## LG Chem, Ltd.

Separate Financial Statements and Internal Control over Financial Reporting December 31, 2022 and 2021

## LG Chem, Ltd. Index December 31, 2022 and 2021

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#### **Independent Auditor's Report**

(English Translation of a Report Originally Issued in Korean)

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

#### **Opinion**

We have audited the accompanying separate financial statements of LG Chem, Ltd. (the Company), which comprise the separate statements of financial position as at December 31, 2022 and 2021, and separate statements of profit or loss, separate statements of comprehensive income, separate statements of changes in equity and separate statements of cash flows for the years then ended, and notes to the separate financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying separate financial statements present fairly, in all material respects, the separate financial position of LG Chem, Ltd. as at December 31, 2022 and 2021, and its separate financial performance and its separate cash flows for the years then ended in accordance with International Financial Reporting Standards as adopted by the Republic of Korea (Korean IFRS).

We also have audited, in accordance with Korean Standards on Auditing, the Company's Internal Control over Financial Reporting as of December 31, 2022, based on *Conceptual Framework for Designing and Operating Internal Control over Financial Reporting*, and our report dated March 9, 2023 expressed an unqualified opinion.

#### **Basis for Opinion**

We conducted our audits in accordance with Korean Standards on Auditing. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of the Company in accordance with the ethical requirements of the Republic of Korea that are relevant to our audit of the separate financial statements and we have fulfilled our other ethical responsibilities in accordance with the ethical requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### **Key Audit Matters**

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the separate financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

#### Impairment assessment for Cash Generating Units to which goodwill was allocated

Why this matter was determined to be a key audit matter

The Company annually performs impairment assessment on the goodwill. We focused on goodwill impairment assessment due to the significant size of goodwill balance (₩ 590,486 million as at December 31, 2022) and management's involvement in assumptions and judgments for the future results of the business, discount rate and adjustments arising from the perspective of market participants used in the measurement of the 'recoverable amount' of Cash Generating Units (CGU's). Details are described in Note 12.

In particular, we focused our audit effort on the goodwill recognized in relation to the Life Sciences CGU (goodwill amounting to  $\forall$  391,311 million as at December 31, 2022) and the Separator CGU (goodwill amounting to  $\forall$  160,577 million as at December 31, 2022) which are the most significant elements among all relevant CGUs with goodwill. While management considered that there was enough headroom between the value-in-use and the underlying book value of these CGUs, we have determined this matter as a key audit matter considering the size of the balance and the significant level of management's assumption and judgment involved for the estimation of value-in-use.

How this matter was addressed the in our audit

We have performed the following audit procedures to address this key audit matter, including the involvement of valuation specialists:

- · Obtained understanding of and evaluated accounting policy and internal controls related to the impairment assessment.
- Assessed the design and operating effectiveness of relevant internal controls in place in connection with impairment assessment including review and approval by management of future cash flow forecasts and assumptions applied in the assessment.
- · Assessed the competence and objectivity of the expert utilized by the management
- · Obtained understanding of the valuation model, assumptions and underlying data used to estimate value-in-use.
- Assessed whether an appropriate valuation model has been used by management to estimate value-in-use.
- Assessed whether management's assumptions used to estimate value-in-use are reasonable through the following procedures.
  - Compared the current year actual results with the prior year forecasts of the CGUs to assess whether management's forecasts are reasonable.
  - Assessed the long-term growth rate by considering economic and industry forecasts

- Compared the discount rate used by the management with the discount rate independently calculated by us using observable information in the market.
- Compared the future cash flow forecasts used to estimate value-in-use with the budgets approved by the management except for the cash flows relating to specific fixed assets adjusted from the perspective of market participants
- · Assessed the CGUs identification and performed tests on book values allocated to CGUs
- · Assessed the sensitivity analysis performed by management on the discount rate and terminal growth rate

#### Other Matter

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

#### Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the separate financial statements in accordance with Korean IFRS, and for such internal control as management determines is necessary to enable the preparation of separate financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the separate financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations.

Those charged with governance are responsible for overseeing the Company's financial reporting process.

#### Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the separate financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Korean Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Korean Standards on Auditing, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the separate financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- · Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the separate financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the separate financial statements, including the disclosures, and whether the separate financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the separate financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in this independent auditor's report is Seung-Hun Kim, Certified Public Accountant.

Seoul, Korea March 9, 2023

This report is effective as of March 9, 2023, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the accompanying separate financial statements and notes thereto. Accordingly, the readers of the audit report should understand that there is a possibility that the above audit report may have to be revised to reflect the impact of such subsequent events or circumstances, if any.

LG Chem, Ltd.
Separate Statements of Financial Position
December 31, 2022 and 2021

(in millions of Korean won)	Notes	2022	2021
Assets			
Current assets			
Cash and cash equivalents	3, 5, 6	1,323,209	1,056,665
Trade receivables	3, 5, 7, 31	3,090,096	3,260,354
Other receivables	3, 5, 7, 31	419,600	214,700
Other current financial assets	3, 5, 8	-	1,789
Other current assets	13	227,982	145,308
Inventories	9	3,374,871	3,261,583
Assets held for sale	34	3,080	298,545
Total current assets	_	8,438,838	8,238,944
Non-current assets			
Other receivables	3, 5, 7	480,628	595,171
Other non-current financial assets	3, 5, 8	743,412	262,876
Investments in subsidiaries	10	8,465,346	8,755,113
Investments in associates and joint ventures	10	665,373	203,170
Property, plant and equipment	11	11,937,751	11,204,154
Intangible assets	12	1,686,988	1,596,904
Investment properties	36	54,655	23,270
Other non-current assets	13, 16	399,833	49,550
Total non-current assets	_	24,433,986	22,690,208
Total assets	-	32,872,824	30,929,152
Liabilities			
Current liabilities			
Trade payables	3, 5, 31	1,288,959	1,502,925
Other payables	3, 5, 31	1,799,663	1,596,265
Borrowings	3, 5, 14	625,186	1,042,387
Other current financial liabilities	3, 5, 8	3,484	342
Provisions	15	13,019	13,077
Income tax payables		420,852	704,176
Other current liabilities	17, 35	454,841	574,432
Total current liabilities	·	4,606,004	5,433,604
Non-current liabilities	_		· · · · · · · · · · · · · · · · · · ·
Other payables	3, 5, 31	6,297	4,958
Borrowings	3, 5, 14	6,457,883	6,112,797
Other non-current financial liabilities	3, 5, 8	32,578	-
Provisions	15	,	9,575
Deferred income tax liabilities	28	646,053	525,407
Other non-current liabilities	17, 35	50,581	57,934
Total non-current liabilities	_	7,193,392	6,710,671
Total liabilities	_	11,799,396	12,144,275
	-	, . 50,000	,,

# LG Chem, Ltd. Separate Statements of Financial Position December 31, 2022 and 2021

(in millions of Korean won)	Notes	2022	2021
Equity			
Share capital	1, 19	391,406	391,406
Capital surplus	19	2,925,449	2,733,331
Other components of equity	19, 21	(270)	(18,011)
Accumulated other comprehensive income		(70,479)	19,893
Retained earnings	20	17,827,322	15,658,258
Total equity		21,073,428	18,784,877
Total liabilities and equity		32,872,824	30,929,152

LG Chem, Ltd.
Separate Statements of Profit or Loss
Years Ended December 31, 2022 and 2021

(in millions of Korean won, except per share amounts)	Notes	2022	2021
Revenue Cost of sales Gross profit Selling and administrative expenses Operating profit	31, 35 23 22, 23	23,403,601 (18,854,934) 4,548,667 (3,478,617) 1,070,050	20,471,044 (14,759,600) 5,711,444 (2,692,284) 3,019,160
Finance income Finance costs Other non-operating income Other non-operating expenses	25 25 26 27	1,117,953 (645,642) 3,059,763 (701,015)	662,840 (326,413) 404,307 (515,344)
Profit before income tax Income tax expense Profit from continuing operations Profit (loss) from discontinued operations Profit for the year	32 28 34	3,901,109 (887,608) 3,013,501 (6,532) 3,006,969	3,244,550 (799,967) 2,444,583 69,680 2,514,263
Earnings per share (in won)  Basic earnings per ordinary share Basic earnings per ordinary share from continuing operations Basic earnings per preferred share Basic earnings per preferred share from continuing operations	29	38,573 38,657 38,623 38,707	32,274 31,379 32,324 31,429

## LG Chem, Ltd. Separate Statements of Comprehensive Income Years Ended December 31, 2022 and 2021

(in millions of Korean won)	Notes	2022	2021
Profit for the year		3,006,969	2,514,263
Other comprehensive income			<u> </u>
Items that will not be reclassified to profit or loss		6,998	35,715
Remeasurements of net defined benefit liabilities	16	121,694	43,196
Gain (loss) on valuation of financial assets at fair value through other comprehensive income	8	(123,347)	6,066
Income tax relating to these items		8,651	(13,547)
Other comprehensive income for the year, net of tax		6,998	35,715
Total comprehensive income for the year	_	3,013,967	2,549,978

The above separate statements of comprehensive income should be read in conjunction with the accompanying note:

LG Chem, Ltd. Separate Statements of Changes in Equity Years Ended December 31, 2022 and 2021

(in millions of Korean won)	Notes	Share capital	Capital surplus	Other components of equity	Accumulated other comprehensive income	Retained earnings	Total equity
Balance at January 1, 2021		391,406	2,701,242	(35,699)	15,495	13,891,061	16,963,505
Comprehensive income							
Profit for the year		-	-	-	-	2,514,263	2,514,263
Remeasurements of net defined benefit liabilities	16	-	-	-	-	31,317	31,317
Gain on valuation of financial assets at fair value	8						
through other comprehensive income	_	_			4,398		4,398
Total comprehensive loss for the year	_	<u>-</u>			4,398	2,545,580	2,549,978
Transactions with owners							
Disposal of treasury shares	19	-	32,089	17,688	-	-	49,777
Dividends	30	<u>-</u>			<u>-</u>	(778,383)	(778,383)
Total transactions with owners			32,089	17,688	<u>-</u>	(778,383)	(728,606)
Balance at December 31, 2021	_	391,406	2,733,331	(18,011)	19,893	15,658,258	18,784,877
Balance at January 1, 2022		391,406	2,733,331	(18,011)	19,893	15,658,258	18,784,877
Comprehensive income		_					_
Profit for the year		-	-	-	-	3,006,969	3,006,969
Remeasurements of net defined benefit liabilities	16	-	-	-	-	97,370	97,370
Loss on valuation of financial assets at fair value	8						
through other comprehensive income					(90,372)		(90,372)
Total comprehensive income for the year	_	<u>-</u>			(90,372)	3,104,339	3,013,967
Transactions with owners							
Disposal of treasury shares	19	-	192,118	17,741	-	-	209,859
Dividends	30 _			=		(935,275)	(935,275)
Total transactions with owners			192,118	17,741	-	(935,275)	(725,416)
Balance at December 31, 2022	_	391,406	2,925,449	(270)	(70,479)	17,827,322	21,073,428

LG Chem, Ltd. Separate Statements of Cash Flows Years Ended December 31, 2022 and 2021

(in millions of Korean won)	Notes	2022	2021
Cash flows from operating activities			
Cash generated from operations	32	2,059,708	4,192,246
Interest received		37,886	6,360
Interest paid		(144,748)	(123,973)
Dividends received		520,742	352,501
Income taxes paid		(1,086,080)	(385,366)
Net cash inflow from operating activities	_	1,387,508	4,041,768
Cash flows from investing activities			
Decrease in other receivables		100,691	22,921
Proceeds from disposal of investments in associates and joint ventures		-	6,836
Proceeds from disposal of investments in subsidiaries		297,458	1
Proceeds from disposal of other financial assets		30,238	5,131
Proceeds from disposal of property, plant and equipment		499	54,729
Proceeds from disposal of intangible assets		9,415	156
Government grants received		-	2,582
Proceeds from disposal of assets held for sale		2,558,384	68,659
Cash inflow due to business transfer		-	182,785
Increase in other receivables		(31,473)	(490,823)
Acquisition of investments in subsidiaries		(68,858)	(227,035)
Acquisition of investments in associates and joint ventures		(466,012)	(48,544)
Acquisition of other financial assets		(558,947)	(111,984)
Acquisition of property, plant and equipment		(1,732,944)	(1,990,446)
Acquisition of intangible assets		(76,630)	(73,420)
Cash outflow due to business combination		-	(457,000)
Net cash inflow (outflow) from investing activities	_	61,821	(3,055,452)
Cash flows from financing activities			
Proceeds from borrowings		2,169,130	3,774,113
Settlement of derivatives transaction		5,712	_
Disposal of treasury shares		256,995	8,835
Repayments of borrowings		(2,681,664)	(3,794,894)
Dividends		(935,274)	(778,383)
Net cash outflow from financing activities	_	(1,185,101)	(790,329)
Net increase in cash and cash equivalents		264,228	195,987
Cash and cash equivalents at the beginning of the year		1,056,665	852,668
Effects of exchange rate changes on cash and cash equivalents		2,316	8,010
Cash and cash equivalents at the end of year in	_		· · · · · · · · · · · · · · · · · · ·
the separate statement of financial position	_	1,323,209	1,056,665

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

#### 1. General Information

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

As at December 31, 2022, the Company has its manufacturing facilities in Yeosu, Daesan, Cheongju, Ulsan, Naju, Iksan, Paju, Osong, Onsan and Gimcheon and engages in petrochemical, advanced materials, and life sciences business.

#### 2. Summary of Significant Accounting Policies

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

#### 2.1 Basis of Preparation

The Company 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 separate financial statements have been condensed, restructured and translated into English from the Korean language financial statements.

The separate financial statements of the Company have been prepared in accordance with Korean IFRS. These are the standards, subsequent amendments and related interpretations issued by the International Accounting Standards Board (IASB) that have been adopted by the Republic of Korea.

The financial statements have been prepared on a historical cost basis, except for the following:

- Certain financial assets and liabilities (including derivative instruments), certain classes of property, plant and equipment and investment property – measured at fair value,
- · Assets held for sale measured at fair value less costs to sell, and
- Defined benefit pension plans plan assets measured at fair value.

The preparation of financial statements requires the use of critical accounting estimates. Management also needs to exercise judgement in applying the Company's accounting policies. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the separate financial statements are disclosed in Note 4.

#### 2.2 Changes in Accounting Policy and Disclosures

(a) New and amended standards adopted by the Company

The Company has applied the following standards and amendments for the first time for their annual reporting period commencing January 1, 2022.

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

The application of the practical expedient, a lessee may elect not to assess whether a rent concession occurring as a direct consequence of the COVID-19 pandemic is a lease modification, is extended to lease payments originally due on or before June 30, 2022. A lessee shall apply the practical expedient consistently to eligible contracts with similar characteristics and in similar circumstances. The amendment does not have a significant impact on the financial statements.

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

The amendments update a reference of definition of assets and liabilities to be recognized in a business combination in revised Conceptual Framework for Financial Reporting. However, the amendments add an exception for the recognition of liabilities and contingent liabilities within the scope of Korea IFRS 1037 *Provisions, Contingent Liabilities and Contingent Assets*, and Korean IFRS 2121 *Levies*. The amendments also clarify that contingent assets should not be recognized at the acquisition date. The amendment does not have a significant impact on the financial statements.

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

The amendments prohibit an entity from deducting from the cost of an item of property, plant and equipment any proceeds from selling items produced while the entity is preparing the asset for its intended use. Instead, the entity will recognize the proceeds from selling such items, and the costs of producing those items, in profit or loss. The amendment does not have a significant impact on the financial statements.

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

The amendments clarify that the direct costs of fulfilling a contract include both the incremental costs of fulfilling the contract and an allocation of other costs directly related to fulfilling contracts when assessing whether the contract is onerous. The amendment does not have a significant impact on the financial statements.

- Annual improvements to Korean IFRS 2018-2020

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

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

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

The following new and amended accounting standards have been published that are not mandatory for December 31, 2022 reporting periods and have not been early adopted by the Company.

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

The amendments clarify that liabilities are classified as either current or non-current, depending on the substantive rights that exist at the end of the reporting period. Classification is unaffected by the likelihood that an entity will exercise right to defer settlement of the liability or management's expectation. 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 meet the definition of equity instruments and recognized separately from the liability. The amendments should be applied for annual periods beginning on or after January 1, 2024, and earlier application is permitted. The Company is in review for the impact of these amendments on the financial statements.

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

The amendments to Korean IFRS 1001 define and require entities to disclose their material accounting policies. The amendments should be applied for annual periods beginning on or after January 1, 2023, and earlier application is permitted. The Company is in review for the impact of these amendments on the financial statements.

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

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

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

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

- New Standard: Korean IFRS 1117 Insurance Contract

Korean IFRS 1117 Insurance Contracts replaces Korean IFRS 1104 Insurance Contracts. This

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

Further amendments made in December 2021 added a transition option that permits an entity to apply an optional classification overlay in the comparative period(s) presented on initial application of Korean IFRS 1117. The classification overlay applies to all financial assets, including those held in respect of activities not connected to contracts within the scope of Korean IFRS 1117. It allows those assets to be classified in the comparative period(s) in a way that aligns with how the entity expects those assets to be classified on initial application of Korean IFRS 1109. The classification can be applied on an instrument-by-instrument basis.

- Korean IFRS 1001 Presentation of Financial Statements - Disclosure of gain or loss on valuation of financial liabilities subject to adjustment of exercise price

If the entire or a part of financial instrument, whose exercise price is subject to change due to the issuer's share price, is classified as a financial liability, the carrying amount of the financial liability and related gains and losses shall be disclosed. The amendments should be applied for annual periods beginning on or after January 1, 2023, and earlier application is permitted. The Company does not expect that these amendments have a significant impact on the financial statements.

#### 2.3 Subsidiaries, Joint Ventures, and Associates

The financial statements of the Company are the separate financial statements prepared in accordance with Korean IFRS 1027 *Separate Financial Statements*. Investments in subsidiaries, joint ventures and associates are recognized at cost. Management applied the carrying amounts under the previous K-GAAP at the time of transition to Korean IFRS as deemed cost of investments. The Company recognizes dividend income from subsidiaries, joint ventures and associates in profit or loss when its right to receive the dividend is established.

#### 2.4 Foreign Currency Translation

#### (a) Functional and presentation currency

Items included in the financial statements of each of the Company are measured using the currency of the primary economic environment in which each entity operates (the "functional currency"). The financial statements are presented in Korean won, which is the Company's functional and presentation currency.

#### (b) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange

rates at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation of monetary assets and liabilities denominated in foreign currencies at year end exchange rates are generally recognized in profit or loss. They are recognized in other comprehensive income if they relate to qualifying cash flow hedges ,qualifying effective portion of net investment hedges, or are attributable to monetary part of the net investment in a foreign operation.

Foreign exchange gains and losses that relate to borrowings are presented in the statement of profit or loss, within finance costs.

Foreign exchange gains and losses on non-monetary items are recognized as part of gains and losses resulting from the changes in fair value. Foreign exchange gains and losses on equity investments measured at fair value through profit or loss are recognized in profit or loss and those on equity investments measured at fair value through other comprehensive income are recognized in other comprehensive income.

#### 2.5 Cash and Cash Equivalents

Cash and cash equivalents include cash in hand, deposits held at call with banks, other short-term highly liquid investments with original maturities of three months or less.

#### 2.6 Financial Assets

#### (a) Classification

The Company classifies its financial assets in the following measurement categories:

- those to be measured at fair value through profit or loss,
- those to be measured at fair value through other comprehensive income, and
- those to be measured at amortized cost

Financial assets are classified on the basis of the entity's business model for managing the financial assets and the contractual cash flow characteristics of the financial assets.

For financial assets measured at fair value, gains and losses will either be recorded in profit or loss or other comprehensive income. For investments in debt instruments, this will depend on the business model in which the investment is held. The Company reclassifies debt investments when, and only when its business model for managing those assets changes.

For investments in equity instruments that are not held for trading, this will depend on whether the Company has made an irrevocable election at the time of initial recognition to account for the equity investment at fair value through other comprehensive income. Changes in fair value of non-designated equity investment are recognized in profit or loss.

#### (b) Measurement

At initial recognition, the Company measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at fair value through profit or loss are expensed in profit or loss. Financial assets with embedded derivatives are considered in their entirety when determining whether their cash flows are solely payment of principal and interest.

#### A. Debt instruments

Subsequent measurement of debt instruments depends on the Company's business model for managing the asset and the cash flow characteristics of the asset. The Company classifies its debt instruments into one of the following three measurement categories:

- Amortized cost: Assets that are held for collection of contractual cash flows where those
  cash flows represent solely payments of principal and interest are measured at amortized
  cost. A gain or loss on a debt investment that is subsequently measured at amortized cost
  and is not part of a hedging relationship is recognized in profit or loss when the asset is
  derecognized or impaired. Interest income from these financial assets is included in 'finance
  income' using the effective interest rate method.
- Fair value through other comprehensive income: Assets that are held for collection of contractual cash flows and for selling the financial assets, where the assets' cash flows represent solely payments of principal and interest, are measured at fair value through other comprehensive income. Movements in the carrying amount are taken through other comprehensive income, except for the recognition of impairment loss (reversal of impairment loss), interest income and foreign exchange gains and losses which are recognized in profit or loss. When the financial asset is derecognized, the cumulative gain or loss previously recognized in other comprehensive income is reclassified from equity to profit or loss. Interest income from these financial assets is included in 'finance income' using the effective interest rate method. Foreign exchange gains and losses are presented in 'financial income / costs' or 'other non-operating income / expenses' and impairment losses are presented in 'other non-operating expenses'.
- Fair value through profit or loss: Assets that do not meet the criteria for amortized cost or fair
  value through other comprehensive income are measured at fair value through profit or loss.
  A gain or loss on a debt investment that is subsequently measured at fair value through
  profit or loss and is not part of a hedging relationship is recognized in profit or loss and
  presented net in the statement of profit or loss within 'finance income / costs' in the period in
  which it arises.

#### B. Equity instruments

The Company subsequently measures all equity investments at fair value. Where the Company's management has elected to present fair value gains and losses on equity investments, which held for long-term investment or strategic purpose, in other comprehensive income, there is no subsequent reclassification of fair value gains and losses to profit or loss following the derecognition of the investment. Dividend income from such investments continue to be recognized in profit or loss as 'finance income' when the right to receive payments is established.

Changes in the fair value of financial assets at fair value through profit or loss are recognized in 'finance income or costs' in the statement of profit or loss as applicable. Impairment loss (reversal of impairment loss) on equity investments measured at fair value through other comprehensive income are not reported separately from other changes in fair value.

#### (c) Impairment

The Company assesses on a forward looking basis the expected credit losses associated with its debt instruments carried at amortized cost and fair value through other comprehensive income. The impairment methodology applied depends on whether there has been a significant increase in credit risk. For trade receivables and lease receivables, the Company applies the simplified approach, which requires expected lifetime credit losses to be recognized from initial recognition

of the receivables.

#### (d) Recognition and Derecognition

Regular way purchases and sales of financial assets are recognized or derecognized on tradedate, the date on which the Company commits to purchase or sell the asset. Financial assets are derecognized when the rights to receive cash flows from the financial assets have expired or have been transferred and the Company has transferred substantially all the risks and rewards of ownership.

If a transfer does not result in derecognition because the Company has retained substantially all the risks and rewards of ownership of the transferred asset, the Company continues to recognize the transferred asset in its entirety and recognizes a financial liability for the consideration received. The Company classified the financial liability as "borrowings" in the statement of financial position.

