

LG Chem, Ltd. and Subsidiaries
Condensed Consolidated Interim Financial Statements
March 31, 2024 and 2023

LG Chem, Ltd. and Subsidiaries
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March 31, 2024 and 2023

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Report on Review of Condensed Interim Financial Statements

(English Translation of a Report Originally Issued in Korean)

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

Reviewed Financial Statements

We have reviewed the accompanying condensed consolidated interim financial statements of LG Chem, Ltd. and its subsidiaries (collectively referred to as the “Group”). These condensed consolidated interim financial statements consist of the consolidated interim statement of financial position of the Group as at March 31, 2024, and the related consolidated interim income statement, statements of comprehensive income, changes in equity and cash flows for the three-month period ended March 31, 2024, and material accounting policy information and other selected explanatory notes, expressed in Korean won.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these condensed 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 condensed 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 condensed 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 condensed consolidated interim financial statements are not presented fairly, in all material respects, in accordance with Korean IFRS 1034 *Interim Financial Reporting*.

Other Matters

The consolidated income statement, statements of comprehensive income, changes in equity and cash flows for the three-month period ended March 31, 2023, presented herein for comparative purposes, were reviewed by another auditor whose report dated May 15, 2023. Based on their review, nothing has come to their attention that causes them to believe the accompanying financial statements do not present fairly, in all material respects, in accordance with Korean IFRS 1034 *Interim Financial Reporting*.

The consolidated statement of financial position as at December 31, 2023, and the consolidated income statement, statements of comprehensive income, changes in equity and cash flows for the year then ended, not presented herein, were audited by another auditor who expressed an unqualified opinion on those statements on March 7, 2024. The consolidated statement of financial position as at December 31, 2023, presented herein for comparative purposes, is consistent, in all material respects, with the above audited statement of financial position as at December 31, 2023.

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

May 14, 2024
Seoul, Korea

This report is effective as of May 14, 2024, 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 condensed consolidated interim financial statements and notes thereto. Accordingly, the readers of the review report should understand that there is a possibility that the above review report may have to be revised to reflect the impact of such subsequent events or circumstances, if any.

LG Chem, Ltd. and Subsidiaries
Consolidated Interim Statements of Financial Position
March 31, 2024 and December 31, 2023

<i>(in millions of Korean won)</i>	Notes	March 31, 2024 (Unaudited)		December 31, 2023	
Assets					
Current assets					
Cash and cash equivalents	3, 5, 6	₩	9,263,241	₩	9,084,899
Trade receivables	3, 5, 7, 31		8,152,462		8,082,952
Other receivables	3, 5, 7, 31		922,260		682,178
Other current financial assets	3, 5, 8		213,151		141,428
Prepaid income taxes			121,872		86,032
Other current assets	13		1,540,846		1,211,374
Inventories	9		9,666,037		9,375,327
Assets held for sale	34		198,386		195,106
Total current assets			30,078,255		28,859,296
Non-current assets					
Trade receivables	3, 5, 7		147,034		129,996
Other receivables	3, 5, 7		450,284		427,693
Other non-current financial assets	3, 5, 8		1,446,636		1,228,501
Investments in associates and joint ventures	1, 10, 33		1,014,397		1,005,606
Deferred tax assets	28		2,450,513		2,308,966
Property, plant and equipment	11		41,860,898		38,950,393
Intangible assets	12		3,782,039		3,692,922
Investment properties	36		100,993		88,950
Other non-current assets	13, 16		784,520		774,371
Total non-current assets			52,037,314		48,607,398
Total assets		₩	82,115,569	₩	77,466,694
Liabilities					
Current liabilities					
Trade payables	3, 5, 31	₩	4,195,289	₩	4,117,913
Other payables	3, 5, 31		4,051,504		4,905,081
Borrowings	3, 5, 14		7,789,466		7,077,782
Other current financial liabilities	3, 5, 8		459,571		523,910
Provisions	15		501,561		546,950
Income tax payables			106,304		45,304
Other current liabilities	17, 35		1,447,606		1,146,844
Liabilities of disposal group held for sale	34		15,790		27,055
Total current liabilities			18,567,091		18,390,839
Non-current liabilities					
Other payables	3, 5		31,476		33,418
Borrowings	3, 5, 14		16,893,704		14,850,332
Other non-current financial liabilities	3, 5, 8		233,032		99,950
Provisions	15		952,757		887,775
Net defined benefit liabilities	13, 16		12,752		11,879
Deferred tax liabilities	28		723,548		735,326
Other non-current liabilities	17, 35		1,522,412		1,518,990
Total non-current liabilities			20,369,681		18,137,670
Total liabilities		₩	38,936,772	₩	36,528,509

LG Chem, Ltd. and Subsidiaries
Consolidated Interim Statements of Financial Position
March 31, 2024 and December 31, 2023

<i>(in millions of Korean won)</i>	Notes	March 31, 2024 (Unaudited)	December 31, 2023
Equity			
Issued capital	1, 19	391,406	391,406
Capital surplus	19	11,572,098	11,572,098
Elements of other stockholders equity	21	(19,569)	(19,569)
Accumulated other comprehensive income		1,111,810	598,038
Retained earnings	20	19,515,654	19,650,632
Equity attributable to owners of the Parent Company		<u>32,571,399</u>	<u>32,192,605</u>
Non-controlling interests		10,607,398	8,745,580
Total equity		<u>43,178,797</u>	<u>40,938,185</u>
Total liabilities and equity		<u>₩ 82,115,569</u>	<u>₩ 77,466,694</u>

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

LG Chem, Ltd. and Subsidiaries
Consolidated Interim Income Statements
Three-Month Periods Ended March 31, 2024 and 2023

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

	Notes	Period Ended March 31	
		2024 (Unaudited)	2023 (Unaudited)
Revenue	22, 31, 33, 35	₩ 11,609,432	₩ 14,284,487
Cost of sales	22, 23, 31	<u>(9,705,679)</u>	<u>(11,972,086)</u>
Gross profit		1,903,753	2,312,401
Other operating income	22	188,954	100,294
Selling and administrative expenses	22, 23, 31	<u>(1,828,076)</u>	<u>(1,608,992)</u>
Operating income	22, 33	264,631	803,703
Finance income	25	636,090	535,328
Finance costs	25	(657,418)	(515,250)
Profits (losses) of associates and joint ventures	10	(3,460)	(14,303)
Other non-operating income	26	329,195	522,855
Other non-operating expenses	27	<u>(245,734)</u>	<u>(408,235)</u>
Profit before income tax	32	323,304	924,098
Income tax expense	28	<u>(3,945)</u>	<u>(248,780)</u>
Profit from continuing operations		<u>₩ 319,359</u>	<u>₩ 675,318</u>
Profit (loss) from discontinued operations	34	<u>₩ 22,340</u>	<u>₩ (6,268)</u>
Profit		<u>₩ 341,699</u>	<u>₩ 669,050</u>
Profit is attributable to:			
Owners of the Parent Company			
Profit from continuing operations		₩ 114,267	₩ 479,724
Profit (loss) from discontinued operations		<u>22,458</u>	<u>(5,557)</u>
		136,725	474,167
Non-controlling interests			
Profit from continuing operations		205,092	195,594
Loss from discontinued operations		<u>(118)</u>	<u>(711)</u>
		204,974	194,883
Earnings per share for profit attributable to the owners of the Parent Company (in won)			
Basic earnings per ordinary share	29	1,742	6,053
Basic earnings per preferred share		1,792	6,103
Earnings per share for profit from continuing operations attributable to the owners of the Parent Company (in won)			
Basic earnings per ordinary share	29	1,455	6,124
Basic earnings per preferred share		1,505	6,174

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

LG Chem, Ltd. and Subsidiaries
Consolidated Interim Statements of Comprehensive Income
Three-Month Periods Ended March 31, 2024 and 2023

(in millions of Korean won)

	Notes	Period Ended March 31	
		2024 (Unaudited)	2023 (Unaudited)
Profit		₩ 341,699	₩ 669,050
Other comprehensive income			
<i>Items that will not be reclassified to profit or loss</i>			
Remeasurements of net defined benefit liabilities	16	(1,050)	1,411
Loss on valuation of financial assets at fair value through other comprehensive income	8	(23,449)	(2,762)
Shares of remeasurements of net defined benefit liabilities of associates		-	461
Income tax relating to these items		12,571	393
<i>Items that may be subsequently reclassified to profit or loss</i>			
Exchange differences on translation of foreign operations		825,048	677,411
Cash flow hedge		1,383	(7,227)
Shares of other comprehensive income of associates and joint ventures		16,994	28,490
Income tax relating to these items		(2,244)	10,573
Other comprehensive income for the period, net of tax		<u>829,253</u>	<u>708,750</u>
Total comprehensive income for the period		₩ <u>1,170,952</u>	₩ <u>1,377,800</u>
Total comprehensive income for the period is attributable to:			
Owners of the Parent Company		₩ 649,752	₩ 1,006,997
Non-controlling interest		521,200	370,803

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

LG Chem, Ltd. and Subsidiaries
Consolidated Interim Statements of Changes in Equity
Three-Month Periods Ended March 31, 2024 and 2023

(in millions of Korean won)

Notes	Attributable to owners of the Parent Company								Non-controlling interests	Total equity
	Issued capital	Capital surplus	Elements of other stockholders equity	Accumulated other comprehensive income (loss)	Retained earnings	Total				
Balance at January 1, 2023	₩ 391,406	₩ 11,569,556	₩ (19,569)	₩ 366,916	₩ 19,142,263	₩ 31,450,572	₩ 6,030,555	₩ 37,481,127		
Comprehensive income										
Profit	-	-	-	-	474,167	474,167	194,883	669,050		
Remeasurements of net defined benefit liabilities	16	-	-	-	939	939	104	1,043		
Exchange differences on translation of foreign operations	-	-	-	512,005	-	512,005	174,180	686,185		
Gain (loss) on valuation of financial assets at fair value through other comprehensive income	-	-	-	(3,368)	-	(3,368)	1,368	(2,000)		
Cash flow hedge	-	-	-	(4,443)	-	(4,443)	(986)	(5,429)		
Others	-	-	-	27,236	461	27,697	1,254	28,951		
Total comprehensive income for the period	-	-	-	531,430	475,567	1,006,997	370,803	1,377,800		
Transactions with owners:										
Dividends	30	-	-	-	(783,135)	(783,135)	(80,748)	(863,883)		
Increase in paid-in capital of a subsidiary	-	-	-	-	-	-	408,362	408,362		
Others	-	-	-	-	665	665	-	665		
Total transactions with owners	-	-	-	-	(782,470)	(782,470)	327,614	(454,856)		
Balance at March 31, 2023 (Unaudited)	₩ 391,406	₩ 11,569,556	₩ (19,569)	₩ 898,346	₩ 18,835,360	₩ 31,675,099	₩ 6,728,972	₩ 38,404,071		
Balance at January 1, 2024	₩ 391,406	₩ 11,572,098	₩ (19,569)	₩ 598,038	₩ 19,650,632	₩ 32,192,605	₩ 8,745,580	₩ 40,938,185		
Comprehensive income										
Profit	-	-	-	-	136,725	136,725	204,974	341,699		
Remeasurements of net defined benefit liabilities	16	-	-	-	(745)	(745)	(70)	(815)		
Exchange differences on translation of foreign operations	-	-	-	508,898	-	508,898	314,244	823,142		
Gain (loss) on valuation of financial assets at fair value through other comprehensive income	-	-	-	(11,243)	-	(11,243)	130	(11,113)		
Cash flow hedge	-	-	-	855	-	855	190	1,045		
Others	-	-	-	15,262	-	15,262	1,732	16,994		
Total comprehensive income for the period	-	-	-	513,772	135,980	649,752	521,200	1,170,952		
Transactions with owners:										
Dividends	30	-	-	-	(274,347)	(274,347)	(79,832)	(354,179)		
Increase in paid-in capital of a subsidiary	-	-	-	-	-	-	1,500,454	1,500,454		
Others	-	-	-	-	3,389	3,389	(80,004)	(76,615)		
Total transactions with owners	-	-	-	-	(270,958)	(270,958)	1,340,618	1,069,660		
Balance at March 31, 2024 (Unaudited)	₩ 391,406	₩ 11,572,098	₩ (19,569)	₩ 1,111,810	₩ 19,515,654	₩ 32,571,399	₩ 10,607,398	₩ 43,178,797		

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

LG Chem, Ltd. and Subsidiaries
Consolidated Interim Statements of Cash Flows
Three-Month Periods Ended March 31, 2024 and 2023

(in millions of Korean won)

	Notes	Period Ended March 31	
		2024 (Unaudited)	2023 (Unaudited)
Cash flows from operating activities			
Cash generated from operations	32	₩ 700,552	₩ 816,674
Interest received		101,430	89,260
Interest paid		(223,319)	(118,715)
Dividends received		6,088	12,952
Income taxes paid		(131,057)	(296,874)
Net cash inflow from operating activities		453,694	503,297
Cash flows from investing activities			
Decrease in other receivables		175,413	242,488
Proceeds from disposal of other financial assets		600	4,522
Proceeds from disposal of property, plant and equipment		16,672	2,610
Proceeds from disposal of intangible assets		22	17
Government grants received		35,871	70,963
Proceeds from disposal of assets held for sale		-	6,853
Increase in other receivables		(165,781)	(112,906)
Acquisition of investments in associates and joint ventures		(2,889)	(66,959)
Acquisition of other financial assets		(29,562)	(153,284)
Acquisition of property, plant and equipment		(3,972,304)	(3,321,149)
Acquisition of intangible assets		(40,702)	(43,699)
Cash outflows from transfer of business		-	(702,227)
Other cashflows from investing activities		-	(4,431)
Net cash outflow from investing activities		(3,982,660)	(4,077,202)
Cash flows from financing activities			
Proceeds from borrowings		4,555,622	3,112,369
Capital contribution from non-controlling interests		1,500,454	408,360
Repayments of borrowings and others		(2,467,629)	(1,696,976)
Others		(81,096)	(55,670)
Net cash inflow from financing activities		3,507,351	1,768,083
Net decrease in cash and cash equivalents			
Cash equivalents included in the disposal group held for sale at the beginning of the period		23,877	-
Cash and cash equivalents at the beginning of the period		9,084,899	8,497,882
Effects of exchange rate changes on cash and cash equivalents		191,856	95,033
Cash equivalents included in the disposal group held for sale at the end of the period		(15,776)	-
Cash and cash equivalents at the end of the period		₩ 9,263,241	₩ 6,787,093

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 Condensed Consolidated Interim Financial Statements

March 31, 2024 and 2023 (Unaudited), and December 31, 2023

1. General Information

General information about LG Chem, Ltd. (the Parent Company) and its 73 subsidiaries (collectively referred to as “the Group”) is as follows:

1.1 The Parent Company

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

As at March 31, 2024, the Group has its manufacturing facilities in Yeosu, Daesan, Ochang, Cheongju, Naju, Iksan, Osong, Onsan, Gimcheon and overseas sites.

As at March 31, 2024, the Parent Company's capital, including the preferred issued capital of ₩38,444 million, is ₩391,406 million. The largest shareholder of the Parent Company is LG Corp., which owns 33.34% of the Parent Company's ordinary shares.

The Parent Company is authorized to issue 292 million shares of ordinary shares with par value of ₩5,000 per share. As at March 31, 2024, the Parent Company has 70,592,343 ordinary shares and 7,688,800 preferred shares issued and outstanding. Preferred shareholders have no voting rights but are entitled to receive dividends at a rate of 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.

LG Chem, Ltd. and Subsidiaries

Notes to the Condensed Consolidated Interim Financial Statements

March 31, 2024 and 2023 (Unaudited), and December 31, 2023

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.

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		Business location	Closing month	Business activities
	March 31, 2024	December 31, 2023			
Consolidated subsidiaries					
LG Energy Solution, Ltd. ¹	82	82	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, 5}	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	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, Ltd. and Subsidiaries
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	Percentage of ownership		Business location	Closing month	Business activities
	March 31, 2024	December 31, 2023			
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 ⁶	100	100	USA	December	Investments in venture companies
Uniseal, Inc.	100	100	USA	December	Adhesive manufacturing and sales
LG Chem Life Sciences USA Inc. ⁷	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
LG PETRONAS CHEMICALS Malaysia Sdn.Bhd.	51	51	Malaysia	December	NBL manufacturing and sales
LG Chem Hangzhou Advanced Materials Co., Ltd. ⁸	70	70	China	December	Polarizer sheet manufacturing and sales
LG-HY BCM CO., LTD. ⁹	51	51	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.	100	100	Vietnam	December	Sales and trading
LG Chem Malaysia SDN.BHD.	100	100	Malaysia	December	Sales and trading
LG Chem BRASIL INTERMEDIACAO DE NEGOCIOS DO SETOR QUIMICO LTDA.	100	100	Brazil	December	Sales and trading
Aveo Pharmaceuticals, Inc. ¹⁰	100	100	USA	December	Anticancer drug sales and research
PT LG CHEM INDONESIA ¹¹	100	100	Indonesia	December	Sales and trading
TW Biomassenergy Co., Ltd ¹²	60	60	Korea	December	Plant utility manufacturing and sales
LG Chem America Advanced Materials, Inc. ¹³	100	-	USA	December	Battery materials manufacturing and sales
FarmHannong Co., Ltd. ¹⁴	100	100	Korea	December	Agricultural pesticide manufacturing and sales
Farmhannong America, Inc. ¹⁴	100	100	USA	December	Agricultural pesticide sales
FarmHannong(Thailand) Ltd. ¹⁴	100	100	Thailand	December	Research and development ("R&D") on seeds
FARMHANNONG(MALAYSIA) SDN. BHD. ¹⁴	100	100	Malaysia	December	Agricultural pesticide licensing
PT FARM HANNONG INDONESIA ¹⁴	100	100	Indonesia	December	Agricultural pesticide licensing
FarmHannong do Brasil Limitada ¹⁴	100	100	Brazil	December	Agricultural pesticide sales
LG Energy Solution (Nanjing) Co., Ltd. ¹	82	82	China	December	Small-battery manufacturing and sales
LG Energy Solution Michigan Inc. ¹	82	82	USA	December	Automotive battery research and manufacturing
LG Energy Solution Battery (Nanjing) Co., Ltd. ¹	82	82	China	December	Automotive battery manufacturing and sales
LG Energy Solution Wroclaw sp. z o.o. ¹	82	82	Poland	December	Automotive battery manufacturing and sales
LG Energy Solution Australia Pty Ltd ¹	82	82	Australia	December	ESS sales
LG Energy Solution Technology (Nanjing) Co., Ltd. ¹	82	82	China	December	Automotive battery manufacturing and sales
Ultium Cells Holdings LLC ¹	41	41	USA	December	Automotive battery manufacturing and sales
Ultium Cells LLC ¹	41	41	USA	December	Automotive battery manufacturing and sales
LG Energy Solution Europe GmbH ¹	82	82	Germany	December	ESS sales
LG Energy Solution (Taiwan), Ltd. ¹	82	82	Taiwan	December	Small-storage battery sales
Aremnuri. Co. Ltd ¹	82	82	Korea	December	Facility management and general cleaning

