# LG CNS CO., LTD.

SEPARATE FINANCIAL STATEMENTS
AS OF AND FOR THE YEARS ENDED
DECEMBER 31, 2021 AND 2020,
ATTACHMENT: INDEPENDENT AUDITORS' REPORT

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## INDEPENDENT AUDITORS' REPORT

English Translation of Independent Auditors' Report Originally Issued in Korean on March 16, 2022.

To the Shareholders and the Board of Directors of
LG CNS Co., Ltd.:

### Report on the Audited Separate Financial Statements

### Audit Opinion

We have audited the accompanying separate financial statements of LG CNS Co., Ltd. (the "Company"), which comprise the separate statements of financial position as of December 31, 2021 and 2020, respectively, and the related separate statements of income, separate statements of comprehensive income, separate statements of changes in shareholders' equity and separate statements of cash flows, all expressed in Korean won, for the years then ended, and a summary of significant accounting policies and other explanatory information.

In our opinion, the separate financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, respectively, and its financial performance and its cash flows for the years then ended in accordance with Korean International Financial Reporting Standards ("K-IFRSs").

#### Basis for Audit Opinion

We conducted our audits in accordance with the Korean Standards on Auditing ("KSAs"). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audits of the Separate Financial Statements section of our report. We are independent of the Company in accordance with the ethical requirements, including those related to independence, that are relevant to our audits of the separate financial statements in the Republic of Korea as required by prevailing audit regulations. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

#### Key Audit Matters

The key audit matters were determined, in the auditors' professional judgment and from the matters communicated with those charged with governance, to be of most significance in the audit of the separate financial statements of the current period in accordance with 'Auditing practice guidance 2016-1 (revised in 2018)' in the Republic of Korea. These matters were addressed in the content of our audits of the separate financial statements as a whole, and we do not provide a separate opinion on these matters.

(The key audit matters) Change in estimating total contract cost.

As described in Note 19 (5) to the separate financial statements, changes in estimation of the total contract cost for contracts that recognize revenue over a period of time using the cost-based input method affect profit or loss of current and future periods, contract assets and contract liabilities. In addition, as explained in Note 3 to the separate financial statements, the total contract cost is estimated on the basis of future expectations, such as labor cost, material cost, project duration and so on.

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Estimates of total contract costs require expertise in engineering design and, therefore, the risk that changes the total contract costs as the project progresses will not be reflected in a timely manner. Thus, we identified changes in estimated total contract cost as a key audit matter, taking into account the impact of changes in estimated total contract cost on current and future profit and loss.

The major audit procedures we have conducted in relation to the changes in estimated total contract cost are as follows:

- Understanding and evaluating design and implementation of internal control relevant to accuracy and cutoff of estimated total contract cost
- Retrospective test of changes in estimated total contract cost of ongoing projects at the end of current period
- Test of accuracy and cutoff of estimated total contract cost, which was changed during the current period
- Test of the subsequent event related to estimated total contract cost, which is in progress at the end of current period

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

Management is responsible for the preparation of the accompanying separate financial statements in accordance with K-IFRSs, and for such internal control as they determine 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 of the Company 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, or has no realistic alternative, but to do so.

Those charged with governance's responsibilities include overseeing the Company's financial reporting process.

**Auditors' Responsibilities for the Audits of the Separate 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 auditors' 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 KSAs 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 separate financial statements.

As part of an audit in accordance with KSAs, 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, 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, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of the 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 auditors' 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 auditors' 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 of the Company regarding, among other matters, the planned scope and timing of the audits and significant audit findings, including any significant deficiencies in internal control that we identify during our audits.

Deloitte Anjin LLC

March 16, 2022

Notice to Readers

This report is effective as of March 16, 2022, the auditors' report date. Certain subsequent events or circumstances may have occurred between the auditors' report date and the time the auditors' report is read. Such events or circumstances could significantly affect the separate financial statements and may result in modifications to the auditors' report

# LG CNS CO., LTD. (the "Company")

## SEPARATE FINANCIAL STATEMENTS

## AS OF AND FOR THE YEARS ENDED

## DECEMBER 31, 2021 AND 2020

The accompanying separate financial statements, including all footnote disclosures, were prepared by, and are the responsibility of, the Company.

**Kim Young Shub.**

**Chief Executive Officer**

**LG CNS CO., LTD.**

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**LG CNS CO., LTD.**
**SEPARATE STATEMENTS OF FINANCIAL POSITION**
**AS OF DECEMBER 31, 2021 AND 2020**

| | Korean won | | | |
|---|---|---|---|---|
| | Year ended December 31, 2021 | | Year ended December 31, 2020 | |
| | (In thousands) | | | |
| ASSETS | | | | |
| CURRENT ASSETS: | | | | |
| Cash and cash equivalents (Notes 5, 6, 28 and 34) | ₩ | 545,373,508 | ₩ | 667,029,770 |
| Financial institution deposits (Notes 5, 28, 31 and 34) | | 100,000,000 | | 122,000,000 |
| Current derivative assets (Notes 5, 28 and 34) | | 1,621,136 | | 2,309,579 |
| Trade receivables, net (Notes 5, 7, 28, 30 and 34) | | 996,741,540 | | 762,974,540 |
| Other receivables, net (Notes 5, 7, 28, 30 and 34) | | 23,555,478 | | 16,912,561 |
| Inventories, net (Note 8) | | 46,562,568 | | 30,036,051 |
| Other assets (Notes 9, 19 and 30) | | 378,396,855 | | 204,572,072 |
| Total current assets | | 2,092,251,085 | | 1,805,834,573 |
| NON-CURRENT ASSETS: | | | | |
| Long-term financial institution deposits (Notes 5, 28, 31 and 34) | | 12,000,000 | | - |
| Financial assets at FVTPL (Notes 5, 28, 31 and 34) | | 23,281,345 | | 17,057,497 |
| Financial assets at FVTOCI (Notes 5, 28 and 34) | | 769,139 | | 2,416,392 |
| Long-term trade receivables, net (Notes 5, 7, 28, 30 and 34) | | 6,228,251 | | 9,035,424 |
| Long-term other receivables, net (Notes 5, 7, 28, 30, 31 and 34) | | 6,268,398 | | 4,520,582 |
| Property, plant and equipment, net (Notes 10 and 30) | | 553,807,128 | | 567,006,214 |
| Investment property (Note 11) | | 32,349,308 | | 27,743,745 |
| Intangible assets (Note 12) | | 104,254,186 | | 66,534,757 |
| Investments in subsidiaries (Notes 13 and 30) | | 84,347,595 | | 76,591,679 |
| Investments in associates and joint ventures (Notes 14 and 30) | | 44,118,373 | | 48,212,873 |
| Retirement benefit assets (Note 17) | | 32,761 | | - |
| Deferred tax assets, net (Note 29) | | 62,278,363 | | 32,740,642 |
| Other non-current assets (Notes 9 and 30) | | 91,583 | | 99,178 |
| Right-of-use assets (Note 32) | | 50,566,974 | | 53,886,471 |
| Total non-current assets | | 980,393,404 | | 905,845,454 |
| TOTAL ASSETS | ₩ | 3,072,644,489 | ₩ | 2,711,680,027 |

(Continued)

**LG CNS CO., LTD.**
**SEPARATE STATEMENTS OF FINANCIAL POSITION (CONTINUED)**
**AS OF DECEMBER 31, 2021 AND 2020**

| | Korean won | | | |
|---|---|---|---|---|
| | Year ended December 31, 2021 | | Year ended December 31, 2020 | |
| | (In thousands) | | | |
| LIABILITIES AND SHAREHOLDERS' EQUITY | | | | |
| CURRENT LIABILITIES: | | | | |
| Derivative liabilities (Notes 5, 28 and 34) | ₩ | 2,564,026 | ₩ | 326,494 |
| Trade payables (Notes 5, 28, 30 and 34) | | 602,820,782 | | 452,833,838 |
| Other payables (Notes 5, 28, 30 and 34) | | 190,124,491 | | 139,516,441 |
| Current portion of long-term borrowings (Notes 5, 15, 28 and 34) | | 89,982,760 | | 89,972,432 |
| Current tax liabilities (Note 29) | | 62,077,783 | | 28,988,752 |
| Current provisions (Note 16) | | 26,531,834 | | 27,885,662 |
| Other liabilities (Notes 18 and 19) | | 247,136,802 | | 174,802,102 |
| Current lease liabilities (Notes 5, 28, 32 and 34) | | 9,854,903 | | 11,004,547 |
| Total current liabilities | | 1,231,093,381 | | 925,330,268 |
| NON-CURRENT LIABILITIES: | | | | |
| Long-term other payables (Notes 5, 28, 30 and 34) | | 1,364,150 | | 1,364,150 |
| Long-term borrowings (Notes 5, 15, 28 and 34) | | 409,262,536 | | 498,810,231 |
| Provisions (Note 16) | | 1,214,451 | | 919,779 |
| Retirement benefit obligation (Note 17) | | - | | 115,236 |
| Other liabilities (Note 18) | | 17,383,790 | | 11,518,365 |
| Lease liabilities (Notes 5, 28, 32 and 34) | | 39,705,653 | | 41,710,487 |
| Total non-current liabilities | | 468,930,580 | | 554,438,248 |
| TOTAL LIABILITIES | | 1,700,023,961 | | 1,479,768,516 |
| SHAREHOLDERS' EQUITY: | | | | |
| Issued capital (Note 20) | | 47,198,411 | | 47,198,411 |
| Capital surplus (Notes 20 and 21) | | 138,026,095 | | 138,026,095 |
| Accumulated other comprehensive loss (Note 22) | | (13,731,028) | | (14,990,368) |
| Retained earnings (Note 23) | | 1,201,127,050 | | 1,061,677,373 |
| TOTAL SHAREHOLDERS' EQUITY | | 1,372,620,528 | | 1,231,911,511 |
| TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY | ₩ | 3,072,644,489 | ₩ | 2,711,680,027 |

(Concluded)

**See notes to separate financial statements.**

**LG CNS CO., LTD.**
**SEPARATE STATEMENTS OF INCOME**
**FOR THE YEARS ENDED DECEMBER 31, 2021 AND 2020**

| | Korean won | |
|---|---|---|
| | Year ended December 31, 2021 | Year ended December 31, 2020 |
| | (In thousands) | |
| Revenue (Notes 4, 24 and 30) | ₩ 3,826,781,022 | ₩ 3,107,800,439 |
| Cost of sales (Notes 24, 25 and 30) | (3,277,574,873) | (2,643,364,381) |
| Gross profit | 549,206,149 | 464,436,058 |
| Selling and administrative expenses (Notes 24, 25 and 30) | (273,998,801) | (253,818,946) |
| Operating income | 275,207,348 | 210,617,112 |
| Financial income (Note 26) | 29,135,651 | 25,347,860 |
| Financial expenses (Note 26) | (13,385,521) | (16,807,105) |
| Other non-operating income (Note 27) | 22,107,148 | 48,302,488 |
| Other non-operating expenses (Note 27) | (35,537,079) | (59,331,802) |
| Profit before income tax expense | 277,527,547 | 208,128,553 |
| Income tax expense (Note 29) | (63,585,143) | (54,592,675) |
| Profit for the year | ₩ 213,942,404 | ₩ 153,535,878 |

**See notes to separate financial statements.**

**LG CNS CO., LTD.**
**SEPARATE STATEMENTS OF COMPREHENSIVE INCOME**
**FOR THE YEARS ENDED DECEMBER 31, 2021 AND 2020**

| | Korean won | | | |
|---|---|---|---|---|
| | Year ended December 31, 2021 | | Year ended December 31, 2020 | |
| | (In thousands) | | | |
| Profit for the year | ₩ | 213,942,404 | ₩ | 153,535,878 |
| Other comprehensive income (loss): | | | | |
| Items that will not be reclassified subsequently to profit or loss: | | | | |
| Remeasurements of the net defined benefit liability | | 61,010 | | 5,618 |
| Income (loss) on financial assets measured at FVTOCI | | 1,259,340 | | (121,825) |
| | | 1,320,350 | | (116,207) |
| Items that may be reclassified subsequently to profit or loss | | - | | - |
| Total comprehensive income for the year | ₩ | 215,262,754 | ₩ | 153,419,671 |

**See notes to separate financial statements.**

**LG CNS CO., LTD.**
**SEPARATE STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY**
**FOR THE YEARS ENDED DECEMBER 31, 2021 AND 2020**

| | Korean won | | | | |
|---|---|---|---|---|---|
| | Issued capital | Capital surplus | Accumulated other comprehensive income (loss) | Retained earnings | Total |
| | (In thousands) | | | | |
| Balance at January 1, 2020 | ₩ 47,198,411 | ₩ 138,026,095 | ₩ (14,868,543) | ₩ 1,007,540,859 | ₩ 1,177,896,822 |
| Profit for the year | - | - | - | 153,535,878 | 153,535,878 |
| Fair value loss on investments in equity instruments designated as at FVTOCI | - | - | (121,825) | - | (121,825) |
| Remeasurements of retirement benefit liability | - | - | - | 5,618 | 5,618 |
| Annual dividends | - | - | - | (99,404,982) | (99,404,982) |
| Balance at December 31, 2020 | ₩ 47,198,411 | ₩ 138,026,095 | ₩ (14,990,368) | ₩ 1,061,677,373 | ₩ 1,231,911,511 |
| Balance at January 1, 2021 | ₩ 47,198,411 | ₩ 138,026,095 | ₩ (14,990,368) | ₩ 1,061,677,373 | ₩ 1,231,911,511 |
| Profit for the year | - | - | - | 213,942,404 | 213,942,404 |
| Fair value profit on investments in equity instruments designated as at FVTOCI | - | - | 1,259,340 | - | 1,259,340 |
| Remeasurements of retirement benefit liability | - | - | - | 61,010 | 61,010 |
| Annual dividends | - | - | - | (74,553,737) | (74,553,737) |
| Balance at December 31, 2021 | ₩ 47,198,411 | ₩ 138,026,095 | ₩ (13,731,028) | ₩ 1,201,127,050 | ₩ 1,372,620,528 |

**See notes to separate financial statements.**

**LG CNS CO., LTD.**
**SEPARATE STATEMENTS OF CASH FLOWS**
**FOR THE YEARS ENDED DECEMBER 31, 2021 AND 2020**

| | Korean won | |
|---|---|---|
| | Year ended December 31, 2021 | Year ended December 31, 2020 |
| | (In thousands) | |
| CASH FLOWS FROM OPERATING ACTIVITIES: | | |
| Profit for the year | ₩ 213,942,404 | ₩ 153,535,878 |
| Addition of expenses not involving cash outflows: | | |
| Salaries and wages | 7,370,483 | 3,119,246 |
| Retirement benefits | 3,727,711 | 1,370,142 |
| Depreciation | 59,283,762 | 65,447,966 |
| Amortization of intangible assets | 13,697,565 | 9,820,106 |
| Bad debt expenses | 1,864,394 | 1,938,867 |
| Accrual of provision | 22,637,681 | 20,909,146 |
| Other selling and administrative expenses | - | 232,214 |
| Loss on foreign currency translation | 1,326,948 | 6,224,369 |
| Loss on disposal of property, plant and equipment | 247,734 | 1,305,617 |
| Impairment loss on property, plant and equipment | - | 4,339 |
| Loss on disposal of intangible assets | 5,698 | 310,105 |
| Impairment loss on intangible assets | 2,673,417 | - |
| Loss on transactions of derivatives | 12,315,065 | 18,795,478 |
| Loss on valuation of derivatives | 2,564,026 | 326,494 |
| Interest expenses | 12,540,401 | 14,822,553 |
| Loss on valuation of FVTPL financial assets | 22,198 | 201,952 |
| Loss on disposals of FVTPL financial assets | 16,900 | 8 |
| Loss on disposals of FVTOCI financial assets | 17,501 | - |
| Loss on disposal of investments in subsidiaries | 16,760 | 3,500 |
| Impairment loss on investments in subsidiaries | 4,654,288 | 20,402,336 |
| Impairment loss on investments in associates | 4,094,500 | - |
| Income tax expense | 63,585,143 | 54,592,675 |
| | 212,662,175 | 219,827,113 |
| Deduction of items not involving cash inflows: | | |
| Reversal of loss on valuation of inventories | 17,306 | 255,365 |
| Gain on valuation of FVTPL financial assets | 57,177 | 151,693 |
| Reversal of allowance for bad debt | - | 4,782,857 |
| Reversal of provision | 6,996,487 | 13,919,975 |
| Other selling and administrative expenses | 96,477 | - |
| Gain on foreign currency translation | 2,260,736 | 2,708,066 |
| Gain on disposal of property, plant and equipment | 529,930 | 455,138 |
| Gain on disposal of intangible assets | - | 989 |
| Gain on transactions of derivatives | 4,967,716 | 17,740,512 |
| Gain on valuation of derivatives | 1,621,136 | 2,309,579 |
| Interest income | 6,048,739 | 6,351,998 |
| Dividend income | 22,338,388 | 17,179,726 |
| Reversal of impairment loss of investments in associates | 1,872 | 107,521 |
| Other non-operating income | 280,450 | 903,837 |
| | (45,216,414) | (66,867,256) |

(Continued)

