

LG Chem, Ltd. and Subsidiaries

Consolidated Interim Financial Statements

September 30, 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 September 30, 2021, and the related consolidated interim statements of profit or loss and comprehensive income for the three-month and nine-month periods ended September 30, 2021 and 2020, and consolidated interim statements of changes in equity and cash flows for the nine-month periods ended September 30, 2021 and 2020, and a summary of significant accounting policies and other explanatory notes, expressed in Korean won.

Management's Responsibility for the Financial Statements

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

Auditor's Responsibility

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

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

Conclusion

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

Emphasis of Matter

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

Uncertainty relating to COVID-19

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

Settlement with SK Innovation

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

Other Matters

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

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

November 15, 2021

Seoul, Korea

This report is effective as of November 15, 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
September 30, 2021 and December 31, 2020

<i>(in millions of Korean won)</i>	Notes	September 30, 2021 (Unaudited)	December 31, 2020
Assets			
Current assets			
Cash and cash equivalents	3, 5, 6	4,279,041	3,274,250
Trade receivables	3, 5, 7, 31	6,433,793	5,298,365
Other receivables	3, 5, 7, 31	999,907	924,303
Other current financial assets	3, 5, 8	24,648	23,821
Prepaid income taxes		19,154	17,049
Other current assets	13	788,480	643,152
Inventories	9	7,986,017	5,349,688
Assets held for sale	34	5,723	789,072
Total current assets		<u>20,536,763</u>	<u>16,319,700</u>
Non-current assets			
Trade receivables	3, 5, 7	51,175	29,376
Other receivables	3, 5, 7	1,193,778	255,030
Other non-current financial assets	3, 5, 8	342,894	81,532
Investments in associates and joint ventures	1, 10, 33	500,292	309,329
Deferred tax assets	28	1,866,907	1,409,757
Property, plant and equipment	11	22,793,052	20,567,475
Intangible assets	12	2,423,749	2,279,917
Investment properties	36	53,931	49,433
Other non-current assets	13	59,442	87,345
Total non-current assets		<u>29,285,220</u>	<u>25,069,194</u>
Total assets		<u>49,821,983</u>	<u>41,388,894</u>
Liabilities			
Current liabilities			
Trade payables	3, 5, 31	3,649,306	3,458,526
Other payables	3, 5, 31	4,188,237	5,266,974
Borrowings	3, 5, 14	3,388,860	1,548,815
Other current financial liabilities	3, 5, 8	1,326	16,797
Provisions	15	1,763,453	1,041,451
Income tax payables	28	838,220	373,244
Other current liabilities	17, 35	1,036,042	788,029
Liabilities held for sale	34	-	130,383
Total current liabilities		<u>14,865,444</u>	<u>12,624,219</u>
Non-current liabilities			
Other payables	3, 5, 31	13,336	11,927
Borrowings	3, 5, 14	10,629,991	8,637,302
Other non-current financial liabilities	3, 5, 8	-	41,768
Provisions	15	591,251	328,556
Net defined benefit liabilities	16	279,253	117,959
Deferred tax liabilities	28	655,385	689,817
Other non-current liabilities	17, 35	108,727	146,906
Total non-current liabilities		<u>12,277,943</u>	<u>9,974,235</u>
Total liabilities		<u>27,143,387</u>	<u>22,598,454</u>

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

<i>(in millions of Korean won)</i>	Notes	September 30, 2021 (Unaudited)	December 31, 2020
Equity			
Share capital	1, 19	391,406	391,406
Capital surplus		2,720,698	2,692,485
Other components of equity	21	(40,696)	(54,998)
Accumulated other comprehensive income		450,515	(165,076)
Retained earnings	20	17,803,177	15,175,304
Equity attributable to owners of the Parent Company		21,325,100	18,039,121
Non-controlling interests		1,353,496	751,319
Total equity		22,678,596	18,790,440
Total liabilities and equity		49,821,983	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 and Nine-Month Periods Ended September 30, 2021 and 2020

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

	Notes	Period Ended September 30			
		2021		2020	
		(Unaudited)		(Unaudited)	
		Three months	Nine months	Three months	Nine months
Revenue	31, 33, 35, 37	10,610,153	31,706,025	7,503,088	21,159,552
Cost of sales	23, 31	(7,960,597)	(22,752,729)	(5,705,394)	(16,736,683)
Gross profit		2,649,556	8,953,296	1,797,694	4,422,869
Selling and administrative expenses	22, 23, 31	(1,922,951)	(4,676,246)	(893,590)	(2,737,981)
Operating profit	33	726,605	4,277,050	904,104	1,684,888
Finance income	5, 25	198,186	528,418	63,475	269,393
Finance costs	5, 25	(282,609)	(576,365)	(245,275)	(791,439)
Share of net profit of associates and joint ventures accounted for using the equity method	10	259	5,710	1,110	3,319
Other non-operating income	5, 26	369,337	753,516	189,083	902,811
Other non-operating expenses	5, 27	(274,274)	(609,412)	(202,665)	(727,873)
Profit before income tax	32	737,504	4,378,917	709,832	1,341,099
Income tax expense	28	(36,933)	(1,067,596)	(186,230)	(373,222)
Profit from continuing operations		700,571	3,311,321	523,602	967,877
Profit from discontinued operations	34	(20,686)	305,805	46,785	57,927
Profit for the period		679,885	3,617,126	570,387	1,025,804
Profit is attributable to:					
Owners of the Parent Company					
Profit from continuing operations		630,814	3,101,297	465,515	857,718
Profit from discontinued operations		(20,686)	305,805	46,785	57,927
		610,128	3,407,102	512,300	915,645
Non-controlling interests					
Profit from continuing operations		69,757	210,024	58,087	110,159
		69,757	210,024	58,087	110,159
Earnings per share for profit					
attributable to the equity holders					
of the Parent Company (in won)	29				
Basic earnings per ordinary share		7,832	43,739	6,680	11,939
Basic earnings per preferred share		7,843	43,777	6,692	11,976
Diluted earnings per ordinary share		7,832	43,739	6,680	11,939
Diluted earnings per preferred share		7,843	43,777	6,692	11,976
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		8,098	39,813	6,070	11,183
Basic earnings per preferred share		8,110	39,850	6,083	11,221
Diluted earnings per ordinary share		8,098	39,813	6,070	11,183
Diluted earnings per preferred share		8,110	39,850	6,083	11,221

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

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

(in millions of Korean won)

	Note	Period Ended September 30			
		2021		2020	
		(Unaudited)		(Unaudited)	
		Three months	Nine months	Three months	Nine months
Profit for the period		679,885	3,617,126	570,387	1,025,804
Other comprehensive income					
<i>Items that will not be reclassified to profit or loss</i>					
Remeasurements of net defined benefit liabilities	16	(2,644)	1,624	(1,131)	(5,062)
Gain (loss) on valuation of financial assets at fair value through other comprehensive income		16,637	18,373	(6,993)	6,419
Shares of remeasurements of net defined benefit liabilities of associates		-	(234)	-	159
Income tax relating to these items		(3,851)	(5,508)	2,233	(376)
<i>Items that may be subsequently reclassified to profit or loss</i>					
Exchange differences on translation of foreign operations		353,931	668,233	15,200	114,024
Cash flow hedge		(4,420)	(15,716)	12,946	(5,560)
Shares of other comprehensive income of associates and joint ventures		7,709	12,712	774	33,238
Income tax relating to these items		6,837	24,409	(2,642)	(410)
Other comprehensive income for the period, net of tax		374,199	703,893	20,387	142,432
Total comprehensive income for the period		1,054,084	4,321,019	590,774	1,168,236
Total comprehensive income for the period is attributable to:					
Owners of the Parent Company		927,786	4,023,524	527,475	1,044,560
Non-controlling interest		126,298	297,495	63,299	123,676

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
Nine-Month Periods Ended September 30, 2021 and 2020

(in millions of Korean won)

Notes	Attributable to owners of the Parent Company						Non-controlling interests	Total equity
	Share capital	Capital surplus	Other components of equity	Accumulated other comprehensive income	Retained earnings	Total		
Balance at January 1, 2020	391,406	2,274,620	(374,243)	(85,496)	14,798,690	17,004,977	378,812	17,383,789
Comprehensive income								
Profit for the period	-	-	-	-	915,645	915,645	110,159	1,025,804
Remeasurements of net defined benefit liabilities	16	-	-	-	(3,672)	(3,672)	-	(3,672)
Exchange differences on translation of foreign operations	-	-	-	98,569	-	98,569	13,517	112,086
Gain on valuation of financial assets at fair value through other comprehensive income	-	-	-	4,654	-	4,654	-	4,654
Cash flow hedge	-	-	-	(4,031)	-	(4,031)	-	(4,031)
Others	-	-	-	33,237	158	33,395	-	33,395
Total comprehensive income for the period	-	-	-	132,429	912,131	1,044,560	123,676	1,168,236
Transactions with owners:								
Disposal of treasury shares	-	143,281	128,690	-	-	271,971	-	271,971
Dividends	30	-	-	-	(153,608)	(153,608)	(24,040)	(177,648)
Increase in paid-in capital of subsidiaries	-	-	-	-	-	-	175,821	175,821
Others	-	-	-	-	(1,192)	(1,192)	(397)	(1,589)
Total transactions with owners	-	143,281	128,690	-	(154,800)	117,171	151,384	268,555
Balance at September 30, 2020 (Unaudited)	391,406	2,417,901	(245,553)	46,933	15,556,021	18,166,708	653,872	18,820,580
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	-	-	-	-	3,407,102	3,407,102	210,024	3,617,126
Remeasurements of net defined benefit liabilities	16	-	-	-	1,169	1,169	-	1,169
Exchange differences on translation of foreign operations	-	-	-	601,173	-	601,173	87,471	688,644
Gain on valuation of financial assets at fair value through other comprehensive income	-	-	-	13,320	-	13,320	-	13,320
Cash flow hedge	-	-	-	(11,718)	-	(11,718)	-	(11,718)
Others	-	-	-	12,712	(234)	12,478	-	12,478
Total comprehensive income for the period	-	-	-	615,487	3,408,037	4,023,524	297,495	4,321,019
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 subsidiaries	-	(131)	-	-	-	(131)	397,604	397,473
Others	-	-	-	104	(1,781)	(1,677)	(1,588)	(3,265)
Total transactions with owners	-	28,213	14,302	104	(780,164)	(737,545)	304,682	(432,863)
Balance at September 30, 2021 (Unaudited)	391,406	2,720,698	(40,696)	450,515	17,803,177	21,325,100	1,353,496	22,678,596

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
Nine-Month Periods Ended September 30, 2021 and 2020

<i>(in millions of Korean won)</i>	Note	2021 (Unaudited)	2020 (Unaudited)
Cash flows from operating activities			
Cash generated from operations	32	4,810,871	4,055,858
Interest received		36,609	28,504
Interest paid		(171,479)	(173,414)
Dividends received		10,016	14,048
Income taxes paid		(1,129,201)	(318,869)
Net cash inflow from operating activities		3,556,816	3,606,127
Cash flows from investing activities			
Decrease in other receivables		637,573	80,075
Decrease in other non-current receivables		49,396	36,700
Proceeds from disposal of investments in associates		28,466	382,945
Proceeds from disposal of financial instruments		12,024	85,481
Proceeds from disposal of property, plant and equipment		80,770	5,275
Proceeds from disposal of intangible assets		126	930
Government grants received		165,347	209,300
Net cash inflow from losing control of subsidiaries		-	1,757
Proceeds from disposal of assets held for sale		53,672	52,114
Proceeds from transfer of business		906,659	184,302
Increase in other receivables		(154,598)	(62,515)
Increase in other non-current receivables		(455,012)	(97,732)
Acquisition of investments in associates and joint ventures		(209,132)	(15,908)
Acquisition of financial assets		(131,951)	(10,820)
Acquisition of property, plant and equipment		(4,027,353)	(4,221,330)
Acquisition of intangible assets		(90,650)	(102,588)
Net cash outflow from investing activities		(3,134,663)	(3,472,014)
Cash flows from financing activities			
Proceeds from borrowings		4,468,245	3,980,490
Capital contribution from non-controlling interests		397,604	175,821
Repayments of borrowings and others		(3,599,837)	(2,444,271)
Dividends paid		(869,717)	(177,648)
Net cash inflow from financing activities		396,295	1,534,392
Net increase in cash and cash equivalents		818,448	1,668,505
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		186,343	(8,533)
Cash and cash equivalents included in disposal groups classified as held for sale		-	(9,589)
Cash and cash equivalents at the end of the period in the consolidated interim statement of financial position		4,279,041	3,539,014

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

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

1. General Information

General information about LG Chem, Ltd. (the Parent Company) and its fifty two 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 September 30, 2021, the Group has its manufacturing facilities in Yeosu, Daesan, Ochang, Cheongju, Ulsan, Naju, Iksan, Paju, Osong, Onsan, Gimcheon and overseas sites.