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	Percentage of ownership (%)		Business location	Closing month	Business activities
	March 31, 2024	December 31, 2023			
LG Energy Solution Fund I LLC ¹	82	82	USA	December	Investments in venture companies
LG Energy Solution Vertech Inc. ¹	82	82	USA	December	ESS installation service
LG Energy Solution Arizona, Inc ¹	82	82	USA	December	Small-battery manufacturing and sales
Baterias De Castilla, S.L. ¹	82	82	Spain	December	Special purpose company
L-H Battery Company, Inc. ^{1,15}	42	42	USA	December	Automotive battery manufacturing and sales
LG Energy Solution India Private Limited ¹	82	82	India	December	Small-battery sales
LG Energy Solution Arizona ESS, Inc. ^{1,16}	82	82	USA	December	ESS Manufacturing and sales
Nextstar Energy Inc. ^{1,17}	42	42	Canada	December	Automotive battery manufacturing and sales
LG Energy Solution Fund II LLC ¹	82	82	USA	December	Investments in venture companies
HL-GA BATTERY COMPANY LLC ^{1,18}	41	41	USA	December	Automotive battery manufacturing and sales
LG Energy Solution Japan Co., Ltd. ^{1,19}	82	-	Japan	December	ESS sales
Associates					
TECHWIN Co., Ltd.	20	20	Korea	December	Environment solution and construction of chemical plant
LG Chem Life Sciences Poland Ltd.	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
KOREA PRECURSOR CO., LTD. ²⁰	49	49	Korea	December	Battery materials manufacturing and sales
Sam-a Aluminium Company, Limited ^{1,21}	8	8	Korea	December	Aluminium sales and manufacturing
NEXPO Co., Ltd ^{1,22}	16	16	Korea	December	Battery products manufacturing and sales
Bricks Capital Management Global Battery Private Equity Fund I ^{1,23}	49	49	Korea	December	Collective investment scheme
Joint ventures²⁴					
SEETEC Co., Ltd.	50	50	Vietnam	December	DOP production and sales
LG Toray Hungary Battery Separator Kft.	50	50	Hungary	December	Plant utility and distribution, research assistance service
PT.HLI Green Power. ¹	41	41	Indonesia	December	Automotive battery manufacturing and sales

¹ As at March 31, 2024, LG Energy Solution, Ltd. owns shares in subsidiaries, associates and joint ventures, such as LG Energy Solution (Nanjing) Co., Ltd. and others, and the Group has stated the shares of those companies as effective share ratio.

² As at March 31, 2024, Ningbo LG Yongxing Chemical Co., Ltd. owns 100% of Ningbo Zhenhai LG Yongxing Trade Co.'s shares.

³ As at March 31, 2024, LG Chemical India Pvt. Ltd. owns 100% of LG Polymers India Pvt. Ltd.'s shares.

⁴ As at March 31, 2024, LG Chem (China) Investment Co., Ltd. owns 100% of LG Chem China Tech Center's shares.

⁵ During the year ended December 31, 2023, LG Chemical India Pvt. Ltd. additionally acquired shares of LG Polymers India Pvt. Ltd. for ₩12,390 million.

⁶ During the three-month period ended March 31, 2024, the Group additionally acquired shares of LG CHEM FUND I LLC for ₩8,346 million.

⁷ During the three-month period ended March 31, 2024, LG Chem Life Science Innovation Center, Inc. changed its name to LG Chem Life Sciences USA Inc.

⁸ During the year ended December 31, 2023, the Group reclassified the shares of LG Chem Hangzhou Advanced Materials Co., Ltd. amounting to ₩11,712 million as assets held for sale.

⁹ During the year ended December 31, 2023, the Group additionally acquired shares of LG BCM for

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₩80,257 million. Meanwhile, the percentage of ownership has been reduced due to paid-in capital increase with allotment to the third party, and the company's name was changed to LG-HY BCM Co., Ltd.

¹⁰ During the year ended December 31, 2023, LG Chem Life Sciences USA Inc. (formerly, LG Chem Life Science Innovation Center, Inc.) invested ₩701,103 million for a 100% share in Aveo Pharmaceuticals, Inc.

¹¹ During the year ended December 31, 2023, the Group invested ₩886 million for a 100% share in PT LG CHEM INDONESIA.

¹² During the year ended December 31, 2023, the Group invested ₩26,400 million for a 60% share in TW Biomassenergy Co., Ltd.

¹³ During the three-month period ended March 31, 2024, LG Chem America Advanced Materials, Inc. was established and the Group has newly acquired a 100% interest for ₩133,130 million.

¹⁴ As at March 31, 2024, FarmHannong Co., Ltd. owns 100% of Farmhannong America, Inc., FarmHannong(Thailand) Ltd., FARMHANNONG(MALAYSIA) SDN.BHD., PT FARM HANNONG INDONESIA and FarmHannong do Brasil Limitada's shares.

¹⁵ During the year ended December 31, 2023, L-H Battery Company, Inc. was established and LG Energy Solution has newly acquired a 51% interest for ₩548,958 million.

¹⁶ During the year ended December 31, 2023, LG Energy Solution Arizona ESS, Inc. was established, and LG Energy Solution has newly acquired a 100% interest for ₩39,936 million.

¹⁷ During the year ended December 31, 2023, Nextstar Energy Inc. was established, and LG Energy Solution has newly acquired a 51% interest for ₩579,075 million.

¹⁸ During the year ended December 31, 2023, HL-GA Battery Company LLC was established and LG Energy Solution has newly acquired a 50% interest for ₩143,198 million. Although the Group has less than a majority ownership interest in HL-GA Battery Company LLC, it is considered to have control over HL-GA Battery Company 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.

¹⁹ During the three-month period ended March 31, 2024, LG Energy Solution Japan Co., Ltd. was established, and LG Energy Solution has newly acquired a 100% interest for ₩535 million.

²⁰ During the year ended December 31, 2023, the Group additionally acquired shares of KOREA PRECURSOR CO., LTD. for ₩30,576 million.

²¹ During the year ended December 31, 2023, LG Energy Solution, Ltd. newly acquired 10% shares of Sam-a Aluminum Company, Limited for ₩46,575 million. Although the ownership interest in Sam-a Aluminum Company, Limited. is less than 20%, the Group can exercise the majority voting rights in its decision-making process in accordance with the shareholders' agreement. Therefore, it is judged to have a significant influence.

²² During the year ended December 31, 2023, LG Energy Solution, Ltd. newly acquired 19% shares of NEXPO Co., Ltd for ₩2,375 million. Although the ownership interest in NEXPO Co., Ltd. is less than 20%, the Group can exercise the majority voting rights in its decision-making process in accordance with the shareholders' agreement. Therefore, it is judged to have a significant influence.

²³ During the year ended December 31, 2023, LG Energy Solution, Ltd. newly acquired 59.9% interests of Bricks Capital Management Global Battery No. 1 Private Equity Limited Partnership Company for ₩13,381 million. Although the Group's ownership interest in the limited partnership is more than 50%, since the consent of all equity participants is required for major decisions, the Group determine that the Group has not control over the limited partnership and has classified it as an associate.

²⁴ 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.

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1.4 Changes in Scope for Consolidation

Subsidiaries newly included in the consolidation for the three-month period ended March 31, 2024, are as follows:

Subsidiary	Reason
LG Chem America Advanced Materials, Inc.	Newly established
LG Energy Solution Japan Co., Ltd.	Newly established

2. Material Accounting Policies

The principal accounting policies applied in the preparation of these condensed 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 condensed consolidated interim financial statements have been condensed, restructured and translated into English from the Korean language financial statements.

The Group's condensed consolidated interim financial statements for the three-month period ended March 31, 2024, have been prepared in accordance with Korean IFRS 1034 *Interim Financial Reporting*. These condensed consolidated interim financial statements have been prepared in accordance with Korean IFRS which is effective or early adopted as at March 31, 2024.

2.1.1 New and amended standards and interpretations adopted by the Group

The Group has applied the following standards and interpretations for the first time for their annual reporting period commencing January 1, 2024.

(a) Amendments to Korean IFRS 1001 Presentation of Financial Statements – Classification of Liabilities as Current or Non-current, Non-current Liabilities with Covenants

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. In addition, covenants that an entity is required to comply with after the end of the reporting period would not affect classification of a liability as current or non-current at the reporting date. When an entity classifies a liability that is subject to the covenants which an entity is required to comply with within twelve months of the reporting date as non-current at the end of the reporting period, the entity shall disclose information in the notes to understand the risk that non-current liabilities with covenants could become repayable within twelve months after the reporting period. The amendment does not have a significant impact on the consolidated interim financial statements.

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(b) Amendments to Korean IFRS 1007 Statement of Cash Flows, Korean IFRS 1107 Financial Instruments: Disclosures – Supplier finance arrangements

When applying supplier finance arrangements, an entity shall disclose information about its supplier finance arrangements that enables users of financial statements to assess the effects of those arrangements on the entity's liabilities and cash flows and on the entity's exposure to liquidity risk. The amendments should be applied for annual periods beginning on or after January 1, 2024, and earlier application is permitted. There is no impact on the interim financial statements in accordance with the transitional provision that does not require to disclose the relevant information during the interim reporting period within the fiscal year in which these amendments are first applied.

(c) Amendments to Korean IFRS 1116 Leases – Lease Liability in a Sale and Leaseback

When subsequently measuring lease liabilities arising from a sale and leaseback, a seller-lessee shall determine lease payments or revised lease payments in a way that the seller-lessee would not recognize any amount of the gain or loss that relates to the right of use retained by the seller-lessee. The amendments should be applied for annual periods beginning on or after January 1, 2024, and earlier application is permitted. The amendment does not have a significant impact on the consolidated interim financial statements.

(d) Amendments to Korean IFRS 1001 Presentation of Financial Statements – Disclosure of Cryptographic Assets

The amendments require an additional disclosure if an entity holds cryptographic assets, or holds cryptographic assets on behalf of the customer, or issues cryptographic assets. The amendments should be applied for annual periods beginning on or after January 1, 2024, and earlier application is permitted. The amendment does not have a significant impact on the consolidated interim financial statements.

2.1.2 New standards and interpretations not yet adopted by the Group

The following new accounting standards and interpretations had been issued but were not mandatory for annual reporting periods ending on December 31, 2024.

(a) Amendments to Korean IFRS 1021 The Effects of Changes in Foreign Exchange Rates and 1101 First-time Adoption of International Financial Reporting Standards – Lack of Exchangeability

When an entity estimates a spot exchange rate because exchangeability between two currencies is lacking, the entity shall disclose related information. The amendments should be applied for annual periods beginning on or after January 1, 2025, and earlier application is permitted. The Group is in review for the impact of these amendments on the consolidated interim financial statements.

2.2 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.

The Group is within the scope of the Pillar Two model rules. The Group recognized an additional income tax expenses in relation to the rules and applied the exception to recognizing and disclosing information about deferred tax and assets and liabilities related to Pillar Two income Taxes.

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3. Financial Risk Management

3.1 Financial Risk Factors

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

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

(a) Market risk

Foreign exchange risk

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

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

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

As at March 31, 2024 and December 31, 2023, the Group's monetary assets and liabilities denominated in currencies other than its functional currency, are as follows:

<i>(in millions of Korean won)</i>	March 31, 2024				December 31, 2023			
		Assets	Liabilities		Assets	Liabilities		
USD	₩	6,338,292	₩	11,630,460	₩	6,713,566	₩	11,155,591
EUR		556,589		4,419,361		626,087		4,459,588
JPY		14,987		115,055		20,136		119,699
CNY and others		361,190		37,046		292,973		22,210

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As at March 31, 2024 and December 31, 2023, if the Group's functional currency had weakened / strengthened by 10% against the US dollar and other currencies with all other variables held constant, profit before income tax would have been affected as follows:

<i>(in millions of Korean won)</i>	March 31, 2024				December 31, 2023			
		10% Increase	10% Decrease		10% Increase	10% Decrease		
USD	₩	(437,716)	₩	437,716	₩	(359,888)	₩	359,888
EUR		(356,202)		356,202		(363,185)		363,185
JPY		(10,006)		10,006		(9,954)		9,954
CNY and others		37,570		(37,570)		31,036		(31,036)

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

As at March 31, 2024 and December 31, 2023, 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)

		March 31, 2024					Book amount		
Contractor		Contract amount	Contract exchange rate	Contract inception date	Contract maturity	Assets	Liabilities		
Currency Forward	Shinhan Bank	USD 500	1,135.60	2020.10.14	2024.10.15	₩ 96,537	₩	-	
	KB Kookmin Bank	USD 500	1,102.83	2020.11.24	2029.4.16	71,874		-	
Currency swap	SMBC	USD 200	1,118.00	2021.5.28	2024.5.28	44,713		-	
	KDB	USD 130	1,135.60	2021.6.24	2025.6.24	32,096		-	
	KDB	USD 35	1,135.60	2021.6.24	2026.6.24	9,512		-	
	Shinhan Bank	USD 300	1,131.80	2021.7.7	2026.7.7	48,421		-	
	Woori Bank	USD 100	1,131.80	2021.7.7	2026.7.7	16,224		-	
	Industrial and Commercial Bank of China	USD 100	1,131.80	2021.7.7	2026.7.7	16,335		-	
	Shinhan Bank	USD 100	1,131.80	2021.7.7	2031.7.7	11,998		-	
	Woori Bank	USD 200	1,131.80	2021.7.7	2031.7.7	24,462		-	
	KDB	USD 200	1,131.80	2021.7.7	2031.7.7	24,517		-	
	KDB	USD 250	1,289.70	2022.6.15	2025.6.15	15,777		-	
	Shinhan Bank	USD 110	1,289.70	2022.6.15	2027.6.15	6,651		-	
	The Export-Import Bank of Korea	USD 200	1,305.90	2022.7.14	2025.7.14	4,637		-	
Shinhan Bank	USD 100	1,305.90	2022.7.14	2025.7.14	2,386		-		
KDB	USD 200	1,233.40	2023.1.26	2025.1.26	24,603		-		
Shinhan Bank	USD 100	1,233.40	2023.1.26	2026.1.26	12,056		-		
KDB	USD 100	1,233.40	2023.1.26	2026.1.26	12,201		-		

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

March 31, 2024						
Contractor	Contract amount	Contract exchange rate	Contract inception date	Contract maturity	Book amount	
					Assets	Liabilities
JP Morgan	USD 200	1,337.60	2023.9.25	2026.9.25	11,015	10,945
Shinhan Bank	USD 200	1,337.60	2023.9.25	2026.9.25	10,648	10,722
KDB	USD 400	1,337.60	2023.9.25	2028.9.25	24,617	30,788
Woori Bank	USD 200	1,337.60	2023.9.25	2028.9.25	12,319	15,407

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

December 31, 2023							
	Contractor	Contract amount	Contract exchange rate	Contract inception date	Contract maturity	Book amount	
						Assets	Liabilities
Currency Forward	Industrial and Commercial Bank of China	USD 158	1,218.70	2022.4.22	2024.2.1	₩ -	₩ 10,808
	Bank of America	USD 158	1,307.73	2023.12.5	2024.2.1	-	3,500
	Shinhan Bank	USD 500	1,135.60	2020.10.14	2024.10.15	65,388	-
	KB Kookmin Bank	USD 500	1,102.83	2020.11.24	2029.4.16	47,138	-
Currency swap	SMBC	USD 200	1,118.00	2021.5.28	2024.5.28	31,693	-
	KDB	USD 130	1,135.60	2021.6.24	2025.6.24	24,902	-
	KDB	USD 35	1,135.60	2021.6.24	2026.6.24	7,303	-
	Shinhan Bank	USD 300	1,131.80	2021.7.7	2026.7.7	31,996	-
	Woori Bank	USD 100	1,131.80	2021.7.7	2026.7.7	10,906	-
	Industrial and Commercial Bank of China	USD 100	1,131.80	2021.7.7	2026.7.7	11,057	-
	Shinhan Bank	USD 100	1,131.80	2021.7.7	2031.7.7	6,234	-
	Woori Bank	USD 200	1,131.80	2021.7.7	2031.7.7	13,025	-
	KDB	USD 200	1,131.80	2021.7.7	2031.7.7	13,108	-
	KDB	USD 250	1,289.70	2022.6.15	2025.6.15	30	-
	Shinhan Bank	USD 110	1,289.70	2022.6.15	2027.6.15	-	1,399
	The Export-Import Bank of Korea	USD 200	1,305.90	2022.7.14	2025.7.14	-	6,571
	Shinhan Bank	USD 100	1,305.90	2022.7.14	2025.7.14	-	3,274
	KDB	USD 200	1,233.40	2023.1.26	2025.1.26	12,236	-
	Shinhan Bank	USD 100	1,233.40	2023.1.26	2026.1.26	5,097	-
KDB	USD 100	1,233.40	2023.1.26	2026.1.26	5,332	-	
JP Morgan	USD 200	1,337.60	2023.9.25	2026.9.25	-	10,945	
Shinhan Bank	USD 200	1,337.60	2023.9.25	2026.9.25	-	10,722	
KDB	USD 400	1,337.60	2023.9.25	2028.9.25	-	30,788	

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

December 31, 2023						
Contractor	Contract amount	Contract exchange rate	Contract inception date	Contract maturity	Book amount	
					Assets	Liabilities
Woori Bank	USD 200	1,337.60	2023.9.25	2028.9.25	-	15,407

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), NYSE (New York Stock Exchange), SZSE (Shenzhen Stock Exchange), HSI (Hang Seng Index), ASX (Australian Stock Exchange) and KOSPI index.

The table below summarizes the impact of increases/decreases of the listed stock price index on the Group's equity before tax effects as at March 31, 2024 and December 31, 2023. The analysis is based on the assumption that the equity index has increased/decreased by 10% with all other variables held constant, and that all the Group's equity instruments moved in line with the index.