**LG CNS CO., LTD.**
**SEPARATE STATEMENTS OF CASH FLOWS (CONTINUED)**
**FOR THE YEARS ENDED DECEMBER 31, 2021 AND 2020**

| | Korean won | |
|---|---|---|
| | Year ended December 31, 2021 | Year ended December 31, 2020 |
| | (In thousands) | |
| Movements in working capital: | | |
| Trade receivables | ₩ (231,484,346) | ₩ 2,928,973 |
| Other receivables | (4,191,462) | 1,739,064 |
| Other current assets | (177,008,977) | 243,664 |
| Inventories | (16,509,211) | 21,166,526 |
| Non-current trade receivables | (12,109) | 1,163,568 |
| Other non-current assets | (57,374) | (47,585) |
| Trade payables | 148,548,806 | 126,078,552 |
| Other payables | 47,451,263 | 4,788,771 |
| Other current liabilities | 72,337,103 | (11,398,006) |
| Current provisions | (16,995,022) | (18,442,599) |
| Retirement benefit obligation | (2,659,615) | (2,011,961) |
| Other non-current liabilities | (1,503,750) | (1,775,550) |
| Other operating assets and liabilities | (22,986) | (1,807,832) |
| | (182,107,680) | 122,625,585 |
| Interest income received | 4,826,897 | 6,384,336 |
| Dividend income received | 22,338,388 | 17,125,458 |
| Income taxes returned | 2,689,323 | 1,676,843 |
| Interest expense paid | (11,611,266) | (13,414,471) |
| Income taxes paid | (63,146,163) | (29,151,523) |
| | (44,902,821) | (17,379,357) |
| Net cash provided by operating activities | 154,377,664 | 411,741,963 |
| CASH FLOWS FROM INVESTING ACTIVITIES: | | |
| Cash inflows from investing activities: | | |
| Disposal of derivative instruments | 4,967,716 | 17,740,512 |
| Decrease in financial institution deposits | 10,000,000 | 500,000 |
| Decrease in other receivables | 1,857,925 | 9,633,830 |
| Disposal of financial assets measured at FVTOCI | 434,851 | 248,772 |
| Disposal of financial assets measured at FVTPL | 3,292,623 | 3,753,517 |
| Decrease in other non-current receivables | 239,333 | 49,202 |
| Disposal of investments in subsidiaries | 2,600,000 | - |
| Disposal of investments in associates | 1,872 | 4,665,821 |
| Disposal of property, plant and equipment | 432,884 | 1,607,137 |
| Disposal of intangible assets | 199,000 | 10,730,290 |
| | 24,026,204 | 48,929,081 |
| Cash outflows for investing activities: | | |
| Increase in financial institution deposits | - | 110,000,000 |
| Acquisition of derivative instruments | 10,331,981 | 17,090,023 |
| Increase in other receivables | 3,426,477 | 2,663,743 |
| Acquisition of financial assets measured at FVTPL | 6,623,720 | 7,290,231 |

(Continued)

**LG CNS CO., LTD.**
**SEPARATE STATEMENTS OF CASH FLOWS (CONTINUED)**
**FOR THE YEARS ENDED DECEMBER 31, 2021 AND 2020**

| | Korean won | |
|---|---|---|
| | Year ended December 31, 2021 | Year ended December 31, 2020 |
| | (In thousands) | |
| Increase in long-term other receivables | ₩ 3,090,420 | ₩ 1,649,260 |
| Acquisition of investments in subsidiaries | 14,941,204 | 11,148,793 |
| Acquisition of investments in associates | - | 10,540,750 |
| Acquisition of property, plant and equipment | 32,750,263 | 21,347,248 |
| Acquisition of intangible assets | 53,139,143 | 29,049,882 |
| | (124,303,208) | (210,779,930) |
| Net cash used in investing activities | (100,277,004) | (161,850,849) |
| CASH FLOWS FROM FINANCING ACTIVITIES: | | |
| Cash inflows from financing activities: | | |
| Issuance of debentures | 34,024 | 300,000,000 |
| Increase in government subsidies | - | 1,960,262 |
| | 34,024 | 301,960,262 |
| Cash outflows for financing activities: | | |
| Redemption of debentures | 90,000,000 | 230,000,000 |
| Redemption of current lease liabilities | 11,237,209 | 11,032,833 |
| Payment of dividends | 74,553,737 | 99,404,982 |
| | (175,790,946) | (340,437,815) |
| Net cash used in financing activities | (175,756,922) | (38,477,553) |
| Net increase (decrease) in cash and cash equivalents | (121,656,262) | 211,413,561 |
| Cash and cash equivalents at beginning of year | 667,029,770 | 455,616,209 |
| Cash and cash equivalents at end of year | ₩ 545,373,508 | ₩ 667,029,770 |

(Concluded)

**See notes to separate financial statements.**

**LG CNS CO., LTD.**
**NOTES TO SEPARATE FINANCIAL STATEMENTS**
**AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2021 AND 2020**

## 1. GENERAL:

LG CNS Co., Ltd. (the "Company") was incorporated in 1987 under the laws of the Republic of Korea to engage in the business of system integration, software design and development, providing information processing services and leasing computer hardware. It was organized under a joint venture agreement among LG Engineering Co., Ltd., E.D.S. World Corporation (Far East) and others.

As of December 31, 2021, the issued capital is ₩47,198 million, and the Company's shareholders are LG Corp. (49.95%) and others.

## 2. SIGNIFICANT ACCOUNTING POLICIES:

The Company has adopted the Korean International Financial Reporting Standards ("K-IFRSs") and these separate financial statements of the Company are in accordance with K-IFRS 1027 Separate Financial Statements presented by an investor with joint control or significant influence, in which the investments are accounted for on the basis of cost method, K-IFRS 1109 Financial Instruments or K-IFRS 1028 *Investment in Associates and Joint Ventures*.

The principal accounting policies are set out below. Except for the effect of the amendments to K-IFRSs and new interpretations set out below, the principal accounting policies used to prepare the separate financial statements as of and for the year ended December 31, 2021, are consistent with the accounting policies used to prepare the separate financial statements as of and for the year ended December 31, 2020.

The accompanying separate financial statements have been prepared on the historical cost basis, except for certain non-current assets and financial instruments that are measured at fair values, as explained in the accounting policies below. Historical cost is based on the fair values of the consideration given.

Fair value is the price that will be paid when the asset is sold or the liability is transferred in a normal transaction between market participants at the measurement date, whether the price is directly observable or whether it is valued using valuation techniques. In estimating the fair value of an asset or liability, we consider the nature of the asset or liability that the market participant considers when determining the cost of the asset or liability at the measurement date. Fair value for measurement and disclosure purposes in these separate financial statements is determined on such a basis, except for share-based payment transactions that are within the scope of K-IFRS 1102 Share-Based Payment and leasing transactions that are within the scope of K-IFRS 1116 Leases; and measurements that have some similarities to fair value, but are not fair value, such as net realizable value in K-IFRS 1002 Inventories or value in use in K-IFRS 1036 Impairment of Assets, in accordance with the principles described above will be determined.

The directors have, at the time of approving the separate financial statements, a reasonable expectation that the Company have adequate resources to continue in operational existence for the foreseeable future. Thus, they continue to adopt the going-concern basis of accounting in preparing the separate financial statements.

(1) Basis of preparing separate financial statements

1) Measurement standard
The accompanying separate financial statements have been created based on a historical cost basis, with the exception of certain non-current assets and financial assets measured at revalued amount and fair value at the end of each reporting period as explained in the accounting policy below. Historical cost is commonly measured in fair value of cost to acquire the asset.

2) Functional currencies and presentation currencies
The Company measures the items included in its separate financial statements using the currency (functional currency) in the primary economic environment in which it operates, and the functional currency and presentation currency of the Company are "KRW."

3) The standards and interpretations newly introduced in 2021 and the consequent changes in accounting policies are as follows:

- K-IFRS 1116 Leases – Impact of the initial application of COVID-19-Related Rent Concessions (Amendment) beyond June 30, 2021

The amendments provide practical relief to lessees in accounting for rent concessions occurring as a direct consequence of COVID-19, by introducing a practical expedient to K-IFRS 1116. This practical expedient was available to rent concessions for which any reduction in lease payments affected payments originally due on or before June 30, 2021. The practical expedient permits a lessee to elect not to assess whether a COVID-19-related rent concession is a lease modification. A lessee that makes this election shall account for any change in lease payments resulting from the COVID-19-related rent concession the same way it would account for the change applying K-IFRS 1116 if the change were not a lease modification.

The practical expedient applies only to rent concessions occurring as a direct consequence of COVID-19 and only if all of the following conditions are met:

- The change in lease payments results in revised consideration for the lease that is substantially the same as, or less than, the consideration for the lease immediately preceding the change.
- Any reduction in lease payments affects only payments originally due on or before June 30, 2022 (a rent concession meets this condition if it results in reduced lease payments on or before June 30, 2022, and increased lease payments that extend beyond June 30, 2022).
- There is no substantive change to other terms and conditions of the lease.

- Impact of the initial application of Interest Rate Benchmark Reform

In the current year, the Company adopted the Phase 2 amendments Interest Rate Benchmark Reform—Amendments to K-IFRS 1109, K-IFRS 1039, K-IFRS 1107, K-IFRS 1104 and K-IFRS 1116. Adopting these amendments enables the Company to reflect the effects of transitioning from InterBank Offered Rates (IBOR) to alternative benchmark interest rates (also referred to as 'risk-free rates' or RFRs) without giving rise to accounting impacts that would not provide useful information to users of separate financial statements.

Details of the derivative and non-derivative financial instruments affected by the interest rate benchmark reform together with a summary of the actions taken by the Company to manage the risks relating to the reform and the accounting impact, including the impact on hedge accounting relationships, appear in Note 34.

The amendments are relevant for the following types of hedging relationships and financial instruments of the Company, all of which extend beyond 2021:

- Fair value hedges where London InterBank Offered Rate ("LIBOR")-linked derivatives are designated as a fair value hedge of fixed-rate debt in respect of the GBP LIBOR risk component
- Cash flow hedges where IBOR-linked derivatives are designated as a cash flow hedge of IBOR-linked bank borrowings
- Bills or exchange and lease liabilities, which reference LIBORs and are subject to the interest rate benchmark reform

The Company will continue to apply the Phase 1 amendments to K-IFRS 1109 until the uncertainty arising from the interest rate benchmark reform with respect to the timing and the amount of the underlying cash flows to which the Company is exposed ends. The Company expects this uncertainty will continue until the Company's contracts that reference IBORs are amended to specify the date on which the interest rate benchmark will be replaced and the basis for the cash flows of the alternative benchmark rate are determined, including any fixed spread.

As a result of the Phase 2 amendments:

- When the contractual terms of the Company's bank borrowings are amended as a direct consequence of the interest rate benchmark reform and the new basis for determining the contractual cash flows is economically equivalent to the basis immediately preceding the change, the Company changes the basis for determining the contractual cash flows prospectively by revising the effective interest rate. If additional changes are made, which are not directly related to the reform, the applicable requirements of K-IFRS 1109 are applied to the other changes.
- When a lease is modified as a direct consequence of the interest rate benchmark reform and the new basis for determining the lease payments is economically equivalent to the previous basis, the Company remeasures the lease liability to reflect the revised lease payments discounted using a revised discount rate that reflects the change in the basis for determining the contractual cash flows.
- When changes are made to the hedging instruments, hedged item and hedged risk as a result of the interest rate benchmark reform, the Company updates the hedge documentation without discontinuing the hedging relationship and, in the case of a cash flow hedge, the amount accumulated in the cash flow hedge reserve is deemed to be based on SONIA.
- For the Company's fair value hedges of a non-contractually specified benchmark component of interest rate risk, on transition to the alternative benchmark rate, if that risk rate is not separately identifiable at the date of designation, it will be deemed to have met the separately identifiable requirement at that date, if the Company reasonably expects the term specific interest rate component will be separately identifiable within a period of 24 months from the date the alternative benchmark rate is first designated, regardless of the term for which the risk is designated in that hedge. The 24-month period applies on a rate-by-rate basis.

4) The Company has not applied the following new and revised K-IFRSs that have been issued, but are not yet effective

- K-IFRS 1117 Insurance Contracts

K-IFRS 1117 establishes the principles for the recognition, measurement, presentation and disclosure of insurance contracts and supersedes IFRS 4 Insurance Contracts.

K-IFRS 1117 outlines a general model, which is modified for insurance contracts with direct participation features, described as the variable fee approach. The general model is simplified if certain criteria are met by measuring the liability for remaining coverage using the premium allocation approach.

The general model uses current assumptions to estimate the amount, timing and uncertainty of future cash flows and explicitly measures the cost of that uncertainty. It takes into account market interest rates and the impact of policyholders' options and guarantees.

In June 2020, the Board issued amendments to K-IFRS 1117 to address concerns and implementation challenges that were identified after K-IFRS 1117 was published. The amendments defer the date of initial application of K-IFRS 1117 (incorporating the amendments) to annual reporting periods beginning on or after January 1, 2023. At the same time, the Board issued Extension of the Temporary Exemption from Applying K-IFRS 1109 (amendments to K-IFRS 1104) that extends the fixed expiry date of the temporary exemption from applying K-IFRS 1109 in K-IFRS 1104 to annual reporting periods beginning on or after January 1, 2023.
K-IFRS 1117 must be applied retrospectively unless impracticable, in which case, the modified retrospective approach or the fair value approach is applied.

For the purpose of the transition requirements, the date of initial application is the start of the annual reporting period in which the entity first applies the standard, and the transition date is the beginning of the period immediately preceding the date of initial application.

- K-IFRS 1001 Presentation of Financial Statements

The amendments to K-IFRS 1001 affect only the presentation of liabilities as current or non-current in the statements of financial position and not the amount or timing of recognition of any asset, liability, income or expenses or the information disclosed about those items.

The amendments clarify that the classification of liabilities as current or non-current is based on rights that are in existence at the end of the reporting period; specify that classification is unaffected by expectations about whether an entity will exercise its right to defer settlement of a liability; explain that rights are in existence if covenants are complied with at the end of the reporting period; and introduce a definition of 'settlement' to make clear that settlement refers to the transfer to the counterparty of cash, equity instruments, other assets or services.

The amendments are applied retrospectively for annual periods beginning on or after January 1, 2023, with early application permitted.

- K-IFRS 1103 Business Combinations - Reference to the Conceptual Framework (Amendment)

The amendments update K-IFRS 1103 so that it refers to the Conceptual Framework (2018) instead of the Framework (2007).

They also add to K-IFRS 1103 a requirement that for obligations within the scope of K-IFRS 1037, an acquirer applies K-IFRS 1037 to determine whether at the acquisition date a present obligation exists as a result of past events. For a levy that would be within the scope of K-IFRS 2121 Levies, the acquirer applies K-IFRS 2121 to determine whether the obligating event that gives rise to a liability to pay the levy has occurred by the acquisition date.

Finally, the amendments add an explicit statement that an acquirer does not recognize contingent assets acquired in a business combination.

The amendments are effective for business combinations for which the date of acquisition is on or after the beginning of the first annual period beginning on or after January 1, 2022. Early application is permitted if an entity also applies all other updated references (published together with the updated Conceptual Framework) at the same time or earlier.

- K-IFRS 1016 Property, Plant and Equipment - Proceeds before Intended Use (Amendment)

The amendment prohibits deducting from the cost of an item of property, plant and equipment any proceeds from selling items produced before that asset is available for use, i.e., proceeds while bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management. Consequently, an entity recognizes such sales proceeds and related costs in profit or loss. The entity measures the cost of those items in accordance with K-IFRS 1002 Inventories.

The amendment also clarifies the meaning of 'testing whether an asset is functioning properly.' K-IFRS 1016 now specifies this as assessing whether the technical and physical performance of the asset is such that it is capable of being used in the production or supply of goods or services for rental to others or for administrative purposes.

If not presented separately in the statements of comprehensive income, the financial statements shall disclose the amounts of proceeds and cost included in profit or loss that relate to items produced that are not an output of the entity's ordinary activities and which line item(s) in the statements of comprehensive income include(s) such proceeds and cost.

The amendment is applied retrospectively, but only to items of property, plant and equipment that are brought to the location and condition necessary for them to be capable of operating in the manner intended by management on or after the beginning of the earliest period presented in the financial statements in which the entity first applies the amendment.

The entity shall recognize the cumulative effect of initially applying the amendment as an adjustment to the opening balance of retained earnings (or other component of equity, as appropriate) at the beginning of that earliest period presented. The amendment is effective for annual periods beginning on or after January 1, 2022, with early application permitted.

- K-IFRS 1037 Provisions, Contingent Liabilities and Contingent Assets - Onerous Contracts - Cost of Fulfilling a Contract (Amendment)

The amendment specifies that the 'cost of fulfilling' a contract comprises the 'costs that relate directly to the contract.' Costs that relate directly to a contract consist of both the incremental costs of fulfilling that contract (examples would be direct labor or materials) and an allocation of other costs that relate directly to fulfilling contracts (an example would be the allocation of the depreciation charge for an item of property, plant and equipment used in fulfilling the contract).

The amendment applies to contracts for which the entity has not yet fulfilled all of its obligations at the beginning of the annual reporting period in which the entity first applies the amendment. Comparatives are not restated. Instead, the entity shall recognize the cumulative effect of initially applying the amendment as an adjustment to the opening balance of retained earnings or other component of equity, as appropriate, at the date of initial application.

The amendment is effective for annual periods beginning on or after January 1, 2022, with early application permitted.

- Annual Improvements to K-IFRSs 2018–2020

The annual improvements include amendments to four standards, such as K-IFRS 1101 First-Time Adoption of K-IFRSs, K-IFRS 1109 Financial Instruments, K-IFRS 1116 Leases and K-IFRS 1041 Agriculture.

① K-IFRS 1101 First-Time Adoption of K-IFRSs (Amendment)

The amendment provides additional relief to a subsidiary that becomes a first-time adopter later than its parent in respect of accounting for cumulative translation differences. As a result of the amendment, a subsidiary that uses the exemption in K-IFRS 1101 paragraph D16(1) can now also elect to measure cumulative translation differences for all foreign operations at the carrying amount that would be included in the parent's consolidated financial statements, based on the parent's date of transition to K-IFRSs, if no adjustments were made for consolidation procedures and for the effects of the business combination in which the parent acquired the subsidiary. A similar election is available to an associate or a joint venture that uses the exemption in K-IFRS 1101 paragraph D16(1).

The amendment is effective for annual periods beginning on or after January 1, 2022, with early application permitted.

② K-IFRS 1109 Financial Instruments (Amendment)

The amendment clarifies that in applying the '10 percent' test to assess whether to derecognize a financial liability, an entity includes only fees paid or received between the entity (the borrower) and the lender, including fees paid or received by either the entity or the lender on the other's behalf.