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

1.2 Business Overview

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

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

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

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

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

LG Chem, Ltd. and Subsidiaries

Notes to the Consolidated Interim Financial Statements

September 30, 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

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

LG Chem, Ltd. and Subsidiaries

Notes to the Consolidated Interim Financial Statements

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

Shanjin Optoelectronics (Taiwan) Co., Ltd. ⁸	100	Taiwan	December	Others
LG PETRONAS CHEMICALS Malaysia Sdn.Bhd. ⁹	51	Malaysia	December	NBL manufacturing and sales Agricultural pesticide manufacturing and sales
FarmHannong Co., Ltd. ¹⁰	100	Korea	December	sales
Farmhannong America, Inc. ¹⁰	100	USA	December	Agricultural pesticide sales
FarmHannong(Thailand) Ltd. ¹⁰	100	Thailand	December	Research and development on seeds
FARMHANNONG(MALAYSIA) SDN. BHD. ¹⁰	100	Malaysia	December	Agricultural pesticide licensing
PT FARM HANNONG INDONESIA ¹⁰	100	Indonesia	December	Agricultural pesticide licensing
LG Energy Solution (Nanjing) Co., Ltd. ¹	100	China	December	Battery manufacturing and sales Automotive battery research and manufacturing
LG Energy Solution Michigan Inc. ¹	100	USA	December	Automotive battery manufacturing and sales
LG Energy Solution Battery (Nanjing) Co., Ltd. ¹	50	China	December	Automotive battery manufacturing and sales
LG Energy Solution Wroclaw sp. z o.o. ¹	100	Poland	December	Automotive battery manufacturing and sales
LG Energy Solution Australia Pty Ltd ¹	100	Australia	December	ESS sales
LG Energy Solution Technology (Nanjing) Co., Ltd. ¹	100	China	December	Battery manufacturing and sales
Ultium Cells LLC ¹	50	USA	December	Automotive battery manufacturing and sales
LG Energy Solution Europe GmbH ¹	100	Germany	December	Sales and trading
LG Energy Solution (Taiwan), Ltd. ¹	100	Taiwan	December	Sales and trading
Aremnuri. Co. Ltd ¹	100	Korea	December	Facility management and general cleaning
LG Energy Solution Fund I LLC ¹	100	USA	December	Investments in venture companies
Associates				
TECHWIN Co., Ltd.	20	Korea	December	Environment solution and construction of chemical plant
LG Chem BRASIL INTERMEDIACAO DE NEGOCIOS DO SETOR QUIMICO LTDA. ¹²	100	Brazil	December	Sales and trading
LG Chem Malaysia SDN.BHD. ¹²	100	Malaysia	December	Sales and trading
FJ Composite Material Co., Ltd.	30	Japan	May	Heat diffuser research and manufacturing
LG Chem Life Sciences Poland Ltd. ¹²	100	Poland	December	Pharmaceutical products sales
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 Plant utility and distribution, research assistance service
SEETEC Co., Ltd.	50	Korea	December	Automotive battery manufacturing and sales
PT.HKML Battery Indonesia ^{1,11}	50	Indonesia	December	

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

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

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

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

⁵ During the nine-month period ended September 30, 2021, the Parent Company additionally acquired shares of LG Jiansheng Life Sciences (Beijing) Co., Ltd. for ₩2,257 million. The entity name of LG Jiansheng Life Sciences (Beijing) Co., Ltd. has been changed from LG Chem Life

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Sciences (Beijing) Co., Ltd. and the percentage of ownership of the Parent Company has decreased to 60%.

⁶ During the nine-month period ended September 30, 2021, the Parent Company additionally acquired shares of LG CHEM FUND I LLC for ₩4,849 million.

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

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

⁹ LG PETRONAS CHEMICALS Malaysia Sdn.Bhd. was newly established during the nine-month period ended September 30, 2021, and the Parent Company acquired 51% shares of LG PETRONAS CHEMICALS Malaysia Sdn.Bhd. for ₩36,867 million.

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

¹¹ PT.HKML Battery Indonesia was newly established in accordance with a joint arrangement in which the Group participated during the nine-month period ended September 30, 2021. This investment is classified as a joint venture since the joint arrangement is structured through a separate vehicle and the Group has rights to the net assets of the arrangement.

¹² 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)

	September 30, 2021			2021	
	Assets	Liabilities	Equity	Revenue	Profit (loss) for the period
Subsidiaries					
LG Energy Solution, Ltd. ^{1,2}	23,612,306	14,390,129	9,222,177	13,412,543	858,057
Ningbo LG Yongxing Chemical Co.,Ltd.	1,267,599	263,528	1,004,071	1,913,355	409,160
Ningbo Zhenhai LG Yongxing Trade Co.,Ltd.	6,705	905	5,800	20,422	387
LG Chem America, Inc.	435,525	383,608	51,917	736,229	18,270
LG Chemical India Pvt. Ltd.	32,790	28	32,762	-	13
LG Polymers India Pvt. Ltd.	41,008	30,420	10,588	8,563	(7,473)
LG Chemical (Guangzhou) Engineering Plastics Co.,Ltd.	115,873	40,441	75,432	201,633	7,469
LG Chem (Taiwan), Ltd.	102,315	28,461	73,854	79,263	2,123
LG Chem Display Materials (Beijing) Co.,Ltd. ²	-	-	-	-	276
Tianjin LG Bohai Chemical Co.,Ltd.	432,708	82,489	350,219	477,442	98,657
Tianjin LG BOTIAN Chemical Co.,Ltd.	49,171	23,459	25,712	98,758	864
LG Chem (China) Investment Co.,Ltd.	827,559	506,895	320,664	44,367	4,762
LG Chem (Tianjin) Engineering Plastics Co.,Ltd.	56,921	11,453	45,468	58,366	2,843
LG Chem Europe GmbH	354,149	297,756	56,393	462,688	13,875
LG Chem Poland Sp. z o.o.	104,440	42,470	61,970	124,245	15,149
LGC Petrochemical India Private Ltd.	4,494	781	3,713	3,017	337
HAENGBOKNURI CO., LTD.	4,022	1,103	2,919	7,002	503
LG CHEM TK Kimya SANAYI VE TIC. Ltd. STI.	11,257	10,731	526	30,509	(310)
LG Chem Japan Co.,Ltd.	5,157	1,015	4,142	4,513	(891)
LG NanoH2O, LLC ³	47,278	19,828	27,450	40,648	3,272
LG Chem (Chongqing) Engineering Plastics Co.,Ltd.	54,325	20,642	33,683	60,052	3,209
LG Chem(HUIZHOU) Petrochemical Co., Ltd.	557,847	189,326	368,521	786,720	149,959

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LG Chem Life Sciences India Pvt. Ltd.	2,553	1,776	777	3,808	272
LG Jiansheng Life Sciences (Beijing) Co., Ltd.	11,497	5,444	6,053	3,248	(197)
LG Chem Life Sciences (Thailand) Ltd.	21,923	8,179	13,744	23,935	1,180
LG Chem Hai Phong Vietnam Company Ltd.	13,433	3,675	9,758	21,338	1,396
LG Chem Mexico S.A. de C.V.	1,472	235	1,237	1,465	214
LG Chem Hai Phong Engineering Plastics Ltd.	29,274	14,203	15,071	25,935	2,038
LG Chem (Guangzhou) Information & Electronics Materials Co.,Ltd. ²	326,719	120,858	205,861	126,582	(10,958)
LEYOU NEW ENERGY MATERIALS(WUXI) Co.,LTD	644,754	227,197	417,557	490,366	50,730
LG Chem Fund I LLC	34,999	813	34,186	-	(2,089)
Ugimag Korea Co., Ltd. ²	-	-	-	11,512	(3,838)
Uniseal,Inc. ³	39,580	8,121	31,459	48,481	(11)
LG Chem Life Science Innovation Center, Inc.	3,476	1,594	1,882	3,881	293
LG Chem Asia Pte. Ltd.	2,031	1,192	839	919	(30)
LG Chem China Tech Center	19,479	185	19,294	259	133
Shanjin Optoelectronics (Taiwan) Co., Ltd.	58,763	6	58,757	-	(12)
LG PETRONAS CHEMICALS Malaysia Sdn.Bhd.	77,749	2,499	75,250	-	105
FarmHannong Co., Ltd. ^{1,3}	1,098,480	700,977	397,503	543,388	21,068
Associates					
TECHWIN Co., Ltd.	126,906	35,082	91,824	54,658	2,219
LG Chem BRASIL INTERMEDIACAO DE NEGOCIOS DO SETOR Q UIMICO LTDA.	693	111	582	1,166	110
LG Chem Malaysia SDN.BHD.	502	2	500	495	61
FJ Composite Material Co., Ltd.	10,818	4,384	6,434	1,441	265
LG Chem Life Sciences Poland Ltd.	197	77	120	129	6
HUAJIN NEW ENERGY MATERIALS(QUZHOU)CO., LTD.	345,886	152,992	192,894	62,459	(6,578)
VINFAST LITHIUM BATTERY PACK LLC.	17,809	6,322	11,487	9,504	(1,273)
Jiangxi VL Battery.,Ltd	78,075	14,570	63,505	5,506	(5,468)
Joint ventures					
LG VINA Chemical Co., Ltd.	73,590	50,962	22,628	133,037	12,842
SEETEC Co., Ltd.	325,290	47,981	277,309	414,652	10,136
PT.HKML Battery Indonesia	422,207	44	422,163	-	323

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

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

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

(in millions of Korean won)

	December 31, 2020			2020	
	Assets	Liabilities	Equity	Revenue	Profit (loss) for the period
Subsidiaries					
LG Energy Solution, Ltd.	12,342,717	5,090,619	7,252,098	-	-
Ningbo LG Yongxing Chemical Co.,Ltd.	1,092,905	219,173	873,732	1,192,816	223,017
Ningbo Zhenhai LG Yongxing Trade Co.,Ltd.	6,224	1,303	4,921	15,248	293
LG Chem America, Inc.	237,946	208,031	29,915	518,212	1,225
LG Chemical India Pvt. Ltd.	32,680	19	32,661	-	26
LG Polymers India Pvt. Ltd.	56,029	38,833	17,196	61,501	(27,895)
LG Chemical (Guangzhou) Engineering Plastics Co.,Ltd.	107,270	33,741	73,529	147,085	11,865
LG Chem (Taiwan), Ltd.	113,717	46,372	67,345	98,070	4,838
LG Chem Display Materials (Beijing) Co.,Ltd. ¹	40,417	13,171	27,246	167	1,852

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Tianjin LG Bohai Chemical Co.,Ltd.	282,683	53,113	229,570	348,598	52,095
Tianjin LG BOTIAN Chemical Co.,Ltd.	38,391	14,760	23,631	86,247	9,067
LG Chem (China) Investment Co.,Ltd.	703,145	392,501	310,644	44,157	4,446
LG Chem (Tianjin) Engineering Plastics Co.,Ltd.	52,446	10,440	42,006	40,605	3,708
LG Chem Europe GmbH	229,078	166,779	62,299	499,790	3,944
LG Chem Poland Sp. z o.o.	74,063	27,931	46,132	78,140	6,020
LGC Petrochemical India Private Ltd.	3,722	590	3,132	2,750	265
HAENGBOKNURI CO., LTD.	4,869	2,453	2,416	8,603	913
LG CHEM TK Kimya SANAYI VE TIC. Ltd. STI.	7,033	6,154	879	35,777	379
LG Chem Japan Co.,Ltd.	5,863	852	5,011	4,352	382
LG NanoH2O, LLC ²	33,155	11,117	22,038	25,760	3,086
LG Chem (Chongqing) Engineering Plastics Co.,Ltd.	38,629	10,973	27,656	33,640	2,845
LG Chem(HUIZHOU) Petrochemical Co., Ltd.	392,176	199,465	192,711	491,791	67,573
LG Chem Life Sciences India Pvt. Ltd.	1,295	837	458	4,415	725
LG Jiansheng Life Sciences (Beijing) Co., Ltd.	2,099	716	1,383	1,009	44
LG Chem Life Sciences (Thailand) Ltd.	22,854	9,722	13,132	21,754	(32)
LG Chem Hai Phong Vietnam Company Ltd.	14,277	6,770	7,507	9,785	(123)
LG Chem Mexico S.A. de C.V.	1,081	152	929	957	150
LG Chem Hai Phong Engineering Plastics Ltd.	23,110	11,430	11,680	10,035	(1,476)
LG Chem (Guangzhou) Information & Electronics Materials Co.,Ltd. ¹	630,513	399,728	230,785	27,422	14,572
LEYOU NEW ENERGY MATERIALS(WUXI) Co.,LTD	429,359	97,122	332,237	-	(3,601)
LG Chem Fund I LLC	28,842	31	28,811	-	(3,062)
Ugimag Korea Co., Ltd. ^{1,2}	39,015	15,903	23,112	12,089	(5,843)
Uniseal,Inc. ^{2,3}	34,452	6,050	28,402	42,180	153
LG Chem Life Science Innovation Center, Inc.	3,314	1,868	1,446	3,457	181
FarmHannong Co., Ltd. ^{2,3}	1,023,232	646,884	376,348	501,247	20,763
LG Energy Solution (Nanjing) Co., Ltd. ¹	3,793,936	1,536,320	2,257,616	2,346,996	259,194
LG Energy Solution Michigan Inc.	915,288	607,065	308,223	503,182	(47,203)
LG Energy Solution Battery (Nanjing) Co., Ltd.	1,059,066	781,217	277,849	923,793	50,275
LG Energy Solution Wroclaw sp. z o.o.	6,526,231	5,350,936	1,175,295	3,072,462	(282,063)
LG Energy Solution Australia Pty Ltd	4,793	3,049	1,744	6,781	316
LG Energy Solution Technology (Nanjing) Co., Ltd.	1,767,706	964,689	803,017	522,258	34,267
Ultium Cells LLC	336,851	32,309	304,542	-	11
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	1,157	338
LG Chem Malaysia SDN.BHD.	418	2	416	523	62
FJ Composite Material Co., Ltd.	11,026	4,635	6,391	1,324	347
WUXI CL New Energy Technology Ltd.	1,910	2,972	(1,062)	242	258
LG Chem Life Sciences Poland Ltd.	191	78	113	152	7
Combustion Synthesis Co., Ltd.	717	66	651	76	(360)
HUAJIN NEW ENERGY MATERIALS(QUZHOU)CO., LTD.	226,471	43,454	183,017	-	720
VINFAST LITHIUM BATTERY PACK LLC.	18,148	6,322	11,826	16,328	(974)
Jiangxi VL Battery.,Ltd	67,186	4,066	63,120	-	-
Joint ventures					
LG VINA Chemical Co., Ltd.	35,832	27,515	8,317	60,363	450
HL Greenpower Co., Ltd.	406,928	360,547	46,381	839,392	(3,171)
SEETEC Co., Ltd.	342,227	55,056	287,171	363,011	11,052

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

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

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

1.5 Changes in Scope for Consolidation

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

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

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

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

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 nine-month period ended September 30, 2021, have been prepared in accordance with Korean IFRS 1034 *Interim Financial Reporting*. These consolidated interim financial statements have been prepared in accordance with Korean IFRS which is effective or early adopted as at September 30, 2021.