(in millions of Korean won)	December 31, 2023			
	March 31, 2024		December 31, 2023	
	10% Increase	10% Decrease	10% Increase	10% Decrease
NASDAQ	₩ 15,795	₩ (15,795)	₩ 14,104	₩ (14,104)
ASX	642	(642)	1,640	(1,640)
NYSE	935	(935)	520	(520)
SZSE	16,577	(16,577)	8,534	(8,534)
HSI	8,411	(8,411)	9,277	(9,277)
KOSPI	14,335	(14,335)	15,989	(15,989)
Total	₩ 56,695	₩ (56,695)	₩ 50,064	₩ (50,064)

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Interest rate risk

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

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

The table below summarizes the impact of increases/decreases of interest rate on the Group's equity and post-tax profit for the three-month periods ended March 31, 2024 and 2023. 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	
		December 31,		December 31,	
		March 31, 2024	2023	March 31, 2024	2023
Increase	Deposits	₩ 21,318	₩ 25,547	₩ 21,318	₩ 25,547
	Borrowings	(43,897)	(43,535)	(43,897)	(43,535)
		₩ (22,579)	₩ (17,988)	₩ (22,579)	₩ (17,988)
Decrease	Deposits	₩ (21,318)	₩ (25,547)	₩ (21,318)	₩ (25,547)
	Borrowings	43,897	43,535	43,897	43,535
		₩ 22,579	₩ 17,988	₩ 22,579	₩ 17,988

The deposits exposed to the above interest rate risk are held for the purpose of meeting the short-term demand for cash as it is easily convertible to a determined amount of cash. Also, the above borrowings 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 925 million (equivalent to ₩1,245,790 million) to hedge interest rate risk of variable interest rate borrowings.

(b) Credit risk

Credit risk arises from trade receivables and that the Group holds, as well as debt instruments at amortized cost.

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Trade receivables

The Group applies the simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for trade receivables. To measure the expected credit losses, trade receivables have been grouped based on shared credit risk characteristics and the days past due. The loss allowance provision as at March 31, 2024 is as follows. Expected credit losses include forward-looking information.

<i>(in millions of Korean won)</i>	Receivables not		Receivables past		Impaired		Total	
	past due¹		due but not		receivables²			
			impaired¹					
March 31, 2024								
(trade receivables)								
Gross carrying amount	₩	8,045,733	₩	252,928	₩	3,552	₩	8,302,213
Expected loss rate		0.0%		0.2%		21.2%		0.0%
Loss allowance provision	₩	1,416	₩	550	₩	751	₩	2,717
December 31, 2023								
(trade receivables)								
Gross carrying amount	₩	8,065,741	₩	148,163	₩	1,854	₩	8,215,758
Expected loss rate		0.0%		0.4%		64.0%		0.0%
Loss allowance provision	₩	1,071	₩	552	₩	1,187	₩	2,810

¹ Note 7.(3) for aging analysis.

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

Movements in the loss allowance provision for trade receivables for the three-month period ended March 31, 2024 and for the year ended December 31, 2023, are as follows:

<i>(in millions of Korean won)</i>	Trade receivables			
	March 31, 2024		December 31, 2023	
Beginning balance	₩	2,810	₩	5,017
Reversal of loss allowance recognized in profit or loss		(64)		(636)
Receivables written off as uncollectible		-		(1,234)
Exchange differences		(29)		(337)
Ending balance	₩	2,717	₩	2,810

As at March 31, 2024, the carrying amount of trade receivables representing the maximum exposure to credit risk amounts to ₩8,299,496 million (December 31, 2023: ₩8,212,948 million).

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Other financial assets at amortized cost

Movements in loss allowance provision for other financial assets at amortized cost for the three-month period ended March 31, 2024 and for the year ended December 31, 2023, are as follows:

(in millions of Korean won)

	Other receivables			
	March 31, 2024		December 31, 2023	
Beginning balance	₩	628	₩	682
Reversal of loss allowance recognized in profit or loss		-		-
Receivables written off as uncollectible		-		(54)
Ending balance	₩	628	₩	628

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

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

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

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

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

(c) 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. When predicting liquidity, considerations are taken into account from external regulations or legal requirements such as funding plans of consolidation units, compliance with agreements, internal target financial ratios within consolidation units, and restrictions related to currency.

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The table below categorizes the financial liabilities of consolidation units based on the remaining period from the end of the reporting period to the contract maturity date. The cash flows presented in the table are amounts not discounted as present value and include the cash flows related to interest expenses.

(in millions of Korean won)

	March 31, 2024			
	Less than 1 year	Between 1-2 years	Between 2-5 years	Over 5 years
Non-derivative financial instruments				
Borrowings (excluding lease liabilities)	₩ 9,196,608	₩ 4,482,598	₩ 10,141,705	₩ 3,774,898
Lease liabilities	141,609	99,367	156,903	319,111
Trade and other payables	8,246,793	17,450	13,343	683
	<u>17,585,010</u>	<u>4,599,415</u>	<u>10,311,951</u>	<u>4,094,692</u>
Derivative instruments				
Gross settlement currency forwards and swaps				
(Inflows)	(1,421,555)	(932,487)	(2,237,014)	(1,386,783)
Outflows	1,188,439	870,114	2,094,930	1,149,168
	<u>(233,116)</u>	<u>(62,373)</u>	<u>(142,084)</u>	<u>(237,615)</u>
	<u>₩ 17,351,894</u>	<u>₩ 4,537,042</u>	<u>₩ 10,169,867</u>	<u>₩ 3,857,077</u>

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(in millions of Korean won)	December 31, 2023			
	Less than 1 year	Between 1-2 years	Between 2-5 years	Over 5 years
Non-derivative financial instruments				
Borrowings (excluding lease liabilities)	₩ 5,876,982	₩ 3,647,796	₩ 11,356,290	₩ 5,763,791
Lease liabilities	123,528	121,499	85,865	242,717
Trade and other payables	9,022,994	19,953	13,363	102
	<u>15,023,504</u>	<u>3,789,248</u>	<u>11,455,518</u>	<u>6,006,610</u>
Derivative instruments				
Gross settlement currency forwards and swaps				
(Inflows)	(1,416,608)	(1,256,394)	(2,152,233)	(1,335,335)
Outflows	1,278,089	1,204,261	2,102,600	1,155,602
	<u>(138,519)</u>	<u>(52,133)</u>	<u>(49,633)</u>	<u>(179,733)</u>
	<u>₩ 14,884,985</u>	<u>₩ 3,737,115</u>	<u>₩ 11,405,885</u>	<u>₩ 5,826,877</u>

Although not included in the above cash flow, the agreement is made to purchase additional shares of LG Toray Hungary Battery Separator Kft. in accordance with the agreed price calculation method (Note 18). Additionally, during the period ended December 31, 2023, the Group issued exchangeable bonds that allow issuers and investors to exercise their early redemption rights (Note 14).

As at March 31, 2024 and December 31, 2023, the Group has entered into swap contracts for which cash flow hedge accounting is applied, to avoid market price fluctuation of raw materials.

(in millions of Korean won)	Purpose of the contracts	Hedged items	Financial institution	Maturity	March 31, 2024		December 31, 2023	
					Assets	Liabilities	Assets	Liabilities
Merchandise (raw materials) swap ¹	Cash flow hedge	Non-ferrous metal	Citi Bank and others	2026.12	₩ 343	₩ 4,104	₩ 88	₩ 4,899

¹Gain (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).

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Details of financial guarantee contracts by maturity as at March 31, 2024 and December 31, 2023, are as follows:

(in millions of Korean won)

	March 31, 2024			
	Less than 1 year	Between 1-2 years	Between 2-5 years	Over 5 years
Financial guarantee contracts ¹	₩ 360,269	₩ -	₩ -	₩ -

(in millions of Korean won)

	December 31, 2023			
	Less than 1 year	Between 1-2 years	Between 2-5 years	Over 5 years
Financial guarantee contracts ¹	₩ 285,602	₩ -	₩ -	₩ -

¹ The financial guarantee contracts above are for joint ventures and are presented based on the maximum amount of guarantee that can be requested as at March 31, 2024 and December 31, 2023. Meanwhile, the total amount of payment guarantee contracted as at March 31, 2024, is ₩ 478,787 million (December 31, 2023: ₩458,382 million) (Note 18).

3.2 Capital Risk Management

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

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

The gearing ratio and debt-to-equity ratio as at March 31, 2024 and December 31, 2023, were as follows:

<i>(in millions of Korean won, except for ratios)</i>	March 31, 2024	December 31, 2023
Total borrowings (Note 14) (A)	₩ 24,683,170	₩ 21,928,114
Less: cash and cash equivalents (B)	(9,263,241)	(9,084,899)
Net debt (C=A+B)	15,419,929	12,843,215
Total liabilities (D)	38,936,772	36,528,509
Total equity (E)	43,178,797	40,938,185
Total capital (F=C+E)	58,598,726	53,781,400
Gearing ratio (C/F)	26.3%	23.9%
Debt-to-equity ratio (D/E)	90.2%	89.2%

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3.3 Fair Value

Carrying amount and fair value of financial instruments by category as at March 31, 2024 and December 31, 2023, are as follows:

(in millions of Korean won)

	March 31, 2024		December 31, 2023	
	Carrying amount	Fair value	Carrying amount	Fair value
Financial assets (current)				
Cash and cash equivalents	₩ 9,263,241	1	₩ 9,084,899	1
Deposits held by financial institutions	31,000	1	57,106	1
Trade receivables	8,152,462	1	8,082,952	1
Other receivables (excluding deposits held by financial institutions)	891,260	1	625,072	1
Current derivative financial assets (currency forward)	96,537	96,537	65,388	65,388
Current derivative financial assets (excluding currency forward)	182	182	51	51
Current derivative financial assets (currency swap)	69,316	69,316	31,693	31,693
Current derivative financial assets (purchase of interests)	47,116	47,116	44,296	44,296
Financial assets (non-current)				
Deposits held by financial institutions	272,425	1	267,558	1
Trade receivables	147,034	1	129,996	1
Other receivables (excluding deposits held by financial institutions)	177,859	1	160,135	1
Other non-current financial assets (carried at fair value)				
Marketable financial assets (excluding derivative financial assets)	580,042	580,042	507,186	507,186
Non-marketable financial assets ³	480,746	480,746	514,924	514,924
Non-current derivative financial assets (currency forward)	71,874	71,874	47,138	47,138
Non-current derivative financial assets (excluding currency forward)	296,033	296,033	142,076	142,076
Non-current derivative financial assets (purchase of interests)	17,941	17,941	17,177	17,177
Financial liabilities (current)				
Trade and other payables	8,246,793	1	9,022,994	1
Current borrowings (excluding lease liabilities/ exchangeable bond)	5,531,624	1	4,979,229	1
Current borrowings (exchangeable bond)	2,138,515	2,241,264	1,998,423	2,220,842
Current lease liabilities	119,327	²	100,130	²
Current derivative financial liabilities(currency forward)	-	-	14,308	14,308
Current derivative financial liabilities (excluding currency forward)	3,289	3,289	3,936	3,936
Current derivative financial liabilities (right of exchange/option)	451,649	451,649	501,951	501,951

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<i>(in millions of Korean won)</i>	March 31, 2024		December 31, 2023	
	Carrying amount	Fair value	Carrying amount	Fair value
Financial guarantee contracts liabilities	4,633	¹	3,715	¹
Financial liabilities (non-current)				
Non-current borrowings (excluding lease liabilities)	16,470,657	16,253,434	14,458,596	13,537,804
Non-current lease liabilities	423,047	²	391,736	²
Other non-current payables	31,476	¹	33,418	¹
Non-current derivative financial liabilities (excluding currency forward)	68,677	68,677	80,069	80,069
Financial liabilities at amortized cost	143,589	¹	-	-
Non-current derivative financial liabilities (purchase of interests)	20,766	20,766	19,881	19,881

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

³ Including some unmarketable financial assets for which acquisition cost is used as the best estimate of fair value.

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

The fair value of financial liabilities was calculated by applying the following discount rate to the nominal value of expected future outflow cash flows.

Discount rate	March 31, 2024	December 31, 2023	Remark
Non-current borrowings (excluding lease liabilities/ exchangeable bond)	3.58% ~ 4.82%	3.64% ~ 4.79%	Yield of won debenture with credit rating (AA+)
Current borrowings (Exchangeable Bond)	5.15% / 5.22% 5.10% / 5.19%	4.55% / 4.47%	Yield of foreign currency debenture equal to the maturity of the evaluation target

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).

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Fair value hierarchy of the financial instruments that are either measured at fair value or their fair values are disclosed for as at March 31, 2024 and December 31, 2023, are as follows:

<i>(in millions of Korean won)</i>	March 31, 2024			
	Level 1	Level 2	Level 3	Total
Financial assets/liabilities measured at fair value				
Other non-current financial assets (marketable financial assets)	₩ 580,042	₩ -	₩ -	580,042
Other non-current financial assets (non-marketable financial assets) ¹	-	-	480,746	480,746
Current derivative financial assets (currency forward)	-	96,537	-	96,537
Current derivative financial assets (excluding currency forward)	-	182	-	182
Current derivative financial assets (currency swap)	-	69,316	-	69,316
Current derivative financial assets (purchase of interests)	-	-	47,116	47,116
Non-current derivative financial assets (currency forward)	-	71,874	-	71,874
Non-current derivative financial assets (excluding currency forward)	-	296,033	-	296,033
Non-current derivative financial assets (purchase of interests)	-	-	17,941	17,941
Current derivative financial liabilities (excluding currency forward)	-	3,289	-	3,289
Current derivative financial liabilities (right of exchange/option)	-	-	451,649	451,649
Non-current derivative financial liabilities (excluding currency forward)	-	68,677	-	68,677
Non-current derivative financial liabilities (purchase of interests)	-	-	20,766	20,766
Financial assets/liabilities not measured at fair value				
Current borrowings (exchangeable bond)	-	-	2,241,264	2,241,264
Non-current borrowings (excluding lease liabilities)	-	-	16,253,434	16,253,434

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(in millions of Korean won)	December 31, 2023			
	Level 1	Level 2	Level 3	Total
Financial assets/liabilities measured at fair value				
Other non-current financial assets (marketable financial assets)	₩ 507,186	₩ -	₩ -	507,186
Other non-current financial assets (non-marketable financial assets) ¹	-	-	514,924	514,924
Current derivative financial assets (currency forward)	-	65,388	-	65,388
Current derivative financial assets (excluding currency forward)	-	51	-	51
Current derivative financial assets (currency swap)	-	31,693	-	31,693
Current derivative financial assets (purchase of interests)	-	-	44,296	44,296
Non-current derivative financial assets (currency forward)	-	47,138	-	47,138
Non-current derivative financial assets (excluding currency forward)	-	142,076	-	142,076
Non-current derivative financial assets (purchase of interests)	-	-	17,177	17,177
Current derivative financial liabilities (currency forward)	-	14,308	-	14,308
Current derivative financial liabilities (excluding currency forward)	-	3,936	-	3,936
Current derivative financial liabilities (right of exchange/option)	-	-	501,951	501,951
Non-current derivative financial liabilities (excluding currency forward)	-	80,069	-	80,069
Non-current derivative financial liabilities (purchase of interests)	-	-	19,881	19,881
Financial assets/liabilities not measured at fair value				
Current borrowings (exchangeable bond)	-	-	2,220,842	2,220,842
Non-current borrowings (excluding lease liabilities)	-	-	13,537,804	13,537,804

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

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 March 31, 2024 and December 31, 2023, are as follows:

<i>(in millions of Korean won)</i>	March 31, 2024				
	Fair value	Level	Valuation Technique	Inputs	Coverage of Level 3 inputs
Current derivative financial assets (purchase of interests)	₩ 47,116	3	Monte Carlo Simulation	Stock volatility of underlying assets	32.78%
				Stock price correlation coefficient	37.38%
				Volatility of financial indicators	42.17%
Non-current derivative financial assets (purchase of interests)	17,941	3	Binominal option pricing model	Volatility	31.51%
				Risk-free rate	4.57%
Non-current derivative financial liabilities (purchase of interests)	20,766	3	Monte Carlo Simulation	Stock volatility of underlying assets	32.78%
				Stock price correlation coefficient	42.98%
				Volatility of financial indicators	21.82%
Other non-current financial assets (Non-listed shares)	88,018	3	Binominal option-pricing model	Volatility	45.6% and others
	19,980	3	Discounted cash flows model	Discount rates	11.31% and others
	134,507	3	Adjusted net asset method	-	-
Current financial liabilities (right of exchange/option)	451,649	3	Binominal option-pricing model	Stock price of underlying assets	₩ 395,000 <i>(in Korean won)</i>
				Risk-free rate	3.35% / 3.42%
				Risk rate	5.15% / 5.22%
				Volatility	41.69%

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<i>(in millions of Korean won)</i>		December 31, 2023			
	Fair value	Level	Valuation Technique	Inputs	Coverage of Level 3 inputs
Current derivative financial assets (purchase of interests)	₩ 44,296	3	Monte Carlo Simulation	Stock volatility of underlying assets	32.78%
				Stock price correlation coefficient	37.38%
				Volatility of financial indicators	42.17%
Non-current derivative financial assets (purchase of interests)	17,177	3	Binominal option pricing model	Volatility	31.51%
				Risk-free rate	4.57%
Non-current derivative financial liabilities (purchase of interests)	19,881	3	Monte Carlo Simulation	Stock volatility of underlying assets	32.78%
				Stock price correlation coefficient	42.98%
				Volatility of financial indicators	21.82%
Other non-current financial assets (Non-listed shares)	82,517	3	Binominal option-pricing model	Volatility	45.6% and others
	37,164	3	Discounted cash flows model	Discount rates	11.31% and others
	133,655	3	Adjusted net asset method	-	-
Current financial liabilities (right of exchange/option)	501,951	3	Binominal option-pricing model	Stock price of underlying assets	₩ 427,500 <i>(in Korean won)</i>
				Risk-free rate	3.17% / 3.19%
				Risk rate	4.55% / 4.47%
				Volatility	45.38%

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, 2023, except for the estimates used to determine income tax expense.