#### 2.7 Derivative Financial Instruments

Derivatives are initially recognized at fair value on the date a derivative contract is entered into and are subsequently remeasured to their fair value at the end of each reporting period. The accounting for subsequent changes in fair value depends on whether the derivative is designated as a hedging instrument. Changes in the fair value of any derivative instrument that does not qualify for hedge accounting are recognized immediately in profit or loss within 'finance income or costs' based on the nature of transactions and if so, the nature of the item being hedged. The Company has hedge relationships and designates certain derivatives as either:

- hedges of the fair value of recognized assets or liabilities or a firm commitment (fair value hedges)
- hedges of a particular risk associated with the cash flows of recognized assets and liabilities and highly probable forecast transactions (cash flow hedges), or
- hedges of a net investment in a foreign operation (net investment hedges)

At inception of the hedge relationship, the Company documents the economic relationship between hedging instruments and hedged items including whether changes in the cash flows of the hedging instruments are expected to offset changes in the cash flows of hedged items.

The full fair value of a hedging derivative is classified as a non-current asset or liability when the remaining maturity of the hedged item is more than 12 months; it is classified as a current asset or liability when the remaining maturity of the hedged item is less than 12 months. A non-derivative financial asset and a non-derivative financial liability is classified as a current or non-current based on its expected maturity and its settlement, respectively.

#### Cash flow hedge

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognized in the cash flow hedge reserve within equity, limited to the cumulative change in fair value (present value) of the hedged item (the present value of the cumulative change in the future expected cash flows of the hedged item) from the inception of the hedge. The ineffective portion is recognized in 'finance income or costs'.

When option contracts are used to hedge forecast transactions, the Company designates only the intrinsic value of the option contract as the hedging instrument. Gains or losses relating to the effective portion of the change in intrinsic value of the option contracts are recognized in the cash flow hedge reserve within equity. The changes in the time value of the option contracts that relate to the hedged item ('aligned time value') are recognized within the costs of hedging in other comprehensive income within equity.

When forward contracts are used to hedge forecast transactions, the Company generally designates only the change in fair value of the forward contract related to the spot element as the hedging instrument. Gains or losses relating to the effective portion of the change in the spot element of the forward contracts are recognized in the cash flow hedge reserve within equity. The change in the forward element of the contract that relates to the hedged item is recognized within other comprehensive income within equity. In some cases, the Company may designate the full change in fair value of the forward contract (including forward points) as the hedging instrument. In such cases, the gains or losses relating to the effective portion of the change in fair value of the entire forward contract are recognized in the cash flow hedge reserve within equity.

Amounts accumulated in equity are reclassified in the periods when the hedged item affects profit or loss, as follows:

- Where the hedged item subsequently results in the recognition of a non-financial asset (such as inventory), both the deferred hedging gains and losses and the deferred time value of the option contracts or deferred forward points, if any, are included within the initial cost of the asset. The deferred amounts are ultimately recognized in profit or loss as the hedged item affects profit or loss (for example through cost of sales).
- The gain or loss relating to the effective portion of the interest rate swaps hedging variable rate borrowings is recognized in profit or loss within 'finance cost' at the same time as the interest expense on the hedged borrowings.

When a hedging instrument expires, or is sold, terminated, exercised, or when a hedge no longer meets the criteria for hedge accounting, any accumulated cash flow hedge reserve at that time remains in equity until the forecast transaction occurs, resulting in the recognition of a non-financial asset such as inventory. When the forecast transaction is no longer expected to occur, the cash flow hedge reserve and deferred costs of hedging that were reported in equity are immediately reclassified to profit or loss.

Changes in the fair value of any derivative instrument that does not qualify for hedge accounting are recognized immediately in profit or loss within 'other non-operating income (expenses)' or 'finance income (costs)' based on the nature of transactions.

#### 2.8 Trade Receivables

Trade receivables are recognized initially at the amount of consideration that is unconditional, unless they contain significant financing components, or are measured at fair value if the trade receivables contain a significant financing component. Trade receivables are subsequently measured at amortized cost using the effective interest method, less loss allowance.

#### 2.9 Inventories

Inventories are stated at the lower of cost and net realizable value. Cost is determined using average cost method, except for goods in transit which is determined using the specific identification method.

#### 2.10 Assets Held for sale

Assets are classified as held for sale when their carrying amount will be recovered principally through a sale transaction rather than through continuing use and a sale is considered highly probable. The assets are measured at the lower amount between their carrying amount and the fair value less costs to sell.

#### 2.11 Property, Plant and Equipment

Property, plant and equipment are stated at historical cost less accumulated depreciation and accumulated impairment losses. Historical cost includes expenditure that is directly attributable to the acquisition of the items. Depreciation of all property, plant and equipment, except for land, is calculated using the straight-line method to allocate their cost or revalued amounts, net of their residual values, over their estimated useful lives as follows:

**Useful lives** 

Buildings	25 - 50 years
Structures	15 - 50 years
Machinery	4 - 15 years
Others	1 - 15 years

The assets' depreciation method, residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period.

#### 2.12 Investment Property

Investment property is property held to earn rentals or for capital appreciation or both. An investment property is measured initially at its cost. An investment property is measured after initial measurement at depreciated cost (less any accumulated impairment losses.) The Company depreciates investment properties, except for land, using the straight-line method over their useful lives of  $20 \sim 50$  years.

#### 2.13 Borrowing Costs

General and specific borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset are capitalized during the period of time that is required to complete and prepare the asset for its intended use or sale. Investment income earned on the temporary investment of specific borrowings on qualifying assets is deducted from the borrowing costs eligible for capitalization. Other borrowing costs are expensed in the period in which they are incurred.

#### 2.14 Government Grants

Grants from the government are recognized at their fair value where there is a reasonable assurance that the grant will be received and the Company will comply with all attached conditions. Government grants related to assets are presented in the statement of financial position by deducting the grant in arriving at the carrying amount of the asset, and government grants related to income are deferred and later deducted from the related expense.

#### 2.15 Intangible Assets

The excess of consideration transferred and acquisition-date fair value of any previous equity interest in the acquired entity over the fair value of the net identifiable assets acquired is recoded as goodwill. Goodwill is carried at its cost less accumulated impairment losses. Impairment losses on goodwill are not reversed.

Intangible assets, except for goodwill, are initially recognized at its historical cost, and carried at cost less accumulated amortization and accumulated impairment losses.

Development costs that are directly attributable to internally generated by the Company are recognized when the criteria; such as, technically feasible, generate probable future economic benefits and other, are met. Membership rights that have an indefinite useful life are not subject to amortization because there is no foreseeable limit to the period over which the assets are expected to be utilized. The Company amortizes intangible assets with a limited useful life using the straight-line method over the following periods:

#### **Useful lives**

Development costs 3 - 15 years
Industrial property rights 5 - 15 years
Other intangible assets 6 - 20 years

#### 2.16 Research and Development

Costs associated with research are recognized as an expense as incurred. Costs that are identifiable, controllable and directly attributable to development projects are recognized as intangible assets when the following criteria are met:

- It is technically feasible to complete the development project so that it will be available for use;
- Management intends to complete the development project for its own use or selling;
- There is an ability to use or sell the development project;
- It can be demonstrated how the development project will generate probable future economic benefits:
- Adequate technical, financial resources and other resources to complete the development and to use or sell the development project are available; and
- The expenditure attributable to the development project during its development can be reliably measured.

Generally, internally generated development projects have the following stages; formulation and selection of a project, verification of idea and technology, development and testing, decision of commercialization, test of final application. Expenditures can be capitalized as intangible assets only after the decision of commercialization. Expenditures incurred in other stages are recognized as expenses on the research phase.

Internally generated development projects in the Life Sciences business have the following stages; formulation of potential candidates, preclinical research, clinical researches such as phase 1, 2 and 3 trials, approval of regulatory body and new product launch. Expenditures incurred from new drug development project are recognized as expensed on the research phase. However, expenditures incurred during clinical phase 1~3 trials from development projects for generic drugs or biosimilars are recognized as intangible assets depending on the nature of the products.

Expenditures incurred from technology license agreement with the third parties are recognized as intangible assets.

Development costs previously recognized as an expense are not recognized as an asset in a subsequent period. Capitalized development costs that are recognized as intangible assets are amortized using the straight-line method over their estimated useful lives when the assets are available for use and are tested for impairment.

#### 2.17 Impairment of Non-financial Assets

Goodwill and intangible assets with indefinite useful life are tested annually for impairment, or more frequently if events or changes in circumstances indicate that they might be impaired. Other assets that are subject to amortization are tested for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs of disposal and value in use. Non-financial assets other than goodwill that suffered an impairment are reviewed for possible reversal of the impairment at the end of each reporting period.

#### 2.18 Trade and Other Payables

These amounts represent liabilities for goods and services provided to the Company prior to the end of reporting period which are unpaid. Trade and other payables are presented as current liabilities, unless payment is not due within 12 months after the reporting period. They are recognized initially at their fair value and subsequently measured at amortized cost using the effective interest method.

#### 2.19 Financial Liabilities

#### (a) Classification and measurement

The Company's financial liabilities at fair value through profit or loss are financial instruments held for trading. A financial liability is held for trading if it is incurred principally for the purpose of repurchasing in the near term. A derivative that is not a designated as hedging instruments and an embedded derivative that is separated are also classified as held for trading.

The Company classifies non-derivative financial liabilities, except for financial liabilities at fair value through profit or loss, financial guarantee contracts and financial liabilities that arise when a transfer of financial assets does not qualify for derecognition, as financial liabilities carried at amortized cost and present as 'trade payables', 'borrowings', and 'other payables' in the statement of financial position.

Borrowings are initially recognized at fair value, net of transaction costs incurred. Borrowings are subsequently measured at amortized cost. Any difference between the proceeds (net of transaction costs) and the redemption amount is recognized in profit or loss over the period of the borrowings using the effective interest method. Fees paid on the establishment of loan facilities are recognized as transaction costs of the loan to the extent that it is probable that some or all of the facility will be drawn down. In this case, the fee is deferred until the draw-down occurs. To the extent there is no evidence that it is probable that some or all of the facility will be drawn down, the fee is capitalized as a prepayment for liquidity services and amortized over the period of the facility to which it relates.

Borrowings are classified as current liabilities unless the Company has an unconditional right to defer settlement of the liability for at least 12 months after the reporting period.

#### (b) Derecognition

Financial liabilities are removed from the statement of financial position when it is extinguished; for example, when the obligation specified in the contract is discharged or cancelled or expired or when the terms of an existing financial liability are substantially modified. The difference between the carrying amount of a financial liability extinguished or transferred to another party and the consideration paid (including any non-cash assets transferred or liabilities assumed) is recognized in profit or loss.

#### 2.20 Financial Guarantee Contracts

Financial guarantee contracts are recognized as a financial liability at the time the guarantee is issued. The liability is initially measured at fair value, subsequently at the higher of following and recognized in the statement of financial position within 'other financial liabilities'.

- the amount determined in accordance with the expected credit loss model under Korean IFRS 1109 Financial Instruments and
- the amount initially recognized less, where appropriate, the cumulative amount of income recognized in accordance with Korean IFRS 1115 Revenue from Contracts with Customers

#### 2.21 Current and Deferred Tax

The tax expense for the period consists of current and deferred tax. Current and deferred tax is recognized in profit or loss, except to the extent that it relates to items recognized in other comprehensive income or directly in equity. In this case, the tax is also recognized in other comprehensive income or directly in equity, respectively.

The current income tax expense is measured at the amount expected to be paid to the taxation authorities, using the tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation, and considers whether it is probable that a taxation authority will accept an uncertain tax treatment. The Company measures its tax balances either based on the most likely amount or the expected value, depending on which method provides a better prediction of the resolution of the uncertainty.

Deferred income tax is provided in full, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the separate financial statements. However, deferred income tax is not accounted for if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss.

Deferred tax assets are recognized only if it is probable that future taxable amounts will be available to utilize those temporary differences and losses.

The Company recognizes a deferred tax liability all taxable temporary differences associated with investments in subsidiaries, associates, and interests in joint arrangements, except to the extent that the Company is able to control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. In addition, The Company recognizes a deferred tax asset for all deductible temporary differences arising from such investments to the extent that it is probable the temporary difference will reverse in the foreseeable future and taxable profit will be available against which the temporary difference can be utilized.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets and liabilities and when the deferred tax balances relate to the same taxation authority. Current tax assets and tax liabilities are offset when the Company has a legally enforceable right to offset and intends either to settle on a net basis, or to realize the assets and settle the liability simultaneously.

#### 2.22 Provisions

Provisions for warranties, site restorations, and legal claims are recognized when the Company has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required to settle the obligation and the amount can be reliably estimated. Provisions are measured at the present value of management's best estimate of the expenditure required to settle the present obligation at the end of the reporting period, and the increase in the provision due to the passage of time is recognized as interest expense.

#### 2.23 Greenhouse Gas Emissions Permits and Obligations

With enforcement of *The Act on the Allocation and Trading of Greenhouse Gas Emission Permits*, the permits that are received free of charge from the government are measured at zero while permits purchased are measured at acquisition cost and stated net of accumulated impairment loss. Emissions obligations are measured as the sum of the carrying amount of the allocated permits that will be submitted to the government and the best estimate of expenditure required to settle the obligation at the end of reporting period for any excess emission. The permits and emissions obligations are classified as intangible assets and provisions, respectively, in the statement of financial position.

#### 2.24 Employee Benefits

#### (a) Post-employment benefits

The Company operates both defined contribution and defined benefit pension plans. For defined contribution plans, the Company pays contribution to publicly or privately administered pension insurance plans on mandatory, contractual or voluntary basis. The Company has no further payment obligation once the contribution has been paid. The contribution is recognized as employee benefit expense when they are due. A defined benefit plan is a pension plan that is not a defined contribution plan.

Generally, post-employment benefits are payable after the completion of employment, and the benefit amount depended on the employee's age, periods of service or salary levels. The liability recognized in the statement of financial position in respect of defined benefit pension plans is the present value of the defined benefit obligation at the end of the reporting period less the fair value of plan assets. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid, and that have terms approximating to the terms of the related obligation. Remeasurement gains and losses arising from experience adjustments and changes in actuarial assumptions are recognized in the period in which they occur, directly in other comprehensive income.

Changes in the present value of the defined benefit obligation resulting from plan amendments or curtailments are recognized immediately in profit or loss as past service costs.

#### (b) Other long-term employee benefits

Certain entities within the Company provide long-term employee benefits that are entitled to employees with service period for ten years and above. The expected costs of these benefits are accrued over the period of employment using the same accounting methodology as used for defined benefit pension plans. The Company recognizes service cost, net interest on other long-term employee benefits and remeasurements as profit or loss for the year. These liabilities are valued annually by an independent qualified actuary.

#### 2.25 Revenue Recognition

#### (a) Identify performance obligation

With regard to the contract of selling products to the customer, the Company identifies the services provided separately to the customer as a different performance obligation. When the Company makes a sales contract with the customer, the standard warranty period for each product and customer is set up considering the legal warranty period. Even though the standard warranty period has been expired, the warranties are recognized as a revenue and is identified as a separate performance obligation when the Company provides additional warranties for the quality of product or when the customer has an option to purchase additional warranties separately.

#### (b) A performance obligation satisfied at a point in time

The revenue from the sale of goods is recognized at the time they are delivered to the customer. Delivery occurs when the products have been shipped to the specific location, the risks of obsolescence and loss have been transferred to the customer, and either the customer has accepted the products in accordance with the sales contract, the acceptance provisions have lapsed, or the Company has objective evidence that all criteria for acceptance have been satisfied.

The goods are often sold with volume discounts, and it is the Company's policy to sell its products to the customer with a right of return. Accumulated experience is used to estimate for the discounts and the refund, and the volume discounts is calculated based on the periodical forecast sales. The warranty provision for the sales and refund is reasonably estimated and recognized properly.

#### (c) Sales return

A gross contract liability for the expected refunds to customers is recognized as adjustment to revenue, and the Company has a right to recover the product from the customer where the customer exercises his right of return and recognizes an asset and a corresponding adjustment to cost of sales. A right to recover the products is measured at former carrying amount of the product less the costs to recover the products.

#### (d) Significant financing component

As a practical expedient, the Company need not adjust the promised amount of consideration for the effects of a significant financing component as the period between when the entity transfers a promised good or service to a customer and when the customer pays for that good or service is generally one year or less.

#### 2.26 Lease

#### (a) Lessor

Lease income from operating leases where the Company is a lessor is recognized in income on a straight-line basis over the lease term. Initial direct costs incurred in obtaining an operating lease are added to the carrying amount of the underlying asset and recognized as expense over the lease term on the same basis as lease income. The respective leased assets are included in the statement of financial position based on their nature.

#### (b) Lessee

The Company leases various machinery, real estate and cars. Lease contracts are typically made for fixed periods, but may have extension options.

Contracts may contain both lease and non-lease components. The Company allocates the consideration in the contract to the lease and non-lease components based on their relative stand-alone prices. However, for leases of real estate for which the Company is lessee, the Company applies the practical expedient which has elected not to separate lease and non-lease components and instead accounts for these as a single lease component.

Lease terms are negotiated on an individual basis and contain a wide range of different terms and conditions. The lease agreements do not impose any covenants, but leased assets may not be used as security for borrowing purposes.

The Company determines the lease term as the non-cancellable period of a lease, together with both (a) periods covered by an option to extend the lease if the lessee is reasonably certain to exercise that option; and (b) periods covered by an option to terminate the lease if the lessee is reasonably certain not to exercise that option. When the lessee and the lessor each has the right to terminate the lease without permission from the other party, the Company should consider a termination penalty in determining the period for which the contract is enforceable.

Assets and liabilities arising from a lease are initially measured on a present value basis. Lease liabilities include the net present value of the following lease payments:

- Fixed payments (including in-substance fixed payments), less any lease incentives receivable
- Variable lease payment that are based on an index or a rate, initially measured using the index or rate as at the commencement date
- Amounts expected to be payable by the Company (the lessee) under residual value guarantees
- The exercise price of a purchase option if the Company (the lessee) is reasonably certain to exercise that option, and
- Payments of penalties for terminating the lease, if the lease term reflects the Company (the lessee) exercising that option

Measurement of lease liability also includes payments to be made in optional periods if the lessee is reasonably certain to exercise an option to extend the lease.

The lease payments are discounted using the interest rate implicit in the lease. If that rate cannot be determined, the lessee's incremental borrowing rate is used, being the rate that the lessee would have to pay to borrow the funds necessary to obtain an asset of similar value in a similar economic environment with similar terms and conditions.

To determine the incremental borrowing rate, the Company:

- where possible, uses recent third-party financing received by the individual lessee as a starting point, adjusted to reflect changes in financing conditions since third party financing was received
- makes adjustments specific to the lease, for example term, country, currency and security.

If a readily observable amortizing loan rate is available to the individual lessee (through recent financing or market data) which has a similar payment profile to the lease, then the Company uses that rate as a starting point to determine the incremental borrowing rate.

The Company is exposed to potential future increases in variable lease payments based on an index or rate, which are not included in the lease liability until they take effect. When adjustments to lease payments based on an index or rate take effect, the lease liability is reassessed and adjusted against the right-of-use asset.

Each lease payment is allocated between the liability and finance cost. The finance cost is charged to profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period.

Right-of-use assets are measured at cost comprising the following:

- the amount of the initial measurement of lease liability
- any lease payments made at or before the commencement date less any lease incentives received
- any initial direct costs, and
- · restoration costs

The right-of-use asset is depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis. If the Company is reasonably certain to exercise a purchase option, the right-of-use asset is depreciated over the underlying asset's useful life.

Payments associated with short-term leases of equipment and vehicles and leases of low-value assets are recognized on a straight-line basis as an expense in profit or loss. Short-term leases are leases with a lease term of 12 months or less without a purchase option. Low-value assets comprise IT-equipment and small items of office furniture.

#### (c) Extension and termination options

Extension and termination options are included in a number of leases across the Company. These terms are used to maximize operational flexibility in terms of managing contracts. The majority of extension and termination options held are exercisable only by the Company and not by the respective lessor.

#### 3. Financial Risk Management

#### 3.1 Financial risk factors

The Company's activities expose it to a variety of financial risks: market risk, credit risk and liquidity risk. The Company'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 Company. The Company uses derivative financial instruments to hedge certain risk exposures.

Risk management is carried out by the Company'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 Company'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, credit risk, use of derivative financial instruments and non-derivative financial instruments and investment of excess liquidity.

#### (a) Market risk

#### 1) Foreign exchange risk

The Company operates internationally and is exposed to foreign exchange risk arising from foreign currency transactions, 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 Company companies to manage their foreign exchange risk against their functional currency. The Company manages maximum loss for currency risk exposures within acceptable range by using currency risk management model and hires employees who are exclusively responsible for currency risk management.

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

(in millions of Korean won)	202	.2	2021		
	Assets	Liabilities	Assets	Liabilities	
USD	3,331,620	3,442,924	2,762,672	3,103,574	
EUR	305,516	34,656	374,974	143,615	
JPY	5,212	33,008	1,809	40,585	
CNY and others	262,096	9,129	210,481	36,996	

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

(in millions of Korean won)	20	)22	2021		
	10% Increase	10% Decrease	10% Increase	10% Decrease	
USD	(11,130)	11,130	(34,090)	34,090	

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

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

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

				2022			
		Contract	Contract exchange	Contract inception	Contract	Book a	mount
	Contractor	amount	rate	date	maturity	Assets	Liabilities
Currency Forward	Citi	USD 105	1,234.6	2022.4.22	2023.2.1	-	3,348
	Industrial and Commercial Bank of China	USD 158	1,218.7	2022.4.22	2024.2.1	-	4,364
Currency swap	SMBC	USD 200	1,118.0	2021.5.28	2024.5.28	22,974	-
	KDB	USD 130	1,135.6	2021.6.24	2025.6.24	26,317	-
	KDB	USD 35	1,135.6	2021.6.24	2026.6.24	7,898	-
	Shinhan Bank	USD 300	1,131.8	2021.7.7	2026.7.7	26,599	-
	Woori Bank	USD 100	1,131.8	2021.7.7	2026.7.7	9,067	-
	Industrial and Commercial Bank of China	USD 100	1,131.8	2021.7.7	2026.7.7	9,175	-
	Shinhan Bank	USD 100	1,131.8	2021.7.7	2031.7.7	6,192	-
	Woori Bank	USD 200	1,131.8	2021.7.7	2031.7.7	12,852	-
	KDB	USD 200	1,131.8	2021.7.7	2031.7.7	12,926	-
	KDB	USD 250	1,289.7	2022.6.15	2025.6.15	_	3,374
	Shinhan Bank	USD 110	1,289.7	2022.6.15	2027.6.15	_	1,700
	Export import bank	USD 200	1,305.9	2022.7.14	2025.7.14	-	10,360
	Shinhan Bank	USD 100	1,305.9	2022.7.14	2025.7.14	-	5,003

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

	2021						
	Contract Contract Contract exchange inception Contract						mount
	Contractor	amount	exchange rate	inception date	maturity	Assets	Liabilities
Currency Forward	KDB	USD 35	1,135.6	2021.06.24	2022.06.24	1,789	-
Currency swap	SMBC	USD 200	1,118.0	2021.05.28	2024.05.28	13,556	-
·	KDB	USD 130	1,135.6	2021.06.24	2025.06.24	8,817	-
	KDB	USD 35	1,135.6	2021.06.24	2026.06.24	2,319	-
	Shinhan Bank	USD 300	1,131.8	2021.07.07	2026.07.07	12,196	-
	Woori Bank	USD 100	1,131.8	2021.07.07	2026.07.07	4,380	-
	Industrial and Commercial Bank of China	USD 100	1,131.8	2021.07.07	2026.07.07	4,653	-
	Shinhan Bank	USD 100	1,131.8	2021.07.07	2031.07.07	4,804	-
	Woori Bank	USD 200	1,131.8	2021.07.07	2031.07.07	10,032	-
	KDB	USD 200	1,131.8	2021.07.07	2031.07.07	10,429	-

#### 2) Price risk

The Company is exposed to equity securities price risk arises from investments held by the Company and classified in the separate statement of financial position either as available-for-sale or at fair value through profit or loss. The Company's equity investments are publicly traded and are related to the NASDAQ (National Association of Securities Dealers Automated Quotations), NYSE (New York Stock Exchange), HSI (Hang Seng Index) and KOSPI Index.