(a) New and amended standards adopted by the Group

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

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

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

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

In relation to interest rate benchmark reform, the amendments provide exceptions including adjust effective interest rate instead of book amounts when interest rate benchmark of financial instruments at amortized costs is replaced, and apply hedge accounting without discontinuance although the interest rate benchmark is replaced in hedging relationship. The amendment does not have a significant impact on the consolidated 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 September 30, 2021 reporting periods and have not been early adopted by the Group.

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

The application of the practical expedient, where a lessee may elect not to assess whether a rent concession occurring as a direct consequence of the COVID-19 pandemic is a lease modification, is extended to lease payments originally due on or before June 30, 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 consolidated 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 consolidated financial statements.

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

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

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

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

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

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

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

The amendments clarify that liabilities are classified as either current or non-current, depending on the substantive rights that exist at the end of the reporting period. Classification is unaffected by the likelihood that an entity will exercise right to defer settlement of the liability or the expectations of management. Also, the settlement of liability includes the transfer of the entity's own equity instruments, however, it would be excluded if an option to settle them by the entity's own equity instruments if compound financial instruments is met the definition of equity instruments and recognized separately from the liability. The amendments should be applied for annual periods beginning on or after January 1, 2023, and earlier application is permitted. The Group is in review for the impact of these amendments on the consolidated 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 September 30, 2021 and December 31, 2020, the Group's monetary assets and liabilities denominated in currencies other than its functional currency, are as follows:

(in millions of Korean won)	September 30, 2021		December 31, 2020	
	Assets	Liabilities	Assets	Liabilities
USD	6,321,928	5,911,379	4,367,761	3,805,638
EUR	255,687	4,844,669	244,382	4,479,131
JPY	26,317	122,458	20,035	303,704
CNY and others	487,425	4,793	343,749	8,199

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

(in millions of Korean won)	September 30, 2021		December 31, 2020	
	10% Increase	10% Decrease	10% Increase	10% Decrease
USD	78,332	(78,332)	77,289	(77,289)

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

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

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

September 30, 2021							
	Contractor	Contract amount	Contract exchange rate	Contract inception date	Contract maturity	Book amount	
						Assets	Liabilities
Currency Forward ¹	KDB	USD 35	1,135.60	2021.6.24	2022.6.24	1,786	-
	Shinhan Bank	USD 500	1,135.60	2020.10.14	2024.10.15	25,698	-
	KB Kookmin Bank	USD 500	1,102.83	2020.11.24	2029.4.16	22,507	-
	Citi	EUR 150	4.5900 ²	2021.5.12	2022.4.29	3,185	-
	SC	EUR 250	4.5861 ²	2021.5.14	2022.4.29	5,451	-
	CACIB	EUR 100	4.6055 ²	2021.8.5	2022.8.4	1,175	-
Currency swap	KDB	EUR 165	4.6036 ²	2021.8.5	2022.8.4	3,597	-
	SMBC	USD 200	1,118.00	2021.5.28	2024.5.28	14,061	-
	KDB	USD 130	1,135.60	2021.6.24	2025.6.24	7,116	-
	KDB	USD 35	1,135.60	2021.6.24	2026.6.24	1,848	-
	Shinhan Bank	USD 300	1,131.80	2021.7.7	2026.7.7	12,259	-
	Woori Bank	USD 100	1,131.80	2021.7.7	2026.7.7	4,403	-
	Industrial and Commercial Bank of China	USD 100	1,131.80	2021.7.7	2026.7.7	4,679	-
	Shinhan Bank	USD 100	1,131.80	2021.7.7	2031.7.7	2,357	-
	Woori Bank	USD 200	1,131.80	2021.7.7	2031.7.7	5,344	-
	KDB	USD 200	1,131.80	2021.7.7	2031.7.7	5,576	-

¹ Derivatives that are not qualified for hedge accounting.

² Cross exchange rate between PLN and EUR.

(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.

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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 September 30, 2021 and December 31, 2020. The analysis is based on the assumption that the equity index has increased/decreased by 10% with all other variables held constant, and that all the Group's equity instruments moved in line with the index.

<i>(in millions of Korean won)</i>	September 30, 2021		December 31, 2020	
	10% Increase	10% Decrease	10% Increase	10% Decrease
KOSDAQ	-	-	-	-
NASDAQ	1,054	(1,054)	997	(997)
Total	1,054	(1,054)	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, avoiding high rate borrowings, reforming capital structure, managing an appropriate ratio of fixed rate borrowings and floating rate borrowings, monitoring a fluctuation of domestic and foreign interest rates daily, weekly and monthly, establishing alternatives, and balancing floating rate short-term borrowings with floating rate deposits.

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

<i>(in millions of Korean won)</i>	Impact on post-tax profit		Impact on equity	
	2021	2020	2021	2020
Increase	(46,249)	(36,812)	(46,249)	(36,812)
Decrease	46,249	36,812	46,249	36,812

The Group has entered into a currency interest rate swap contract amounting to USD 165 million (equivalent to ₩195,508 million) to hedge interest rate risk of variable interest rate borrowings from Korea Development Bank and others.

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(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 September 30, 2021 is as follows. Expected credit losses include forward-looking information.

(in millions of Korean won)

	Receivables not past due ¹	Receivables past due but not impaired ¹	Impaired receivables ²	Total
September 30, 2021				
(trade receivables)				
Gross carrying amount	6,200,502	287,049	1,792	6,489,343
Expected loss rate	0.0%	0.2%	78.4%	0.1%
Loss allowance provision	2,372	597	1,406	4,375
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.

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

(in millions of Korean won)

	Trade receivables	
	September 30, 2021	December 31, 2020
Beginning balance	4,391	5,830
Increase in (reversal of) loss allowance recognized in profit or loss	(306)	(480)
Receivables written off as uncollectible	(404)	(833)
Exchange differences	694	(126)
Ending balance	4,375	4,391

As at September 30, 2021, the carrying amount of trade receivables representing the maximum exposure to credit risk amounts to ₩6,489,343 million (December 31, 2020: ₩5,332,132 million).

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2) Other financial assets at amortized cost

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

(in millions of Korean won)

	Other receivables	
	September 30, 2021	December 31, 2020
Beginning balance	2,165	2,109
Increase in loss allowance recognized as 'other non-operating expenses' in profit or loss	-	2
Exchange differences	-	54
Ending balance	2,165	2,165

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

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

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

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

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

(3) Liquidity risk

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

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

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	September 30, 2021			
	Less than 1 year	Between 1-2 years	Between 2-5 years	Over 5 years
Non-derivative financial instruments				
Borrowings (excluding lease liabilities)	3,546,320	2,265,204	5,638,170	3,346,195
Lease liabilities	60,391	37,141	73,313	123,762
Trade and other payables ¹	7,837,543	11,665	1,551	120
	<u>11,444,254</u>	<u>2,314,010</u>	<u>5,713,034</u>	<u>3,470,077</u>
Derivative instruments				
Gross settlement currency forwards and swaps				
(Inflows)	(982,917)	(27,378)	(1,690,224)	(1,255,253)
Outflows	972,901	26,808	1,614,812	1,181,161
	<u>(10,016)</u>	<u>(570)</u>	<u>(75,412)</u>	<u>(74,092)</u>
	<u>11,434,238</u>	<u>2,313,440</u>	<u>5,637,622</u>	<u>3,395,985</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)
Outflows	-	-	567,800	551,415
	<u>-</u>	<u>-</u>	<u>23,800</u>	<u>7,415</u>
	<u>10,451,005</u>	<u>1,921,636</u>	<u>5,009,418</u>	<u>2,323,093</u>

¹ Included ₩1,293,166 million (December 31, 2020: ₩2,099,936 million) of financial liabilities due to a financial institution relating to reverse factoring arrangement. The Group has entered into reverse factoring arrangement (interest rate CD 91 days + 0.78~1.05%) 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.

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

(in millions of Korean won)	September 30, 2021				
	Purpose of the contracts	Hedged items	Financial institution	Maturity	Fair value
Merchandise (raw materials) swap ¹	Cash flow hedge	Non-ferrous metal	Citi bank and others	~2021. 12	8,129

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

(in millions of Korean won)	September 30, 2021		December 31, 2020	
	Assets	Liabilities	Assets	Liabilities
Merchandise (raw materials) swap ¹	9,455	1,326	23,821	-

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

3.2 Capital Risk Management

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

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

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

(in millions of Korean won, except for ratios)	September 30, 2021	December 31, 2020
Total borrowings (Note 14) (A)	14,018,851	10,186,117
Less: cash and cash equivalents (B)	(4,279,041)	(3,274,250)
Net debt (C=A+B)	9,739,810	6,911,867
Total liabilities (D)	27,143,387	22,598,454
Total equity (E)	22,678,596	18,790,440
Total capital (F=C+E)	32,418,406	25,702,307
Gearing ratio (C/F)	30.0%	26.9%
Debt-to-equity ratio (D/E)	119.7%	120.3%

3.3 Fair Value

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

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	September 30, 2021		December 31, 2020	
	Carrying amount	Fair value	Carrying amount	Fair value
Financial assets (current)				
Cash and cash equivalents	4,279,041	¹	3,274,250	¹
Deposits held by financial institutions	64,428	¹	608,039	¹
Trade receivables	6,433,793	¹	5,298,365	¹
Other receivables (excluding deposits held by financial institutions)	935,479	¹	316,264	¹
Current derivative financial assets (commodity swap)	9,455	9,455	23,821	23,821
Current derivative financial assets (currency forward)	15,193	15,193	-	-
Financial assets (non-current)				
Deposits held by financial institutions	268,019	¹	167,054	¹
Trade receivables	51,175	¹	29,376	¹
Other receivables (excluding deposits held by financial institutions)	925,759	¹	87,976	¹
Other non-current financial assets (carried at fair value)				
Marketable financial assets	9,742	9,742	7,679	7,679
Non-marketable financial assets ²	227,303	227,303	73,853	73,853
Non-current derivative financial assets (currency forward)	48,204	48,204	-	-
Non-current derivative financial assets (currency swap)	57,645	57,645	-	-
Financial liabilities (current)				
Trade and other payables	7,837,543	¹	8,725,500	¹
Current borrowings (excluding exchangeable bonds and lease liabilities)	3,334,114	¹	1,460,926	¹
Current borrowings (exchangeable bonds)	-	-	32,500	32,763
Current lease liabilities	54,746	³	55,389	³
Current derivative financial liabilities (exchange rights)	-	-	16,797	16,797
Current derivative financial liabilities (commodity swap)	1,326	1,326	-	-
Financial liabilities (non-current)				
Non-current borrowings (excluding lease liabilities)	10,426,817	10,306,305	8,508,066	8,614,889
Non-current lease liabilities	203,174	³	129,236	³
Other non-current payables	13,336	¹	11,927	¹
Non-current derivative financial liabilities (currency forward)	-	-	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.

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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 September 30, 2021 and December 31, 2020, are as follows:

<i>(in percentage)</i>	September 30, 2021	December 31, 2020
Discount rate	1.25% ~ 2.92%	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 September 30, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	September 30, 2021			
	Level 1	Level 2	Level 3	Total
Financial assets/liabilities measured at fair value				
Other non-current financial assets (marketable financial assets)	9,742	-	-	9,742
Other non-current financial assets (non-marketable financial assets)	-	-	227,303	227,303
Current derivative financial assets (commodity swap)	-	9,455	-	9,455
Current derivative financial assets (currency forward)	-	15,193	-	15,193
Non-current derivative financial assets (currency forward)	-	48,204	-	48,204
Non-current derivative financial assets (currency swap)	-	57,645	-	57,645
Current derivative financial liabilities (commodity swap)	-	1,326	-	1,326
Financial assets/liabilities not measured at fair value				
Non-current borrowings (excluding lease liabilities)	-	10,306,305	-	10,306,305

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

¹ Movements in exchange rights are as follows.