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5. Financial Instruments by Category

Categorizations of financial instruments as at March 31, 2024 and December 31, 2023, are as follows:

(in millions of Korean won)

	March 31, 2024				
	Financial assets at amortized cost	Financial assets at fair value through profit or loss	Financial assets at fair value through other comprehensive income	Other financial assets¹	Total
Financial assets					
Cash and cash equivalents	₩ 9,263,241	₩ -	₩ -	₩ -	₩ 9,263,241
Trade receivables	7,632,733	-	519,729	-	8,152,462
Non-current trade receivables	147,034	-	-	-	147,034
Other receivables	922,260	-	-	-	922,260
Other non-current receivables	450,284	-	-	-	450,284
Other current financial assets	-	-	-	213,151	213,151
Other non-current financial assets	-	444,493	616,295	385,848	1,446,636
Total	₩ 18,415,552	₩ 444,493	₩ 1,136,024	₩ 598,999	₩ 20,595,068

(in millions of Korean won)

	March 31, 2024		
	Financial liabilities at amortized cost	Other financial liabilities²	Total
Financial liabilities			
Trade payables	₩ 4,195,289	₩ -	₩ 4,195,289
Other payables	4,048,312	-	4,048,312
Borrowings (current)	7,637,254	152,212	7,789,466
Other current liabilities (dividend payable)	354,921	-	354,921
Other current financial liabilities	-	459,571	459,571
Other non-current financial liabilities	143,588	89,444	233,032
Other non-current payables	31,476	-	31,476
Borrowings (non-current)	16,470,657	423,047	16,893,704
Total	₩ 32,881,497	₩ 1,124,274	₩ 34,005,771

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(in millions of Korean won)

	December 31, 2023				
	Financial assets at amortized cost	Financial assets at fair value through profit or loss	Financial assets at fair value through other comprehen- sive income	Other financial assets ¹	Total
Financial assets					
Cash and cash equivalents	₩ 9,084,899	₩ -	₩ -	₩ -	₩ 9,084,899
Trade receivables	7,425,071	-	657,881	-	8,082,952
Non-current trade receivables	129,996	-	-	-	129,996
Other receivables	681,307	-	871	-	682,178
Other non-current receivables	427,693	-	-	-	427,693
Other current financial assets	-	-	-	141,428	141,428
Other non-current financial assets	-	387,487	634,623	206,391	1,228,501
Total	<u>₩ 17,748,966</u>	<u>₩ 387,487</u>	<u>₩ 1,293,375</u>	<u>₩ 347,819</u>	<u>₩ 19,777,647</u>

(in millions of Korean won)

	December 31, 2023		
	Financial liabilities at amortized cost	Other financial liabilities ²	Total
Financial liabilities			
Trade payables	₩ 4,117,913	₩ -	₩ 4,117,913
Other payables	4,905,081	-	4,905,081
Borrowings (current)	6,978,097	99,685	7,077,782
Other current financial liabilities	-	523,910	523,910
Other non-current financial liabilities	-	99,950	99,950
Other non-current payables	33,418	-	33,418
Borrowings (non-current)	14,458,596	391,736	14,850,332
Total	<u>₩ 30,493,105</u>	<u>₩ 1,115,281</u>	<u>₩ 31,608,386</u>

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

² Other financial liabilities include lease liabilities, derivative liabilities, financial guarantee contract liabilities and negotiated borrowings that are not subject to the categorizations.

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Net gains or losses on each category of financial instruments for the three-month periods ended March 31, 2024 and 2023, are as follows:

<i>(in millions of Korean won)</i>	2024	2023
Dividend income		
Financial assets at fair value through other comprehensive income	₩ -	₩ 12,920
Impairment losses(reversal)		
Financial assets at amortized cost	(64)	(525)
Interest income		
Financial assets at amortized cost	98,761	69,588
Interest expense		
Financial liabilities at amortized cost	(231,422)	(130,429)
Other financial liabilities	(3,493)	(2,460)
Financial assets at amortized cost ¹	(84)	(5,807)
Gain (loss) on valuation		
Financial assets at fair value through profit or loss	22,717	3,482
Financial assets at fair value through other comprehensive income	(23,450)	(2,762)
Derivative instruments	313,248	129,976
Exchange differences		
Financial assets at amortized cost	298,862	224,699
Financial liabilities at amortized cost	(419,011)	(148,659)
Derivative instruments	-	(517)
Other financial liabilities	-	(9,399)

¹ Fees paid to financial institutions for factoring.

6. Cash and Cash Equivalents

Details of cash and cash equivalents as at March 31, 2024 and December 31, 2023, are as follows:

<i>(in millions of Korean won)</i>	March 31, 2024	December 31, 2023
Bank deposits and cash on hand	₩ 3,846,869	₩ 3,411,992
Deposits held by financial institutions and others	5,416,372	5,672,907
Total	<u>₩ 9,263,241</u>	<u>₩ 9,084,899</u>

As at March 31, 2024, cash and cash equivalents include ₩7,041 million(December 31, 2023: ₩7,038 million), which is subject to a restriction on the use in association with the national R&D projects.

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7. Trade and Other Receivables

Trade and other receivables and its provisions for impairment, as at March 31, 2024 and December 31, 2023, are as follows:

(in millions of Korean won)

	March 31, 2024		
	Gross amount	Provision for impairment	Carrying amount
Trade receivables	₩ 8,155,179	₩ (2,717)	₩ 8,152,462
Non-current trade receivables	147,034	-	147,034
Other current receivables	922,888	(628)	922,260
Other non-current receivables	450,284	-	450,284
Total	₩ 9,675,385	₩ (3,345)	₩ 9,672,040

(in millions of Korean won)

	December 31, 2023		
	Gross amount	Provision for impairment	Carrying amount
Trade receivables	₩ 8,085,762	₩ (2,810)	₩ 8,082,952
Non-current trade receivables	129,996	-	129,996
Other current receivables	682,806	(628)	682,178
Other non-current receivables	427,693	-	427,693
Total	₩ 9,326,257	₩ (3,438)	₩ 9,322,819

Details of other receivables as at March 31, 2024 and December 31, 2023, are as follows:

(in millions of Korean won)

	March 31, 2024	December 31, 2023
Current		
Non-trade receivables	₩ 838,634	₩ 565,769
Deposits held by financial institutions ¹	31,000	57,106
Accrued income	13,074	16,570
Guarantee deposits provided	39,552	42,733
	<u>922,260</u>	<u>682,178</u>
Non-current		
Non-trade receivables	35,448	35,255
Deposits held by financial institutions ¹	272,425	267,558
Loans	12,789	9,890
Guarantee deposits provided	129,622	114,990
	<u>450,284</u>	<u>427,693</u>
Total	₩ 1,372,544	₩ 1,109,871

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¹ As at March 31, 2024, ₩266,100 million (December 31, 2023: ₩266,100 million) is withdrawal restricted in relation to large-, small- and medium-sized companies cooperation agreement, ₩132 million is restricted in use to be retained in connection with maintaining checking accounts (December 31, 2023: ₩114 million) is restricted in use. There are no employee loan deposits as at March 31, 2024 (December 31, 2023: ₩5,000 million). Also, PLN 1 million (December 31, 2023: PLN 4 million) is withdrawal restricted in relation to overseas transportation of hazardous waste and USD 4 million is restricted for use as collateral for the issuance of LOC.

The aging analysis of trade and other receivables as at March 31, 2024 and December 31, 2023, is as follows:

(in millions of Korean won)

	March 31, 2024		December 31, 2023	
	Trade receivables	Other receivables	Trade receivables	Other receivables
Receivables not past due	₩ 8,045,733	₩ 1,312,740	₩ 8,065,741	₩ 1,053,672
Past due but not impaired	252,928	59,804	148,163	56,199
Up to 3 months	225,278	43,751	106,433	31,350
Between 3-6 months	27,388	5,134	40,162	14,950
Over 6 months	262	10,919	1,568	9,899
Impaired receivables	3,552	628	1,854	628
Total	₩ 8,302,213	₩ 1,373,172	₩ 8,215,758	₩ 1,110,499

Movements on the provision for impairment of trade and other receivables for the three-month period ended March 31, 2024 and for the year ended December 31, 2023, are as follows:

(in millions of Korean won)

	March 31, 2024			
	Trade receivables		Other receivables	
	Current	Non-current	Current	Non-current
Beginning balance	₩ 2,810	₩ -	₩ 628	₩ -
Reversal	(64)	-	-	-
Business combination (Note 37)	-	-	-	-
Write-off	-	-	-	-
Exchange differences	(29)	-	-	-
Ending balance	₩ 2,717	₩ -	₩ 628	₩ -

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(in millions of Korean won)

	December 31, 2023			
	Trade receivables		Other receivables	
	Current	Non-current	Current	Non-current
Beginning balance	₩ 5,017	₩ -	₩ 682	₩ -
Reversal	(636)	-	-	-
Business combination (Note 37)	-	-	-	-
Write-off	(1,234)	-	(54)	-
Exchange differences	(337)	-	-	-
Ending balance	₩ 2,810	₩ -	₩ 628	₩ -

As at March 31, 2024 and December 31, 2023, the carrying amounts of trade and other receivables are approximation of their fair values.

The Group transferred trade receivables to financial institutions and derecognized the trade receivables from the financial statements at the date of disposal, as substantial all the risks and rewards were transferred and as at March 31, 2024, the balance of transferred trade receivables is ₩ 2,448 million (December 31, 2023: ₩ 38,358 million).

8. Other Financial Assets and Liabilities

Details of other financial assets and liabilities as at March 31, 2024 and December 31, 2023, are as follows:

(in millions of Korean won)

	March 31, 2024	December 31, 2023
Other financial assets		
Financial assets at fair value through other comprehensive income (derivative instruments) (current)	₩ 182	₩ 51
Financial assets at fair value through profit or loss (derivative instruments) (current)	212,969	141,377
Financial assets at fair value through other comprehensive income (derivative instruments) (non-current)	161	38
Financial assets at fair value through other comprehensive income (excluding derivative instruments) (non-current)	616,294	634,623
Financial assets at fair value through profit or loss (derivative instruments) (non-current)	385,688	206,353
Financial assets at fair value through profit or loss (excluding derivative instruments) (non-current)	444,493	387,487
	<u>1,659,787</u>	<u>1,369,929</u>
Other financial liabilities		
Financial guarantee contracts	4,633	3,715
Financial liabilities at fair value through other	3,289	3,936

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<i>(in millions of Korean won)</i>	March 31, 2024	December 31, 2023
comprehensive income (derivative instruments) (current)		
Financial liabilities at fair value through profit or loss (derivative instruments) (current)	451,649	516,259
Financial liabilities at fair value through other comprehensive income (derivative instruments) (non-current)	815	962
Financial liabilities at fair value through profit or loss (derivative instruments) (non-current)	88,628	98,988
Financial liabilities at amortized cost (non-current)	143,589	-
	<u>₩ 692,603</u>	<u>₩ 623,860</u>

Changes in equity and debt instruments included in other financial assets for the three-month period ended March 31, 2024 and for the year ended December 31, 2023, are as follows:

<i>(in millions of Korean won)</i>	March 31, 2024	December 31, 2023
¹		
Beginning balance	₩ 1,022,110	₩ 958,060
Acquisitions / transfer	29,425	273,210
Disposals	(600)	(4,640)
Loss on valuation through other comprehensive income (before income tax effects)	(23,449)	(222,998)
Gain on valuation through profit or loss	22,717	15,535
Exchange differences on translation of foreign operations	10,584	2,943
Ending balance	<u>₩ 1,060,788</u>	<u>₩ 1,022,110</u>

¹ The Group has entered into a Put-Option agreement regarding its equity investment for Volta Energy Solutions S.a.r.l for the purpose of guaranteeing the principal amount of investments. The main conditions of the Put-Option agreement are as follows:

Category	Details
Exercise date	For three years from the date on which three years lapse since it was acquired (Date of initial investment: January 27, 2021)
Exercise price	Investment amount deducting dividends (received from the time of investment to the time of exercise) from the investment
Other conditions	Put-option cannot be exercised in case Volta Energy Solutions S.a.r.l is listed

During the three-month period ended March 31, 2024 and for the year ended December 31, 2023, the Group did not recognize impairment for other financial assets.

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9. Inventories

Details of inventories as at March 31, 2024 and December 31, 2023, are as follows:

(in millions of Korean won)

	March 31, 2024					
		Gross amount		Provision for impairment		Carrying amount
Merchandise	₩	535,546	₩	(47,253)	₩	488,293
Finished / Semi-finished products		5,040,290		(297,715)		4,742,575
Work-in-process		23,435		-		23,435
Raw materials		2,717,219		(42,648)		2,674,571
Supplies		347,314		-		347,314
Goods-in-transit		1,389,849		-		1,389,849
Total	₩	10,053,653	₩	(387,616)	₩	9,666,037

(in millions of Korean won)

	December 31, 2023					
		Gross amount		Provision for impairment		Carrying amount
Merchandise	₩	487,525	₩	(33,453)	₩	454,072
Finished / Semi-finished products		5,217,031		(256,599)		4,960,432
Work-in-process		18,443		-		18,443
Raw materials		2,565,721		(81,448)		2,484,273
Supplies		341,616		-		341,616
Goods-in-transit		1,116,491		-		1,116,491
Total	₩	9,746,827	₩	(371,500)	₩	9,375,327

During the three-month period ended March 31, 2024, the cost of inventories recognized as expense and included in 'cost of sales' amounted to ₩6,940,937 million (2023: ₩9,536,885 million).

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10. Investments in Associates and Joint Ventures

Changes in investments in associates and joint ventures for the three-month period ended March 31, 2024 and for the year ended December 31, 2023, are as follows:

(in millions of
Korean won)

	March 31, 2024							
	Beginning balance	Acquisitions / transfer	Dividends	Share of profit (loss) of associates and joint ventures	Share of other comprehensive income (loss) of associates and joint ventures	Impairment / disposals	Others	Ending balance
TECHWIN Co., Ltd.	₩ 16,284	₩ -	₩ -	₩ 125	₩ -	₩ -	₩ -	₩ 16,409
SEETEC Co., Ltd	138,148	-	(7,500)	3,082	-	-	-	133,730
LG Life Sciences Poland Ltd.	17	-	-	-	-	-	-	17
HUAJIN NEW ENERGY MATERIALS(QUZHOU) CO., LTD.	79,383	-	-	3,769	2,183	-	-	85,335
PT.HLI Green Power	162,273	-	-	(12,788)	9,538	-	-	159,023
Sam-a Aluminium Company, Limited	46,257	-	-	266	-	-	-	46,523
NEXPO Co., Ltd	2,186	1,900	-	(59)	-	-	-	4,027
Bricks Capital Management Global Battery Private Equity Fund I	12,843	857	-	(50)	-	-	-	13,650
TL Chemical CO., Ltd	49,203	-	-	530	-	-	-	49,733
LG Toray Hungary Battery Separator Kft.	451,408	-	-	2,769	5,273	-	-	459,450
KOREA PRECURSOR CO., LTD.	47,604	-	-	(1,104)	-	-	-	46,500
	₩ 1,005,606	₩ 2,757	₩ (7,500)	₩ (3,460)	₩ 16,994	₩ -	₩ -	₩ 1,014,397

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(in millions of
Korean won)

	December 31, 2023									
	Beginning balance	Acquisitions / transfer	Dividends	Share of profit (loss) of associates and joint ventures	Share of other comprehensive income (loss) of associates and joint ventures	Impairment / disposals	Others	Ending balance		
TECHWIN Co., Ltd.	₩ 16,526	₩ -	₩ -	₩ (242)	₩ -	₩ -	₩ -	₩ 16,284		
SEETEC Co., Ltd	134,482	-	(5,000)	9,187	-	-	(521)	138,148		
LG Life Sciences Poland Ltd.	17	-	-	-	-	-	-	17		
HUAJIN NEW ENERGY MATERIALS(QUZHOU) CO., LTD.	81,179	-	-	(1,612)	(184)	-	-	79,383		
VINFAST LITHIUM BATTERY PACK, LLC. ¹	2,428	-	-	(482)	65	(2,011)	-	-		
Jiangxi VL Battery Co., Ltd ²	13,323	-	-	(1,317)	543	(12,549)	-	-		
PT.HLI Green Power Sam-a Aluminium Company, Limited	187,945	-	-	(29,606)	3,934	-	-	162,273		
NEXPO Co., Ltd	-	46,575	-	(318)	-	-	-	46,257		
Bricks Capital Management Global Battery Private Equity Fund I	-	2,375	-	(189)	-	-	-	2,186		
TL Chemical CO., Ltd	-	13,381	-	(538)	-	-	-	12,843		
LG Toray Hungary Battery Separator Kft.	47,816	-	-	1,387	-	-	-	49,203		
KOREA PRECURSOR CO., LTD.	445,999	-	-	(7,025)	20,834	-	(8,400)	451,408		
	19,838	30,576	-	(2,556)	(156)	-	(98)	47,604		
	₩ 949,553	₩ 92,907	₩ (5,000)	₩ (33,311)	₩ 25,036	₩ (14,560)	₩ (9,019)	₩ 1,005,606		

¹ During the year ended December 31, 2023, the Group disposed 100% ownership shares of VINFAST LITHIUM BATTERY PACK LLC.

² During the year ended December 31, 2023, the Group disposed 100% ownership shares of Jiangxi VL Battery Co., Ltd.

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The tables below provide a reconciliation of the summarized financial information presented to the carrying amount of its interest in the joint ventures or associates:

(in millions of
Korean won)

		March 31, 2024					
		Net Asset (a)	Group's share in % (b)	Group's share in KRW (a x b)	Investment difference	Intercompany transactions, etc.	Carrying amount
HUAJIN NEW ENERGY MATERIALS(QUZHOU)CO., LTD.	₩	170,096	49	₩ 83,347	₩ -	₩ 1,988	₩ 85,335
SEETEC Co., Ltd		274,399	50	137,200	(3,470)	-	133,730
LG Toray Hungary Battery Separator Kft.		793,009	50	396,504	62,946	-	459,450
PT.HLI Green Power		439,022	50	219,511	-	(60,488)	159,023

(in millions of
Korean won)

		December 31, 2023					
		Net Asset (a)	Group's share in % (b)	Group's share in KRW (a x b)	Investment difference	Intercompany transactions, etc.	Carrying amount
HUAJIN NEW ENERGY MATERIALS(QUZHOU)CO., LTD.	₩	163,773	49	₩ 80,249	₩ -	₩ (866)	₩ 79,383
SEETEC Co., Ltd		283,236	50	141,618	(3,470)	-	138,148
LG Toray Hungary Battery Separator Kft.		776,928	50	388,464	71,344	(8,400)	451,408
PT.HLI Green Power		434,608	50	217,304	-	(55,030)	162,274

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11. Property, Plant and Equipment

Changes in property, plant and equipment for the three-month period ended March 31, 2024 and for the year ended December 31, 2023, are as follows:

<i>(in millions of Korean won)</i>	March 31, 2024		December 31, 2023	
Beginning balance	₩	38,950,393	₩	29,662,743
Business combination (Note 37)		-		935
Acquisitions / transfer		6,895,035		19,164,385
Disposals / transfer		(3,873,252)		(6,487,541)
Exchange differences		885,326		497,536
Depreciation		(965,837)		(3,555,738)
Transfer to assets held for sale(Note 34)		(18,643)		(201,339)
Impairment		(12,124)		(130,588)
Ending balance	<u>₩</u>	<u>41,860,898</u>	<u>₩</u>	<u>38,950,393</u>

During the three-month ended March 31, 2024, the Group capitalized ₩38,593 million of borrowing costs (2023: ₩9,264 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 4.06% (2023: 1.96%).