The table below summarizes the impact of increases/decreases of the listed stock price index on the Company's equity before tax effects as at December 31, 2022 and 2021. The analysis is based on the assumption that the equity index has increased/decreased by 10% with all other variables held constant, and that all the Company's equity instruments moved in line with the index.

(in millions of Korean won)	2022		2021		
	10% Increase	10% Decrease	10% Increase	10% Decrease	
NASDAQ	255	(255)	909	(909)	
NYSE	2,208	(2,208)	-	-	
HSI	8,349	(8,349)	-	-	
KOSPI	17,667	(17,667)	-		
Total	28,479	(28,479)	909	(909)	

#### 3) Interest rate risk

Interest rate risk is defined as the risk that the interest income or expenses arising from deposits and borrowings will fluctuate because of changes in future market interest rate. The interest rate risk mainly arises on 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 Company adequately minimizes risks from interest rate fluctuations through various policies, such as sharing excess cash within the Company (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<sup>1</sup> on the Company's equity and post-tax profit for the years ended December 31, 2022 and 2021. The analysis is based on the assumption that the interest rate has increased/decreased by 1% (100 basis points) with all other variables held constant.

(in millions of Korean won)		Impact on pro	•	Impact on equity	
		2022	2021	2022	2021
Increase	Deposits	8,804	6,366	8,804	6,366
	Borrowings		(301)		(301)
		8,804	6,065	8,804	6,065
Decrease	Deposits	(8,804)	(6,366)	(8,804)	(6,366)
	Borrowings		301		301
		(8,804)	(6,065)	(8,804)	(6,065)

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. In addition, the above borrowings exposed to interest rate risk amounting to USD 35 million (equivalent to in 2021: ₩ 41,492 million) were borrowed from KDB Industrial Bank and were classified as short-term borrowings, which were repaid for the year ended December 31, 2022 (Note 14). Meanwhile, the Company has entered into a currency interest rate swap contract amounting to USD 525 million (equivalent to ₩665,333 million) to hedge interest rate risk of variable interest rate borrowings.

#### (b) Credit risk

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

#### A. Trade receivables

The Company 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 December 31, 2022 and 2021, is as follows. Expected credit losses include forward-looking information.

(in millions of Korean won)	Receivables not past due <sup>1</sup>	Receivables past due but not impaired <sup>1</sup>	Impaired receivables <sup>2</sup>	Total
December 31, 2022 (Trade receivables)				
Gross carrying amount	3,018,815	72,353	899	3,092,067
Expected loss rate	0.0%	0.1%	100.0%	0.1%
Loss allowance provision  December 31, 2021  (Trade receivables)	1,009	63	899	1,971
Gross carrying amount	3,182,702	78,658	1,162	3,262,522
Expected loss rate	0.0%	0.1%	76.7%	0.1%
Loss allowance provision	1,232	45	891	2,168

<sup>&</sup>lt;sup>1</sup> See Note 7.(3) for aging analysis.

Movements in the loss allowance provision for trade receivables for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	Trade receivables			
	2022	2021		
Beginning balance	2,168	2,499		
Increase in loss allowance recognized in profit or loss during the year (reversal of)	(180)	116		
Receivables written off during the year as uncollectible	(17)	(447)		
Ending balance	1,971	2,168		

As at December 31, 2022, the carrying amount of trade receivables representing the maximum exposure to credit risk amounts to  $\mbox{$\forall$}$  3,090,096 million (2021:  $\mbox{$\forall$}$  3,260,354 million).

#### B. Other financial at assets amortized cost

Movements in loss allowance provision for other financial assets at amortized cost for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022	2021
Beginning balance	2,111	2,111
Increase in loss allowance recognized in profit or loss during the year	(331)	-
Receivables written off during the year as uncollectible	(1,152)	
Ending balance	628	2,111

<sup>&</sup>lt;sup>2</sup> Impaired receivables are those for which impairment indicators have been confirmed, such as significant lack of collectability.

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

To manage credit risks relating to trade receivables, the Company 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 customers. The credit risks relating to trade receivables are also mitigated by insurance contracts, collaterals as well as payment guarantees.

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

The Company has deposited its cash and cash equivalents, and other long-term deposits in several financial institutions, such as Woori Bank and others. The Company has also entered into derivative contract with several financial institutions. The Company 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

The Company monitors rolling forecasts of the Company'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 Company does not breach borrowing limits or covenants (where applicable) on any of its borrowing facilities. The Company's liquidity management policy involves projecting cash flows in major currencies and considering the level of liquid assets necessary to meet these, monitoring balance sheet liquidity ratios against internal and external regulatory requirements and maintaining debt financing plans.

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

(in millions of Korean won)	2022			
·	Less than	Between	Between	
	1 year	1-2 years	2-5 years	Over 5 years
Non-derivative financial				
instruments				
Borrowings (excluding lease liabilities)	758,255	1,426,869	2,931,928	2,613,185
Lease liabilities	37,642	15,355	15,525	53,031
Trade and other payables <sup>1</sup>	3,088,622	6,297	-	-
	3,884,519	1,448,521	2,947,453	2,666,216
Derivative instruments				
Gross settlement currency				
forwards and swaps				
(Inflows)	(209,778)	(524,012)	(1,787,213)	(693,847)
Outflows	190,857	479,573	1,694,337	616,984
	(18,921)	(44,439)	(92,876)	(76,863)
	3,865,598	1,404,082	2,854,577	2,589,353

<sup>(\*)</sup> 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).

(in millions of Korean won)		202		
	Less than	Between	Between	
	1 year	1-2 years	2-5 years	Over 5 years
Non-derivative financial instruments				
Borrowings (excluding lease liabilities)	1,138,177	705,873	3,089,606	2,829,728
Lease liabilities	42,467	24,615	25,836	61,019
Trade and other payables <sup>1</sup>	3,099,190	4,958	-	
	4,279,834	735,446	3,115,442	2,890,747
Derivative instruments Gross settlement currency forwards and swaps				
(Inflows)	(69,192)	(27,579)	(1,097,304)	(663,139)
Outflows	66,646	26,825	1,045,463	629,746
	(2,546)	(754)	(51,841)	(33,393)
	4,277,288	734,692	3,063,601	2,857,354

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

2) The table below analyzes the Company's financial guarantee contracts into relevant maturity groupings based on the remaining maturity as at the reporting date to the contractual maturity date.

(in millions of Korean won)	2022			
	Less than 1 year	Between 1-2 years	Between 2-5 years	Over 5 years
Financial guarantee contracts <sup>1</sup>	105,749	-	-	-
		20	)21	
	Less than 1 year	Between 1-2 years	Between 2-5 years	Over 5 years
Financial guarantee contracts <sup>1</sup>	140,000	-	-	-

<sup>&</sup>lt;sup>1</sup> The Company has provided financial guarantee for subsidiaries. The amount represents the maximum amount of the guarantee as at December 31, 2022 and 2021, in which the guarantee could be called (Note 18).

#### 3.2 Capital Risk Management

The Company's objectives when managing capital are to safeguard the Company's ability to continue as a going concern in order 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 Company 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 statement of financial position plus net debt.

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

(in millions of Korean won, except for ratios)	2022	2021
Total borrowings (Note 14) (A)	7,083,069	7,155,184
Less: cash and cash equivalents (B)	(1,323,209)	(1,056,665)
Net debt (C=A+B)	5,759,860	6,098,519
Total liabilities (D)	11,799,396	12,144,275
Total equity (E)	21,073,428	18,784,877
Total capital (F=C+E)	26,833,288	24,883,396
Gearing ratio (C/F)	21.5%	24.5%
Debt-to-equity ratio (D/E)	56.0%	64.6%

### 3.3 Fair Value

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

(in millions of Korean won) 2022		2	2021		
<del>-</del>	Carrying amount	Fair value	Carrying amount	Fair value	
Financial assets (current)					
Cash and cash equivalents	1,323,209	1	1,056,665	1	
Trade receivables	3,090,096	1	3,260,354	1	
Other receivables	419,600	1	214,700	1	
Current derivative financial assets (currency forward)	-	-	1,789	1,789	
Financial assets (non-current)					
Deposits held by financial institutions	206,119	1	206,121	1	
Other receivables (excluding deposits held by financial institutions) Other non-current financial assets	274,509	1	389,050	1	
(carried at fair value)					
Marketable financial assets (excluding derivative instruments)	369,108	369,108	7,565	7,565	
Non-marketable financial assets <sup>3</sup>	193,749	193,749	184,125	184,125	
Non-current derivative financial assets (currency swap)	134,000	134,000	71,186	71,186	
Non-current derivative financial assets (purchase of equity)	46,555	46,555	-	-	
Financial liabilities (current)					
Trade and other payables	3,088,622	1	3,099,190	1	
Current borrowings (excluding lease liabilities)	589,919	1	1,007,315	1	
Current lease liabilities	35,267	2	35,072	2	
Current derivative financial liabilities (currency forward)	3,348	3,348	-	-	
Other current financial liabilities (excluding derivative liabilities)	136	1	342	1	
Financial liabilities (non-current)					
Non-current borrowings (excluding lease liabilities)	6,388,283	5,694,963	6,029,409	5,836,698	
Non-current lease liabilities	69,600	2	83,388	2	
Non-current derivative financial liabilities (currency forward)	4,364	4,364	-	-	
Non-current derivative financial liabilities (currency swap)	20,437	20,437	-	-	
Non-current derivative financial liabilities (purchase of equity)	7,777	7,777	-	-	
Other non-current payables	6,297	1	4,958	1	

<sup>&</sup>lt;sup>1</sup> These financial assets and liabilities are not included in the disclosure above as their carrying amount is a reasonable approximation of the fair value.

<sup>&</sup>lt;sup>2</sup> Fair values for these financial assets and liabilities are not disclosed above in accordance with related Korean IFRS.

<sup>&</sup>lt;sup>3</sup> Acquisition costs of these financial assets approximate their fair values.

### (b) Fair Value Hierarchy

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

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

Fair value hierarchy classifications of the financial instruments that are measured at fair value or its fair value is disclosed as at December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	nillions of Korean won) 2022				
	Level 1	Level 2	Level 3	Total	
Financial assets/liabilities measured	d at fair value				
Other non-current financial assets (Marketable financial assets)	369,108	-	-	369,108	
Other non-current financial assets (Non-marketable financial assets)	-	-	193,749	193,749	
Non-current derivative financial assets (currency swap)	-	134,000	-	134,000	
Non-current derivative financial assets (purchase of equity)	-	-	46,555	46,555	
Current derivative financial liabilities (currency forward)	-	3,348	-	3,348	
Non-current derivative financial liabilities (currency forward)	-	4,364	-	4,364	
Non-current derivative financial liabilities (currency swap)	-	20,437	-	20,437	
Non-current derivative financial liabilities (purchase of equity)	-	-	7,777	7,777	
Financial assets/liabilities not measured at fair value					
Non-current borrowings (excluding lease liabilities)	-	-	5,694,963	5,694,963	

(in millions of Korean won)	2021			
	Level 1	Level 2	Level 3	Total
Financial assets/liabilities measured	d at fair value			
Other non-current financial assets (Marketable financial assets)	7,565	-	-	7,565
Other non-current financial assets (Non-marketable financial assets)	-	-	184,125	184,125
Current derivative financial assets (currency forward)	-	1,789	-	1,789
Non-current derivative financial assets (currency swap)	-	71,186	-	71,186
Financial assets/liabilities not meas	ured at fair val	ue		
Non-current borrowings (excluding lease liabilities)	-	-	5,836,698	5,836,698

### (c) 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 December 31, 2022 and 2021, are as follows:

(in	mil	liOi	าร	ot
Ko	rea	n v	voi	n)

Korean won)	2022							
	Fair value	Level	Valuation Technique	Inputs	Coverage of Level 3 inputs			
Non-current derivative	46,555	3	Monte carlo simulation	Stock volatility of underlying assets	40.54%			
financial assets (purchase of equity)				Stock price correlation coefficient	35.81%			
				Volatility of financial indicators	44.11%			
Non-current derivative	7,777	3	Monte carlo simulation	Underlying asset (equity) volatility	40.54%			
financial assets (purchase of equity)				Stock price correlation coefficient	57.86%			
				Financial Statement Volatility	21.90%			
Non-current borrowings (excluding lease liabilities)	5,694,963	3	Discounted cash flows model	Discount rates	4.94% ~ 5.23%			

(in millions of Korean won)	2021				
	Fair value	Level	Valuation Technique	Inputs	Coverage of Level 3 inputs
Non-current borrowings (excluding lease liabilities)	5,836,698	3	Cash flow discount model	Discount rate	1.77% ~ 2.99%

### 4. Critical Accounting Estimates and Assumptions

The preparation of financial statements requires the Company to make estimates and assumptions concerning the future. Management also needs to exercise judgement in applying the Company'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. The management's judgment and the estimates and assumptions of significant risk that may have adjustments to the carrying amounts of assets and liabilities in the following fiscal year are addressed as below.

### (a) Impairment test of goodwill

The Company tests whether goodwill has suffered any impairment on an annual basis. The recoverable amount of a cash generating unit (CGU) is determined based on value-in-use or fair value less cost of disposal calculations (Note 12).

#### (b) Income taxes

The Company recorded, based on its best estimate, current taxes and deferred taxes that the Company will be liable in the future for the operating results as at the financial year end. However, the final tax outcome in the future may be different from the amounts that were initially recorded. Such differences will impact the current and deferred tax assets and liabilities in the period in which such determination is made.

#### (c) Provisions

The Company recognizes provisions for product warranties and others as explained in Note 15. These provisions are estimated based on the past experience.

#### (d) Fair value of financial instruments

The fair value of financial instruments that are not traded in an active market is determined by using valuation techniques. The Company uses its judgment to select a variety of methods and make assumptions that are mainly based on market conditions existing at the end of each reporting period (Note 3.3).

### (e) Impairment of financial assets

The provision for impairment for financial assets is based on assumptions about risk of default and expected loss rates. The Company uses judgement in making these assumptions and selecting the inputs to the impairment calculation based on the Company's past experience, existing market conditions as well as forward looking estimates at the end of each reporting period (Note 3.1 (b)).

### (f) Net defined benefit liabilities

The present value of net defined benefit liabilities depends on a number of factors that are determined on an actuarial basis using a number of assumptions including the discount rate (Note 16).

### (g) Leases

In determining the lease term, management considers all facts and circumstances that create an economic incentive to exercise an extension option, or not exercise a termination option.

Extension options (or periods after termination options) are only included in the lease term if the lease is reasonably certain to be extended (or not terminated).

When both lessee and lessor have the right to terminate the lease without permission from the other party, the Company considers the contractual termination payments in determining the period for which the contract is enforceable.

The lease term is reassessed if an option is actually exercised (or not exercised) or the Company becomes obliged to exercise (or not exercise) it. The assessment of reasonable certainty is only revised if a significant event or a significant change in circumstances occurs, which affects this assessment, and that is within the control of the lessee.

### (h) Valuation of inventory

Inventories are stated at the lower of cost and net realizable value which is determined on the estimated selling price and the estimated costs necessary to make the sale. The assessment of slow-moving inventories is made of net realizable value estimated with the market circumstances and the historical experience.

### (i) Impairment assessment of CGUs

The recoverable amount of a cash-generating unit used in the impairment assessment of Property, Plant and Equipment and Intangible Assets is determined with the value in use.

#### (j) Impairment assessment of investments in subsidiaries and associates

The Company determines indications of impairment annually for investments in subsidiaries and associates. Impairment assessment is performed when there is an indication that an asset may be impaired. Impairment assessment is made by measuring the recoverable amount (value-in-use or net fair value), and estimation of the recoverable amount is made by using the valuation techniques.

### 5. Financial Instruments by Category

(a) Categorizations of financial instruments as at December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022					
Financial assets	Financial assets at amortized	Financial assets at fair value through profit or	Financial assets at fair value through other comprehensive	Other Financial asset <sup>1</sup>	Total	
Filialiciai assets	cost	loss	income	สรรษเ	i Otai	
Cash and cash equivalents	1,323,209	-	-	-	1,323,209	
Trade receivables	3,000,445	-	89,651	-	3,090,096	
Other receivables	418,169	-	1,431	-	419,600	
Other non-current receivables	480,628	-	-	-	480,628	
Other non-current financial assets	-	161,572	401,285	180,555	743,412	
Total	5,222,451	161,572	492,367	180,555	6,056,945	

(in millions of Korean won)	2022			
Financial liabilities	Financial liabilities at amortized cost	Other financial liabilities <sup>2</sup>	Total	
Trade payables	1,288,959	-	1,288,959	
Other payables	1,799,663	-	1,799,663	
Borrowings (current)	589,919	35,267	625,186	
Other current financial liabilities	-	3,484	3,484	
Other non-current financial liabilities	-	32,578	32,578	
Other non-current payables	6,297	-	6,297	
Borrowings (non-current)	6,388,283	69,600	6,457,883	
Total	10,073,121	140,929	10,214,050	

(in millions of Korean won)	2021					
Financial assets	Financial assets at amortized cost	Financial assets at fair value through profit or loss	Financial assets at fair value through other comprehensive income	Other Financial asset <sup>1</sup>	Total	
Cash and cash equivalents	1,056,665	-	-	-	1,056,665	
Trade receivables	3,156,808	-	103,546	-	3,260,354	
Other receivables	213,375	-	1,325	-	214,700	
Other non-current receivables	595,171	-	-	-	595,171	
Other current financial assets	-	-	-	1,789	1,789	
Other non-current financial						
assets		149,881	41,809	71,186	262,876	
Total	5,022,019	149,881	146,680	72,975	5,391,555	

(in millions of Korean won)	2021			
Financial liabilities	Financial liabilities at amortized cost	Other financial liabilities <sup>2</sup>	Total	
Trade payables	1,502,925	-	1,502,925	
Other payables	1,596,265	-	1,596,265	
Borrowings (current)	601,363	441,024	1,042,387	
Other current financial liabilities	-	342	342	
Other non-current payables	4,958	-	4,958	
Borrowings (non-current)	6,029,409	83,388	6,112,797	
Total	9,734,920	524,754	10,259,674	

<sup>&</sup>lt;sup>1</sup> Other financial assets include derivative assets that are not subject to the categorizations.

<sup>&</sup>lt;sup>2</sup> Other financial liabilities include lease liabilities, derivative liabilities and negotiated borrowings that are not subject to the categorizations.

(b) Net gains or losses on each category of financial instruments for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022	2021
Dividend income		
Financial assets at fair value through other comprehensive income	20	237
(Reversal of) Impairment losses		
Financial assets at amortized cost	(511)	116
Interest income		
Financial assets at amortized cost	71,104	34,619
Interest expense		
Financial liabilities at amortized cost	(150,252)	(137,049)
Other financial liabilities	(2,438)	(4,680)
Financial assets at amortized cost <sup>1</sup>	(3,307)	(47)
Gain (loss) on valuation/disposal		
Financial assets at fair value through profit or loss	9,555	25,388
Financial assets at fair value through other comprehensive income	(129,165)	6,066
Derivative instruments	39,357	64,896
Exchange differences		
Financial assets at amortized cost	188,486	229,632
Financial liabilities at amortized cost	(165,984)	(132,474)
Other financial liabilities	(17,000)	149

<sup>&</sup>lt;sup>1</sup> Fees paid to financial institutions for factoring

### 6. Cash and Cash Equivalents

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

(in millions of Korean won)	2022	2021
Bank deposits and cash on hand	126,967	178,643
Deposits held by financial institutions and others	1,196,242	878,022
Total	1,323,209	1,056,665

### 7. Trade and Other Receivables

(a) Trade and other receivables and its provisions for impairment as at December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022			
	Gross amount	Provision for impairment	Carrying amount	
Trade receivables	3,092,067	(1,971)	3,090,096	
Other current receivables	420,228	(628)	419,600	
Other non-current receivables	480,628	-	480,628	
Total	3,992,923	(2,599)	3,990,324	
(in millions of Korean won)	2021			
	Gross amount	Provision for impairment	Carrying amount	
Trade receivables	3,262,522	(2,168)	3,260,354	
Other current receivables	216,811	(2,111)	214,700	
Other non-current receivables	595,171	-	595,171	
Total	4,074,504	(4,279)	4,070,225	

(b) Details of other receivables as at December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022	2021
Current		
Non-trade receivables	207,333	109,192
Accrued income	61,487	28,268
Loans	133,143	65,203
Guarantee deposits provided	17,637	12,037
	419,600	214,700
Non-current		
Non-trade receivables	28,304	27,599
Deposits held by financial institutions <sup>1</sup>	206,119	206,121
Loans	218,610	329,024
Guarantee deposits provided	27,595	32,427
	480,628	595,171
Total	900,228	809,871
•	-	

¹ As at December 31, 2022, ₩ 206,100 million (2021: ₩ 206,100 million) is restricted from being withdrawn in relation to large, small and medium-sized companies cooperation agreement and others. In addition, ₩ 19 million is restricted from withdrawal in connection with maintaining checking accounts (2021: ₩ 21 million).

(c) The aging analysis of trade and other receivables as at December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022		2021	
	Trade receivables	Other receivables	Trade receivables	Other receivables
Receivables not past due	3,018,815	900,228	3,182,702	809,871
Past due but not impaired	72,353	-	78,658	-
Up to 3 months	72,105	-	74,560	-
Between 3-6 months	229	-	205	-
Over 6 months	19	-	3,893	<u>-</u>
	899	628	1,162	2,111
Impaired receivables	3,092,067	900,856	3,262,522	811,982
	3,018,815	900,228	3,182,702	809,871

(d) Movements on the provision for impairment of trade and other receivables for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022			
	Trade rece	ivables	Other rec	eivables
		Non-		Non-
	Current	current	Current	current
Beginning balance	2,168	_	2,111	-
Provisions for impairment	(180)	-	(331)	-
Write-off	(17)	<u>-</u>	(1,152)	<u> </u>
Ending balance	1,971	_	628	_

(in millions of Korean won)	2021			
•	Trade receivables		Other rece	eivables
		Non-		Non-
	Current	current	Current	current
Beginning balance	2,499	-	2,111	-
Provisions for impairment	116	-	-	-
Write-off	(447)	<u>-</u>	<u>-</u>	
Ending balance	2,168	<u>-</u>	2,111	-

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

### 8. Other Financial Assets and Liabilities

(a) Details of other financial assets and liabilities as at December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022	2021
Other financial assets		
Financial assets at fair value through profit or loss (derivative instruments) (current)	-	1,789
Financial assets at fair value through other comprehensive income (excluding derivative instruments) (non-current)	401,285	41,809
Financial assets at fair value through profit or loss (excluding derivative instruments) (non-current)	161,572	149,881
Financial assets at fair value through profit or loss (derivative instruments) (non-current)	180,555	71,186
	743,412	264,665
Other financial liabilities		
Financial guarantee contracts (current)	136	342
Financial liabilities at fair value through profit or loss (derivative instruments) (current)	3,348	-
Financial liabilities at fair value through profit or loss (derivative instruments) (non-current)	32,578	_
	36,062	342

(b) Changes in equity and debt instruments included in other financial assets for the years ended December 31, 2022 and 2021, are as follows:

2022	2021
191,690	51,699
520,938	111,984
(30,161)	(3,447)
(123,347)	6,066
3,737	25,388
562,857	191,690
	191,690 520,938 (30,161) (123,347) 3,737

(c) No impairment losses on other financial assets were recognized for the years ended December 31, 2022 and 2021.