The amendment is applied prospectively to modifications and exchanges that occur on or after the date the entity first applies the amendment.

The amendment is effective for annual periods beginning on or after January 1, 2022, with early application permitted.

③ K-IFRS 1116 Leases (Amendment)

The amendment removes the illustration of the reimbursement of leasehold improvements.

As the amendment to K-IFRS 1116 is only regarded as an illustrative example, no effective date is stated.

④ K-IFRS 1041 Agriculture (Amendment)

The amendment removes the requirement in K-IFRS 1041 for entities to exclude cash flows for taxation when measuring fair value. This aligns the fair value measurement in K-IFRS 1041 with the requirements of K-IFRS 1113 Fair Value Measurement to use internally consistent cash flows and discount rates and enables preparers to determine whether to use pretax or posttax cash flows and discount rates for the most appropriate fair value measurement.

The amendment is applied prospectively, i.e., for fair value measurements on or after the date an entity initially applies the amendment.

The amendment is effective for annual periods beginning on or after January 1, 2022, with early application permitted.

-K-IFRS 1001 Presentation of Financial Statements and IFRS Practice Statement 2 Making Materiality Judgements - Disclosure of Accounting Policies (Amendments)

The amendments change the requirements in K-IFRS 1001 with regard to disclosure of accounting policies. The amendments replace all instances of the term 'significant accounting policies' with 'material accounting policy information.' Accounting policy information is material if, when considered together with other information included in an entity's financial statements, it can reasonably be expected to influence decisions that the primary users of general-purpose financial statements make on the basis of those financial statements.

The supporting paragraphs in K-IFRS 1001 are also amended to clarify that accounting policy information that relates to immaterial transactions, other events or conditions is immaterial and need not be disclosed. Accounting policy information may be material because of the nature of the related transactions, other events or conditions even if the amounts are immaterial. However, not all accounting policy information relating to material transactions, other events or conditions is itself material.
The Board has also developed guidance and examples to explain and demonstrate the application of the 'four-step materiality process' described in IFRS Practice Statement 2.

The amendments to K-IFRS 1001 are effective for annual periods beginning on or after January 1, 2023, with earlier application permitted and are applied prospectively. The amendments to IFRS Practice Statement 2 do not contain an effective date or transition requirements.

-K-IFRS 1008 Accounting Polices, Changes in Accounting Estimates and Errors - Definition of Accounting Estimates (Amendment)

The amendment replaces the definition of a change in accounting estimates with the definition of accounting estimates. Under the new definition, accounting estimates are "monetary amounts in the financial statements that are subject to measurement uncertainty."

The definition of a change in accounting estimates was deleted. However, the Board retained the concept of changes in accounting estimates in the standard with the following clarifications:

- A change in accounting estimate that results from new information or new developments is not the correction of an error.
- The effects of a change in an input or a measurement technique used to develop an accounting estimate are changes in accounting estimates if they do not result from the correction of prior-period errors.

The Board added two examples (Examples 4 and 5) to the guidance on implementing K-IFRS 1008, which accompanies the standard. The Board has deleted one example (Example 3), as it could cause confusion in light of the amendment.

The amendment is effective for annual periods beginning on or after January 1, 2023, to changes in accounting policies and changes in accounting estimates that occur on or after the beginning of that period, with earlier application permitted.

-K-IFRS 1012 Income Taxes - Deferred Tax related to Assets and Liabilities arising from a Single Transaction (Amendment)

The amendment introduces a further exception from the initial recognition exemption. Under the amendment, an entity does not apply the initial recognition exemption for transactions that give rise to equal taxable and deductible temporary differences.

Depending on the applicable tax law, equal taxable and deductible temporary differences may arise on initial recognition of an asset and liability in a transaction that is not a business combination and affects neither accounting nor taxable profit. For example, this may arise upon recognition of a lease liability and the corresponding right-of-use asset applying K-IFRS 1116 at the commencement date of a lease.

Following the amendment to K-IFRS 1012, an entity is required to recognize the related deferred tax asset and liability, with the recognition of any deferred tax asset being subject to the recoverability criteria in K-IFRS 1012.

The Board also adds an illustrative example to K-IFRS 1012 that explains how the amendment is applied.
The amendment applies to transactions that occur on or after the beginning of the earliest comparative period presented. In addition, at the beginning of the earliest comparative period, an entity recognizes:

- A deferred tax asset (to the extent that it is probable that taxable profit will be available against which the deductible temporary difference can be utilized) and a deferred tax liability for all deductible and taxable temporary differences associated with:
    - Right-of-use assets and lease liabilities
    - Decommissioning, restoration and similar liabilities and the corresponding amounts recognized as part of the cost of the related asset
- The cumulative effect of initially applying the amendment as an adjustment to the opening balance of retained earnings (or other component of equity, as appropriate) at that date

The amendment is effective for annual reporting periods beginning on or after January 1, 2023, with earlier application permitted.

(2) Business Combination

Acquisitions of businesses are accounted for using the acquisition method. The consideration transferred in a business combination is measured at fair value, which is calculated as the sum of the acquisition-date fair values of the assets transferred by the Company, liabilities incurred by the Company to the former owners of the acquiree and the equity interest issued by the Company in exchange for control of the acquiree. Acquisition-related costs are recognized in profit or loss as incurred.

At the acquisition date, the identifiable assets acquired and the liabilities assumed are recognized at their fair value at the acquisition date, except that:

- Deferred tax assets or liabilities and liabilities or assets related to employee benefit arrangements are recognized and measured in accordance with K-IFRS 1012 Income Taxes and K-IFRS 1019 Employee Benefits, respectively.
- Liabilities or equity instruments related to share-based payment arrangements of the acquiree or share-based payment arrangements of the Company entered into to replace share-based payment arrangements of the acquiree are measured in accordance with K-IFRS 1102 Share-Based Payment at the acquisition date.
- Assets (or disposal groups) that are classified as held for sale in accordance with K-IFRS 1105 Non-Current Assets Held for Sale and Discontinued Operations are measured in accordance with that

standard.

Goodwill is measured as the excess of the sum of a) the consideration transferred, b) the amount of any non-controlling interests in the acquiree and c) the fair value of the acquirer's previously held equity interest in the acquiree (if any) over the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed. If, after reassessment, the net of the acquisition-date amounts of the identifiable assets acquired and liabilities assumed exceeds the sum of a) the consideration transferred, b) the amount of any non-controlling interests in the acquiree and c) the fair value of the acquirer's previously held interest in the acquiree (if any); the excess is recognized immediately in profit or loss as a bargain purchase gain.

When the consideration transferred by the Company in a business combination includes contingent consideration arrangement, the contingent consideration is measured at its acquisition-date fair value and included as part of the consideration transferred in a business combination. Changes in fair value of the contingent consideration that qualify as measurement period adjustments are adjusted retrospectively, with corresponding adjustments against goodwill. Measurement period adjustments are adjustments that arise from additional information obtained during the ‘measurement period’ (which cannot exceed one year from the acquisition date) about facts and circumstances that existed at the acquisition date.

The subsequent accounting for changes in the fair value of the contingent consideration that do not qualify as measurement-period adjustments depends on how the contingent consideration is classified. Contingent consideration that is classified as equity is not remeasured at subsequent reporting dates and its subsequent settlement is accounted for within equity. Other contingent consideration is remeasured to fair value at subsequent reporting dates with changes in fair value recognized in profit or loss.

When a business combination is achieved in stages, the Company’s previously held interests (including joint operations) in the acquired entity are remeasured to its acquisition-date fair value and the resulting gain or loss, if any, is recognized in profit or loss. Amounts arising from interests in the acquiree prior to the acquisition date that have previously been recognized in other comprehensive income are reclassified to profit or loss, where such treatment would be appropriate if that interest were disposed of.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Company reports provisional amounts for the items for which the accounting is incomplete. Those provisional amounts are adjusted during the measurement period (see above), or additional assets or liabilities are recognized, to reflect new information obtained about facts and circumstances that existed as of the acquisition date that, if known, would have affected the amounts recognized as of that date.

(3) Foreign currencies

In preparing the separate financial statements of the Company entities, transactions in currencies other than the entity’s functional currency (foreign currencies) are recognized at the rates of exchange prevailing at the dates of the transactions. At the end of each reporting period, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Non-monetary items carried at fair value that are denominated in foreign currencies are retranslated at the rates prevailing at the date when the fair value was determined. Non-monetary items that are measured in terms of historical cost in a foreign currency are not retranslated.

Exchange differences are recognized in profit or loss in the period in which they arise, except for:

• Exchange differences on foreign currency borrowings relating to assets under construction for future productive use, which are included in the cost of those assets when they are regarded as an adjustment to interest costs on those foreign currency borrowings; and

• Exchange differences on transactions entered into in order to hedge certain foreign currency risks

(4) Cash and cash equivalents

Cash and cash equivalents include petty cash, bank deposits and other highly liquid short-term investments with maturity of less than three months at the time of acquisition. The overdraft is included in the short-term borrowings account in the separate statements of financial position.

(5) Financial assets and financial liabilities are recognized in the Company's separate statements of financial position when the Company becomes a party to the contractual provisions of the instrument.
Financial assets and financial liabilities are initially measured at fair value. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets and financial liabilities at fair value through profit or loss (FVTPL)) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at FVTPL are recognized immediately in profit or loss.

(6) Financial assets

All regular-way purchases or sales of financial assets are recognized and derecognized on a trade-date basis. Regular-way purchases or sales are purchases or sales of financial assets that require delivery of assets within the timeframe established by regulation or convention in the marketplace.

All recognized financial assets are measured subsequently in their entirety at either amortized cost or fair value, depending on the classification of the financial assets.

1) Classification of financial assets

Debt instruments that meet the following conditions are measured subsequently at amortized cost:

- The financial asset is held within a business model, whose objective is to hold financial assets in order to collect contractual cash flows.
- The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Debt instruments that meet the following conditions are measured subsequently at fair value through other comprehensive income (FVTOCI):

- The financial asset is held within a business model, whose objective is achieved by both collecting contractual cash flows and selling the financial assets.
- The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

By default, all other financial assets are measured subsequently at FVTPL.

Despite the foregoing, the Company may make the following irrevocable election/designation at initial recognition of a financial asset:

- The Company may irrevocably elect to present subsequent changes in fair value of an equity investment in other comprehensive income if certain criteria are met (see (1–3) below).
- The Company may irrevocably designate a debt investment that meets the amortized cost or FVTOCI criteria as measured at FVTPL if doing so eliminates or significantly reduces an accounting mismatch (see (1–4) below).

1-1) Amortized cost and effective interest method

The effective interest method is a method of calculating the amortized cost of a debt instrument and of allocating interest income over the relevant period. For financial assets other than purchased or originated credit-impaired financial assets (i.e., assets that are credit-impaired on initial recognition), the effective interest rate is the rate that exactly discounts estimated future cash receipts (including all fees and points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts), excluding expected credit losses (ECLs), through the expected life of the debt instrument or, where appropriate, a shorter period to the gross carrying amount of the debt instrument on initial recognition. For purchased or originated credit-impaired financial assets, a credit-adjusted effective interest rate is calculated by discounting the estimated future cash flows, including ECLs, to the amortized cost of the debt instrument on initial recognition.

The amortized cost of a financial asset is the amount at which the financial asset is measured at initial recognition, minus the principal repayments, plus the cumulative amortization using the effective interest method of any difference between that initial amount and the maturity amount, adjusted for any loss allowance. The gross carrying amount of a financial asset is the amortized cost of a financial asset before adjusting any loss allowance.

Interest income is recognized using the effective interest method for debt instruments measured subsequently at amortized cost and at FVTOCI. For financial assets other than purchased or originated credit-impaired financial assets, interest income is calculated by applying the effective interest rate to the gross carrying amount of a financial asset, except for financial assets that have subsequently become credit-impaired (see below). For financial assets that have subsequently become credit-impaired, interest income is recognized by applying the effective interest rate to the amortized cost of the financial asset. If, in subsequent reporting periods, the credit risk on the credit-impaired financial instrument improves so that the financial asset is no longer credit-impaired, interest income is recognized by applying the effective interest rate to the gross carrying amount of the financial asset.

For purchased or originated credit-impaired financial assets, the Company recognizes interest income by applying the credit-adjusted effective interest rate to the amortized cost of the financial asset from initial recognition. The calculation does not revert to the gross basis even if the credit risk of the financial asset subsequently improves so that the financial asset is no longer credit-impaired.

Interest income is recognized in profit or loss and is included in the "finance income - interest income" line item.

1-2) Debt instruments classified as at FVTOCI

The corporate bonds held by the Company are classified as at FVTOCI. Fair value is determined in the manner described in Note 34. The corporate bonds are initially measured at fair value, plus transaction costs. Subsequently, changes in the carrying amount of these corporate bonds as a result of foreign exchange gains and losses, impairment gains or losses and interest income calculated using the effective interest method are recognized in profit or loss. The amounts that are recognized in profit or loss are the same as the amounts that would have been recognized in profit or loss if these corporate bonds had been measured at amortized cost. All other changes in the carrying amount of these corporate bonds are recognized in other comprehensive income and accumulated under the heading of investments revaluation reserve. When these corporate bonds are derecognized, the cumulative gains or losses previously recognized in other comprehensive income are reclassified to profit or loss.

1-3) Equity instruments designated as at FVTOCI

On initial recognition, the Company may make an irrevocable election (on an instrument-by-instrument basis) to designate investments in equity instruments as at FVTOCI. Designation at FVTOCI is not permitted if the equity investment is held for trading or if it is contingent consideration recognized by an acquirer in a business combination.

Investments in equity instruments at FVTOCI are initially measured at fair value, plus transaction costs. Subsequently, they are measured at fair value with gains and losses arising from changes in fair value recognized in other comprehensive income and accumulated in the investments revaluation reserve. The cumulative gain or loss is not reclassified to profit or loss on disposal of the equity investments; instead, it is transferred to retained earnings.

Dividends on these investments in equity instruments are recognized in profit or loss in accordance with K-IFRS 1109, unless the dividends clearly represent a recovery of part of the cost of the investment. Dividends are included in the ‘finance income’ line item in profit or loss.

The Company designated all investments in equity instruments that are not held for trading as at FVTOCI on initial recognition.

A financial asset is held for trading if:

- It has been acquired principally for the purpose of selling it in the near term.
- On initial recognition, it is part of a portfolio of identified financial instruments that the Company manages together and has evidence of a recent actual pattern of short-term profit-taking.
- It is a derivative (except for a derivative that is a financial guarantee contract or a designated and effective hedging instrument).

1–4) Financial assets at FVTPL

Financial assets that do not meet the criteria for being measured at amortized cost or FVTOCI are measured at FVTPL. Specifically:

- Investments in equity instruments are classified as at FVTPL, unless the Company designates an equity investment that is neither held for trading nor a contingent consideration arising from a business combination as at FVTOCI on initial recognition (see (1–3) above).
- Debt instruments that do not meet the amortized cost criteria or the FVTOCI criteria (see (1–1) and (1–2) above) are classified as at FVTPL. In addition, debt instruments that meet either the amortized cost criteria or the FVTOCI criteria may be designated as at FVTPL upon initial recognition if such designation eliminates or significantly reduces a measurement or recognition inconsistency (so called 'accounting mismatch') that would arise from measuring assets or liabilities or recognizing the gains and losses on them on different bases. The Company has not designated any debt instruments as at FVTPL.

Financial assets at FVTPL are measured at fair value at the end of each reporting period, with any fair value gains or losses recognized in profit or loss to the extent they are not part of a designated hedging relationship (see hedge accounting policy). The net gain or loss recognized in profit or loss includes any dividend or interest earned on the financial asset and is included in the 'other gains and losses' line item. Fair value is determined in the manner described in Note 35.

2) Foreign exchange gains and losses

The carrying amount of financial assets that are denominated in a foreign currency is determined in that foreign currency and translated at the spot rate at the end of each reporting period. Specifically;

- For financial assets measured at amortized cost that are not part of a designated hedging relationship, exchange differences are recognized in profit or loss in the 'other gains and losses' line item;
- For debt instruments measured at FVTOCI that are not part of a designated hedging relationship, exchange differences on the amortized cost of the debt instrument are recognized in profit or loss in the 'other gains and losses' line item. As the foreign currency element recognized in profit or loss is the same as if it was measured at amortized cost, the residual foreign currency element based on the translation of the carrying amount (at fair value) is recognized in other comprehensive income in the investments revaluation reserve;
- For financial assets measured at FVTPL that are not part of a designated hedging relationship, exchange differences are recognized in profit or loss in the 'other gains and losses' line item as part of the fair value gain or loss ; and
- For equity instruments measured at FVTOCI, exchange differences are recognized in other comprehensive income in the investments revaluation reserve.

3) Impairment of financial assets

The Company recognizes a loss allowance for ECLs on investments in debt instruments that are measured at amortized cost or at FVTOCI, lease receivables, trade receivables and contract assets, as well as on financial guarantee contracts. The amount of ECLs is updated at each reporting date to reflect changes in credit risk since initial recognition of the respective financial instrument.

The Company always recognizes lifetime ECL for trade receivables, contract assets and lease receivables. The ECLs on these financial assets are estimated using a provision matrix based on the Company's historical credit loss experience, adjusted for factors that are specific to the debtors, general economic conditions and an assessment of both the current, as well as the forecast direction of conditions at the reporting date, including time value of money, where appropriate.

For all other financial instruments, the Company recognizes lifetime ECL when there has been a significant increase in credit risk since initial recognition. However, if the credit risk on the financial instrument has not increased significantly since initial recognition, the Company measures the loss allowance for that financial instrument at an amount equal to 12-month ECL.

Lifetime ECL represents the ECLs that will result from all possible default events over the expected life of a financial instrument. In contrast, 12-month ECL represents the portion of lifetime ECL that is expected to result from default events on a financial instrument that are possible within 12 months after the reporting date.