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

(4) Valuation technique and the inputs

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

(in millions of Korean won)

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

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

<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 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.

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5. Financial Instruments by Category

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

(in millions of Korean won)

Financial assets	September 30, 2021				
	Financial assets at amortized cost	Financial assets at fair value through profit or loss	Financial assets at fair value through other comprehensive income	Other financial assets ¹	Total
Cash and cash equivalents	4,279,041	-	-	-	4,279,041
Trade receivables	5,860,704	-	573,089	-	6,433,793
Non-current trade receivables	51,175	-	-	-	51,175
Other receivables	997,495	-	2,412	-	999,907
Other non-current receivables	1,193,778	-	-	-	1,193,778
Other current financial assets	-	-	-	24,648	24,648
Other non-current financial assets	-	87,485	149,560	105,849	342,894
Total	12,382,193	87,485	725,061	130,497	13,325,236

(in thousands of Korean won)

Financial liabilities	September 30, 2021		
	Financial liabilities at amortized cost	Other financial liabilities ²	Total
Trade payables	3,649,306	-	3,649,306
Other payables	4,188,237	-	4,188,237
Borrowings (current)	3,334,114	54,746	3,388,860
Other current financial liabilities	-	1,326	1,326
Other non-current financial liabilities	-	-	-
Other non-current payables	13,336	-	13,336
Borrowings (non-current)	10,426,817	203,174	10,629,991
Total	21,611,810	259,246	21,871,056

(in millions of Korean won)

Financial assets	December 31, 2020				
	Financial assets at amortized cost	Financial assets at fair value through profit or loss	Financial assets at fair value through other comprehensive income	Other financial assets ¹	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

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

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

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

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

(in millions of Korean won)

	2021		2020	
	Three months	Nine months	Three months	Nine months
Dividend income				
Financial assets at fair value through other comprehensive income	4,875	5,963	-	12
Interest income				
Financial assets at amortized cost	32,547	55,048	7,949	28,803
Interest expense				
Financial liabilities at amortized cost	(70,540)	(186,734)	(62,096)	(190,255)
Other financial liabilities	(1,624)	(5,355)	(2,798)	(7,152)
Financial assets at amortized cost ¹	(78)	(78)	4	(875)
Financial assets at fair value through other comprehensive income ¹	(74)	(904)	(139)	(2,459)
Gain (loss) on valuation				
Financial assets at fair value through profit or loss	(4,257)	7,522	-	-
Financial assets at fair value through other comprehensive income	16,637	18,373	(6,993)	6,419
Derivative instruments	119,506	139,235	(94,239)	(173,865)
Exchange differences				
Financial assets at amortized cost	308,721	465,205	(107,819)	18,355
Financial liabilities at amortized cost	(399,921)	(436,482)	75,961	(257,184)
Other financial liabilities	(1,664)	(1,684)	(5,911)	(11,469)

¹ Fees paid to financial institutions for factoring.

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6. Cash and Cash Equivalents

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

<i>(in millions of Korean won)</i>	September 30, 2021	December 31, 2020
Bank deposits and cash on hand	1,454,548	1,704,420
Deposits held by financial institutions and others	2,824,493	1,569,830
Total	4,279,041	3,274,250

As at September 30, 2021, cash and cash equivalents include ₩57,647 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 September 30, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	September 30, 2021		
	Gross amount	Provision for impairment	Carrying amount
Trade receivables	6,438,168	(4,375)	6,433,793
Non-current trade receivables	51,175	-	51,175
Other current receivables	1,002,072	(2,165)	999,907
Other non-current receivables	1,193,778	-	1,193,778
Total	8,685,193	(6,540)	8,678,653

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

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

<i>(in millions of Korean won)</i>	September 30, 2021	December 31, 2020
Current		
Non-trade receivables	832,350	271,651
Deposits held by financial institutions	64,428	608,039
Accrued income	20,268	2,567
Loans	61,980	-
Guarantee deposits provided	20,881	42,046
	<u>999,907</u>	<u>924,303</u>
Non-current		
Non-trade receivables	517,812	24,910
Deposits held by financial institutions ¹	268,019	167,054
Loans	330,461	831
Guarantee deposits provided	77,486	62,235
	<u>1,193,778</u>	<u>255,030</u>
Total	<u>2,193,685</u>	<u>1,179,333</u>

¹ As at September 30, 2021, ₩266,100 million (December 31, 2020: ₩166,100 million) is withdrawal restricted in relation to large, small and medium-sized companies cooperation agreement and others. In addition, ₩1,008 million is withdrawal restricted in connection with maintaining checking accounts (December 31, 2020: ₩928 million). Also, PLN 3 million is withdrawal restricted in relation to overseas transportation of hazardous waste.

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

<i>(in millions of Korean won)</i>	September 30, 2021		December 31, 2020	
	Trade receivables	Other receivables	Trade receivables	Other receivables
Receivables not past due	<u>6,200,502</u>	<u>2,178,927</u>	<u>4,835,299</u>	<u>1,134,863</u>
Past due but not impaired				
Up to 3 months	127,631	12,905	333,522	41,780
Between 3-6 months	63,759	791	69,272	353
Over 6 months	95,659	1,062	90,577	2,337
	<u>287,049</u>	<u>14,758</u>	<u>493,371</u>	<u>44,470</u>
Impaired receivables	<u>1,792</u>	<u>2,165</u>	<u>3,462</u>	<u>2,165</u>
Total	<u>6,489,343</u>	<u>2,195,850</u>	<u>5,332,132</u>	<u>1,181,498</u>

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

(in millions of Korean won)

	September 30, 2021			
	Trade receivables		Other receivables	
	Current	Non-current	Current	Non-current
Beginning balance	4,391	-	2,165	-
Additions	(306)	-	-	-
Write-off	(404)	-	-	-
Exchange differences	694	-	-	-
Ending balance	<u>4,375</u>	<u>-</u>	<u>2,165</u>	<u>-</u>

(in millions of Korean won)

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

As at September 30, 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 September 30, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	September 30, 2021	December 31, 2020
Other financial assets		
Financial assets at fair value through other comprehensive income (derivative instruments) (current)	9,455	23,821
Financial assets at fair value through profit or loss (derivative instruments) (current)	15,193	-
Financial assets at fair value through other comprehensive income (excluding derivative instruments) (non-current)	149,560	52,216
Financial assets at fair value through profit or loss (derivative instruments) (non-current)	105,849	-
Financial assets at fair value through profit or loss (excluding derivative instruments) (non-current)	87,485	29,316
	<u>367,542</u>	<u>105,353</u>
Other financial liabilities		
Financial liabilities at fair value through profit or loss (derivative instruments) (current)	1,326	-
Financial liabilities at fair value through profit or loss (exchange rights) (current)	-	16,797
Financial liabilities at fair value through profit or loss (derivative instruments) (non-current)	-	41,768
	<u>1,326</u>	<u>58,565</u>

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

<i>(in millions of Korean won)</i>	September 30, 2021	December 31, 2020
Beginning balance	81,532	149,463
Acquisitions / transfer	133,250	18,120
Disposals	(8,078)	(91,251)
Gain on valuation (before income tax effects) through other comprehensive income	18,373	3,024
Gain on valuation (before income tax effects) through profit or loss	9,309	3,898
Others	2,659	(1,722)
Ending balance	<u>237,045</u>	<u>81,532</u>

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

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9. Inventories

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

(in millions of Korean won)

	September 30, 2021		
	Gross amount	Valuation allowance	Carrying amount
Merchandise	160,375	(5,133)	155,242
Finished / Semi-finished products	4,597,546	(141,412)	4,456,134
Work-in-process	22,069	-	22,069
Raw materials	1,817,252	(25,320)	1,791,932
Supplies	254,502	-	254,502
Materials-in-transit	1,306,138	-	1,306,138
Total	8,157,882	(171,865)	7,986,017

(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 nine-month period ended September 30, 2021, the cost of inventories recognized as expense and included in 'cost of sales' amounted to ₩17,067,782 million (2020: ₩12,331,384 million).

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10. Investments in Associates and Joint Ventures

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

(in millions of
Korean won)

	September 30, 2021							
	Beginning balance	Acquisitions / transfer	Dividends	Share of profit (loss) of associates and joint ventures	Share of other comprehensive income (loss) of associates and joint ventures	Impairment / disposals	Others	Ending balance
LG VINA Chemical Co., Ltd.	5,875	-	-	5,896	107	-	-	11,878
HL Greenpower Co., Ltd. ¹	22,710	-	-	1,847	-	(24,323)	(234)	-
TECHWIN Co., Ltd.	20,113	-	-	(757)	17	-	-	19,373
SEETEC Co., Ltd	140,116	-	(10,000)	5,069	-	-	-	135,185
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	-	-	(532)	381	-	-	2,586
WUXI CL New Energy Technology Ltd ¹	-	-	-	-	-	-	-	-
LG Chem Life Sciences Poland Ltd.	17	-	-	-	-	-	-	17
Combustion Synthesis Co., Ltd. ¹	1,867	-	-	273	(106)	(1,969)	(65)	-
HUAJIN NEW ENERGY MATERIALS(QUZHOU)C O., LTD.	89,525	-	-	(3,776)	8,217	-	-	93,966
VINFAST LITHIUM BATTERY PACK LIMITED LIABILITY COMPANY	4,179	-	-	(625)	318	-	-	3,872
Jiangxi VL Battery Co.,Ltd	21,461	-	-	(1,847)	1,990	-	-	21,604
HKML Battery Indonesia ²	-	209,132	-	162	1,788	-	-	211,082
	<u>309,329</u>	<u>209,132</u>	<u>(10,000)</u>	<u>5,710</u>	<u>12,712</u>	<u>(26,292)</u>	<u>(299)</u>	<u>500,292</u>

¹ During the nine-month period ended September 30, 2021, the Group has sold all the shares of HL Greenpower Co., Ltd., WUXI CL New Energy Technology Ltd. and Combustion Synthesis Co., Ltd.

² During the nine-month period ended September 30, 2021, the Group newly acquired shares of HKML Battery Indonesia for ₩209,132 million.

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(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 INTERMEDIACAO DE NEGOCIOS DO SETOR QUIMICO LTDA.	579	-	-	-	-	-	-	579
LG Chem Malaysia SDN.BHD	150	-	-	-	-	-	-	150
FJ Composite Materials Co., LTD.	2,171	-	-	(142)	(162)	-	870	2,737
WUXI CL New Energy Technology Ltd	-	-	-	-	-	-	-	-
LG Chem Life Sciences Poland Ltd.	17	-	-	-	-	-	-	17
Combustion Synthesis Co., Ltd.	2,042	-	-	(88)	(68)	-	(19)	1,867
HUAJIN NEW ENERGY MATERIALS(QUZHOU)C O., LTD.	67,058	22,191	-	151	125	-	-	89,525
VINFAST LITHIUM BATTERY PACK LIMITED LIABILITY COMPANY	4,888	-	-	(461)	(248)	-	-	4,179
Jiangxi VL Battery Co.,Ltd	-	21,815	-	71	(425)	-	-	21,461
	<u>307,577</u>	<u>44,006</u>	<u>(10,314)</u>	<u>9,343</u>	<u>(1,459)</u>	<u>(41,040)</u>	<u>1,216</u>	<u>309,329</u>

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11. Property, Plant and Equipment

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

<i>(in millions of Korean won)</i>	September 30, 2021	December 31, 2020
Beginning balance	20,567,475	18,593,642
Acquisitions/ transfer	9,007,150	10,454,805
Disposals/ transfer	(5,396,266)	(5,622,795)
Exchange differences	532,529	(92,291)
Depreciation	(1,888,795)	(2,131,075)
Impairment	(29,041)	(76,038)
Reversal of impairment	-	220
Transfer to assets held for sale (Note 34)	-	(558,993)
Ending balance	22,793,052	20,567,475

During the nine-month ended September 30, 2021, the Group capitalized ₩40,334 million of borrowing costs (2020: ₩32,292 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 1.40% (2020: 1.43%).

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

<i>(in millions of Korean won)</i>	2021		2020	
	Three months	Nine months	Three months	Nine months
Cost of sales	619,081	1,707,822	486,698	1,357,245
Selling and administrative expenses	61,460	176,100	48,671	141,167
Others	431	1,024	744	1,878
Discontinued operations	568	3,849	1,950	47,265
Total	681,540	1,888,795	538,063	1,547,555

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>	September 30, 2021	December 31, 2020
Right-of-use assets¹		
Real-estate	262,715	183,136
Machinery	24,001	26,541
Vehicles	19,876	17,026
Tools	2,449	3,535
Equipment	485	616
	309,526	230,854

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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 nine-month period ended September 30, 2021, were ₩136,423 million (2020: ₩54,487 million).