### 9. Inventories

(a) Details of inventories as at December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	
	Gross
	amount

	Gross amount	Valuation allowance	Carrying amount
Merchandise	21,617	(208)	21,409
Finished / Semi-finished products	2,060,667	(168,456)	1,892,211
Work-in-process	32,439	-	32,439
Raw materials	900,669	(17,252)	883,417
Supplies	154,209	-	154,209
Materials-in-transit	391,186	-	391,186
Total	3,560,787	(185,916)	3,374,871

2022

(in millions of Korean won)		2021	
-	Gross amount	Valuation allowance	Carrying amount
Merchandise	19,985	(519)	19,466
Finished / Semi-finished products	1,661,097	(63,842)	1,597,255
Work-in-process	24,998	-	24,998
Raw materials	826,647	(14,876)	811,771
Supplies	127,918	-	127,918
Materials-in-transit	680,175	-	680,175
Total	3,340,820	(79,237)	3,261,583

<sup>(</sup>b) During the year, the cost of inventories recognized as expense and included in 'cost of sales' amounted to ₩ 14,452,076 million (2021: ₩ 10,944,338 million).

#### 10. Investments in Subsidiaries, Associates and Joint ventures

(a) Changes in investments in subsidiaries, associates and joint ventures for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022	2021
Beginning balance	8,958,283	8,951,193
Additions / Transfer	534,870	342,805
Impairment <sup>1</sup>	(55,314)	-
Reclassified as held-for-sale <sup>2</sup>	(3,080)	(293,762)
Others <sup>3</sup>	(304,040)	(41,953)
Ending balance	9,130,719	8,958,283

<sup>&</sup>lt;sup>1</sup> The Company reviews whether there are any events or changes in circumstances indicate that assets might be impaired at the end of each reporting period. If the indications are present, the recoverable amount of that asset is estimated by cashflow discount method or other method. If the recoverable amount is less than its carrying amount, the carrying amount of the asset shall be reduced and the impairment loss shall me recognized.

During 2022, the major assumptions used to calculate the amount of impairment recognized and the value in use measured using the discounted cash flow method are as follows:

(in millions of Korean won and in percentage)	2022.12.31		
	LG Chem Hangzhou Advanced Materials Co., Ltd.		
Impaired amount	55,314		
Pre-tax discount rate	12.56%		
Growth rate for subsequent years after five years	0.00%		

<sup>&</sup>lt;sup>2</sup> The Company decided to dispose of shares VINA Plasticizers Chemical Co.,Ltd., and reclassified it as assets held for sale in the statement of financial position as at December 31, 2022. In addition, the Company decided to dispose of 8,500,000 shares of LG Energy Solution, Ltd., a subsidiary, and reclassified it as assets held for sale in the statement of financial position as at December 31, 2021. The disposal has been completed in January 2022.

<sup>&</sup>lt;sup>3</sup> During the year ended December 31, 2022, the Company decreased the capital of LG CHEM FUND I LLC, LG Chem (Taiwan), Ltd., LG Chem (China) Investment Co.,Ltd with consideration of ₩8,245 million, ₩17 million and ₩240,480 million, respectively and the Company sold 137,988,929 shares of Shanjin Optoelectronics (Taiwan) Co., Ltd., a subsidiary. Meanwhile, the Company sold Ugimag Korea Co., Ltd. and FJ Composite Material Co., Ltd. during 2021.

(b) Details of investments in subsidiaries, associates and joint ventures as at December 31, 2022 and 2021, are as follows:

(in millions of Korean won and in percentage)	Location	Percen owners	•	Carrying	ı amount
(in millions of Notean won and in percentage)	Location	2022	2021	2022	2021
Cubaidinta					
Subsidiaries	<b>0</b> 1.1			405.000	407.000
Ningbo LG Yongxing Chemical Co.,Ltd.	China	75	75	135,908	135,908
LG Energy Solution, Ltd. <sup>1</sup>	Korea	82	100	6,618,295	6,618,295
LG Chemical (Cuangabay) Engineering Plactics	India	100	100	85,718	54,929
LG Chemical (Guangzhou) Engineering Plastics Co.,Ltd.	China	100	100	21,911	21,911
LG Chem (Taiwan), Ltd. <sup>3</sup>	Taiwan	100	100	1	18
Tianjin LG Bohai Chemical Co.,Ltd.	China	68	68	77,871	77,871
Tianjin LG BOTIAN Chemical Co.,Ltd.	China	58	58	10,423	10,423
LG Chem (China) Investment Co.,Ltd. <sup>4</sup>	China	100	100	23,753	264,233
LG Chem (Tianjin) Engineering Plastics Co.,Ltd.	China	90	90	14,733	14,733
LG Chem Europe GmbH	Germany	100	100	20,619	20.619
LG Chem Poland Sp. z o.o.	Poland	100	100	49,142	49,142
LGC Petrochemical India Private Ltd.	India	100	100	299	299
HAENGBOKNURI CO.,LTD.	Korea	100	100	600	600
LG CHEM TK Kimya SANAYI VE TIC. Ltd. STI.	Turkey	100	100	174	174
LG Chem Japan Co.,Ltd.	Japan	100	100	1,406	1,406
LG Chem (Chongqing) Engineering Plastics Co.,	oapa			.,	.,
Ltd.	China	100	100	37,410	37,410
LG Chem(HUIZHOU) Petrochemical Co., Ltd.	China	70	70	99,001	99,001
LG Chem Hai Phong Veitnam Co.,Ltd.	Vietnam	100	100	3,079	3,079
LG Chem Mexico S.A. de C.V.	Mexico	100	100	394	394
LG Chem Hai Phong Engineering Plastics Co.,Ltd.	Vietnam	100	100	15,344	15,344
LG Chem (Guangzhou) Information & Electronics					
Materials Co.,Ltd.	China	100	100	184,491	184,491
FarmHannong Co.,Ltd.	Korea	100	100	579,581	579,581
LG Chem Life Sciences India Pvt. Ltd.	India	100	100	2,170	2,170
LG Chem Life Sciences (Beijing) Co., Ltd.	China	100	100	3,490	3,490
LG Chem Life Sciences (Thailand) Ltd.	Thailand	100	100	431	431
LG Chem Life Science Innovation Center, Inc. 5	USA	100	100	18,295	1,702
LG CHEM FUND I LLC <sup>6</sup>	USA	100	100	64,303	51,431
LEYOU NEW ENERGY MATERIALS(WUXI)CO.,LTD.	China	51	51	169,113	169,113
	USA	100	100	32,283	
LG Chem America, Inc. LG NanoH2O, Inc.	USA	100	100	38,414	32,283
				•	38,414
Uniseal, Inc.	USA	100	100	30,186	30,186
LG Chem Asia Pte. Ltd.  Shanjin Optoelectronics (Taiwan) Co., Ltd. <sup>7</sup>	Singapore	100	100	821	821 55 207
, , ,	Taiwan Malaysia	- 51	100 51	- 26 967	55,297 36,867
LG PETRONAS Chemicals Malaysia	Malaysia	51 70	51 70	36,867	36,867
LG Chara Chia Data sharring language La	China	70	70	11,712	67,027
LG Chem Ohio Petrochemical, Inc.	USA	100	100	22,516	22,516

LOROM	V	400	400	50 504	50 504
LG BCM	Korea	100	100	53,504	53,504
LG Chem Vietnam Co., LTD <sup>9</sup>	Vietnam	100	-	359	-
LG Chem Malaysia SDN.BHD. 10	Malaysia	100	-	150	-
LG Chem BRASIL INTERMEDICAO DE					
NEGOCIOS DO SETOR QUIMICO LTDA. 11	Brazil	100	-	579	
				8,465,346	8,755,113
Associates					
TECWIN Co.,Ltd.	Korea	21	21	2,861	2,861
LG Chem BRASIL INTERMEDICAO DE			400		570
NEGOCIOS DO SETOR QUIMICO LTDA. 11	Brazil	-	100	-	579
LG Chem Malaysia SDN.BHD. 10	Malaysia	-	100	-	150
LG Chem Life Sciences Poland Ltd. 12	Poland	100	100	17	17
HUAJIN NEW ENERGY		49	49	90 522	90 533
MATERIALS(QUZHOU)CO.,LTD.	China	49	49	89,523	89,523
TL Chemical CO., Ltd.	Korea	40	40	48,544	48,544
KOREA PRECURSOR CO.,LTD. 13	Korea	49	-	20,384	
				161,329	141,674
Joint ventures					
VINA Plasticizers Chemical Co.,Ltd. 14	Vietnam	50	50	-	3,080
SEETEC Co.,Ltd.	Korea	50	50	58,416	58,416
LG Toray Hungary Battery Separator Kft. 15	Hungary	50	-	445,628	-
				504,044	61,496
Total				665,373	203,170

- <sup>1</sup> During the year ended December 31, 2022, the ownership was changed due to disposal of shares of ₩ 293,762 million in LG Energy Solutions, which were reclassified as assets held for sale in the statement of financial position as at December 31, 2021.
- <sup>2</sup> During the year ended December 31, 2022, the Company additionally acquired shares of LG Chemical India Pvt. Ltd. for ₩30,789 million.
- <sup>3</sup> During the year ended December 31, 2022, LG Chem (Taiwan), Ltd. decreased its capital with consideration of ₩17 million.
- <sup>4</sup> During the year ended December 31, 2022, LG Chem (China) Investment Co., Ltd. decreased its capital with consideration of ₩240,480 million.
- <sup>5</sup> During the year ended December 31, 2022, the Company additionally acquired shares of LG Chem Life Science Innovation Center, Inc. for ₩16,593.
- <sup>6</sup> During the year ended December 31, 2022, the Company additionally acquired shares of LG CHEM FUND I LLC for ₩21,117 million and decreased its capital with consideration of ₩8,245 million.
- <sup>7</sup> During the year ended December 31, 2022, the Company disposed Shanjin Optoelectronics (Taiwan) Co., Ltd.
- <sup>8</sup> During the year ended December 31, 2022, the Company recognized shares of LG Chem Hangzhou Advanced Materials Co., Ltd. for ₩ 55,315 million as impairment losses.
- <sup>9</sup> During the year ended December 31, 2022, the Company additionally acquired shares of LG Chem Vietnam Co., Ltd for ₩ 359 million.
- <sup>10</sup> During the year ended December 31, 2022, the Company reclassified the shares of LG Chem Malaysia SDN.BHD. amounting to ₩150 million from associates to subsidiaries.
- <sup>11</sup> During the year ended December 31, 2022, the Company reclassified the shares of LG Chem BRASIL INTERMEDICAO DE NEGOCIOS DO SETOR QUIMICO LTDA. for ₩ 579 million from associates to subsidiaries.
- <sup>12</sup> Classified as an investment in associate due to its small size.
- <sup>13</sup> During the year ended December 31, 2022, the Company additionally acquired shares of KOREA

PRECURSOR CO.,LTD. for ₩ 20,384 million.

Details of investments in subsidiaries that have a quoted market price as at December 31, 2022, are as follows:

(in millions of Korean won)	2022									
	Classification	Number of shares	Market price per share (in won)	Market value	Book amount					
LG Energy Solution, Ltd.	Subsidiary	191,500,000	435,500	83,398,250	6,618,295					

### 11. Property, Plant and Equipment

(a) Changes in property, plant and equipment for the years ended December 31, 2022 and 2021, are as follows:

(in millions of						:	2022					
Korean won)									Right-of-	Construction	Machinery	
	Land	Buildings	Structures	Machinery	Vehicles	Tools	Equipment	Others	use assets	-in-progress	-in-transit	Total
Beginning balance	1,102,586	2,217,123	1,023,738	5,356,071	2,715	240,994	118,107	185,958	115,771	762,914	78,177	11,204,154
Cost	1,138,870	2,708,304	1,630,529	13,065,640	22,186	723,343	308,724	490,049	205,524	839,544	78,177	21,210,890
Accumulated												
depreciation	-	(468,062)	(587,531)	(7,612,307)	(19,400)	(477,714)	(189,131)	(298,173)	(89,753)	-	-	(9,742,071)
Accumulated												
impairment	(36,284)	(23,119)	(19,260)	(97,262)	(71)	(4,635)	(1,486)	(5,918)	-	(76,630)	-	(264,665)
Acquisitions/												
Transfer	54,221	217,872	62,860	775,509	2,491	140,439	62,076	208,962	83,895	2,107,994	94,170	3,810,489
Disposals/ Transfer	(91)	(9,126)	(1,349)	(6,074)	(6)	(2,256)	(442)	-	(62,184)	(1,700,631)	(70,267)	(1,852,426)
Depreciation	-	(61,986)	(57,199)	(800,721)	(1,181)	(78,736)	(37,707)	(121,197)	(38,102)	-	-	(1,196,829)
Impairment	-	(1,219)	(895)	(24,227)	(11)	(1,767)	(64)	(163)	-	-	-	(28,346)
Reversal of												
impairment				705						4		709
Ending balance	1,156,716	2,362,664	1,027,155	5,301,263	4,008	298,674	141,970	273,560	99,380	1,170,281	102,080	11,937,751
Cost	1,193,000	2,913,356	1,688,115	13,727,787	24,373	828,555	352,358	675,183	224,307	1,245,557	102,080	22,974,671
Accumulated												
depreciation	-	(526,846)	(640,932)	(8,310,893)	(20,283)	(524,240)	(208,957)	(395,542)	(124,927)	-	-	(10,752,620)
Accumulated												
impairment	(36,284)	(23,846)	(20,028)	(115,631)	(82)	(5,641)	(1,431)	(6,081)	-	(75,276)	-	(284,300)

<sup>&</sup>lt;sup>14</sup> During the year ended December 31, 2022, the Company reclassified the shares of VINA Plasticizers Chemical Co., Ltd. amounting to ₩3,080 million as assets held for sale.

<sup>&</sup>lt;sup>15</sup> During the year ended December 31, 2022, the Company additionally acquired 50% shares of LG Toray Hungary Battery Separator Kft. and recognized as investments in joint ventures for 445,628 million (Note 10).

(in millions of						:	2021					
Korean won)									Right-of-	Construction	Machinery	
	Land	Buildings	Structures	Machinery	Vehicles	Tools	Equipment	Others	use assets	-in-progress	-in-transit	Total
Beginning balance	1,024,616	1,957,015	777,195	3,315,441	2,860	220,742	96,681	112,295	125,905	2,140,794	322,641	10,096,185
Cost	1,060,900	2,395,008	1,329,896	10,575,612	22,433	696,284	298,035	413,151	187,255	2,217,048	322,641	19,518,263
Accumulated												
depreciation	-	(415,241)	(538,185)	(7,124,438)	(19,488)	(464,216)	(199,410)	(294,938)	(61,337)	-	-	(9,117,253)
Accumulated												
impairment	(36,284)	(22,752)	(14,516)	(135,733)	(85)	(11,326)	(1,944)	(5,918)	(13)	(76,254)	-	(304,825)
Business												
combination												
(Note 37)	69,872	61,251	2,754	52,983	69	3,200	772	-	-	29	-	190,930
Acquisitions/												
Transfer	15,889	261,028	305,332	2,745,144	758	93,417	52,608	181,305	31,231	2,053,714	96,890	5,837,316
Disposals/ Transfer	(7,791)	(5,207)	(901)	(7,186)	(13)	(4,462)	(1,030)	-	(5,216)	(3,431,247)	(338,218)	(3,801,271)
Depreciation	-	(54,956)	(54,222)	(737,161)	(959)	(71,537)	(30,865)	(107,642)	(36,149)	-	-	(1,093,491)
Impairment	-	(2,008)	(6,420)	(13,150)	-	(366)	(59)	-	-	(376)	(3,136)	(25,515)
Ending balance	1,102,586	2,217,123	1,023,738	5,356,071	2,715	240,994	118,107	185,958	115,771	762,914	78,177	11,204,154
Cost	1,138,870	2,708,304	1,630,529	13,065,640	22,186	723,343	308,724	490,049	205,524	839,544	78,177	21,210,890
Accumulated												
depreciation	-	(468,062)	(587,531)	(7,612,307)	(19,400)	(477,714)	(189,131)	(298,173)	(89,753)	-	-	(9,742,071)
Accumulated												
impairment	(36,284)	(23,119)	(19,260)	(97,262)	(71)	(4,635)	(1,486)	(5,918)	-	(76,630)	-	(264,665)

- (b) During the year, the Company capitalized ₩ 11,360 million of borrowing costs (2021: ₩ 28,158 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 2.18% (2021: 2.30%).
- (c) Line items including depreciation in the separate statements of profit or loss for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022	2021
Cost of sales	1,068,445	969,359
Selling and administrative expenses	127,938	121,331
Others	-	68
Discontinued operations	446	2,733
Total	1,196,829	1,093,491

### (d) Lease

(i) Amounts recognized in the statement of financial position

The statement of financial position shows the following amounts relating to leases:

(in millions of Korean won)	2022	2021
Right-of-use assets¹		
Real-estate	87,059	102,004
Machinery	3,375	6,156
Vehicles	8,946	7,611
	99,380	115,771

<sup>&</sup>lt;sup>1</sup> Included in the line item 'Property, plant and equipment' in the statements of financial position.

(in millions of Korean won)	2022	2021
Lease liabilities <sup>1</sup>		
Current	35,267	35,072
Non-current	69,600	83,388
	104,867	118,460

<sup>&</sup>lt;sup>1</sup> Included in the line item 'borrowings' in the statements of financial position.

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

The statement of profit or loss shows the following amounts relating to leases:

(in millions of Korean won)	2022	2021
Depreciation of right-of-use assets		
Real-estate	29,062	28,555
Machinery	2,829	2,836
Vehicles and others	6,211	4,758
_	38,102	36,149
Interest expense relating to lease liabilities (included in finance cost)	2,438	2,695
Expense relating to short-term leases (included in cost of goods sold and administrative expenses)	5,633	10,731
Expense relating to leases of low-value assets that are not short-term leases (included in cost of goods sold and administrative expenses)	8,036	7,227
• • •		

### 12. Intangible Assets

(a) Changes in intangible assets for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)		2022								
	Development costs	Software	Industrial property rights	Goodwill	Memberships	Others	Total			
Beginning balance Separate acquisitions/	49,952	345,466	383,993	590,486	23,264	203,743	1,596,904			
Transfer	-	221,886	67,811	-	4,509	2,120	296,326			
Disposals/ Transfer	-	(22,594)	(1,748)	-	(9,408)	(395)	(34,145)			
Amortization	(6,091)	(108,950)	(36,603)	-	-	(20,413)	(172,057)			
Impairment	<u>-</u>	(40)	<u> </u>	-		<u> </u>	(40)			
Ending balance	43,861	435,768	413,453	590,486	18,365	185,055	1,686,988			

(in millions of Korean won)				2021			
	Development costs	Software	Industrial property rights	Goodwill	Memberships	Others	Total
Beginning balance Business combination	55,677	294,825	367,591	723,756	21,868	166,432	1,630,149
(Note 37)	-	349	642	165,760	-	39,120	205,871
Separate acquisitions/ Transfer Additions – internal	-	139,424	52,924	-	1,506	21,862	215,716
development	198	-	-	-	-	-	198
Disposals/ Transfer	-	(2,272)	(3,871)	(4,112)	(110)	(2,037)	(12,402)
Amortization	(5,923)	(86,800)	(32,529)	-	-	(18,167)	(143,419)
Impairment Transfer to assets held for sale (Note 34)	-	(60)	(404) (360)	(294,918)	-	(3,467)	(298,849) (360)
Ending balance	49,952	345,466	383,993	590,486	23,264	203,743	1,596,904

(b) Line items including amortization of intangible assets for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022	2021
Cost of sales	26,768	23,583
Selling and administrative expenses	145,288	119,697
Discontinued operations	1	139
Total	172,057	143,419

- (d) Goodwill is allocated to the Company's CGUs identified. The carrying amounts of goodwill allocation by CGUs as at December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022								
		Acquisition of							
	Merger of LG Petrochemical	Acquisition of SAP	LG Life Sciences,	Acquisition of CEM					
CGUs	Co., Ltd	business	Ltd,	business	Total				
Petrochemicals									
NCC	-	-	-	-	-				
ABS	2,939	-	-	-	2,939				
PO	1,092	-	-	-	1,092				
PVC	1,271	-	-	-	1,271				
Acrylic	595	25,222	-	-	25,817				
Plasticizer	89	-	-	-	89				
BPA	495	-	-	-	495				
Others	1,712	-	-	-	1,712				
Advanced Materials									
Separator <sup>1</sup>	-	-	-	160,577	160,577				
VCF <sup>1</sup>	-	-	-	5,183	5,183				
Life Sciences									
Life sciences <sup>3</sup>	-	-	391,311	-	391,311				
Total	8,193	25,222	391,311	165,760	590,486				

(in millions of Korean won)	2021								
	Acquisition of								
	Merger of LG Petrochemical	Acquisition of SAP	LG Life Sciences,	Acquisition of CEM					
CGUs	Co., Ltd	business	Ltd,	business	Total				
Petrochemicals									
NCC	2,639	-	-	-	2,639				
ABS	1,472	-	-	-	1,472				
PO	1,054	-	-	-	1,054				
PVC	808	-	-	-	808				
Acrylic	350	25,222	-	-	25,572				
Plasticizer	53	-	-	-	53				
BPA	467	-	-	-	467				
Others	1,350	-	-	-	1,350				
Advanced Materials									
PSAA <sup>2</sup>	-	-	-	-	-				
Separator <sup>3</sup>	-	-	-	165,760	165,760				
Life Sciences									
Life sciences <sup>4</sup>			391,311	<u>-</u>	391,311				
Total	8,193	25,222	391,311	165,760	590,486				

<sup>&</sup>lt;sup>1</sup> During 2022, goodwill related to the acquisition of the CEM business was separated due to organizational reorganization.

The recoverable amounts of CGUs have been determined based on value-in-use. Value-in-use calculations use pre-tax cash flow projections based on financial budgets approved by management covering a five-year period. Fair value less cost of disposal reflects expectation of future business and usage pattern of assets from the perspective of market participants. Management determined the estimated pre-tax cash flow based on past performance and its expectations of market development.

During 2022, key assumptions used for calculation of value in use and fair value less cost of disposal are as follows:

(in millions of Korean won)	2022				
	Pre-tax discount rate	Growth rate for subsequent years after five years			
NCC/ABS/PO/PVC/ Plasticizer /BAP/Others	8.3%	0.0%			
Acrylic	8.5%	0.0%			
Life sciences	11.6%	3.0%			
Separator	12.5%	1.0%			
VCF	17.7%	2.0%			

<sup>&</sup>lt;sup>2</sup> During 2021, the Company has sold PSAA business.

<sup>&</sup>lt;sup>3</sup> During 2021, the Company recognized goodwill in relation to the acquisition of CEM business.

<sup>&</sup>lt;sup>4</sup> During 2021, the Company recognized ₩ 294,918 million of impairment against goodwill recognized in relation to the acquisition of LG Life Sciences, Ltd.

The results of the sensitivity analysis for the fair value less cost of disposal calculation of Life Sciences CGU are as follows:

(in millions of Korean won)	0.5% Increase	0.5% Decrease
<b>Discount rate</b> Increase (decrease) in recoverable value	(130,450)	151,874
Growth rate Increase (decrease) in recoverable value	101,255	(87,072)

Had the discount rate been 0.5% higher than the management's estimate, the Company should have recognized impairment loss of \$6,345 million for the carrying value of goodwill.