Line items including depreciation in the consolidated income statements for the three-month periods ended March 31, 2024 and 2023, are as follows:

<i>(in millions of Korean won)</i>	2024		2023	
Cost of sales	₩	861,886	₩	741,002
Selling and administrative expenses		97,530		80,775
Others		15		561
Discontinued operations		6,406		8,771
Total	<u>₩</u>	<u>965,837</u>	<u>₩</u>	<u>831,109</u>

Details of property, plant and equipment provided as collateral as at March 31, 2024 is as follows:

<i>(in millions of Korean won)</i>	March 31, 2024				
	Carrying amount	Secured amount	Related line item	Related amount	Secured party
Buildings and others	₩ 130,145	₩ 378,000	Borrowings (Note 14)	₩ 205,000	KDB Bank

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Leases

Amounts recognized in the consolidated statement of financial position

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

<i>(in millions of Korean won)</i>	March 31, 2024		December 31, 2023	
Right-of-use assets ¹				
Real-estate	₩	520,640	₩	479,818
Machinery		47,377		43,631
Vehicles		37,252		35,853
Tools		2,866		1,765
Equipment		1,018		1,013
	₩	609,153	₩	562,080

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

Additions to the right-of-use assets during the three-month period ended March 31, 2024, were ₩75,282 million (2023: ₩69,301 million).

<i>(in millions of Korean won)</i>	March 31, 2024		December 31, 2023	
Lease liabilities ¹				
Current	₩	119,327	₩	100,130
Non-current		423,047		391,736
	₩	542,374	₩	491,866

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

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Amounts recognized in the consolidated income statements

Lease related expenses recognized in the consolidated income statements for the three-month periods ended March 31, 2024 and 2023, are as follows:

<i>(in millions of Korean won)</i>	2024		2023	
Depreciation of right-of-use assets				
Real-estate	₩	23,103	₩	20,036
Machinery		1,626		2,176
Vehicles		5,695		5,164
Tools		291		627
Equipment		84		94
	₩	<u>30,799</u>	₩	<u>28,097</u>
Interest expense relating to lease liabilities (included in finance cost)	₩	3,493	₩	2,460
Expense relating to short-term leases (included in cost of goods sold and administrative expenses)		9,030		7,845
Expense relating to leases of low-value assets that are not short-term leases (included in cost of goods sold and administrative expenses)		4,757		4,712

Total cash outflow for leases during the three-month period ended March 31, 2024, was ₩46,187 million (2023: ₩41,389 million).

12. Intangible Assets

Changes in intangible assets for the three-month period ended March 31, 2024 and for the year ended December 31, 2023, are as follows:

<i>(in millions of Korean won)</i>	March 31, 2024		December 31, 2023	
Beginning balance	₩	3,692,922	₩	2,690,203
Business combination (Note 37)		-		841,305
Separate acquisitions/ transfer		146,384		593,626
Disposals/ transfer		(2,316)		(49,334)
Exchange differences		55,474		75,296
Amortization		(110,300)		(398,196)
Impairment/ reversal of impairment		(125)		(4,745)
Transfer to assets held for sale (Note 34)		-		(55,233)
Ending balance	₩	<u>3,782,039</u>	₩	<u>3,692,922</u>

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Line items including amortization of intangible assets for the three-month periods ended March 31, 2024 and 2023, are as follows:

<i>(in millions of Korean won)</i>	2024		2023	
Cost of sales	₩	21,378	₩	14,550
Selling and administrative expenses		86,647		65,419
Discontinued operations		2,275		3,432
Total	₩	110,300	₩	83,401

Total research and development costs recognized as expenses amounted to ₩521,903 million (2023: ₩441,055 million) for the three-month period ended March 31, 2024.

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	10,167	10,504	9,368	9,233	9,233	48,505

Changes in greenhouse gas emission permits during the three-month period ended March 31, 2024 and for the year ended December 31, 2023, are as follows:

<i>(in thousands of tons and millions of Korean won)</i>	March 31, 2024							
	2020		2021		2022		2023	
	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount
Beginning balance								
/Allocation with nil consideration	8,666	₩ -	10,167	₩ -	10,504	₩ -	9,368	₩ -
Purchase/Sale	(69)	1,111	(339)	(20)	(788)	179	(486)	-
Exchange	100	-	(100)	-	-	-	-	-
Borrowings/Carry forwards between years	(49)	(388)	(392)	388	(769)	-	1,211	-
Surrendered to the government	(8,648)	(723)	(9,336)	(368)	(8,947)	(179)	-	-
Ending balance	-	₩ -	-	₩ -	-	₩ -	10,093	₩ -

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<i>(in thousands of tons and millions of Korean won)</i>	March 31, 2024					
	2024		2025		Total	
	Quantity	Amount	Quantity	Amount	Quantity	Amount
Beginning balance / Allocation with nil consideration	9,233	₩ -	9,233	₩ -	57,171	₩ -
Purchase/Sale	-	-	-	-	(1,682)	1,270
Exchange	-	-	-	-	-	-
Borrowings/Carry forwards between years	-	-	-	-	1	-
Surrendered to the government	-	-	-	-	(26,931)	(1,270)
Ending balance	9,233	₩ -	9,233	₩ -	28,559	₩ -

<i>(in thousands of tons and millions of Korean won)</i>	December 31, 2023							
	2020		2021		2022		2023	
	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount
Beginning balance /Allocation with nil consideration	8,666	₩ -	10,167	₩ -	10,504	₩ -	9,368	₩ -
Purchase/Sale	(69)	1,111	(339)	(20)	(788)	179	(317)	-
Exchange	100	-	(100)	-	-	-	-	-
Borrowings/Carry forwards between years	(49)	(388)	(392)	388	(769)	-	1,210	-
Surrendered to the government	(8,648)	(723)	(9,336)	(368)	(8,947)	(179)	-	-
Ending balance	-	₩ -	-	₩ -	-	₩ -	10,261	₩ -

<i>(in thousands of tons and millions of Korean won)</i>	December 31, 2023					
	2024		2025		Total	
	Quantity	Amount	Quantity	Amount	Quantity	Amount
Beginning balance / Allocation with nil consideration	9,233	₩ -	9,233	₩ -	57,171	₩ -
Purchase/Sale	-	-	-	-	(1,513)	1,270
Exchange	-	-	-	-	-	-
Borrowings/Carry forwards between years	-	-	-	-	-	-
Surrendered to the government	-	-	-	-	(26,931)	(1,270)
Ending balance	9,233	₩ -	9,233	₩ -	28,727	₩ -

During the three-month period ended March 31, 2024 and for the year ended December 31, 2023, there are no greenhouse gas emission permits held for short-term trading purpose.

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Details of Greenhouse gas emission permits included in other intangible assets of consolidated financial statements regarding the EU ETS(Emissions Trading System) for the three-month period ended March 31, 2024 and for the year ended December 31, 2023, are as follows:

(in millions of Korean won)

	March 31, 2024		December 31, 2023	
	Quantity	Amount	Quantity	Amount
Beginning balance	153	₩ 13,809	87	₩ 8,002
Increase	30	3,272	170	16,875
Used	-	-	(104)	(11,068)
Ending balance	183	₩ 17,081	153	₩ 13,809

13. Other Current and Non-current Assets

Details of other current and non-current assets as at March 31, 2024 and December 31, 2023, are as follows:

(in millions of Korean won)

	2024		2023	
Current				
Prepayments to suppliers and prepaid expenses	₩	501,629	₩	348,182
Prepaid value added tax		189,722		287,977
Others		849,495		575,215
Total	₩	1,540,846	₩	1,211,374
Non-current				
Net defined benefit assets	₩	463,788	₩	494,818
Long-term prepayments and long-term prepaid expenses		320,583		279,407
Others		149		146
Total	₩	784,520	₩	774,371

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14. Borrowings

Borrowings as at March 31, 2024 and December 31, 2023, consist of:

<i>(in millions of Korean won)</i>	2024	2023
Current		
Short-term borrowings	₩ 2,405,662	₩ 1,875,362
Current portion of long-term borrowings	1,423,632	1,470,152
Current portion of debentures	3,840,845	3,632,138
Current lease liabilities	119,327	100,130
	<u>7,789,466</u>	<u>7,077,782</u>
Non-current		
Long-term borrowings	6,187,389	6,330,484
Debentures	10,283,268	8,128,112
Lease liabilities	423,047	391,736
	<u>16,893,704</u>	<u>14,850,332</u>
Total	<u>₩ 24,683,170</u>	<u>₩ 21,928,114</u>

Details of general borrowings as at March 31, 2024 and December 31, 2023, are as follows:

<i>(in millions of Korean won)</i>	Currency	Bank	Latest maturity date	Interest rate(%) as at March 31, 2024	Carrying amount			
					March 31, 2024		December 31, 2023	
					Current	Non-current	Current	Non-current
Short-term borrowings								
Bank loans	Foreign currency	Citi and others	March 28, 2025	6.63 and others	₩ 2,405,662	₩ -	₩ 1,875,362	₩ -
Total					<u>₩ 2,405,662</u>	<u>₩ -</u>	<u>₩ 1,875,362</u>	<u>₩ -</u>
Long-term borrowings								
Bank loans	Korean won	KDB Bank and others ¹	January 30, 2031	3.05 and others	₩ 150,000	₩ 505,000	₩ 200,000	₩ 505,000
Bank loans	Foreign currency	RHB and others	December 15, 2031	4.55 and others	1,273,669	5,682,743	1,270,249	5,825,873
Less: discount on long-term borrowings					(37)	(355)	(97)	(389)
Total					<u>₩ 1,423,632</u>	<u>₩ 6,187,388</u>	<u>₩ 1,470,152</u>	<u>₩ 6,330,484</u>
Debentures								
Public debentures	Korean won	KB Securities Co., Ltd. and others	February 19, 2036	3.73 and others	₩ 980,000	₩ 6,400,000	₩ 990,000	₩ 4,400,000
Private debentures	Korean won	KB Securities Co., Ltd. and others	May 7, 2036	2.39 and others	50,000	150,000	-	150,000
Exchangeable bonds ^{2,3}	Foreign currency	CITI Securities and others	July 7, 2031	2.38 and others	673,400	3,771,040	644,700	3,610,320
Exchangeable bonds ^{2,3}	Foreign currency	CITI Securities and others	July 18, 2030	1.60 and others	2,693,600	-	2,578,800	-
Less: discount on debentures					(556,155)	(37,772)	(581,362)	(32,208)
Total					<u>₩ 3,840,845</u>	<u>₩10,283,268</u>	<u>₩ 3,632,138</u>	<u>₩ 8,128,112</u>

¹ The Group's building is provided as collateral for some borrowings from the KDB Bank (Note 11).

² The details of issued exchangeable bonds (Tranche 1) are as follows:

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	Details
Aggregate principal amount	USD 1,000,000,000
Issue price	USD 1,000,000,000
Interest rate	1.25
Issue Date	July 18, 2023
Maturity Date	July 18, 2028
Principal Repayment Method	<p>Maturity repayment: Lump-sum repayment at maturity of the remaining principal and interest of debentures that have been repaid early by maturity or for which the right of exchange has not been exercised.</p> <p>Early redemption: The Parent Company has the Call Option.</p>
Exchange Target	<p>1,883,636 common shares of LG Energy Solution, Ltd. However, despite the bondholder's exercise of the exchange right, the issuer has the option to settle by paying cash equivalent to the consideration instead of issuing the target shares.</p>
Exchange Price (KRW/share)	<p>687,500 (23.07.11 closing price X premium 125%) However, the exchange price may be adjusted according to the standards set in the investment prospectus, such as when the target company pays stock dividends.</p>
Claim Period	<p>August 28, 2023 – July 11, 2028</p>
Early Redemption at the Option of the Issuer	<p>1) After three years and 14 days from the date of payment, if there are more than 20 trading days out of 30 consecutive trading days when the stock price (based on closing price) is 130% or more of the exchange price based on U.S. dollar conversion.</p> <p>2) When the outstanding principal is less than 10% of the original debt (Clean Up Call)</p> <p>3) When additional tax burden arises due to revision of related laws, etc.</p>
Early Redemption at the Option of the Bondholders	<p>1) Can be exercised on 2025.07.18 (Optional Put Date)</p> <p>2) When Shares cease to be listed or admitted to trading or are suspended for a period equal to or exceeding 30 consecutive Trading Days on the Relevant Stock Exchange</p> <p>3) When there is a change in control of the company or the issuer of stocks subject to exchange (Change of Control)</p> <p>4) When the issuer acquires more than 85% of the Voting Rights of the issued capital of LG Energy Solution (Free Float)</p>

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³The details of issued exchangeable bonds (Tranche 2) are as follows:

	Details
Aggregate principal amount	USD 1,000,000,000
Issue price	USD 1,000,000,000
Interest rate	1.60
Issue Date	July 18, 2023
Maturity Date	July 18, 2030
Principal Repayment Method	Maturity repayment: Lump-sum repayment at maturity of the remaining principal and interest of debentures that have been repaid early by maturity or for which the right of exchange has not been exercised. Early redemption: The Parent Company has the Call Option.
Exchange Target	1,811,188 common shares of LG Energy Solution, Ltd. However, despite the bondholder's exercise of the exchange right, the issuer has the option to settle by paying cash equivalent to the consideration instead of issuing the target shares.
Exchange Price (KRW/share)	715,000 (23.07.11 closing price X premium 130%) However, the exchange price may be adjusted according to the standards set in the investment prospectus, such as when the target company pays stock dividends.
Claim Period	August 28, 2023 – July 11, 2030
Early Redemption at the Option of the Issuer	1) After five years and 14 days from the date of payment, if there are more than 20 trading days out of 30 consecutive trading days when the stock price (based on closing price) is 130% or more of the exchange price based on U.S. dollar conversion. 2) When the outstanding principal is less than 10% of the original debt (Clean Up Call) 3) When additional tax burden arises due to revision of related laws, etc.
Early Redemption at the Option of the Bondholders	1) Can be exercised on 2027.07.18 (Optional Put Date) 2) When Shares cease to be listed or admitted to trading or are suspended for a period equal to or exceeding 30 consecutive Trading Days on the Relevant Stock Exchange 3) When there is a change in control of the company or the issuer of stocks subject to exchange (Change of Control) 4) When the issuer acquires more than 85% of the Voting Rights of the issued capital of LG Energy Solution (Free Float)

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Details of the exchangeable bonds (Tranche 1) as of the date of issuance and as at March 31, 2024, are as follows:

<i>(in millions of Korean won)</i>	July 18, 2023		March 31, 2024	
Issue price	₩	1,266,100	₩	1,346,800
Book amount of exchangeable bonds		991,756		1,109,909
Derivative financial liabilities		263,532		194,114

Details of the exchangeable bonds (Tranche 2) as of the date of issuance and as at March 31, 2024, are as follows:

<i>(in millions of Korean won)</i>	July 18, 2023		March 31, 2024	
Issue price	₩	1,266,100	₩	1,346,800
Book amount of exchangeable bonds		914,412		1,028,606
Derivative financial liabilities		340,876		257,535

Details of lease liabilities as at March 31, 2024 and December 31, 2023, are as follows:

<i>(in millions of Korean won)</i>	March 31, 2024				
Leaser	Annual interest rate (%)	Latest maturity date	Total amount	Current	Non-current
Hyundai Oil Bank and others	0.65 ~ 8.68	2082.2.28	₩ 542,374	₩ 119,327	₩ 423,047

<i>(in millions of Korean won)</i>	December 31, 2023				
Leaser	Annual interest rate (%)	Latest maturity date	Total amount	Current	Non-current
Hyundai Oil Bank and others	0.67 ~ 8.68	2082.2.28	₩ 491,866	₩ 100,130	₩ 391,736

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15. Provisions

Changes in provisions for the three-month period ended March 31, 2024 and for the year ended December 31, 2023, are as follows:

(in millions of Korean won)

	March 31, 2024			
	Warranty¹	Greenhouse gas emission²	Others³	Total
Beginning balance	₩ 1,279,460	₩ 8,966	₩ 146,299	₩ 1,434,725
Additions	209,100	3,064	3,481	215,645
Used	(184,924)	-	(11,128)	(196,052)
Ending balance	₩ 1,303,636	₩ 12,030	₩ 138,652	₩ 1,454,318
Current	372,904	12,030	116,627	501,561
Non-current	930,732	-	22,025	952,757

(in millions of Korean won)

	December 31, 2023			
	Warranty¹	Greenhouse gas emission²	Others³	Total
Beginning balance	₩ 1,485,978	₩ 8,712	₩ 65,170	₩ 1,559,860
Additions	771,185	11,501	134,171	916,857
Used	(977,703)	(11,247)	(53,042)	(1,041,992)
Ending balance	₩ 1,279,460	₩ 8,966	₩ 146,299	₩ 1,434,725
Current	413,309	8,966	124,675	546,950
Non-current	866,151	-	21,624	887,775

¹ Warranty provisions have been accrued based on historical experience for the estimated warranty costs to be incurred due to quality control, exchange and 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. As at March 31, 2024, the above warranty provision included ₩1,297,594 million (December 31, 2023: ₩1,274,438 million) of warranty provision for LG Energy Solution, Ltd. and its subsidiaries.

² Greenhouse gas emission provisions have been accrued for estimated expenditures to be obligated for any excess emission. The estimated emission as at March 31, 2024, amounts to 2,148 thousand tons (2023: 2,340 thousand tons).

³ The Group recognized as provisions in relation to certain litigations in progress.

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16. Net Defined Benefit Liabilities

Details of net defined benefit liabilities(assets) recognized in the consolidated statements of financial position as at March 31, 2024 and December 31, 2023, are as follows:

<i>(in millions of Korean won)</i>	March 31, 2024	December 31, 2023
Present value of defined benefit obligations ¹	₩ 1,768,184	₩ 1,750,986
Fair value of plan assets	(2,219,221)	(2,233,925)
Liabilities (assets) in the consolidated statement of financial position	₩ (451,037)	₩ (482,939)

¹ The present value of retirement benefit obligations is net of existing contributions to the National Pension Plan of ₩520 million as at March 31, 2024 (December 31, 2023: ₩587 million).