<i>(in millions of Korean won)</i>	September 30, 2021	December 31, 2020
Lease liabilities ¹		
Current	54,746	55,389
Non-current	203,174	129,236
	<u>257,920</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	40,494	37,743
Machinery	4,244	3,632
Vehicles	9,727	10,359
Tools	1,095	590
Equipment	375	374
	<u>55,935</u>	<u>52,698</u>
Interest expense relating to lease liabilities (included in finance cost)	5,355	7,152
Expense relating to short-term leases (included in cost of goods sold and administrative expenses)	20,723	26,440
Expense relating to leases of low-value assets that are not short-term leases (included in cost of goods sold and administrative expenses)	9,620	13,052
Expense relating to variable lease payments not included in lease liabilities (included in cost of goods sold and administrative expenses)	-	-

Total cash outflow for leases during the nine-month period ended September 30, 2021, was ₩90,421 million (2020: ₩92,782 million).

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12. Intangible Assets

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

<i>(in millions of Korean won)</i>	September 30, 2021	December 31, 2020
Beginning balance	2,279,917	2,206,229
Acquisitions/ transfer	296,670	435,319
Disposals/ transfer	208	4,282
Exchange differences	(6,758)	(30,585)
Amortization	20,514	(7,718)
Impairment	(166,382)	(180,973)
Reversal of impairment	(60)	(138,547)
Transfer to assets held for sale (Note 34)	(360)	(8,090)
Ending balance	2,423,749	2,279,917

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

<i>(in millions of Korean won)</i>	2021		2020	
	Three months	Nine months	Three months	Nine months
Cost of sales	14,583	45,031	11,142	29,997
Selling and administrative expenses	43,440	121,191	35,952	95,717
Discontinued operations	-	160	15	423
Total	58,023	166,382	47,109	126,137

Total research and development costs recognized as expenses amounted to ₩973,498 million (2020: ₩809,360 million) for the nine-month period ended September 30, 2021.

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

Greenhouse gas emission permits held for the purpose of fulfilling obligations

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

<i>(in thousands of tons)</i>	2021	2022	2023	2024	2025	Total
Allocation with nil consideration	9,346	9,371	9,371	9,283	9,283	46,654

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

(in thousands of tons and millions of Korean won)	September 30, 2021							
	2020		2021		2022		2023	
	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount
Beginning balance								
/Allocation with nil consideration	8,666	-	9,346	-	9,371	-	9,371	-
Purchase/Sale	(69)	1,111	(54)	-	-	-	-	-
Exchange	100	-	(100)	-	-	-	-	-
Borrowings/Carry forwards between years	(49)	(388)	49	388	-	-	-	-
Surrendered to the government	(8,648)	(723)	-	-	-	-	-	-
Ending balance	-	-	9,241	388	9,371	-	9,371	-

(in thousands of tons and millions of Korean won)	September 30, 2021					
	2024		2025		Total	
	Quantity	Amount	Quantity	Amount	Quantity	Amount
Beginning balance /						
Allocation with nil consideration	9,283	-	9,283	-	55,320	-
Purchase/Sale	-	-	-	-	(123)	1,111
Exchange	-	-	-	-	-	-
Borrowings/Carry forwards between years	-	-	-	-	-	-
Surrendered to the government	-	-	-	-	(8,648)	(723)
Ending balance	9,283	-	9,283	-	46,549	388

(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	-

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

13. Other Current and Non-Current Assets

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

(in millions of Korean won)	September 30, 2021	December 31, 2020
Current		
Prepayments to suppliers and prepaid expenses	216,748	174,885
Prepaid value added tax	442,694	428,303
Others	129,038	39,964
Total	<u>788,480</u>	<u>643,152</u>
Non-current		
Long-term prepayments and long-term prepaid expenses	59,342	87,247
Others	100	98
Total	<u>59,442</u>	<u>87,345</u>

14. Borrowings

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

(in millions of Korean won)	September 30, 2021	December 31, 2020
Current		
Short-term borrowings	1,556,318	879,757
Current portion of long-term borrowings of bank loans	1,118,048	341,203
Current portion of debentures	659,748	272,466
Current portion of financial lease liabilities	54,746	55,389
	<u>3,388,860</u>	<u>1,548,815</u>

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(in millions of Korean won)

	September 30, 2021	December 31, 2020
Non-current		
Long-term borrowings	3,001,212	3,131,254
Debentures	7,425,605	5,376,812
Lease liabilities	203,174	129,236
	<u>10,629,991</u>	<u>8,637,302</u>
Total	<u>14,018,851</u>	<u>10,186,117</u>

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

(in millions of Korean won)	Bank	Latest maturity date	Interest rate(%)	September 30, 2021	December 31, 2020
Bank loans	Citi and others	June 24, 2022	0.92 and others	1,556,318	879,757
Total				<u>1,556,318</u>	<u>879,757</u>

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

(in millions of Korean won)		September 30, 2021			
	Bank	Annual interest rate (%)	Amount in Korean won	Current	Non-current
Borrowings in foreign currencies		USD: 3M LIBOR+1.40			
	HSBC	CNY: PBOC×0.95, LPR-33.75	44,630	44,630	-
		USD: 3M			
	SMBC	LIBOR+1.20~1.30	442,486	6,871	435,615
		EUR: 0.32~0.48			
	Construction Bank of China	LPR(1Y)+0.36~0.46	61,240	42,937	18,303
	Agricultural Bank of China	3M LIBOR + 1.15	60,400	3,624	56,776
		USD: 3M LIBOR + 0.95~1.20			
	Citi	EUR: 3M EURIBOR + 0.62~0.70	206,139	-	206,139
		6M EURIBOR + 0.70~0.83			
	ING		164,911	68,713	96,198
	Standard Chartered Bank	USD: 3M LIBOR + 1.20 CNY: PBOC×0.95	-	-	-
	CNOOC Finance	PBOC×0.90	10,982	10,982	-
	EBRD	6M EURIBOR + 0.62	343,564	48,099	295,465
	MUFG	6M EURIBOR +	137,426	68,713	68,713

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(in millions of Korean won)	September 30, 2021				
	Bank	Annual interest rate (%)	Amount in Korean won	Current	Non-current
		0.60~0.80			
	Industrial and Commercial Bank of China	PBOC ×1.00	42,418	14,145	28,273
	Hana Bank	3M EURIBOR + 0.62	274,851	-	274,851
		USD: 3M LIBOR + 0.80~0.93			
	KDB	EUR: 3M EURIBOR+0.75~1.50	861,133	355,830	505,303
	The Export-Import Bank of Korea	3M EURIBOR+0.75~1.50	448,008	302,336	145,672
	NongHyup Bank	3M EURIBOR+0.75~1.50	224,004	151,168	72,836
	EIB	3M EURIBOR + 0.47	659,643	-	659,643
	DBS	6M EURIBOR + 0.60	137,425	-	137,425
Total			<u>4,119,260</u>	<u>1,118,048</u>	<u>3,001,212</u>

(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		USD: 3M LIBOR + 0.95~1.40			
	HSBC	CNY: PBOC×0.95, LPR(5Y)-0.3375	87,806	60,541	27,265
	SMBC	3M LIBOR + 0.32~0.48	202,142	-	202,142
	Construction Bank of China	LPR(1Y)+0.36~0.46	81,673	35,315	46,358
	Communications Bank of China	PBOC ×1.00	5,676	5,676	-
	Citi	USD: 3M LIBOR + 0.95 EUR: EURIBOR	241,354	39,212	202,142

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(in millions of Korean won)	December 31, 2020				
	Bank	Annual interest rate (%)	Amount in Korean won	Current	Non-current
		+ 0.62~0.70			
	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	-
	Hana Bank	3M EURIBOR + 0.62	269,523	-	269,523
		USD: 3M LIBOR + 0.93			
	KDB	EUR: 6M EURIBOR+1.50	513,380	43,381	469,999
	The Export-Import Bank of Korea	6M EURIBOR + 1.50	296,475	-	296,475
	NongHyup Bank	6M EURIBOR + 1.50	148,238	-	148,238
	EIB	3M EURIBOR + 0.47	646,855	-	646,855
	DBS	6M EURIBOR + 0.60	134,761	-	134,761
Total			<u>3,472,457</u>	<u>341,203</u>	<u>3,131,254</u>

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

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

(in millions of Korean won)

	Financial institution	September 30, 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	2026.3.13	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	592,450	-	592,450
USD foreign currency debenture with maturity in 2029	Citi and others	3.63	2029.4.15	592,450	-	592,450
EUR foreign currency debenture with maturity in 2023	Citi and others	0.50	2023.4.15	687,155	-	687,155
5Y USD Green Bond (non-guaranteed/private)	Citi Securities and others	1.38	2026.7.7	592,450	-	592,450
10Y USD Green Bond (non-guaranteed/private)	Citi Securities and others	2.38	2031.7.7	592,450	-	592,450
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	3.00	2023.3.02	40,000	-	40,000

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		September 30, 2021				
	Financial institution	Annual interest rate (%)	Latest maturity date	Amount in Korean won	Current	Non-current
	Co., Ltd.					
	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
	NH Investment & Securities Co., Ltd.	1.56	2024.2.08	70,000	-	70,000
55-1 st Debenture (non-guaranteed/private)	KB Securities Co., Ltd and others	2.39	2031.5.7	90,000	-	90,000
55-2 nd Debenture (non-guaranteed/private)	KB Securities Co., Ltd and others	2.52	2036.5.7	60,000	-	60,000
Less: discount on debentures				(31,602)	(252)	(31,350)
Total				8,085,353	659,748	7,425,605

(in millions of Korean won)

		December 31, 2020				
	Financial institution	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
51-1 st Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	2.56	2021.2.20	190,000	190,000	-
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
52-3 rd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	2.21	2026.3.13	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
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

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		December 31, 2020				
	Financial institution	Annual interest rate (%)	Latest maturity date	Amount in Korean won	Current	Non-current
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	2021.3.02	50,000	50,000	-
	NH Investment & Securities Co., Ltd.	3.00	2023.3.02	40,000	-	40,000
	NH Investment & Securities Co., Ltd.	1.95	2023.2.14	80,000	-	80,000
	NH Investment & Securities Co., Ltd.	2.22	2025.2.14	30,000	-	30,000
Less: discount on debentures				(20,629)	(321)	(20,308)
Total				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 nine-month period ended September 30, 2021, exchangeable bonds of EUR 22,300,000 were additionally exchanged with 54,834 treasury shares and the remaining exchangeable bonds of EUR 2,200,000 have been early repaid.

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

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

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	Details
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

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	<ul style="list-style-type: none"> - 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
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 September 30, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>		September 30, 2021			
Leaser	Annual interest rate (%)	Latest maturity date	Total amount	Current	Non-current
Hyundai Oil Bank and others	1.98 ~ 3.01	2068.3.31	257,920	54,746	203,174
<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

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15. Provisions

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

<i>(in millions of Korean won)</i>					
September 30, 2021					
	Warranty¹	Greenhouse gas emission²	Legal claims³	Restoration⁴	Total
Beginning balance	1,244,017	4,875	8,286	112,829	1,370,007
Additions (reversal)	1,361,225	(4,040)	7,313	4,833	1,369,331
Used	(346,195)	(724)	(6,657)	(31,058)	(384,634)
Ending balance	2,259,047	111	8,942	86,604	2,354,704
Less: current portion	(1,721,782)	(111)	-	(41,560)	(1,763,453)
Total	537,265	-	8,942	45,044	591,251
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

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

² Greenhouse gas emission provisions have been accrued for estimated expenditures to be obligated for any excess emission. The estimated emission as at September 30, 2021 amounts to 6,406 thousand tons (September 30, 2020: 6,480 thousand tons).

³ Lawsuit provisions have been accrued for certain pending cases.

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

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16. Net Defined Benefit Liabilities

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

<i>(in millions of Korean won)</i>	September 30, 2021	December 31, 2020
Present value of defined benefit obligations ¹	1,561,087	1,454,596
Fair value of plan assets	(1,281,834)	(1,336,637)
Liabilities in the consolidated statement of financial position	279,253	117,959

¹ The present value of retirement benefit obligations is net of existing contributions to the National Pension Plan of ₩693 million as at September 30, 2021 (December 31, 2020: ₩734 million).

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

<i>(in millions of Korean won)</i>	2021		2020	
	Three months	Nine months	Three months	Nine months
Current service cost ¹	47,693	143,050	46,425	138,702
Interest cost	428	1,554	1,024	3,116
Total, included in employee benefit expenses	48,121	144,604	47,449	141,818

¹ The above amounts excluded ₩1,896 million (2020: ₩1,863 million) of expenses capitalized to construction in progress and development costs.

Post-employment benefits recognized for defined contribution plan for the nine-month period ended September 30, 2021, amounted to ₩7,378 million (2020: ₩5,513 million).