3-1) Significant increase in credit risk

In assessing whether the credit risk on a financial instrument has increased significantly since initial recognition, the Company compares the risk of a default occurring on the financial instrument at the reporting date with the risk of a default occurring on the financial instrument at the date of initial recognition. In making this assessment, the Company considers both quantitative information and qualitative information that is reasonable and supportable, including historical experience and forward-looking information that is available without undue cost or effort. Forward-looking information considered includes the future prospects of the industries, in which the Company’s debtors operate, obtained from economic expert reports, financial analysts, governmental bodies, relevant think-tanks and other similar organizations, as well as consideration of various external sources of actual and forecast economic information that relate to the Company’s core operations.

In particular, the following information is taken into account when assessing whether credit risk has increased significantly since initial recognition:

- An actual or expected significant deterioration in the financial instrument’s external (if available) or internal credit rating;
- Significant deterioration in external market indicators of credit risk for a particular financial instrument, e.g., a significant increase in the credit spread, the credit default swap prices for the debtor or the length of time or the extent to which the fair value of a financial asset has been less than its amortized cost;
- Existing or forecast adverse changes in business and financial or economic conditions that are expected to cause a significant decrease in the debtor’s ability to meet its debt obligations;
- An actual or expected significant deterioration in the operating results of the debtor;
- Significant increases in credit risk on other financial instruments of the same debtor;
- An actual or expected significant adverse change in the regulatory, economic or technological environment of the debtor that results in a significant decrease in the debtor’s ability to meet its debt obligations.

Irrespective of the outcome of the above assessment, the Company presumes that the credit risk on a financial asset has increased significantly since initial recognition when contractual payments are more than 30 days past due, unless the Company has reasonable information and supportable information that demonstrates otherwise.

Despite the foregoing, the Company assumes that the credit risk on a financial instrument has not increased significantly since initial recognition if the financial instrument is determined to have low credit risk at the reporting date. A financial instrument is determined to have low credit risk if:

(1) The financial instrument has a low risk of default.
(2) The debtor has a strong capacity to meet its contractual cash flow obligations in the near term.
(3) Adverse changes in economic and business conditions in the longer term may, but will not necessarily, reduce the ability of the borrower to fulfil its contractual cash flow obligations.

The Company considers a financial asset to have low credit risk when the asset has external credit rating of ‘investment grade’ in accordance with the globally understood definition or if an external rating is not available, the asset has an internal rating of ‘performing.’ Performing means that the counterparty has a strong financial position and there are no past-due amounts.

For financial guarantee contracts, the date that the Company becomes a party to the irrevocable commitment is considered to be the date of initial recognition for the purposes of assessing the financial instrument for impairment. In assessing whether there has been a significant increase in the credit risk since initial recognition of a financial guarantee contracts, the Company considers the changes in the risk that the specified debtor will default on the contract.
The Company regularly monitors the effectiveness of the criteria used to identify whether there has been a significant increase in credit risk and revises them as appropriate to ensure that the criteria are capable of identifying significant increase in credit risk before the amount becomes past due.

3-2) Definition of default

The Company considers the following as constituting an event of default for internal credit risk management purposes as historical experience indicates that financial assets that meet either of the following criteria are generally not recoverable:

Irrespective of the above analysis, the Company considers that default has occurred when a financial asset is more than 90 days past due, unless the Company has reasonable and supportable information to demonstrate that a more lagging default criterion is more appropriate.

3-3) Credit-impaired financial assets

A financial asset is credit-impaired when one or more events that have a detrimental impact on the estimated future cash flows of that financial asset have occurred. Evidence that a financial asset is credit-impaired includes observable data about the following events:

① Significant financial difficulty of the issuer or the borrower;
② A breach of contract, such as a default or past-due event (see (3-2) above);
③ The lender(s) of the borrower, for economic or contractual reasons relating to the borrower’s financial difficulty, having granted to the borrower a concession(s) that the lender(s) would not otherwise consider;
④ It is becoming probable that the borrower will enter bankruptcy or other financial reorganization; or
⑤ The disappearance of an active market for that financial asset because of financial difficulties.

3-4) Write-off policy

The Company writes off a financial asset when there is information indicating that the debtor is in severe financial difficulty and there is no realistic prospect of recovery, e.g., when the debtor has been placed under liquidation or has entered into bankruptcy proceedings, or in the case of trade receivables, when the amounts are over two years past due, whichever occurs sooner. Financial assets written off may still be subject to enforcement activities under the Company’s recovery procedures, taking into account legal advice, where appropriate. Any recoveries made are recognized in profit or loss.

3-5) Measurement and recognition of ECLs

The measurement of ECLs is a function of the probability of default, loss-given default (i.e., the magnitude of the loss if there is a default) and the exposure at default. The assessment of the probability of default and loss-given default is based on historical data adjusted by forward-looking information as described above.

As for the exposure at default, for financial assets, this is represented by the assets’ gross carrying amount at the reporting date; for financial guarantee contracts, the exposure includes the amount drawn down as at the reporting date, together with any additional amounts expected to be drawn down in the future by default date determined based on historical trend, the Company’s understanding of the specific future financing needs of the debtors and other relevant forward-looking information.

For financial assets, the ECL is estimated as the difference between all contractual cash flows that are due to the Company in accordance with the contract and all the cash flows that the Company expects to receive, discounted at the original effective interest rate. For a lease receivable, the cash flows used for determining the

ECLs are consistent with the cash flows used in measuring the lease receivable in accordance with K-IFRS 1116 Leases.

For a financial guarantee contract, as the Company is required to make payments only in the event of a default by the debtor in accordance with the terms of the instrument that is guaranteed, the expected loss allowance is the expected payments to reimburse the holder for a credit loss that it incurs, less any amounts that the Company expects to receive from the holder, the debtor or any other party.

If the Company has measured the loss allowance for a financial instrument at an amount equal to lifetime ECL in the previous reporting period, but determines at the current reporting date that the conditions for lifetime ECL are no longer met, the Company measures the loss allowance at an amount equal to 12-month ECL at the current reporting date, except for assets for which simplified approach was used.

The Company recognizes an impairment gain or loss in profit or loss for all financial instruments with a corresponding adjustment to their carrying amount through a loss allowance account, except for investments in debt instruments that are measured at FVTOCI, for which the loss allowance is recognized in other comprehensive income and accumulated in the investment revaluation reserve, and does not reduce the carrying amount of the financial asset in the separate statements of financial position.

4) Derecognition of financial assets

The Company derecognizes a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and, substantially, all the risks and rewards of ownership of the asset to another entity. If the Company neither transfers nor retains substantially all the risks and rewards of ownership and continues to control the transferred asset, the Company recognizes its retained interest in the asset and an associated liability for amounts it may have to pay. If the Company retains substantially all the risks and rewards of ownership of a transferred financial asset, the Company continues to recognize the financial asset and also recognizes a collateralized borrowing for the proceeds received.

On derecognition of a financial asset measured at amortized cost, the difference between the asset’s carrying amount and the sum of the consideration received and receivable is recognized in profit or loss. In addition, on derecognition of an investment in a debt instrument classified as at FVTOCI, the cumulative gain or loss previously accumulated in the investments revaluation reserve is reclassified to profit or loss. In contrast, on derecognition of an investment in equity instrument, which the Company has elected on initial recognition to measure at FVTOCI, the cumulative gain or loss previously accumulated in the investments revaluation reserve is not reclassified to profit or loss, but is transferred to retained earnings.

(7) Inventories

The acquisition costs of inventories are recognized, including both acquisition costs, conversion costs and other costs incurred, to bring the inventory to its current location.

Cost is a systematic amount of fixed and variable overhead, and is measured in the most appropriate method for each inventory category, and the unit cost measurement method is used by the individual method

In addition, inventories are measured at the lower of acquisition cost and net realizable value every subsequent period after acquisition. Net realizable value is the amount of additional cost of completion and sales expected from the expected selling price of the normal sales process, and the net realizable value is reevaluated in each subsequent period. If there is clear evidence that the circumstances that led to the reduction of inventories have been resolved or that the net realizable value has been increased due to changes in economic conditions, the valuation loss shall be reversed within the scope of not exceeding the initial carrying amount.

(8) Investments in associates and joint ventures

The Company's financial statements are separate financial statements in accordance with K-IFRS 1027, Separate Financial Statements, and separate financial statements are financial statements in which an investor with joint control or significant influence over the parent or investee applies either the cost method or the equity method specified in K-IFRS 1028 Investments in Associates and Joint Ventures.

The Company has accounted for investments in subsidiaries, associates and joint ventures by selecting the cost method in accordance with K-IFRS 1027. On the other hand, dividends received from subsidiaries, associates and joint ventures are recognized in profit or loss at the time the right to a dividend is confirmed.

Affiliates refer to entities in which we have significant influence, and significant influence is the ability to participate in decisions about financial and sales policies of an investee, not control or joint control of such policies.

A joint venture refers to a joint arrangement in which the parties that have joint control of the arrangement have rights to the net assets of the arrangement, and joint control is a contractual agreed-upon share of the control of the arrangement and exists only when a decision on the relevant activity requires consent from all parties who share control.

The Company determines whether or not to recognize impairment losses on investments in subsidiaries, associates and joint ventures in accordance with the requirements of Internal Auditing Standard 36. In the event of an impairment sign, the entire carrying amount of the investment in the related company and the joint venture is tested for impairment in accordance with K-IFRS 1036 Accounting Policies, Changes in Assets, compared with the recoverable amount (a larger of the fair value, less costs to sell, and the recoverable amount) is compared to the recoverable amount in accordance with K-IFRS 1036. The recognized impairment loss shall not be allocated to any assets (including goodwill) that constitute a part of the carrying amount of the investment in the associate and the joint venture. In addition, reversals of impairment losses are recognized as the recoverable amount of such investments is subsequently increased in accordance with K-IFRS 1036.

(9) Interests in joint operations

A joint operation is a joint arrangement, whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

When a company undertakes its activities under joint operations, the Company, as a joint operator, recognizes in relation to its interest in a joint operation:

- Its assets, including its share of any assets held jointly;
- Its liabilities, including its share of any liabilities incurred jointly;
- Its revenue from the sale of its share of the output arising from the joint operation;
- Its share of the revenue from the sale of the output by the joint operation; and
- Its expenses, including its share of any expenses incurred jointly.

The Company accounts for the assets, liabilities, revenues and expenses relating to its interest in a joint operation in accordance with the K-IFRSs applicable to the particular assets, liabilities, revenues and expenses.

When a company transacts with a joint operation in which the Company is a joint operator (such as a sale or contribution of assets), the Company is considered to be conducting the transaction with other parties to the joint operation, and gains and losses resulting from the transactions are recognized in the Company’s separate financial statements only to the extent of other parties’ interests in the joint operation.

When a company transacts with a joint operation in which the Company is a joint operator (such as a purchase of assets), the Company does not recognize its share of the gains and losses until it resells those assets to a third party.

(10) Goodwill

Goodwill resulting from an acquisition of a business is carried at cost as established at the date of acquisition of the business, less accumulated impairment losses, if any.

For the purpose of impairment testing, goodwill is allocated to each of the Company's cash-generating units (or groups of cash-generating units) that is expected to benefit from the synergies of the combination.

A cash-generating unit to which goodwill has been allocated is tested for impairment annually, or more frequently when there is indication that the unit may be impaired. If the recoverable amount of the cash-generating unit is less than its carrying amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit on a pro rata basis based on the carrying amount of each asset in the unit. Any impairment loss for goodwill is recognized directly in profit or loss. An impairment loss recognized for goodwill is not reversed in subsequent periods.

On disposal of the relevant cash-generating unit, the attributable amount of goodwill is included in the determination of the profit or loss on disposal.

(11) Property, plant and equipment

Property, plant and equipment are stated at cost, less subsequent accumulated depreciation and accumulated impairment losses. The cost of an item of property, plant and equipment is directly attributable to their purchase or construction, which includes any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management. It also includes the initial estimate of the costs of dismantling and removing the item and restoring the site at which it is located.

Subsequent costs are recognized in the carrying amount of an asset or as an asset if it is probable that future economic benefits associated with the assets will flow into the Company and the cost of the asset can be measured reliably. Routine maintenance and repairs are expensed as incurred.

The Company does not depreciate land and some tangible assets, and depreciation is computed using the straight-line method based on the estimated useful lives of the assets as follows:

| | Estimated useful lives (years) |
|---|---|
| Buildings | 25–40 |
| Structures | 40 |
| Furniture and fixtures | 4–25 |
| Machinery, vehicles, tools and equipment and other property | 3–20 |

The Company reviews the depreciation method and the estimated useful lives and residual values of property, plant and equipment at the end of each annual reporting period. If expectations differ from previous estimates, the changes are accounted for as a change in accounting estimate.

An item of property, plant and equipment is derecognized upon disposal or when no future economic benefits are expected to arise from the continued use of the assets. Any gain or loss arising from the disposal or retirement of an item of property, plant and equipment is determined as the difference between sales proceeds and the carrying amount of the asset and is recognized in profit or loss.

(12) Investment property

Investment property held to earn rentals and/or for capital appreciation (including property under construction for such purposes) is measured initially at its cost, including transaction costs. Subsequent to initial recognition, investment property is measured at acquisition cost, less accumulated depreciation and accumulated impairment losses.

Subsequent costs are recognized in the carrying amount of an asset, or as an asset, if it is probable that future economic benefits associated with the assets will flow into the Company and the cost of an asset can be measured reliably. Routine maintenance and repairs are expensed as incurred.

Among the investment properties, land is not depreciated. However, investment properties other than land are depreciated more than 25 to 40 years of their useful lives using the straight-line method. The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in estimate accounted for on a prospective basis.

An investment property is derecognized upon disposal or when the investment property is permanently withdrawn from use and no future economic benefits are expected from the disposal. Any gain or loss arising on derecognition of the property (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in profit or loss in the period in which the property is derecognized.

(13) Intangible assets

1) Intangible assets acquired separately

Intangible assets with finite useful lives that are acquired separately are carried at cost, less accumulated amortization and accumulated impairment losses. Amortization is recognized on a straight-line basis over their estimated useful lives. Intangible assets acquired separately compose of development costs, industrial property, software, membership, etc. They are amortized using the straight-line method for more than 5 to 10 years, with no residual value.

In relation to intangible assets with definite useful lives, the estimated useful life and amortization method are reviewed at the end of each annual reporting period, with the effect of any changes in estimate being accounted for as change in accounting estimates.

2) Internally generated intangible assets - research and development expenditure

Expenditure on research activities is recognized as an expense in the period in which it is incurred. Expenditure arising from development (or from the development phase of an internal project) is recognized as an intangible asset if, and only if, the development project is designed to produce new or substantially improved products, and the Company can demonstrate the technical and economic feasibility and measure reliably the resources attributable to the intangible asset during its development.

The amount initially recognized for internally generated intangible assets is the sum of the expenditure incurred from the date when the intangible asset first meets the recognition criteria. Where no internally generated intangible asset can be recognized, development expenditure is recognized in profit or loss in the period in which it is incurred.
Subsequent to initial recognition, internally generated intangible assets are reported at cost, less accumulated amortization and accumulated impairment losses, on the same basis as intangible assets that are acquired separately.

3) Intangible assets acquired in a business combination

Intangible assets that are acquired in a business combination are recognized separately from goodwill and are initially recognized at their fair value at the acquisition date (which is regarded as their cost). Subsequent to initial recognition, intangible assets acquired in a business combination are reported at cost, less accumulated amortization and accumulated impairment losses, on the same basis as intangible assets that are acquired separately.

4) Derecognition of intangible assets

An intangible asset is derecognized on disposal or when no future economic benefits are expected from its use or disposal. Gains or losses arising from derecognition of an intangible asset, measured as the difference between the net disposal proceeds and the carrying amount of the asset, are recognized in profit or loss when the asset is derecognized.

(14) Impairment of tangible and intangible assets other than goodwill

At the end of each reporting period, the Company reviews the carrying amounts of its tangible and intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any). Where it is not possible to estimate the recoverable amount of an individual asset, the Company estimates the recoverable amount of the cash-generating unit to which the asset belongs. Where a reasonable and consistent basis of allocation can be identified, corporate assets are also allocated to individual cash-generating units, or otherwise, they are allocated to the smallest group of cash-generating units for which a reasonable and consistent allocation basis can be identified.

Intangible assets with indefinite useful lives and intangible assets not yet available for use are tested for impairment at least annually and whenever there is an indication that the asset may be impaired.

Recoverable amount is the higher of fair value, less costs to sell, or value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pretax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset (or a cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (or the cash-generating unit) is reduced to its recoverable amount. An impairment loss is recognized immediately in profit or loss, unless the relevant asset is carried at a revalued amount, in which case, the impairment loss is treated as a revaluation decrease.

Where an impairment loss subsequently reverses, the carrying amount of the asset (or a cash-generating unit) is increased to the revised estimate of its recoverable amount so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset (or the cash-generating unit) in prior years. A reversal of an impairment loss is recognized immediately in profit or loss.

(15) Financial liabilities and equity instruments

1) Classification as debt or equity

Debt and equity instruments are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangement and the definitions of financial liability and an equity instrument.

2) Equity instruments

An equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities. Equity instruments issued by the Company are recognized at the proceeds received, net of direct issue costs.

Repurchase of the Company’s own equity instruments is recognized and deducted directly in equity. No gain or loss is recognized in profit or loss on the purchase, sale, issue or cancellation of the Company’s own equity instruments.

3) Financial liabilities

Financial liabilities are recognized when the Company becomes a party to the contract. Financial liabilities are measured at fair value on initial recognition. Transaction costs directly related to the issue of financial liabilities are deducted or added to the fair value of the financial liability upon initial recognition. However, transaction costs directly related to the issuance of financial liabilities at FVTPL are recognized as immediate profit or loss.

All financial liabilities are measured subsequently at amortized cost using the effective interest method or at FVTPL. However, financial liabilities that arise when a transfer of a financial asset does not qualify for derecognition or when the continuing involvement approach applies, and financial guarantee contracts issued by the Company, are measured in accordance with the specific accounting policies set out below.

4) Financial liabilities at FVTPL

Financial liabilities are classified as at FVTPL when the financial liability is (i) contingent consideration of an acquirer in a business combination, (ii) held for trading or (iii) it is designated as at FVTPL.

