089</u>	<u>4,842</u>

¹ The amounts represent lease liabilities that were recognized or repaid for the three-month ended March 31, 2021.

Compensation for key management of the Group for the three-month periods ended March 31, 2021 and 2020, consists of:

<i>(in millions of Korean won)</i>	2021	2020
Short-term employee benefits	13,777	16,710
Post-employment benefits	<u>3,765</u>	<u>1,783</u>
Total	<u>17,542</u>	<u>18,493</u>

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 March 31, 2021 and December 31, 2020; therefore, there are no impairment losses recognized against the receivables from related parties for the three-month period ended March 31, 2021 and for the year ended December 31, 2020.

As at March 31, 2021, there are no payment guarantees provided by the Group for related parties.

32. Cash Generated from Operations

Reconciliation between profit before income tax and cash generated from operations for the three-month periods ended March 31, 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	1,426,627	157,569
Profit (loss) before income tax from discontinued operations	<u>421,509</u>	<u>(8,282)</u>
	<u>1,848,136</u>	<u>149,287</u>
Adjustments for:		
Depreciation	577,521	493,171
Amortization	50,167	36,741
Post-employment benefits	48,225	47,035

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Finance income	(193,165)	(164,602)
Finance costs	235,853	486,835
Foreign exchange differences	(1,419)	596
Loss (gain) on valuation of inventories	(5,347)	12,256
Gain on disposal of property, plant and equipment	(30,732)	(716)
Gain on disposal of intangible assets	(15)	(115)
Loss on disposal of property, plant and equipment	8,686	5,933
Loss on disposal of intangible assets	103	115
Impairment loss on property, plant and equipment	3,493	33,603
Impairment loss on intangible assets	14	63
Gain on disposal of investments in associates	-	(328,634)
Gain on disposal of business	(385,704)	-
Additions to provisions	69,294	61,627
Other income	(37,030)	(50,436)
Increase in inventories	(440,955)	(274,042)
Increase in trade receivables	(613,795)	(748,867)
Decrease (increase) in other receivables	(99,859)	12,701
Increase in other current assets	(99,544)	(32,398)
Increase in trade payables	479,698	26,493
Increase in other payables	313,644	371,572
Decrease in other current liabilities	(321,871)	(83,889)
Decrease in provisions	(93,739)	(64,916)
Increase (decrease) in net defined benefit liabilities	129	(496)
Other cash flows from operations	1,471	17,041
Cash generated from operations	1,313,259	5,958

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Changes in liabilities arising from financial activities for the three-month period ended March 31, 2021, are as follows:

(in millions of Korean won)	2021						At March 31, 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	59,699	141,973	-	-	37,169	1,515,190
Long-term borrowings	3,260,490	11,349	(141,973)	-	124,798	(29,202)	3,225,462
Debentures	5,649,278	1,023,247	-	1,414	-	10,984	6,684,923
Exchange rights	16,797	-	-	-	-	(16,797)	-
Other payables for the reverse factoring arrangement	2,081,307	(516,410)	-	-	-	641,839	2,206,736
Total	12,284,221	577,885	-	1,414	124,798	643,993	13,632,311

Significant non-cash transactions for the three-month periods ended March 31, 2021 and 2020, are as follows:

(in millions of Korean won)	2021	2020
Reclassification of construction-in-progress	1,192,523	1,643,916
Reclassification of machinery-in-transit	12,589	18,814
Reclassification of long-term borrowings into current portion	401,747	494,921
Other payables related to acquisitions of property, plant and equipment and intangible assets	1,697,363	1,865,597
Exchange of treasury stocks such as exchangeable bonds	54,383	-
Reclassification of other payables under the reverse factoring arrangement	641,839	633,254

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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 three-month periods ended March 31, 2021 and 2020, are as follows:

(in millions of Korean won)	2021					
	Petro-chemicals	Energy solutions	Advanced materials	Life sciences	Common and others ³	Total
Total segment revenue	4,435,187	4,215,247	1,171,914	161,901	282,113	10,266,362
Inter-segment revenue	135,980	2,054	420,321	2,019	55,956	616,330
Revenue from external customers ¹	4,299,207	4,213,193	751,593	159,882	226,157	9,650,032
Operating profit (loss) ²	983,751	340,557	88,310	22,461	(26,935)	1,408,144

(in millions of Korean won)	2020					
	Petro-chemicals	Energy solutions	Advanced materials	Life sciences	Common and others ³	Total
Total segment revenue	3,765,381	2,260,876	721,853	157,519	212,086	7,117,715
Inter-segment revenue	136,092	228	233,251	1,070	17,905	388,546
Revenue from external customers ¹	3,629,289	2,260,648	488,602	156,449	194,181	6,729,169
Operating profit (loss) ²	234,552	(51,832)	38,562	23,086	(38,512)	205,856

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.