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

<i>(in millions of Korean won)</i>	2021		2020	
	Three months	Nine months	Three months	Nine months
Cost of sales	29,535	89,355	29,280	86,407
Selling and administrative expenses	20,984	62,323	18,234	55,319
Discontinued operations	18	304	1,681	5,605
Total	50,537	151,982	49,195	147,331

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

<i>(in millions of Korean won)</i>	September 30, 2021	December 31, 2020
Beginning balance	1,454,596	1,343,553
Transfer in	30,578	7,190
Transfer out	(5,839)	(1,690)
Current service cost	144,946	202,276
Interest expense	27,818	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	(1,985)	(14,637)
Payments from plans	(76,872)	(83,812)
Ending balance	1,561,087	1,454,596

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

<i>(in millions of Korean won)</i>	September 30, 2021	December 31, 2020
Beginning balance	1,336,637	1,164,393
Transfer in	1,131	-
Transfer out	(1,105)	(725)
Interest income	26,264	27,307
Remeasurements:		
Return on plan assets (excluding amounts included in interest income)	(10,535)	(5,069)
Contributions:		
Employers	568	227,555
Payments from plans	(69,844)	(76,458)
Administrative costs	(1,282)	(366)
Ending balance	1,281,834	1,336,637

The actual return on plan assets for the nine-month period ended September 30, 2021, was ₩15,729 million (December 31, 2020: ₩22,238 million).

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

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

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

<i>(in millions of Korean won)</i>	Increase by 0.5%	Decrease by 0.5%
Discount rate:		
Increase (decrease) in defined benefit obligations	(120,377)	140,210
Salary growth rate:		
Increase (decrease) in defined benefit obligations	135,932	(118,830)

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 September 30, 2021 and December 31, 2020, consist of:

<i>(in millions of Korean won)</i>	September 30, 2021		December 31, 2020	
	Amount	Composition (%)	Amount	Composition (%)
Insurance contracts with guaranteed yield	1,260,210	98.3	1,314,072	98.3
Equity linked bonds	20,123	1.6	20,855	1.6
Time deposits	1,501	0.1	1,710	0.1
	1,281,834	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 September 30, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	September 30, 2021	December 31, 2020
Current		
Advances from customers	313,878	203,507
Withholdings	72,997	128,754
Unearned revenues	99,268	62,286
Accrued expenses and others	549,899	393,482
Total	1,036,042	788,029
Non-current		
Long-term accrued expenses	66,778	63,019
Long-term unearned revenues	37,795	14,952
Long-term advanced received	4,154	68,935
Total	108,727	146,906

18. Commitments and Contingencies

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

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

Classification	The Parent Group		Certain Overseas Subsidiaries					
	KRW	USD	KRW	USD	CNY	EUR	INR	THB
Limit of bank overdraft	20,400		8,700	228	2,000	104	-	10
Limit of the letter of credit	22,000	336	-	307	2,224	-	777	-
Limit of discount of notes from export	-	312	-	931	2,900	-	-	-
Limit of guaranteed payments in other foreign currency	-	181	-	100	400	-	-	-
Limit of loan arrangements	350,000	-	268,000	3,093	3,700	5,540	2,857	-
Forward foreign exchange	-	-	-	138	-	-	-	-
Limit of other loans	-	-	-	70	-	-	-	-

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

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- (4) As at September 30, 2021, the Parent Company and certain subsidiaries have B2B purchase arrangements with several financial institutions with limit of ₩320,000 million and ₩165,000 million, respectively.
- (5) As at September 30, 2021, the Parent Company has reverse factoring agreements, and utilized the facility for ₩434,768 million provided by Shinhan Card and utilized the facility for ₩858,398 million provided by Woori Card.
- (6) As at September 30, 2021, in connection with styrene monomer gas leakage accident, several lawsuits 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. LG Polymer India Pvt. Ltd deposited INR 500 million under the order from NGT, and deposited INR 654 million generated from sales of inventories, under the order from APHC in connection with this accident. The manufacturing facility is currently closed with limited access in accordance with the order from APHC.
- (7) As at September 30, 2021, in relation to price fixing of mobile batteries, the consumers in Israel have filed one class action against a certain subsidiary. However, the ultimate outcome of these cases cannot be determined at the reporting date.
- (8) As at September 30, 2021, in relation to General Motors (GM) Bolt EV, the class action against General Motors (GM) Bolt EV including the Group is still pending. However, the ultimate outcome of the case cannot be determined at the reporting date.
- (9) In addition, as at September 30, 2021, the Parent Company and certain subsidiaries have been named as a plaintiff in 7 and 20 legal actions, respectively, involving ₩21,604 million and ₩10,111 million in claims, respectively. They have been named as a defendant in 12 and 168 legal actions, respectively, with ₩5,436 million and ₩2,624 million in claims, respectively. The ultimate outcome of these cases cannot be determined at the reporting date.
- (10) As at September 30, 2021, the Parent Company is under investigation by the related authorities in relation to the manipulation of the emission of fine dust-causing substance in the Yeosu Industrial Complex, and the final outcome of these investigations cannot be determined at the reporting date. As at September 30, 2021, the Parent Company shut down the relevant production facilities.
- (11) The Parent Company has entered into manufacture and production technical contracts with ExxonMobil and others.
- (12) 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.
- (13) As at September 30, 2021, the Parent Company has entered into payment guarantee contract of USD 73 million, and certain subsidiaries have entered into payment guarantee contracts of USD 3 million, EUR 2 million and ₩6,748 million with financial institutions to guarantee the warrant of certain installed products. Also, certain subsidiaries have entered into payment guarantee contract of CNY 214 million with financial institutions in relation to custom of imported raw materials.

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

	September 30, 2021		
	Secured amount	Borrowings / Loan	Secured party
Factory	-	Current and non-current borrowings	KDB
	-	-	

The collateral provided for a subsidiary has been removed due to the disposal of the subsidiary during the nine-month period ended September 30, 2021.

	December 31, 2020		
	Secured amount	Borrowings / Loan	Secured party
Factory	20,880	Current and non-current borrowings	KDB
	20,880	6,622	

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

	September 30, 2021	December 31, 2020
Property, plant and equipment	3,499,129	2,428,411

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

19. Share Capital

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

	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
September 30, 2021	70,592,343	352,962	7,688,800	38,444	2,014,036

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Changes in treasury shares for the nine-month period ended September 30, 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
September 30, 2021	373,614	16,368	21,397	460,063

20. Retained Earnings

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

(in millions of Korean won)	September 30, 2021	December 31, 2020
Legal reserve ¹	416,808	401,574
Discretionary reserve ²	12,945,537	13,780,609
Retained earnings before appropriation	4,440,832	993,121
Total	17,803,177	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 September 30, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	September 30, 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 and nine-month periods ended September 30, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021		2020	
	Three months	Nine months	Three months	Nine months
Wages and salaries	326,336	890,405	248,741	709,874
Post-employment benefits (Note 16)	20,984	62,323	18,233	55,319
Employee benefits	57,948	171,166	48,291	142,809
Travel expense	11,539	29,533	8,262	25,458
Water & utilities	18,876	53,247	14,427	42,726
Packaging expense	2,332	5,580	2,025	5,706
Rental expenses	34,170	94,492	21,660	61,504
Commission expenses	220,153	582,755	145,278	503,360
Depreciation	61,766	177,036	48,949	142,089
Advertising expense	8,439	24,871	6,634	16,893
Freight expenses	260,438	677,519	140,013	444,616
Training expense	8,357	19,677	4,131	9,980
Amortization (Note 12)	43,440	121,191	35,952	95,717
Sample expense	4,925	14,479	6,191	17,566
Development costs	68,097	179,721	50,214	163,612
Others	775,151	1,572,251	94,589	300,752
Total	1,922,951	4,676,246	893,590	2,737,981

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23. Classification of Expenses by Nature

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

(in millions of Korean won)

	2021		2020	
	Three months	Nine months	Three months	Nine months
Changes in inventories of merchandise, finished goods, semi-finished goods and work in process	(740,658)	(1,539,524)	(223,921)	(206,689)
Raw materials and consumables used	6,321,015	17,658,685	4,060,386	11,688,245
Purchase of merchandise	345,514	948,621	334,245	849,828
Employee benefit expenses (Note 24)	945,086	2,571,410	750,941	2,128,626
Advertising expenses	8,738	25,756	6,988	17,596
Freight expenses	272,122	711,337	150,367	473,016
Commission expenses	369,054	1,025,684	253,164	802,878
Depreciation and amortization	738,870	2,051,080	582,740	1,625,048
Rent expenses and usage fee	23,212	61,902	14,766	44,847
Other expenses	1,600,595	3,914,024	669,308	2,051,269
Total	9,883,548	27,428,975	6,598,984	19,474,664

24. Employee Benefit Expenses

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

(in millions of Korean won)

	2021		2020	
	Three months	Nine months	Three months	Nine months
Salaries	805,377	2,182,882	633,805	1,792,920
Post-employment benefits – Defined benefit plan (Note 16)	48,103	144,300	45,767	136,213
Post-employment benefits – Defined contribution plan (Note 16)	2,416	7,378	1,746	5,513
Others	89,190	236,850	69,623	193,980
Total	945,086	2,571,410	750,941	2,128,626

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25. Finance Income and Costs

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

(in millions of Korean won)

	2021		2020	
	Three months	Nine months	Three months	Nine months
Finance income				
Interest income ¹	32,547	55,048	7,949	28,803
Dividend income	4,875	5,963	-	12
Exchange differences	45,906	296,564	55,526	240,578
Gain on valuation of derivative instruments	118,933	163,055	-	-
Gain on valuation of financial instruments	(4,075)	7,788	-	-
Total	198,186	528,418	63,475	269,393
Finance costs				
Interest expense ²	65,633	152,737	51,160	168,449
Exchange differences	221,787	415,258	86,930	454,685
Loss on valuation of derivative instruments	(4,993)	8,104	107,185	168,305
Loss on valuation of financial instruments	182	266	-	-
Total	282,609	576,365	245,275	791,439

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

(in millions of Korean won)

	2021		2020	
	Three months	Nine months	Three months	Nine months
Deposits held by financial institutions	8,232	24,332	6,383	19,893
Other loans and receivables	24,315	30,716	1,566	8,910
Total	32,547	55,048	7,949	28,803

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

(in millions of Korean won)

	2021		2020	
	Three months	Nine months	Three months	Nine months
Interest on financial institutions	14,821	34,980	15,876	52,284
Interest on lease liabilities	1,622	5,355	2,798	7,152
Interest on debentures	45,437	120,234	37,730	114,413
Other interest expenses	10,436	32,502	8,625	26,892
Capitalized interest for qualifying assets	(6,683)	(40,334)	(13,870)	(32,292)
Total	65,633	152,737	51,159	168,449

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26. Other Non-Operating Income

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

(in millions of Korean won)

	2021		2020	
	Three months	Nine months	Three months	Nine months
Exchange differences	302,096	630,791	145,107	522,901
Gain on disposal of property, plant and equipment	2,979	34,803	243	1,628
Gain on disposal of intangible assets	-	15	-	147
Gain on disposal of investments in associates (Note 10)	3,820	3,820	1,530	312,068
Others	60,442	84,087	42,203	66,067
Total	369,337	753,516	189,083	902,811

27. Other Non-Operating Expenses

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

(in millions of Korean won)

	2021		2020	
	Three months	Nine months	Three months	Nine months
Exchange differences	219,081	485,060	151,472	559,092
Loss on disposal of property, plant and equipment	10,882	43,756	32,388	51,550
Loss on disposal of intangible assets	3	112	1,310	1,423
Impairment loss on property, plant and equipment (Note 11)	21,825	27,487	2,820	51,184
Impairment loss on intangible assets (Note 12)	46	60	1,363	1,405
Loss on disposal of investments in associates	2,054	2,054	-	-
Donations	2,045	9,795	2,403	7,577
Others	18,338	41,088	10,909	55,642
Total	274,274	609,412	202,665	727,873

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 24.4% (the estimated tax rate for the year ended December 31, 2020: 23.0%).