(e) 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:

(in thousands of tons)	2021	2022	2023	2024	2025	Total
Allocation with nil consideration	9,555	8,787	8,787	8,704	8,704	44,537

Changes in greenhouse gas emission permits during the years ended December 31, 2022 and 2021, are as follows:

(in thousands of	s of <b>2022</b>								
tons and millions	2020		202	2021 202		22		2023	
of Korean won)	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount	
Beginning balance									
/Allocation with nil									
consideration	8,140	-	9,555	-	8,787	-	8,787	-	
Purchase/Sale	(144)	-	(214)	-	(192)	-	-	-	
Exchange	100	-	(100)	-	-	-	-	-	
Issuance of offset									
emission permits	-	-	-	-	119	-	-	-	
Borrowings/Carry									
forwards between									
years	(24)	-	(401)	-	425	-	-	-	
Surrendered to the									
government	(8,072)		(8,840)					-	
Ending balance <sup>1</sup>					9,139		8,787		

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(in thousands of			202	2			
tons and millions	202	4	202	5	Total		
of Korean won)	Quantity	Amount	Quantity	Amount	Quantity	Amount	
Beginning balance /Allocation with nil	0.704		0.704		50.077		
consideration	8,704	-	8,704	-	52,677	-	
Purchase/Sale	-	-	-	-	(550)	-	
Exchange	-	-	-	-	-	-	
Issuance of offset emission permits	-	-	-	-	119	-	
Borrowings/Carry							
forwards between years	-	-	-	-	-	-	
Surrendered to the government		<u>-</u>	<u>-</u>		(16,912)	<u>-</u>	
Ending balance	8,704		8,704		35,334	-	
emission permits Borrowings/Carry forwards between years Surrendered to the government	- - 8,704	- - -	- - 8,704	- - <u>-</u>	(16,912)	- - -	

(in thousands of	2021									
tons and millions	2020		202	2021		2022		2023		
of Korean won)	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount		
Beginning balance										
/Allocation with nil										
consideration	8,140	-	8,800	-	8,800	-	8,800	-		
Purchase/Sale	(144)	-	-	-	-	-	-	-		
Exchange	100	-	(100)	-	-	-	-	-		
Borrowings/Carry										
forwards between										
years	(24)	-	24	-	-	-	-	-		
Surrendered to the										
government	(8,072)	<u>-</u>	<u>-</u>	<u>-</u> .	<u>-</u>	<u>-</u>				
Ending balance			8,724	<u>-</u>	8,800	-	8,800			

(in thousands of			2021			
tons and millions	2024		2025		Tota	<u> </u>
of Korean won)	Quantity	Amount	Quantity	Amount	Quantity	Amount
Beginning balance /Allocation with nil consideration	8,718	_	8,718	_	51,976	_
Purchase/Sale	-	-	-	-	(144)	-
Exchange Borrowings/Carry forwards between	-	-	-	-	-	-
years Surrendered to the government	-	-	-	-	(8,072)	-
Ending balance	8,718	-	8,718		43,760	-

During the years ended December 31, 2022 and 2021, there are no greenhouse gas emission permits held for short-term trading purpose.

### 13. Other Current and Non-current Assets

Details of other current and non-current assets as at December 31, 2022 and 2021, consist of:

(in millions of Korean won)	2022	2021
Current		
Prepayments to suppliers and prepaid		
expense	31,651	30,188
Prepaid value added tax	114,537	107,093
Others	81,794	8,027
Total	227,982	145,308
Non-current		
Net defined benefit assets (Note 16) Long-term prepayments and prepaid	395,407	44,717
expenses	4,426	4,833
Total	399,833	49,550

### 14. Borrowings

(a) Borrowings as at December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022	2021	
Current			
Short-term borrowings	-	447,445	
Current portion of debentures	589,919	559,870	
Current portion of lease liabilities	35,267	35,072	
	625,186	1,042,387	
Non-current			
Long-term borrowings	1,368,141	882,134	
Debentures	5,020,142	5,147,275	
Lease liabilities	69,600	83,388	
	6,457,883	6,112,797	
Total	7,083,069	7,155,184	

(b) Details of borrowings as at December 31, 2022, are as follows:

				Interest rate(%) as				
(in millions of	_		Latest	at December 31,		_		
Korean won)	Currency	Bank	maturity date	2022	202		202	
						Non-		Non-
					Current	current	Current	current
Short-term borrow			0000000				44 400	
Bank loans	Foreign currency	KDB Bank	2022.6.24	3M LIBOR + 0.77	-	-	41,492	-
Negotiated borrowings in foreign currency	Foreign currency	Shinhan Bank and others	2022.12.17	3M EURIBOR + 0.50 and other	-	-	405,953	-
Total						-	447,445	_
Long-term borrowi	nac							
Bank loans	Korean won	KDB Bank and others	2028.11.1	3.05 and other	-	450,000	-	450,000
	Foreign currency	KDB Bank and others	2027.6.15	3M LIBOR + 0.53 and other	-	918,793	-	432,708
Less: discount on lo	ng-term borrov	wings			-	(652)	-	(574)
Total					-	1,368,141	-	882,134
Debentures								
Public debentures	Korean won	KB Securities Co., Ltd and others	2036.2.19	3.29 and other	590,000	3,240,000	560,000	3,830,000
Private	Korean	KB Securities	2036.5.7	2.52 and other	-	150,000	-	150,000
debentures	won	Co., Ltd and others						
	Foreign currency	CITI Securities and others	2031.7.7	4.38 and other	-	1,647,490	-	1,185,500
Less: discount on de	ebentures				(81)	(17,348)	(130)	(18,225)
Total					588,661	5,020,142	559,870	5,147,275

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

(in millions of Korean won)			2022		
Leaser	Annual interest rate (%)	Latest maturity date	Total amount	Current	Non-current
Hyundai Oil Bank and others	1.98 ~ 2.35	2082.2.28	104,867	35,267	69,600
(in millions of Korean won)			2021		
Leaser	Annual interest rate (%)	Latest maturity date	Total amount	Current	Non-current
Hyundai Oil Bank and others	1.98 ~ 3.01	2068.3.31	118,460	35,072	83,388

### 15. Provisions

Changes in the carrying amount of provisions for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022				
	Greenhouse				
		gas	Legal		
	Warranty <sup>1</sup>	emission <sup>2</sup>	claims <sup>3</sup>	Restoration <sup>4</sup>	Total
Beginning balance	8,097	-	-	14,555	22,652
Additions	37,100	-	-	356	37,456
Used	(39,971)	-	-	(7,118)	(47,089)
Ending balance	5,226		-	7,793	13,019
Current	5,226	-	-	7,793	13,019
Non-current	_	-	-	-	-

(in millions of Korean won)	2021				
		Greenhouse			
		gas	Legal		
	Warranty <sup>1</sup>	emission <sup>2</sup>	claims <sup>3</sup>	Restoration <sup>4</sup>	Total
Beginning balance	6,901	4,033	-	25,403	36,337
Business combination	1,386	-	-	-	1,386
Additions (reversal)	14,994	(4,033)	990	4,537	16,488
Used	(15,184)	· -	(990)	(15,385)	(31,559)
Ending balance	8,097		-	14,555	22,652
Current	6,352			6,725	13,077
Non-current	1.745			7.830	9.575

<sup>&</sup>lt;sup>1</sup> Warranty provisions have been accrued based on historical experience for the estimated warranty costs to be incurred due to quality control, exchange, refunds with regard to products.

<sup>&</sup>lt;sup>2</sup> Greenhouse gas emission provisions have been accrued for estimated expenditures to be obligated for any excess emission. The estimated emission for the year ended December 31, 2022, amounts to 8,561 thousand tons (2021: 7,813 thousand tons).

<sup>&</sup>lt;sup>3</sup> Lawsuit provisions have been accrued for certain pending cases.

<sup>&</sup>lt;sup>4</sup> Restoration provisions have been accrued based on the estimated expenses to restore land pollutions.

#### 16. Net Defined Benefit Liabilities

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

(in millions of Korean won)	2022	2021
Present value of defined benefit obligations <sup>1</sup>	950,316	1,005,986
Fair value of plan assets	(1,345,723)	(1,050,703)
Liability (asset) in the separate statement of	<u> </u>	
financial position	(395,407)	(44,717)

<sup>&</sup>lt;sup>1</sup> The present value of retirement benefit obligations is net of existing contributions to the National Pension Plan of ₩ 579 million as at December 31, 2022 (2021: ₩ 629 million).

(b) The amounts recognized in the separate statements of profit or loss for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022	2021
Current service cost <sup>1</sup>	126,494	113,770
Net interest cost	(1,292)	1,474
Total, included in employee benefit expenses	125,202	115,244

<sup>&</sup>lt;sup>1</sup> The above amounts excluded ₩ 1,342 million (2021: ₩ 2,456 million) of expenses capitalized to construction in progress and development costs.

- (c) Post-employment benefits recognized for defined contribution plan for the year ended December 31, 2022, amounted to ₩ 8,756 million (2021: ₩ 7,730 million).
- (d) Post-employment benefits recognized in the separate statements of profit or loss for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022	2021
Cost of sales	87,904	79,047
Selling and administrative expenses	46,054	43,665
Discontinued operations		262
Total	133,958	122,974

(e) Movements in the present value of defined benefit obligations for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022	2021
Beginning balance	1,005,986	936,965
Transfer in	2,484	4,808
Transfer out	(4,082)	(5,898)
Increase in defined benefit obligations		
due to business combination	-	54,897
Current service cost	127,836	116,226
Interest expense	28,412	23,190
Remeasurements:		
Actuarial loss from change in demographic assumptions	1,959	2,820
Actuarial gain from change in financial		
assumptions	(177,807)	(41,433)
Actuarial loss (gain) from experience		
adjustments	45,695	(11,614)
Others	(316)	(275)
Payments from plans	(79,851)	(73,700)
Ending balance	950,316	1,005,986

(f) Movements in the fair value of plan assets for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022	2021
Beginning balance	1,050,703	878,700
Transfer out	(860)	(233)
Increase in assets due to business combination	-	45,275
Interest income	29,704	21,716
Remeasurements:		
Return on plan assets	(8,775)	(7,306)
Contributions:		
Employers	349,900	184,725
Payments from plans	(73,372)	(70,079)
Administrative costs	(1,577)	(2,095)
Ending balance	1,345,723	1,050,703

(h) The significant actuarial assumptions as at December 31, 2022 and 2021, are as follows:

	2022	2021
Discount rate	5.3%	2.9%
Salary growth rate	6.0%	5.0%

(i) The sensitivity analysis for changes in key actuarial assumptions as at December 31, 2022, is as follows:

(in millions of Korean won)	Increase by 0.5%	Decrease by 0.5%
Discount rate: Increase (decrease) in defined benefit		
obligations	(91,494)	108,562
Salary growth rate:		
Increase (decrease) in defined benefit		
obligations	113,449	(96,703)

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

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

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

(j) Plan assets as at December 31, 2022 and 2021, consist of:

(in millions of Korean won)	202	2	202	<u>1</u>
	Amount	Composition	Amount	Composition
Insurance contracts with	4 0 4 5 700	4000/	4 050 700	4000/
guaranteed yield	1,345,723	100%	1,050,703	100%

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

(k) As at December 31, 2022, the weighted average duration of defined benefit obligation is 11.37 years.

The Company reviews the funding level on an annual basis and has a policy of eliminating deficit from the fund. Expected contributions to post-employment benefit plans for the year ending December 31, 2023 are ₩ 55,740 million.

#### 17. Other Current and Non-current Liabilities

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

(in millions of Korean won)	2022	2021
Current		
Advances from customers	32,590	49,959
Withholding	80,779	68,844
Unearned revenues	21,144	34,089
Accrued expenses	320,328	421,540
Total	454,841	574,432
Non-current		
Long-term accrued expenses	41,606	46,857
Long-term unearned revenues	8,975	11,077
Total	50,581	57,934

#### 18. Commitments and Contingencies

- (a) The company is jointly liable for liabilities of LG Energy Solution, Ltd. as at December 1, 2020, a newly established company through the split-off from the Parent Company.
- (b) As at December 31, 2022, the Company has been guaranteed from the Seoul Guarantee Insurance Company for the execution of contracts and others.
- (c) As at December 31, 2022, the Company has bank overdraft agreements with several banks for up to ₩ 20,400 million, and has entered into contracts with several financial institutions, and for letters of credit for up to ₩ 15,000 million and US\$ 278 million, foreign currency purchase agreement for up to US\$ 569 million, and for the guaranteed payments in foreign currency for up to US\$ 305 million. The Company also has comprehensive credit line of credit agreements with several financial institutions for up to ₩ 20,000 million (including bank overdraft of ₩ 5,000 million), US\$ 300 million (relating to trade finance and import/export).
- (d) As at December 31, 2022, the Company has B2B purchase arrangements with several financial institutions amounting to ₩ 235,000 million, as well as enterprise general fund arrangement with limit of ₩ 800,000 million and US\$ 725 million.
- (e) As at December 31, 2022, the Company has reverse factoring agreements, and there is no utilized amount.
- (f) As at December 31, 2022, in relation to General Motors (GM) Bolt EV, the class action against General Motors (GM) Bolt EV including the Company is still pending. However, the ultimate outcome of the case cannot be determined at the reporting date.
- (g) In addition, as at December 31, 2022, the Company has been named as a plaintiff in 8 legal actions, involving ₩ 26,494 million in claims. The Company has been named as a defendant in 15 legal actions, with ₩ 48,670 million in claims. The ultimate outcome of these cases cannot be determined at the reporting date.
- (h) The Company has entered into manufacture and production technical contracts with ExxonMobil and others.
- (i) The Company has entered into a license agreement with LG Corp. to use trademarks on the products that the Company manufactures and sells, and on the services the Company provides in relation to its business.

- (j) As at December 31, 2022, the Company has contracts of US\$ 65 million in guarantees with financial institutions in regard to payment and other.
- (k) As at December 31, 2022, the Company has guaranteed the repayment of various obligations of its subsidiaries. Details of guarantees provided as at December 31, 2022 and 2021, are as follows:

(in millions of Korean won					Outstanding loan		
and MYR)			_	Amount of g	uarantee	amoı	unt
Guarantee beneficiary	Financial institution	Guarantee period	Currency	2022	2021	2022	2021
FarmHannong Co.,Ltd.	Creditors	2017.2.16 ~ 2022.2.16	KRW	-	100,000	_	100,000
FarmHannong Co.,Ltd. LG PETRONAS Chemicals Malaysia	Creditors	2018.3.2 ~ 2023.3.2	KRW	40,000	40,000	40,000	40,000
Sdn. Bhd	RHB	2022.1.11 ~ 2023.4.30 <sup>1</sup>	MYR	230	-	181	-

<sup>&</sup>lt;sup>1</sup>The debt guarantee period is until the completion of construction, and the expected completion of construction as at December 31, 2022 is April 2023.

In addition, the Company provides Letters of Comfort (LOC) in relation to certain borrowings of subsidiaries.

Further, as at December 31, 2022, the Company provided no financial guarantee to its associates in relation to their borrowings.

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

(in millions of Korean won)	2022	2021
Property, plant and equipment	1,505,115	657.292

(m) As at December 31, 2022, the Company investment agreements, are as follows:

(in millions of Korean won and USD)	Currency	Committed investments	Cumulative investments	Remaining
KBE Fund	KRW	75,000	26,387	48,613
Gross Acceleration Fund	KRW	5,000	4,750	250
LGC Fund	USD	105	62	43
BNZ(Beyond Net Zero) Fund	USD	75	23	52

(n) The 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. during the year ended December 31, 2022. The shares were recognized as investment in associates as it was determined that there was a joint control under the agreement. The details on agreements entered into upon the acquisition of shares are as follows:

Category	Details
Agreement to purchase additional shares	After 30 months from the acquisition date of the 50% shares, purchasing the 20% shares through the agreed pricing method
Restrictions on share transfer	<ul> <li>During the lock-up period<sup>1</sup>, share transfer is prohibited without prior written consent of the other shareholder.</li> <li>When sold to a third party, the Company holds a drag-along right and Toray Industries, Inc. holds a tag-along right.</li> </ul>
Default	In case the 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 <sup>1</sup> ends, the other shareholder has a put option to sell the remaining 30% of the shares to the Company.
Deadlock	In the event of a dead lock agreed by both parties,  1) the 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 Company to purchase shares of the counterparty.

<sup>&</sup>lt;sup>1</sup> Lock-up period: restriction period of share transfer for 5 years from the time the Company acquires 50% of the shares.

### 19. Share Capital

(a) Changes in share capital and share premium for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won and in shares)	Ordinary s	hares	Preferred s	shares	
	Number of shares	Share capital	Number of shares	Share capital	Share premium
January 1, 2021	70,592,343	352,962	7,688,800	38,444	2,014,454
December 31, 2021	70,592,343	352,962	7,688,800	38,444	2,014,454
December 31, 2022	70,592,343	352,962	7,688,800	38,444	2,014,454

(b) Changes in treasury shares for the years ended December 31, 2022 and 2021, are as follows:

	Number of	f shares		Gain on	
(in millions of Korean won and in shares)	Ordinary shares	Preferred shares	Carrying amount	disposal of treasury shares	
January 1, 2021 Decrease in treasury shares due to exercise of	464,842	16,368	35,699	431,719	
exchange rights	(91,228)	-	(14,302)	28,344	
Disposal of treasury shares <sup>1</sup>	(6,085)	(10,327)	(3,386)	3,744	
December 31, 2021	367,529	6,041	18,011	463,807	
Disposal of treasury shares <sup>2</sup>	(367,529)		(17,741)	192,119	
December 31, 2022		6,041	270	655,926	

<sup>&</sup>lt;sup>1</sup> After the exchange of exchangeable bonds, all of the remaining treasury shares purchased in early 2017 due to the exercise of share purchase rights by the dissenting shareholders who objected to the merger with LG Life Sciences, Ltd. have been disposed of.

Capital surplus as at December 31, 2022, and 2021, consist of:

(in millions of Korean won)	2022	2021
Revaluation reserve	206,769	206,769
Share premium	2,014,454	2,014,454
Gain on disposal of treasury shares	655,926	463,807
Other capital surplus	48,300	48,301
Total	2,925,449	2,733,331

<sup>&</sup>lt;sup>2</sup> The Company disposed of all of treasury shares of the Company (367,529 shares), on November 23, 2022, as the Board of Directors' meeting decided to exchange treasury shares of Korea Zinc Company, Ltd with the treasury shares of the Company

### 20. Retained Earnings

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

(in millions of Korean won)	2022	2021
Legal reserve <sup>1</sup>	195,703	195,703
Discretionary reserve <sup>2</sup>	14,527,280	12,916,975
Retained earnings before appropriation	3,104,339	2,545,580
Total	17,827,322	15,658,258

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

### 21. Other Components of Equity

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

(in millions of Korean won)	2022	2021
Treasury shares (Note 19)	(270)	(18,011)

<sup>&</sup>lt;sup>2</sup> The Company 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.

### 22. Selling and Administrative Expenses

Selling and administrative expenses for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022	2021
Wages and salaries	619,838	574,511
Post-employment benefits (Note 16)	46,054	43,665
Employee benefits	110,896	92,020
Travel expense	23,521	11,289
Water & utilities	45,861	37,157
Packaging expenses	3,653	5,613
Rental expenses	95,905	88,611
Commission expenses	680,393	632,439
Depreciation	130,157	121,966
Advertising expense	23,698	21,401
Freight expenses	1,157,392	652,497
Training expense	24,555	15,810
Amortization (Note 12)	145,288	119,697
Sample expense	10,782	6,585
Development costs	234,523	137,512
Others	126,101	131,511
Total	3,478,617	2,692,284

### 23. Breakdown of Expenses by Nature

Cost of sales, and selling and administrative expenses by nature for the years ended December 31, 2022 and 2021, consist of:

(in millions of Korean won)	2022	2021
Changes in inventories of merchandise, finished goods, semi-finished goods and		
work in process	(304,340)	(805,224)
Raw materials and consumables used	14,394,816	11,379,018
Purchase of merchandise	361,600	370,544
Employee benefit expenses (Note 24)	1,910,785	1,702,633
Advertising expenses	24,822	22,436
Freight expenses	1,184,209	676,795
Commission expenses	920,028	845,423
Depreciation and amortization	1,370,658	1,234,605
Rentals and fees	30,632	28,899
Other expenses	2,440,341	1,996,755
Total	22,333,551	17,451,884

### 24. Employee Benefit Expenses

Details of employee benefit expenses for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022	2021
Salaries	1,586,934	1,463,583
Post-employment benefits – Defined benefit plan (Note 16)	125,202	114,982
Post-employment benefits – Defined contribution plan (Note 16)	8.756	7.730
Others	189,893	116,338
Total	1,910,785	1,702,633

### 25. Finance Income and Costs

Details of finance income and costs for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022	2021
Finance income		
Interest income <sup>1</sup>	71,104	34,619
Dividend income	627,579	356,433
Exchange differences	339,153	171,629
Gain on derivative instruments	67,505	72,975
Gain on financial assets	12,612	27,184
Total	1,117,953	662,840
Finance costs		
Interest expense <sup>2</sup>	144,637	113,617
Exchange differences	469,800	204,604
Loss on derivative instruments	28,148	8,079
Loss on financial assets	3,057	113
Total	645,642	326,413

<sup>&</sup>lt;sup>1</sup> Details of interest income for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022	2021
Deposits held by financial institutions	29,247	6,292
Other loans and receivables	41,857	28,327
Total	71,104	34,619

<sup>&</sup>lt;sup>2</sup> Details of interest expense for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022	2021	
Interest on financial institutions	31,094	5.807	
Interest on finance lease liabilities	2,438	2,695	
Interest on debentures	121,405	107,857	
Other interest expenses	1,060	25,416	
Capitalized interest for qualifying assets	(11,360)	(28,158)	
Total	144,637	113,617	

#### 26. Other Non-operating Income

Details of other non-operating income for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022	2021
Exchange differences	657,632	254,985
Gain on disposal of property, plant and equipment	36,517	27,270
Gain on disposal of intangible assets	8	5,266
Gain on disposal of investment in associates and joint ventures (Note 10)	-	3,820
Gain on disposal of investment in subsidiary	0.000.440	
(Note 10)	2,230,413	-
Others	135,193	112,966
Total	3,059,763	404,307

#### 27. Other Non-operating Expenses

Details of other non-operating expenses for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022	2021
Exchange differences	521,483	124,703
Loss on disposal of property, plant and equipment	21,214	20,354
Loss on disposal of intangible assets	22,780	2,255
Impairment loss on property, plant and equipment (Note 11)	28,346	25,158
Impairment loss on intangible assets (Note 12)	40	298,849
Impairment loss on investment properties (Note 36)	17,332	-
Impairment loss on investments in subsidiaries	55,314	-
Loss on disasters	4,434	10,607
Donations	20,023	14,074
Others	10,049	19,344
Total	701,015	515,344

## 28. Tax Expense and Deferred Tax

(a) Income tax expense for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022	2021
Current tax:		
Current tax on profit for the year	824,642	871,673
Adjustments in respect of prior years	(21,121)	12,495
Deferred tax:	( , ,	,
Deferred tax movement in temporary		
differences	133,423	(6,239)
Deferred tax – change in the Korean tax rate	(27,752)	-
Deferred tax - credit carryforwards	14,975	(28,170)
	924,167	849,759
Deferred tax charged directly to equity	8,649	(13,686)
Current tax charged directly to equity	(47,132)	(13,304)
	, ,	,
Effect of discontinued operations	1,924	(22,802)
Income tax expense	887,608	799,967

(b) The aggregate current and deferred tax charged directly to equity (other comprehensive income) for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022	2021
Current tax		
Gain on disposal of financial assets at fair value through other comprehensive income	1	138
Loss on disposal of treasury shares	(47,133)	(13,442)
<b>Deferred tax</b> Remeasurements of net defined benefits liabilities	(24,324)	(11,878)
Gain (loss) on valuation of financial assets at fair value through other comprehensive income	32,973	(1,807)
Total	(38,483)	(26,989)

(c) Movements in deferred tax assets (liabilities) for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022			
		Increase	(decrease)	
	Beginning	Profit (loss)	Other comprehensive	Ending
	balance	for the year	loss	balance
Defined benefit liabilities	261,124	2,841	(26,078)	237,887
Plan assets	(288,943)	(47,508)	1,754	(334,697)
Property, plant and equipment	29,753	(19,870)	-	9,883
Investments in subsidiaries,				
associates and joint ventures	48,876	(60,732)	-	(11,856)
Accrued income	(1)	(16,180)	-	(16,181)
Others	(611,193)	27,129	32,973	(551,091)
	(560,384)	(114,320)	8,649	(666,055)
Tax credit carryforwards	34,977	(14,975)	-	20,002
Deferred income tax assets				
(Liabilities)	(525,407)	(129,295)	8,649	(646,053)
		·	·	·

(in millions of Korean won)	2021			
		_		
	Beginning balance	Profit (loss) for the year	Other comprehensive loss	Ending balance
Defined benefit liabilities	257,160	1,955	2,009	261,124
Plan assets	(242,796)	(32,259)	(13,888)	(288,943)
Provision for impairment on receivables	235	(235)	-	_
Property, plant and equipment Investments in subsidiaries,	70,275	(40,522)	-	29,753
associates and joint ventures	(1,046)	49,922	-	48,876
Accrued income	(3)	2	-	(1)
Others	(650,448)	41,062	(1,807)	(611,193)
	(566,623)	19,925	(13,686)	(560,384)
Tax credit carryforwards	6,807	28,170	<del>-</del>	34,977
Deferred income tax assets (Liabilities)	(559,816)	48,095	(13,686)	(525,407)

(d) The reconciliations between income tax expense and accounting profit for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022	2021
Profit before income tax expense <sup>1</sup>	3,892,652	3,337,032
Tax at domestic tax rates applicable	1,060,641	907,322
Tax effects of:		
Income not subject to tax	(1,169)	(1,797)
Expenses not deductible for tax purposes	43,835	35,978
Unrecognized deferred income tax for temporary		
differences in the current year	9,366	27,392
Tax credit	(242,405)	(159,801)
Re-measurement of deferred tax – change in the		
Korean tax rate	(27,752)	-
Others	43,168	13,675
Effect of discontinued operations	1,924	(22,802)
Income tax expense	887,608	799,967
Effective tax rate (income tax expense/ profit before		
income tax)	22.80%	23.97%

<sup>&</sup>lt;sup>1</sup> The amount includes profit before income tax from discontinued operations

- (e) Realization of deferred tax assets is dependent on the Company's ability to generate future taxable profits in excess of the profits arising from the reversal of taxable temporary differences, and economic and industry outlooks. Management periodically reviews on these factors.
- (f) Details of deductible (taxable) temporary differences unrecognized as deferred tax assets (liabilities) as at December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022	2021	
Investments in subsidiaries, associates and joint ventures	(857,036)	(877,575)	Permanently re-invested income not distributed as dividend
	4,312,841	4,318,866	No possibility of disposal
Land	373	373	
Total	3,456,178	3,441,664	

#### 29. Earnings per Share

Basic earnings per share is calculated by dividing the profit attributable to ordinary shares by the weighted average number of shares in issue excluding shares purchased by the Company and held as treasury shares. As at the reporting date, the Company has no potential ordinary shares. Preferred shares have a right to participate in the profits of the Company. These participation rights have been considered in presenting the EPS for ordinary shares and preferred shares.