A financial liability is classified as held for trading if:

- It has been acquired principally for the purpose of repurchasing it in the near term.
- On initial recognition, it is part of a portfolio of identified financial instruments that the Company manages together and has a recent actual pattern of short-term profit-taking.
- It is a derivative that is not designated and effective as a hedging instrument.

A financial liability other than a financial liability held for trading or contingent consideration of an acquirer in a business combination may be designated as at FVTPL upon initial recognition if:

- Such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise.
- The financial liability forms part of a group of financial assets or financial liabilities or both, which is managed and its performance is evaluated on a fair value basis, in accordance with the Company's documented risk management or investment strategy, and information about the grouping is provided internally on that basis; or
- It forms part of a contract containing one or more embedded derivatives, and K-IFRS 1109 permits the entire combined contract to be designated as at FVTPL.

Financial liabilities at FVTPL are measured at fair value, with any gains or losses arising on changes in fair value recognized in profit or loss to the extent that they are not part of a designated hedging relationship. The net gain or loss recognized in profit or loss incorporates any interest paid on the financial liability and is included in the ‘other gains and losses’ line item in profit or loss.

However, for financial liabilities that are designated as at FVTPL, the amount of change in the fair value of the financial liability that is attributable to changes in the credit risk of that liability is recognized in other comprehensive income, unless the recognition of the effects of changes in the liability’s credit risk in other comprehensive income would create or enlarge an accounting mismatch in profit or loss. The remaining amount of change in the fair value of liability is recognized in profit or loss. Changes in fair value attributable to a financial liability’s credit risk that are recognized in other comprehensive income are not subsequently reclassified to profit or loss; instead, they are transferred to retained earnings upon derecognition of the financial liability.

Gains or losses on financial guarantee contracts issued by the Company that are designated by the Company as at FVTPL are recognized in profit or loss.

Fair value is determined in the manner described in Note 35.

5) Financial liabilities measured subsequently at amortized cost

Other financial liabilities are subsequently measured at amortized cost using the effective interest method, and interest costs are recognized using the effective interest method.

The effective interest method is to calculate the amortized cost of a financial liability and to allocate the interest expense over the relevant period. The effective interest rate is the interest rate that accurately matches the present value of the expected net carrying amount of the expected future cash payment, including fees and points paid or received (if appropriate) in the expected life of the financial liability (which is a major component of the effective interest rate), transaction costs and other surcharges or discounts.

6) Financial guarantee contracts

A financial guarantee contract is a contract that requires the issuer to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payments when due in accordance with the terms of a debt instruments.

Financial guarantee contract liabilities are measured initially at their fair values and, if not designated as at FVTPL, do not arise from a transfer of an asset, are measured subsequently at the higher of:

- The amount of the loss allowance determined in accordance with K-IFRS 1109.
- The amount recognized initially less, where appropriate, cumulative amortization recognized in accordance with K-IFRS 1115.

7) Foreign exchange gains and losses

For financial liabilities that are denominated in a foreign currency and are measured at amortized cost at the end of each reporting period, the foreign exchange gains and losses are determined based on the amortized cost of the instruments. These foreign exchange gains and losses are recognized in the 'other gains and losses' line item in profit or loss for financial liabilities that are not part of a designated hedging relationship. For those which are designated as hedging instruments for a hedge of foreign currency risk, foreign exchange gains and losses are recognized in other comprehensive income and accumulated in a separate component of equity.

The fair value of financial liabilities denominated in a foreign currency is determined in that foreign currency and translated at the spot rate at the end of the reporting period. For financial liabilities that are measured as at FVTPL, the foreign exchange component forms part of the fair value gains or losses and is recognized in profit or loss for financial liabilities that are not part of a designated hedging relationship.

8) Derecognition of financial liabilities

The Company removes the financial liability only if our obligations have been fulfilled, canceled or expired. The difference between the carrying amount of the financial liability derecognized and the consideration paid and payable is recognized in profit or loss.

(16) Lease

① The Company as lessee

The Company assesses whether a contract is or contains a lease, at inception of the contract. The Company recognizes a right-of-use asset and a corresponding lease liability with respect to all lease arrangements in which it is the lessee, except for short-term leases (defined as leases with a lease term of 12 months or less) and leases of low-value assets (such as tablets and personal computers, small items of office furniture and telephones). For these leases, the Company recognizes the lease payments as an operating expense on a straight-line basis over the term of the lease, unless another systematic basis is more representative of the time pattern, in which economic benefits from the leased assets are consumed.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the rate implicit in the lease. If this rate cannot be readily determined, the Company uses its incremental borrowing rate.

The incremental borrowing rate depends on the term, currency and start date of the lease and is determined based on a series of inputs, including the RFR based on government bond rates; a country-specific risk adjustment; a credit risk adjustment based on bond yields; and an entity-specific adjustment when the risk profile of the entity that enters into the lease is different to that of the Group and the lease does not benefit from a guarantee from the Company.

Lease payments included in the measurement of the lease liability comprise:

- Fixed lease payments (including in-substance fixed payments), less any lease incentives receivable;
- Variable lease payments that depend on an index or rate, initially measured using the index or rate at the commencement date;

- The amount expected to be payable by the lessee under residual value guarantees;
- The exercise price of purchase options, if the lessee is reasonably certain to exercise the options; and
- Payments of penalties for terminating the lease, if the lease term reflects the exercise of an option to terminate the lease.

The lease liability is presented as a separate line in the separate statements of financial position.

The lease liability is subsequently measured by increasing the carrying amount to reflect interest on the lease liability (using the effective interest method) and by reducing the carrying amount to reflect the lease payments made.

The Company remeasures the lease liability (and makes a corresponding adjustment to the related right-of-use asset) whenever:

- The lease term has changed or there is a significant event or change in circumstances resulting in a change in the assessment of exercise of a purchase option, in which case, the lease liability is remeasured by discounting the revised lease payments using a revised discount rate.
- The lease payments change due to changes in an index or rate or a change in expected payment under a guaranteed residual value, in which case, the lease liability is remeasured by discounting the revised lease payments using an unchanged discount rate (unless the lease payments change is due to a change in a floating interest rate, in which case, a revised discount rate is used).
- A lease contract is modified and the lease modification is not accounted for as a separate lease, in which case, the lease liability is remeasured based on the lease term of the modified lease by discounting the revised lease payments using a revised discount rate at the effective date of the modification.

The right-of-use assets comprise the initial measurement of the corresponding lease liability, lease payments made at or before the commencement day, less any lease incentives received and any initial direct costs. They are subsequently measured at cost, less accumulated depreciation and impairment losses.

Whenever the Company incurs an obligation for costs to dismantle and remove a leased asset, restore the site on which it is located or restore the underlying asset to the condition required by the terms and conditions of the lease, a provision is recognized and measured under K-IFRS 1037. To the extent that the costs relate to a right-of-use asset, the costs are included in the related right-of-use asset, unless those costs are incurred to produce inventories.

Right-of-use assets are depreciated over the shorter period of lease term and useful life of the right-of-use asset. If a lease transfers ownership of the underlying asset or the cost of the right-of-use asset reflects that the Company expects to exercise a purchase option, the related right-of-use asset is depreciated over the useful life of the underlying asset. The depreciation starts at the commencement date of the lease.

The right-of-use assets are presented as a separate line in the separate statements of financial position.

The Company applies K-IFRS 1036 to determine whether a right-of-use asset is impaired and accounts for any identified impairment loss as described in the 'Property, Plant and Equipment' policy.

Variable rents that do not depend on an index or rate are not included in the measurement the lease liability and the right-of-use asset. The related payments are recognized as an expense in the period in which the event or condition that triggers those payments occurs and are included in profit or loss.

As a practical expedient, K-IFRS 1116 permits a lessee not to separate non-lease components, and instead account for any lease and associated non-lease components as a single arrangement. The Company has not used this practical expedient. For contracts that contain a lease component and one or more additional lease or non-lease components, the Company allocates the consideration in the contract to each lease component on the basis of the relative standalone price of the lease component and the aggregate standalone price of the non-lease components.

② The Company as lessor

Leases for which the Company is a lessor are classified as finance or operating leases. Whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee, the contract is classified as a finance lease. All other leases are classified as operating leases.

When the Company is an intermediate lessor, it accounts for the head lease and the sublease as two separate contracts. The sublease is classified as a finance or operating lease by reference to the right-of-use asset arising from the head lease.

Rental income from operating leases is recognized on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognized on a straight-line basis over the lease term.

Amounts due from lessees under finance leases are recognized as receivables at the amount of the Company's net investment in the leases. Finance lease income is allocated to accounting periods so as to reflect a constant periodic rate of return on the Company's net investment outstanding in respect of the leases.

Subsequent to initial recognition, the Company regularly reviews the estimated unguaranteed residual value and applies the impairment requirements of K-IFRS 1109, recognizing an allowance for ECLs on the lease receivables.

Finance lease income is calculated with reference to the gross carrying amount of the lease receivables, except for credit-impaired financial assets for which interest income is calculated with reference to their amortized cost (i.e., after a deduction of the loss allowance).

When a contract includes both lease and non-lease components, the Company applies K-IFRS 1115 to allocate the consideration under the contract to each component.

(17) Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale.

Investment income earned on the temporary investment of specific borrowings, pending their expenditure on qualifying assets, is deducted from the borrowing costs eligible for capitalization. All other borrowing costs are recognized in profit or loss in the period in which they are incurred.

(18) Derivative financial instruments

Derivatives are recognized initially at fair value at the date a derivative contract is entered into and are subsequently remeasured to their fair value at each reporting date. The resulting gain or loss is recognized in profit or loss immediately, unless the derivative is designated and effective as a hedging instrument, in which event, the timing of the recognition in profit or loss depends on the nature of the hedge relationship.

A derivative with a positive fair value is recognized as a financial asset, whereas a derivative with a negative fair value is recognized as a financial liability. Derivatives are not offset in the financial statements, unless the Company has both legally enforceable right and intention to offset. The impact of the Master Netting Agreements on the Company's financial position is disclosed in Note 35. A derivative is presented as a non-current asset or a non-current liability if the remaining maturity of the instrument is more than 12 months and it is not due to be realized or settled within 12 months. Other derivatives are presented as current assets or current liabilities.

1) Embedded derivatives

An embedded derivative is a component of a hybrid contract that also includes a non-derivative host—with the effect that some of the cash flows of the combined instrument vary in a way similar to a standalone derivative.

Derivatives embedded in hybrid contracts with a financial asset host within the scope of K-IFRS 1109 are not separated. The entire hybrid contract is classified and subsequently measured as either amortized cost or fair value, as appropriate.

Derivatives embedded in hybrid contracts with hosts that are not financial assets within the scope of K-IFRS 1109 (e.g., financial liabilities) are treated as separate derivatives when they meet the definition of a derivative, their risks and characteristics are not closely related to those of the host contracts and the host contracts are not measured at FVTPL.

An embedded derivative is presented as a non-current asset or non-current liability if the remaining maturity of the hybrid instrument to which the embedded derivative relates is more than 12 months and is not expected to be realized or settled within 12 months.

2) Hedge accounting

The Company designates certain derivatives as hedging instruments in respect of foreign currency risk and interest rate risk in fair value hedges, cash flow hedges or hedges of net investments in foreign operations. Hedges of foreign exchange risk on firm commitments are accounted for as cash flow hedges.

At the inception of the hedge relationship, the Company documents the relationship between the hedging instrument and the hedged item, along with its risk management objectives and its strategy for undertaking various hedge transactions. Furthermore, at the inception of the hedge and on an ongoing basis, the Company documents whether the hedging instrument is effective in offsetting changes in fair values or cash flows of the hedged item attributable to the hedged risk, which is when the hedging relationships meet all of the following hedge effectiveness requirements:

- There is an economic relationship between the hedged item and the hedging instrument.
- The effect of credit risk does not dominate the value changes that result from that economic relationship.
- The hedge ratio of the hedging relationship is the same as that resulting from the quantity of the hedged item that the Company actually hedges and the quantity of the hedging instrument that the Company actually uses to hedge that quantity of hedged item.

If a hedging relationship ceases to meet the hedge effectiveness requirement relating to the hedge ratio, but the risk management objective for that designated hedging relationship remains the same, the Company adjusts the hedge ratio of the hedging relationship (i.e., rebalances the hedge) so that it meets the qualifying criteria again.

The Company designates the full change in the fair value of a forward contract (i.e., including the forward elements) as the hedging instrument for all of its hedging relationships involving forward contracts.

When using an option contract to hedge the expected transaction, the Company has designated only the intrinsic value of the option as a hedging instrument. In K-IFRS 1039, changes in the time value of an option's fair value (that is, an unspecified element) are immediately recognized in profit or loss. In K-IFRS 1109, changes in the time value of options related to the hedged item (corresponding time value) are recognized in other comprehensive income, and the accumulated amount in equity is that the hedged item affects profit or loss, reclassified to profit or loss during the period or removed from equity and included directly in the carrying amount of non-financial items.

The Company designates only the intrinsic value of option contracts as a hedged item, i.e., excluding the time value of the option. The changes in the fair value of the aligned time value of the option are recognized in other comprehensive income and accumulated in the cost of hedging reserve. If the hedged item is transaction related, the time value is reclassified to profit or loss when the hedged item affects profit or loss. If the hedged item is time-period related, then the amount accumulated in the cost of hedging reserve is reclassified to profit or loss on a rational basis – the Company applies straight-line amortization. Those reclassified amounts are recognized in profit or loss in the same line as the hedged item. If the hedged item is a non-financial item, then the amount accumulated in the cost of hedging reserve is removed directly from equity and included in the initial carrying amount of the recognized non-financial item. Furthermore, if the Company expects that some or all of the loss accumulated in cost of hedging reserve will not be recovered in the future, that amount is immediately reclassified to profit or loss.

Note 35 sets out details of the fair values of the derivative instruments used for hedging purposes.

3) Fair value hedges

The fair value change on qualifying hedging instruments is recognized in profit or loss, except when the hedging instrument hedges an equity instrument designated at FVTOCI, in which case, it is recognized in other comprehensive income.

The carrying amount of a hedged item not already measured at fair value is adjusted for the fair value change attributable to the hedged risk with a corresponding entry in profit or loss. For debt instruments measured at FVTOCI, the carrying amount is not adjusted as it is already at fair value, but the hedging gain or loss is recognized in profit or loss instead of other comprehensive income. When the hedged item is an equity instrument designated at FVTOCI, the hedging gain or loss remains in other comprehensive income to match that of the hedging instrument.

Where hedging gains or losses are recognized in profit or loss, they are recognized in the same line as the hedged item.

The Company discontinues hedge accounting only when the hedging relationship (or a part thereof) ceases to meet the qualifying criteria (after rebalancing, if applicable). This includes instances when the hedging instrument expires or is sold, terminated or exercised. The discontinuation is accounted for prospectively. The fair value adjustment to the carrying amount of the hedged item arising from the hedged risk is amortized to profit or loss from that date.

4) Cash flow hedges

The effective portion of changes in the fair value of derivatives and other qualifying hedging instruments that are designated and qualify as cash flow hedges is recognized in other comprehensive income and accumulated under the heading of cash flow hedging reserve, limited to the cumulative change in fair value of the hedged item from inception of the hedge. The gain or loss relating to the ineffective portion is recognized immediately in profit or loss, and is included in the ‘other gains and losses’ line item.

Amounts previously recognized in other comprehensive income and accumulated in equity are reclassified to profit or loss in the periods when the hedged item affects profit or loss, in the same line as the recognized hedged item. However, when the hedged forecast transaction results in the recognition of a non-financial asset or a non-financial liability, the gains and losses previously recognized in other comprehensive income and accumulated in equity are removed from equity and included in the initial measurement of the cost of the non-financial asset or non-financial liability. This transfer does not affect other comprehensive income. Furthermore, if the Company expects that some or all of the loss accumulated in the cash flow hedging reserve will not be recovered in the future, that amount is immediately reclassified to profit or loss.

The Company discontinues hedge accounting only when the hedging relationship (or a part thereof) ceases to meet the qualifying criteria (after rebalancing, if applicable). This includes instances when the hedging instrument expires or is sold, terminated or exercised. The discontinuation is accounted for prospectively. Any gain or loss recognized in other comprehensive income and accumulated in cash flow hedge reserve at that time remains in equity, and is reclassified to profit or loss when the forecast transaction occurs. When a forecast transaction is no longer expected to occur, the gain or loss accumulated in cash flow hedge reserve is reclassified immediately to profit or loss.

(19) Retirement benefit costs and termination benefits

Contributions to defined contribution retirement benefit plans are recognized as an expense when employees have rendered service entitling them to the contributions.

For defined benefit retirement benefit plans, the cost of providing benefits is determined using the Projected Unit Credit Method, with actuarial valuations being carried out at the end of each annual reporting period. Remeasurements comprising actuarial gains and losses, the effect of the asset ceiling (if applicable) and the return on plan assets (excluding interest) are recognized immediately in the separate statements of financial position, with a charge or credit recognized in the separate statements of comprehensive income in the period in which they occur. Remeasurements recognized in the separate statements of comprehensive income are not reclassified. Past service cost is recognized in profit or loss when the plan amendment or curtailment occurs, or when the Company recognizes related restructuring costs or termination benefits, if earlier. Gains or losses on settlement of a defined benefit plan are recognized when the settlement occurs.

Net interest is calculated by applying a discount rate to the net defined benefit liability or asset. Defined benefit costs are split into three categories as follows:

- Service costs, which include current service cost, past service cost and gains and losses on curtailments and settlements
- Net interest expense or income
- Remeasurements

Net interest expense or income is recognized within finance costs and the remeasurement component in other comprehensive income. Curtailment gains and losses are accounted for as past service costs.

The retirement benefit obligation recognized in the separate statements of financial position represents the actual deficit or surplus in the Company’s defined benefit plans. Any surplus resulting from this calculation is limited to the present value of any economic benefits available in the form of refunds from the plans or reductions in future contributions to the plans.