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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 and nine-month periods ended September 30, 2021 and 2020, are computed as follows:

Basic earnings per ordinary share from continuing operations

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

	2021		2020	
	Three months	Nine months	Three months	Nine months
Profit from continuing operations attributable to ordinary shares ¹	568,590	2,795,546	418,846	771,628
Weighted average number of ordinary shares outstanding ²	70,217,122	70,217,122	68,999,296	68,999,296
Basic earnings per ordinary share from continuing operations <i>(in won)</i>	8,098	39,813	6,070	11,183

Basic earnings per ordinary share

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

	2021		2020	
	Three months	Nine months	Three months	Nine months
Profit attributable to ordinary shares ¹	549,940	3,071,230	460,949	823,758
Weighted average number of ordinary shares outstanding ²	70,217,122	70,217,122	68,999,296	68,999,296
Basic earnings per ordinary shares <i>(in won)</i>	7,832	43,739	6,680	11,939

Basic earnings per preferred share from continuing operations

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

	2021		2020	
	Three months	Nine months	Three months	Nine months
Profit from continuing operations attributable to preferred share ¹	62,224	305,751	46,669	86,090
Weighted average number of preferred shares outstanding ²	7,672,432	7,672,432	7,672,433	7,672,433
Basic earnings per preferred share from continuing operations <i>(in won)</i>	8,110	39,850	6,083	11,221

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Basic earnings per preferred share

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

	2021		2020	
	Three months	Nine months	Three months	Nine months
Profit attributable to preferred shares ¹	60,188	335,872	51,351	91,887
Weighted average number of preferred shares outstanding ²	7,672,432	7,672,432	7,672,433	7,672,433
Basic earnings per preferred shares <i>(in won)</i>	<u>7,843</u>	<u>43,777</u>	<u>6,692</u>	<u>11,976</u>

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

(in millions of Korean won)

	2021		2020	
	Three months	Nine months	Three months	Nine months
Profit from continuing operations attributable to the equity holders of the Parent Company	630,814	3,101,297	465,515	857,718
Ordinary shares dividends (A)	175,543	526,627	34,500	103,499
Preferred shares dividends (B)	19,277	57,831	3,932	11,796
Undistributed earnings from continuing operation for the period	435,994	2,516,839	427,083	742,423
Undistributed earnings available for ordinary shares (C)	393,047	2,268,919	384,346	668,129
Undistributed earnings available for preferred shares (D)	42,947	247,920	42,737	74,294
Profit from continuing operations for the period attributable to ordinary shares (A+C)	568,590	2,795,546	418,846	771,628
Profit from continuing operations for the period attributable to preferred shares (B+D)	62,224	305,751	46,669	86,090

(in millions of Korean won)

	2021		2020	
	Three months	Nine months	Three months	Nine months
Profit attributable to the equity holders of the Parent Company	610,128	3,407,102	512,300	915,645
Ordinary shares dividends (A)	175,542	526,627	34,500	103,499
Preferred shares dividends (B)	19,278	57,831	3,932	11,796
Undistributed earnings for the period	415,308	2,822,644	473,868	800,350
Undistributed earnings available for ordinary shares (C)	374,398	2,544,603	426,449	720,259
Undistributed earnings available for preferred shares (D)	40,910	278,041	47,419	80,091
Profit for the period attributable to ordinary shares (A+C)	549,940	3,071,230	460,949	823,758
Profit for the period attributable to preferred shares (B+D)	60,188	335,872	51,351	91,887

² Weighted average numbers of shares are calculated as follows:

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Ordinary shares outstanding	2021			
	Period	Number of shares	Number of days	Number of shares x days
Beginning balance	2021. 1. 1 - 2021. 9. 30	70,163,895	273	19,154,743,335
Conversion of treasury shares	2021. 1. 9 - 2021. 9. 30	54,834	265	14,531,010
Total				19,169,274,345

Weighted average number of ordinary shares outstanding: $19,169,274,345 / 273 = 70,217,122$ shares

Preferred shares outstanding	2021			
	Period	Number of shares	Number of days	Number of shares x days
Beginning balance	2021. 1. 1 - 2021. 9. 30	7,672,432	273	2,094,573,936
Total				2,094,573,936

Weighted average number of preferred shares outstanding: $2,094,573,936 / 273 = 7,672,432$ shares

Ordinary shares outstanding	2020			
	Period	Number of shares	Number of days	Number of shares x days
Beginning balance	2020. 1. 1 - 2020. 9. 30	68,939,926	274	18,889,539,724
Total				18,889,539,724

Weighted average number of ordinary shares outstanding: $18,889,539,724 / 274 = 68,939,926$ shares

Preferred shares outstanding	2020			
	Period	Number of shares	Number of days	Number of shares x days
Beginning balance	2020. 1. 1 - 2020. 9. 30	7,672,433	274	2,102,246,642
Total				2,102,246,642

Weighted average number of preferred shares outstanding: $2,102,246,642 / 274 = 7,672,433$ shares

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

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

	2021		2020	
	Three months	Nine months	Three months	Nine months
Basic earnings (losses) per ordinary share from discounted operations	(266)	3,926	610	756
Basic earnings (losses) per preferred share from discounted operations	(266)	3,926	610	756
Diluted earnings (losses) per ordinary share from discounted operations	(266)	3,926	610	756
Diluted earnings (losses) per preferred share from discounted operations	(266)	3,926	610	756

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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.

31. Related Party Transactions

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

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

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

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

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Sales and purchases with related parties for the nine-month periods ended September 30, 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.	-	-	-	-	128	66,353
Associates and joint ventures						
SEETEC Co., Ltd.	47,285	127,574	15	92	316	50,806
TECWIN Co., Ltd.	10	150	924	-	-	38
HL Greenpower Co., Ltd.	470,525	440	-	-	-	-
HUAJIN NEW ENERGY MATERIALS(QUZHOU) CO., LTD.	804	66,532	-	-	-	-
Others	11,631	7,895	-	-	-	2,009
Other related parties						
LX MMA Corporation ¹	104,221	148,433	-	-	-	2,816
S&I Corp. and its subsidiaries	72	8,148	399,376	-	-	83,031
LG CNS Co., Ltd. and its subsidiaries	9,848	3,174	244,542	-	13	110,284
Others	124	-	-	-	-	25,025
Others						
LG Display Co., Ltd. and its subsidiaries	473,638	102	-	-	12	2
LG Electronics Inc. and its subsidiaries	1,178,804	828,887	221,136	-	29	17,623
LX International Corp. and its subsidiaries	78,711	326,608	16,980	-	1	770,659
LX Hausys, Ltd. and its subsidiaries	203,243	390	31,873	-	-	659
Others	7,707	25,811	1,078	9	48	5,862
Total	2,586,623	1,544,144	915,924	101	547	1,135,167

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	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.	-	-	-	-	159	44,952
Associates and joint ventures						
SEETEC Co., Ltd.	41,776	98,244	10	618	21	61,127
TECWIN Co., Ltd.	-	295	1,142	-	-	111
HL Greenpower Co., Ltd.	674,399	-	-	-	-	3,179
HUAJIN NEW ENERGY MATERIALS(QUZHOU) CO., LTD.	-	320	-	-	-	-
Others	47	2,137	-	-	-	1,915
Other related parties						
LX MMA Corporation ¹	70,786	100,880	-	-	-	2,608
S&I Corp. and its subsidiaries	181	16,551	469,004	-	-	44,278
LG CNS Co., Ltd. and its subsidiaries	6,818	2,499	221,374	-	13	82,718
Others	5	-	-	583	2	11,644
Others						
LG Display Co., Ltd. and its subsidiaries	637,212	98	879	891	6	255
LG Electronics Inc. and its subsidiaries	805,506	578,254	283,919	-	-	57,279
LX International Corp. and its subsidiaries	48,088	243,175	108,254	1,181	3	342,520
LX Hausys, Ltd. and its subsidiaries	124,296	1,183	4,217	-	1	4,857
Others	5,926	17,172	648	1,605	24	4,426
Total	2,415,040	1,060,808	1,089,447	4,878	229	661,869

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

LG Chem, Ltd. and Subsidiaries

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

(in millions of Korean won)

	September 30, 2021			
	Receivables			Total
	Trade receivables and others	Loan receivables	Other receivables	
Entity with a significant influence over the Group				
LG Corp.	-	-	9,983	9,983
Associates and joint ventures				
SEETEC Co., Ltd.	8,568	-	267	8,835
TECWIN Co., Ltd.	5	-	-	5
HL Greenpower Co., Ltd.	129,637	-	46,869	176,506
HUAJIN NEW ENERGY MATERIALS(QUZHOU) CO., LTD.	-	-	640	640
Others	1	-	6,569	6,570
Other related parties				
LX MMA Corporation	19,565	-	556	20,121
S&I Corp. and its subsidiaries ¹	-	-	8,784	8,784
LG CNS Co., Ltd. and its subsidiaries	3,588	-	-	3,588
Others	-	-	6,741	6,741
Others				
LG Display Co., Ltd. and its subsidiaries	112,688	-	228	112,916
LG Electronics Inc. and its subsidiaries	300,878	-	96,894	397,772
LX International Corp. and its subsidiaries	4,072	-	378	4,450
LX Hausys, Ltd. and its subsidiaries	52,825	-	1,238	54,063
Others	11	-	1,413	1,424
Total	631,838	-	180,560	812,398

(in millions of Korean won)

	September 30, 2021			
	Payables			Total
	Trade payables	Borrowings	Lease liabilities	
Entity with a significant influence over the Group				
LG Corp.	-	-	2,982	16,733
Associates and joint ventures				
SEETEC Co., Ltd.	18,463	-	24,993	52,852
TECWIN Co., Ltd.	-	-	-	256
HL Greenpower Co., Ltd.	-	-	-	-
HUAJIN NEW ENERGY MATERIALS(QUZHOU) CO., LTD.	26,736	-	-	26,736
Others	-	-	-	349
Other related parties				
LX MMA Corporation	19,439	-	-	19,439
S&I Corp. and its subsidiaries ¹	-	-	-	204,529
LG CNS Co., Ltd. and its subsidiaries	-	-	301	97,579
Others	-	-	-	1,567
Others				
LG Display Co., Ltd. and its subsidiaries	37	-	640	2,940
LG Electronics Inc. and its subsidiaries	182,004	-	1,722	86,109
LX International Corp. and its subsidiaries	35,720	-	-	162,590
LX Hausys, Ltd. and its subsidiaries	-	-	8	2,720
Others	3,117	-	3,649	3,801
Total	285,516	-	34,295	588,268

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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
HUAJIN NEW ENERGY MATERIALS(QUZHOU) CO., LTD.	-	-	-	-
Others	-	-	22	22
Other related parties				
LX MMA Corporation	3,186	-	534	3,720
S&I Corp. and its subsidiaries ¹	6	-	8,783	8,789
LG CNS Co., Ltd. and its subsidiaries	7,048	-	85	7,133
Others	606	-	4,360	4,966
Others				
LG Display Co., Ltd. and its subsidiaries	152,152	-	27,792	179,944
LG Electronics Inc. and its subsidiaries	245,176	-	111,549	356,725
LX International Corp. and its subsidiaries	4,710	-	-	4,710
LX Hausys, Ltd. and its subsidiaries	34,977	-	31	35,008
Others	128	-	1,163	1,291
Total	729,135	-	166,940	896,075

(in millions of Korean won)

	December 31, 2020				
	Payables				Total
	Trade payables	Borrowings	Lease liabilities	Other payables	
Entity with a significant influence over the Group					
LG Corp.	-	-	11,934	4,013	15,947
Associates and joint ventures					
SEETEC Co., Ltd.	14,977	-	26,014	9,884	50,875
TECWIN Co., Ltd.	-	-	-	574	574
HL Greenpower Co., Ltd.	-	-	-	330	330
HUAJIN NEW ENERGY MATERIALS(QUZHOU) CO., LTD.	70	-	-	-	70
Others	124	-	-	272	396
Other related parties					
LX MMA Corporation	13,272	-	-	-	13,272
S&I Corp. and its subsidiaries ¹	30	-	-	265,647	265,677
LG CNS Co., Ltd. and its subsidiaries	4	-	1,206	164,632	165,842
Others	-	-	92	289	381
Others					
LG Display Co., Ltd. and its subsidiaries	-	-	703	115	818
LG Electronics Inc. and its subsidiaries	133,330	-	1,792	254,868	389,990
LX International Corp. and its subsidiaries	23,654	-	575	74,267	98,496
LX Hausys, Ltd. and its subsidiaries	-	-	-	3,965	3,965
Others	1,869	-	1,101	6,224	9,194
Total	187,330	-	43,417	785,080	1,015,827

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

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

(in millions of Korean won)

	2021						
	Dividends received	Dividends paid	Equity contributions in cash (capital reduction)	Loans		Borrowings ¹	
				Loans	Repayment	Borrowings	Repayment
Entity with a significant influence over the Group							
LG Corp.	-	235,342	-	-	-	-	8,950
Associates and joint ventures							
SEETEC Co., Ltd.	10,000	-	-	-	-	92	6,383
PT. HKML Battery Indonesia	-	-	209,132	-	-	-	-
Other related parties							
LG CNS Co., Ltd.	-	-	-	-	-	-	2,931
LG Holdings Japan Co.,Ltd.	-	-	-	-	-	-	91
Others							
LG Display America, Inc.	-	-	-	-	-	-	108
Pantos Logistics France	-	-	-	-	-	-	419
Pantos Logistics Spain S.L.	-	-	-	-	-	-	161
LG Electronics Deutschland GmbH	-	-	-	-	-	-	214
LX Hausys, Ltd.	-	-	-	-	-	-	571
LG HOUSEHOLD & HEALTH CARE LTD	-	-	-	-	-	9	1,124
Total	10,000	235,342	209,132	-	-	101	20,952

(in millions of Korean won)

	2020						
	Dividends received	Dividends paid	Equity contributions in cash (capital reduction)	Loans		Borrowings ¹	
				Loans	Repayment	Borrowings	Repayment
Entity with a significant influence over the Group							
LG Corp.	-	47,068	-	-	-	-	10,988
Associates and joint ventures							
SEETEC Co., Ltd.	10,000	-	-	-	-	618	1,505
TECWIN Co., Ltd.	314	-	-	-	-	-	-
HUAJIN NEW ENERGY MATERIALS(QUZHOU)	-	-	13,611	-	-	-	-

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				2020			
				Loans		Borrowings ¹	
	Dividends received	Dividends paid	Equity contributions in cash (capital reduction)	Loans	Repayment	Borrowings	Repayment
CO.,Ltd							
Jiangxi VL Battery Co.,Ltd	-	-	2,296	-	-	-	-
Other related parties							
LG CNS Co., Ltd.	-	-	-	-	-	-	892
LG Holdings Japan Co.,Ltd.	-	-	-	-	-	583	438
Others							
LG Display America,Inc.	-	-	-	-	-	891	59
Pantos Logistics (China) Co., Ltd.	-	-	-	-	-	-	17
Pantos Logistics France	-	-	-	-	-	854	238
Pantos Logistics Spain S.L.	-	-	-	-	-	328	91
LX Hausys, Ltd.	-	-	-	-	-	-	49
LG HOUSEHOLD & HEALTH CARE LTD	-	-	-	-	-	1,605	524
Total	10,314	47,068	15,907	-	-	4,879	14,801

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

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

(in millions of Korean won)	2021	2020
Short-term employee benefits	66,858	68,012
Post-employment benefits	12,588	5,315
Total	79,446	73,327

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 September 30, 2021 and December 31, 2020; therefore, there are no impairment losses recognized against the receivables from related parties for the nine-month period ended September 30, 2021 and for the year ended December 31, 2020.

