

LG Chem, Ltd. and Subsidiaries
Consolidated Interim Financial Statements
June 30, 2022 and 2021

LG Chem, Ltd. and Subsidiaries
Index
June 30, 2022 and 2021

	Page(s)
Report on Review of Interim Financial Statements	1 - 2
Consolidated Interim Financial Statements	
Consolidated Interim Statements of Financial Position	3 - 4
Consolidated Interim Statements of Profit or Loss	5
Consolidated Interim Statements of Comprehensive Income	6
Consolidated Interim Statements of Changes in Equity	7
Consolidated Interim Statements of Cash Flows	8
Notes to the Consolidated Interim Financial Statements	9 - 86



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.

We have reviewed the accompanying consolidated interim financial statements of LG Chem, Ltd. and its subsidiaries (collectively referred to as the “Group”). These financial statements consist of the consolidated interim statement of financial position of the Group as at June 30, 2022, and the related consolidated interim statements of profit or loss and comprehensive income for the three-month and six-month periods ended June 30, 2022 and 2021, and consolidated interim statements of changes in equity and cash flows for the six-month periods ended June 30, 2022 and 2021, 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 Note 4 to the consolidated interim financial statements. Note 4 to the consolidated interim financial statements describes uncertainty relating to the impact of Coronavirus disease 2019 (COVID-19) on the Group's productivity and ability to satisfy customer's orders.

Other Matters

We have audited the consolidated statement of financial position of the Group as at December 31, 2021, 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 8, 2022. The consolidated statement of financial position as at December 31, 2021, presented herein for comparative purposes, is consistent, in all material respects, with the above audited statement of financial position as at December 31, 2021.

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

August 16, 2022

Seoul, Korea

This report is effective as of August 16, 2022, the review report date. Certain subsequent events or circumstances, which may occur between the review report date and the time of reading this report, could have a material impact on the accompanying consolidated interim financial statements and notes thereto. Accordingly, the readers of the review report should understand that there is a possibility that the above review report may have to be revised to reflect the impact of such subsequent events or circumstances, if any.

LG Chem, Ltd. and Subsidiaries
Consolidated Interim Statements of Financial Position
June 30, 2022 and December 31, 2021

<i>(in millions of Korean won)</i>	Notes	June 30, 2022 (Unaudited)	December 31, 2021
Assets			
Current assets			
Cash and cash equivalents	3,5,6	5,278,553	3,760,834
Trade receivables	3,5,7,31	7,514,583	6,386,979
Other receivables	3,5,7,31	7,578,495	1,048,549
Other current financial assets	3,5,8	20,540	23,289
Prepaid income taxes		16,406	156,299
Other current assets	13	761,773	749,032
Inventories	9	11,239,704	8,283,474
Assets held for sale	34	23,596	5,364
Total current assets		32,433,650	20,413,820
Non-current assets			
Trade receivables	3,5,7	78,483	67,055
Other receivables	3,5,7	617,514	713,166
Other non-current financial assets	3,5,8	811,402	506,022
Investments in associates and joint ventures	1,10,33	1,065,752	535,310
Deferred tax assets	28	2,088,232	1,905,149
Property, plant and equipment	11	26,465,473	24,378,259
Intangible assets	12	2,561,282	2,444,303
Investment properties	36	56,446	56,297
Other non-current assets	13,16	168,299	115,921
Total non-current assets		33,912,883	30,721,482
Total assets		66,346,533	51,135,302
Liabilities			
Current liabilities			
Trade payables	3,5,31	5,329,558	3,742,132
Other payables	3,5,31	3,516,195	3,991,784
Borrowings	3,5,14	4,427,032	3,477,080
Other current financial liabilities	3,5,8	18,066	-
Provisions	15	1,208,034	1,572,755
Income tax payables	28	1,029,760	957,676
Other current liabilities	3,5,17,35	1,368,011	1,320,669
Liabilities held for sale	34	15	-
Total current liabilities		16,896,671	15,062,096
Non-current liabilities			
Other payables	3,5	30,987	15,623
Borrowings	3,5,14	11,312,793	11,288,654
Other non-current financial liabilities	3,5,8	61,677	126
Provisions	15	422,326	636,953
Net defined benefit liabilities	13,16	84,388	18,122
Deferred tax liabilities	28	782,569	713,862
Other non-current liabilities	3,5,17,35	207,339	189,878
Total non-current liabilities		12,902,079	12,863,218
Total liabilities		29,798,750	27,925,314

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 Financial Position
June 30, 2022 and December 31, 2021

<i>(in millions of Korean won)</i>	Notes	June 30, 2022 (Unaudited)	December 31, 2021
Equity			
Share capital	1,19	391,406	391,406
Capital surplus		11,377,437	2,696,385
Other components of equity	21	(37,310)	(37,310)
Accumulated other comprehensive income		863,652	551,354
Retained earnings	20	18,499,332	18,091,949
Equity attributable to owners of the Parent Company		31,094,517	21,693,784
Non-controlling interests		5,453,266	1,516,204
Total equity		36,547,783	23,209,988
Total liabilities and equity		₩ 66,346,533	₩ 51,135,302

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

LG Chem, Ltd. and Subsidiaries
Consolidated Interim Statements of Profit or Loss
Three-Month and Six-Month Periods Ended June 30, 2022 and 2021

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

	Notes	Period Ended June 30			
		2022		2021	
		(Unaudited)		(Unaudited)	
		Three months	Six months	Three months	Six months
Revenue	31, 33, 35	12,239,911	23,834,911	11,439,322	21,067,187
Cost of sales	23, 31	(9,713,491)	(18,811,466)	(7,594,495)	(14,766,100)
Gross profit		2,526,420	5,023,445	3,844,827	6,301,087
Selling and administrative expenses	22, 23, 31	(1,647,967)	(3,120,214)	(1,703,647)	(2,751,322)
Operating profit	33	878,453	1,903,231	2,141,180	3,549,765
Finance income	25	361,679	557,846	171,769	330,218
Finance costs	25	(408,218)	(647,118)	(98,598)	(293,661)
Share of net profit of associates and joint ventures accounted for using the equity method	10	(2,443)	(9,671)	3,517	5,451
Other non-operating income	26	598,407	873,520	68,026	383,510
Other non-operating expenses	27	(485,101)	(711,704)	(71,765)	(334,159)
Profit before income tax	32	942,777	1,966,104	2,214,129	3,641,124
Income tax expense	28	(224,949)	(478,601)	(646,625)	(1,030,660)
Profit from continuing operations		717,828	1,487,503	1,567,504	2,610,464
Profit (loss) from discontinued operations	34	487	34	(1,235)	326,777
Profit for the period		718,315	1,487,537	1,566,269	2,937,241
Profit is attributable to:					
Owners of the Parent Company					
Profit from continuing operations		658,849	1,347,480	1,491,507	2,470,197
Profit (loss) from discontinued operations		487	34	(1,235)	326,777
		659,336	1,347,514	1,490,272	2,796,974
Non-controlling interests					
Profit from continuing operations		58,979	140,023	75,997	140,267
		58,979	140,023	75,997	140,267
Earnings per share for profit					
attributable to the equity holders					
of the Parent Company (in won)	29				
Basic and diluted earnings per ordinary share		8,462	17,294	19,132	35,907
Basic and diluted earnings per preferred share		8,473	17,319	19,144	35,932
Earnings per share for profit from continuing					
operations attributable to the equity holders					
of the Parent Company (in won)	29				
Basic and diluted earnings per ordinary share		8,456	17,293	19,148	31,712
Basic and diluted earnings per preferred share		8,468	17,318	19,160	31,737

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

LG Chem, Ltd. and Subsidiaries
Consolidated Interim Statements of Comprehensive Income
Three-Month and Six-Month Periods Ended June 30, 2022 and 2021

(in millions of Korean won)

	Notes	Period Ended June 30			
		2022 (Unaudited)		2021 (Unaudited)	
		Three months	Six months	Three months	Six months
Profit for the period		718,315	1,487,537	1,566,269	2,937,241
Other comprehensive income					
<i>Items that will not be reclassified to profit or loss</i>					
Remeasurements of net defined benefit liability	16	(3,817)	(6,684)	(5,534)	4,267
Gain (loss) on valuation of financial assets at fair value through other comprehensive income		11,339	11,027	(562)	1,735
Shares of remeasurements of net defined benefit liabilities of associates		(307)	(307)	-	(234)
Income tax relating to these items		(2,403)	(1,640)	1,676	(1,656)
<i>Items that may be subsequently reclassified to profit or loss</i>					
Exchange differences on translation of foreign operations		306,146	487,696	133,291	314,302
Cash flow hedge		(76,476)	(17,404)	(7,040)	(11,297)
Shares of other comprehensive income of associates and joint ventures		15,000	23,145	1,430	5,004
Income tax relating to these items		2,642	(38,255)	(557)	17,573
Other comprehensive income for the period, net of tax		252,124	457,578	122,704	329,694
Total comprehensive income for the period		970,439	1,945,115	1,688,973	3,266,935
Total comprehensive income for the period is attributable to:					
Owners of the Parent Company		802,172	1,654,900	1,603,143	3,095,739
Non-controlling interest		168,267	290,215	85,830	171,196

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

LG Chem, Ltd. and Subsidiaries

Consolidated Interim Statements of Changes in Equity

Six-Month Periods Ended June 30, 2022 and 2021

(in millions of Korean won)

	Notes	Attributable to owners of the Parent Company					Total	Non-controlling interests	Total equity
		Share capital	Capital surplus	Other components of Equity	Accumulated other comprehensive income (loss)	Retained earnings			
Balance at January 1, 2021		391,406	2,692,485	(54,998)	(165,076)	15,175,304	18,039,121	751,319	18,790,440
Comprehensive income									
Profit for the period		-	-	-	-	2,796,974	2,796,974	140,267	2,937,241
Remeasurements of net defined benefit liabilities	16	-	-	-	-	3,088	3,088	-	3,088
Exchange differences on translation of foreign operations		-	-	-	298,345	-	298,345	30,929	329,274
Gain on valuation of financial assets at fair value through other comprehensive income		-	-	-	1,258	-	1,258	-	1,258
Cash flow hedge		-	-	-	(8,696)	-	(8,696)	-	(8,696)
Others		-	-	-	5,004	(234)	4,770	-	4,770
Total comprehensive income for the period		-	-	-	295,911	2,799,828	3,095,739	171,196	3,266,935
Transactions with owners:									
Disposal of treasury shares	19	-	28,344	14,302	-	-	42,646	-	42,646
Dividends	30	-	-	-	-	(778,383)	(778,383)	(91,334)	(869,717)
Increase in paid-in capital of a subsidiary		-	(131)	-	-	-	(131)	264,479	264,348
Others		-	-	-	-	(2,005)	(2,005)	(1,588)	(3,593)
Total transactions with owners		-	28,213	14,302	-	(780,388)	(737,873)	171,557	(566,316)
Balance at June 30, 2021 (Unaudited)		391,406	2,720,698	(40,696)	130,835	17,194,744	20,396,987	1,094,072	21,491,059
Balance at January 1, 2022		391,406	2,696,385	(37,310)	551,354	18,091,949	21,693,784	1,516,204	23,209,988
Comprehensive income									
Profit for the period		-	-	-	-	1,347,514	1,347,514	140,023	1,487,537
Remeasurements of net defined benefit liabilities	16	-	-	-	-	(4,605)	(4,605)	(248)	(4,853)
Exchange differences on translation of foreign operations		-	-	-	298,215	-	298,215	148,242	446,457
Gain on valuation of financial assets at fair value through other comprehensive income		-	-	-	6,072	-	6,072	1,483	7,555
Cash flow hedge		-	-	-	(11,502)	-	(11,502)	(2,918)	(14,420)
Others		-	-	-	19,513	(307)	19,206	3,633	22,839
Total comprehensive income for the period		-	-	-	312,298	1,342,602	1,654,900	290,215	1,945,115
Transactions with owners:									
Dividends	30	-	(30,428)	-	-	(935,275)	(965,703)	(125,206)	(1,090,909)
Changes in ownership percentage of subsidiaries		-	8,711,480	-	-	-	8,711,480	3,297,254	12,008,734
Increase in paid-in capital of a subsidiary		-	-	-	-	-	-	474,944	474,944
Others		-	-	-	-	56	56	(145)	(89)
Total transactions with owners		-	8,681,052	-	-	(935,219)	7,745,833	3,646,847	11,392,680
Balance at June 30, 2022 (Unaudited)		391,406	11,377,437	(37,310)	863,652	18,499,332	31,094,517	5,453,266	36,547,783

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

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

<i>(in millions of Korean won)</i>	Notes	2022 (Unaudited)	2021 (Unaudited)
Cash flows from operating activities			
Cash generated from operations	32	646,571	3,391,707
Interest received		52,304	21,731
Interest paid		(139,295)	(120,625)
Dividends received		5,287	10,016
Income taxes paid		(995,899)	(648,544)
Net cash inflow from operating activities		<u>(431,032)</u>	<u>2,654,285</u>
Cash flows from investing activities			
Decrease in other receivables		107,380	633,664
Decrease in other non-current receivables		12,871	37,804
Proceeds from disposal of other financial assets		1,007	3,964
Proceeds from disposal of property, plant and equipment		12,697	61,816
Proceeds from disposal of intangible assets		18,261	125
Government grants received		96,665	165,065
Proceeds from disposal of assets held for sale		31,460	53,672
Proceeds from transfer of business		-	907,590
Increase in other receivables		(6,296,630)	(94,908)
Increase in other non-current receivables		(29,346)	(442,176)
Acquisition of investments in associates		(483,272)	-
Acquisition of other financial assets		(118,521)	(112,525)
Acquisition of property, plant and equipment		(3,858,774)	(2,545,482)
Acquisition of intangible assets		(86,899)	(66,764)
Cash outflows from transfer of business		(8,986)	-
Net cash outflow from investing activities		<u>(10,602,087)</u>	<u>(1,398,155)</u>
Cash flows from financing activities			
Proceeds from borrowings		3,044,454	2,221,429
Transactions with non-controlling interests		13,095,200	264,479
Repayments of borrowings and others		(2,811,233)	(2,039,000)
Dividends paid		(944,761)	(869,258)
Net cash inflow (outflow) from financing activities		<u>12,383,660</u>	<u>(422,350)</u>
Net increase in cash and cash equivalents		1,350,541	833,780
Cash and cash equivalents at the beginning of the period		3,760,834	3,274,250
Effects of exchange rate changes on cash and cash equivalents		167,279	80,511
Cash and cash equivalents included in disposal groups classified as held for sale		(101)	-
Cash and cash equivalents at the end of the period in the consolidated interim statement of financial position		<u>5,278,553</u>	<u>4,188,541</u>

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

LG Chem, Ltd. and Subsidiaries

Notes to the Consolidated Interim Financial Statements

June 30, 2022 and 2021 (Unaudited), and December 31, 2021

1. General Information

General information about LG Chem, Ltd. (the Parent Company) and its 61 subsidiaries (collectively referred to as “the Group”) is as follows:

1.1 The Parent Company

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

As at June 30, 2022, the Group has its manufacturing facilities in Yeosu, Daesan, Ochang, Cheongju, Ulsan, Naju, Iksan, Paju, Osong, Onsan, Gimcheon and overseas sites.

The Parent Company is authorized to issue 292 million shares of ordinary shares with par value of ₩5,000 per share. As at June 30, 2022, 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 material business manufactures and supplies various kinds of IT materials such as 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

June 30, 2022 and 2021 (Unaudited), and December 31, 2021

FarmHannong Co., Ltd. and its subsidiaries which were acquired by the Group in 2016 to 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

	Percentage of ownership held by the Group (%)		Business location	Closing month	Business activities
	June 30, 2022	December 31, 2021			
Consolidated subsidiaries					
LG Energy Solution, Ltd. ¹	82	100	Korea	December	Battery manufacturing and sales
Ningbo LG Yongxing Chemical Co., Ltd. ²	75	75	China	December	ABS/SBL manufacturing and sales
Ningbo Zhenhai LG Yongxing Trade Co., Ltd. ²	75	75	China	December	ABS sales
LG Chem America, Inc	100	100	USA	December	Sales and trading
LG Chemical India Pvt. Ltd. ^{3,5}	100	100	India	December	Synthetic resin manufacturing and sales
LG Polymers India Pvt. Ltd. ^{3,6}	100	100	India	December	PS manufacturing and sales
LG Chemical (Guangzhou) Engineering Plastics Co., Ltd.	100	100	China	December	EP manufacturing and sales
LG Chem (Taiwan), Ltd.	100	100	Taiwan	December	Polarizer manufacturing and sales
Tianjin LG Bohai Chemical Co., Ltd.	75	75	China	December	PVC, VCM, EDC manufacturing and sales
Tianjin LG BOTIAN Chemical Co., Ltd.	58	58	China	December	SBS manufacturing and sales
LG Chem (China) Investment Co., Ltd. ^{4,7}	100	100	China	December	China holding company
LG Chem (Tianjin) Engineering Plastics Co., Ltd.	100	100	China	December	EP manufacturing and sales
LG Chem Europe GmbH	100	100	Germany	December	Sales and trading
LG Chem Poland Sp. z o.o.	100	100	Poland	December	EP manufacturing and sales
LGC Petrochemical India Private Ltd.	100	100	India	December	Synthetic resin manufacturing and sales
HAENGBOKNURI CO., LTD.	100	100	Korea	December	Facility management and general cleaning
LG CHEM TK Kimya SANAYI VE TIC. Ltd. STI.	100	100	Turkey	December	Sales and trading
LG Chem Japan Co., Ltd.	100	100	Japan	December	Sales and trading
LG NanoH2O, LLC	100	100	USA	December	Water processing membrane sales
LG Chem (Chongqing) Engineering Plastics Co., Ltd.	100	100	China	December	EP manufacturing and sales
LG Chem(HUIZHOU) Petrochemical Co., Ltd.	70	70	China	December	ABS manufacturing and sales
LG Chem Life Sciences India Pvt. Ltd.	100	100	India	December	Pharmaceutical products sales
LG Jiansheng Chem Life Sciences (Beijing) Co., Ltd.	60	60	China	December	Pharmaceutical products sales
LG Chem Life Sciences (Thailand) Ltd.	100	100	Thailand	December	Pharmaceutical products sales
LG Chem Hai Phong Vietnam Co., Ltd.	100	100	Vietnam	December	Polarizer manufacturing and sales
LG Chem Mexico S.A. de C.V.	100	100	Mexico	December	Sales and trading
LG Chem Hai Phong engineering Plastics LLC.	100	100	Vietnam	December	EP manufacturing and sales
LG Chem (Guangzhou) Information & Electronics Materials Co., Ltd.	100	100	China	December	Polarizer manufacturing and sales
LEYOU NEW ENERGY MATERIALS(WUXI) Co., LTD.	51	51	China	December	Battery materials manufacturing and sales
LG Chem Fund I LLC ⁸	100	100	USA	December	Investments in venture companies
Uniseal, Inc.	100	100	USA	December	Adhesive manufacturing and sales
LG Chem Life Science Innovation Center, Inc.	100	100	USA	December	Pharmaceutical products research
LG Chem Asia Pte. Ltd.	100	100	Singapore	December	Asia BSC
LG Chem China Tech Center ⁴	100	100	China	December	Research on petrochemicals
Shanjin Optoelectronics (Taiwan) Co., Ltd.	100	100	Taiwan	December	Others