The amounts recognized in the consolidated income statements for the three-month periods ended March 31, 2024 and 2023, are as follows:

<i>(in millions of Korean won)</i>	2024	2023
Current service cost ¹	₩ 54,775	₩ 47,958
Interest cost	(5,553)	(7,976)
Total, included in employee benefit expenses	₩ 49,222	₩ 39,982

¹ The above amounts excluded ₩396 million (2023: ₩295 million) of expenses capitalized to construction in progress and development costs.

Post-employment benefits recognized for defined contribution plan for the three-month period ended March 31, 2024, amounted to ₩6,950 million (2023: ₩5,385 million).

Post-employment benefits recognized in the consolidated income statements for the three-month periods ended March 31, 2024 and 2023, are as follows:

<i>(in millions of Korean won)</i>	2024	2023
Cost of sales	₩ 30,984	₩ 26,135
Selling and administrative expenses	23,747	17,144
Discontinued operations	1,441	2,088
Total	₩ 56,172	₩ 45,367

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Movements in the present value of defined benefit obligations for the three-month period ended March 31, 2024 and for the year ended December 31, 2023, are as follows:

<i>(in millions of Korean won)</i>	March 31, 2024		December 31, 2023	
Beginning balance	₩	1,750,986	₩	1,554,870
Transferred-in liability due to intercompany transfer		1,182		15,195
Transferred-out liability due to intercompany transfer		(122)		(8,849)
Current service cost		55,171		203,005
Interest expense		19,840		80,529
Remeasurements:				
Actuarial loss from change in demographic assumptions		-		2,290
Actuarial loss from change in financial assumptions		-		12,394
Actuarial loss from experience adjustments		-		59,020
Others		-		(2,303)
Exchange differences		(808)		(10,294)
Payments from plans		(58,065)		(154,871)
Ending balance	<u>₩</u>	<u>1,768,184</u>	<u>₩</u>	<u>1,750,986</u>

Movements in the fair value of plan assets for the three-month period ended March 31, 2024 and for the year ended December 31, 2023, are as follows:

<i>(in millions of Korean won)</i>	March 31, 2024		December 31, 2023	
Beginning balance	₩	2,233,925	₩	2,153,449
Transferred-out plan assets due to intercompany transfer		(60)		(1,356)
Interest income		25,393		112,537
Remeasurements:				
Return on plan assets (excluding amounts included in interest income)		(1,047)		3,844
Contributions:				
Employers		1,098		106,411
Payments from plans		(38,842)		(137,389)
Administrative costs		(1,246)		(3,571)
Ending balance	<u>₩</u>	<u>2,219,221</u>	<u>₩</u>	<u>2,233,925</u>

The actual return on plan assets for the three-month period ended March 31, 2024, was ₩24,346 million and for the year ended December 31, 2023, was ₩116,381 million.

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The significant actuarial assumptions as at March 31, 2024 and December 31, 2023, are as follows:

	March 31, 2024	December 31, 2023
Discount rate	4.5%~4.7%	4.5%~4.7%
Salary growth rate	5.0%~6.0%	5.0%~6.0%

The sensitivity analysis for changes in key actuarial assumptions as at March 31, 2024, 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	₩ (183,713)	₩ 218,952
Salary growth rate:		
Increase (decrease) in defined benefit obligations	₩ 227,680	₩ (193,301)

The decline in rate of return of the gilt, which is the discount rate, is a key factor leading to an increase in the defined benefit liability.

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

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

Plan assets as at March 31, 2024 and December 31, 2023, consist of:

<i>(in millions of Korean won)</i>	March 31, 2024		December 31, 2023	
	Amount	Composition (%)	Amount	Composition (%)
Insurance contracts with guaranteed yield	₩ 2,198,881	99.1	₩ 2,212,965	99.1
Equity linked bonds	20,256	0.9	20,899	0.9
Time deposits	84	0.0	61	0.0
	<u>₩ 2,219,221</u>	<u>100.0</u>	<u>₩ 2,233,925</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.

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17. Other Current and Non-Current Liabilities

Details of other current and non-current liabilities as at March 31, 2024 and December 31, 2023, are as follows:

<i>(in millions of Korean won)</i>	March 31, 2024		December 31, 2023	
Current				
Advances from customers	₩	279,842	₩	247,150
Dividends payable		354,921		-
Withholdings		385,456		302,890
Unearned revenues		118,699		119,399
Accrued expenses		308,688		477,405
Total	₩	1,447,606	₩	1,146,844
Non-current				
Long-term accrued expenses	₩	75,647	₩	76,000
Long-term unearned revenues		119,830		163,497
Long-term advanced received		1,326,935		1,279,493
Total	₩	1,522,412	₩	1,518,990

18. Commitments and Contingencies

(a) As at March 31, 2024, the Parent Company and certain subsidiaries have been guaranteed by Seoul Guarantee Insurance Company for the execution of contracts and others.

(b) As at March 31, 2024, 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 Subsidiaries								
	KRW	USD	KRW	USD	CNY	EUR	PLN	INR	THB	MYR	JPY
Limit of bank overdraft	₩20,400	-	₩8,700	108	1,260	38	-	-	10	-	-
Limit of the letter of credit	15,000	278	-	441	1,819	-	-	-	-	-	500
Limit of discount of notes from export	-	1,269	-	1,397	3,625	-	-	-	-	-	-
Limit of guaranteed payments in other foreign currency	-	181	50,600	383	1,042	-	-	-	-	-	-
Limit of loan arrangements	350,000	-	960,000	8,409	14,330	3,191	155	2,970	-	450	-
Derivatives	-	40	90,000	1,445	-	220	-	-	-	-	-

The Parent Company and certain subsidiaries also entered into comprehensive credit line

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agreements with other financial institutions relating to trade finance and import/export (including bank overdraft) amounting to ₩30,000 million and USD 245 million. Certain subsidiaries entered into factoring agreements with a limit of ₩150,000 million.

- (c) As at March 31, 2024, the Parent Company and certain subsidiaries have B2B purchase arrangements with several financial institutions with limit of ₩356,000 million and ₩190,000 million, respectively.
- (d) As at March 31, 2024, the Parent Company has reverse factoring agreements, and there is no utilized amount.
- (e) As at March 31, 2024, the Group's litigation status is as follows:

As at March 31, 2024, 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.

As at March 31, 2024, in relation to small rechargeable batteries sales and General Motors ("GM") Bolt EV, the consumers have filed five class actions against the Group. However, the ultimate outcome of these cases cannot be determined at the reporting date.

In addition, as at March 31, 2024, the Parent Company and certain subsidiaries have been named as plaintiffs in seven (related claim amount of ₩ 25,983 million) and 23 (related claim amount of USD 107 million and ₩6,416 million) legal actions, respectively. They have been named as defendants in 14 and 71 legal actions, respectively, with ₩80,803 million and ₩1,498 million, respectively, in claims. The ultimate outcome of these cases cannot be determined at the reporting date.

- (f) The Parent Company has entered into manufacture and production technical contracts with ExxonMobil and others.
- (g) 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.
- (h) As at March 31, 2024, the Group has entered into a payment guarantee contract of USD 8 million, and certain subsidiaries have entered into payment guarantee contracts of USD 146 million, EUR 5 million with financial institutions to guarantee the warrant of products and payment. Certain subsidiaries have entered into payment guarantee contracts of CNY 376 million with financial institutions in relation to the custom of imported raw materials.

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- (i) Capital expenditure arrangement that has not incur as at March 31, 2024 and December 31, 2023, are as follows:

<i>(in millions of Korean won)</i>	March 31, 2024	December 31, 2023
Property, plant and equipment	₩ 10,045,839	₩ 9,416,171

- (j) As at March 31, 2024, the Group has entered into an agreement with GM regarding joint investment in Ultium Cells Holdings LLC and Ultium Cells LLC, whereby each party can sell its shares to third parties in eight 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.
- (k) As at March 31, 2024, the Group has entered into a joint venture agreement with Honda in which the Group agreed to invest USD 1,802 million. At the end of the current period, a total investment of USD 874 million has been made. In addition, the Group determined payment guarantees of USD 450 million for the joint venture, in accordance with the equity ratio of the borrowing with a credit limit of USD 883 million. Additionally, in the event of default, other equity investors have the right to purchase the applicable interest.
- (l) As at March 31, 2024, the Group has entered into a joint venture agreement with Stellantis in which the Group agreed to invest USD 1,464 million. At the end of the current period, a total investment of USD 765 million has been made. Additionally, in the event of default, other equity investors have the right to purchase the applicable interest.
- (m) As at March 31, 2024, the Group has entered into a joint venture agreement with HMG Global LLC, in which the Group agreed to invest USD 1,108 million. At the end of the current period, a total investment of USD 285 million has been made. Additionally, after the expiration of the contract period, it is possible to transfer the applicable interest to a third party, and in the event of default, other equity investors have the right to purchase the applicable interest.
- (n) As at March 31, 2024, the Group and certain subsidiaries' investment agreements are as follows:

<i>(in millions of Korean won, USD and EUR)</i>	Currency	Committed investments	Cumulative investments	Remaining
KBE Fund	KRW	150,000	81,340	68,660
Gross Acceleration Fund	KRW	5,000	4,900	100
BNZ (Beyond Net Zero) Fund	USD	150	50	100
Secondary battery growth Fund	KRW	6,700	5,360	1,340
U.S. Venture Partners XII ¹	USD	5	4	1
U.S. Venture Partners XIII ¹	USD	5	1	4
Phoenix Venture Partners III ¹	USD	10	5	5
Emerald Industrial Innovation Fund IX ¹	EUR	5	1	4
BCM Global Battery Fund	KRW	30,000	13,381	16,619
Yonsei Technology Holdings IP Fund	KRW	3,000	1,020	1,980

¹ Investment agreements of LG Chem Fund I LLC.

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- (o) The Parent Company 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.. 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:

	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 Parent Company holds a drag-along right and Toray Industries, Inc. holds a tag-along right.
Default	In case the Parent Company 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).
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 Parent Company.
Deadlock	After 30 months from the acquisition date of the 50% shares, in the event of a deadlock agreed by both parties, 1) the Parent Company 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 Parent Company to purchase shares of the counterparty.

¹ Lock-up period: Restriction period of share transfer for five years from the time the Parent Company acquires 50% of the shares.

- (p) Certain subsidiaries provide payment guarantees for borrowings as at March 31, 2024 and December 31, 2023, are as follows:

<i>(in millions of Korean won)</i>			Amount of borrowing¹		Guaranteed amount²	
Guarantor	Guaranteed company	Creditor	March 31, 2024	December 31, 2023	March 31, 2024	December 31, 2023
LG ENERGY SOLUTION, LTD.	PT. HLI Green Power	ANZ and others	₩ 360,269	₩ 285,602	₩ 478,787	₩ 458,382

¹ It is the amount of borrowing as at March 31, 2024 and December 31, 2023.

² It is a total amount guaranteed.

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- (q) During the year ended December 31, 2023, the Group issued exchangeable bonds targeting the stocks of LG Energy Solution, LTD., and recognized the right of exchange and option included in the exchangeable bonds as a derivative financial liability (Note 14).
- (r) As at March 31, 2024, the Group has provided as collateral for borrowings of ₩205,000 million from the KDB Bank, and when completion of the building or acquisition of land ownership, the Group has committed to provide the first priority security right (maximum amount of ₩378,000 million) to the KDB Bank (Note 11).

19. Issued Capital

Changes in issued capital and share premium for the three-month period ended March 31, 2024 and for the year ended December 31, 2023, are as follows:

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

	Ordinary shares		Preferred shares		Share premium
	Number of shares	Issued capital	Number of shares	Issued capital	
January 1, 2023	70,592,343	₩ 352,962	7,688,800	₩ 38,444	₩ 2,014,036
December 31, 2023	70,592,343	352,962	7,688,800	38,444	2,014,036
March 31, 2024	70,592,343	₩ 352,962	7,688,800	₩ 38,444	₩ 2,014,036

Changes in treasury shares for the three-month period ended March 31, 2024 and for the year ended December 31, 2023, are as follows:

<i>(in millions of Korean won and in shares)</i>	Number of shares		Carrying amount	Gain on disposal of treasury shares
	Ordinary shares	Preferred shares		
January 1, 2023	-	6,041	₩ 270	₩ 655,927
December 31, 2023	-	6,041	270	655,927
March 31, 2024	-	6,041	₩ 270	₩ 655,927

Capital surplus as at March 31, 2024 and December 31, 2023, are as follows:

<i>(in millions of Korean won)</i>	March 31, 2024	December 31, 2023
Revaluation reserve	₩ 206,769	₩ 206,769
Share premium	2,014,036	2,014,036
Gain on disposal of treasury shares	655,927	655,927
Other capital surplus	8,695,366	8,695,366
Total	₩ 11,572,098	₩ 11,572,098

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20. Retained Earnings

Retained earnings as at March 31, 2024 and December 31, 2023, consist of:

<i>(in millions of Korean won)</i>	March 31, 2024	December 31, 2023
Legal reserve ¹	₩ 765,794	₩ 765,794
Discretionary reserve ²	16,825,437	16,894,707
Retained earnings before appropriation	<u>1,924,423</u>	<u>1,990,131</u>
Total	<u>₩ 19,515,654</u>	<u>₩ 19,650,632</u>

¹ The Commercial Code of the Republic of Korea requires the Parent Company to appropriate for each financial period, as a legal reserve, an amount equal to a minimum of 10% of cash dividends paid until such reserve equals 50% of its issued capital. The reserve is not available for cash dividends payment, but may be transferred to 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. Elements of Other Stockholders Equity

Details of other components of equity as at March 31, 2024 and December 31, 2023, are as follows:

<i>(in millions of Korean won)</i>	March 31, 2024	December 31, 2023
Treasury shares (Note 19)	₩ (270)	₩ (270)
Capital transactions within the Group ¹	<u>(19,299)</u>	<u>(19,299)</u>
Total	<u>₩ (19,569)</u>	<u>₩ (19,569)</u>

¹ Gain or loss on disposal interest within the consolidated entity, changes in ownership interests and the investment difference, etc., all adjusted for the related deferred corporate tax effects.

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22. Operating Income

Operating Income for the three-month periods ended March 31, 2024 and 2023, are as follows:

<i>(in millions of Korean won)</i>	2024		2023	
Revenue	₩	11,609,432	₩	14,284,487
Cost of sales		9,705,679		11,972,086
Gross profit		1,903,753		2,312,401
Other non-operating income ¹		188,954		100,294
Selling and administrative expenses		1,828,076		1,608,992
Wages and salaries		435,647		404,099
Post-employment benefits (Note 16)		23,747		17,144
Employee benefits		108,513		92,949
Travel expense		21,911		20,163
Water and utilities		36,714		34,323
Packaging expense		2,516		1,625
Rental expenses		34,991		39,699
Commission expenses		235,886		252,886
Depreciation		98,424		81,667
Advertising expense		17,727		11,160
Freight expenses		187,197		207,860
Training expense		11,174		13,072
Amortization (Note 12)		86,647		65,419
Sample expense		7,905		8,802
Development costs		133,207		97,140
Others		385,870		260,984
Operating income	₩	<u>264,631</u>	₩	<u>803,703</u>

¹ Under the Inflation Reduction Act, which takes effect on January 1, 2023, manufacturers and sellers of battery cells/modules produced in the United States are eligible for tax deductions of a certain amount. The amount is the amount of revenue the Group is expected to receive for the three-month period ended March 31, 2024.

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23. Classification of Expenses by Nature

Cost of sales, and selling and administrative expenses by nature for the three-month periods ended March 31, 2024 and 2023, consist of:

<i>(in millions of Korean won)</i>	2024	2023
Changes in inventories of merchandise, finished goods, semi-finished goods and work in process	₩ 178,646	₩ 303,977
Raw materials and consumables used	6,448,256	8,850,498
Purchase of merchandise	314,035	382,410
Employee benefit expenses (Note 24)	1,267,249	1,173,865
Advertising expenses	18,095	11,339
Freight expenses	198,393	221,688
Commission expenses	455,375	431,116
Depreciation and amortization	1,068,336	902,637
Rent expenses and usage fee	25,919	29,231
Other expenses	1,559,451	1,274,318
Total	₩ 11,533,755	₩ 13,581,079

24. Employee Benefit Expenses

Details of employee benefit expenses for the three-month periods ended March 31, 2024 and 2023, are as follows:

<i>(in millions of Korean won)</i>	2024	2023
Salaries	₩ 1,025,429	₩ 971,404
Post-employment benefits – Defined benefit plan	48,247	38,033
Post-employment benefits – Defined contribution plan	6,484	5,241
Others	187,089	159,187
Total	₩ 1,267,249	₩ 1,173,865

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25. Finance Income and Costs

Details of finance income and costs for the three-month periods ended March 31, 2024 and 2023, are as follows:

<i>(in millions of Korean won)</i>	2024		2023	
Finance income				
Interest income ¹	₩	98,761	₩	69,588
Dividend income		-		12,920
Exchange differences		194,516		304,429
Gain related to derivative instruments		311,468		144,623
Gain related to financial assets		31,345		3,768
Total	₩	<u>636,090</u>	₩	<u>535,328</u>
Finance costs				
Interest expense ²	₩	196,693	₩	129,591
Exchange differences		459,404		379,216
Loss related to other financial assets		1,321		6,443
Total	₩	<u>657,418</u>	₩	<u>515,250</u>

¹ Details of interest income for the three-month periods ended March 31, 2024 and 2023, are as follows:

<i>(in millions of Korean won)</i>	2024		2023	
Deposits held by financial institutions	₩	74,630	₩	57,463
Other loans and receivables		24,131		12,125
Total	₩	<u>98,761</u>	₩	<u>69,588</u>

² Details of interest expense for the three-month periods ended March 31, 2024 and 2023, are as follows:

<i>(in millions of Korean won)</i>	2024		2023	
Interest on financial institutions	₩	99,157	₩	78,947
Interest on lease liabilities		3,493		2,460
Interest on debentures		123,996		50,368
Other interest expenses		8,354		6,926
Capitalized interest for qualifying assets		(38,307)		(9,110)
Total	₩	<u>196,693</u>	₩	<u>129,591</u>

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26. Other Non-operating Income

Details of other non-operating income for the three-month periods ended March 31, 2024 and 2023, are as follows:

<i>(in millions of Korean won)</i>	2024		2023	
Exchange differences	₩	314,211	₩	501,828
Gain on disposal of property, plant and equipment		1,845		661
Gain on disposal of intangible assets		14		-
Insurance income		766		1,259
Others		12,359		19,107
Total	₩	<u>329,195</u>	₩	<u>522,855</u>

27. Other Non-operating Expenses

Details of other non-operating expenses for the three-month periods ended March 31, 2024 and 2023, are as follows:

<i>(in millions of Korean won)</i>	2024		2023	
Exchange differences	₩	169,473	₩	364,820
Loss on disposal of property, plant and equipment		46,526		23,026
Loss on disposal of intangible assets		430		666
Impairment loss on property, plant and equipment (reversal) (Note 11)		18,643		(2,691)
Impairment loss on intangible assets (Note 12)		125		-
Loss on disasters		8		14,229
Donations		1,012		2,443
Others		9,517		5,742
Total	₩	<u>245,734</u>	₩	<u>408,235</u>

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28. Tax Expense and Deferred Tax

Income tax expense is recognized based on the best estimate of weighted average annual income tax rate expected for the full financial year.