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

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32. Cash Generated from Operations

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

<i>(in millions of Korean won)</i>	2021	2020
Profit before income tax		
Profit before income tax from continuing operations	4,756,555	1,438,775
Profit before income tax from discontinued operations	4,378,917	1,341,098
	<u>377,638</u>	<u>97,677</u>
Adjustments for:		
Depreciation	1,888,707	1,546,600
Amortization	166,382	126,137
Post-employment benefits	144,604	141,818
Finance income	(402,285)	(116,660)
Finance costs	470,612	645,934
Foreign exchange differences	(28,608)	7,925
(Reversal of) Loss on valuation of inventories	21,971	(26,004)
Gain on disposal of property, plant and equipment	(42,735)	(3,200)
Gain on disposal of intangible assets	(15)	(149)
Gain on disposal of other assets	-	(2,771)
Loss on disposal of property, plant and equipment	43,759	54,141
Loss on disposal of intangible assets	155	1,474
Reversal of impairment loss on property, plant and equipment	-	(220)
Impairment loss on property, plant and equipment	28,049	53,438
Impairment loss on intangible assets	60	1,473
Gain on disposal of investments in associates	(1,766)	(312,084)
Gain on disposal of business	(371,125)	(32,134)
Additions to provisions	1,369,331	175,695
Other income	3,718	4,068
Increase in inventories	(2,403,273)	(30,512)
Increase in trade receivables	(799,829)	(1,674,256)
Increase in other receivables	(1,021,338)	(197,420)
Increase in other current assets	(61,404)	(15,299)
Increase in trade payables	291,734	1,251,555
Increase in other payables	1,080,692	944,706
Increase in other current liabilities	64,470	348,532
Decrease in provisions	(383,910)	(245,787)
Increase (decrease) in net defined benefit liabilities	18,399	(2,671)
Other cash flows from operations	(22,039)	(27,246)
Cash generated from operations	<u>4,810,871</u>	<u>4,055,858</u>

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

(in millions of Korean won)	2021						
	At January 1, 2021	Cash flows from financing activities	Lease liabilities	Amortization	Reclassification of current portion	Others	At September 30, 2021
Short-term borrowings	1,276,349	(149,627)	-	-	1,144,038	458,352	2,729,112
Long-term borrowings	3,260,490	1,219,337	123,032	-	(1,144,038)	(254,435)	3,204,386
Debentures	5,649,278	2,293,691	-	4,773	-	137,611	8,085,353
Exchange rights	16,797	-	-	-	-	(16,797)	-
Other payables for the reverse factoring arrangement	2,081,307	(2,494,993)	-	-	-	1,696,935	1,283,249
Total	12,284,221	868,408	123,032	4,773	-	2,021,666	15,302,100

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

(in millions of Korean won)	2021	2020
Reclassification of construction-in-progress	4,912,637	3,950,320
Reclassification of machinery-in-transit	351,354	57,683
Reclassification of long-term borrowings into current portion	1,803,740	1,403,797
Other payables related to acquisitions of property, plant and equipment and intangible assets	1,565,671	1,778,136
Reclassification of other payables under the reverse factoring arrangement	1,696,934	2,136,238
Transfer to non-current assets held for sale	-	770,070
Transfer to non-current liabilities held for sale	-	129,254
Exchange of treasury stocks such as exchangeable bonds	54,383	335,180

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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 nine-month periods ended September 30, 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	15,332,657	13,405,222	3,616,716	542,220	676,150	33,572,965
Inter-segment revenue	459,621	12,754	1,291,273	37,109	66,183	1,866,940
Revenue from external customers ¹	14,873,036	13,392,468	2,325,443	505,111	609,967	31,706,025
Operating profit (loss) ²	3,395,368	693,074	234,475	60,856	(106,723)	4,277,050

(in millions of Korean won)	2020					
	Petro-chemicals	Energy solutions	Advanced materials	Life sciences	Common and others ³	Total
Total segment revenue	10,531,069	8,227,785	2,725,704	486,073	627,866	22,598,497
Inter-segment revenue	417,198	(39)	925,142	2,266	94,378	1,438,945
Revenue from external customers ¹	10,113,871	8,227,824	1,800,562	483,807	533,488	21,159,552
Operating profit (loss) ²	1,375,234	272,497	153,609	45,782	(162,234)	1,684,888

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 September 30, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won</i>	September 30, 2021					
	Petro-chemicals	Energy solutions	Advanced materials	Life sciences	Common and others	Total
Reportable segment asset ¹	14,870,304	23,512,221	4,446,508	1,900,688	5,092,262	49,821,983
Investments in associates and joint ventures	12,607	236,558	93,969	17	157,141	500,292
Reportable segment liability ¹	4,581,393	14,402,282	1,321,212	248,966	6,589,534	27,143,387

<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 nine-month periods ended September 30, 2021 and 2020, and as at September 30, 2021 and December 31, 2020, are as follows:

<i>(in millions of Korean won)</i>	Sales		Non-current assets¹	
	2021	2020	September 30, 2021	December 31, 2020
Korea ²	7,832,392	6,164,473	15,280,614	14,656,257
China	8,808,816	6,299,304	4,566,601	3,690,486
Asia/Oceania	3,876,775	2,451,820	86,411	34,876
America	3,184,409	1,778,847	1,368,114	656,190
Europe	7,655,008	4,207,041	3,968,992	3,859,016
Others	348,625	258,067	-	-
Total	31,706,025	21,159,552	25,270,732	22,896,825

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

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

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

34. Assets and Liabilities Held for Sale and Discontinued Operations

34.1 Assets and Liabilities Held for Sale

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

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

<i>(in millions of Korean won)</i>	September 30, 2021	December 31, 2020
Assets of disposal group		
Inventories	-	185,693
Property, plant and equipment	5,363	570,374
Intangible assets	360	8,086
Others	-	24,919
Total	5,723	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 nine-month periods ended September 30, 2021 and 2020.

34.2 Discontinued Operations

The Group decided to discontinue Glass substrate business with the resolution of the Board of Directors in January 2020 and substantially discontinued the related business as of March 2020. In addition, the Group decided to dispose of LCD polarizer business with the resolution of the Board of Directors in June 2020, and the disposal has been completed in February 2021. The Group disposed of all of its shares of Ugimag Korea Co., Ltd., in July 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 nine-month periods ended September 30, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021			
	LCD polarizer	Glass substrate	Ugimag	Total
Revenue	631,228	9,699	11,609	652,536
Expense	(226,886)	(7,356)	(40,656)	(274,898)
Gain (loss) before income tax of discontinued operation	404,342	2,343	(29,047)	377,638
Income tax benefits (expense)	(80,068)	(560)	8,795	(71,833)
Gain (loss) after income tax of discontinued operations	324,274	1,783	(20,252)	305,805

(in millions of Korean won)

	2020			
	LCD polarizer	Glass substrate	Ugimag	Total
Revenue	1,246,370	28,082	12,197	1,286,649
Expense	(1,103,203)	(67,730)	(18,040)	(1,188,973)
Gain (loss) before income tax of discontinued operation	143,167	(39,648)	(5,843)	97,676
Income tax benefits (expense)	(47,407)	7,658	-	(39,749)
Gain (loss) after income tax of discontinued operations	95,760	(31,990)	(5,843)	57,927

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

(in millions of Korean won)

	2021			
	LCD polarizer	Glass substrate	Ugimag	Total
Net cash inflow (outflow) from operating activities	175,806	3,097	(1,835)	177,068
Net cash inflow from investing activities	895,195	5,423	26,569	927,187
Net cash outflow from financing activities	(1,083,501)	(8,520)	(24,734)	(1,116,755)

(in millions of Korean won)

	2020			
	LCD polarizer	Glass substrate	Ugimag	Total
Net cash inflow (outflow) from operating activities	26,534	7,724	(5,239)	29,019
Net cash inflow (outflow) from investing activities	(44,702)	1,043	(978)	(44,637)
Net cash inflow (outflow) from financing activities	27,435	(8,767)	6,217	24,885

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35. Assets and Liabilities related to Contracts with Customers

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

<i>(in millions of Korean won)</i>	September 30, 2021	December 31, 2020
Contract assets	-	-
Total contract assets	-	-
Contract liabilities		
Advances in relation to revenue from the Group's main business activities	304,618	265,688
Expected services to be transferred	-	-
Expected customer incentives	4,576	5,394
Unearned revenue	25,600	26,036
Total contract liabilities	334,794	297,118

Revenue recognized in relation to contract liabilities

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

<i>(in millions of Korean won)</i>	2021	2020
Revenue recognized in the current period from the contract liability balance at the beginning of the period	180,298	143,513
Advances in relation to revenue from the Group's main business activities	175,159	130,632
Unearned revenue	5,139	9,381
Expected services to be transferred	-	3,500
Revenue recognized from performance obligations satisfied in previous periods	-	-

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36. Investment Properties

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

(in millions of Korean won)	September 30, 2021				December 31, 2020			
	Cost	Accumulated depreciation	Accumulated impairment	Book amount	Cost	Accumulated depreciation	Accumulated impairment	Book amount
Land	4,211	-	-	4,211	4,211	-	-	4,211
Buildings	62,834	(13,067)	(47)	49,720	54,457	(9,225)	(10)	45,222
Total	67,045	(13,067)	(47)	53,931	58,668	(9,225)	(10)	49,433

Changes in investment properties for the nine-month periods ended September 30, 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	-	5,520	5,520	-	2,644	2,644
Disposals/transfers	-	(86)	(86)	(157)	(5,221)	(5,378)
Depreciation	-	(936)	(936)	-	(1,161)	(1,161)
Ending balance	4,211	49,720	53,931	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 September 30, 2021, is ₩60,142 million (December 31, 2020: ₩51,625 million).

During the nine-month period ended September 30, 2021, rental income from investment properties under operating lease is ₩5,005 million (2020: ₩5,210 million), and operating expenses incurred for investment properties that generated rental income (including maintenance and repair expenses) are ₩927 million (2020: ₩794 million). During the nine-month period ended September 30, 2021, operating expenses incurred for investment properties that do not generate rental income (including maintenance and repair expenses) are ₩9 million (2020: ₩9 million).

Operating lease

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

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

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

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<i>(in millions of Korean won)</i>	September 30, 2021	December 31, 2020
Within one year	6,265	503
Within two years	6,015	172
Within five years	1,504	500
Total	13,784	1,175

37. Revenue from Contracts with Customers

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

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

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

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

38. Events after the Reporting Period

(a) On November 1, 2021, the Group completed the acquisition of CEM (Chemical Electronics Material) business of LG Electronics Inc. to lead competitive battery separator business.

(b) On October 22, 2021, the Board of Directors of the Group approved the disposal of all the shares (percentage of ownership: 30%) of FJ Composite Material Co., Ltd, an associate, to enhance its business competitiveness and improve the efficiency of assets.

(c) On October 22, 2021, the Board of Directors of the Group decided to dispose of the remaining treasury shares (6,085 of ordinary shares, 10,327 of preferred shares) purchased from the dissenting shareholders who objected to the merger with LG Life Sciences, Ltd. in the past. On October 27, 2021, the Group disposed of these treasury shares through off-hours block trading.

(d) On October 27, 2021, for the production and sale of separator for rechargeable batteries, the Board of Directors of the Group approved an investment in the establishment of joint venture with Toray Industries, Inc. which owns a number of original technologies of battery separator

(e) In October 2021, the Group entered into a contract to acquire 4.8% of shares of Greatpower Nickel & Cobalt Materials, a Nickel/Cobalt smelting company.

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(f) On October 22, 2021, the Board of Directors of the Group approved an investment in the establishment of LG BCM Co., Ltd. (Gumi Plant) for the production of cathode materials for rechargeable batteries, and the establishment was completed on November 3, 2021.

(g) On October 22, 2021, the Board of Directors of the Group decided to acquire 50% of shares of China Heungji Science and Technology Co., Ltd. owned by LG Energy Solution Battery (Nanjing) Co., Ltd., a subsidiary of the Group, for ₩196,856 million.

(h) On October 5, 2021, the Group signed an MOU to establish a joint venture with Stellantis, an automobile manufacturing company.