LG Chem, Ltd. and Subsidiaries

Notes to the Consolidated Interim Financial Statements

June 30, 2022 and 2021 (Unaudited), and December 31, 2021

LG PETRONAS CHEMICALS Malaysia Sdn.Bhd.	51	51	Malaysia	December	NBL manufacturing and sales
LG Chem Hangzhou Advanced Materials Co., Ltd.	70	70	China	December	Polarizer sheet manufacturing and sales
LG BCM	100	100	Korea	December	Battery materials manufacturing and sales
LG Chem Ohio Petrochemical, Inc.	100	100	USA	December	ABS manufacturing and sales
LG Chem VietNam Co.,Ltd. ⁹	100	-	Vietnam	December	Sales and trading
LG Chem Malaysia SDN.BHD.	100	-	Malaysia	December	Sales and trading
					Agricultural pesticide manufacturing and sales
FarmHannong Co., Ltd. ¹¹	100	100	Korea	December	
Farmhannong America, Inc. ¹¹	100	100	USA	December	Agricultural pesticide sales
FarmHannong(Thailand) Ltd. ¹¹	100	100	Thailand	December	Research and development on seeds
FARMHANNONG(MALAYSIA) SDN. BHD. ¹¹	100	100	Malaysia	December	Agricultural pesticide licensing
PT FARM HANNONG INDONESIA ¹¹	100	100	Indonesia	December	Agricultural pesticide licensing
FarmHannong do Brasil Limitada ¹¹	100	100	Brazil	December	Agricultural pesticide sales
LG Energy Solution (Nanjing) Co., Ltd. ¹	100	100	China	December	Battery manufacturing and sales
					Automotive battery research and manufacturing
LG Energy Solution Michigan Inc. ¹	100	100	USA	December	
LG Energy Solution Battery (Nanjing) Co., Ltd. ¹	100	100	China	December	Automotive battery manufacturing and sales
LG Energy Solution Wroclaw sp. z o.o. ¹	100	100	Poland	December	Automotive battery manufacturing and sales
LG Energy Solution Australia Pty Ltd ¹	100	100	Australia	December	ESS sales
LG Energy Solution Technology (Nanjing) Co., Ltd. ¹	100	100	China	December	Battery manufacturing and sales
Ultium Cells LLC ^{1,14}	50	50	USA	December	Automotive battery manufacturing and sales
LG Energy Solution Europe GmbH ¹	100	100	Germany	December	Sales and trading
LG Energy Solution (Taiwan), Ltd. ¹	100	100	Taiwan	December	Sales and trading
Aremnuri. Co. Ltd ¹	100	100	Korea	December	Facility management and general cleaning
LG Energy Solution Fund I LLC ¹	100	100	USA	December	Investments in venture companies
LG Energy Solution Vertech Inc. ¹	100	-	USA	December	ESS installation service
ES America, LLC ¹	100	-	USA	December	Battery manufacturing and sales
Baterias De Castilla, S.L. ¹	100	-	Spain	December	Special purpose company
Associates					Environment solution and construction of chemical plant
TECHWIN Co., Ltd.	20	20	Korea	December	
LG Chem BRASIL INTERMEDIACAO DE NEGOCIOS DO SETOR QUIMICO LTDA. ¹³	100	100	Brazil	December	Sales and trading
LG Chem Malaysia SDN.BHD.	-	100	Malaysia	December	Sales and trading
LG Chem Life Sciences Poland Ltd. ¹³	100	100	Poland	December	Pharmaceutical products sales
HUAJIN NEW ENERGY MATERIALS(QUZHOU)CO., LTD.	49	49	China	December	Battery materials manufacturing and sales
TL Chemical CO., Ltd	40	40	Korea	December	AN manufacturing and sales
VINFAST LITHIUM BATTERY PACK LLC. ¹	35	35	Vietnam	December	Battery manufacturing and sales
Jiangxi VL Battery., Ltd. ¹	34	34	China	December	Battery manufacturing and sales
Joint ventures ¹²					DOP production and sales
VINA Plasticizers Chemical Co.,Ltd.	50	50	Vietnam	December	Plant utility and distribution, research assistance service
SEETEC Co., Ltd.	50	50	Korea	December	
LG Toray Hungary Battery Separator Kft. ¹⁰	50	-	Hungary	December	Battery separator manufacturing and sales
PT.HLI Greenpower Co., Ltd. ¹	50	50	Indonesia	December	Automotive battery manufacturing and sales

¹ During the six-month period ended June 30, 2022, LG Energy Solution, Ltd. was listed on Korea Composite Stock Price Index (KOSPI) and its percentage of ownership to LG Energy Solution, Ltd. decreased since the Parent Company sold the shares of LG Energy Solution, Ltd. As at June 30, 2022, LG Energy Solution, Ltd. owns shares in subsidiaries such as LG Energy Solution (Nanjing) Co., Ltd. and other.

LG Chem, Ltd. and Subsidiaries

Notes to the Consolidated Interim Financial Statements

June 30, 2022 and 2021 (Unaudited), and December 31, 2021

- ² As at June 30, 2022, Ningbo LG Yongxing Chemical Co., Ltd. owns 100% of Ningbo Zhenhai LG Yongxing Trading Co., Ltd.'s shares.
- ³ As at June 30, 2022, LG Chemical India Pvt. Ltd. owns 100% of LG Polymers India Pvt. Ltd.'s shares.
- ⁴ As at June 30, 2022, LG Chem (China) Investment Co., Ltd. owns 100% of LG Chem China Tech Center's shares.
- ⁵ During the six-month period ended June 30, 2022, the Parent Company additionally acquired shares of LG Chemical India Pvt. Ltd. for ₩30,789 million.
- ⁶ During the six-month period ended June 30, 2022, the Parent Company additionally acquired shares of LG Polymers India Pvt. Ltd. for ₩17,820 million.
- ⁷ During the six-month period ended June 30, 2022, LG Chem (China) Investment Co., Ltd. decreased its capital with consideration of ₩240,480 million.
- ⁸ During the six-month period ended June 30, 2022, the Parent Company additionally acquired shares of LG CHEM FUND I LLC for ₩15,838 million and decreased its capital with consideration of ₩6,833 million.
- ⁹ LG Chem Vietnam Co., Ltd. was newly established during the six-month period ended June 30, 2022, and the Parent Company newly acquired 100% shares of LG Chem Vietnam Co., Ltd. for ₩359 million.
- ¹⁰ During the six-month period ended June 30, 2022, the Parent Company additionally acquired 50% shares of LG Toray Hungary Battery Separator Kft. for ₩522,424 million.
- ¹¹ As at June 30, 2022, FarmHannong Co., Ltd. owns 100% of Farmhannong America, Inc., FarmHannong(Thailand) Ltd., FARMHANNONG(MALAYSIA) SDN.BHD., and PT FARM HANNONG INDONESIA's shares.
- ¹² All joint arrangements over which the Group has joint control are classified as a joint venture since the joint arrangements are structured through a separate vehicle and the parties have rights to the net assets of the arrangement.
- ¹³ Classified as an investment in associate due to its small size.
- ¹⁴ The Group possesses control over Ultium Cells LLC as the Group can exercise the majority voting rights in its decision-making process and has the ability to use power to affect the returns of the investee through its involvement in the production and cost management and other activities in accordance with the shareholders' agreement.

1.4 Summarized Financial Information of Subsidiaries, Associates and Joint Ventures

Summarized financial information (before the adjustment such as elimination of intercompany transactions, etc.) of subsidiaries, associates and joint ventures is as follows:

<i>(in millions of Korean won)</i>	June 30, 2022			2022	
	Assets	Liabilities	Equity	Revenue	Profit (loss) for the period
Subsidiaries					
LG Energy Solution, Ltd. and its subsidiaries ¹	36,434,421	16,532,015	19,902,406	9,412,909	316,548
Ningbo LG Yongxing Chemical Co.,Ltd.	1,428,956	577,326	851,630	1,178,702	110,318
Ningbo Zhenhai LG Yongxing Trade Co.,Ltd.	6,643	131	6,512	14,358	246
LG Chem America, Inc.	574,617	528,411	46,206	656,705	56
LG Chemical India Pvt. Ltd.	63,873	48	63,825	-	(235)
LG Polymers India Pvt. Ltd.	57,019	33,034	23,985	2,103	(2,142)
LG Chemical (Guangzhou) Engineering Plastics Co.,Ltd.	110,743	37,790	72,953	119,124	960
LG Chem (Taiwan), Ltd.	164,246	85,802	78,444	26,294	4,997
Tianjin LG Bohai Chemical Co.,Ltd.	531,266	103,941	427,325	342,314	48,986
Tianjin LG BOTIAN Chemical Co.,Ltd.	60,008	30,497	29,511	79,230	1,862
LG Chem (China) Investment Co.,Ltd.	1,119,876	735,338	384,538	37,287	4,550
LG Chem (Tianjin) Engineering Plastics Co.,Ltd.	57,304	9,638	47,666	42,196	2,712
LG Chem Europe GmbH	590,047	500,118	89,929	572,127	19,943
LG Chem Poland Sp. z o.o.	259,995	172,963	87,032	142,816	(58)
LGC Petrochemical India Private Ltd.	5,435	1,005	4,430	3,233	384

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

HAENGBOKNURI CO., LTD.	4,209	1,225	2,984	4,346	(135)
LG CHEM TK Kimya SANAYI VE TIC. Ltd. STI.	14,918	16,239	(1,321)	51,118	(1,342)
LG Chem Japan Co.,Ltd.	5,174	1,365	3,809	2,747	420
LG NanoH2O, LLC	49,450	12,693	36,757	38,000	4,408
LG Chem (Chongqing) Engineering Plastics Co.,Ltd.	52,057	15,045	37,012	38,574	1,881
LG Chem(HUIZHOU) Petrochemical Co., Ltd.	628,469	161,655	466,814	525,501	32,198
LG Chem Life Sciences India Pvt. Ltd.	2,970	1,864	1,106	3,232	128
LG Jiansheng Life Sciences (Beijing) Co.,Ltd.	24,219	19,868	4,351	14,489	(689)
LG Chem Life Sciences (Thailand) Ltd.	30,611	14,125	16,486	21,301	1,168
LG Chem Hai Phong Vietnam Company Ltd.	17,303	5,244	12,059	9,411	1,226
LG Chem Mexico S.A. de C.V.	1,866	194	1,672	1,445	189
LG Chem Hai Phong Engineering Plastics Ltd.	31,524	14,509	17,015	17,915	168
LG Chem (Guangzhou) Information & Electronics Materials Co.,Ltd.	307,257	88,800	218,457	99,121	2,696
LEYOU NEW ENERGY MATERIALS(WUXI) Co.,LTD	1,216,084	636,739	579,345	793,516	126,015
LG Chem Fund I LLC	63,347	25	63,322	-	(1,305)
Uniseal,Inc.	46,077	10,354	35,723	42,715	1,137
LG Chem Life Science Innovation Center, Inc.	4,496	1,476	3,020	4,222	506
LG Chem Asia Pte. Ltd.	9,368	8,434	934	1,917	38
LG Chem China Tech Center	36,449	927	35,522	2,041	394
Shanjin Optoelectronics (Taiwan) Co., Ltd.	60,098	15	60,083	-	56
LG PETRONAS CHEMICALS Malaysia Sdn.Bhd.	166,694	92,857	73,837	-	(1,236)
LG Chem Hangzhou Advanced Materials Co., Ltd.	63,217	26,728	36,489	56,047	1,382
LG BCM	82,853	31,694	51,159	-	(1,654)
LG Chem Ohio Petrochemical, Inc.	28,743	4,132	24,611	-	13
LG Chem VietNam Co.,Ltd	819	405	414	419	35
LG Chem Malaysia SDN.BHD.	636	49	587	916	45
FarmHannong Co., Ltd. ¹	1,211,061	779,444	431,617	501,322	41,646
Associates					
TECHWIN Co., Ltd.	128,315	43,741	84,574	27,076	(6,326)
LG Chem BRASIL INTERMEDIACAO DE NEGOCIOS DO SETOR Q UIMICO LTDA.	1,093	138	955	1,136	202
LG Chem Malaysia SDN.BHD.					
LG Life Sciences Poland Ltd.	210	66	144	83	28
HUAJIN NEW ENERGY MATERIALS(QUZHOU)CO., LTD.					
	400,442	198,477	201,965	211,657	7,541
TL Chemical CO., Ltd	121,971	294	121,677	-	539
VINFAST LITHIUM BATTERY PACK LLC.	17,373	6,987	10,386	6,187	(938)
Jiangxi VL Battery.,Ltd	97,551	45,438	52,113	847	(9,309)
Joint ventures					
Vina Plasticizer Chemical Co.,Ltd.	88,554	57,091	31,463	99,578	3,882
SEETEC Co., Ltd.	324,142	52,042	272,100	331,628	6,061
LG Toray Hungary Battery Separator Kft. ²	759,594	3,239	756,355	-	-
PT.HLI Green Power	459,164	1,281	457,883	-	(2,389)

¹ The information is represented on basis of the consolidated financial information.

² The information of revenue and profit or loss for the period represent the financial performance after the acquisition of shares.

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

<i>(in millions of Korean won)</i>	December 31, 2021			2021	
	Assets	Liabilities	Equity	Revenue	Profit (loss) for the period
Subsidiaries					
LG Energy Solution, Ltd. ¹	23,764,139	15,021,765	8,742,374	9,385,132	1,063,893
Ningbo LG Yongxing Chemical Co.,Ltd.	1,394,894	258,879	1,136,015	1,253,467	280,721
Ningbo Zhenhai LG Yongxing Trade Co.,Ltd.	6,787	735	6,052	13,356	251
LG Chem America, Inc.	408,469	366,034	42,435	437,948	16,272
LG Chemical India Pvt. Ltd.	32,799	35	32,764	-	5
LG Polymers India Pvt. Ltd.	44,118	36,206	7,912	2,205	(10,939)
LG Chemical (Guangzhou) Engineering Plastics Co.,Ltd.	119,231	42,590	76,641	136,944	6,419
LG Chem (Taiwan), Ltd.	109,772	35,905	73,867	20,578	1,312
LG Chem Display Materials (Beijing) Co.,Ltd.	-	-	-	-	276
Tianjin LG Bohai Chemical Co.,Ltd.	530,055	127,935	402,120	327,098	65,994
Tianjin LG BOTIAN Chemical Co.,Ltd.	46,289	19,597	26,692	65,235	2,264
LG Chem (China) Investment Co.,Ltd.	1,371,751	679,206	692,545	27,840	3,454
LG Chem (Tianjin) Engineering Plastics Co.,Ltd.	56,898	12,011	44,887	39,100	2,075
LG Chem Europe GmbH	358,459	288,909	69,550	281,594	10,629
LG Chem Poland Sp. z o.o.	222,263	133,527	88,736	81,227	11,838
LGC Petrochemical India Private Ltd.	4,918	988	3,930	2,050	234
HAENGBOKNURI CO., LTD.	4,503	1,385	3,118	4,871	177
LG CHEM TK Kimya SANAYI VE TIC. Ltd. STI.	10,416	10,685	(269)	19,111	206
LG Chem Japan Co.,Ltd.	5,109	1,391	3,718	3,018	255
LG NanoH2O, LLC	44,449	14,978	29,471	21,637	2,765
LG Chem (Chongqing) Engineering Plastics Co.,Ltd.	49,879	15,955	33,924	40,856	1,981
LG Chem(HUIZHOU) Petrochemical Co., Ltd.	574,744	155,233	419,511	508,720	104,498
LG Chem Life Sciences India Pvt. Ltd.	3,191	2,242	949	2,679	234
LG Jiansheng Life Sciences (Beijing) Co.,Ltd.	11,742	6,854	4,888	1,345	26
LG Chem Life Sciences (Thailand) Ltd.	25,708	10,875	14,833	17,165	1,186
LG Chem Hai Phong Vietnam Company Ltd.	14,571	4,458	10,113	16,405	771
LG Chem Mexico S.A. de C.V.	1,619	267	1,352	925	133
LG Chem Hai Phong Engineering Plastics Ltd.	31,476	15,698	15,778	16,584	1,220
LG Chem (Guangzhou) Information & Electronics Materials Co.,Ltd.	317,592	109,131	208,461	76,780	(8,621)
LEYOU NEW ENERGY MATERIALS(WUXI) Co.,LTD	608,961	172,607	436,354	343,087	37,875
LG Chem Fund I LLC	45,922	9	45,913	0	(1,330)
Ugimag Korea Co., Ltd.	-	-	-	10,301	(3,534)
Uniseal,Inc.	38,635	6,932	31,703	31,396	(188)
LG Chem Life Science Innovation Center, Inc.	3,446	1,153	2,293	2,568	213
LG Chem Asia Pte. Ltd.	2,927	2,079	848	421	(44)
LG Chem China Tech Center	34,327	390	33,937	105	54
Shanjin Optoelectronics (Taiwan) Co., Ltd.	59,149	5	59,144	-	(15)
LG PETRONAS CHEMICALS Malaysia Sdn.Bhd.	123,502	50,961	72,541	-	(10)
LG Chem Hangzhou Advanced Materials Co., Ltd.	112,892	78,981	33,911	-	-
LG BCM	54,412	1,599	52,813	-	-
LG Chem Ohio Petrochemical, Inc.	24,132	1,578	22,554	-	-
FarmHannong Co., Ltd. ¹	1,047,277	657,687	389,590	420,885	31,103
Associates					
TECHWIN Co., Ltd.	142,066	51,893	90,173	26,704	(1,088)
LG Chem BRASIL INTERMEDIACAO DE NEGOCIOS DO SETOR Q UIMICO LTDA.	729	91	638	764	96
LG Chem Malaysia SDN.BHD.	525	2	523	338	41

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

FJ Composite Material Co., Ltd.	-	-	-	941	233
WUXI CL New Energy Technology Ltd.	-	-	-	-	(86)
LG Life Sciences Poland Ltd.	188	70	118	85	4
Combustion Synthesis Co., Ltd.	-	-	-	75	(218)
HUAJIN NEW ENERGY					
MATERIALS(QUZHOU)CO., LTD.	422,366	229,745	192,621	21,700	(3,184)
TL Chemical CO., Ltd	121,551	369	121,182	-	-
VINFAST LITHIUM BATTERY PACK LLC.	17,496	6,295	11,201	1,127	(409)
Jiangxi VL Battery.,Ltd	76,495	16,799	59,696	-	(2,744)
Joint ventures					
VINA Plasticizer Chemical Co., Ltd.	64,237	39,721	24,516	83,955	9,755
SEETEC Co., Ltd.	328,396	52,384	276,012	263,459	8,596
HL Greenpower Co., Ltd.	-	-	-	537,684	1,374
PT.HLI Green Power	404,131	1,156	402,975	-	-

¹ The information is represented on basis of the consolidated financial information.