A liability for a termination benefit is recognized at the earlier of when the entity can no longer withdraw the offer of the termination benefit or when the entity recognizes any related restructuring costs.

The discretionary contributions of employees or third parties reduce service cost when such contributions are paid to the plan. When specifying that there will be contributions from employees or third parties in the formal terms of the plan, accounting depends on whether contributions are linked to service as follows:

If the contributions are not linked to the service (for example, contributions to reduce the deficit arising from losses in plan assets or actuarial losses), the contributions affect the remeasurement of the net defined benefit liability (asset).

If contributions are linked to services, they reduce service costs. For the amount of contribution that is dependent on the number of years of service, the entity reduces service cost by attributing the contributions to periods of service using the attribution method required by K-IFRS 1019 paragraph 70 for the gross benefits. For the amount of contribution that is independent of the number of years of service, the entity reduces service cost in the period in which the related service is rendered/reduces service cost by attributing contributions to the employees’ periods of service in accordance with K-IFRS 1019 paragraph 70.

(20) Provisions and contingent liabilities

A provision is a present obligation (legal or constructive obligation) resulting from past events, and is recognized when it is likely that the obligation will be fulfilled and the amount can be estimated reliably.

The amount recognized as a provision is the best estimate at the end of each reporting period for the expenditure required to fulfill the current obligation, taking into account the inevitable risks and uncertainties associated with the event and situation. If the effect of the time value of money is important, the provision is assessed as the present value of the expected expenditure to fulfill the obligation. Discount rates are pretax rates that reflect current market assessments of the time value of money and the inherent risks of debt. The increase in provisions over time is recognized in profit or loss as financial cost when incurred.

If a third party is expected to reimburse some or all of the expenses required to settle the provision, the reimbursement is almost certain to be reimbursed if the Company fulfills its obligations and the amount can be measured reliably, the reimbursement is recognized as an asset.

The balance of the provisions is reviewed at the end of each reporting period and adjusted to reflect the best estimate as of the end of the reporting period. The related provisions are reversed when the economic benefits are no longer likely to be leaked.

1) Onerous contract
The current obligations under the onerous contract are recognized and measured as provisions. The Company determines that it is responsible for the onerous contract when the unavoidable costs arising from the performance of its contractual obligations exceed the economic benefits expected to be received under the contract.

(21) Government grants

Government grants are not recognized until there is reasonable assurance that the Company will comply with the conditions attaching to them and that the grants will be received.

The benefit of a government loan at a below-market rate of interest is treated as a government grant, measured as the difference between proceeds received and the fair value of the loan based on prevailing market interest rates.

Government grants related to assets are presented in the separate statements of financial position by deducting the grant from the carrying amount of the asset (including property, plant and equipment). The related grant is recognized in profit or loss over the life of a depreciable asset as a reduced depreciation expense.

Government grants related to income are recognized in profit or loss on a systematic basis over the periods in which the Company recognizes as expenses the related costs for which the grants are intended to compensate.

(22) Revenue recognition

Revenue is measured on the basis of the consideration specified in the contract with the customer and excludes the amount collected on behalf of the third party. We also recognize revenue when control of goods or services is transferred to the customer.

1) Sale of goods
The Company recognizes revenue from sale of goods when significant risks and rewards from ownership of goods have been transferred and it retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods. Therefore, the Company recognizes revenue for the manufactured goods at acceptance and merchandises at delivery. Revenue is recognized by estimating the total amount of returns expected monthly using the expected return period and the return rate. Based on past experience, in case of a return condition transaction with a low importance of the amount, the entire amount of the sale is recognized as revenue. At the point of sale, a refund liability and a corresponding adjustment to revenue are recognized for those products expected to be returned. At the same time, the Company has a right to recover the product when customers exercise their right of return, so it consequently recognizes a right to returned goods asset and a corresponding adjustment to cost of sales; previously, these effects were recognized as warranty provisions.

2) Rendering of service
The Company recognizes revenue from rendering of service using percentage-of-completion method when the outcome of the transaction can be estimated reliably, stage of completion at reporting date can be measured reliably and the costs incurred and the cost to complete the transaction can be measured reliably.

3) Construction contracts

The projects that are developed to suit the customer's characteristics are recognized as revenue over time because the assets the Company has created do not have an alternative use to themselves and they have the right to enforceable payment for performance completed. Therefore, revenue from construction contracts is recognized over time on a cost-based input method (i.e., based on the proportion of contract costs incurred for work performed to date relative to the estimated total contract costs). The directors consider that this input method is an appropriate measure of the progress toward complete satisfaction of these performance obligations under K-IFRS 1115.

Where the outcome of a construction contract can be estimated reliably, revenue and costs are recognized by reference to the stage of completion of the contract activity at the end of the reporting period, measured based on the proportion of contract costs incurred for work performed to date relative to the estimated total contract costs, except where this would not be representative of the stage of completion. Variations in contract work, claims and incentive payments are included to the extent that the amount can be measured reliably, and its receipt is considered probable.

Where the outcome of a construction contract cannot be estimated reliably, contract revenue is recognized to the extent of contract costs incurred that are probable to be recovered. Contract costs are recognized as expenses in the period in which they are incurred.

When it is probable that total contract costs will exceed total contract revenue, the expected loss is recognized as an expense immediately.

The amount added from the recognized profit to the accumulated accrued costs exceeding the amount claimed for progress is classified as contract assets, and the amount claimed for progress exceeding the amount added from the recognized profit to the accumulated accrued costs is classified as contract liabilities. Amounts received before the related work is performed are included in the separate statements of financial position, as a liability, as advances received. Amounts billed for work performed, but not yet paid by the customer, are included in the separate statements of financial position under trade and other receivables.

(23) Income tax

Income tax expense consists of current tax and deferred tax.

1) Current tax payable

The tax currently payable is based on taxable profit for the year. Taxable profit differs from profit as reported in the separate statements of comprehensive income because of items of income or expense that are taxable or deductible in other years and items that are never taxable or deductible. The Company’s liability for current tax is calculated using tax rates that have been enacted, or substantively enacted, by the end of the reporting period.

A provision is recognized for those matters for which the tax determination is uncertain, but it is considered probable that there will be a future outflow of funds to a tax authority. The provisions are measured at the best estimate of the amount expected to become payable. The assessment is based on the judgement of tax professionals within the Company, supported by previous experience in respect of such activities and, in certain cases, based on specialist independent tax advice.

2) Deferred tax

Deferred tax is the tax expected to be payable or recoverable on differences between the carrying amounts of assets and liabilities in the separate financial statements and the corresponding tax bases used in the computation of taxable profit, and is accounted for using the liability method. Deferred tax liabilities are generally recognized for all taxable temporary differences. Deferred tax assets are generally recognized for all deductible temporary differences to the extent it is probable that taxable profits will be available against which those deductible temporary differences can be utilized. Such deferred tax assets and liabilities are not recognized if the temporary difference arises from goodwill or from the initial recognition (other than in a business combination) of other assets and liabilities in a transaction that affects neither the taxable profit nor the accounting profit.

The Company recognizes a deferred tax liability for all taxable temporary differences associated with investments in subsidiaries, branches and 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. A deferred tax asset for all deductible temporary differences arising from above-mentioned investments is recognized to the extent, and only to the extent, that it is probable that the temporary difference will reverse in the foreseeable future and taxable profit will be available against which the temporary difference can be utilized. The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period in which the liability is settled or the asset is realized, based on tax rates (and tax laws) that have been enacted, or substantively enacted, by the end of the reporting period. The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Company expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

Deferred tax assets and liabilities are offset if, and only if, the Company has a legally enforceable right to set off current tax assets against current tax liabilities, and the deferred tax assets and liabilities relate to income taxes levied by the same taxation authority on either the same taxable entity or different taxable entities that intend either to settle current tax liabilities and assets on a net basis or to realize the assets and settle the liabilities simultaneously in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

3) Recognition of current tax payable and deferred tax

Current and deferred taxes are recognized in profit or loss, except when they relate to items that are recognized in other comprehensive income or directly in equity, in which case, the current and deferred taxes are also recognized in other comprehensive income or directly in equity, respectively. Where current tax or deferred tax arises from the initial accounting for a business combination, the tax effect is included in the accounting for the business combination.

(24) Treasury shares

In the event of reacquisition of its own equity instruments (hereinafter, "treasury share") the incremental costs incurred directly related to the equity transaction are accounted for by deducting the net income tax benefit from equity, and other capital items are marked as the total capital reduction item in the separate statements of financial position. On the other hand, the gain or loss on the purchase, sale or incineration of own shares is not recognized in profit or loss, but is recognized directly in equity.

(25) Fair value

Fair value is the price that will be received on sale of assets or paid on transfer of liabilities at the measurement date in normal transactions between market participants, whether the price is directly observable or estimated using valuation techniques. In estimating the fair value of an asset or liability, we consider the characteristics of the asset or liability that market participants consider when pricing the asset or liability at the measurement date. Equity-based payment transactions within the scope of IFRS 2 Share-Based Payment, lease transactions within the scope of K-IFRS 1017 Leases, net realizable value of K-IFRS 1002 Inventories, and the value of use of K-IFRS 1036 Inventories, are determined in accordance with the principles described in measurement or disclosure, except for measurements that are similar in part, but are not fair value.

In addition, based on the observable degree of input used for measuring fair value for financial reporting purposes and the significance of input variables for the entire fair value measurement, the fair value measurement is classified as Levels 1, 2 or 3.

| | Details |
|---|---|
| (Level 1) | Quoted price (unadjusted) in an active market accessible to the same asset or liability at the measurement date |

(Level 2) Inputs that can be observed directly or indirectly for an asset or liability beside the quoted price of Level 1

(Level 3) Unobservable inputs to assets or liabilities

(26) Allocation of greenhouse gas emission rights and accounting for trading systems

The Company classifies the emission rights as intangible assets, and the emission rights allocated free of charge by the government are measured at zero and the sales rights purchased are measured at cost. In addition, the emission liabilities shall be measured at zero if the emission rights granted free of charge by the government are sufficient for fulfilling obligations under emission liabilities incurred in the current period in connection with the corresponding year of implementation, and the emission liabilities shall be measured at the best estimate as of the end of the reporting period for the expenditure expected to be incurred for the discharge of emission liabilities in excess of the amount of free quota.

## 3. CRITICAL ACCOUNTING JUDGMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY:

In the application of the Company's accounting policies, management is required to make judgments, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

Estimation and assumptions are continuously reviewed. Effects of changes in accounting estimates are recognized during the period of changes made only in case that those changes affect a corresponding period. Effects of changes are recognized during both current and future periods and, in such case, those changes affect both periods.

(1) Uncertainty on the estimation of the total construction revenue

Total contract revenue is measured based on the contract amount initially agreed upon, but can be increased or decreased as the terms of the contract change in the course of performing the contract, so measurement of contract revenue is subject to various uncertainties related to the outcome of future events. The Company includes in the contract revenue when it is likely that the customer will approve a change in the amount of revenue due to a change in the terms of the contract or when the Company is more likely to meet its performance criteria and can measure the amount more reliably.

(2) Estimation of the total construction cost

The amount due from the customer is affected by the percentage of completion, which is estimated by reference to the total cost incurred, and the total contract cost is estimated by reference to the expected future figures, such as the material costs, the labor costs, the contract period, etc. The Company periodically reviews any changes of estimated total contract cost and reflects such changes when it calculates current progress rate at the end of reporting period.

(3) Implementation of IFRIC agenda decision on SaaS arrangements

SaaS arrangements are service contracts providing the Company with the right to access the cloud provider's application software over the contract period. Regarding the customization and configuration costs incurred in implementing SaaS agreements, the key judgements made by management in the process of applying accounting policies are as follows:

In a contract where the cloud provider provides both the SaaS configuration and customization, and the SaaS access over the contract term, the directors applied judgement to determine whether these services are distinct from each other or not, and therefore, whether the configuration and customization costs incurred are expensed as the software is configured or customized, or over the SaaS contract term.

During the year, the Company recognized ₩10,276 million (2020: ₩706 million) as costs to fulfil contract in respect of customization and configuration activities undertaken in implementing SaaS arrangements, which are considered not to be distinct from the access to the SaaS access over the contract term.

## 4. OPERATING SEGMENTS:

The Company reports segment information based on K-IFRS 1108 Operating Segments. The information at the entity level is as follows (Unit: Korean won in thousands):

(1) Information about sales

| | December 31, 2021 | | December 31, 2020 | |
|---|---|---|---|---|
| Merchandise | ₩ | 724,479,709 | ₩ | 595,871,869 |
| Service | | 1,419,375,080 | | 1,207,050,856 |
| Construction | | 1,682,926,233 | | 1,304,877,714 |
| Total | ₩ | 3,826,781,022 | ₩ | 3,107,800,439 |

(2) Information about the region
Company sales are all generated, and all of the non-current assets are located within the country (Republic of Korea).

(3) Information on major customers
Customer sales, which account for more than 10% of sales as of December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | December 31, 2021 | | December 31, 2020 | |
|---|---|---|---|---|
| LG Electronics Inc. (*) | ₩ | 784,482,466 | ₩ | 629,461,217 |
| LG Chem Ltd. (*) | | 591,168,064 | | 369,046,348 |
| LG Uplus Co., Ltd. (*) | ₩ | 383,632,388 | ₩ | 347,870,040 |

(*) It includes the transaction history of subsidiaries.

## 5. CLASSIFICATION OF FINANCIAL INSTRUMENTS AND FAIR VALUE:

(1) The carrying amount and fair value of financial assets and liabilities as of December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

1) Financial assets

| Financial assets | Account | December 31, 2021 Carrying amount | December 31, 2021 Fair value | December 31, 2020 Carrying amount | December 31, 2020 Fair value |
|---|---|---|---|---|---|
| Cash and cash equivalents | Cash and cash equivalents | ₩ 545,373,508 | ₩ 545,373,508 | ₩ 667,029,770 | ₩ 667,029,770 |
| Financial assets at FVTPL | Derivative assets for trading | 1,621,136 | 1,621,136 | 2,309,579 | 2,309,579 |
| | Investment (*) | 23,281,345 | 23,281,345 | 17,057,497 | 17,057,497 |
| | Subtotal | 24,902,481 | 24,902,481 | 19,367,076 | 19,367,076 |
| Financial assets at FVTOCI | Marketable equity securities | - | - | 1,634,949 | 1,634,949 |
| | Unmarketable equity securities | 769,139 | 769,139 | 781,443 | 781,443 |
| | Subtotal | 769,139 | 769,139 | 2,416,392 | 2,416,392 |
| Financial assets at amortized cost | Financial institution deposits | 112,000,000 | 112,000,000 | 122,000,000 | 122,000,000 |
| | Trade receivables | 1,002,969,791 | 1,002,969,791 | 772,009,964 | 772,009,964 |
| | Loans | 8,117,329 | 8,117,329 | 5,131,482 | 5,131,482 |
| | Other accounts receivable | 12,056,714 | 12,056,714 | 8,458,090 | 8,458,090 |
| | Accrued income | 822,289 | 822,289 | 422,450 | 422,450 |
| | Deposits | 8,827,544 | 8,827,544 | 7,421,121 | 7,421,121 |
| | Subtotal | 1,144,793,667 | 1,144,793,667 | 915,443,107 | 915,443,107 |
| | Total | ₩ 1,715,838,795 | ₩ 1,715,838,795 | ₩ 1,604,256,345 | ₩ 1,604,256,345 |

(*) Contains equity securities classified as debt securities as those are puttable financial instruments.

2) Financial liabilities

| Financial liabilities | Account | December 31, 2021 Carrying amount | December 31, 2021 Fair value | December 31, 2020 Carrying amount | December 31, 2020 Fair value |
|---|---|---|---|---|---|
| Financial liabilities at FVTPL | Derivative liabilities for trading | ₩ 2,564,026 | ₩ 2,564,026 | ₩ 326,494 | ₩ 326,494 |
| Financial liabilities at amortized cost | Trade payables | 602,820,782 | 602,820,782 | 452,833,838 | 452,833,838 |
| | Other accounts payable (*) | 38,329,514 | 38,329,514 | 21,459,539 | 21,459,539 |
| | Accrued expenses (*) | 7,211,201 | 7,211,201 | 5,098,608 | 5,098,608 |
| | Dividend payables | 4,422 | 4,422 | 4,018 | 4,018 |
| | Deposits received | 1,364,150 | 1,364,150 | 1,364,150 | 1,364,150 |
| | Long-term borrowings | 499,245,297 | 495,725,611 | 588,782,663 | 596,597,046 |
| | Subtotal | 1,148,975,366 | 1,145,455,680 | 1,069,542,816 | 1,077,357,199 |
| Lease liabilities | | 49,560,557 | 49,560,557 | 52,715,034 | 52,715,034 |
| | Total | ₩ 1,201,099,949 | ₩ 1,197,580,263 | ₩ 1,122,584,344 | ₩ 1,130,398,727 |

(*) Other accounts payable and accrued expenses that are not related financial liabilities are excluded.