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

<i>(in millions of Korean won)</i>	March 31, 2021					
	Petro-chemicals	Energy solutions	Advanced materials	Life sciences	Common and others	Total
Reportable segment asset ¹	13,398,483	20,646,935	4,056,827	1,843,920	4,745,655	44,691,820
Investments in associates and joint ventures	7,863	49,683	91,298	17	155,685	304,546
Reportable segment liability ¹	4,894,400	12,398,691	1,394,430	212,075	6,144,148	25,043,744
<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 three-month periods ended March 31, 2021 and 2020, and as at March 31, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	Sales		Non-current assets¹	
	2021	2020	March 31, 2021	December 31, 2020
Korea ²	2,165,239	2,083,874	14,946,414	14,656,257
China	2,647,491	1,656,137	3,996,929	3,690,486
Asia	1,222,047	983,322	35,452	34,876
America	991,623	625,853	782,968	656,190
Europe	2,530,902	1,292,355	3,762,384	3,859,016
Others	92,730	87,628	-	-
Total	9,650,032	6,729,169	23,524,147	22,896,825

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

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

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There is no single external customer who contributes over 10% of the Group's revenue for the three-month periods ended March 31, 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 small pouch assembly facility business is pending due to the delay in factory establishment by the buyer, but the transaction is expected to be completed in the first half of 2021. The disposal of acrylic film business is expected to be completed in the second half of 2021. In addition, the disposal of land acquired as part of acquisition of Farm Hannong Co., Ltd. is expected to be completed in the first half of 2021 and the disposal of LCD polarizer business has been completed in February 2021.

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

<i>(in millions of Korean won)</i>	March 31, 2021	December 31, 2020
Assets of disposal group		
Inventories	-	185,693
Property, plant and equipment	26,478	570,374
Intangible assets	-	8,086
Others	-	24,919
Total	26,478	789,072
Liabilities of disposal group		
Borrowings and others	-	130,383
Total	-	130,383

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 three-month periods ended March 31, 2021 and 2020.

The Group recognized cumulative profit of ₩748 million directly to other comprehensive income in relation to the disposal groups classified as held for sale.

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 three-month periods ended March 31, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021		
	LCD polarizer	Glass substrate	Total
Revenue	587,655	7,499	595,154
Expense	(168,357)	(5,288)	(173,645)
Profit before income tax of discontinued operation	419,298	2,211	421,509
Income tax expense	(92,656)	(475)	(93,131)
Profit after income tax of discontinued operations	326,642	1,736	328,378

(in millions of Korean won)

	2020		
	LCD polarizer	Glass substrate	Total
Revenue	390,901	10,093	400,994
Expense	(372,458)	(36,818)	(409,276)
Profit (loss) before income tax of discontinued operation	18,443	(26,725)	(8,282)
Income tax benefits (expense)	(7,715)	2,548	(5,167)
Profit (loss) after income tax of discontinued operations	10,728	(24,177)	(13,449)

Net cash flows from discontinued operations for the three-month periods ended March 31, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021		
	LCD polarizer	Glass substrate	Total
Net cash inflow from operating activities	203,352	2,019	205,371
Net cash inflow from investing activities	581,085	5,874	586,959
Net cash outflow from financing activities	(796,937)	(7,893)	(804,830)

(in millions of Korean won)

	2020		
	LCD polarizer	Glass substrate	Total
Net cash outflow from operating activities	(55,391)	(6,395)	(61,786)
Net cash outflow from investing activities	(30,291)	(2,404)	(32,695)
Net cash inflow from financing activities	85,532	8,799	94,331

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35. Assets and Liabilities related to Contracts with Customers

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

<i>(in millions of Korean won)</i>	March 31, 2021	December 31, 2020
Contract assets		
A right to recover the product	4,581	4,729
Total contract assets	<u>4,581</u>	<u>4,729</u>
Contract liabilities		
Advances in relation to revenue from the Group's main business activities	290,760	265,688
Expected customer incentives	49,796	5,394
Unearned revenue	22,888	26,036
Expected refunds	8,699	8,631
Total contract liabilities	<u>372,143</u>	<u>305,749</u>

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	94,393	84,598
Advances in relation to revenue from the Group's main business activities	91,034	78,581
Unearned revenue	3,359	4,517
Expected services to be transferred	-	1,500
Revenue recognized from performance obligations satisfied in previous periods	-	-

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36. Investment Properties

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

(in millions of Korean won)	March 31, 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	62,778	(12,428)	(47)	50,303	54,457	(9,225)	(10)	45,222
Total	66,989	(12,428)	(47)	54,514	58,668	(9,225)	(10)	49,433

Changes in investment properties for the three-month periods ended March 31, 2021 and 2020, are as follows:

(in millions of Korean won)	2021			2020		
	Land	Building	Total	Land	Building	Total
Beginning balance	4,211	45,222	49,433	4,368	48,960	53,328
Acquisitions/transfers	-	5,438	5,438	-	2,644	2,644
Disposals/transfers	-	(50)	(50)	(157)	(5,221)	(5,378)
Depreciation	-	(307)	(307)	-	(1,161)	(1,161)
Ending balance	4,211	50,303	54,514	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 March 31, 2021, is ₩60,133 million (December 31, 2020: ₩51,625 million).

During the three-month period ended March 31, 2021, rental income from investment properties under operating lease is ₩1,613 million (2020: ₩1,944 million), and operating expenses incurred for investment properties that generated rental income (including maintenance and repair expenses) are ₩304 million (2020: ₩310 million). During the three-month period ended March 31, 2021, operating expenses incurred for investment properties that do not generate rental income (including maintenance and repair expenses) are ₩3 million (2020: ₩3 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.

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

<i>(in millions of Korean won)</i>	March 31, 2021	December 31, 2020
Within one year	6,721	503
Within two years	6,015	172
Within five years	4,511	500
Total	17,247	1,175

37. Events after the Reporting Period

In April 2021, the Group has agreed with SK Innovation to settle all legal disputes relating to electric vehicle batteries.

In April 2021, the Group approved an investment for the second plant of Ultium Cells LLC, a jointly invested entity with General Motors Company, in order to respond to the growing demand for electric vehicle batteries in the North American market.