1.5 Information of Non-Controlling Interests that are Material to the Group

(a) LG Energy Solution and its subsidiaries

- Percentage of ownership held by non-controlling interests and accumulated non-controlling interests

(in millions of Korean won)

June 30, 2022

Percentage of ownership held by non-controlling interests	18.2%
Accumulated non-controlling interests	4,717,290

- Profit and dividends attributable to non-controlling interests for the six-month period ended June 30, 2022, are as follows:

(in millions of Korean won)

2022

Profit allocated to non-controlling interests	52,994
Dividends paid to non-controlling interests	-

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

- Summarized consolidated statements of financial positions of subsidiaries with material non-controlling interests, are as follows (before elimination of intercompany transaction):

<i>(in millions of Korean won)</i>	June 30, 2022
Current assets	19,614,021
Non-current assets	16,820,400
Total assets	<u>36,434,421</u>
Current liabilities	11,040,208
Non-current liabilities	5,491,807
Total liabilities	<u>16,532,015</u>
Total equity	19,902,406

- Summarized consolidated statements of comprehensive income of subsidiaries with material non-controlling interests for the six-month period ended June 30, 2022, are as follows (before elimination of intercompany transaction):

<i>(in millions of Korean won)</i>	2022
Revenue	9,412,909
Profit for the period	316,548
Total comprehensive income	625,899

- Summarized consolidated statements of cash flows of subsidiaries with material non-controlling interests for the six-month period ended June 30, 2022, are as follows (before elimination of intercompany transaction):

<i>(in millions of Korean won)</i>	2022
Cash flows from operating activities	(550,964)
Cash flows from investing activities	(9,045,454)
Cash flows from financing activities	10,191,577
Net increase in cash and cash equivalents	<u>595,159</u>
Cash and cash equivalents at beginning of the period	1,282,880
Effects of exchange rate changes on cash and cash equivalents	105,442
Cash and cash equivalents at end of the period	<u>1,983,481</u>

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

1.6 Changes in Scope for Consolidation

Subsidiaries newly included in the consolidation for the six-month period ended June 30, 2022, are as follows:

Subsidiary	Reason
LG Energy Solution Vertech Inc.	Newly acquired
LG Chem VietNam Co.,Ltd	Newly established
ES America, LLC	Newly established
Baterias De Castilla, S.L.	Newly acquired

2. Summary of Significant Accounting Policies

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

2.1 Basis of Preparation

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

The Group's consolidated interim financial statements for the six-month period ended June 30, 2022, have been prepared in accordance with Korean IFRS 1034 *Interim Financial Reporting*. These consolidated interim financial statements have been prepared in accordance with Korean IFRS which is effective or early adopted as at June 30, 2022.

(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, 2022.

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

The application of the 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, 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 does not have a significant impact on the consolidated interim 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 to be recognized in a business combination 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 clarify that contingent assets should not be recognized at the acquisition date. The amendments should be applied for annual periods beginning on or

LG Chem, Ltd. and Subsidiaries

Notes to the Consolidated Interim Financial Statements

June 30, 2022 and 2021 (Unaudited), and December 31, 2021

after January 1, 2022, and earlier application is permitted. The amendment does not have a significant impact on the consolidated interim 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 amendment does not have a significant impact on the consolidated interim 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 amendment does not have a significant impact on the consolidated interim 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 amendment does not have a significant impact on the consolidated interim 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 1041 *Agriculture* – Measuring fair value

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

The following new and amended accounting standards and interpretations that have been published that are not mandatory for June 30, 2022 reporting periods and have not been early adopted by the Group.

- 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 interim financial statements.

LG Chem, Ltd. and Subsidiaries

Notes to the Consolidated Interim Financial Statements

June 30, 2022 and 2021 (Unaudited), and December 31, 2021

- Korean IFRS 1001 Presentation of Financial Statements - Disclosure of Accounting Policies

The amendments to Korean IFRS 1001 define and require entities to disclose their material accounting policies. 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 interim financial statements.

- Korean IFRS 1008 Accounting policies, changes in accounting estimates and errors - Definition of Accounting Estimates

The amendments define accounting estimates and clarify how to distinguish them from changes in accounting policies. The amendments should be applied for annual periods beginning on or after January 1, 2023, and earlier application is permitted. The Group does not expect that these amendments have a significant impact on the consolidated interim financial statements.

- Korean IFRS 1012 Income Taxes - Deferred Tax related to Assets and Liabilities arising from a Single Transaction

The amendments include an additional condition to the exemption to initial recognition of an asset or liability that a transaction does not give rise to equal taxable and deductible temporary differences at the time of the transaction. The amendments should be applied for annual periods beginning on or after January 1, 2023, and earlier application is permitted. The Group does not expect that these amendments have a significant impact on the consolidated interim financial statements.

- New Standard: Korean IFRS 1117 Insurance Contract

Korean IFRS 1117 *Insurance Contracts* replaces Korean IFRS 1104 *Insurance Contracts*. This Standard estimates future cash flows of an insurance contract and measures insurance liabilities using discount rates applied with assumptions and risks at the measurement date. The entity recognizes insurance revenue on an accrual basis including services (insurance coverage) provided to the policyholder by each annual period. In addition, investment components (Refunds due to termination/maturity) repaid to a policyholder even if an insured event does not occur, are excluded from insurance revenue, and insurance financial income or expense and the investment income or expense are presented separately to enable users of the information to understand the sources of income or expenses. This Standard should be applied for annual periods beginning on or after January 1, 2023, and earlier application is permitted for entities that applied Korean IFRS 1109 *Financial Instruments*. The Group does not expect that these amendments have a significant impact on the consolidated interim 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, 2021, 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.

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

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.

As at June 30, 2022 and December 31, 2021, the Group's monetary assets and liabilities denominated in currencies other than its functional currency, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2022		December 31, 2021	
	Assets	Liabilities	Assets	Liabilities
USD	5,436,654	7,667,006	5,708,219	6,488,454
EUR	425,181	5,326,905	441,123	4,937,370
JPY	9,566	124,897	18,315	96,238
CNY and others	589,626	9,072	523,907	4,131

As at June 30, 2022 and December 31, 2021, if the Group's functional currency had weakened / strengthened by 10% against the US dollar and Euro with all other variables held constant, profit before income tax would have been affected as follows:

<i>(in millions of Korean won)</i>	June 30, 2022		December 31, 2021	
	10% Increase	10% Decrease	10% Increase	10% Decrease
USD	(166,948)	166,948	(42,976)	42,976
EUR	(447,775)	447,775	(426,735)	426,735

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.

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

As at June 30, 2022 and December 31, 2021, the Group entered into foreign currency forward and currency swap contracts to manage risk from changes in exchange rates and the details are as follows:

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

		June 30, 2022					
		Contract amount	Contract exchange rate	Contract inception date	Contract maturity	Book amount	
						Assets	Liabilities
Currency Forward	Citi	USD 105	1,234.60	2022.04.22	2023.02.01	-	5,128
	Industrial and Commercial Bank of China	USD 158	1,218.70	2022.04.22	2024.02.01	-	9,228
	Shinhan Bank	USD 500	1,135.60	2020.10.14	2024.10.15	65,146	-
	KB Kookmin Bank	USD 500	1,102.83	2020.11.24	2029.04.16	56,967	-
	CACIB	EUR 100	4.6055 ¹	2021.08.05	2022.08.04	3,592	-
	KDB Bank	EUR 165	4.6036 ¹	2021.08.05	2022.08.04	4,732	-
	ING	EUR 100	4.7120 ¹	2021.10.22	2022.10.21	2,330	-
	ING	EUR 100	4.7800 ¹	2022.01.05	2023.01.05	2,589	-
Currency swap	SMBC	USD 200	1,118.00	2021.05.28	2024.05.28	30,578	-
	KDB Bank	USD 130	1,135.60	2021.06.24	2025.06.24	28,991	-
	KDB Bank	USD 35	1,135.60	2021.06.24	2026.06.24	8,302	-
	Shinhan Bank	USD 300	1,131.80	2021.07.07	2026.07.07	37,196	-
	Woori Bank	USD 100	1,131.80	2021.07.07	2026.07.07	12,690	-
	Industrial and Commercial Bank of China	USD 100	1,131.80	2021.07.07	2026.07.07	12,749	-
	Shinhan Bank	USD 100	1,131.80	2021.07.07	2031.07.07	9,812	-
	Woori Bank	USD 200	1,131.80	2021.07.07	2031.07.07	20,367	-
	KDB Bank	USD 200	1,131.80	2021.07.07	2031.07.07	20,466	-
	KDB Bank	USD 250	1,289.70	2022.06.15	2025.06.15	-	3,134
	Shinhan Bank	USD 110	1,289.70	2022.06.15	2027.06.15	-	2,723

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

		December 31, 2021					
		Contract amount	Contract exchange rate	Contract inception date	Contract maturity	Book amount	
						Assets	Liabilities
Currency Forward	KDB Bank	USD 35	1,135.60	2021.06.24	2022.06.24	1,789	-
	Shinhan Bank	USD 500	1,135.60	2020.10.14	2024.10.15	24,687	-
	KB Kookmin Bank	USD 500	1,102.83	2020.11.24	2029.04.16	30,232	-
	Citi	EUR 150	4.5900 ¹	2021.05.12	2022.04.29	2,881	-
	SC	EUR 250	4.5861 ¹	2021.05.14	2022.04.29	4,703	-
	CACIB	EUR 100	4.6055 ¹	2021.08.05	2022.08.04	2,964	-
	KDB Bank	EUR 165	4.6036 ¹	2021.08.05	2022.08.04	4,925	-

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

Currency swap	ING	EUR 100	4,7120 ¹	2021.10.22	2022.10.21	1,420	-
	SMBC	USD 200	1,118.00	2021.05.28	2024.05.28	13,556	-
	KDB Bank	USD 130	1,135.60	2021.06.24	2025.06.24	8,817	-
	KDB Bank	USD 35	1,135.60	2021.06.24	2026.06.24	2,319	-
	Shinhan Bank	USD 300	1,131.80	2021.07.07	2026.07.07	12,196	-
	Woori Bank	USD 100	1,131.80	2021.07.07	2026.07.07	4,380	-
	Industrial and Commercial Bank of China	USD 100	1,131.80	2021.07.07	2026.07.07	4,653	-
	Shinhan Bank	USD 100	1,131.80	2021.07.07	2031.07.07	4,804	-
	Woori Bank	USD 200	1,131.80	2021.07.07	2031.07.07	10,032	-
	KDB Bank	USD 200	1,131.80	2021.07.07	2031.07.07	10,429	-

¹ Cross exchange rate between PLN and EUR.

2) Price risk

The Group is exposed to equity securities price risk arises from investments held by the Group and classified in the consolidated interim statement of financial position as non-current financial assets. The Group's equity investments are publicly traded and are related to the NASDAQ (National Association of Securities Dealers Automated Quotations), ASX (Australian Stock Exchange), NYSE (New York Stock Exchange) and SZSE (Shenzhen Stock Exchange) index.

The table below summarizes the impact of increases/decreases of the listed stock price index on the Group's equity before tax effects as at June 30, 2022 and December 31, 2021. 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>	June 30, 2022		December 31, 2021	
	10% Increase	10% Decrease	10% Increase	10% Decrease
NASDAQ	2,441	(2,441)	909	(909)
ASX	484	(484)	676	(676)
NYSE	3,204	(3,204)	-	-
SZSE	20,410	(20,410)	-	-
Total	26,538	(26,538)	1,585	(1,585)

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.

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

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 rate on the Group's equity and post-tax profit for the six-month periods ended June 30, 2022 and 2021. 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	
	2022	2021	2022	2021
Increase	(42,808)	(37,374)	(42,808)	(37,374)
Decrease	42,808	37,374	42,808	37,374

The borrowings exposed to the above interest rate risk are variable interest rate borrowings from KDB Bank and others, and the Group has entered into a currency interest rate swap contract amounting to USD 525 million (equivalent to ₩678,773 million) to hedge interest rate risk of variable interest rate borrowings. As such, the borrowings are not exposed to interest rate risk.

(2) Credit risk

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

1) Trade receivables

The Group applies the simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for trade receivables. To measure the expected credit losses, trade receivables have been grouped based on shared credit risk characteristics and the days past due. The loss allowance provision as at June 30, 2022 is as follows. Expected credit losses include forward-looking information.

<i>(in millions of Korean won)</i>	Receivables not past due¹	Receivables past due but not impaired¹	Impaired receivables²	Total
June 30, 2022				
<i>(trade receivables)</i>				
Gross carrying amount	7,294,790	300,541	3,994	7,599,325
Expected loss rate	0.0%	0.1%	66.5%	0.1%
Loss allowance provision	3,020	581	2,658	6,259
December 31, 2021				
<i>(trade receivables)</i>				
Gross carrying amount	6,118,779	338,693	1,656	6,459,128
Expected loss rate	0.1%	0.2%	81.5%	0.1%
Loss allowance provision	3,152	592	1,350	5,094

¹ See Note 7.(3) for aging analysis.

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

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

Movements in the loss allowance provision for trade receivables for the six-month period ended June 30, 2022 and for the year ended December 31, 2021, are as follows:

<i>(in millions of Korean won)</i>	Trade receivables	
	June 30, 2022	December 31, 2021
Beginning balance	5,094	4,391
Increase in reversal of loss allowance recognized in profit or loss	(291)	(127)
Receivables written off as uncollectible	(8)	(447)
Exchange differences	1,464	1,277
Ending balance	6,259	5,094

As at June 30, 2022, the carrying amount of trade receivables representing the maximum exposure to credit risk amounts to ₩7,593,066 million (December 31, 2021: ₩6,454,034 million).

2) Other financial assets at amortized cost

Movements in loss allowance provision for other financial assets at amortized cost for the six-month period ended June 30, 2022 and for the year ended December 31, 2021, are as follows:

<i>(in millions of Korean won)</i>	Other receivables	
	June 30, 2022	December 31, 2021
Beginning balance	2,165	2,165
Receivables written off as uncollectible	(1,150)	-
Ending balance	1,015	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

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

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.

<i>(in millions of Korean won)</i>	June 30, 2022			
	Less than 1 year	Between 1-2 years	Between 2-5 years	Over 5 years
Non-derivative financial instruments				
Borrowings (excluding lease liabilities)	4,603,889	2,269,166	5,460,240	4,117,499
Lease liabilities	73,672	62,651	96,146	152,910
Trade and other payables	8,845,753	29,116	1,774	97
Other current liabilities (dividends payable)	151,546	-	-	-
	<u>13,674,860</u>	<u>2,360,933</u>	<u>5,558,160</u>	<u>4,270,506</u>
Derivative instruments				
Gross settlement currency forwards and swaps				
(Inflows)	(816,193)	(496,762)	(2,049,852)	(1,323,921)
Outflows	806,283	470,731	1,869,637	1,174,727
	<u>(9,910)</u>	<u>(26,031)</u>	<u>(180,215)</u>	<u>(149,194)</u>
	<u>13,664,950</u>	<u>2,334,902</u>	<u>5,377,945</u>	<u>4,121,312</u>

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

<i>(in millions of Korean won)</i>	December 31, 2021			
	Less than 1 year	Between 1-2 years	Between 2-5 years	Over 5 years
Non-derivative financial instruments				
Borrowings (excluding lease liabilities)	3,548,442	2,403,648	5,984,843	3,551,215
Lease liabilities	82,568	54,416	87,498	156,494
Trade and other payables ¹	7,733,917	13,757	1,694	171
	<u>11,364,927</u>	<u>2,471,821</u>	<u>6,074,035</u>	<u>3,707,880</u>
Derivative instruments				
Gross settlement currency forwards and swaps				
(Inflows)	(1,096,082)	(27,579)	(1,690,054)	(1,255,889)
Outflows	1,096,734	26,825	1,613,263	1,181,161
	<u>652</u>	<u>(754)</u>	<u>(76,791)</u>	<u>(74,728)</u>
	<u>11,365,579</u>	<u>2,471,067</u>	<u>5,997,244</u>	<u>3,633,152</u>

¹ Included ₩301,946 million of financial liabilities due to a financial institution relating to reverse factoring arrangement as at December 31, 2021. The Group has entered into reverse factoring arrangement (interest rate CD 91 days + 0.93~1.20%) with a financial institution whereby suppliers receive payments from the financial institution on the due date of each invoice and the Group pays to the financial institution at the end of extended credit period as agreed in the reverse factoring arrangement. As at June 30, 2022, there is no utilized amount in the reverse factoring arrangement.

As at June 30, 2022, the Group has entered into swap contracts for which cash flow hedge accounting is applied, to avoid market price fluctuation of raw materials.

<i>(in millions of Korean won)</i>	June 30, 2022					
	Purpose of the contracts	Hedged items	Financial institution	Maturity	Fair value	
					Assets	Liabilities
Merchandise (raw materials) swap ¹	Cash flow hedge	Non-ferrous metal	Citi and others	~2024. 12	10,239	20,742

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).

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

3.2 Capital Risk Management

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

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

The gearing ratio and debt-to-equity ratio as at June 30, 2022 and December 31, 2021, were as follows:

<i>(in millions of Korean won, except for ratios)</i>	June 30, 2022	December 31, 2021
Total borrowings (Note 14) (A)	15,739,825	14,765,734
Less: cash and cash equivalents (B)	<u>(5,278,553)</u>	<u>(3,760,834)</u>
Net debt (C=A+B)	<u>10,461,272</u>	<u>11,004,900</u>
Total liabilities (D)	29,798,750	27,925,314
Total equity (E)	<u>36,547,783</u>	<u>23,209,988</u>
Total capital (F=C+E)	<u>47,009,055</u>	<u>34,214,888</u>
Gearing ratio (C/F)	22.30%	32.2%
Debt-to-equity ratio (D/E)	81.50%	120.3%

3.3 Fair Value

(1) Carrying amount and fair value of financial instruments by category as at June 30, 2022 and December 31, 2021, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2022		December 31, 2021	
	Carrying amount	Fair value	Carrying amount	Fair value
Financial assets (current)				
Cash and cash equivalents	5,278,553	1	3,760,834	1
Deposits held by financial institutions	6,235,300	1	64,583	1
Trade receivables	7,514,583	1	6,386,979	1
Other receivables (excluding deposits held by financial institutions)	1,343,195	1	983,966	1
Current derivative financial assets (currency forward)	13,243	13,243	18,683	18,683
Current derivative financial assets (excluding currency forward)	7,297	7,297	4,606	4,606
Financial assets (non-current)				
Deposits held by financial institutions	277,215	1	267,116	1
Trade receivables	78,483	1	67,055	1
Other receivables (excluding deposits held by financial institutions)	340,299	1	446,050	1
Other non-current financial assets (carried at fair value)				
Marketable financial assets	103,978	103,978	21,630	21,630

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

<i>(in millions of Korean won)</i>	June 30, 2022		December 31, 2021	
	Carrying amount	Fair value	Carrying amount	Fair value
Non-marketable financial assets ²	383,595	383,595	340,823	340,823
Non-current derivative financial assets (currency forward)	122,113	122,113	54,918	54,918
Non-current derivative financial assets (excluding currency forward)	201,716	201,716	88,651	88,651
Financial liabilities (current)				
Trade and other payables	8,845,753	1	7,733,916	1
Current borrowings (excluding lease liabilities)	4,356,457	1	3,405,215	1
Current lease liabilities	70,575	3	71,865	3
Other current liabilities (dividend payable)	151,546	1	-	-
Current derivative financial liabilities (currency forward)	5,129	5,129	-	-
Current derivative financial liabilities (excluding currency forward)	12,937	12,937	-	-
Financial liabilities (non-current)				
Non-current borrowings (excluding lease liabilities) ⁴	11,048,290	10,439,117	11,041,274	10,923,942
Non-current lease liabilities	264,503	3	247,380	3
Other non-current payables	30,987	1	15,623	1
Non-current derivative financial liabilities (currency forward)	9,228	9,228	-	-
Non-current derivative financial liabilities (excluding currency forward)	52,449	52,449	126	126

¹ These financial assets and liabilities are not included in the disclosure above as their carrying amount is a reasonable approximation of the fair value.