## 6. CASH AND CASH EQUIVALENTS:

Cash and cash equivalents in the separate statements of cash flows are equivalent to cash and cash equivalents in the separate statements of financial position. Details of cash and cash equivalents as of December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| Description | December 31, 2021 | December 31, 2020 |
|---|---|---|
| Cash on hand | ₩ 6,606 | ₩ 7,648 |
| Bank deposits | 545,366,902 | 667,022,122 |
| Total | ₩ 545,373,508 | ₩ 667,029,770 |

## 7. TRADE AND OTHER RECEIVABLES:

(1) Details of trade and other receivables before deducting accumulated impairment losses as of December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

1) December 31, 2021:

| | Neither past due nor impaired receivables | Past due, but not impaired receivables | Impaired receivables | Total |
|---|---|---|---|---|
| Trade receivables | ₩ 921,484,451 | ₩ 81,485,340 | ₩ 11,173,213 | ₩1,014,143,004 |
| Other trade receivables | 27,168,041 | 2,655,834 | 5,715,502 | 35,539,377 |
| Total | ₩ 948,652,492 | ₩ 84,141,174 | ₩ 16,888,715 | ₩1,049,682,381 |

2) December 31, 2020:

| | Neither past due nor impaired receivables | Past due, but not impaired receivables | Impaired receivables | Total |
|---|---|---|---|---|
| Trade receivables | ₩ 718,359,862 | ₩ 53,650,102 | ₩ 10,267,552 | ₩ 782,277,516 |
| Other trade receivables | 18,263,545 | 3,169,597 | 4,714,398 | 26,147,540 |
| Total | ₩ 736,623,407 | ₩ 56,819,699 | ₩ 14,981,950 | ₩ 808,425,056 |

(2) Aging analysis based on committed collection period of past due, but not impaired trade and other receivables as of December 31, 2021 and 2020, is as follows (Unit: Korean won in thousands):

| Delinquency periods | December 31, 2021 | December 31, 2020 |
|---|---|---|
| 1 day–29 days | ₩ 64,267,341 | ₩ 30,979,122 |
| 30–60 days | 4,170,285 | 5,041,649 |
| 61–90 days | 454,341 | 2,529,989 |
| 91–120 days | 2,813,760 | 1,935,057 |
| More than 120 days | 12,435,447 | 16,333,883 |
| Total | ₩ 84,141,174 | ₩ 56,819,699 |

The Company measures the allowance for losses on trade receivables at amounts equivalent to ECLs over the full term. The ECLs on trade receivables are estimated using the provisioning schedule based on the borrower's experience of past defaults. It is adjusted by assessing the factors specific to the borrower and the general economic situation in the industry to which the borrower belongs and the current and future direction of forecast at the end of the reporting period. There are no changes in estimation techniques or important assumptions during this year.

(3) Changes in accumulated impairment losses for the years ended December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| Description | Year ended December 31, 2021 | | Year ended December 31, 2020 | |
|---|---|---|---|---|
| | Trade receivables | Other receivables | Trade receivables | Other receivables |
| Beginning balance | ₩ 10,267,552 | ₩ 4,714,397 | ₩ 21,754,100 | ₩ 5,439,680 |
| Impairment loss | 853,924 | 1,010,470 | - | 1,938,867 |
| Reversal of impairment loss | - | - | (4,782,857) | - |
| Disposals of accounts receivable | - | (9,365) | (4,398,771) | (2,664,150) |
| Others | 51,737 | - | (2,304,920) | - |
| Ending balance | ₩ 11,173,213 | ₩ 5,715,502 | ₩ 10,267,552 | ₩ 4,714,397 |

(4) Aging analysis of impaired trade and other receivables as of December 31, 2021 and 2020, is as follows (Unit: Korean won in thousands):

| Periods | December 31, 2021 | December 31, 2020 |
|---|---|---|
| Less than 6 months | ₩ 5,515,760 | ₩ 4,457,712 |
| More than 6 months and less than 1 year | 132,343 | 124,196 |
| More than 1 year | 11,240,612 | 10,400,042 |
| Total | ₩ 16,888,715 | ₩ 14,981,950 |

## 8. INVENTORIES:

(1) Inventories as of December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| Description | December 31, 2021 | | |
|---|---|---|---|
| | Acquisition cost | Valuation allowance | Carrying amount |
| Merchandise | ₩ 45,880,476 | ₩ - | ₩ 45,880,476 |
| Other inventories | 773,973 | (91,881) | 682,092 |
| Total | ₩ 46,654,449 | ₩ (91,881) | ₩ 46,562,568 |

| Description | December 31, 2020 | | |
|---|---|---|---|
| | Acquisition cost | Valuation allowance | Carrying amount |
| Merchandise | ₩ 28,939,255 | ₩ - | ₩ 28,939,255 |
| Other inventories | 1,205,983 | (109,187) | 1,096,796 |
| Total | ₩ 30,145,238 | ₩ (109,187) | ₩ 30,036,051 |

(2) Inventory costs recognized in operating expenses as of December 31, 2021 and 2020, are ₩922,757,352 thousand and ₩856,596,248 thousand, respectively. Reversal of loss on valuation of inventories as of December 31, 2021 and 2020, are ₩17,306 thousand and ₩255,365 thousand, respectively.

## 9. OTHER ASSETS:

Details of other assets as of December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | December 31, 2021 | | December 31, 2020 | |
|---|---|---|---|---|
| | Current | Non-current | Current | Non-current |
| Advance payments | ₩ 5,624,395 | ₩ 63,436 | ₩ 3,628,340 | ₩ 41,057 |
| Prepaid expenses | 5,137,097 | 28,147 | 5,252,021 | 58,121 |
| Prepaid value-added tax | 52,046 | - | 193,289 | - |
| Contract asset | 268,622,432 | - | 149,340,964 | - |
| Costs to fulfil a contract | 98,848,713 | - | 46,089,376 | - |
| Other current assets | 112,172 | - | 68,082 | - |
| | ₩ 378,396,855 | ₩ 91,583 | ₩ 204,572,072 | ₩ 99,178 |

## 10. PROPERTY, PLANT AND EQUIPMENT:

(1) Composition of property, plant and equipment as of December 31, 2021 and 2020, is as follows (Unit: Korean won in thousands):

1) December 31, 2021:

| | Land | Buildings | Structures | Machinery | Tools and equipment | Furniture and fixtures | Construction in progress | Others | Total |
|---|---|---|---|---|---|---|---|---|---|
| Acquisition cost | ₩86,420,271 | ₩487,118,742 | ₩3,766,519 | ₩ 139,324 | ₩ 419,886 | ₩86,110,109 | ₩ 4,880,468 | ₩ 401,864,862 | ₩ 1,070,720,181 |
| Accumulated depreciation | - | (130,395,936) | (461,334) | (95,901) | (391,667) | (47,235,096) | - | (337,394,002) | (515,973,936) |
| Accumulated impairment loss | - | - | - | - | - | - | - | (65,297) | (65,297) |
| Government grants | - | (873,820) | - | - | - | - | - | - | (873,820) |
| Total | ₩86,420,271 | ₩355,848,986 | ₩3,305,185 | ₩ 43,423 | ₩ 28,219 | ₩38,875,013 | ₩ 4,880,468 | ₩ 64,405,563 | ₩ 553,807,128 |

2) December 31, 2020:

| | Land | Buildings | Structures | Machinery | Tools and equipment | Furniture and fixtures | Construction in progress | Others | Total |
|---|---|---|---|---|---|---|---|---|---|
| Acquisition cost | ₩87,980,267 | ₩489,479,850 | ₩3,532,499 | ₩ 139,324 | ₩ 419,886 | ₩86,538,665 | ₩ 3,094,197 | ₩416,985,885 | ₩ 1,088,170,573 |
| Accumulated depreciation | - | (116,011,346) | (369,940) | (66,832) | (367,001) | (54,766,751) | - | (348,521,647) | (520,103,517) |
| Accumulated impairment loss | - | - | - | - | - | - | - | (149,977) | (149,977) |
| Government grants | - | (910,865) | - | - | - | - | - | - | (910,865) |
| Total | ₩87,980,267 | ₩372,557,639 | ₩3,162,559 | ₩ 72,492 | ₩ 52,885 | ₩31,771,914 | ₩ 3,094,197 | ₩ 68,314,261 | ₩ 567,006,214 |

(2) Changes in property, plant and equipment for the years ended December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

1) Year ended December 31, 2021:

| | Land | Buildings | Structures | Machinery | Tools and equipment | Furniture and fixtures | Construction in progress | Others | Total |
|---|---|---|---|---|---|---|---|---|---|
| Beginning balance | ₩87,980,267 | ₩372,557,639 | ₩3,162,559 | ₩ 72,492 | ₩ 52,885 | ₩ 31,771,914 | ₩ 3,094,197 | ₩ 68,314,261 | ₩567,006,214 |
| Acquisition | - | 2,191,500 | 286,618 | - | - | 14,671,719 | 1,786,271 | 21,435,453 | 40,371,561 |
| Disposals | - | (28,656) | - | - | - | (10,418) | - | (346,695) | (385,769) |
| Depreciation | - | (15,297,927) | (101,505) | (29,069) | (24,666) | (6,968,605) | - | (24,998,956) | (47,420,728) |
| Transfers | (1,559,996) | (3,930,815) | (42,487) | - | - | - | - | - | (5,533,298) |
| Others | - | 357,245 | - | - | - | (589,597) | - | 1,500 | (230,852) |
| Ending balance | ₩86,420,271 | ₩355,848,986 | ₩3,305,185 | ₩ 43,423 | ₩ 28,219 | ₩ 38,875,013 | ₩ 4,880,468 | ₩ 64,405,563 | ₩553,807,128 |

2) Year ended December 31, 2020:

| | Land | Buildings | Structures | Machinery | Tools and equipment | Furniture and fixtures | Constructio n in progress | Others | Total |
|---|---|---|---|---|---|---|---|---|---|
| Beginning balance | ₩87,319,158 | ₩384,734,825 | ₩3,137,356 | ₩ 101,851 | ₩ 77,552 | ₩ 36,617,244 | ₩ 1,527,952 | ₩ 81,188,884 | ₩ 594,704,822 |
| Acquisition | - | 506,900 | 110,256 | - | - | 2,951,427 | 1,566,245 | 20,621,116 | 25,755,944 |
| Disposals | - | - | - | - | - | (5,007) | - | (2,453,986) | (2,458,993) |
| Depreciation | - | (15,375,528) | (89,906) | (29,359) | (24,667) | (7,531,549) | - | (30,579,144) | (53,630,153) |
| Transfers | 661,109 | 2,524,063 | 4,853 | - | - | - | - | - | 3,190,025 |
| Impairment loss | - | - | - | - | - | - | - | (4,339) | (4,339) |
| Others | - | 167,379 | - | - | - | (260,201) | - | (458,270) | (551,092) |
| Ending balance | ₩87,980,267 | ₩372,557,639 | ₩3,162,559 | ₩ 72,492 | ₩ 52,885 | ₩ 31,771,914 | ₩ 3,094,197 | ₩ 68,314,261 | ₩ 567,006,214 |

(3) Changes in government grants for the years ended December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

1) Year ended December 31, 2021:

| | Buildings | Total |
|---|---|---|
| Beginning balance | ₩ 910,865 | ₩ 910,865 |
| Offsetting depreciation | (37,045) | (37,045) |
| Ending balance | ₩ 873,820 | ₩ 873,820 |

2) Year ended December 31, 2020:

| | Buildings | Others | Total |
|---|---|---|---|
| Beginning balance | ₩ 947,911 | ₩ 10,639 | ₩ 958,550 |
| Offsetting depreciation | (37,046) | (10,639) | (47,685) |
| Ending balance | ₩ 910,865 | ₩ - | ₩ 910,865 |

(4) Composition of disposal for the years ended December 31, 2021 and 2020, is as follows (Unit: Korean won in thousands):

1) Year ended December 31, 2021

| | Buildings | Furniture and fixtures | Others | Total |
|---|---|---|---|---|
| Book value before disposal | ₩ 28,656 | ₩ 10,418 | ₩ 346,696 | ₩ 385,770 |
| Disposal amount | - | 856 | 602,029 | 602,885 |
| Gain (loss) on disposal | ₩ (28,656) | ₩ (9,562) | ₩ 255,333 | ₩ 217,115 |

2) Year ended December 31, 2020

| | Furniture and fixtures | Others | Total |
|---|---|---|---|
| Book value before disposal | ₩ 5,007 | ₩ 2,453,986 | ₩ 2,458,993 |
| Disposal amount | 29,624 | 1,483,912 | 1,513,536 |
| Gain (loss) on disposal | ₩ 24,617 | ₩ (970,074) | ₩ (945,457) |

## 11. INVESTMENT PROPERTY:

(1) Composition of investment property as of December 31, 2021 and 2020, is as follows (Unit: Korean won in thousands):

1) Year ended December 31, 2021

| | Land | Buildings | Structures | Total |
|---|---|---|---|---|
| Beginning acquisition cost | ₩ 9,322,460 | ₩ 29,491,225 | ₩ 314,330 | ₩ 39,128,015 |
| Accumulated depreciation | - | (6,710,962) | (67,745) | (6,778,707) |
| Ending balance | ₩ 9,322,460 | ₩ 22,780,263 | ₩ 246,585 | ₩ 32,349,308 |

2) Year ended December 31, 2020

| | Land | Buildings | Structures | Total |
|---|---|---|---|---|
| Beginning acquisition cost | ₩ 7,762,464 | ₩ 24,556,240 | ₩ 261,731 | ₩ 32,580,435 |
| Accumulated depreciation | - | (4,788,515) | (48,175) | (4,836,690) |
| Ending balance | ₩ 7,762,464 | ₩ 19,767,725 | ₩ 213,556 | ₩ 27,743,745 |

(2) Changes in investment property for the years ended December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

1) Year ended December 31, 2021

| | Land | Buildings | Structures | Total |
|---|---|---|---|---|
| Beginning balance | ₩ 7,762,464 | ₩ 19,767,725 | ₩ 213,556 | ₩ 27,743,745 |
| Depreciation | - | (918,277) | (9,458) | (927,735) |
| Transfers | 1,559,996 | 3,930,815 | 42,487 | 5,533,298 |
| Ending balance | ₩ 9,322,460 | ₩ 22,780,263 | ₩ 246,585 | ₩ 32,349,308 |

2) Year ended December 31, 2020

| | Land | Buildings | Structures | Total |
|---|---|---|---|---|
| Beginning balance | ₩ 8,423,573 | ₩ 23,116,439 | ₩ 226,713 | ₩ 31,766,725 |
| Depreciation | - | (824,651) | (8,304) | (832,955) |
| Transfers | (661,109) | (2,524,063) | (4,853) | (3,190,025) |
| Ending balance | ₩ 7,762,464 | ₩ 19,767,725 | ₩ 213,556 | ₩ 27,743,745 |

(3) Evaluation of investment property as of December 31, 2021, is as follows (Unit: Korean won in thousands):

| | Land | Buildings and structures | Total |
|---|---|---|---|
| Book value | | | |
| Sangam DDMC (*1) | ₩ 13,461,407 | ₩ 33,250,212 | ₩ 46,711,619 |
| Evaluation result | | | |
| Sangam DDMC (*2, 3) | | ₩ 343,000,000 | ₩ 343,000,000 |

(*1) Includes the value of investment property occupied by the owner (land: ₩4,138,947 thousand and buildings and structures: ₩10,223,364 thousand).
(*2) This is the valuation amount for entire Sangam DDMC. In case of Sangam DDMC, the total value of real estate includes land and buildings, and constructions.
(*3) Fair value assessment was performed by an independent third party, Samchang Appraisal Co., Ltd., which used an average costing approach and cost approach method of standard appraised value of land and buildings.

## 12. INTANGIBLE ASSETS:

(1) Composition of intangible assets as of December 31, 2021 and 2020, is as follows (Unit: Korean won in thousands):

1) December 31, 2021

| | Development costs | Industrial property rights | Computer software and others | Membership | Construction in progress | Total |
|---|---|---|---|---|---|---|
| Acquisition cost | ₩ 61,917,395 | ₩ 2,753,062 | ₩ 91,088,811 | ₩ 18,785,701 | ₩ 36,661,279 | ₩ 211,206,248 |
| Accumulated depreciation | (27,023,520) | (1,300,744) | (71,505,364) | - | - | (99,829,628) |
| Accumulated impairment loss | (4,762,625) | (1,307) | - | (1,841,738) | (516,764) | (7,122,434) |
| Total | ₩ 30,131,250 | ₩ 1,451,011 | ₩ 19,583,447 | ₩ 16,943,963 | ₩ 36,144,515 | ₩ 104,254,186 |

2) December 31, 2020

| | Development costs | Industrial property rights | Computer software and others | Membership | Construction in progress | Total |
|---|---|---|---|---|---|---|
| Acquisition cost | ₩ 40,826,287 | ₩ 2,410,166 | ₩ 86,991,439 | ₩ 17,366,087 | ₩ 12,775,090 | ₩ 160,369,069 |
| Accumulated depreciation | (20,670,516) | (1,024,156) | (67,690,624) | - | - | (89,385,296) |
| Accumulated impairment loss | (2,605,971) | (1,307) | - | (1,841,738) | - | (4,449,016) |
| Total | ₩ 17,549,800 | ₩ 1,384,703 | ₩ 19,300,815 | ₩ 15,524,349 | ₩ 12,775,090 | ₩ 66,534,757 |

(2) Changes in intangible assets for the years ended December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands)

1) For the year ended December 31, 2021

| | Development costs | Industrial property rights | Computer software | Membership | Construction in progress | Total |
|---|---|---|---|---|---|---|
| Beginning balance | ₩ 17,549,800 | ₩ 1,384,703 | ₩ 19,300,815 | ₩ 15,524,349 | ₩ 12,775,090 | ₩ 66,534,757 |
| Acquisition | - | 342,896 | 7,350,604 | 1,624,312 | - | 9,317,812 |
| Increase due to internal development | - | - | - | - | 44,977,296 | 44,977,296 |
| Disposals | - | - | - | (204,698) | - | (204,698) |
| Impairment loss | (2,156,654) | - | - | - | (516,763) | (2,673,417) |
| Amortization | (6,353,004) | (276,589) | (7,067,971) | - | - | (13,697,564) |
| Transfers | 21,091,108 | - | - | - | (21,091,108) | - |
| Ending balance | ₩ 30,131,250 | ₩ 1,451,010 | ₩ 19,583,448 | ₩ 16,943,963 | ₩ 36,144,515 | ₩104,254,186 |

2) For the year ended December 31, 2020

| | Development costs | Industrial property rights | Computer software | Membership | Construction in progress | Total |
|---|---|---|---|---|---|---|
| Beginning balance | ₩ 5,735,643 | ₩ 1,565,708 | ₩ 22,687,604 | ₩ 26,457,501 | ₩ 1,427,550 | ₩ 57,874,006 |
| Acquisition | - | 61,597 | 3,687,819 | - | - | 3,749,416 |
| Increase due to internal development | - | - | - | - | 25,770,847 | 25,770,847 |
| Disposals | - | - | (106,254) | (10,933,152) | - | (11,039,406) |
| Amortization | (2,609,150) | (242,602) | (6,968,354) | - | - | (9,820,106) |
| Transfers | 14,423,307 | - | - | - | (14,423,307) | - |
| Ending balance | ₩ 17,549,800 | ₩ 1,384,703 | ₩ 19,300,815 | ₩ 15,524,349 | ₩ 12,775,090 | ₩ 66,534,757 |

(3) There is no change in government grants for the year ended December 31, 2021, and change in government grants for the year ended December 31, 2020, is as follows (Unit: Korean won in thousands):

| | Year ended December 31, 2020 Computer software |
|---|---|
| Beginning balance | ₩ 11,155 |
| Offsetting amortization | (11,155) |
| Ending balance | ₩ - |

(4) Composition of disposal for the years ended December 31, 2021 and 2020, is as follows (Unit: Korean won in thousands):

1) Year ended December 31, 2021

| | Membership | Total |
|---|---|---|
| Book value before disposal | ₩ 204,698 | ₩ 204,698 |
| Disposal amount | 199,000 | 199,000 |
| Loss on disposal | ₩ (5,698) | ₩ (5,698) |

2) Year ended December 31, 2020

| | Software | Membership | Total |
|---|---|---|---|
| Book value before disposal | ₩ 106,254 | ₩ 10,933,152 | ₩ 11,039,406 |
| Disposal amount | 11,620 | 10,718,670 | 10,730,290 |
| Loss on disposal | ₩ (94,634) | ₩ (214,482) | ₩ (309,116) |

(5) The expenses related to research and development for the years ended December 31, 2021 and 2020, are ₩33,603,810 thousand and ₩31,986,395 thousand, respectively. Those amounts are recognized in selling and administrative expenses.