(a) Basic earnings per share for profit from continuing operations and earnings per share for the years ended December 31, 2022 and 2021, are computed as follows:

#### Basic earnings per ordinary share from continuing operations

(in millions of Korean won and in number of shares)	2022	2021
Profit from continuing operations attributable to ordinary shares <sup>1</sup> Weighted average number of ordinary shares	2,716,125	2,203,389
outstanding <sup>2</sup>	70,262,070	70,218,611
Basic earnings per ordinary share from continuing operations (in won)	38,657	31,379
Basic earnings per ordinary share		
(in millions of Korean won and in number of shares)	2022	2021
Profit attributable to ordinary shares <sup>1</sup> Weighted average number of ordinary shares	2,710,236	2,266,202
outstanding <sup>2</sup>	70,262,070	70,218,611
Basic earnings per ordinary shares (in won)	38,573	32,274
Basic earnings per preferred share from continu	uing operations	
(in millions of Korean won and in number of shares)	2022	2021
Profit from continuing operations attributable to preferred share <sup>1</sup>	297,377	241,195
Weighted average number of preferred shares outstanding <sup>2</sup>	7,682,759	7,674,271
Basic earnings per preferred share from continuing operations (in won)	38,707	31,429

Basic earnings per preferred share		
(in millions of Korean won and in number of shares)	2022	2021
Profit attributable to preferred shares <sup>1</sup> Weighted average number of preferred shares	296,733	248,061
outstanding <sup>2</sup>	7,682,759	7,674,271
Basic earnings per preferred shares (in won)	38,623	32,324
<sup>1</sup> Profit attributable to ordinary and preferred shares ar	e as follows:	
(in millions of Korean won)	2022	2021
Profit from continuing operations	3,013,502	2,444,584
Ordinary shares dividends (A)	702,621	842,623
Preferred shares dividends (B)	77,211	92,475
Undistributed earnings from continuing		
operation for the year	2,233,670	1,509,486
Undistributed earnings available for ordinary shares (C)	2,013,504	1,360,766
Undistributed earnings available for preferred	2,010,004	1,000,700
shares (D)	220,166	148,720
Profit from continuing operations for the year		
attributable to ordinary shares (A+C)	2,716,125	2,203,389
Profit from continuing operations for the year	207 277	241 105
attributable to preferred shares (B+D)	297,377	241,195
(in millions of Korean won)	2022	2021
Profit	3,006,969	2,514,263
Ordinary shares dividends (A)	702,621	842,622
Preferred shares dividends (B)	77,211	92,476
Undistributed earnings (losses) for the year Undistributed earnings available for ordinary	2,227,137	1,579,165
shares (C)	2,007,615	1,423,580
Undistributed earnings available for preferred		
shares (D)	219,522	155,585
Profit for the year (A+C)	2,710,236	2,266,202
Profit for the year (B+D)	296,733	248,061

<sup>&</sup>lt;sup>2</sup> Weighted average numbers of shares are calculated as follows:

		2022		
Ordinary shares outstanding	Period	Number of shares	Number of days	Number of shares x days
Beginning balance	2022. 1. 1 - 2022. 12. 31	70,224,814	365	25,632,057,110
Disposal of treasury shares	2022. 11. 28 - 2022. 12. 31	367,529	37	13,598,573
Total				25,645,655,683

Weighted average number of ordinary shares outstanding: 25,645,655,683 / 365 = 70,262,070 shares

		2022		
Preferred shares outstanding	Period	Number of shares	Number of days	Number of shares x days
Beginning balance	2022. 1. 1 - 2022. 12. 31	7,682,759	365	2,804,207,035
Total				2,804,207,035

Weighted average number of preferred shares outstanding: 2,804,207,035 / 365 = 7,682,759 shares

	2021		
Period	Number of shares	Number of days	Number of shares x days
2021. 1. 1 - 2021. 12. 31	70,163,895	365	25,609,821,675
2021. 10. 28 - 2021. 12. 31	6,085	65	395,525
2021. 1. 9 - 2021. 12. 31	54,834	357	19,575,738
			25,629,792,938
	2021. 1. 1 - 2021. 12. 31 2021. 10. 28 - 2021. 12. 31	Period Number of shares  2021. 1. 1 - 2021. 12. 31  2021. 10. 28 - 2021. 12. 31  6,085	Period Number of shares days  2021. 1. 1 - 2021. 12. 31 70,163,895 365 2021. 10. 28 - 2021. 12. 31 6,085 65

Weighted average number of ordinary shares outstanding: 25,628,792,938 / 365 = 70,218,611 shares

		2021		
Preferred shares outstanding	Period	Number of shares	Number of days	Number of shares x days
Beginning balance	2021. 1. 1 - 2021. 12. 31	7,672,432	365	2,800,437,680
Disposal of treasury shares	2021. 10. 28 - 2021. 12. 31	10,327	65	671,255
Total				2,801,108,935

Weighted average number of preferred shares outstanding: 2,801,108,935 / 365 = 7,674,271 shares

For the year ended December 31, 2022, there were no dilutive potential outstanding ordinary shares at the reporting date. Accordingly, diluted earnings per share for profit attributable to owners of the Company is identical to basic earnings per share. In addition, for year ended December 31, 2022, the Company did not calculate diluted earnings per share due to antidilution.

Basic and diluted earnings (losses) per share attributable to ordinary and preferred shares from discounted operations for the years ended December 31, 2022 and 2021, are as follows:

(in Korean won)	2022	2021
Basic (losses) per ordinary share from		
discounted operations	(84)	895
Basic (losses) per preferred share from		
discounted operations	(84)	895
Diluted (losses) per ordinary share from		
discounted operations	(84)	895
Diluted (losses) per preferred share from		
discounted operations	(84)	895

#### 30. Dividends

(a) Details of dividends for the years ended December 31, 2022 and 2021, are as follows:

	2022	2021
Number of shares entitled to dividends: shares issued and outstanding (par value per share: ₩ 5,000)		
Ordinary shares	70,592,343	70,224,814
Preferred shares	7,682,759	7,682,759
Dividend per share (in Korean won, %)		
Ordinary shares: cash	10,000(200%)	12,000(240%)
Preferred shares: cash	10,050(201%)	12,050(241%)
Cash dividends to distribute (in millions of Korean won)		
Ordinary shares	705,923	842,698
Preferred shares	77,212	92,577
	783,135	935,275
(b) Dividend payout ratios for the years ended December 3	31, 2022 and 2021,	are as follows:

(in millions of Korean won)	2022	2021
Dividends (A)	783,135	935,275
Profit for the year (B)	3,006,969	2,514,263
Dividend payout ratio (A/B)	26.04%	37.19%

(c) Dividend yield ratios for the years ended December 31, 2022 and 2021, are as follows:

	202	2	2021		
(in Korean won)	Ordinary shares	Preferred Shares	Ordinary shares	Preferred Shares	
Dividend per share (A)	10,000	10,050	12,000	12,050	
Market value at the end of year (B) <sup>1</sup>	616,800	294,700	628,500	298,875	
Dividend yield ratio (A/B)	1.62%	3.41%	1.91%	4.03%	

<sup>&</sup>lt;sup>1</sup> Average price in the stock market for one week preceding two business days before shareholder list closing date for the general shareholders' meeting.

#### 31. Related Party Transactions

- (a) As at December 31, 2022 and 2021, LG Corp. is an entity exercising a significant influence over the Company as it owns 33.34% of the Company's ordinary shares.
- (b) Details of other related parties that have sales and other transactions with the Company or have receivables and payables balances, other than consolidated subsidiaries, associates and joint ventures (Note 10), as at December 31, 2022 and 2021, are as follows:

Related party	Related party's subsidiary (Domestic)	Related party's subsidiary (Overseas)	Details
D&O Corp. <sup>1</sup>	D&O CM Corp.	D&O CM NANJING and others	Subsidiary of LG Corp.
LG CNS Co., Ltd.	BIZTECH I CO., LTD. and others	LG CNS America Inc. and others	Subsidiary of LG Corp.
LG Management Development Institute	-	-	Subsidiary of LG Corp.
LG Sports Ltd.	-	-	Subsidiary of LG Corp.
LG Display Co., Ltd.	-	LG Display (China) Co., Ltd. and others	LG Enterprise group <sup>1</sup>
LG Electronics Inc.	LG Innotek Co., Ltd. and others	Inspur LG Digital Mobile Communications Co., Ltd. and others	LG Enterprise group <sup>2,3</sup>
LG Household & Health Care Ltd.	Coca-Cola Beverage Co. and others	-	LG Enterprise group <sup>2,3</sup>
LG Uplus Corp. G II R Inc.	LG HelloVision Corp. HS AD Inc.	- -	LG Enterprise group <sup>2,3</sup> LG Enterprise group <sup>2,3</sup>
Shanjin Optoelectronics Suzhou)Co.,Ltd.	-	Shanjin Optoelectronics (Nanjing) Co.,LTD. and others	Others <sup>4</sup>

<sup>&</sup>lt;sup>1</sup> During the year ended December 31, 2022, the entity's name of S&I Corp. and its subsidiaries has been changed.

<sup>&</sup>lt;sup>2</sup> Although these entities are not the related parties of the Company in accordance with Korean IFRS 1024, the entities belong to a large enterprise group in accordance with the Monopoly Regulation and Fair Trade Act.

<sup>&</sup>lt;sup>3</sup> During the year ended December 31, 2022, LX Holdings Corp. and its affiliates were excluded from the LG Group due to the spin-off of LG Corp.

<sup>&</sup>lt;sup>4</sup> The entities are included in the scope of related parties in accordance with Korean IFRS 1024.

(c) Sales and purchases with related parties for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won) 2022 Purchase and others Acquisition of property, plant Purchase of and equipment Acquisition Sales and raw materials and intangible of right-of-Interest others /merchandises assets use assets expense Others Entity with a significant influence over the Company LG Corp. 9 12,230 163 58,022 **Subsidiaries** LG Energy Solution, Ltd.<sup>1</sup> 69,718 16 16 205 5,472 Ningbo LG Yongxing Chemical Co.,Ltd. 436,569 7,983 LG Chem America, Inc. 7,117 1,260,189 LG Energy Solution (Nanjing) Co., Ltd. 97,733 LG Chemical (Guangzhou) **Engineering Plastics** Co.,Ltd. 43,286 3,366 LG Chem (Taiwan), Ltd. 99,474 1,901 Tianjin LG Bohai Chemical Co.,Ltd. 244,845 LG Chem (China) 104,547 Investment Co.,Ltd. 56.254 LG Chem (Tianjin) **Engineering Plastics** Co.,Ltd. 13,143 LG Chem Europe GmbH 984,213 60,623 LG Chem Poland 81,020 79 Sp. z o. o. LG NanoH2O, LLC. 58,821 15,823 LG Energy Solution Michigan Inc. 212,629 LG Energy Solution Battery (Nanjing) Co., Ltd. 75,854 LG Energy Solution Wroclaw sp. z o.o. 1,446,700 LG Chem (Guangzhou) 577 I&E Materials Co., Ltd. 110,178 LG Energy Solution Technology (Nanjing) Co., Ltd. 118,797 LEYOU NEW ENERGY MATERIALS(WUXI) CO., LTD. 169,112 23,687

LG Chem, Ltd. Notes to the Separate Financial Statements December 31, 2022 and 2021

Ultium Cells LLC.	300,223	-	-	-	-	-
Others	255,677	2,751	19	-	_	44,642
Associates and joint						
ventures						
SEETEC Co., Ltd.	138,706	251,919	-	38	395	82,900
TECWIN Co., Ltd. HUAJIN NEW ENERGY MATERIALS(QUZHOU)	-	465	1,940	-	-	94
CO., LTD	9,453	328,975	-	-	-	76
Others	7	11,481	-	-	-	184
Other related parties  D&O Corp. and its  subsidiaries and						
associates LG CNS Co., Ltd. and its	21	2,948	335,175	-	-	73,974
subsidiaries	93	3,578	265,408	1,221	16	97,199
Others	5	-	-	-	-	30,280
Others						
LG Display Co., Ltd. and						
its subsidiaries	404,396	70	-	-	-	1
LG Electronics Inc. and its subsidiaries and joint						
ventures	372,850	1,453	13,177	-	-	17,894
LX International Corp. and its subsidiaries <sup>2</sup>	43,467	198,425	236	-	-	633,589
LX Hausys, Ltd. and its subsidiaries <sup>2</sup>	147,045	4,552	1,048	_		3
LX MMA Corporation <sup>2,3</sup>	111,043	107,866	1,040	_	_	2,582
Shanjin Optoelectronics (Suzhou) Co.,Ltd. and its	111,043		-	-	-	2,362
subsidiaries	390,910	1,660	-	-	-	-
Others	10,603	31,572	196	48	50	4,513
Total	7,811,336	983,423	617,199	13,553	829	1,193,143

(in millions of Korean won)			2021			
			Purchas	se 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 Company						
LG Corp. Subsidiaries	12	-	-	11,866	139	53,627
LG Energy Solution, Ltd. Ningbo LG Yongxing	104,238	1,188	261	-	382	6,638
Chemical Co.,Ltd.	303,743	6,899	-	-	-	-
LG Chem America, Inc. LG Energy Solution	1,046,723	-	-	-	-	2,938
(Nanjing) Co., Ltd. LG Chemical (Guangzhou) Engineering Plastics	54,237	31,264	-	-	-	-
Co.,Ltd.	67,566	3,991	-	-	-	-
LG Chem (Taiwan), Ltd. LG Chem Display Materials (Beijing)	47,346	-	-	-	-	2,179
Co.,Ltd. <sup>4</sup> Tianjin LG Bohai Chemical	1,910	-	-	-	-	-
Co.,Ltd. LG Chem (China)	207,529	757	-	-	-	-
Investment Co.,Ltd. LG Chem (Tianjin) Engineering Plastics	854	-	-	-	-	49,610
Co.,Ltd.	21,098	12	-	-	-	-
LG Chem Europe GmbH LG Chem Poland	710,563	-	-	-	-	13,947
Sp. z o. o.	37,938	166	-	-	-	-
LG NanoH2O, LLC. LG Energy Solution	43,222	-	-	-	-	13,117
Michigan Inc. LG Energy Solution Battery (Nanjing) Co.,	71,713	-	-	-	-	-
Ltd. LG Energy Solution	15,786	-	-	-	-	-
Wroclaw sp. z o.o. LG Chem (Guangzhou)	769,245	-	-	-	-	-
I&E Materials Co., Ltd. LG Energy Solution Technology (Nanjing)	187,037	8,408	-	-	-	-
Co., Ltd.  LEYOU NEW ENERGY  MATERIALS(WUXI)	24,789	-	-	-	-	-
CO., LTD.	23,508	16,949	-	-	-	-

LG Chem, Ltd. Notes to the Separate Financial Statements December 31, 2022 and 2021

Ultium Cells LLC.	662	-	-	-	-	-
Others	220,880	2,717	7	-	-	24,487
Associates and joint						
ventures						
SEETEC Co., Ltd.	76,149	180,001	654	33	413	76,313
TECWIN Co., Ltd.	10	182	1,069	-	-	81
HUAJIN NEW ENERGY						
MATERIALS(QUZHOU)						
CO., LTD	804	161,775	-	-	-	33
Others	902	10,949	-	-	-	2,697
Other related parties						
D&O Corp. and its						
subsidiaries	2	4,965	227,658	-	-	69,637
LG CNS Co., Ltd. and its						
subsidiaries	170	4,487	296,527	1,192	14	84,172
Others	156	-	-	-	-	18,701
Others						
LG Display Co., Ltd. and						
its subsidiaries	416,125	151	-	-	-	21
LG Electronics Inc. and its						
subsidiaries and joint						
venture <sup>5</sup>	427,507	923	12,047	-	-	467,614
LX International Corp. and						
its subsidiaries	95,840	289,186	876	-	-	677,545
LX Hausys, Ltd. and its	077.500	5 400	04.054			1.051
subsidiaries	277,568	5,166	31,951	-	-	1,254
LX MMA Corporation <sup>3</sup>	159,641	186,970	-	-	-	3,696
Shanjin Optoelectronics						
(Suzhou) Co.,Ltd. and its	440.500	4.055	44.004			
subsidiaries <sup>6</sup>	448,562	4,055	11,064	-	-	-
Others	10,905	31,655	1,792	2,231	44	4,621
Total	5,874,940	952,816	583,906	15,322	992	1,572,928

<sup>&</sup>lt;sup>1</sup> Net sales and purchases amount after offsetting for Separators with LG Energy Solution, Ltd.

<sup>&</sup>lt;sup>2</sup> The entity has been excluded from the related parties due to the spin-off from LG Corp. during the year perioded December 31, 2022. Transactions with this entity until the spin-off from LG Corp. have been included in the above information.

<sup>&</sup>lt;sup>3</sup> Net sales and purchase amounts after offsetting for Raffinate transactions with LX MMA.

<sup>&</sup>lt;sup>4</sup> This entity has been excluded from the related parties since the Company sold its shares in 2021. Transactions with this entity until the sale of shares have been included in the above information.

<sup>&</sup>lt;sup>5</sup> During FY2021, the consideration transferred for the acquisition of CEM business has been included in other purchase from LG Electronics Inc. and its subsidiaries(Note 37).

<sup>&</sup>lt;sup>6</sup> The amount of sales and others does not include the amount of transaction (USD 120 million) related to the transfer of the LCD polarizer business.