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

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

⁴ Fair values of non-current borrowings are based on cash outflows discounted by using Korean won currency note yield in the same credit grade with the Parent Company (AA+), and the applied discount rates as at June 30, 2022 and December 31, 2021, are as follows:

<i>(in percentage)</i>	June 30, 2022	December 31, 2021
Discount rate	2.82% ~ 4.36%	1.77% ~ 2.99%

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

(2) Fair value hierarchy

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

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

Fair value hierarchy of the financial instruments that are either measured at fair value or their fair values are disclosed for as at June 30, 2022 and December 31, 2021, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2022			
	Level 1	Level 2	Level 3	Total
Financial assets/liabilities measured at fair value				
Other non-current financial assets (marketable financial assets)	103,978	-	-	103,978
Other non-current financial assets (non-marketable financial assets) ¹	-	-	383,595	383,595
Current derivative financial assets (currency forward)	-	13,243	-	13,243
Current derivative financial assets (excluding currency forward)	-	7,297	-	7,297
Non-current derivative financial assets (currency forward)	-	122,113	-	122,113
Non-current derivative financial assets (excluding currency forward)	-	184,092	17,624	201,716
Current derivative financial liabilities (currency forward)	-	5,129	-	5,129
Current derivative financial liabilities (excluding currency forward)	-	12,937	-	12,937
Non-current derivative financial liabilities (currency forward)	-	9,228	-	9,228
Non-current derivative financial liabilities (excluding currency forward)	-	52,449	-	52,449
Financial assets/liabilities not measured at fair value				
Non-current borrowings (excluding lease liabilities)	-	10,439,117	-	10,439,117

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

<i>(in millions of Korean won)</i>	December 31, 2021			
	Level 1	Level 2	Level 3	Total
Financial assets/liabilities measured at fair value				
Other non-current financial assets (marketable financial assets)	21,630	-	-	21,630
Other non-current financial assets (non-marketable financial assets) ¹	-	-	340,823	340,823
Current derivative financial assets (currency forward)	-	18,683	-	18,683
Current derivative financial assets (excluding currency forward)	-	4,606	-	4,606
Non-current derivative financial assets (currency forward)	-	54,918	-	54,918
Non-current derivative financial assets (excluding currency forward)	-	72,491	16,160	88,651
Non-current derivative financial liabilities (excluding currency forward)	-	126	-	126
Financial assets/liabilities not measured at fair value				
Non-current borrowings (excluding lease liabilities)	-	10,923,942	-	10,923,942

¹ Acquisition costs of a part of these financial assets approximate their fair values. For fair values measured by using other methods, see (3) Valuation technique and the inputs.

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

(3) Valuation technique and the inputs

Valuation techniques and inputs used in the fair value measurements categorized within Level 3 of the fair value hierarchy as at June 30, 2022 and December 31, 2021, are as follows:

(in millions of Korean won)

		June 30, 2022			
	Fair value	Level	Valuation Technique	Inputs	Coverage of Level 3 inputs
Equity instrument					
Non-listed shares	105,919	3	Discounted cash flows model	Long-term growth rate through subsequent cash flows Weighted average cost of equity	1.00% 10.98% ~ 12.2%
Derivative instruments					
Option	17,624	3	Binominal option pricing model	Volatility	2.36 ~ 2.4%

(in millions of Korean won)

		December 31, 2021			
	Fair value	Level	Valuation Technique	Inputs	Coverage of Level 3 inputs
Equity instrument					
Non-listed shares	97,121	3	Discounted cash flows model	Long-term growth rate through subsequent cash flows Weighted average cost of equity	1.00% 10.98% ~ 12.2%
Derivative instruments					
Option	16,160	3	Binominal option pricing model	Volatility	2.36 ~ 2.4%

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, 2021, 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 2022.

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-

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

19, and the ultimate impact of COVID-19 on the Group's business, financial position, and performance is currently unpredictable.

5. Financial Instruments by Category

Categorizations of financial instruments as at June 30, 2022 and December 31, 2021, are as follows:

(in millions of Korean won)

Financial assets	June 30, 2022				Total
	Financial assets at amortized cost	Financial assets at fair value through profit or loss	Financial assets at fair value through other comprehensive income	Other financial assets ¹	
Cash and cash equivalents	5,278,553	-	-	-	5,278,553
Trade receivables	6,908,956	-	605,627	-	7,514,583
Non-current trade receivables	78,483	-	-	-	78,483
Other receivables	7,577,745	-	750	-	7,578,495
Other non-current receivables	617,514	-	-	-	617,514
Other current financial assets	-	-	-	20,540	20,540
Other non-current financial assets	-	165,609	321,964	323,829	811,402
Total	20,461,251	165,609	928,341	344,369	21,899,570

(in thousands of Korean won)

Financial liabilities	June 30, 2022		Total
	Financial liabilities at amortized cost	Other financial liabilities ²	
Trade payables	5,329,558	-	5,329,558
Other payables	3,516,195	-	3,516,195
Borrowings (current)	4,356,457	70,575	4,427,032
Other current liabilities (dividend payable)	151,546	-	151,546
Other current financial liabilities	-	18,066	18,066
Other non-current financial liabilities	-	61,677	61,677
Other non-current payables	30,987	-	30,987
Borrowings (non-current)	11,048,290	264,503	11,312,793
Total	24,433,033	414,821	24,847,854

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

(in millions of Korean won)

	December 31, 2021				Total
	Financial assets at amortized cost	Financial assets at fair value through profit or loss	Financial assets at fair value through other comprehensive income	Other financial assets ¹	
Financial assets					
Cash and cash equivalents	3,760,834	-	-	-	3,760,834
Trade receivables	5,898,369	-	488,610	-	6,386,979
Non-current trade receivables	67,055	-	-	-	67,055
Other receivables	1,047,224	-	1,325	-	1,048,549
Other non-current receivables	713,166	-	-	-	713,166
Other current financial assets	-	-	-	23,289	23,289
Other non-current financial assets	-	160,145	202,308	143,569	506,022
Total	11,486,648	160,145	692,243	166,858	12,505,894

(in thousands of Korean won)

	December 31, 2021		Total
	Financial liabilities at amortized cost	Other financial liabilities ²	
Financial liabilities			
Trade payables	3,742,132	-	3,742,132
Other payables	3,991,784	-	3,991,784
Borrowings (current)	3,405,215	71,865	3,477,080
Other non-current financial liabilities	-	126	126
Other non-current payables	15,623	-	15,623
Borrowings (non-current)	11,041,274	247,380	11,288,654
Total	22,196,028	319,371	22,515,399

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.

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

Net gains or losses on each category of financial instruments for the three-month and six-month periods ended June 30, 2022 and 2021, are as follows:

<i>(in millions of Korean won)</i>	2022		2021	
	Three months	Six months	Three months	Six months
Dividend income				
Financial assets at fair value through other comprehensive income	326	326	710	1,088
Interest income				
Financial assets at amortized cost	66,761	124,937	11,641	22,488
Interest expense				
Financial liabilities at amortized cost	(63,226)	(127,322)	(60,624)	(116,180)
Other financial liabilities	(2,447)	(4,675)	(1,638)	(3,731)
Financial assets at amortized cost ¹	(2,308)	(2,688)	-	-
Financial assets at fair value through other comprehensive income ¹	-	-	(771)	(833)
Gain (loss) on valuation				
Financial assets at fair value through profit or loss	263	344	808	11,779
Financial assets at fair value through other comprehensive income	(297)	(609)	(562)	1,735
Derivative instruments	36,705	138,590	9,335	19,728
Exchange differences				
Financial assets at amortized cost	517,064	657,334	(86,864)	157,468
Financial liabilities at amortized cost	(579,469)	(762,983)	201,951	(37,158)
Derivative instruments	10,539	10,539	-	-
Other financial liabilities	(6,963)	(11,189)	(20)	(20)

¹ Fees paid to financial institutions for factoring.

6. Cash and Cash Equivalents

Details of cash and cash equivalents as at June 30, 2022 and December 31, 2021, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2022	December 31, 2021
Bank deposits and cash on hand	1,647,471	1,943,818
Deposits held by financial institutions and others	3,631,082	1,817,016
Total	5,278,553	3,760,834

As at June 30, 2022, cash and cash equivalents include ₩27,164 million which is subject to a restriction on the use in association with the national R&D projects.

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

7. Trade and Other Receivables

Trade and other receivables and its provisions for impairment, as at June 30, 2022 and December 31, 2021, are as follows:

(in millions of Korean won)

	June 30, 2022		
	Gross amount	Provision for impairment	Carrying amount
Trade receivables	7,520,842	(6,259)	7,514,583
Non-current trade receivables	78,483	-	78,483
Other current receivables	7,579,510	(1,015)	7,578,495
Other non-current receivables	617,514	-	617,514
Total	15,796,349	(7,274)	15,789,075

(in millions of Korean won)

	December 31, 2021		
	Gross amount	Provision for impairment	Carrying amount
Trade receivables	6,392,073	(5,094)	6,386,979
Non-current trade receivables	67,055	-	67,055
Other current receivables	1,050,714	(2,165)	1,048,549
Other non-current receivables	713,166	-	713,166
Total	8,223,008	(7,259)	8,215,749

Details of other receivables as at June 30, 2022 and December 31, 2021, are as follows:

(in millions of Korean won)

	June 30, 2022	December 31, 2021
Current		
Non-trade receivables	983,041	865,984
Deposits held by financial institutions	6,235,300	64,583
Accrued income	102,904	31,955
Loans	222,943	65,266
Guarantee deposits provided	34,307	20,761
	<u>7,578,495</u>	<u>1,048,549</u>
Non-current		
Non-trade receivables	29,754	29,195
Deposits held by financial institutions ¹	277,215	267,116
Loans	210,803	330,643
Guarantee deposits provided	99,742	86,212
	<u>617,514</u>	<u>713,166</u>
Total	8,196,009	1,761,715

¹ As at June 30, 2022, ₩266,100 million (December 31, 2021: ₩266,100 million) is withdrawal restricted in relation to large, small and medium-sized companies cooperation agreement, ₩127 million is restricted in use to be retained in connection with maintaining checking accounts (December 31, 2021: ₩120 million), and ₩10,000 million is restricted in use to be retained in connection with employee loan deposits. Also, PLN 3 million is restricted in use to be retained in relation to overseas transportation of hazardous waste.

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

The aging analysis of trade and other receivables as at June 30, 2022 and December 31, 2021, is as follows:

(in millions of Korean won)

	June 30, 2022		December 31, 2021	
	Trade receivables	Other receivables	Trade receivables	Other receivables
Receivables not past due	7,294,790	8,142,203	6,118,779	1,690,123
Past due but not impaired				
Up to 3 months	276,425	40,764	236,860	70,136
Between 3-6 months	4,374	11,422	15,811	457
Over 6 months	19,742	1,620	86,022	999
	300,541	53,806	338,693	71,592
Impaired receivables	3,994	1,015	1,656	2,165
Total	7,599,325	8,197,024	6,459,128	1,763,880

Movements on the provision for impairment of trade and other receivables for the six-month period ended June 30, 2022 and for the year ended December 31, 2021, are as follows:

(in millions of Korean won)

	June 30, 2022			
	Trade receivables		Other receivables	
	Current	Non-current	Current	Non-current
Beginning balance	5,094	-	2,165	-
Reversal	(291)	-	-	-
Write-off	(8)	-	(1,150)	-
Exchange differences	1,464	-	-	-
Ending balance	6,259	-	1,015	-

(in millions of Korean won)

	December 31, 2021			
	Trade receivables		Other receivables	
	Current	Non-current	Current	Non-current
Beginning balance	4,391	-	2,165	-
Reversal	(127)	-	-	-
Write-off	(447)	-	-	-
Exchange differences	1,277	-	-	-
Ending balance	5,094	-	2,165	-

As at June 30, 2022 and December 31, 2021, the carrying amounts of trade and other receivables are approximation of their fair values.

The Group transferred trade and other receivables to financial institutions for ₩85,772 million at June 30, 2022 (December 31, 2021: ₩3,469 million), and derecognized the trade and other receivables from the financial statements at the date of disposal, as substantial all the risks and rewards were transferred.

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

8. Other Financial Assets and Liabilities

Details of other financial assets and liabilities as at June 30, 2022 and December 31, 2021, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2022	December 31, 2021
Other financial assets		
Financial assets at fair value through other comprehensive income (derivative instruments) (current)	7,297	4,606
Financial assets at fair value through profit or loss (derivative instruments) (current)	13,243	18,683
Financial assets at fair value through other comprehensive income (derivative instruments) (non-current)	2,941	1,305
Financial assets at fair value through other comprehensive income (excluding derivative instruments) (non-current)	321,964	202,308
Financial assets at fair value through profit or loss (derivative instruments) (non-current)	320,888	142,264
Financial assets at fair value through profit or loss (excluding derivative instruments) (non-current)	165,609	160,145
	<u>831,942</u>	<u>529,311</u>
Other financial liabilities		
Financial liabilities at fair value through other comprehensive income (derivative instruments) (current)	12,937	-
Financial liabilities at fair value through profit or loss (derivative instruments) (current)	5,129	-
Financial liabilities at fair value through other comprehensive income (derivative instruments) (non-current)	7,805	126
Financial liabilities at fair value through profit or loss (derivative instruments) (non-current)	53,872	-
	<u>79,743</u>	<u>126</u>

Changes in equity and debt instruments included in other financial assets for the six-month period ended June 30, 2022 and for the year ended December 31, 2021, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2022	December 31, 2021
Beginning balance	362,452	81,532
Acquisitions / transfer	117,674	248,354
Disposals	(641)	(16,388)
Gain on valuation through other comprehensive income (before income tax effects)	11,027	15,990
Gain (loss) on valuation through profit or loss	(11,293)	29,810
Others	8,354	3,154
Ending balance	<u>487,573</u>	<u>362,452</u>

During the six-month period ended June 30, 2022 and for the year ended December 31, 2021, the Group did not recognize impairment for other financial assets.

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

9. Inventories

Details of inventories as at June 30, 2022 and December 31, 2021, are as follows:

(in millions of Korean won)

	June 30, 2022		
	Gross amount	Valuation allowance	Carrying amount
Merchandise	261,260	(13,522)	247,738
Finished / Semi-finished products	6,694,543	(255,042)	6,439,501
Work-in-process	28,943	-	28,943
Raw materials	2,639,022	(25,599)	2,613,423
Supplies	293,546	-	293,546
Goods-in-transit	1,616,553	-	1,616,553
Total	11,533,867	(294,163)	11,239,704

(in millions of Korean won)

	December 31, 2021		
	Gross amount	Valuation allowance	Carrying amount
Merchandise	192,580	(6,131)	186,449
Finished / Semi-finished products	4,715,464	(233,613)	4,481,851
Work-in-process	25,587	-	25,587
Raw materials	2,040,432	(24,104)	2,016,328
Supplies	266,487	-	266,487
Goods-in-transit	1,306,772	-	1,306,772
Total	8,547,322	(263,848)	8,283,474

During the six-month period ended June 30, 2022, the cost of inventories recognized as expense and included in 'cost of sales' amounted to ₩14,110,626 million (2021: ₩11,112,885 million).

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

10. Investments in Associates and Joint Ventures

Changes in investments in associates and joint ventures for the six-month period ended June 30, 2022 and for the year ended December 31, 2021, are as follows:

(in millions of
Korean won)

	June 30, 2022							Ending balance
	Beginning balance	Acquisitions / transfer	Dividends	Share of profit (loss) of associates and joint ventures	Share of other comprehensive income (loss) of associates and joint ventures	Impairment / disposals	Others	
VINA Plasticizers Chemical Co.,Ltd.	12,822	-	-	2,239	1,761	-	-	16,822
TECHWIN Co., Ltd.	19,024	-	-	(1,197)	(52)	-	-	17,775
SEETEC Co., Ltd	134,843	-	(5,000)	3,043	-	-	(307)	132,579
LG Chem BRASIL INTERMEDIACAO DE NEGOCIOS DO SETOR QUIMICO LTDA.	579	-	-	-	-	-	-	579
LG Chem Malaysia SDN.BHD	150	-	-	-	-	-	(150)	-
LG Life Sciences Poland Ltd.	17	-	-	-	-	-	-	17
HUAJIN NEW ENERGY MATERIALS(QUZHOU)C O., LTD.	93,835	-	-	2,927	1,432	-	-	98,194
VINFAST LITHIUM BATTERY PACK LIMITED LIABILITY COMPANY	3,769	-	-	(576)	284	-	-	3,477
Jiangxi VL Battery Co.,Ltd	20,310	-	-	(3,397)	656	-	-	17,569
PT.HLI Green Power	201,488	-	-	(12,908)	19,064	-	-	207,644
TL Chemical CO., Ltd	48,473	-	-	198	-	-	-	48,671
LG Toray Hungary Battery Separator Kft.	-	522,425	-	-	-	-	-	522,425
	535,310	522,425	(5,000)	(9,671)	23,145	-	(457)	1,065,752

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

(in millions of
Korean won)

	December 31, 2021							Ending balance
	Beginning balance	Acquisitions / transfer	Dividends	Share of profit (loss) of associates and joint ventures	Share of other comprehensive income (loss) of associates and joint ventures	Impairment / disposals	Others	
VINA Plasticizers Chemical Co., Ltd.	5,875	-	(334)	7,204	77	-	-	12,822
HL Greenpower Co., Ltd.	22,710	-	-	1,847	-	(24,323)	(234)	-
TECHWIN Co., Ltd.	20,113	-	-	(1,106)	17	-	-	19,024
SEETEC Co., Ltd	140,116	-	(10,000)	4,727	-	-	-	134,843
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	-	-	(544)	652	(2,576)	(269)	-
WUXI CL New Energy Technology Ltd	-	-	-	-	-	-	-	-
LG Life Sciences Poland Ltd.	17	-	-	-	-	-	-	17
Combustion Synthesis Co., Ltd.	1,867	-	-	273	(106)	(1,969)	(65)	-
HUAJIN NEW ENERGY MATERIALS(QUZHOU)C O., LTD.	89,525	-	-	(5,537)	9,847	-	-	93,835
VINFAST LITHIUM BATTERY PACK LIMITED LIABILITY COMPANY	4,179	-	-	(730)	320	-	-	3,769
Jiangxi VL Battery Co.,Ltd	21,461	-	-	(3,471)	2,320	-	-	20,310
PT.HLI Green Power	-	209,132	-	(9,201)	1,557	-	-	201,488
TL Chemical CO., Ltd	-	48,544	-	(71)	-	-	-	48,473
	<u>309,329</u>	<u>257,676</u>	<u>(10,334)</u>	<u>(6,609)</u>	<u>14,684</u>	<u>(28,868)</u>	<u>(568)</u>	<u>535,310</u>

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

11. Property, Plant and Equipment

Changes in property, plant and equipment for the six-month period ended June 30, 2022 and for the year ended December 31, 2021, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2022	December 31, 2021
Beginning balance	24,378,259	20,567,475
Business combination (Note 37)	7,251	250,128
Acquisitions / transfer	6,224,294	12,512,008
Disposals / transfer	(2,973,712)	(6,864,140)
Exchange differences	327,521	560,958
Depreciation	(1,473,064)	(2,617,458)
Impairment	(19,605)	(30,712)
Transfer to assets held for sale (Note 34)	(5,471)	-
Ending balance	<u>26,465,473</u>	<u>24,378,259</u>

During the six-month period ended June 30, 2022, the Group capitalized ₩9,540 million of borrowing costs (2021: ₩33,651 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 1.62% (2021: 1.51%).