The Group is within the scope of Pillar Two model rules and liable to pay an additional tax expense as a parent company of LG Energy Solution Michigan Inc. that operates in USA and LG Chem Hai Phong Engineering Plastics LLC. that operates in Vietnam. The Group recognized income tax expense amounting to ₩ 863 million for the three-month period ended March 31, 2024, and applied the exception to recognizing and disclosing information about deferred tax.

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 owners of the Parent Company for the three-month periods ended March 31, 2024 and 2023, are computed as follows:

Basic earnings per ordinary share from continuing operations

<i>(in millions of Korean won and in number of shares)</i>	2024	2023
Profit from continuing operations attributable to ordinary shares ¹	₩ 102,705	₩ 432,293
Weighted average number of ordinary shares outstanding	70,592,343	70,592,343
Basic earnings per ordinary share from continuing operations <i>(in won)</i>	₩ 1,455	₩ 6,124

Basic earnings per ordinary share

<i>(in millions of Korean won and in number of shares)</i>	2024	2023
Profit attributable to ordinary shares ¹	₩ 122,959	₩ 427,282
Weighted average number of ordinary shares outstanding	70,592,343	70,592,343
Basic earnings per ordinary shares <i>(in won)</i>	₩ 1,742	₩ 6,053

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Basic earnings per preferred share from continuing operations

<i>(in millions of Korean won and in number of shares)</i>	2024		2023	
Profit from continuing operations attributable to preferred share ¹	₩	11,562	₩	47,432
Weighted average number of preferred shares outstanding		<u>7,682,759</u>		<u>7,682,759</u>
Basic earnings per preferred share from continuing operations <i>(in won)</i>	₩	<u>1,505</u>	₩	<u>6,174</u>

Basic earnings per preferred share

<i>(in millions of Korean won and in number of shares)</i>	2024		2023	
Profit attributable to preferred shares ¹	₩	13,766	₩	46,886
Weighted average number of preferred shares outstanding ²		<u>7,682,759</u>		<u>7,682,759</u>
Basic earnings per preferred shares <i>(in won)</i>	₩	<u>1,792</u>	₩	<u>6,103</u>

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

<i>(in millions of Korean won)</i>	2024		2023	
Profit from continuing operations attributable to the owners of the Parent Company	₩	114,267	₩	479,725
Ordinary shares dividends (A)		24,315		127,942
Preferred shares dividends (B)		3,030		14,308
Undistributed earnings from continuing operation for the period		86,922		337,475
Undistributed earnings available for ordinary shares (C)		78,390		304,351
Undistributed earnings available for preferred shares (D)		8,532		33,124
Profit from continuing operations for the period attributable to ordinary shares (A+C)		102,705		432,293
Profit from continuing operations for the period attributable to preferred shares (B+D)		11,562		47,432

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<i>(in millions of Korean won)</i>	2024		2023	
Profit attributable to the owners of the Parent Company	₩	136,725	₩	474,168
Ordinary shares dividends (A)		24,315		127,943
Preferred shares dividends (B)		3,030		14,307
Undistributed earnings for the period		109,380		331,918
Undistributed earnings available for ordinary shares (C)		98,644		299,339
Undistributed earnings available for preferred shares (D)		10,736		32,579
Profit for the period attributable to ordinary shares (A+C)		122,959		427,282
Profit for the period attributable to preferred shares (B+D)		13,766		46,886

For the three-month periods ended March 31, 2024 and 2023, 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.

Basic and diluted earnings per share attributable to ordinary and preferred shares from discounted operations for the three-month periods ended March 31, 2024 and 2023, are as follows:

<i>(in Korean won)</i>	2024		2023	
Basic earnings(loss) per ordinary share from discounted operations	₩	287	₩	(71)
Basic earnings(loss) per preferred share from discounted operations		287		(71)
Diluted earnings(loss) per ordinary share from discounted operations		287		(71)
Diluted earnings(loss) per preferred share from discounted operations		287		(71)

30. Dividends

The amount of dividends and dividends per share for the three-month periods ended March 31, 2024 and 2023, are as follows:

<i>(in Korean won and number of share)</i>	2024		2023	
	Ordinary share	Preferred share	Ordinary share	Preferred share
Number of shares outstanding	70,592,343	7,688,800	70,592,343	7,688,800
Number of treasury shares	-	(6,041)	-	(6,041)
Number of dividend share	70,592,343	7,682,759	70,592,343	7,682,759
Dividend per share	₩	3,500	₩	3,550
Total dividend (in millions of Korean won)	247,073	27,274	705,923	77,212

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31. Related Party Transactions

Details of related parties as at March 31, 2024 and December 31, 2023, are as follows:

Related party	Related party's subsidiary (Domestic)	Related party's subsidiary (Overseas)	Related party's associates and joint ventures
Significant influence over the group: ¹ LG Corp.			
Subsidiaries of LG Corp.:			
LG CNS Co., Ltd.	Biztech On Co., Ltd. and others	LG CNS America Inc. and others	
D&O Corp.	D&O CM and others	D&O CM POLAND sp.z o.o. and others	
LG Management Development Institute			
LG Sports Ltd.			
LG Holdings Japan Co., Ltd.			
Associates and joint ventures: ²			
TECHWIN Co., Ltd.			
LG Chem Life Sciences Poland Ltd.			
HUAJIN NEW ENERGY MATERIALS(QUZHOU) CO., LTD.			
TL Chemical CO., Ltd.			
KOREA PRECURSOR CO., LTD.			
LG Toray Hungary Battery Separator Kft.			
SEETEC Co., Ltd.			
PT.HLI Green Power.			
Sam-a Aluminium Company, Limited ³			
NEXPO Co., Ltd. ³			
Mintech Co., Ltd. ⁴			
Bricks Capital Management Global Battery Private Equity Fund I ³			
LG Enterprise group ⁵			
LG Display Co., Ltd.	Nanumnuri Co., Ltd.	LG Display High-Tech (China) Co., Ltd. and others	
LG Electronics Inc.	LG Innotek Co., Ltd. and others	LG ELECTRONICS INDIA PRIVATE LIMITED and others	Robostar Co., Ltd. and others
LG Household & Health Care Ltd.	Coca-Cola Beverage Co. and others	Beijing LG Household Chemical Co., Ltd. and others	
LG Uplus Corp.	LG HelloVision Corp and others.	DACOM AMERICA, INC.	
HS AD Inc. ⁶		GIIR America Inc. and others	

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¹ LG Corp. is an entity exercising a significant influence over the Group, which owns 33.34% of the Parent Company's ordinary shares.

² During the year ended December 31, 2023, the Group disposed VINFAST LITHIUM BATTERY PACK LLC., Jiangxi VL Battery., Ltd., VINA Plasticizers Chemical Co.,Ltd. Therefore, it was excluded from the related parties.

³ During the year ended December 31, 2023, the Group newly acquired shares of the entity.

⁴ Although, the Group owns less than 20% of the shares in the form of redeemable convertible preference shares, it is judged to have significant influence as it holds a right to appoint directors. Meanwhile, it is classified as a financial asset measured at fair value through profit or loss, considering Korean IFRS 1109 and the nature of the shares held.

⁵ Although, these entities are not the related parties of the Group in accordance with Korean IFRS 1024, these entities belong to a large enterprise group in accordance with the Monopoly Regulation and Fair-Trade Act.

⁶ During the year ended December 31, 2023, G II R Inc. merged HS AD Inc. and LBEST Inc. After the merger, G II R Inc. changed its name to HS AD Inc.

Sales and purchases with related parties for the three-month periods ended March 31, 2024 and 2023, are as follows:

(in millions of Korean won)

	2024											
	Purchase and others											
	Sales and others		Purchase of raw materials /merchandises		Acquisition of property, plant and equipment and intangible assets		Acquisition of right-of-use assets		Interest expense		Others	
Entity with a significant influence over the Group												
LG Corp.	₩	2	₩	-	₩	-	₩	-	₩	73	₩	22,673
Associates and joint ventures												
SEETEC Co., Ltd.		24,640		55,394		-		135		101		24,681
TECWIN Co., Ltd.		-		18		88		-		-		-
HUAJIN NEW ENERGY MATERIALS(QUZHOU) CO., LTD.		310		65,767		-		-		-		-
PT. HLI Greenpower		12,208		-		-		-		-		2,369
Others		947		11,325		-		-		-		197
Other related parties												
D&O Corp. and its subsidiaries and associates		22		-		6,072		-		-		4,242
LG CNS Co., Ltd. and its subsidiaries		2,853		504		165,162		-		5		68,604
Others		28		-		-		-		-		19,929
Others												
LG Display Co., Ltd. and its subsidiaries		139,409		110		-		-		2		-
LG Electronics Inc. and its subsidiaries and joint ventures		166,177		49,574		440,551		-		83		22,681
Others		2,317		12,113		93,045		11,836		17		37,319
Total	₩	348,913	₩	194,805	₩	704,918	₩	11,971	₩	281	₩	202,695

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(in millions of Korean won)

	2023											
	Purchase and others											
	Sales and others		Purchase of raw materials /merchandises		Acquisition of property, plant and equipment and intangible assets		Acquisition of right-of-use assets		Interest expense		Others	
Entity with a significant influence over the Group												
LG Corp.	₩	-	₩	-	₩	-	₩	-	₩	65	₩	30,675
Associates and joint ventures												
SEETEC Co., Ltd.		46,167		76,479		-		34		93		24,111
TECWIN Co., Ltd.		-		85		145		-		-		39
HUAJIN NEW ENERGY MATERIALS(QUZHOU) CO., LTD.		230		161,103		-		-		-		-
PT. HLI Greenpower		11,524		-		-		-		-		-
Others		16,946		6,222		-		-		-		28
Other related parties												
D&O Corp. and its subsidiaries		44		-		5,357		-		-		3,983
LG CNS Co., Ltd. and its subsidiaries		9,166		814		134,396		-		6		60,007
Others		7		-		-		-		-		15,551
Others												
LG Display Co., Ltd. and its subsidiaries		108,005		23		-		-		3		89
LG Electronics Inc. and its subsidiaries and joint ventures		632,783		80,197		261,185		-		89		13,039
Shanjin Optoelectronics (Suzhou) Co.,Ltd.. and its subsidiaries ¹		126,110		43		-		-		-		4,078
Others		2,620		14,643		227,967		625		14		28,414
Total	₩	<u>953,602</u>	₩	<u>339,609</u>	₩	<u>629,050</u>	₩	<u>659</u>	₩	<u>270</u>	₩	<u>180,014</u>

¹ Excluded from related parties during the current period, and the details of these relevant transactions are occurred transaction details before it was excluded from related party.

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Balances of receivables and payables arising from sales and purchases of goods and services as at March 31, 2024 and December 31, 2023, are as follows:

(in millions of Korean won)

	March 31, 2024							
	Receivables							
	Trade receivables and others		Loan receivables		Other receivables		Total	
Entity with a significant influence over the Group								
LG Corp.	₩	-	₩	-	₩	22,164	₩	22,164
Associates and joint ventures								
SEETEC Co., Ltd.		7,968		-		927		8,895
TECWIN Co., Ltd.		-		-		-		-
HUAJIN NEW ENERGY MATERIALS(QUZHOU) CO., LTD.		310		-		-		310
PT. HLI Greenpower		593		-		4,758		5,351
Others		-		-		-		-
Other related parties								
D&O Corp. and its subsidiaries		-		-		-		-
LG CNS Co., Ltd. and its subsidiaries		3,106		-		5		3,111
Others		-		-		-		-
Others								
LG Display Co., Ltd. and its subsidiaries		224,851		-		1		224,852
LG Electronics Inc. and its subsidiaries and joint ventures ¹		189,885		-		6,715		196,600
Others		138		-		2,071		2,209
Total	₩	426,851	₩	-	₩	36,641	₩	463,492

(in millions of Korean won)

	March 31, 2024									
	Payables									
	Trade payables		Borrowings		Lease liabilities		Other payables		Total	
Entity with a significant influence over the Group										
LG Corp.	₩	-	₩	-	₩	9,583	₩	103,949	₩	113,532
Associates and joint ventures										
SEETEC Co., Ltd.		18,886		-		19,799		11,249		49,934
TECWIN Co., Ltd.		-		-		-		117		117
HUAJIN NEW ENERGY MATERIALS(QUZHOU) CO., LTD.		68,157		-		-		-		68,157
PT. HLI Greenpower		-		-		-		32,210		32,210
Others		8,357		-		-		209		8,566
Other related parties										
D&O Corp. and its subsidiaries		-		-		-		9,514		9,514
LG CNS Co., Ltd. and its subsidiaries		-		-		646		305,083		305,729
Others		-		-		-		2,126		2,126
Others										

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	March 31, 2024				
	Payables				
	Trade payables	Borrowings	Lease liabilities	Other payables	Total
LG Display Co., Ltd. and its subsidiaries	110	-	306	29	445
LG Electronics Inc. and its subsidiaries and joint ventures ¹	42,565	-	15,686	243,490	301,741
Others	4,024	-	3,198	241,994	249,216
Total	₩ 142,099	₩ -	₩ 49,218	₩ 949,970	₩ 1,141,287

(in millions of Korean won)

	December 31, 2023			
	Receivables			
	Trade receivables and others	Loan receivables	Other receivables	Total
Entity with a significant influence over the Group				
LG Corp.	₩ -	₩ -	₩ 17,196	₩ 17,196
Associates and joint ventures				
SEETEC Co., Ltd.	13,653	-	1,000	14,653
TECWIN Co., Ltd.	-	-	-	-
HUAJIN NEW ENERGY MATERIALS(QUZHOU) CO., LTD.	-	-	-	-
PT. HLI Greenpower	200	-	4,006	4,206
Others	-	-	-	-
Other related parties				
D&O Corp. and its subsidiaries	-	-	23	23
LG CNS Co., Ltd. and its subsidiaries	7,859	-	670	8,529
Others	-	-	6	6
Others				
LG Display Co., Ltd. and its subsidiaries	209,113	-	-	209,113
LG Electronics Inc. and its subsidiaries and joint ventures ¹	349,239	-	5,575	354,814
Others	109	-	2,201	2,310
Total	₩ 580,173	₩ -	₩ 30,677	₩ 610,850

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	December 31, 2023						
	Payables						
	Trade payables	Borrowings	Lease liabilities	Other payables	Total		
Entity with a significant influence over the Group							
LG Corp.	₩	-	₩	-	₩ 3,060	₩ 21,425	₩ 24,485
Associates and joint ventures							
SEETEC Co., Ltd.		31,148	-	20,662	11,735	63,545	
TECWIN Co., Ltd.		-	-	-	2,566	2,566	
HUAJIN NEW ENERGY MATERIALS(QUZHOU) CO., LTD.		161,178	-	-	-	161,178	
PT. HLI Greenpower		-	-	-	45,778	45,778	
Others		3,769	-	-	117	3,886	
Other related parties							
D&O Corp. and its subsidiaries		-	-	-	8,669	8,669	
LG CNS Co., Ltd. and its subsidiaries		293	-	308	472,299	472,900	
Others		-	-	-	1,401	1,401	
Others							
LG Display Co., Ltd. and its subsidiaries		14	-	360	34	408	
LG Electronics Inc. and its subsidiaries and joint ventures ¹		45,591	-	16,026	304,673	366,290	
Others		2,765	-	3,519	212,619	218,903	
Total	₩	244,758	₩	-	₩ 43,935	₩ 1,081,316	₩ 1,370,009

¹ The warranty provision related to the recall of GM Bolt is not included in the above receivables and payables.

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Fund transactions with related parties for the three-month periods ended March 31, 2024 and 2023, are as follows:

(in millions of Korean won)

	2024													
	Dividends received		Dividends paid		Equity contributions in cash (capital reduction) and others		Loans			Borrowings ¹				
	₩		₩		₩		₩		₩		₩		₩	
Entity with a significant influence over the Group														
LG Corp.	₩	-	₩	-	₩	-	₩	-	₩	-	₩	12,738	₩	3,155
Associates and joint ventures														
SEETEC Co., Ltd.		7,500		-		-		-		-		135		356
NEXPO Co., Ltd		-		-		1,900		-		-		-		-
Bricks Capital management Global Battery Private Equity Fund I		-		-		857		-		-		-		-
Other related parties														
LG CNS Co., Ltd.		-		-		-		-		-		859		213
Others														
LG Display America, Inc.		-		-		-		-		-		-		49
LG Electronics Deutschland GmbH		-		-		-		-		-		-		85
LG ELECTRONICS WROCLAW SP. Z O.O.		-		-		-		-		-		-		390
LG Display Vietnam Haiphong Co. Ltd.		-		-		-		-		-		105		13
LG HOUSEHOLD & HEALTH CARE LTD		-		-		-		-		-		-		239
Total	₩	7,500	₩	-	₩	2,757	₩	-	₩	-	₩	13,837	₩	4,500

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(in millions of Korean won)

	2023													
	Dividends received			Dividends paid			Equity contributions in cash (capital reduction) and others			Loans		Borrowings ¹		
										Loans	Repayment	Borrowings	Repayment	
Entity with a significant influence over the Group	₩	-	₩	-	₩	-	₩	-	₩	-	₩	-	₩	3,010
Associates and joint ventures														
SEETEC Co., Ltd.		5,000		-		-		-		-		34		247
KOREA PRECURSOR CO., LTD.		-		-		20,384		-		-		-		-
Sam-A Aluminium Co., Ltd.		-		-		46,575		-		-		-		-
VINA Plasticizers Chemical Co., Ltd.		4,444		-		-		-		-		-		-
Other related parties														
LG CNS Co., Ltd.		-		-		-		-		-		-		303
Others														
LG Display America, Inc.		-		-		-		-		-		-		44
LG Electronics Deutschland GmbH		-		-		-		-		-		-		75
LG ELECTRONICS WROCLAW SP. Z O.O.		-		-		-		-		-		-		361
LG HOUSEHOLD & HEALTH CARE LTD		-		-		-		-		-		625		86
Total	₩	9,444	₩	-	₩	66,959	₩	-	₩	-	₩	659	₩	4,126

¹ The amounts represent lease liabilities that were recognized or repaid for the three-month periods ended March 31, 2024 and 2023.