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

(in millions of Korean won) 2022 Receivables Trade receivables Loan Other **Total** and others receivables receivables Entity with a significant influence over the Company LG Corp. 10,290 10,290 **Subsidiaries** 43,394 1,497 44,891 LG Energy Solution, Ltd. Ningbo LG Yongxing Chemical Co.,Ltd. 3,887 75,743 79,630 276,810 276,810 LG Chem America, Inc. LG Energy Solution (Nanjing) Co., Ltd. 24,880 24,880 LG Chemical (Guangzhou) Engineering Plastics 5,356 Co.,Ltd. 1,324 6,680 LG Chem (Taiwan), Ltd. 6,856 3 6,859 19,874 491 20,365 Tianjin LG Bohai Chemical Co.,Ltd. 996 LG Chem (China) Investment Co.,Ltd. 996 LG Chem (Tianjin) Engineering Plastics 648 2,014 2,662 257,921 4,563 262,484 LG Chem Europe Gmbh 23,749 9,218 32,967 LG Chem Poland Sp. z o. o. LG NanoH2O, Inc. 16,409 16,409 LG Energy Solution Michigan Inc. 12,675 12,675 16,088 LG Energy Solution Battery (Nanjing) Co., Ltd. 16,088 359,646 359,646 LG Energy Solution Wroclaw sp. z o.o. 25,244 146 25,390 LG Chem (Guangzhou) I&E Materials Co., Ltd. LG Energy Solution Technology (Nanjing) Co., Ltd. 51,754 51,754 Others 121,921 18,434 67,359 207,714 Associates and joint ventures SEETEC Co., Ltd. 15,002 1,221 16,223 TECWIN Co., Ltd. HUAJIN NEW ENERGY MATERIALS(QUZHOU) CO., LTD. 9,453 9,453 Others Other related parties D&O Corp. and its subsidiaries and associates LG CNS Co., Ltd. and its subsidiaries1 102 102 Others 5 5 Others 62,803 419 63,222 LG Display Co., Ltd. and its subsidiaries LG Electronics Inc. and its subsidiaries and joint 103,061 1,062 104,123 Shanjin Optoelectronics (Suzhou) Co.,Ltd. and its 47,225 subsidiaries 1,456 48,681 Others 2,361 2,403 42 18,434 Total 1,501,662 183,306 1,703,402

(in millions of Korean won)	2022						
·			Payables				
·	Trade payables	Borrowings	Lease liabilities	Other payables	Total		
	,,	<b>g</b> .		p,			
Entity with a significant influence over the Company							
LG Corp.	-	-	12,232	11,621	23,853		
Subsidiaries							
LG Energy Solution, Ltd.	6,957	-	5,906	16,206	29,069		
Ningbo LG Yongxing Chemical Co.,Ltd.	300	-	-	-	300		
LG Chem America, Inc.	-	-	-	7,546	7,546		
LG Energy Solution (Nanjing) Co., Ltd.	-	-	-	-	-		
LG Chemical (Guangzhou) Engineering Plastics							
Co.,Ltd.	179	-	-	-	179		
LG Chem (Taiwan), Ltd.	-	-	-	656	656		
Tianjin LG Bohai Chemical Co.,Ltd.	-	-	-	-	-		
LG Chem (China) Investment Co.,Ltd.	-	-	-	5,921	5,921		
LG Chem (Tianjin) Engineering Plastics	-	-	-	-	-		
LG Chem Europe Gmbh	-	-	-	23,079	23,079		
LG Chem Poland Sp. z o. o.	79	-	-	88	167		
LG NanoH2O, Inc.	-	-	-	5,652	5,652		
LG Energy Solution Michigan Inc.	-	-	-	-	-		
LG Energy Solution Battery (Nanjing) Co., Ltd.	-	-	-	-	-		
LG Energy Solution Wroclaw sp. z o.o.	-	-	-	-	-		
LG Chem (Guangzhou) I&E Materials Co., Ltd.	301	-	-	89	390		
LG Energy Solution Technology (Nanjing) Co.,							
Ltd.	-	-	-	-	-		
Others	1,533	-	-	5,680	7,213		
Associates and joint ventures							
SEETEC Co., Ltd.	29,368	-	19,127	10,939	59,434		
TECWIN Co., Ltd.	-	-	-	274	274		
HUAJIN NEW ENERGY MATERIALS(QUZHOU)							
CO ., LTD.	34,300	-	-	-	34,300		
Others	1	-	_	47	48		
Other related parties							
D&O Corp. and its subsidiaries and associates	-	-	-	271,447	271,447		
LG CNS Co., Ltd. and its subsidiaries	-	_	1,221	153,196	154,417		
Others	-	_	_	605	605		
Others							
LG Display Co., Ltd. and its subsidiaries	29	_	_	_	29		
LG Electronics Inc. and its subsidiaries and joint							
venture	-	_	_	18,472	18,472		
Shanjin Optoelectronics (Suzhou) Co.,Ltd. and its				-, .	-, -		
subsidiaries	385	-	_	15,535	15,920		
Others	1,313	-	2,146	3,458	6,917		
Total	74,745	-	40,632	550,511	665,888		
-	,		,		,		

(in millions of Korean won)	2021					
	Receivables					
	Trade receivables and others	Loan receivables	Other receivables	Total		
Entity with a significant influence over the						
Company						
LG Corp.	-	-	9,941	9,941		
Subsidiaries						
LG Energy Solution, Ltd.	20,343	-	4,483	24,826		
Ningbo LG Yongxing Chemical Co.,Ltd.	4,072	-	1,969	6,041		
LG Chem America, Inc.	313,378	-	-	313,378		
LG Energy Solution (Nanjing) Co., Ltd.	8,331	-	-	8,331		
LG Chemical (Guangzhou) Engineering Plastics						
Co.,Ltd.	5,429	-	7,076	12,505		
LG Chem (Taiwan), Ltd.	14,055	-	40	14,095		
Tianjin LG Bohai Chemical Co.,Ltd.	32,964	-	612	33,576		
LG Chem (China) Investment Co.,Ltd.	685	-	-	685		
LG Chem (Tianjin) Engineering Plastics	2,299	-	2,096	4,395		
LG Chem Europe Gmbh	249,089	-	5,807	254,896		
LG Chem Poland Sp. z o. o.	19,351	-	3,893	23,244		
LG NanoH2O, Inc.	11,497	-	-	11,497		
LG Energy Solution Michigan Inc.	17,419	-	-	17,419		
LG Energy Solution Battery (Nanjing) Co., Ltd.	4,123	-	-	4,123		
LG Energy Solution Wroclaw sp. z o.o.	123,867	-	-	123,867		
LG Chem (Guangzhou) I&E Materials Co., Ltd.	53,948	_	165	54,113		
LG Energy Solution Technology (Nanjing) Co.,	,			•		
Ltd.	11,022	_	_	11,022		
Others	84,013	_	24,891	108,904		
Associates and joint ventures	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		,	,		
SEETEC Co., Ltd.	7,426	_	462	7,888		
TECWIN Co., Ltd.	-	_	-	-		
HUAJIN NEW ENERGY MATERIALS(QUZHOU)						
CO., LTD.	_	_	_	_		
Others	_	_	477	477		
Other related parties						
D&O Corp. and its subsidiaries <sup>1</sup>	_	_	5,395	5,395		
LG CNS Co., Ltd. and its subsidiaries	_	_	98	98		
Others	_	_	3,956	3,956		
Others			0,000	0,000		
LG Display Co., Ltd. and its subsidiaries	75,342	_	935	76,277		
LG Electronics Inc. and its subsidiaries and joint	10,042		000	10,211		
venture	150,573	_	1,295	151,868		
LX International Corp. and its subsidiaries	2,462	_	1,233	2,462		
·	58,934	-	- 55	58,989		
LX MMA Corporation	20,754	-	585			
LX MMA Corporation	20,734	-	505	21,339		
Shanjin Optoelectronics (Suzhou) Co.,Ltd. and its subsidiaries	55,779		1,948	57,727		
Others	23	-	1,772			
		<u>-</u>		1,795		
Total	1,347,178		77,951	1,425,129		

LG Chem, Ltd. Notes to the Separate Financial Statements December 31, 2022 and 2021

Page	(in millions of Korean won)	2021					
Payable   Paya				Payables			
March   Marc			_			Total	
Subsidiaries	Entity with a significant influence over the Company						
Lig Energy Solution, Ltd.	LG Corp.	-	-	11,866	12,703	24,569	
Ningbo LG Yongxing Chemical Co.,Ltd. 144 - 5 1 145 LG Chem America, Inc. 5 5 5.317 5.317 LG Energy Solution (Nalinjing) Co., Ltd. 6 896 5 6 1 896 LG Chemical (Guangzhou) Engineering Plastics Co., Ltd. 6 896 7 6 1 897 LG Chem (Talwan), Ltd. 6 6 6 7 6 1 897 LG Chem (Talwan), Ltd. 6 6 7 6 896 Tianjin LG Bohai Chemical Co.,Ltd. 6 7 7.416 7.416 LG Chem (China) Investment Co.,Ltd. 7 7.416 7.416 LG Chem (China) Investment Co.,Ltd. 7 7.416 7.416 LG Chem (Talmijn) Engineering Plastics 7 7.416 7.416 LG Chem Europe Gmbh 6 7 7.416 7.416 LG Chem Europe Gmbh 7 7 7.416 7.416 LG Chem Europe Gmbh 8 7 7 7.416 7.416 LG Chem Poland Sp. z o. 0 26.049 7 7 7 7 7 7 7 7 7 7 7 8 7 8 7 8 7 8 7	Subsidiaries						
LG Chem America, Inc.	LG Energy Solution, Ltd.	43,784	-	12,111	5,857	61,752	
LG Energy Solution (Nanjing) Co., Ltd.	Ningbo LG Yongxing Chemical Co.,Ltd.	144	-	-	1	145	
Co Chemical (Guangzhou) Engineering Plastics	LG Chem America, Inc.	-	-	-	5,317	5,317	
Co,Ltd.         896         -         -         1         897           LG Chem (Taiwan), Ltd.         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         <		-	-	-	-	-	
LG Chem (Taiwan), Ltd.							
Tianjin LG Bohai Chemical Co.,Ltd.         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -		896	-	-			
LG Chem (China) Investment Co.,Ltd.	LG Chem (Taiwan), Ltd.	-	-	-	369	369	
LG Chem (Tianjin) Engineering Plastics	Tianjin LG Bohai Chemical Co.,Ltd.	-	-	-	-	-	
LG Chem Europe Gmbh  LG Chem Poland Sp. z o. o.  26,049  LG NanoH2O, Inc.	LG Chem (China) Investment Co.,Ltd.	-	-	-	7,416	7,416	
LG Chem Poland Sp. z o. o. 26,049 5 5 26,054 LG NanoH2O, Inc 5,572 5,572 LG Energy Solution Michigan Inc 5 5,572 LG Energy Solution Battery (Nanjing) Co., Ltd	LG Chem (Tianjin) Engineering Plastics	-	-	-	1	1	
LG NanoH2O, Inc.	LG Chem Europe Gmbh	-	-	-	5,549	5,549	
LG Energy Solution Michigan Inc.         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         <	LG Chem Poland Sp. z o. o.	26,049	-	-	5	26,054	
LG Energy Solution Battery (Nanjing) Co., Ltd.   -   -   -   -   -   -   -	LG NanoH2O, Inc.	-	-	-	5,572	5,572	
LG Energy Solution Wroclaw sp. z o.o.         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -	LG Energy Solution Michigan Inc.	-	-	-	-	-	
LG Chem (Guangzhou) I&E Materials Co., Ltd.         342         -         -         151         493           LG Energy Solution Technology (Nanjing) Co., Ltd.         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -	LG Energy Solution Battery (Nanjing) Co., Ltd.	-	-	-	-	-	
LG Energy Solution Technology (Nanjing) Co., Ltd.	LG Energy Solution Wroclaw sp. z o.o.	-	-	-	-	-	
Others         1,876         -         -         6,227         8,103           Associates and joint ventures           SEETEC Co., Ltd.         17,164         -         20,442         10,310         47,916           TECWIN Co., Ltd.         -         -         -         -         21         21           HUAJIN NEW ENERGY MATERIALS (QUZHOU)         48,054         -         -         -         48,054           Others         -         -         -         -         410         410           Others           D&O Corp. and its subsidiaries 1         -         -         -         69,202         69,202           LG CNS Co., Ltd. and its subsidiaries 1         -         -         1,192         133,150         134,342           Others         -         -         1,192         133,150         134,342           Others         -         -         1,192         133,150         134,342           Others         -         -         -         2,891         2,940           LG Electronics Inc. and its subsidiaries 4         -         -         -         2,891         2,940           LX International Corp. and its subsidiaries	LG Chem (Guangzhou) I&E Materials Co., Ltd.	342	-	-	151	493	
Associates and joint ventures   SEETEC Co., Ltd.	LG Energy Solution Technology (Nanjing) Co., Ltd.	-	-	-	-	-	
SEETEC Co., Ltd.         17,164         - 20,442         10,310         47,916           TECWIN Co., Ltd.         21         21           HUAJIN NEW ENERGY MATERIALS(QUZHOU)         48,054         40         48,054           Others         410         410           Others         410         410           Other related parties         69,202         69,202           LG CNS Corp. and its subsidiaries 1         1,192         133,150         134,342           Others         224         224           Others         224         224           Others         224         224           Others         2281         2,940           LG Display Co., Ltd. and its subsidiaries         49         2,891         2,940           LG Electronics Inc. and its subsidiaries and joint venture         31,924         31,924           LX International Corp. and its subsidiaries         9,116         31,024         31,924           LX Hausys, Ltd. and its subsidiaries         5,415         5,415           LX MMA Corporation         14,861         5,415         5,415           Shanjin Optoelectronics	Others	1,876	-	-	6,227	8,103	
TECWIN Co., Ltd.         -         -         -         21         21           HUAJIN NEW ENERGY MATERIALS(QUZHOU)         48,054         -         -         -         48,054           Others         -         -         -         -         410         410           Others         -         -         -         -         410         410           Other related parties           D&O Corp. and its subsidiaries 1         -         -         -         69,202         69,202           LG CNS Co., Ltd. and its subsidiaries 1         -         -         -         69,202         69,202           LG CNS Co., Ltd. and its subsidiaries 1         -         -         1,192         133,150         134,342           Others         -         -         -         224         224           Others         49         -         -         2,891         2,940           LG Electronics Inc. and its subsidiaries and joint venture         -         -         -         31,924         31,924           LX International Corp. and its subsidiaries         9,116         -         -         5,415         5,415           LX MMA Corporation         14,861         -<	Associates and joint ventures						
HUAJIN NEW ENERGY MATERIALS (QUZHOU) CO ., LTD.	SEETEC Co., Ltd.	17,164	-	20,442	10,310	47,916	
CO ., LTD.         48,054         -         -         -         48,054           Others         -         -         -         410         410           Other related parties           D&O Corp. and its subsidiaries¹         -         -         -         69,202         69,202           LG CNS Co., Ltd. and its subsidiaries¹         -         -         1,192         133,150         134,342           Others         -         -         -         1,192         133,150         134,342           Others         -         -         -         -         224         224            49         -         -         2,891         2,940           LG Electronics Inc. and its subsidiaries and joint venture         -         -         -         2,891         31,924         31,924           LX International Corp. and its subsidiaries         9,116         -         -         120,392         129,508           LX Hausys, Ltd. and its subsidiaries         9,116         -         -         5,415         5,415           LX MMA Corporation         14,861         -         -         -         -         -         -         - <th< td=""><td>TECWIN Co., Ltd.</td><td>-</td><td>-</td><td>-</td><td>21</td><td>21</td></th<>	TECWIN Co., Ltd.	-	-	-	21	21	
Other related parties         -         -         -         410         410           D&O Corp. and its subsidiaries¹         -         -         -         69,202         69,202           LG CNS Co., Ltd. and its subsidiaries¹         -         -         1,192         133,150         134,342           Others         -         -         -         224         224           Others           LG Display Co., Ltd. and its subsidiaries         49         -         -         2,891         2,940           LG Electronics Inc. and its subsidiaries and joint venture         -         -         -         31,924         31,924           LX International Corp. and its subsidiaries         9,116         -         -         120,392         129,508           LX Hausys, Ltd. and its subsidiaries         9,116         -         -         5,415         5,415           LX MMA Corporation         14,861         -         -         -         5,415         5,415           Shanjin Optoelectronics (Suzhou) Co.,Ltd. and its subsidiaries         778         -         -         -         -         778           Others         2,486         -         2,729         4,658         9,873	HUAJIN NEW ENERGY MATERIALS(QUZHOU)						
Other related parties         D&O Corp. and its subsidiaries¹       -       -       -       69,202       69,202         LG CNS Co., Ltd. and its subsidiaries¹       -       -       1,192       133,150       134,342         Others       -       -       -       224       224         Others         LG Display Co., Ltd. and its subsidiaries       49       -       -       2,891       2,940         LG Electronics Inc. and its subsidiaries and joint venture       -       -       -       31,924       31,924         LX International Corp. and its subsidiaries       9,116       -       -       31,924       31,924         LX Hausys, Ltd. and its subsidiaries       9,116       -       -       5,415       5,415         LX MMA Corporation       14,861       -       -       -       5,415       5,415         Shanjin Optoelectronics (Suzhou) Co.,Ltd. and its subsidiaries       778       -       -       -       -       -       778         Others       2,486       -       2,729       4,658       9,873	CO ., LTD.	48,054	-	-	-	48,054	
D&O Corp. and its subsidiaries¹         -         -         -         69,202         69,202           LG CNS Co., Ltd. and its subsidiaries¹         -         -         1,192         133,150         134,342           Others         -         -         -         224         224           Others           LG Display Co., Ltd. and its subsidiaries         49         -         -         2,891         2,940           LG Electronics Inc. and its subsidiaries and joint venture         -         -         -         31,924         31,924           LX International Corp. and its subsidiaries         9,116         -         -         120,392         129,508           LX Hausys, Ltd. and its subsidiaries         -         -         -         5,415         5,415           LX MMA Corporation         14,861         -         -         -         -         14,861           Shanjin Optoelectronics (Suzhou) Co.,Ltd. and its subsidiaries         778         -         -         -         -         778           Others         2,486         -         2,729         4,658         9,873	Others	-	-	-	410	410	
LG CNS Co., Ltd. and its subsidiaries¹       -       -       1,192       133,150       134,342         Others       -       -       -       -       224       224         Others         LG Display Co., Ltd. and its subsidiaries       49       -       -       2,891       2,940         LG Electronics Inc. and its subsidiaries and joint venture       -       -       -       31,924       31,924         LX International Corp. and its subsidiaries       9,116       -       -       120,392       129,508         LX Hausys, Ltd. and its subsidiaries       -       -       -       5,415       5,415         LX MMA Corporation       14,861       -       -       -       14,861         Shanjin Optoelectronics (Suzhou) Co.,Ltd. and its subsidiaries       778       -       -       -       778         Others       2,486       -       2,729       4,658       9,873	Other related parties						
Others         -         -         -         224         224           Others           LG Display Co., Ltd. and its subsidiaries         49         -         -         2,891         2,940           LG Electronics Inc. and its subsidiaries and joint venture         -         -         -         -         31,924         31,924           LX International Corp. and its subsidiaries         9,116         -         -         120,392         129,508           LX Hausys, Ltd. and its subsidiaries         -         -         -         5,415         5,415           LX MMA Corporation         14,861         -         -         -         14,861           Shanjin Optoelectronics (Suzhou) Co.,Ltd. and its subsidiaries         778         -         -         -         778           Others         2,486         -         2,729         4,658         9,873	D&O Corp. and its subsidiaries <sup>1</sup>	-	-	-	69,202	69,202	
Others         LG Display Co., Ltd. and its subsidiaries       49       -       -       2,891       2,940         LG Electronics Inc. and its subsidiaries and joint venture       -       -       -       31,924       31,924         LX International Corp. and its subsidiaries       9,116       -       -       120,392       129,508         LX Hausys, Ltd. and its subsidiaries       -       -       -       5,415       5,415         LX MMA Corporation       14,861       -       -       -       14,861         Shanjin Optoelectronics (Suzhou) Co.,Ltd. and its subsidiaries       778       -       -       -       778         Others       2,486       -       2,729       4,658       9,873	LG CNS Co., Ltd. and its subsidiaries <sup>1</sup>	-	-	1,192	133,150	134,342	
LG Display Co., Ltd. and its subsidiaries       49       -       -       2,891       2,940         LG Electronics Inc. and its subsidiaries and joint venture       -       -       -       31,924       31,924         LX International Corp. and its subsidiaries       9,116       -       -       120,392       129,508         LX Hausys, Ltd. and its subsidiaries       -       -       -       5,415       5,415         LX MMA Corporation       14,861       -       -       -       14,861         Shanjin Optoelectronics (Suzhou) Co.,Ltd. and its subsidiaries       778       -       -       -       778         Others       2,486       -       2,729       4,658       9,873	Others	-	-	-	224	224	
LG Electronics Inc. and its subsidiaries and joint venture       -       -       -       31,924       31,924         LX International Corp. and its subsidiaries       9,116       -       -       120,392       129,508         LX Hausys, Ltd. and its subsidiaries       -       -       -       5,415       5,415         LX MMA Corporation       14,861       -       -       -       14,861         Shanjin Optoelectronics (Suzhou) Co.,Ltd. and its subsidiaries       778       -       -       -       778         Others       2,486       -       2,729       4,658       9,873	Others						
venture         -         -         -         31,924         31,924           LX International Corp. and its subsidiaries         9,116         -         -         -         120,392         129,508           LX Hausys, Ltd. and its subsidiaries         -         -         -         5,415         5,415           LX MMA Corporation         14,861         -         -         -         -         14,861           Shanjin Optoelectronics (Suzhou) Co.,Ltd. and its subsidiaries         778         -         -         -         -         778           Others         2,486         -         2,729         4,658         9,873	LG Display Co., Ltd. and its subsidiaries	49	-	-	2,891	2,940	
LX International Corp. and its subsidiaries       9,116       -       -       120,392       129,508         LX Hausys, Ltd. and its subsidiaries       -       -       -       5,415       5,415         LX MMA Corporation       14,861       -       -       -       -       14,861         Shanjin Optoelectronics (Suzhou) Co.,Ltd. and its subsidiaries       778       -       -       -       -       778         Others       2,486       -       2,729       4,658       9,873	LG Electronics Inc. and its subsidiaries and joint						
LX Hausys, Ltd. and its subsidiaries       -       -       -       5,415       5,415         LX MMA Corporation       14,861       -       -       -       -       14,861         Shanjin Optoelectronics (Suzhou) Co.,Ltd. and its subsidiaries       778       -       -       -       -       778         Others       2,486       -       2,729       4,658       9,873	venture	-	-	-	31,924	31,924	
LX MMA Corporation       14,861       -       -       -       -       14,861         Shanjin Optoelectronics (Suzhou) Co.,Ltd. and its subsidiaries       778       -       -       -       -       778         Others       2,486       -       2,729       4,658       9,873	LX International Corp. and its subsidiaries	9,116	-	-	120,392	129,508	
Shanjin Optoelectronics (Suzhou) Co.,Ltd. and its subsidiaries         778         -         -         -         778           Others         2,486         -         2,729         4,658         9,873	LX Hausys, Ltd. and its subsidiaries	-	-	-	5,415	5,415	
subsidiaries         778         -         -         -         778           Others         2,486         -         2,729         4,658         9,873	LX MMA Corporation	14,861	-	-	-	14,861	
Others <u>2,486</u> <u>- 2,729</u> <u>4,658</u> <u>9,873</u>	Shanjin Optoelectronics (Suzhou) Co.,Ltd. and its						
	subsidiaries	778	-	-	-	778	
<b>Total</b> 165,599 - 48,340 427,766 641,705	Others	2,486		2,729	4,658	9,873	
	Total	165,599		48,340	427,766	641,705	

<sup>&</sup>lt;sup>1</sup> Other receivables to D&O Corp.(former, S&I Corp.) include the amount of deposits which are classified as memberships in the financial statements of the Company.

(e) Fund transactions with related parties for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won) 2022 Equity Loans Borrowings<sup>1</sup> contributions in cash **Dividends Dividends** (capital received paid reduction) Loans Repayment **Borrowings** Repayment Entity with a significant influence over the Company LG Corp. 282,411 12,230 11,845 **Subsidiaries** LG Energy Solution, Ltd. 2 16 5,927 LG Chem (Taiwan), Ltd. 61,560 (17)Ningbo LG Yongxing Chemical Co.,Ltd. 326,905 Tianjin LG Bohai Chemical Co.,Ltd. 25,669 LG Chem Fund I LLC 12,872 LG Chem (China) Investment Co.,Ltd. 92,856 (240,480)LG Chemical India Pvt. Ltd. 30,789 LG Chem VietNam CO., 359 LTD LG Chem (Tianjin) **Engineering Plastics** 1,368 LG Chemical (Guangzhou) **Engineering Plastics** Co.,Ltd. LG Polymers India Pvt. Ltd. 7,345 18,434 LG Chem Life Science Innovation Center, Inc. 16,593 Associates and joint ventures SEETEC Co., Ltd. 5,000 38 959 LG Toray Hungary Battery Separator Kft. 3 483,638 KOREA PRECURSOR CO.,LTD. 20,384 Other related parties LG CNS Co., Ltd. 1,221 1,190 Others LG HOUSEHOLD & HEALTH CARE LTD 48 628 Shanjin Optoelectronics (Suzhou)4 520,703 282,411 18,434 13,553 20,549 Total 324,138

(in millions of Korean won)				2021			
			Equity	Loa	ins	Borro	wings <sup>1</sup>
	Dividends received	Dividends paid	contributions in cash (capital reduction)	Loans	Repayment	Borrowings	Repayment
Entity with a significant influence over the Company							
LG Corp.	-	235,342	-	-	-	11,866	11,791
Subsidiaries							
LG Energy Solution, Ltd.	-	-	-	-	-	-	6,242
LG Chem (Taiwan), Ltd. Ningbo LG Yongxing	2,995	-	-	-	-	-	-
Chemical Co.,Ltd.	269,226	-	-	-	-	-	-
LG Chem Europe GmbH Tianjin LG Bohai	16,772	-	17,534	-	-	-	-
Chemical Co.,Ltd. Tianjin LG BOTIAN	3,063	-	-	-	-	-	-
Chemical Co.,Ltd. LG Chem (Guangzhou) Information & Electronics Materials	630	-	-	-	-	-	-
Co. ,Ltd. LG Chemical (Guangzhou)	33,811	-	-	-	-	-	-
Engineering Plastics Co.,Ltd. LG Chem (Tianjin)	12,388	-	-	-	-	-	-
Engineering Plastics	0.040						
Co.,Ltd.	3,048	-	-	-	-	-	-
LG Chem Fund I LLC	-	-	11,253	-	-	-	-
Ugimag Korea Co., Ltd. <sup>5</sup>	-	-	4,990	-	-	-	-
LG Chem Asia Pte. Ltd. LG PETRONAS	-	-	821	-	-	-	-
Chemicals Malaysia Shanjin Optoelectronics	-	-	36,867	-	-	-	-
(TAIWAN) Co., Ltd. LG Chem Life Sciences	-	-	55,297	-	-	-	-
(Beijing) Co., Ltd. <sup>6</sup> LG Chem Poland Sp. z	-	-	2,257	-	-	-	-
o.o. LG Chem Hangzhou Advanced Materials Co.,	-	-	22,194	-	-	-	-
Ltd. LG Chem Ohio	-	-	67,027	-	-	-	-
Petrochemical, Inc.	-	-	22,516	-	-	-	-
LG BCM	-	-	53,504	-	-	-	-
Associates and joint ventures							
SEETEC Co., Ltd.	10,000	_	_	_	_	33	929
LG Vina Chemical	334	-	-	-	-	-	-

TL Chemical CO., Ltd	-	-	48,544	-	-	-	-
Other related parties							
LG CNS Co., Ltd.	-	-	-	-	-	1,192	1,192
Others							
LX Hausys, Ltd. LG HOUSEHOLD &	-	-	-	-	-	-	-
HEALTH CARE LTD	-	-	-	-	-	2,231	61
Shanjin Optoelectronics (Suzhou) <sup>7</sup>		<u> </u>	<u>-</u>				
Total	352,267	235,342	342,804	_		15,322	20,215

<sup>&</sup>lt;sup>1</sup> The amounts represent lease liabilities that were recognized or repaid for the years ended December 31, 2022 and 2021.