Line items including depreciation in the consolidated statements of profit or loss for the three-month and six-month periods ended June 30, 2022 and 2021, are as follows:

<i>(in millions of Korean won)</i>	2022		2021	
	Three months	Six months	Three months	Six months
Cost of sales	675,530	1,332,113	567,676	1,088,066
Selling and administrative expenses	69,933	140,027	60,109	114,510
Others	72	193	268	593
Discontinued operations	234	731	1,681	4,086
Total	<u>745,769</u>	<u>1,473,064</u>	<u>629,734</u>	<u>1,207,255</u>

Lease

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

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

<i>(in millions of Korean won)</i>	June 30, 2022	December 31, 2021
Right-of-use assets ¹		
Real-estate	320,683	329,920
Machinery	31,507	23,258
Vehicles	36,777	21,475
Tools	2,193	2,083
Equipment	571	473
	<u>391,731</u>	<u>377,209</u>

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

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

Additions to the right-of-use assets during the six-month period ended June 30, 2022, were ₩64,248 million (2021: ₩118,819 million).

<i>(in millions of Korean won)</i>	June 30, 2022	December 31, 2021
Lease liabilities ¹		
Current	70,575	71,865
Non-current	264,503	247,380
	<u>335,078</u>	<u>319,245</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 for the six-month periods ended June 30, 2022 and 2021, are as follows:

<i>(in millions of Korean won)</i>	2022	2021
Depreciation of right-of-use assets		
Real-estate	33,575	28,179
Machinery	2,920	2,811
Vehicles	8,731	5,440
Tools	952	730
Equipment	170	247
	<u>46,348</u>	<u>37,407</u>
Interest expense relating to lease liabilities (included in finance cost)	4,675	3,731
Expense relating to short-term leases (included in cost of goods sold and administrative expenses)	11,431	13,321
Expense relating to leases of low-value assets that are not short-term leases (included in cost of goods sold and administrative expenses)	6,973	6,753

Total cash outflow for leases during the six-month period ended June 30, 2022, was ₩70,904 million (2021: ₩62,141 million).

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

12. Intangible Assets

Changes in intangible assets for the six-month period ended June 30, 2022 and for the year ended December 31, 2021, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2022	December 31, 2021
Beginning balance	2,444,303	2,279,917
Business combination (Note 37)	1,503	251,856
Acquisitions / transfer	276,129	427,080
Additions – internal development	-	220
Disposals / transfer	(35,846)	(15,425)
Exchange differences	13,757	23,042
Amortization	(138,520)	(223,178)
Impairment	(40)	(298,849)
Transfer to assets held for sale (Note 34)	(4)	(360)
Ending balance	<u>2,561,282</u>	<u>2,444,303</u>

Line items including amortization of intangible assets for the three-month and six-month periods ended June 30, 2022 and 2021, are as follows:

<i>(in millions of Korean won)</i>	2022		2021	
	Three months	Six months	Three months	Six months
Cost of sales	16,549	31,736	18,469	30,445
Selling and administrative expenses	56,215	106,780	39,715	77,743
Discontinued operations	<u>2</u>	<u>4</u>	<u>8</u>	<u>171</u>
Total	<u>72,766</u>	<u>138,520</u>	<u>58,192</u>	<u>108,359</u>

Total research and development costs recognized as expenses amounted to ₩784,778 million (2021: ₩617,022 million) for the six-month periods ended June 30, 2022 and 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	10,157	9,417	9,417	9,329	9,329	47,650

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

Changes in greenhouse gas emission permits during the six-month period ended June 30, 2022 and for the year ended December 31, 2021, are as follows:

<i>(in thousands of tons and millions of Korean won)</i>	June 30, 2022							
	2020		2021		2022		2023	
	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount
Beginning balance								
/Allocation with nil consideration	8,666	-	10,157	-	9,417	-	9,417	-
Purchase/Sale	(69)	1,111	(337)	-	-	-	-	-
Exchange	100	-	(100)	-	-	-	-	-
Borrowings/Carry forwards between years	(49)	(388)	49	388	-	-	-	-
Surrendered to the government	(8,648)	(723)	-	-	-	-	-	-
Ending balance ¹	-	-	9,769	388	9,417	-	9,417	-

<i>(in thousands of tons and millions of Korean won)</i>	June 30, 2022						
	2024		2025		Total		
	Quantity	Amount	Quantity	Amount	Quantity	Amount	
Beginning balance / Allocation with nil consideration		9,329	-	9,329	-	56,315	-
Purchase/Sale	-	-	-	-	-	(406)	1,111
Exchange	-	-	-	-	-	-	-
Borrowings/Carry forwards between years	-	-	-	-	-	-	-
Surrendered to the government	-	-	-	-	-	(8,648)	(723)
Ending balance ¹		9,329	-	9,329	-	47,262	388

¹ The emission permits for 2021 is expected to be surrendered to the government after getting a certification in the current year.

<i>(in thousands of tons and millions of Korean won)</i>	December 31, 2021							
	2020		2021		2022		2023	
	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount
Beginning balance								
/Allocation with nil consideration	8,666	-	9,405	-	9,430	-	9,430	-
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	-	-	9,300	388	9,430	-	9,430	-

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

<i>(in thousands of tons and millions of Korean won)</i>	December 31, 2021					
	2024		2025		Total	
	Quantity	Amount	Quantity	Amount	Quantity	Amount
Beginning balance /						
Allocation with nil consideration	9,343	-	9,343	-	55,617	-
Purchase/Sale	-	-	-	-	(123)	1,111
Exchange	-	-	-	-	-	-
Borrowings/Carry forwards between years	-	-	-	-	-	-
Surrendered to the government	-	-	-	-	(8,648)	(723)
Ending balance	9,343	-	9,343	-	46,846	388

During the six-month period ended June 30, 2022 and for the year ended December 31, 2021, there are no greenhouse gas emission permits held for short-term trading purpose.

13. Other Current and Non-Current Assets

Details of other current and non-current assets as at June 30, 2022 and December 31, 2021, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2022	December 31, 2021
Current		
Prepayments to suppliers and prepaid expenses	269,663	201,019
Prepaid value added tax	387,857	465,660
Others	104,253	82,353
Total	761,773	749,032
Non-current		
Net defined benefit assets	54	45,050
Long-term prepayments and long-term prepaid expenses	168,107	70,775
Others	138	96
Total	168,299	115,921

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

14. Borrowings

Borrowings as at June 30, 2022 and December 31, 2021, consist of:

<i>(in millions of Korean won)</i>	June 30, 2022	December 31, 2021
Current		
Short-term borrowings	2,234,168	1,688,383
Current portion of long-term borrowings	739,053	1,056,963
Current portion of debentures	1,383,236	659,869
Current lease liabilities	70,575	71,865
	<u>4,427,032</u>	<u>3,477,080</u>
Non-current		
Long-term borrowings	4,797,711	3,628,563
Debentures	6,250,579	7,412,711
Lease liabilities	264,503	247,380
	<u>11,312,793</u>	<u>11,288,654</u>
Total	<u>15,739,825</u>	<u>14,765,734</u>

Details of short-term borrowings as at June 30, 2022 and December 31, 2021, are as follows:

<i>(in millions of Korean won)</i>	Bank	Latest maturity date	Interest rate(%) as at June 30, 2022	June 30, 2022	December 31, 2021
Bank loans	KDB Bank and others	June 20, 2023	3.00 and others	1,586,643	1,237,430
Negotiated borrowings in foreign currency ¹	KB Kookmin Bank and others	November 17, 2022	EURIBOR + 0.63 and others	647,525	450,953
Total				<u>2,234,168</u>	<u>1,688,383</u>

¹ The above borrowings in foreign currency are accounted for as collateralized borrowings for trade receivables.

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

Details of long-term borrowings as at June 30, 2022 and December 31, 2021, are as follows:

<i>(in millions of Korean won)</i>		June 30, 2022			
	Bank	Annual interest rate (%)	Amount in Korean won	Current	Non-current
Borrowings in Korean won	KDB Bank	3.05	300,000	-	300,000
	BOA	1.95	150,000	-	150,000
	Bank of China	2.46	50,000	-	50,000
Borrowings in foreign currencies	SMBC	USD : 1.30 EUR : 0.32~0.48 Euribor(3M) + 0.8	470,826	148,848	321,978
	Agriculture Bank of China	LPR(1Y)-0.7	74,787	4,626	70,161
	Citi	EUR: 3M EURIBOR + 0.62~0.70 PLN: 3M Wibor+0.85	247,786	-	247,786
	ING	6M EURIBOR + 0.70~0.83	162,379	67,658	94,721
	RHB	3M KLIBOR + 70bp	59,355	-	59,355
	Bank of China	LPR(1Y)-1.0	119,158	11,914	107,244
	EBRD	6M EURIBOR+0.62	290,930	67,658	223,272
	Communications Bank of China	LPR(1Y)-1.0	95,255	-	95,255
	MUFG	6M EURIBOR + 0.60~0.80	67,658	-	67,658
	Industrial and Commercial Bank of China	PBOC ×1.00	33,798	16,098	17,700
	Hana Bank	3M EURIBOR + 0.62	270,632	-	270,632
	KDB Bank	USD: 2.53~3.15 EUR: 3M EURIBOR + 1.00~1.50	1,396,698	214,766	1,181,932
	The Export-Import Bank of Korea	USD: 2.36 EUR: 3M EURIBOR + 1.00~1.50	689,185	-	689,185
	NH NongHyup Bank	3M EURIBOR + 1.00~1.50	273,483	-	273,483
EIB	3M EURIBOR + 0.47	649,518	72,169	577,349	
DBS	6M EURIBOR + 0.60	135,316	135,316	-	
Total			5,536,764	739,053	4,797,711

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

(in millions of Korean won)		December 31, 2021				
		Bank	Annual interest rate (%)	Amount in Korean won	Current	Non-current
Borrowings in Korean won	KDB Bank		3.05	300,000	-	300,000
	BOA		1.95	150,000	-	150,000
Borrowings in foreign currencies	HSBC ¹	USD: 3M LIBOR + 1.40 CNY: PBOC × 0.95, LPR(5Y) - 0.3375		8,313	8,313	-
	SMBC	USD : 1.30 EUR : 3M EURIBOR + 0.8, 0.32~0.48		451,478	10,076	441,402
	Construction Bank of China ¹	PBOC × 0.90		8,305	8,305	-
	Agriculture Bank of China	LPR(1Y)+0.7		74,504	4,470	70,034
	Citi	EUR: 3M EURIBOR + 0.62~0.70 PLN: 3M Wibor+0.85		246,807	-	246,807
	ING	6M EURIBOR + 0.70 ~0.83		161,224	67,177	94,047
	EBRD	6M EURIBOR+0.62		322,448	67,177	255,271
	MUFG	6M EURIBOR + 0.60~0.80		134,354	67,177	67,177
	Industrial and Commercial Bank of China	PBOC × 1.00		39,666	14,785	24,881
	KEB Hana Bank	3M EURIBOR + 0.62		268,706	-	268,706
	KDB Bank	USD: 3M LIBOR+ 0.77~0.95 EUR: 3M EURIBOR + 0.75~1.50		964,255	366,118	598,137
	The Export-Import Bank of Korea	3M EURIBOR + 0.75~1.50		517,479	295,577	221,902
	NH NongHyup Bank	3M EURIBOR + 0.75~1.50		258,739	147,788	110,951
EIB	3M EURIBOR + 0.47		644,895	-	644,895	
DBS	6M EURIBOR + 0.60		134,353	-	134,353	
Total			4,685,526	1,056,963	3,628,563	

¹ Redeemed during the six-month period ended June 30, 2022.

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

Details of debentures as at June 30, 2022 and December 31, 2021, are as follows:

		June 30, 2022				
		Annual interest rate (%)	Latest maturity date	Amount in Korean won	Current	Non-current
	Financial institution					
50-3rd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	2.53	2024.05.19	280,000	-	280,000
51-2nd Debenture (non-guaranteed/public)²	NH Investment & Securities Co., Ltd. and others	2.88	2023.02.20	240,000	240,000	-
51-3rd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	3.07	2025.02.20	270,000	-	270,000
51-4th Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	3.29	2028.02.20	300,000	-	300,000
52-2nd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	2.11	2024.03.13	240,000	-	240,000
52-4th Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	2.40	2029.03.13	400,000	-	400,000
53-1st Debenture (non-guaranteed/public)²	NH Investment & Securities Co., Ltd. and others	1.57	2023.02.19	350,000	350,000	-
53-2nd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	1.65	2025.02.19	250,000	-	250,000
53-3rd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	1.72	2027.02.19	50,000	-	50,000
53-4th Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	1.91	2030.02.19	250,000	-	250,000
54-1st Debenture (non-guaranteed/public)	KB Securities Co., Ltd and others	1.14	2024.02.19	350,000	-	350,000
54-2nd Debenture (non-guaranteed/public)	KB Securities Co., Ltd and others	1.51	2026.02.19	270,000	-	270,000
54-3rd Debenture (non-guaranteed/public)	KB Securities Co., Ltd and others	1.76	2028.02.19	200,000	-	200,000
54-4th Debenture (non-guaranteed/public)	KB Securities Co., Ltd and others	2.14	2031.02.19	260,000	-	260,000
54-5th Debenture (non-guaranteed/public)	KB Securities Co., Ltd and others	2.22	2036.02.19	120,000	-	120,000
55-1st Debenture (non-guaranteed/public)	KB Securities Co., Ltd and others	2.39	2031.05.07	90,000	-	90,000
55-2nd Debenture (non-guaranteed/public)	KB Securities Co., Ltd and others	2.52	2036.05.07	60,000	-	60,000
5Y USD Green Bond (non-guaranteed/private)	Citi	1.38	2026.07.07	646,450	-	646,450
10Y USD Green Bond (non-guaranteed/private)	Citi	2.38	2031.07.07	646,450	-	646,450
1st Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	2.21	2026.03.13	200,000	-	200,000
USD foreign currency debenture with maturity in 2024	Citi and others	3.25	2024.10.15	646,450	-	646,450
USD foreign currency debenture with maturity in 2029	Citi and others	3.63	2029.04.15	646,450	-	646,450
EUR foreign currency debenture with maturity in 2023	Citi and others	0.50	2023.04.15	675,025	675,025	-
Debentures in Korean won (non-guaranteed)	NH Investment & Securities Co., Ltd. ²	3.00	2023.03.02	40,000	40,000	-
	NH Investment & Securities Co., Ltd. ²	1.95	2023.02.14	80,000	80,000	-
	NH Investment & Securities Co., Ltd.	2.22	2025.02.14	30,000	-	30,000

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

(in millions of Korean won)

		June 30, 2022				
	Financial institution	Annual interest rate (%)	Latest maturity date	Amount in Korean won	Current	Non-current
	NH Investment & Securities Co., Ltd.	1.56	2024.02.08	70,000	-	70,000
Less: discount on debentures				(27,010)	(1,789)	(25,221)
Total				7,633,815	1,383,236	6,250,579

(in millions of Korean won)

		December 31, 2021				
	Financial institution	Annual interest rate (%)	Latest maturity date	Amount in Korean won	Current	Non-current
50-2nd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others ¹	2.28	2022.5.19	400,000	400,000	-
50-3rd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	2.53	2024.5.19	280,000	-	280,000
51-2nd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	2.88	2023.2.20	240,000	-	240,000
51-3rd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	3.07	2025.2.20	270,000	-	270,000
51-4th Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	3.29	2028.2.20	300,000	-	300,000
52-1st Debenture (non-guaranteed/public)¹	NH Investment & Securities Co., Ltd. and others	2.02	2022.3.13	160,000	160,000	-
52-2nd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	2.11	2024.3.13	240,000	-	240,000
1st Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	2.21	2026.03.13	200,000	-	200,000
52-4th Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	2.40	2029.3.13	400,000	-	400,000
53-1st Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	1.57	2023.2.19	350,000	-	350,000
53-2nd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	1.65	2025.2.19	250,000	-	250,000
53-3rd Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	1.72	2027.2.19	50,000	-	50,000
53-4th Debenture (non-guaranteed/public)	NH Investment & Securities Co., Ltd. and others	1.91	2030.2.19	250,000	-	250,000
54-1st Debenture (non-guaranteed/public)	KB Securities Co., Ltd and others	1.14	2024.2.19	350,000	-	350,000
54-2nd Debenture (non-guaranteed/public)	KB Securities Co., Ltd and others	1.51	2026.2.19	270,000	-	270,000
54-3rd Debenture (non-guaranteed/public)	KB Securities Co., Ltd and others	1.76	2028.2.19	200,000	-	200,000
54-4th Debenture (non-guaranteed/public)	KB Securities Co., Ltd and others	2.14	2031.2.19	260,000	-	260,000
54-5th Debenture (non-guaranteed/public)	KB Securities Co., Ltd and others	2.22	2036.2.19	120,000	-	120,000
USD foreign currency debenture with maturity in 2024	Citi and others	3.25	2024.10.15	592,750	-	592,750
USD foreign currency debenture with maturity in 2029	Citi and others	3.63	2029.4.15	592,750	-	592,750
EUR foreign currency debenture with maturity in 2023	Citi and others	0.50	2023.4.15	671,170	-	671,170
5Y USD Green Bond (non-	Citi and others	1.38	2026.7.7	592,750	-	592,750

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

(in millions of Korean won)

		December 31, 2021				
	Financial institution	Annual interest rate (%)	Latest maturity date	Amount in Korean won	Current	Non-current
guaranteed/private)						
10Y USD Green Bond (non-guaranteed/private)	Citi and others	2.38	2031.7.7	592,750	-	592,750
1-2nd EUR Overseas						
Exchangeable bonds	Credit Suisse	-	2021.1.14	-	-	-
Debentures in Korean won (non-guaranteed)	NH Investment & Securities Co., Ltd. ¹	2.26	2022.2.16	100,000	100,000	-
	NH Investment & Securities Co., Ltd.	3.00	2023.3.2	40,000	-	40,000
	NH Investment & Securities Co., Ltd.	1.95	2023.2.14	80,000	-	80,000
	NH Investment & Securities Co., Ltd.	2.22	2025.2.14	30,000	-	30,000
	NH Investment & Securities Co., Ltd.	1.56	2024.2.8	70,000	-	70,000
55-1st Debenture (non-guaranteed/private)	KB Securities Co., Ltd and others	2.39	2031.5.7	90,000	-	90,000
55-2nd Debenture (non-guaranteed/private)	KB Securities Co., Ltd and others	2.52	2036.5.7	60,000	-	60,000
Less: discount on debentures				(29,590)	(131)	(29,459)
Total				8,072,580	659,869	7,412,711

¹ Redeemed during the six-month period ended June 30, 2022.

² Reclassified to current portion during the six-month period ended June 30, 2022.