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Compensation for key management of the Group for the three-month periods ended March 31, 2024 and 2023, consists of:

<i>(in millions of Korean won)</i>	2024		2023	
Short-term employee benefits	₩	29,044	₩	35,018
Post-employment benefits		4,378		3,620
Total	₩	<u>33,422</u>	₩	<u>38,638</u>

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

There is no loss allowance recognized against receivables from related parties as at March 31, 2024 and December 31, 2023; therefore, there are no impairment losses recognized against the receivables from related parties for the three-month period ended March 31, 2024 and for the year ended December 31, 2023..

As at March 31, 2024, payment guarantees provided by the Group for related parties are listed in Note 18.

32. Cash Flows

Cash generated from operations for the three-month periods ended March 31, 2024 and 2023, are as follows:

<i>(in millions of Korean won)</i>	2024		2023	
Profit before income tax				
Profit before income tax from continuing operations	₩	323,304	₩	924,098
Profit (loss) before income tax from discontinued operations		20,502		(8,552)
		<u>343,806</u>		<u>915,546</u>
Adjustments for:				
Depreciation		966,717		831,439
Amortization		110,299		83,401
Post-employment benefits		49,221		39,982
Finance income		(491,973)		(260,440)
Finance costs		569,697		320,900
Other foreign exchange differences		57,519		(134,879)
Gain on valuation of inventories (reversal)		16,116		(87,526)
Gain on disposal of property, plant and equipment		(1,845)		(571)
Gain on disposal of intangible assets		(14)		-
Loss on disposal of property, plant and equipment		46,541		23,086
Loss on disposal of intangible assets		655		732

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<i>(in millions of Korean won)</i>	2024	2023
Impairment loss on property, plant and equipment (reversal)	18,643	(914)
Impairment loss on intangible assets	125	20
Additions to provisions	215,510	194,063
Other income/expenses	(278,912)	26,062
Decrease (Increase) in inventories	(179,058)	325,921
Decrease (Increase) in trade receivables	175,566	(803,517)
Increase in other receivables	(332,336)	(193,609)
Decrease (Increase) in other current assets	(11,417)	150,753
Increase (decrease) in trade payables	(87,966)	524,515
Decrease in other payables	(247,144)	(481,362)
Increase (decrease) in other current liabilities	180,135	(514,412)
Decrease in provisions	(195,919)	(149,253)
Decrease in net defined benefit liabilities	(18,614)	(1,092)
Other cash flows from operations	(204,800)	7,829
Cash generated from operations	<u>₩ 700,552</u>	<u>₩ 816,674</u>

Changes in liabilities arising from financial activities for the three-month periods ended March 31, 2024 and 2023, are as follows:

<i>(in millions of Korean won)</i>	2024						
	As at January 1, 2024	Cash flows from financing activities	Non-cash transactions			As at March 31, 2024	
			Acquisition	Amortization	Others		
Short-term borrowings	₩ 9,675,998	₩ 84,827	₩ -	₩ 6,183	₩ 249,676	₩ 10,016,684	
Debentures	11,760,250	2,032,072	-	28,209	303,582	14,124,113	
Lease liabilities	491,866	(28,906)	77,611	-	1,802	542,373	
	<u>₩ 21,928,114</u>	<u>₩ 2,087,993</u>	<u>₩ 77,611</u>	<u>₩ 34,392</u>	<u>₩ 555,060</u>	<u>₩ 24,683,170</u>	

<i>(in millions of Korean won)</i>	2023						
	As at January 1, 2023	Cash flows from financing activities	Non-cash transactions			As at March 31, 2023	
			Acquisition	Amortization	Others		
Short-term borrowings	₩ 7,609,924	₩ 1,304,290	₩ -	₩ 2,143	₩ 333,164	₩ 9,249,521	
Debentures	7,964,957	137,475	-	2,273	118,928	8,223,633	
Lease liabilities	389,638	(26,372)	30,962	-	6,016	400,244	
	<u>₩ 15,964,519</u>	<u>₩ 1,415,393</u>	<u>₩ 30,962</u>	<u>₩ 4,416</u>	<u>₩ 458,108</u>	<u>₩ 17,873,398</u>	

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Significant non-cash transactions for the three-month periods ended March 31, 2024 and 2023, are as follows:

<i>(in millions of Korean won)</i>	2024		2023	
Reclassification of construction-in-progress	₩	3,703,472	₩	953,014
Reclassification of machinery-in-transit		94,628		47,040
Reclassification of long-term borrowings into current portion		1,322,902		2,054,297
Other payables related to acquisitions of property, plant and equipment and intangible assets		746,458		922,621

33. Segment Information

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

Segment	Products or services
Petrochemicals	ABS, PC, PE, PP, Acrylic, Alcohol, SAP, PVC, Synthetic rubber, Special resin, BPA, Ethylene, Propylene and others
LG Energy solution	Mobile batteries, Automotive batteries, Electricity storage batteries and others
Advanced materials ¹	Automotive components, LCD Photoresist, OLED materials, Battery materials and others
Life sciences	Growth hormone, Vaccine, Antidiabetic, agricultural chemicals and others
Common and others	Crop protection products, Seeds, Fertilizers, General management, sales and R&D and others

¹ Management approved the disposal of LCD polarizer business polarizer and polarizer material business and the related profit and loss are presented as discontinued operations are disclosed in Note 34.

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Segment information on revenue, profit and loss for the three-month periods ended March 31, 2024 and 2023, are as follows:

(in millions of
Korean won)

	2024					
	Petro-chemicals	LG Energy solution	Advanced materials	Life sciences	Common and others ³	Total
Total segment revenue	₩ 4,455,221	₩ 6,128,714	₩ 1,583,352	₩ 284,907	₩ 248,676	₩ 12,700,870
Inter-segment revenue	136,023	3,632	936,867	12,576	2,340	1,091,438
Revenue from external customers ¹	4,319,198	6,125,082	646,485	272,331	246,336	11,609,432
Operating profit (loss) ²	(31,155)	157,337	142,133	3,283	(6,967)	264,631
Depreciation and amortization	261,055	654,861	52,913	37,333	62,174	1,068,336

(in millions of
Korean won)

	2023					
	Petro-chemicals	LG Energy solution	Advanced materials	Life sciences	Common and others ³	Total
Total segment revenue	₩ 4,578,643	₩ 8,747,117	₩ 2,329,916	₩ 277,997	₩ 282,113	₩ 16,215,786
Inter-segment revenue	155,913	2,421	1,756,339	11,387	5,239	1,931,299
Revenue from external customers ¹	4,422,730	8,744,696	573,577	266,610	276,874	14,284,487
Operating profit (loss) ²	(50,797)	633,166	215,391	16,414	(10,471)	803,703
Depreciation and amortization	260,092	505,812	47,121	22,611	67,001	902,637

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.

Segment information on assets and liabilities as at March 31, 2024 and December 31, 2023, are as follows:

(in millions of
Korean won)

	March 31, 2024					
	Petro-chemicals	LG Energy solution	Advanced materials	Life sciences	Common and others	Total
Reportable segment asset ¹	₩ 15,816,225	₩ 49,228,244	₩ 7,772,698	₩ 3,460,905	₩ 5,837,497	₩ 82,115,569
Investments in associates and joint ventures	49,733	223,223	591,285	17	150,139	1,014,397
Reportable segment liability ¹	5,154,706	22,568,934	2,313,716	654,564	8,244,852	38,936,772

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(in millions of
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	December 31, 2023					
	Petro-chemicals	LG Energy solution	Advanced materials	Life sciences	Common and others	Total
Reportable segment asset ¹	₩ 15,144,156	₩ 45,399,160	₩ 7,378,796	₩ 2,664,518	₩ 6,880,064	₩ 77,466,694
Investments in associates and joint ventures	49,203	223,559	578,394	17	154,433	1,005,606
Reportable segment liability ¹	4,873,964	21,036,411	2,211,319	592,085	7,814,730	36,528,509

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

The external sales and non-current assets by geographical segments from continuing operations for the three-month periods ended March 31, 2024 and 2023, and as at March 31, 2024 and December 31, 2023, are as follows:

(in millions of Korean won)

	Sales		Non-current assets ¹	
	2024	2023	March 31, 2024	December 31, 2023
Korea ²	₩ 2,449,723	₩ 2,588,153	₩ 19,786,591	₩ 19,676,808
China	3,011,468	3,773,791	5,209,336	5,242,483
Asia	1,318,668	1,139,819	345,650	342,873
America	2,524,512	2,573,598	15,144,439	12,246,392
Europe	2,286,279	4,104,508	5,257,914	5,223,709
Others	18,782	104,618	-	-
Total	₩ 11,609,432	₩ 14,284,487	₩ 45,743,930	₩ 42,732,265

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.

During the three-month period ended March 31, 2024, revenue to single external customers accounting for more than 10% of the Group's revenue was ₩ 1,484,625million (2023: ₩ 1,570,953 million) and ₩1,467,480 million (2023: ₩1,510,614 million), respectively, all from LG Energy Solution, Ltd.

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34. Assets and Liabilities Held for Sale and Discontinued Operations

34.1 Assets and Liabilities Held for Sale

In accordance with the final approval of management, the Group decided to dispose of polarizer and related material business (September 2023) and diagnosis business (June 2023) and all shares of VINA PLASTICIZERS CHEMICAL COMPANY LIMITED (September 2022). As a result, the related assets were reclassified as assets held for sale. Sale of the diagnostic business was finalized in October 2023, and the entire share of VINA PLASTICIZERS CHEMICAL COMPANY LIMITED was sold in December 2023.

The land of FarmHannong Co., Ltd., which is held for sale in accordance with the river maintenance plan, is in the process of the compensation plan with Gimhae City Hall. The Group decided to dispose of the land and buildings related to the former horticultural factory of FarmHannong Co., Ltd. (November 2022), and related assets were reclassified as assets held for sale.

Details of assets and liabilities of disposal group classified as held for sale as at March 31, 2024 and December 31, 2023, are as follows:

<i>(in millions of Korean won)</i>	March 31, 2024		December 31, 2023	
Assets of disposal group				
Property, plant and equipment	₩	77,157	₩	64,589
Intangible assets		38,305		38,345
Inventories		62,429		57,708
Trade and other receivables		5,151		3,517
Right-of-use assets		6,587		6,587
Other current and non-current assets		8,757		24,360
	₩	198,386	₩	195,106
Liabilities of disposal group				
Trade and non-trade payables	₩	11,576	₩	20,613
Other current and non-current liabilities		4,214		6,442
	₩	15,790	₩	27,055

As the net fair value of the assets of the disposal group is expected to exceed the carrying amount, there is no impairment loss recognized for the disposal group classified as assets held for sale as at March 31, 2024.

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34.2 Discontinued Operations

The Group decided to discontinue polarizer and related material business with the resolution of the board of directors in September 2023 and, substantially, discontinued the related business as of September 2023. Also, the Group decided to discontinue glass substrate business with the resolution of the board of directors in January 2020 and, substantially, discontinued the related business as of March 2020. In addition, the Group decided to dispose of LCD polarizer business with the resolution of the board of directors in June 2020, and the disposal was completed in February 2021. The Group determined to disposed 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 income statements have been restated.

Comprehensive income information from discontinued operation for the three-month periods ended March 31, 2024 and 2023, are as follows:

(in millions of Korean won)

	2024			
	LCD polarizer	Glass substrate	Polarizer and related material	Total
Revenue	₩ -	₩ -	₩ 200,208	₩ 200,208
Expense	-	(1,756)	(177,950)	(179,706)
Profit (loss) before income tax of discontinued operation	-	(1,756)	22,258	20,502
Income tax benefit (expense)	-	(331)	2,169	1,838
Profit (loss) after income tax of discontinued operations	₩ -	₩ (2,087)	₩ 24,427	₩ 22,340

(in millions of Korean won)

	2023			
	LCD polarizer	Glass substrate	Polarizer and related material	Total
Revenue	₩ 306	₩ -	₩ 219,408	₩ 219,714
Expense	-	(775)	(227,490)	(228,265)
Profit (loss) before income tax of discontinued operation	306	(775)	(8,082)	(8,551)
Income tax benefit (expense)	(128)	325	2,086	2,283
Profit (loss) after income tax of discontinued operations	₩ 178	₩ (450)	₩ (5,996)	₩ (6,268)

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Net cash flows from discontinued operations for the three-month periods ended March 31, 2024 and 2023, are as follows:

(in millions of Korean won)

	2024			
	LCD polarizer	Glass substrate	Polarizer and related material	Total
Net cash outflow from operating activities	₩ -	₩ (2,136)	₩ (1,234)	₩ (3,370)
Net cash inflow (outflow) from investing activities	-	684	(5,043)	(4,359)
Net cash inflow (outflow) from financing activities	-	-	-	-

(in millions of Korean won)

	2023			
	LCD polarizer	Glass substrate	Polarizer and related material	Total
Net cash inflow (outflow) from operating activities	₩ (14,745)	₩ (341)	₩ 28,639	₩ 13,553
Net cash outflow from investing activities	-	(18)	(10,923)	(10,941)
Net cash inflow (outflow) from financing activities	-	-	-	-

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35. Assets and Liabilities related to Contracts with Customers

Assets and liabilities related to contracts with customers as at March 31, 2024 and December 31, 2023, are as follows:

<i>(in millions of Korean won)</i>	March 31, 2024	December 31, 2023
Contract assets		
Due from customers for contract work	₩ 98,838	₩ 70,356
Total contract assets	₩ 98,838	₩ 70,356
Contract liabilities		
Advances in relation to revenue from the Group's main business activities	₩ 1,396,293	₩ 1,361,224
Expected customer incentives	60,389	5,494
Unearned revenue	82,698	95,277
Due to customers for contract work	43,202	2,785
Total contract liabilities	₩ 1,582,582	₩ 1,464,780

Revenue recognized in relation to contract liabilities.

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

<i>(in millions of Korean won)</i>	2024	2023
Revenue recognized in the current period from the contract liabilities balance at the beginning of the period	₩ 79,800	₩ 128,105
Advances in relation to revenue from the Group's main business activities	63,252	111,822
Unearned revenue	16,548	16,283
Revenue recognized from performance obligations satisfied in previous periods	-	-

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36. Investment Properties

Details of investment properties as at March 31, 2024 and December 31, 2023, are as follows:

(in millions of Korean won)	March 31, 2024				December 31, 2023			
	Cost	Accumulated depreciation	Accumulated impairment	Book amount	Cost	Accumulated depreciation	Accumulated impairment	Book amount
Land	₩ 6,696	₩ (78)	₩ (497)	₩ 6,121	₩ 4,475	₩ (75)	₩ (497)	₩ 3,903
Buildings	134,116	(21,004)	(18,240)	94,872	121,881	(18,591)	(18,243)	85,047
Total	₩ 140,812	₩ (21,082)	₩ (18,737)	₩ 100,993	₩ 126,356	₩ (18,666)	₩ (18,740)	₩ 88,950

Changes in investment properties for the three-month period ended March 31, 2024 and for the year ended December 31, 2023, are as follows:

(in millions of Korean won)	2024			2023		
	Land	Building	Total	Land	Building	Total
Beginning balance	₩ 3,903	₩ 85,047	₩ 88,950	₩ 4,744	₩ 89,282	₩ 94,026
Acquisitions/transfers	2,221	10,815	13,036	-	359	359
Disposals/transfers	-	(98)	(98)	(811)	(1,189)	(2,000)
Depreciation	(3)	(892)	(895)	(30)	(3,405)	(3,435)
Ending balance	₩ 6,121	₩ 94,872	₩ 100,993	₩ 3,903	₩ 85,047	₩ 88,950

The fair value of investment properties is measured either by independent professional appraisers with certified qualification or measured based on official appraised value of land and available information from recent transactions of similar properties, and it is classified as 'Level 3' of the fair value hierarchy. The fair value of investment properties as at March 31, 2024, is ₩114,586 million (December 31, 2023: ₩101,704 million).

During the three-month period ended March 31, 2024, rental income from investment properties under operating lease is ₩1,189 million (2023: ₩2,210 million), and operating expenses incurred for investment properties that generated rental income (including maintenance and repair expenses) are ₩1,040 million (2023: ₩824 million). During the three-month period ended March 31, 2024, operating expenses incurred for investment properties that do not generate rental income (including maintenance and repair expenses) are ₩69 million (2023: nil).

Operating lease

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

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

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The future minimum lease payments expected to be received in relation to the above operating lease agreement for investment properties as at March 31, 2024 and December 31, 2023, are as follows:

<i>(in millions of Korean won)</i>	March 31, 2024		December 31, 2023	
Within one year	₩	4,326	₩	2,073
Within two years		3,598		2,053
Within five years		4,666		4,085
Total	₩	<u>12,590</u>	₩	<u>8,211</u>

37. Business Combination

To establish a foundation for becoming a global pharmaceutical company, the Group acquired 100% interest in Aveo Pharmaceuticals, Inc. on January 20, 2023, for the purpose of securing commercialization capabilities and pre-emptive products in the US anticancer market.

Details of consideration transferred, assets and liabilities recognized as a result of the business combination paid to Aveo Pharmaceuticals, Inc. are as follows:

The goodwill of ₩275,856 million resulting from the business combination arises from various factors, including the expected increase in revenue resulting from the combination of the businesses of the Company and Aveo Pharmaceuticals, Inc.

<i>(in millions of Korean won)</i>	Amount	
Consideration transferred		
Cash and cash equivalents	₩	701,103
Total consideration	₩	<u>701,103</u>
Identifiable assets acquired and liabilities assumed		
Cash and cash equivalents	₩	8,902
Trade and other receivables ¹		34,687
Inventories		845
Property, plant and equipment		935
Intangible assets		565,448
Other assets		246
Trade and non-trade payables		(40,941)
Other payables		(686)
Deferred tax liabilities		(144,189)
Fair value of net identifiable assets acquired		<u>425,247</u>
Goodwill (gain from a bargain purchase)		<u>275,856</u>
	₩	<u>701,103</u>

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

The revenue and loss for the period reflected in the consolidated income statements for the three-month period ended March 31, 2023, contributed by Aveo Pharmaceuticals, Inc. after the acquisition were ₩31,634 million and ₩3,727 million, respectively.