(f) Compensation for key management of the Company for the years ended December 31, 2022 and 2021, consists of:

(in millions of Korean won)	2022	2021
Short-term employee benefits	68,653	63,218
Post-employment benefits	7,613	6,771
Total	76,266	69,989

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

There is no provision recognized for receivables of related parties as at December 31, 2022 and no impairment loss on receivables for related parties are recognized for the years ended December 31, 2022 and 2021.

Details of the guarantees manufactured by the Company for related parties at the reporting date are disclosed in Note 18.

<sup>&</sup>lt;sup>2</sup> The Company transferred 50% of the shares of Korea Battery & ESG Private Equity Investment Joint Stock Company for ₩ 28,874 million during the year ended December 31, 2022. It has not been included in the above fund transactions.

<sup>&</sup>lt;sup>3</sup> The amount is related to the acquisition of 50% of the shares during the year ended December 31, 2022.

<sup>&</sup>lt;sup>4</sup> The Company disposed of shares of Shanjin Optoelectronics (Taiwan) Co., LTD. amounting to ₩ 38 million. It has not been included in the above fund transactions.

<sup>&</sup>lt;sup>5</sup> The entity has been excluded from the related parties since the Company sold its shares in 2021. Transactions with the entity until the sale of shares have been included in the above information.

<sup>&</sup>lt;sup>6</sup> The entity name of LG Jiansheng Life Sciences (Beijing) Co., Ltd. has been changed during the year ended December 31, 2021.

<sup>&</sup>lt;sup>7</sup> The Company disposed of shares of LG Chem Display Materials (Beijing) Co., Ltd. amounting to ₩ 32 million for during the year ended December 31, 2021. It has not been included in the above fund transactions.

#### 32. Cash Flows

(a) Reconciliation between profit before income tax and cash generated from operations for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022	2021
Profit before income tax	3,892,652	3,337,032
Profit before income tax from continuing operations Profit (loss) before income tax from discontinued	3,901,109	3,244,550
operations	(8,457)	92,482
Adjustments for:		
Depreciation	1,199,048	1,094,058
Amortization	172,057	143,416
Post-employment benefits	125,202	115,244
Finance income	(802,527)	(501,606)
Finance costs	289,266	200,885
Foreign exchange differences	101,317	(20,266)
Loss on valuation of inventories (reversal)	106,679	13,708
Gain on disposal of property, plant and equipment	(36,870)	(35,538)
Gain on disposal of intangible assets	(8)	(5,265)
Loss on disposal of property, plant and equipment	21,383	20,404
Loss on disposal of intangible assets	22,780	2,298
Impairment loss on property, plant and equipment	28,346	25,720
Impairment loss on property, plant and equipment	(705)	
(reversal)	(705)	200.040
Impairment loss on intangible assets	40	298,849
Impairment loss on investment properties	17,332	-
Impairment loss on investments in subsidiaries	55,314	(0.000)
Gain on disposal of investments in associates	(0.000.440)	(3,820)
Gain on disposal of investments in subsidiaries	(2,230,413)	-
Loss on disposal of investments in subsidiaries	15,552	36,605
Gain on disposal of business	-	(201,882)
Additions to provisions	37,456	16,489
Other expenses	4,681	160
Increase in inventories	(219,967)	(1,658,476)
Decrease (increase) in trade receivables	23,882	(947,557)
Decrease in other receivables	45,571	17,741
Increase in other current assets	(85,031)	(25,041)
Increase (decrease) in trade payables	(186,762)	1,328,388
Increase in other payables	22,658	954,134
Increase (decrease) in other current liabilities	(152,734)	209,118
Decrease in net defined benefit liabilities	(355,540)	(185,585)
Decrease in provisions	(47,089)	(31,559)
Other cash flows from operations	(3,862)	(5,408)
Cash generated from operations	2,059,708	4,192,246

(b) Changes in liabilities arising from financial activities for the years ended December 31, 2022 and 2021, are as follows:

		2022			
	Cash flows				At
At January	from financing		Lease		December
1, 2022	activities	Amortization	liabilities	Others	31, 2022
1,329,579	(4,225)	_	279	42,508	1,368,141
5,707,145	(171,772)	-	4,467	70,221	5,610,061
118,460	(36,892)	23,668	-	(369)	104,867
299,645	(299,645)		<u> </u>		
7,454,829	(512,534)	23,668	4,746	112,360	7,083,069
		2021			
	Cash flows				At
At January	from financing		Lease		December
1, 2021	activities	Amortization	liabilities	Others	31, 2021
-	1,306,157	_	130	23,292	1,329,579
3,406,001	2,273,941	_	3,165	24,038	5,707,145
127,969	(35,508)	29,777	_	(3,778)	118,460
16,797	-	_	-	(16,797)	-
2,081,307	(3,565,365)			1,783,703	299,645
5,632,074	(20,775)	29,777	3,295	1,810,458	7,454,829
	1, 2022  1,329,579 5,707,145 118,460 299,645 7,454,829  At January 1, 2021  3,406,001 127,969 16,797 2,081,307	At January 1, 2022         from financing activities           1,329,579         (4,225)           5,707,145         (171,772)           118,460         (36,892)           299,645         (299,645)           7,454,829         (512,534)           At January 1, 2021         Cash flows from financing activities           -         1,306,157           3,406,001         2,273,941           127,969         (35,508)           16,797         -           2,081,307         (3,565,365)	At January 1, 2022         Cash flows from financing activities         Amortization           1,329,579         (4,225)         -           5,707,145         (171,772)         -           118,460         (36,892)         23,668           299,645         (299,645)         -           7,454,829         (512,534)         23,668           At January 1,2021         Cash flows from financing activities         Amortization           -         1,306,157         -           3,406,001         2,273,941         -           127,969         (35,508)         29,777           16,797         -         -           2,081,307         (3,565,365)         -	At January 1, 2022         Cash flows from financing activities         Amortization         Lease liabilities           1,329,579         (4,225)         -         279           5,707,145         (171,772)         -         4,467           118,460         (36,892)         23,668         -           299,645         (299,645)         -         -           7,454,829         (512,534)         23,668         4,746           Cash flows from financing activities         Amortization         Lease liabilities           -         1,306,157         -         130           3,406,001         2,273,941         -         3,165           127,969         (35,508)         29,777         -           16,797         -         -         -           2,081,307         (3,565,365)         -         -         -	At January 1, 2022         Cash flows from financing activities         Lease Iliabilities         Others           1,329,579         (4,225)         -         279         42,508           5,707,145         (171,772)         -         4,467         70,221           118,460         (36,892)         23,668         -         (369)           299,645         (299,645)         -         -         -           7,454,829         (512,534)         23,668         4,746         112,360           2021           Cash flows from financing activities         Amortization         Lease liabilities         Others           -         -         1,306,157         -         130         23,292           3,406,001         2,273,941         -         3,165         24,038           127,969         (35,508)         29,777         -         (3,778)           16,797         -         -         -         (16,797)           2,081,307         (3,565,365)         -         -         1,783,703

(c) The significant non-cash transactions for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022	2021
Reclassification of construction-in-progress	1,700,631	3,431,247
Reclassification of machinery-in-transit	70,267	338,218
Reclassification of long-term borrowings into current		
portion	627,588	596,362
Other payables related to acquisitions of property, plant		
and equipment and intangible assets	1,012,866	533,042
Reclassification of other payables under the reverse		
factoring arrangement	-	1,783,702
Conversion of exchangeable bonds into treasury shares	-	54,383

#### 33. Appropriation of Retained Earnings

The appropriation of retained earnings for the year ended December 31, 2022, is expected to be appropriated at the shareholders' meeting on March 28, 2023. The appropriation date for the year ended December 31, 2021, was March 23, 2022.

The appropriation of retained earnings for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022	2021
Unappropriated retained earnings carried over from prior year	-	-
Profit for the year	3,006,969	2,514,263
Remeasurements of net defined benefit liabilities	97,370	31,317
Cash flow hedge	<u>-</u>	
Retained earnings available for appropriation	3,104,339	2,545,580
Transfer from other reserves		
Reserve for technology development	<u>-</u>	
Appropriation of retained earnings Legal reserve	_	_
Dividends	783,135	935,275
Reserve for technology development	2,321,204	1,610,305
receive to teaminately development	3,104,339	2,545,580
Unappropriated retained earnings to be carried forward	-	-

#### 34. Assets Held for Sale and Discontinued Operations

#### 34.1 Assets Held for Sale

Upon the approval of management, the Company decided to dispose of acrylic film business (December 2020), 8,500,000 shares of LG Energy Solution, Ltd., a subsidiary (December 2021), 137,988,929 shares of Shanjin Optoelectronics (Taiwan) Co., Ltd (May 2022), all of shares of VINA PLASTICIZERS CHEMICAL COMPANY LIMITED (September 2022). The related assets were reclassified as assets held for sale. The disposal of acrylic film business has been completed in April 2022, the disposal of 8,500,000 shares of LG Energy Solution has been completed in January 2022 and the disposal of 137,988,929 shares of Shanjin Optoelectronics (Taiwan) Co., Ltd. has been completed in July 2022.

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

(in millions of Korean won)	2022	2021
Assets of disposal group		
Property, plant and equipment	-	4,783
Investment in subsidiaries	-	293,762
Investment in joint venture	3,080	-
Total	3,080	298,545

Assets of the disposal group were measured at the lower of net fair value and book value before the initial classification assets as held for sale, and there are no other non-operating expenses (income) recognized from the measurement for the years ended December 31, 2022 and 2021.

#### 34.2 Discontinued Operations

The Company decided to discontinue Glass substrate business with the resolution of the Board of Directors in January 2022 and substantially discontinued the related business as of March 2022. In addition, the Company decided to dispose of LCD polarizer business with the resolution of the Board of Directors in June 2022, and the disposal has been completed in February 2022. The Company disposed of all of its shares of Ugimag Korea Co., Ltd., in July 2022. Profit and loss from the related operations are presented as discontinued operations and the comparative separate statements of profit or loss have been restated.

Comprehensive income information from discontinued operation for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022				
		Glass substrate			
	LCD polarizer	and others	Total		
Revenue	10,361	354	10,715		
Expense	(15,989)	(3,183)	(19,172)		
Loss before income tax of discontinued					
operation	(5,628)	(2,829)	(8,457)		
Income tax benefits	1,281	644	1,925		
Loss after income tax of discontinued		_	_		
operations	(4,347)	(2,185)	(6,532)		

(in millions of Korean won)	rean won) 2021			
		Glass substrate		
	LCD polarizer	and others	Total	
Revenue	190,289	10,026	200,315	
Expense	(62,809)	(45,024)	(107,833)	
Profit (loss) before income tax of				
discontinued operation	127,480	(34,998)	92,482	
Income tax benefits (expense)	(31,431)	8,629	(22,802)	
Profit (loss) after income tax of discontinued operations	96,049	(26,369)	69,680	

Net cash flows from discontinued operations for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022			
	Glass substrate			
	LCD polarizer	and others	Total	
Net cash inflow (outflow) from operating activities	861	(2,782)	(1,921)	
Net cash inflow (outflow) from investing activities	(6,618)	712	(5,906)	
Net cash inflow from financing activities	5,757	2,070	7,827	
(in millions of Korean won)		2021		
		Glass substrate		
	LCD polarizer	and others	Total	
Net cash inflow (outflow) from operating activities	(26,994)	591	(26,403)	
	182,785	5,934	188,719	
Net cash inflow from investing activities  Net cash outflow from financing activities	(155,791)	(6,525)	(162,316)	

#### 35. Assets and Liabilities related to Contracts with Customers

(a) Assets and liabilities related to contracts with customers as at December 31, 2022 and 2021, are as follows:

(in millions of Korean won)	2022	2021
Contract assets		
Total contract assets	-	-
Contract liabilities		
Advances in relation to revenue from the Company's main business activities	29,566	36,839
Expected customer incentives	1,538	1,824
Unearned revenue	27,784	30,510
Total contract liabilities	58,888	69,173

#### Revenue recognized in relation to contract liabilities

(b) Revenue recognized in the current year that was included in the contract liability balance at the beginning of the year, and revenue recognized in the current year from performance obligations satisfied (or partially satisfied) in previous years are as follows.

(in millions of Korean won)	2022	2021
Revenue recognized in the current year from the contract liability balance at the beginning		
of the year	36,076	29,902
Advances in relation to revenue from the		
Company's main business activities	31,130	25,891
Unearned revenue	4,946	4,011
Revenue recognized from performance obligations satisfied in previous years	-	-

#### 36. Investment Properties

(a) Details of investment properties as at December 31, 2022 and 2021, are as follows:

(in millions of Korean won)		202	22		2021			
	Acquisitions Cost	Accumulated depreciation	Accumulated impairment	Book amount	Acquisitions Cost	Accumulated depreciation	Accumulated impairment	Book amount
Land	5,170	(42)	(462)	4,666	4,216	-	-	4,216
Buildings	78,117	(11,098)	(17,030)	49,989	29,591	(10,365)	(172)	19,054
	83,287	(11,140)	(17,492)	54,655	33,807	(10,365)	(172)	23,270

(b) Changes in investment properties for the years ended December 31, 2022 and 2021, are as follows:

(in millions of Korean won)		2022		2021		
	Land	Building	Total	Land	Building	Total
Beginning balance	4,216	19,054	23.270	4.216	18,587	22,803
Acquisitions/transfers	1,440	53,273	54,713	-,210	6,145	6,145
Disposals/transfers	(486)	(3,291)	(3,777)	-	(5,043)	(5,043)
Depreciation	(42)	(2,177)	(2,219)	-	(635)	(635)
Impairment <sup>1</sup>	(462)	(16,870)	(17,332)	<u> </u>	<u> </u>	_
Ending balance	4,666	49,989	54,655	4,216	19,054	23,270

<sup>&</sup>lt;sup>1</sup> Impairment recognized for Magok donation public contribution facility classified as investment properties. As the recoverable amount was less than carrying amount due to the impact of lease payment setting for public purposes and others, impairment losses were recognized during the year ended December 31, 2022.

(c) 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 December 31, 2022, is ₩ 69,231 million (2021: ₩ 34,379 million).

Rental income from investment properties under operating lease is  $\mbox{$\mbox{$$\mu$}$}$  2,634 million (2021:  $\mbox{$\mbox{$$\mu$}$}$  1,680 million), and operating expenses incurred for investment properties that generated rental income (including maintenance and repair expenses) are  $\mbox{$\mbox{$$\mu$}$}$  2,452 million (2021:  $\mbox{$\mbox{$$\mu$}$}$  623 million). Operating expenses incurred for investment properties that do not generate rental income (including maintenance and repair expenses) are  $\mbox{$\mbox{$$\psi$}$}$  8 million (2021:  $\mbox{$\mbox{$$\psi$}$}$  12 million).

#### (d) Operating lease

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

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

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

(in millions of Korean won)	2022	2021
Within one year	3,297	1,524
Within two years	2,429	551
Within five years	6,178	1,100
	11,904	3,175

#### 37. Business Combination

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

The goodwill of  $\forall$  165,760 million arising from the business combination is attributable to sales increase from combining the operations of the Company and CEM business.

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

(in millions of Korean won)	LG Chem	LG Chem Poland Sp. z o. o.
Consideration transferred		
Cash and cash equivalents	457,000	67,700
Total consideration	457,000	67,700
Identifiable assets acquired and liabilities assumed		
Trade and other receivables <sup>1</sup>	113,639	26,228
Inventories	28,518	36,627
Property, plant and equipment	190,930	38,755
Intangible assets	40,111	447
Other assets	4,050	-
Investment in subsidiary	67,027	-
Trade payables	(136,158)	(24,602)
Provisions	(1,386)	(597)
Net defined benefit liabilities	(9,622)	-
Other liabilities	(5,869)	(522)
Fair value of net identifiable assets acquired	291,240	76,336
Goodwill	165,760	-
Gains from a bargain purchase		(8,636)
	457,000	67,700

<sup>&</sup>lt;sup>1</sup> The fair value of trade and other receivables of LG Chem, Co., Ltd. is identical with the gross contractual amount.

#### 38. Events After the Reporting Period

(a) The Company decided to borrow foreign currency and issue non-guaranteed bonds in KRW by resolution of the Management Committee held on January 3, 2023. Accordingly, the Company borrowed USD 400 million on January 26, 2023, and issued bonds in KRW of ₩ 800,000 million on January 27, 2023.

(in millions of USD and Korean won)	Maturity date	Amount	
Foreign currency borrowing (2 years maturity)	2025.01.26	USD 200	
Foreign currency borrowing (3 years maturity)	2026.01.26	USD 200	
Non-guaranteed bonds in KRW (2 years maturity)	2025.01.27	KRW 150,000	
Non-guaranteed bonds in KRW (3 years maturity)	2026.01.27	KRW 415,000	
Non-guaranteed bonds in KRW (5 years maturity)	2028.01.25	KRW 235,000	

(b) On January 20, 2023, the Company completed to acquire 100% shares of Aveo Pharmaceuticals, Inc. through a capital investment of USD 571 million in LG Chem Life Science Innovation Center, Inc., its subsidiary, to enter in the anticancer medicine market in the United States.

#### 39. Approval of Issuance of the Financial Statements

The separate financial statements 2022 were approved for issue by the Board of Directors on January 31, 2023 and are subject to change with approval of shareholders at their Annual General Meeting.

## Report on Independent Auditor's Audit of Internal Control over Financial Reporting

(English Translation of a Report Originally Issued in Korean)

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

#### **Opinion on Internal Control over Financial Reporting**

We have audited LG Chem, Ltd. (the Company) Internal Control over Financial Reporting as of December 31, 2022, based on *Conceptual Framework for Designing and Operating Internal Control over Financial Reporting.* 

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on *Conceptual Framework for Designing and Operating Internal Control over Financial Reporting.* 

We also have audited, in accordance with Korean Standards on Auditing, the separate financial statements of the Company, which comprise the separate statement of financial position as at December 31, 2022 and the separate statement of profit or loss, separate statement of comprehensive income, separate statement of changes in equity and separate statement of cash flow for the year then ended, and notes to the separate financial statements including a summary of significant accounting policies, and our report dated on March 9, 2023, expressed unqualified opinion.

#### Basis for Opinion on Internal Control over Financial Reporting

We conducted our audit in accordance with Korean Standards on Auditing. Our responsibility under these standards are further described in the *Auditor's Responsibilities for the Audit of the Internal Control over Financial Reporting* section of our report. We are independent of the Company in accordance with the ethical requirements of the Republic of Korea that are relevant to our audit of internal control over financial reporting and we have fulfilled our other ethical responsibilities in accordance with the ethical requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

## Responsibilities of Management and Those Charged with Governance for Internal Control over Financial Reporting

Management is responsible for designing, implementing and maintaining effective internal control over financial reporting, and for its assessment about the effectiveness of internal control over financial reporting, included in the accompanying *Report on the Effectiveness of Internal Control over Financial Reporting.* 

Those charged with governance have the responsibilities for overseeing internal control over financial reporting.

#### Auditor's Responsibilities for the Audit of Internal Control over Financial Reporting

Our responsibility is to express opinion on the Company's internal control over financial reporting based on our audit. We conducted the audit in accordance with Korean Standards on Auditing. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

An audit of internal control over financial reporting involves performing procedures to obtain audit evidence about whether a material weakness exists. The procedures selected depend on the auditor's judgment, including the assessment of the risks that a material weakness exists. An audit includes obtaining an understanding of internal control over financial reporting and testing and evaluating the design and operating effectiveness of internal control over financial reporting based on the assessed risk.

#### Definition and Inherent Limitations of Internal Control over Financial Reporting

An entity's internal control over financial reporting is a process effected by those charged with governance, management, and other personnel, designed to provide reasonable assurance regarding the preparation of reliable separate financial statements in accordance with International Financial Reporting Standards as adopted by the Republic of Korea. An entity's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the entity; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of separate financial statements in accordance with International Financial Reporting Standards as adopted by the Republic of Korea, and that receipts and expenditures of the entity are being made only in accordance with authorizations of management and those charged with governance; and (3) provide reasonable assurance regarding prevention, or timely detection and correction of unauthorized acquisition, use, or disposition of the entity's assets that could have a material effect on the separate financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent, or detect and correct, misstatements. Also, projections of any assessment of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

The engagement partner on the audit resulting in this independent auditor's report is Seung-Hun Kim, Certified Public Accountant.

Seoul, Korea March 9, 2023

This report is effective as of March 9, 2023, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the Company's internal control over financial reporting thereto. Accordingly, the readers of the audit report should understand that there is a possibility that the above audit report may have to be revised to reflect the impact of such subsequent events or circumstances, if any.

## Report on the Effectiveness of Internal Control over Financial Reporting

(English Translation of a Report Originally Issued in Korean)

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

We, as the Chief Executive Officer ("CEO") and the Internal Control over Financial Reporting ("ICFR") Officer of LG Chem, Ltd. ("the Company"), assessed the effectiveness of the design and operation of the Company's Internal Control over Financial Reporting for the year ended December 31, 2022.

The Company's management, including ourselves, is responsible for designing and operating ICFR. We assessed the design and operating effectiveness of the ICFR in the prevention and detection of an error or fraud which may cause material misstatements in the preparation and disclosure of reliable separate financial statements.

We designed and operated ICFR in accordance with Conceptual Framework for Designing and Operating Internal Control over Financial Reporting established by the Operating Committee of Internal Control over Financial Reporting in Korea (the ICFR Committee). And, we conducted an evaluation of ICFR based on Management Guideline for Evaluating and Reporting Effectiveness of Internal Control over Financial Reporting established by the ICFR Committee.

Based on the assessment results, we believe that the Company's ICFR, as at December 31, 2022, is designed and operating effectively, in all material respects, in accordance with *Conceptual Framework for Designing and Operating Internal Control over Financial Reporting.* 

We certify that this report does not contain any untrue statement of a fact or omit to state a fact necessary to be presented herein. We also certify that this report does not contain or present any statement which cause material misunderstandings, and we have reviewed and verified this report with sufficient due care.

January 31, 2023

Hak -Cheol Shin, Chief Executive Officer

Dong-Seok Cha, Internal Control over Financial Reporting Officer