Details of lease liabilities as at June 30, 2022 and December 31, 2021, are as follows:

(in millions of Korean won)

		June 30, 2022			
Leaser	Annual interest rate (%)	Latest maturity date	Total amount	Current	Non-current
Hyundai Oil Bank and others	0.65 ~ 8.68	2082.2.28	335,078	70,575	264,503

(in millions of Korean won)

		December 31, 2021			
Leaser	Annual interest rate (%)	Latest maturity date	Total amount	Current	Non-current
Hyundai Oil Bank and others	0.65 ~ 8.68	2068.3.31	319,245	71,865	247,380

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

15. Provisions

Changes in provisions for the six-month period ended June 30, 2022 and for the year ended December 31, 2021, are as follows:

(in millions of Korean won)

	June 30, 2022					
	Warranty ¹	Greenhouse gas emission ²	Legal claims ³	Restoration ⁴	Repair warranty ⁵	Total
Beginning balance	2,110,180	79	15,642	83,807	-	2,209,708
Business Combination (Note 37)	-	-	-	-	4,999	4,999
Additions	142,145	8,110	50	1,122	1,019	152,446
Used	(714,413)	(3,860)	(1,037)	(17,483)	-	(736,793)
Ending balance	1,537,912	4,329	14,655	67,446	6,018	1,630,360
Less: current portion	(1,154,291)	(4,329)	-	(45,990)	(3,424)	(1,208,034)
Total	383,621	-	14,655	21,456	2,594	422,326

(in millions of Korean won)

	December 31, 2021				
	Warranty ¹	Greenhouse gas emission ²	Legal claims ³	Restoration ⁴	Total
Beginning balance	1,244,017	4,875	8,286	112,829	1,370,007
Business Combination (Note 37)	2,406	-	-	-	2,406
Additions (reversal)	1,477,429	(4,072)	14,013	14,186	1,501,556
Used	(613,672)	(724)	(6,657)	(43,208)	(664,261)
Ending balance	2,110,180	79	15,642	83,807	2,209,708
Less: current portion	(1,532,356)	(79)	-	(40,320)	(1,572,755)
Total	577,824	-	15,642	43,487	636,953

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

² Greenhouse gas emission provisions have been accrued for estimated expenditures to be obligated for any excess emission. The estimated emission as at June 30, 2022 amounts to 4,872 thousand tons (June 30, 2021: 4,253 thousand tons).

³ Lawsuit provisions have been accrued for certain pending cases.

⁴ As at June 30, 2022, restoration provisions have been accrued for the estimated expenses to restore land pollutions and others.

⁵ Repair warranty provisions have been accrued based on historical experience for the estimated warranty costs to be incurred with regard to repairs.

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

16. Net Defined Benefit Liabilities (Assets)

Details of net defined benefit liabilities (assets) recognized in the consolidated statements of financial position as at June 30, 2022 and December 31, 2021, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2022	December 31, 2021
Present value of defined benefit obligations ¹	1,679,012	1,616,781
Fair value of plan assets	<u>(1,594,678)</u>	<u>(1,643,709)</u>
Liabilities (assets) in the consolidated statement of financial position²	<u>84,334</u>	<u>(26,928)</u>

¹ The present value of retirement benefit obligations is net of existing contributions to the National Pension Plan of ₩ 657 million as at June 30, 2022 (December 31, 2021: ₩ 708 million).

² Net defined benefit assets are included in other non-current assets.

The amounts recognized in the consolidated statements of profit or loss for the three-month and six-month periods ended June 30, 2022 and 2021, are as follows:

<i>(in millions of Korean won)</i>	2022		2021	
	Three months	Six months	Three months	Six months
Current service cost ¹	52,933	105,606	47,830	95,357
Interest cost	<u>(199)</u>	<u>(367)</u>	<u>428</u>	<u>1,126</u>
Total, included in employee benefit expenses	<u>52,734</u>	<u>105,239</u>	<u>48,258</u>	<u>96,483</u>

¹ The above amounts excluded ₩ 560 million (2021: ₩ 1,637 million) of expenses capitalized to construction in progress and development costs.

Post-employment benefits recognized for defined contribution plan for the six-month period ended June 30, 2022, amounted to ₩ 6,025 million (2021: ₩ 4,962 million).

Post-employment benefits recognized in the consolidated statements of profit or loss for the three-month and six-month periods ended June 30, 2022 and 2021, are as follows:

<i>(in millions of Korean won)</i>	2022		2021	
	Three months	Six months	Three months	Six months
Cost of sales	32,307	65,234	28,987	59,820
Selling and administrative expenses	23,002	46,030	21,219	41,339
Discontinued operations	<u>-</u>	<u>-</u>	<u>42</u>	<u>286</u>
Total	<u>55,309</u>	<u>111,264</u>	<u>50,248</u>	<u>101,445</u>

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

Movements in the present value of defined benefit obligations for the six-month period ended June 30, 2022 and for the year ended December 31, 2021, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2022	December 31, 2021
Beginning balance	1,616,781	1,454,596
Increase in defined benefit obligations		
due to business combination	-	54,897
Transfer in	6,326	39,334
Transfer out	(2,448)	(8,314)
Current service cost	106,166	193,938
Interest expense	23,164	37,257
Remeasurements:		
Actuarial loss from change in demographic assumptions	-	4,586
Actuarial gain from change in financial assumptions	-	(76,261)
Actuarial loss from experience adjustments	-	9,142
Others	-	11,336
Exchange differences	(320)	(4,600)
Payments from plans	(70,657)	(99,130)
Ending balance	<u>1,679,012</u>	<u>1,616,781</u>

Movements in the fair value of plan assets for the six-month period ended June 30, 2022 and for the year ended December 31, 2021, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2022	December 31, 2021
Beginning balance	1,643,709	1,336,637
Increase in plan assets due to business combination	-	45,275
Transfer in	-	1,135
Transfer out	(530)	(1,238)
Interest income	23,531	35,198
Remeasurements:		
Return on plan assets (excluding amounts included in interest income)	(6,684)	(13,326)
Contributions:		
Employers	1,289	332,299
Payments from plans	(64,656)	(89,445)
Administrative costs	(1,981)	(2,826)
Ending balance	<u>1,594,678</u>	<u>1,643,709</u>

The actual return on plan assets for the six-month period ended June 30, 2022, was ₩ 16,847 million and for the year ended December 31, 2021, was ₩ 21,872 million.

The significant actuarial assumptions as at June 30, 2022 and December 31, 2021, are as follows:

	June 30, 2022	December 31, 2021
Discount rate	2.9% ~ 3.0%	2.9% ~ 3.0%
Salary growth rate	5.0%	5.0%

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

The sensitivity analysis for changes in key actuarial assumptions as at June 30, 2022, 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	(95,521)	104,760
Salary growth rate:		
Increase (decrease) in defined benefit obligations	102,111	(94,169)

A decrease in corporate bond yields is a major factor contributing to an increase in defined benefit liabilities.

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

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

Plan assets as at June 30, 2022 and December 31, 2021, consist of:

<i>(in millions of Korean won)</i>	June 30, 2022		December 31, 2021	
	Amount	Composition (%)	Amount	Composition (%)
Insurance contracts with guaranteed yield	1,580,672	99.1	1,629,239	99.1
Equity linked bonds	12,701	0.8	12,988	0.8
Time deposits	1,305	0.1	1,482	0.1
	<u>1,594,678</u>	<u>100.0</u>	<u>1,643,709</u>	<u>100.0</u>

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

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

17. Other Current and Non-Current Liabilities

Details of other current and non-current liabilities as at June 30, 2022 and December 31, 2021, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2022	December 31, 2021
Current		
Advances from customers	452,214	373,356
Dividends payable	151,546	-
Withholdings	150,088	143,600
Unearned revenues	169,118	104,121
Accrued expenses	445,045	699,592
Total	<u>1,368,011</u>	<u>1,320,669</u>
Non-current		
Long-term accrued expenses	76,318	73,880
Long-term unearned revenues	75,138	99,169
Long-term advanced received	55,883	16,829
Total	<u>207,339</u>	<u>189,878</u>

18. Commitments and Contingencies

- (1) The Parent Company is jointly liable for liabilities of LG Energy Solutions Co., Ltd. as at December 1, 2020, a newly established company through the split-off from the Parent Company.
- (2) As at June 30, 2022, the Parent Company and certain subsidiaries have been guaranteed from Seoul Guarantee Insurance Company for the execution of contracts and others.
- (3) As at June 30, 2022, 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 Company		Certain Overseas Subsidiaries							
	KRW	USD	KRW	USD	CNY	EUR	PLN	INR	THB	MYR
Limit of bank overdraft	20,400	-	8,700	140	1,000	93	-	-	10	-
Limit of the letter of credit	15,000	278	-	337	1,879	-	-	763	-	-
Limit of discount of notes from export	-	724	-	511	2,900	-	-	-	-	-
Limit of guaranteed payments in other foreign currency	-	241	-	220	400	-	-	-	-	-
Limit of loan arrangements	800,000	725	10,000	3,516	7,471	2,988	155	4,521	-	450
Derivatives	-	-	-	1,556	-	-	-	-	-	-
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 300 million. Certain subsidiaries entered into factoring agreements with limit of ₩ 150,000 million and USD 100 million.

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

- (4) As at June 30, 2022, the Parent Company and certain subsidiaries have B2B purchase arrangements with several financial institutions with limit of ₩ 235,000 million and ₩ 150,000 million, respectively.
- (5) As at June 30, 2022, the Parent Company has reverse factoring agreements, and there is no utilized amount.
- (6) As at June 30, 2022, the Group's litigation status is as follows.
- i) As at June 30, 2022, 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 953 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.
 - ii) As at June 30, 2022, in relation to price fixing of small rechargeable batteries, the consumers in Israel have filed a class action against LG Energy Solution, Ltd. However, the ultimate outcome of these cases cannot be determined at the reporting date.
 - iii) As at June 30, 2022, 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.
 - iv) In addition, as at June 30, 2022, the Parent Company and certain subsidiaries have been named as a plaintiff in 9 and 21 legal actions, respectively, involving ₩ 26,701 million and ₩ 11,350 million in claims, respectively. They have been named as a defendant in 14 and 143 legal actions, respectively, with ₩ 43,345 million and ₩ 3,379 million in claims, respectively. The ultimate outcome of these cases cannot be determined at the reporting date.
- (7) The Parent Company has entered into manufacture and production technical contracts with ExxonMobil and others.
- (8) 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.
- (9) As at June 30, 2022, the Parent Company has entered into payment guarantee contract of USD 83 million, and certain subsidiaries have entered into payment guarantee contracts of USD 42 million, EUR 2 million and ₩ 7,755 million with financial institutions to guarantee the warrant of products and payment. Certain subsidiaries have entered into payment guarantee contract of CNY 321 million with financial institutions in relation to custom of imported raw materials.

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

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

<i>(in millions of Korean won)</i>	June 30, 2022	December 31, 2021
Property, plant and equipment	4,073,118	3,822,461

- (11) As at June 30, 2022, 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 completed the process of approval by the government for the use of core technologies according to the Industrial Technology Protection Act.

- (12) As at June 30, 2022, Stellantis, the Group's customer, has recalled Chrysler PHEV vehicles over a potential fire risk. There has been no confirmed root cause of fires in the Stellantis vehicles that are subject to the recall.

- (13) As at June 30, 2022, the Group's investment agreements, are as follows:

<i>(in millions of Korean won and USD)</i>	Currency	Committed investments	Cumulative investments	Remaining
KBE Fund	KRW	150,000	54,617	95,383
Gross Acceleration Fund	KRW	5,000	4,750	250
BNZ(Beyond Net Zero) Fund	USD	150	-	150
Secondary battery growth Fund	KRW	6,700	2,010	4,690
U.S. Venture Partners XII ¹	USD	5	4	1
U.S. Venture Partners XIII ¹	USD	5	-	5
Phoenix Venture Partners III ¹	USD	10	4	6

¹ Investment agreements of LG Chem Fund I LLC.

- (14) The Group acquired 50% of new shares issued by LG Toray Hungary Battery Separator kft. for USD 375 million in accordance with the joint venture agreement with Toray Industries, Inc. during the six-month period ended June 30, 2022. The shares were recognized as investment in associates as it was determined that there was a joint control under the agreement. The details on agreements entered into upon the acquisition of shares are as follows:

Category	Details
Agreement to purchase additional shares	After 30 months from the acquisition date of the 50% shares, purchasing the 20% shares through the agreed pricing method
Restrictions on share transfer	- During the lock-up period ¹ , share transfer is prohibited without prior written consent of the other shareholder. - When sold to a third party, the Group holds a drag-along right and Toray Industries, Inc. holds a tag-along right.
Default	In case the Group or the contracting party defaults, non-default shareholder and subsidiaries have the right to request the default shareholder to sell their shares (Call Option) and the default shareholder to purchase the shares held by the non-default shareholder (Put Option).

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

Exit put option	Once the lock-up period ¹ ends, the other shareholder has a put option to sell the remaining 30% of the shares to the Group
Deadlock	In the event of a dead lock agreed by both parties, 1) the Group holds a call option to request the counterparty's company and affiliates to sell their shares, 2) The other party holds a put option to request the Group to purchase shares of the counterparty

¹ Lock-up period: restriction period of share transfer for 5 years from the time the Group acquires 50% of the shares.

19. Share Capital

Changes in share capital and share premium for the six-month period ended June 30, 2022 and for the year ended December 31, 2021, are as follows:

(in millions of Korean won and in shares)

	Ordinary shares		Preferred shares		Share premium
	Number of shares	Share capital	Number of shares	Share capital	
January 1, 2021	70,592,343	352,962	7,688,800	38,444	2,014,036
December 31, 2021	70,592,343	352,962	7,688,800	38,444	2,014,036
June 30, 2022	<u>70,592,343</u>	<u>352,962</u>	<u>7,688,800</u>	<u>38,444</u>	<u>2,014,036</u>

Changes in treasury shares for the six-month period ended June 30, 2022 and for the year ended December 31, 2021, 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, 2021	464,842	16,368	35,699	431,720
Treasury shares reduction due to the exercise of exchange rights	(91,228)	-	(14,302)	28,344
Disposal of treasury shares ¹	<u>(6,085)</u>	<u>(10,327)</u>	<u>(3,386)</u>	<u>3,744</u>
December 31, 2021	<u>367,529</u>	<u>6,041</u>	<u>18,011</u>	<u>463,808</u>
June 30, 2022	<u>367,529</u>	<u>6,041</u>	<u>18,011</u>	<u>463,808</u>

¹ After the exchange of exchangeable bonds, all of the remaining treasury shares purchased in early 2017 due to the exercise of share purchase rights by the dissenting shareholders who objected to the merger with LG Life Sciences, Ltd. have been disposed of during the year ended December 31, 2021.

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

20. Retained Earnings

Retained earnings as at June 30, 2022 and December 31, 2021, consist of:

<i>(in millions of Korean won)</i>	June 30, 2022	December 31, 2021
Legal reserve ¹	571,496	540,492
Discretionary reserve ²	14,570,240	12,945,537
Retained earnings before appropriation	<u>3,357,596</u>	<u>4,605,920</u>
Total	<u>18,499,332</u>	<u>18,091,949</u>

¹ The Commercial Code of the Republic of Korea requires the Group 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. Among these reserves, the used amounts for each specific purpose and the balances after use can be transferred to discretionary reserve and will be able used for dividends.

21. Other Components of Equity

Details of other components of equity as at June 30, 2022 and December 31, 2021, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2022	December 31, 2021
Treasury shares (Note 19)	(18,011)	(18,011)
Capital transactions within the Group	<u>(19,299)</u>	<u>(19,299)</u>
Total	<u>(37,310)</u>	<u>(37,310)</u>

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

22. Selling and Administrative Expenses

Selling and administrative expenses for the three-month and six-month periods ended June 30, 2022 and 2021, are as follows:

<i>(in millions of Korean won)</i>	2022		2021	
	Three months	Six months	Three months	Six months
Wages and salaries	358,709	704,704	311,503	563,536
Post-employment benefits (Note 16)	23,003	46,030	21,219	41,339
Employee benefits	78,523	142,636	58,949	113,082
Travel expense	22,857	35,273	10,714	17,987
Water & utilities	18,616	43,306	15,717	34,366
Packaging expense	1,608	3,559	1,811	3,248
Rental expenses	35,164	70,155	31,838	60,323
Commission expenses	242,459	448,591	190,754	362,339
Depreciation (Notes 11 and 36)	70,297	140,749	60,435	115,140
Advertising expense	13,129	20,357	10,832	16,431
Freight expenses	434,933	881,168	208,195	416,394
Training expense	12,237	19,312	7,390	11,320
Amortization (Note 12)	56,215	106,780	39,715	77,743
Sample expense	7,435	12,658	6,307	9,548
Development costs	108,900	166,778	60,753	111,622
Others	163,882	278,158	667,515	796,904
Total	1,647,967	3,120,214	1,703,647	2,751,322

23. Classification of Expenses by Nature

Cost of sales, and selling and administrative expenses by nature for the three-month and six-month periods ended June 30, 2022 and 2021, consist of:

<i>(in millions of Korean won)</i>	2022		2021	
	Three months	Six months	Three months	Six months
Changes in inventories of merchandise, finished goods, semi-finished goods and work in process	(1,688,519)	(2,028,896)	(523,764)	(797,138)
Raw materials and consumables used	8,348,922	15,475,716	6,666,524	11,315,871
Purchase of merchandise	340,368	663,806	287,293	594,152
Employee benefit expenses (Note 24)	1,085,525	2,103,739	920,242	1,670,045
Advertising expenses	13,591	20,969	11,168	17,018
Freight expenses	449,363	908,689	219,796	438,478
Commission expenses	415,631	774,948	351,955	655,983
Depreciation and amortization	818,591	1,611,378	686,292	1,311,394
Rent expenses and usage fee	27,112	50,949	19,858	38,549
Other expenses	1,550,874	2,350,382	658,778	2,273,070
Total	11,361,458	21,931,680	9,298,142	17,517,422

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

24. Employee Benefit Expenses

Details of employee benefit expenses for the three-month and six-month periods ended June 30, 2022 and 2021, are as follows:

<i>(in millions of Korean won)</i>	2022		2021	
	Three months	Six months	Three months	Six months
Salaries	890,721	1,733,168	767,283	1,376,554
Post-employment benefits – Defined benefit plan (Note 16)	52,734	105,239	48,216	96,197
Post-employment benefits – Defined contribution plan (Note 16)	2,575	6,025	1,990	4,962
Others	139,495	259,307	102,753	192,332
Total	1,085,525	2,103,739	920,242	1,670,045

25. Finance Income and Costs

Details of finance income and costs for the three-month and six-month periods ended June 30, 2022 and 2021, are as follows:

<i>(in millions of Korean won)</i>	2022		2021	
	Three months	Six months	Three months	Six months
Finance income				
Interest income ¹	66,761	124,937	11,641	22,488
Dividend income	326	326	710	1,088
Exchange differences	155,548	250,646	137,135	250,657
Gain related to derivative instruments	137,317	180,131	21,393	44,122
Others	1,727	1,806	890	11,863
Total	361,679	557,846	171,769	330,218
Finance costs				
Interest expense ²	62,961	125,145	46,742	87,093
Exchange differences	323,902	500,618	46,756	193,387
Loss related to derivative instruments	20,213	20,213	5,018	13,097
Others	1,142	1,142	82	84
Total	408,218	647,118	98,598	293,661

¹ Details of interest income for the three-month and six-month periods ended June 30, 2022 and 2021, are as follows:

<i>(in millions of Korean won)</i>	2022		2021	
	Three months	Six months	Three months	Six months
Deposits held by financial institutions	48,863	90,572	8,076	16,087
Other loans and receivables	17,898	34,365	3,565	6,401
Total	66,761	124,937	11,641	22,488

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

² Details of interest expense for the three-month and six-month periods ended June 30, 2022 and 2021, are as follows:

<i>(in millions of Korean won)</i>	2022		2021	
	Three months	Six months	Three months	Six months
Interest on financial institutions	17,031	31,018	11,827	20,148
Interest on lease liabilities	2,446	4,675	1,638	3,731
Interest on debentures	43,908	89,132	38,102	74,797
Other interest expenses	4,596	9,860	11,466	22,068
Capitalized interest for qualifying assets	(5,020)	(9,540)	(16,291)	(33,651)
Total	62,961	125,145	46,742	87,093

26. Other Non-Operating Income

Details of other non-operating income for the three-month and six-month periods ended June 30, 2022 and 2021, are as follows:

<i>(in millions of Korean won)</i>	2022		2021	
	Three months	Six months	Three months	Six months
Exchange differences	511,684	739,900	53,688	328,034
Gain on disposal of property, plant and equipment	33,590	33,916	6,847	31,824
Gain on disposal of intangible assets	-	8	-	15
Profit from bargain purchase	(2,628)	30,674	-	-
Insurance income	42,454	46,389	908	9,064
Others	13,308	22,633	6,583	14,573
Total	598,408	873,520	68,026	383,510

27. Other Non-Operating Expenses

Details of other non-operating expenses for the three-month and six-month periods ended June 30, 2022 and 2021, are as follows:

<i>(in millions of Korean won)</i>	2022		2021	
	Three months	Six months	Three months	Six months
Exchange differences	402,159	596,227	29,000	265,014
Loss on disposal of property, plant and equipment	20,608	24,717	24,188	32,869
Loss on disposal of intangible assets	108	19,651	6	107
Impairment loss on property, plant and equipment (Note 11)	18,687	19,605	2,731	5,662
Impairment loss on intangible assets (Note 12)	-	40	-	14
Donations	9,159	11,256	7,174	7,735
Others	34,380	40,208	8,666	22,758
Total	485,101	711,704	71,765	334,159

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

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, 2022, is 23.1% (the estimated tax rate for the year ended December 31, 2021: 28.8%).

29. Earnings per Share

Basic earnings per share is calculated by dividing the profit attributable to owners 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 both of ordinary shares and preferred shares.

Basic earnings per share for profit from continuing operations and earnings per share attributable to the equity holders of the Parent Company for the three-month and six-month periods ended June 30, 2022 and 2021, are computed as follows:

Basic earnings per ordinary share from continuing operations

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

	2022		2021	
	Three months	Six months	Three months	Six months
Profit from continuing operations attributable to ordinary shares ¹	593,790	1,214,427	1,344,500	2,226,697
Weighted average number of ordinary shares outstanding ²	70,224,814	70,224,814	70,216,305	70,216,305
Basic earnings per ordinary share from continuing operations <i>(in won)</i>	<u>8,456</u>	<u>17,293</u>	<u>19,148</u>	<u>31,712</u>

Basic earnings per ordinary share

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

	2022		2021	
	Three months	Six months	Three months	Six months
Profit attributable to ordinary shares ¹	594,230	1,214,458	1,343,386	2,521,285
Weighted average number of ordinary shares outstanding ²	70,224,814	70,224,814	70,216,305	70,216,305
Basic earnings per ordinary shares <i>(in won)</i>	<u>8,462</u>	<u>17,294</u>	<u>19,132</u>	<u>35,907</u>

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

Basic earnings per preferred share from continuing operations

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

	2022		2021	
	Three months	Six months	Three months	Six months
Profit from continuing operations attributable to preferred share ¹	65,059	133,053	147,007	243,500
Weighted average number of preferred shares outstanding ²	<u>7,682,759</u>	<u>7,682,759</u>	<u>7,672,432</u>	<u>7,672,432</u>
Basic earnings per preferred share from continuing operations <i>(in won)</i>	<u>8,468</u>	<u>17,318</u>	<u>19,160</u>	<u>31,737</u>

Basic earnings per preferred share

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

	2022		2021	
	Three months	Six months	Three months	Six months
Profit attributable to preferred shares ¹	65,106	133,056	146,886	275,689
Weighted average number of preferred shares outstanding ²	<u>7,682,759</u>	<u>7,682,759</u>	<u>7,672,432</u>	<u>7,672,432</u>
Basic earnings per preferred shares <i>(in won)</i>	<u>8,473</u>	<u>17,319</u>	<u>19,144</u>	<u>35,932</u>

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

(in millions of Korean won)

	2022		2021	
	Three months	Six months	Three months	Six months
Profit from continuing operations attributable to the owners of the Parent Company	658,849	1,347,480	1,491,507	2,470,197
Ordinary shares dividends (A)	210,674	421,349	175,541	351,081
Preferred shares dividends (B)	23,145	46,289	19,277	38,554
Undistributed earnings from continuing operation for the period	425,030	879,842	1,296,689	2,080,562
Undistributed earnings available for ordinary shares (C)	383,116	793,078	1,168,959	1,875,616
Undistributed earnings available for preferred shares (D)	41,914	86,764	127,730	204,946
Profit from continuing operations for the period attributable to ordinary shares (A+C)	593,790	1,214,427	1,344,500	2,226,697
Profit from continuing operations for the period attributable to preferred shares (B+D)	65,059	133,053	147,007	243,500

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

(in millions of Korean won)

	2022		2021	
	Three months	Six months	Three months	Six months
Profit attributable to the owners of the Parent Company				
Ordinary shares dividends (A)	659,336	1,347,514	1,490,272	2,796,974
Preferred shares dividends (B)	210,674	421,349	175,540	351,081
Preferred shares dividends (B)	23,145	46,289	19,278	38,554
Undistributed earnings for the period	425,517	879,876	1,295,454	2,407,339
Undistributed earnings available for ordinary shares (C)	383,556	793,109	1,167,846	2,170,204
Undistributed earnings available for preferred shares (D)	41,961	86,767	127,608	237,135
Profit for the period attributable to ordinary shares (A+C)	594,230	1,214,458	1,343,386	2,521,285
Profit for the period attributable to preferred shares (B+D)	65,106	133,056	146,886	275,689

² Weighted average numbers of shares are calculated as follows:

Ordinary shares outstanding	Period	2022		Number of shares x days
		Number of shares	Number of days	
Beginning balance	2022. 1. 1 - 2022. 6. 30	70,224,814	181	12,710,691,334
Total				12,710,691,334

Weighted average number of ordinary shares outstanding: $12,710,691,334 / 181 = 70,224,814$ shares

Preferred shares outstanding	Period	2022		Number of shares x days
		Number of shares	Number of days	
Beginning balance	2022. 1. 1 - 2022. 6. 30	7,682,759	181	1,390,579,379
Total				1,390,579,379

Weighted average number of preferred shares outstanding: $1,390,579,379 / 181 = 7,682,759$ shares

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

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

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

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

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

For the six-month period ended June 30, 2022, there were no dilutive potential outstanding ordinary shares at the reporting date. Accordingly, diluted earnings per share for profit attributable to owners of the Parent Company is identical to basic earnings per share. In addition, for the six-month period ended June 30, 2021, the Parent Company did not calculate diluted earnings per share due to antidilution effect.

Basic and diluted earnings (losses) per share attributable to ordinary and preferred shares from discounted operations for the three-month and six-month periods ended June 30, 2022 and 2021, are as follows:

(in Korean won and in number of shares)

	2022		2021	
	Three months	Six months	Three months	Six months
Basic earnings (losses) per ordinary share from discounted operations	6	1	(16)	4,195
Basic earnings (losses) per preferred share from discounted operations	6	1	(16)	4,195
Diluted earnings (losses) per ordinary share from discounted operations	6	1	(16)	4,195
Diluted earnings (losses) per preferred share from discounted operations	6	1	(16)	4,195

30. Dividends

The ₩ 935,275 million (2021: ₩ 778,383 million) of dividends for the year ended December 31, 2021, was paid to the shareholders of the Parent Company in April 2022.

LG Chem, Ltd. and Subsidiaries

Notes to the Consolidated Interim Financial Statements

June 30, 2022 and 2021 (Unaudited), and December 31, 2021

31. Related Party Transactions

As at June 30, 2022 and December 31, 2021, LG Corp. is an entity exercising a significant influence over the Group, which owns 33.34% of the Parent Company's ordinary shares.

Details of associates and other related parties that have sales and other transactions with the Group or have receivables and payables balances as at June 30, 2022 and December 31, 2021, 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
D&O Corp. ¹	D&O CM Corp. Co.,Ltd.	D&O CM NANJING and others	Subsidiary of LG Corp.
LG CNS Co., Ltd.	Biz Tech Partners Co., Ltd. and others	LG CNS America Inc. and others	Subsidiary of LG Corp.
LG Management Development Institute	-	-	Subsidiary of LG Corp.
LG Sports Ltd.	-	-	Subsidiary of LG Corp.
LG Holdings Japan	-	-	Subsidiary of LG Corp.
LG Display Co., Ltd.	-	LG Display (China) Co., Ltd. and others	LG Enterprise group ^{2,3}
LG Electronics Inc.	LG Innotek Co., Ltd. and others	Inspur LG Digital Mobile Communications Co., Ltd. and others	LG Enterprise group ^{2,3}
LG Household & Health Care Ltd.	Coca-Cola Beverage Co. and others	-	LG Enterprise group ^{2,3}
LG Uplus Corp.	LG HelloVision Corp.	-	LG Enterprise group ^{2,3}
G II R Inc.	HS AD Inc.	Beijing Yuanzhimeng Advertising Co., Ltd.	LG Enterprise group ^{2,3}

¹ During the six-month period ended June 30, 2022, the entity's name of S&I Corp. and its subsidiaries has been changed.

² 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.

³ During the six-month period ended June 30, 2022, LX Holdings Corp. and its affiliates were excluded from the LG Group due to the spin-off of LG Corp.

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

Sales and purchases with related parties for the six-month periods ended June 30, 2022 and 2021, are as follows:

(in millions of Korean won)

	2022					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	
Entity with a significant influence over the Group						
LG Corp.	-	-	1,273	-	103	50,263
Associates and joint ventures						
SEETEC Co., Ltd.	57,926	111,081	-	-	200	39,980
TECWIN Co., Ltd.	-	254	524	-	-	31
HUAJIN NEW ENERGY MATERIALS(QUZHOU) CO., LTD.	-	138,834	-	-	-	-
Others	7	6,735	-	-	-	1,319
Other related parties						
D&O Corp. and its subsidiaries and associates	145	4,036	204,068	-	-	45,098
LG CNS Co., Ltd. and its subsidiaries	9,186	931	213,298	-	10	97,565
Others	-	-	-	-	-	26,533
Others						
LG Display Co., Ltd. and its subsidiaries	300,666	31	-	-	7	71
LG Electronics Inc. and its subsidiaries and joint ventures	563,209	204,887	208,849	-	192	36,912
LX International Corp. and its subsidiaries ¹	43,477	266,666	79,395	-	9	812,884
LX Hausys, Ltd. and its subsidiaries ¹	147,990	4,552	1,048	-	-	3
LX MMA Corporation ^{1,2}	111,379	109,790	-	-	-	2,582
Others	5,744	21,026	58	-	26	4,122
Total	1,239,729	868,823	708,513	-	547	1,117,363

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

(in millions of Korean won)

	2021					Others
	Sales and others	Purchase and others				
		Purchase of raw materials /merchandises	Acquisition of property, plant and equipment and intangible assets	Acquisition of right-of-use assets	Interest expense	
Entity with a significant influence over the Group						
LG Corp.	-	-	-	-	101	43,012
Associates and joint ventures						
SEETEC Co., Ltd.	25,861	75,717	13	92	212	33,248
TECWIN Co., Ltd.	5	11	826	-	-	25
HL Greenpower Co., Ltd. ³	324,164	440	-	-	-	-
HUAJIN NEW ENERGY MATERIALS(QUZHOU) CO., LTD.	164	13,491	-	-	-	-
Others	56	5,326	-	-	-	1,289
Other related parties						
D&O Corp. and its subsidiaries	39	6,386	252,631	-	-	54,107
LG CNS Co., Ltd. and its subsidiaries	6,539	2,220	155,401	-	10	73,283
Others	88	-	-	-	-	16,202
Others						
LG Display Co., Ltd. and its subsidiaries	314,115	65	-	-	8	2
LG Electronics Inc. and its subsidiaries and joint ventures	804,447	597,131	148,384	-	19	16,499
LX International Corp. and its subsidiaries	45,334	201,440	11,760	-	1	474,519
LX Hausys, Ltd. and its subsidiaries	132,048	-	29,924	-	-	662
LX MMA Corporation ²	59,327	101,157	-	-	-	1,690
Others	4,882	15,639	928	9	33	2,262
Total	1,717,069	1,019,023	599,867	101	384	716,800

¹ The entity has been excluded from the related parties due to the spin-off from LG Corp. during the six-month period ended June 30, 2022. Transactions with this entity until the spin-off from LG Corp. have been included in the above information.

² Net sales and purchase amounts after offsetting for Raffinate transactions with LX MMA Corporation.

³ This entity has been excluded from the related parties since the Group sold its shares in 2021. Transactions with this entity until the sale of shares have been included in the above information.

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

Balances of receivables and payables arising from sales and purchases of goods and services as at June 30, 2022 and December 31, 2021, are as follows:

(in millions of Korean won)

	June 30, 2022			
	Receivables			
	Trade receivables and others	Loan receivables	Other receivables	Total
Entity with a significant influence over the Group				
LG Corp.	-	-	10,086	10,086
Associates and joint ventures				
SEETEC Co., Ltd.	10,483	-	1,242	11,725
TECWIN Co., Ltd.	-	-	-	-
HUAJIN NEW ENERGY MATERIALS(QUZHOU) CO., LTD.	-	-	-	-
Others	-	-	-	-
Other related parties				
D&O Corp. and its subsidiaries and associates	-	-	-	-
LG CNS Co., Ltd. and its subsidiaries	3,879	-	-	3,879
Others	-	-	-	-
Others				
LG Display Co., Ltd. and its subsidiaries	99,003	-	706	99,709
LG Electronics Inc. and its subsidiaries and joint ventures ²	258,369	-	154,609	412,978
Others	28	-	1,602	1,630
Total	371,762	-	168,245	540,007

(in millions of Korean won)

	June 30, 2022				
	Payables				
	Trade payables	Borrowings	Lease liabilities	Other payables	Total
Entity with a significant influence over the Group					
LG Corp.	-	-	6,024	6,252	12,276
Associates and joint ventures					
SEETEC Co., Ltd.	22,034	-	23,542	10,082	55,658
TECWIN Co., Ltd.	-	-	-	365	365
HUAJIN NEW ENERGY MATERIALS(QUZHOU) CO., LTD.	65,196	-	-	-	65,196
Others	1,995	-	-	233	2,228
Other related parties					
D&O Corp. and its subsidiaries and associates	53,076	-	-	144,348	197,424
LG CNS Co., Ltd. and its subsidiaries	7,602	-	603	178,349	186,554
Others	-	-	-	1,537	1,537
Others					
LG Display Co., Ltd. and its subsidiaries	-	-	558	1,404	1,962
LG Electronics Inc. and its subsidiaries and joint ventures ²	69,409	-	17,767	233,098	320,274
Others	4,647	-	3,145	6,095	13,887
Total	223,959	-	51,639	581,763	857,361

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

(in millions of Korean won)

	December 31, 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.	7,426	-	462	7,888
TECWIN Co., Ltd.	-	-	-	-
HUAJIN NEW ENERGY MATERIALS(QUZHOU) CO., LTD.	-	-	-	-
Others	463	-	4,586	5,049
Other related parties				
D&O Corp. and its subsidiaries and affiliates ¹	388	-	8,762	9,150
LG CNS Co., Ltd. and its subsidiaries	5,632	-	326	5,958
Others	-	-	6,739	6,739
Others				
LG Display Co., Ltd. and its subsidiaries	110,826	-	935	111,761
LG Electronics Inc. and its subsidiaries and joint ventures ²	270,116	-	25,438	295,554
LX International Corp. and its subsidiaries	2,676	-	-	2,676
LX Hausys, Ltd. and its subsidiaries	58,934	-	55	58,989
LX MMA Corporation	20,754	-	625	21,379
Others	23	-	1,773	1,796
Total	477,238	-	59,684	536,922

(in millions of Korean won)

	December 31, 2021				
	Payables				Total
	Trade payables	Borrowings	Lease liabilities	Other payables	
Entity with a significant influence over the Group					
LG Corp.	-	-	11,866	23,609	35,475
Associates and joint ventures					
SEETEC Co., Ltd.	17,164	-	24,653	10,310	52,127
TECWIN Co., Ltd.	317	-	-	16,116	16,433
HUAJIN NEW ENERGY MATERIALS(QUZHOU) CO., LTD.	48,054	-	-	-	48,054
Others	-	-	-	410	410
Other related parties					
D&O Corp. and its subsidiaries and affiliates ¹	-	-	-	282,691	282,691
LG CNS Co., Ltd. and its subsidiaries	233	-	1,192	316,160	317,585
Others	-	-	-	715	715
Others					
LG Display Co., Ltd. and its subsidiaries	32	-	595	2,942	3,569
LG Electronics Inc. and its subsidiaries and joint ventures ²	59,289	-	18,694	148,185	226,168
LX International Corp. and its subsidiaries	18,467	-	-	182,716	201,183
LX Hausys, Ltd. and its subsidiaries	-	-	-	5,501	5,501
LX MMA Corporation	15,960	-	-	-	15,960
Others	3,226	-	3,479	8,583	15,288
Total	162,742	-	60,479	997,938	1,221,159

¹ Other receivables to D&O Corp. (formerly, S&I Corp.) include the amount of deposits which are classified as memberships in the consolidated financial statements of the Group.

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

² The warranty provision related to the recall of GM Bolt is not included in the above receivables and payables.

Fund transactions with related parties for the six-month periods ended June 30, 2022 and 2021, are as follows:

(in millions of Korean won)

	2022						
	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.	-	282,411	-	-	-	-	5,881
Associates and joint ventures							
SEETEC Co., Ltd.	5,000	-	-	-	-	-	477
LG Toray Hungary Battery Separator Kft. ³	-	-	483,638	-	-	-	-
Other related parties							
LG CNS Co., Ltd.	-	-	-	-	-	-	593
Others							
LG Display America, Inc.	-	-	-	-	-	-	82
LX Pantos Poland sp.z.o.o. ²	-	-	-	-	-	62	7
PANTOS LOGISTICS MEXICO S.A. de C.V. ²	-	-	-	-	-	2,384	320
LX PANTOS TURKEY LOJISTIK ²	-	-	-	-	-	337	41
LG Electronics Deutschland GmbH	-	-	-	-	-	-	145
LG ELECTRONICS WROCLAW SP. Z O.O.	-	-	-	-	-	-	696
LG HOUSEHOLD & HEALTH CARE LTD	-	-	-	-	-	-	314
Total	5,000	282,411	483,638	-	-	2,783	8,556

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

(in millions of Korean won)

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

¹ The amounts represent lease liabilities that were recognized or repaid for the six-month periods ended June 30, 2022 and 2021.

² The entity has been excluded from the related parties due to the spin-off from LG Corp. during the six-month period ended June 30, 2022. Transactions with this entity until the spin-off from LG Corp. have been included in the above information.

³ The amount is related to the acquisition of 50% of the shares during the six-month period ended June 30, 2022.

Compensation for key management of the Group for the six-month periods ended June 30, 2022 and 2021, consists of:

(in millions of Korean won)	2022	2021
Short-term employee benefits	57,992	41,502
Post-employment benefits	6,017	7,275
Total	64,009	48,777

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

There are no provisions recognized against receivables from related parties as at June 30, 2022 and December 31, 2021; therefore, there are no impairment losses recognized against the

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

receivables from related parties for the six-month period ended June 30, 2022 and for the year ended December 31, 2021.

As at June 30, 2022, there are no payment guarantees provided by the Group for related parties.

32. Cash Flows

Cash generated from operations for the six-month periods ended June 30, 2022 and 2021, are as follows:

<i>(in millions of Korean won)</i>	2022	2021
Profit before income tax		
Profit before income tax from continuing operations	1,966,104	3,641,124
Profit before income tax from discontinued operations	(326)	408,850
	<u>1,965,778</u>	<u>4,049,974</u>
Adjustments for:		
Depreciation	1,473,593	1,207,292
Amortization	138,520	108,359
Post-employment benefits	105,239	96,483
Finance income	(598,573)	(181,503)
Finance costs	650,894	144,850
Foreign exchange differences	8,183	(1,853)
Loss (gain) on valuation of inventories	30,315	(658)
Gain on disposal of property, plant and equipment	(33,916)	(38,313)
Gain on disposal of intangible assets	(8)	(15)
Loss on disposal of property, plant and equipment	24,717	32,874
Loss on disposal of intangible assets	19,651	109
Impairment loss on property, plant and equipment	19,605	7,130
Impairment loss on intangible assets	40	14
Gain on disposal of business	-	(396,144)
Additions to provisions	152,446	668,087
Other income/expenses	31,058	(2,042)
Increase in inventories	(2,879,679)	(1,354,597)
Increase in trade receivables	(856,578)	(768,003)
Decrease (increase) in other receivables	112,406	(1,066,447)
Increase in other current assets	(179,725)	(114,638)
Increase in trade payables	1,342,192	398,860
Increase (decrease) in other payables	(31,677)	990,248
Decrease in other current liabilities	(45,957)	(97,039)
Decrease in provisions	(736,793)	(283,617)
Increase (decrease) in net defined benefit liabilities	(901)	13,142
Other cash flows from operations	(64,259)	(20,846)
Cash generated from operations	<u>646,571</u>	<u>3,391,707</u>

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

Changes in liabilities arising from financial activities for the six-month period ended June 30, 2022, are as follows:

<i>(in millions of Korean won)</i>	2022						As at June 30, 2022
	As at January 1, 2022	Cash flows from financing activities	Reclassification of current portion	Amortization	Lease liabilities	Others	
Short-term borrowings and lease liabilities	2,817,211	41,765	641,947	-	-	(457,127)	3,043,796
Long-term borrowings and lease liabilities	3,875,943	1,150,886	(641,947)	-	59,212	618,120	5,062,214
Debentures	8,072,580	(659,785)	-	3,761	-	217,259	7,633,815
Other payables for the reverse factoring arrangement	299,645	(299,645)	-	-	-	-	-
Total	15,065,379	233,221	-	3,761	59,212	378,252	15,739,825

Significant non-cash transactions for the six-month periods ended June 30, 2022 and 2021, are as follows:

<i>(in millions of Korean won)</i>	2022	2021
Reclassification of construction-in-progress	2,851,729	4,082,536
Reclassification of machinery-in-transit	64,577	289,710
Reclassification of long-term borrowings into current portion	2,020,665	1,645,697
Other payables related to acquisitions of property, plant and equipment and intangible assets	1,743,861	1,468,746
Reclassification of other payables under the reverse factoring arrangement	-	1,484,058
Exchange of treasury stocks such as exchangeable bonds	-	54,383
Reclassification of non-current assets held for sale	23,129	-
Reclassification of non-current liabilities held for sale	15	-

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

33. Segment Information

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

Segment	Products or services	Major customers
Petrochemicals	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
LG Energy solution	Mobile batteries, Automotive batteries, Electricity storage batteries and others	Hewlett-Packard Co., General Motors Corp., and others
Advanced materials	Automotive components, LCD Photoresist, OLED materials, anodic materials and others	LG Display Co., Ltd., Samsung Display Co., Ltd., BOE, AUO and others
Life sciences	Growth hormone, Vaccine, Antidiabetic, agricultural chemicals and others	UNICEF, Intervet, SOUSAM IMPORTACAO E EXPORTACAO LTDA 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 The management approved to dispose of LCD polarizer business from the subsidiary in Taiwan and related profit and loss are presented as discontinued operations. The information for the comparative period has been restated to reflect these changes.

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

Segment information on revenue, profit and loss for the six-month periods ended June 30, 2022 and 2021, are as follows:

<i>(in millions of Korean won)</i>	2022					Total
	Petro-chemicals	LG Energy solution	Advanced materials	Life sciences	Common and others³	
Total segment revenue	11,951,117	9,412,909	3,586,398	439,117	551,116	25,940,657
Inter-segment revenue	307,131	4,830	1,744,778	31,116	17,892	2,105,747
Revenue from external customers ¹	11,643,986	9,408,078	1,841,620	408,001	533,226	23,834,911
Operating profit (loss) ²	1,147,836	455,270	489,118	56,437	(245,430)	1,903,231
Depreciation and amortization	493,789	845,949	99,072	42,647	129,921	1,611,378

<i>(in millions of Korean won)</i>	2021					Total
	Petro-chemicals	LG Energy solution	Advanced materials	Life sciences	Common and others³	
Total segment revenue	9,702,583	9,379,593	2,468,858	364,855	466,019	22,381,908
Inter-segment revenue	305,608	3,964	922,434	30,734	51,981	1,314,721
Revenue from external customers ¹	9,396,975	9,375,629	1,546,424	334,121	414,038	21,067,187
Operating profit (loss) ²	2,308,482	1,065,200	182,848	51,538	(58,303)	3,549,765
Depreciation and amortization	407,795	663,033	90,850	39,950	109,766	1,311,394

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

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.

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

Segment information on assets and liabilities as at June 30, 2022 and December 31, 2021, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2022					
	Petro-chemicals	LG Energy solution	Advanced materials	Life sciences	Common and others	Total
Reportable segment asset ¹	16,053,872	36,382,519	6,703,605	1,701,931	5,504,606	66,346,533
Investments in associates and joint ventures	66,071	228,690	620,618	17	150,356	1,065,752
Reportable segment liability ¹	5,732,195	16,408,155	2,510,881	306,758	4,840,761	29,798,750

<i>(in millions of Korean won)</i>	December 31, 2021					
	Petro-chemicals	LG Energy solution	Advanced materials	Life sciences	Common and others	Total
Reportable segment asset ¹	15,297,794	23,728,448	4,972,040	1,576,987	5,560,033	51,135,302
Investments in associates and joint ventures	62,024	225,567	93,835	17	153,867	535,310
Reportable segment liability ¹	5,016,619	14,980,391	1,406,698	220,954	6,300,652	27,925,314

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

External sales and non-current assets by geographical segments from continuing operations for the six-month periods ended June 30, 2022 and 2021, and as at June 30, 2022 and December 31, 2021, are as follows:

<i>(in millions of Korean won)</i>	Sales		Non-current assets¹	
	2022	2021	June 30, 2022	December 31, 2021
Korea ²	5,638,180	5,414,886	16,305,870	16,157,398
China	7,309,350	5,636,309	5,069,399	4,688,935
Asia / Oceania	2,923,896	2,489,618	187,300	147,809
America	2,436,893	2,063,687	3,037,277	1,692,631
Europe	5,325,118	5,267,800	4,483,355	4,192,086
Others	201,474	194,887	-	-
Total	23,834,911	21,067,187	29,083,201	26,878,859

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

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

There is no single external customer who contributes over 10% of the Group's revenue for the six-month periods ended June 30, 2022 and 2021.

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

34. Assets Held for Sale and Discontinued Operations

34.1 Assets Held for Sale

In accordance with the final approval of management in May 2022, the Group decided to dispose of LCD polarizer business from the subsidiary in Taiwan. As a result, the related assets were reclassified as assets held for sale and disposal was completed in July 2022. The disposal of acrylic film business was completed in April 2022, and the land of FarmHannong Co., Ltd. which is held for sale in accordance with the river maintenance plan is in the process of compensation with Gimhae City Hall.

Details of assets of disposal group classified as held for sale as at June 30, 2022 and December 31, 2021, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2022	December 31, 2021
Assets of disposal group		
Inventories	6,341	-
Property, plant and equipment	16,947	5,364
Others	308	-
Total	<u>23,596</u>	<u>5,364</u>
Liabilities of disposal group		
Accrued expenses and others	15	-
Total	<u>15</u>	<u>-</u>

Assets of the disposal group were measured at net fair value immediately before the initial classification as assets as held for sale and there are no other non-operating expenses (income) recognized from the measurement for the six-month periods ended June 30, 2022 and 2021.

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 at 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, and also determined to dispose of LCD polarizer business in Taiwan in May 2022 and the disposal was completed in July 2022. 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.

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

Comprehensive income information from discontinued operation for the six-month periods ended June 30, 2022 and 2021, are as follows:

(in millions of Korean won)

	2022		
	LCD polarizer	Glass substrate	Total
Revenue	31,464	407	31,871
Expense	(30,267)	(1,930)	(32,197)
Profit (loss) before income tax of discontinued operation	1,197	(1,523)	(326)
Income tax benefit (expense)	(10)	370	360
Profit (loss) after income tax of discontinued operations	<u>1,187</u>	<u>(1,153)</u>	<u>34</u>

(in millions of Korean won)

	2021			Total
	LCD polarizer	Glass substrate	Ugimag	
Revenue	652,005	8,228	10,389	670,622
Expense	(241,330)	(6,520)	(13,922)	(261,772)
Profit (loss) before income tax of discontinued operation	410,675	1,708	(3,533)	408,850
Income tax expense	(81,671)	(402)	-	(82,073)
Profit (loss) after income tax of discontinued operations	<u>329,004</u>	<u>1,306</u>	<u>(3,533)</u>	<u>326,777</u>

Net cash flows from discontinued operations for the six-month periods ended June 30, 2022 and 2021, are as follows:

(in millions of Korean won)

	2022		
	LCD polarizer	Glass substrate	Total
Net cash outflow from operating activities	(33,806)	(844)	(34,650)
Net cash inflow (outflow) from investing activities	(17,474)	583	(16,891)
Net cash inflow from financing activities	51,381	261	51,642

(in millions of Korean won)

	2021			Total
	LCD polarizer	Glass substrate	Ugimag	
Net cash inflow (outflow) from operating activities	278,784	(2,886)	(718)	275,180
Net cash inflow (outflow) from investing activities	896,230	7,591	(180)	903,641
Net cash inflow (outflow) from financing activities	(1,187,514)	(4,705)	898	(1,191,321)

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

35. Assets and Liabilities related to Contracts with Customers

Assets and liabilities related to contracts with customers as at June 30, 2022 and December 31, 2021, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2022	December 31, 2021
Contract assets		
Due from customers for contract work	23,694	-
Total contract assets	<u>23,694</u>	<u>-</u>
Contract liabilities		
Advances in relation to revenue from the Group's main business activities	379,203	376,487
Expected customer incentives	81,682	5,636
Unearned revenue	141,157	167,151
Due to customers for contract work	22,906	-
Total contract liabilities	<u>624,948</u>	<u>549,274</u>

Revenue recognized in relation to contract liabilities

The following table shows how much of the revenue recognized during the current and previous 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>	2022	2021
Revenue recognized in the current period from the contract liabilities balance at the beginning of the period	192,527	151,074
Advances in relation to revenue from the Group's main business activities	163,655	147,598
Unearned revenue	28,872	3,476
Revenue recognized from performance obligations satisfied in previous periods	-	-

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

36. Investment Properties

Details of investment properties as at June 30, 2022 and December 31, 2021, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2022			December 31, 2021				
	Cost	Accumulated depreciation	Accumulated impairment	Book amount	Cost	Accumulated depreciation	Accumulated impairment	Book amount
Land	4,211	-	-	4,211	4,211	-	-	4,211
Buildings	66,913	(14,625)	(53)	52,235	65,542	(13,409)	(47)	52,086
Total	71,124	(14,625)	(53)	56,446	69,753	(13,409)	(47)	56,297

Changes in investment properties for the six-month period ended June 30, 2022 and for the year ended December 31, 2021, are as follows:

<i>(in millions of Korean won)</i>	2022			2021		
	Land	Building	Total	Land	Building	Total
Beginning balance	4,211	52,086	56,297	4,211	45,222	49,433
Acquisitions/transfers	-	921	921	-	8,233	8,233
Disposals/transfers	-	(50)	(50)	-	(73)	(73)
Depreciation	-	(722)	(722)	-	(1,296)	(1,296)
Ending balance	4,211	52,235	56,446	4,211	52,086	56,297

The fair value of investment properties is measured either by independent professional appraisers with certified qualification or measured based on official appraised value of land and available information from recent transactions of similar properties, and it is classified as 'level 3' of the fair value hierarchy. The fair value of investment properties as at June 30, 2022, is ₩ 68,188 million (December 31, 2021: ₩ 66,861 million).

During the six-month period ended June 30, 2022, rental income from investment properties under operating lease is ₩ 3,358 million (2021: ₩ 3,271 million), and operating expenses incurred for investment properties that generated rental income (including maintenance and repair expenses) are ₩ 715 million (2021: ₩ 623 million). During the six-month period ended June 30, 2022, operating expenses incurred for investment properties that do not generate rental income (including maintenance and repair expenses) are ₩ 6 million (2021: ₩ 6 million).

Operating lease

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

The future minimum lease payments expected to be received in relation to the above operating lease agreement for investment properties as at June 30, 2022 and December 31, 2021, are as follows:

<i>(in millions of Korean won)</i>	June 30, 2022	December 31, 2021
Within one year	6,301	6,874
Within two years	2,856	6,016
Total	9,157	12,890

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

37. Business Combination

On February 28, 2022, the Group acquired 100% shares of LG Energy Solution Vertech Inc., an electricity storage batteries installation service provider in USA. The acquisition is expected to increase sales through expanded vertical integration by strengthening contact points with customers of electricity storage batteries.

Details of consideration transferred, assets and liabilities recognized as a result of the business combination, are as follows:

Gain from a bargain purchase amounting to ₩ 30,674 million occurred from the acquisition is recognized as other non-operating income in the consolidated statement of profit or loss.

<i>(in millions of Korean won)</i>	Amount
Consideration transferred	
Cash and cash equivalents	16,168
Total consideration	<u>16,168</u>
Identifiable assets acquired and liabilities assumed	
Cash and cash equivalents	7,748
Trade and other receivables ¹	56,333
Inventories	5,477
Property, plant and equipment	7,251
Intangible assets	1,503
Other assets	12,295
Trade and non-trade payables	(25,859)
Other payables	(15,543)
Deferred tax liabilities	(2,364)
Fair value of net identifiable assets acquired	<u>46,841</u>
Goodwill (gain from a bargain purchase)	<u>(30,673)</u>
	<u>16,168</u>

¹ The fair value of trade and other receivables is equal to the total contractual amount.

The revenue and net loss for the six-month period ended June 30, 2022 contributed by LG Energy Solution Vertech Inc. since the acquisition date were ₩ 16,755 million and ₩ 2,415 million, respectively.

Revenue and profit or loss of the Group for the six-month period ended June 30, 2022 would have been ₩ 23,834,229 million and ₩ 1,466,773 million, respectively as though the acquisition of LG Energy Solution Vertech Inc. had occurred as at the beginning of the six-month period ended June 30, 2022.

The Group accounts for the business combination with provisional amounts as at June 30, 2022 and the amounts may be adjusted if there is new information obtained about facts and circumstances related to business combination within the measurement period of one year from the acquisition date.

LG Chem, Ltd. and Subsidiaries
Notes to the Consolidated Interim Financial Statements
June 30, 2022 and 2021 (Unaudited), and December 31, 2021

On November 1, 2021, the Parent Company and its subsidiary, LG Chem Poland Sp. z o.o., acquired CEM (Chemical Electronics Material) business from LG Electronics Inc. to drive competitive separator business. The Parent Company acquired the domestic CEM business for ₩ 389,973 million and the 70% shares of LG Chem Hangzhou Advanced Materials Co., Ltd. (formerly, LG Electronics(Hangzhou) Co., Ltd) for ₩ 67,027 million. LG Chem Poland Sp. z o.o., a subsidiary, acquired CEM business in Poland for ₩ 67,700 million.

The goodwill of ₩ 202,568 million arising from the business combination is attributable to sales increase from combining the operations of the Group and CEM business.

Details of consideration transferred, assets and liabilities recognized as a result of the business combination, are as follows:

<i>(in millions of Korean won)</i>	LG Chem Ltd.	LG Chem Poland Sp. Z.o.o
Consideration transferred		
Cash and cash equivalents	457,000	67,700
Total consideration	<u>457,000</u>	<u>67,700</u>
Identifiable assets acquired and liabilities assumed		
Cash and cash equivalents	4,376	-
Trade and other receivables ¹	190,386	26,228
Inventories	43,084	36,627
Property, plant and equipment	211,373	38,755
Intangible assets	48,841	447
Other assets	4,204	-
Trade and other payables	(213,669)	(24,602)
Provisions	(1,809)	(597)
Net defined benefit liabilities	(9,622)	-
Other liabilities	(5,930)	(522)
Deferred tax liabilities	(3,851)	-
Fair value of net identifiable assets acquired	<u>267,383</u>	<u>76,336</u>
Less: non-controlling interest	<u>(12,951)</u>	<u>-</u>
Acquired amount attributable to the Parent Company	254,432	76,336
Goodwill	202,568	-
Gain from a bargain purchase	<u>-</u>	<u>(8,636)</u>
	<u>457,000</u>	<u>67,700</u>

¹ The fair value of trade and other receivables as of the acquisition date and the total contractual amount are ₩ 217,624 million, of which the amount that is not expected to be recovered is ₩ 1,010 million.

LG Chem, Ltd. and Subsidiaries

Notes to the Consolidated Interim Financial Statements

June 30, 2022 and 2021 (Unaudited), and December 31, 2021

38. Events after the Reporting Period

The Group decided to issue global Green Bond at the Management Committee held on June 24, 2022. Accordingly, foreign currency debenture amounting to USD 300 million was issued on July 14, 2022.

<i>(in millions of foreign currency)</i>	Maturity	Amount
USD foreign currency debenture with maturity in 3 years	July 14, 2025	USD 300

In order to establish a long-term strategic relationship with lithium suppliers and to stabilize supply and demand of lithium, the Group approved the acquisition of new shares of Tianqi Lithium issued during the Hong Kong IPO at the Board of Directors on June 27, 2022. In July 2022, 14,360,200 shares (8.75% of issued shares) were acquired through the Cornerstone Investment method.