## 13. INVESTMENTS IN SUBSIDIARIES:

(1) Composition of the Company's investments in subsidiaries as of December 31, 2021 and 2020, is as follows:

| Company | Location of incorporation | Major operation | Closing date | Number of shares owned by the Company | Number of shares issued | Percentage of ownership (%) 2021 | Percentage of ownership (%) 2020 |
|---|---|---|---|---|---|---|---|
| LG CNS PHILIPPINES, INC. | Philippines | Services | December 31 | 298,083 | 298,083 | 100.00% | 100.00% |
| LG CNS China Inc. (*1) | China | Services | December 31 | - | - | 100.00% | 100.00% |
| LG CNS Europe B.V. | Netherlands | Services | December 31 | 5,000 | 5,000 | 100.00% | 100.00% |
| LG CNS America, Inc. | USA | Services | December 31 | 100 | 100 | 100.00% | 100.00% |
| LG CNS India Pvt., Ltd. | India | Services | December 31 | 15,319,725 | 15,319,725 | 100.00% | 100.00% |
| PT. LG CNS Indonesia | Indonesia | Services | December 31 | 20,000 | 20,000 | 100.00% | 100.00% |
| LG CNS BRASIL SERVICOS DE TI LTDA | Brazil | Services | December 31 | 2,471,000 | 2,471,000 | 100.00% | 100.00% |
| Biztech Partners Co., Ltd. | South Korea | Services | December 31 | 12,534,571 | 13,045,007 | 96.09% | 96.09% |
| LG CNS COLOMBIA SAS | Colombia | Services | December 31 | 110,000 | 110,000 | 100.00% | 100.00% |
| LG CNS MALAYSIA SDN BHD | Malaysia | Services | December 31 | 1,500,002 | 1,500,002 | 100.00% | 100.00% |
| LG CNS Saudi Arabia LLC | Saudi Arabia | Services | December 31 | 3,060 | 6,000 | 51.00% | 51.00% |
| LG CNS JAPAN Co., Ltd. | Japan | Services | December 31 | 800 | 800 | 100.00% | 100.00% |
| LG CNS UZBEKISTAN, LLC (*2) | UZBEKISTAN | Services | December 31 | - | - | 51.00% | 51.00% |
| Hangbokmaru Co., Ltd. | South Korea | Services | December 31 | 140,000 | 140,000 | 100.00% | 100.00% |
| LG CNS Vietnam Co., Ltd. (*3) | Vietnam | Services | December 31 | - | - | 100.00% | 100.00% |
| LG CNS FUND I LLC (*4) | USA | Investment Fund | December 31 | - | - | 100.00% | 100.00% |
| Sejong Green Power Co., Ltd. (*5) | South Korea | Product/sale | December 31 | - | - | - | 100.00% |
| Open Source Consulting | South Korea | Services | December 31 | 115,642 | 205,715 | 56.21% | 56.21% |
| Rightbrain Co., Ltd. (*6) | South Korea | Services | December 31 | 204,300 | 330,000 | 61.91% | - |

(*1) There are no outstanding shares based on the relevant laws and regulations of local country for an entity formed in China.

(*2) There are no outstanding shares based on the relevant laws and regulations of local country for an entity formed in Uzbekistan.

(*3) There were no outstanding shares based on the relevant laws and regulations of local country for an entity formed in Vietnam.

(*4) There were no outstanding shares based on the relevant laws and regulations of local country for an entity formed in USA.

(*5) In the current year, it was excluded from the subsidiaries due to disposal.

(*6) In the current year, it was acquired.

(2) Changes in investments in subsidiaries for the years ended December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

1) For the year ended December 31, 2021

| Company | Beginning balance | Acquisition | Impairment loss | Disposal | Ending balance |
|---|---|---|---|---|---|
| LG CNS PHILIPPINES, INC. | ₩ - | ₩ | ₩ | ₩ | ₩ - |
| LG CNS China Inc. | 23,231,647 | - | - | - | 23,231,647 |
| LG CNS Europe B.V. | 3,656,950 | - | - | - | 3,656,950 |
| LG CNS America, Inc. | 2,883,494 | - | - | - | 2,883,494 |
| LG CNS India Pvt., Ltd. | 795,429 | - | - | - | 795,429 |
| PT. LG CNS Indonesia | - | - | - | - | - |
| LG CNS BRASIL SERVICOS DE TI LTDA. | 1,777,852 | - | - | - | 1,777,852 |
| UCESS PHILIPPINES, INC. | - | - | - | - | - |
| Biztech Partners Co., Ltd. | 12,098,863 | - | - | - | 12,098,863 |
| LG CNS COLOMBIA SAS | 690,134 | - | - | - | 690,134 |
| LG CNS MALAYSIA SDN BHD | - | - | - | - | - |
| LG CNS Saudi Arabia LLC | - | - | - | - | - |
| LG CNS JAPAN Co., Ltd. | 418,032 | - | - | - | 418,032 |
| LG CNS UZBEKISTAN, LLC | - | - | - | - | - |
| Hangbokmaru Co., Ltd. | 700,000 | - | - | - | 700,000 |
| LG CNS Vietnam Co., Ltd. | 233,340 | - | - | - | 233,340 |
| LG CNS FUND I LLC | 16,538,625 | 8,992,203 | - | - | 25,530,828 |
| Sejong GreenPower Co., LTD. | 7,185,287 | - | (4,654,287) | (2,531,000) | - |
| Open Source Consulting | 6,382,026 | - | - | - | 6,382,026 |
| Rightbrain Co., Ltd. | - | 5,949,000 | - | - | 5,949,000 |
| Total | ₩ 76,591,679 | ₩ 14,941,203 | ₩ (4,654,287) | ₩ (2,531,000) | ₩84,347,595 |

2) For the year ended December 31, 2020

| Company | Beginning balance | Acquisition | Impairment loss | Ending balance |
|---|---|---|---|---|
| LG CNS PHILIPPINES, INC. | ₩ - | ₩ - | ₩ - | ₩ - |
| LG CNS China Inc. | 23,231,647 | - | - | 23,231,647 |
| LG CNS Europe B.V. | 3,656,950 | - | - | 3,656,950 |
| LG CNS America, Inc. | 2,883,494 | - | - | 2,883,494 |
| LG CNS India Pvt., Ltd. | 795,429 | - | - | 795,429 |
| PT. LG CNS Indonesia | - | - | - | - |
| LG CNS BRASIL SERVICOS DE TI LTDA | 1,777,852 | - | - | 1,777,852 |
| UCESS PHILIPPINES, INC. | - | - | - | - |
| Biztech Partners Co., Ltd. | 12,098,863 | - | - | 12,098,863 |
| LG CNS COLOMBIA SAS | 690,134 | - | - | 690,134 |
| LG CNS MALAYSIA SDN BHD | - | - | - | - |
| LG CNS Saudi Arabia LLC | - | - | - | - |
| LG CNS JAPAN Co., Ltd. | 418,032 | - | - | 418,032 |
| LG CNS UZBEKISTAN, LLC | - | - | - | - |
| Hangbokmaru Co., Ltd. | 700,000 | - | - | 700,000 |
| LG CNS Vietnam Co., Ltd. | 233,340 | - | - | 233,340 |
| LG CNS FUND I LLC | 5,389,832 | 11,148,793 | - | 16,538,625 |
| Sejong GreenPower Co., LTD. | 24,975,246 | - | (17,789,959) | 7,185,287 |
| Open Source Consulting | 8,994,403 | - | (2,612,377) | 6,382,026 |
| Total | ₩ 85,845,222 | ₩ 11,148,793 | ₩ (20,402,336) | ₩ 76,591,679 |

The Company conducts an annual impairment inspection on subsidiaries with signs of impairment. As a result of performing impairment assessment, it is estimated that the carrying amount of investment in subsidiaries will not significantly exceed the recoverable amount based on fair value less costs to sell and value in use.

## 14. INVESTMENTS IN ASSOCIATES AND JOINT VENTURES:

(1) Composition of the Company's investments in associates and jointly controlled entity as of December 31, 2021 and 2020, is as follows:

| Companies | Location of incorporation | Major business activities | Closing date | Number of shares owned by the Company: Common stock | Number of shares owned by the Company: Preferred stock | Number of issued shares: Common stock | Number of issued shares: Preferred stock | Percentage of ownership (%) 2021 | Book value 2021 | Percentage of ownership (%) 2020 | Book value 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tmoney Co., Ltd. | South Korea | System software development and supply | December 31 | 3,927,167 | - | 11,934,085 | - | 32.91 | ₩21,598,660 | 32.91 | ₩21,598,660 |
| Songdo U-Life LLC (*1) | South Korea | Health care, integrated wireless environment, integrated smart cards and building management | December 31 | 5,880 | - | 35,880 | - | 16.39 | 711,333 | 16.39 | 711,333 |
| RECAUDO BOGOTA S.A.S. | Colombia | Public system development and service | December 31 | 2,126 | - | 10,630 | - | 20.00 | 2,575,022 | 20.00 | 2,575,022 |
| Hellas SmarTicket Societe Anonyme | Greece | Public system development and service | December 31 | 22,500 | - | 75,000 | - | 30.00 | 2,843,358 | 30.00 | 2,843,358 |
| Ulleungdo Natural Energy Co., Ltd. (*5) | South Korea | New renewable energy supply | December 31 | - | - | 5,360,000 | - | - | - | 29.85 | - |
| Daegu Natural Energy Co., Ltd. | South Korea | Power plant construction | December 31 | 25,000 | - | 100,000 | - | 25.00 | - | 25.00 | - |
| Cloudgram Co. Ltd. (*2) | South Korea | Hosting and related service | December 31 | 1,075,000 | - | 3,075,000 | - | 34.96 | 15,793,000 | 34.96 | 19,887,500 |
| KoreaDRD Co., Ltd. (*1,2) | South Korea | Information service and blockchain technology-related service | December 31 | 119,400 | - | 600,000 | - | 19.90 | 597,000 | 19.90 | 597,000 |
| HEMPKING (*2,3) | South Korea | System software development and supply | December 31 | - | 25,000 | 100,000 | 25,000 | - | - | - | - |
| Danbi Inc. (*4) | South Korea | System software development and supply | December 31 | 50,000 | - | 250,000 | - | 20.00 | - | 20.00 | - |
| **Total** | | | | | | | | | ₩44,118,373 | | ₩48,212,873 |

(*1) The Company has significant influence since contractual right by which the Company is able to appoint one member of board even though the percentage of ownership is less than 20%.
(*2) In the prior year, it was acquired.
(*3) Although significant influence is exercised by the contract between shareholders, the right to convert preferred stocks is not exercised, and as mentioned in Note 5, it is classified as a FVTPL financial asset.
(*4) In the prior year, through the exercise of conversion rights, it was acquired.
(*5) In the current year, it was liquidated.

(2) Changes in investments in associates and jointly controlled entity for the years ended December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

1) Year ended December 31, 2021

| Company | Beginning balance | Impairment loss | Ending balance |
|---|---|---|---|
| Tmoney Co., Ltd. | ₩ 21,598,660 | ₩ - | ₩ 21,598,660 |
| Songdo U-Life LLC | 711,333 | - | 711,333 |
| RECAUDO BOGOTA S.A.S. | 2,575,022 | - | 2,575,022 |
| Hellas SmarTicket Societe Anonyme | 2,843,358 | - | 2,843,358 |
| Ulleungdo Natural Energy Co., Ltd. | - | - | - |
| Daegu Natural Energy Co., Ltd. | - | - | - |
| Cloudgram Co. Ltd. | 19,887,500 | (4,094,500) | 15,793,000 |
| KoreaDRD Co., Ltd. | 597,000 | - | 597,000 |
| Danbi Inc. | - | - | - |
| Total | ₩ 48,212,873 | ₩ (4,094,500) | ₩ 44,118,373 |

2) Year ended December 31, 2020

| Company | Beginning balance | Acquisition (*) | Disposal | Reversal of impairment loss | Ending balance |
|---|---|---|---|---|---|
| Tmoney Co., Ltd. | ₩ 21,598,660 | ₩ - | ₩ - | ₩ - | ₩ 21,598,660 |
| Songdo U-Life LLC | 711,333 | - | - | - | 711,333 |
| RECAUDO BOGOTA S.A.S. | 2,575,022 | - | - | - | 2,575,022 |
| Hellas SmarTicket Societe Anonyme | 2,843,358 | - | - | - | 2,843,358 |
| Ulleungdo Natural Energy Co., Ltd. | 4,558,300 | - | (4,665,821) | 107,521 | - |
| Daegu Natural Energy Co., Ltd. | - | - | - | - | - |
| Cloudgram Co. Ltd. | - | 19,887,500 | - | - | 19,887,500 |
| KoreaDRD Co., Ltd. | - | 597,000 | - | - | 597,000 |
| Danbi Inc. | - | - | - | - | - |
| Total | ₩ 32,286,673 | ₩ 20,484,500 | ₩ (4,665,821) | ₩ 107,521 | ₩ 48,212,873 |

(*) Proffered stock acquired during the prior year has been classified as the FVTPL financial asset.

In the current year, the Company recognized impairment losses of ₩4,095 million as a result of evaluating the recoverable amount of associates after identifying signs of impairment due to poor performance of Cloudgram Co. Ltd. At the end of the current year, the recoverable amount was determined based on value in use, and the discount rates applied to measure the value in use was 15.76%.

## 15. DEBENTURES AND BORROWINGS:

Long-term borrowings (debentures) as of December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | Type | Maturity date | Annual interest rate (%) | December 31, 2021 | December 31, 2020 |
|---|---|---|---|---|---|
| Unguaranteed public bond | 9-3rd public offering | 2022.04.16 | 2.44 | ₩ 50,000,000 | ₩ 50,000,000 |
| | 10-2nd public offering | 2022.04.11 | 2.45 | 40,000,000 | 40,000,000 |
| | 11-1st public offering | 2021.04.11 | 2.55 | - | 90,000,000 |
| | 11-2nd public offering | 2023.04.11 | 2.83 | 110,000,000 | 110,000,000 |
| | 12-1st public offering | 2023.05.12 | 1.60 | 150,000,000 | 150,000,000 |
| | 12-2nd public offering | 2025.05.14 | 1.75 | 50,000,000 | 50,000,000 |
| | 12-3rd public offering | 2027.05.14 | 1.99 | 100,000,000 | 100,000,000 |
| | Subtotal | | | 500,000,000 | 590,000,000 |
| | Discount on debentures | | | (754,704) | (1,217,337) |
| | Current portion of debentures | | | (89,982,760) | (89,972,432) |
| | Total | | | ₩ 409,262,536 | ₩ 498,810,231 |

## 16. PROVISIONS:

(1) Changes in provisions for the years ended December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

1) For the year ended December 31, 2021

| | Beginning balance | Decrease | Reversal | Increase | Ending balance |
|---|---|---|---|---|---|
| Provision for construction (product) warranties | ₩ 21,983,669 | ₩ (12,450,763) | ₩ (6,653,121) | ₩ 14,710,940 | ₩ 17,590,725 |
| Restoration liabilities (*) | 919,779 | (18,561) | - | 313,233 | 1,214,451 |
| Others | 5,901,993 | (4,544,259) | (343,366) | 7,926,741 | 8,941,109 |
| Total | ₩ 28,805,441 | ₩ (17,013,583) | ₩ (6,996,487) | ₩ 22,950,914 | ₩ 27,746,285 |

(*) Increases in valuation of present value for the year ended December 31, 2021, amounting to ₩23,557 thousand are included in increase of provisions.

2) For the year ended December 31, 2020

| | Beginning balance | Decrease | Reversal | Increase | Ending balance |
|---|---|---|---|---|---|
| Provision for construction (product) warranties | ₩ 17,529,676 | ₩ (7,955,282) | ₩ (2,774,924) | ₩ 15,184,199 | ₩ 21,983,669 |
| Restoration liabilities (*) | 2,193,162 | - | (1,361,326) | 87,943 | 919,779 |
| Others | 24,498,604 | (13,176,507) | (11,145,051) | 5,724,947 | 5,901,993 |
| Total | ₩ 44,221,442 | ₩ (21,131,789) | ₩(15,281,301) | ₩ 20,997,089 | ₩ 28,805,441 |

(*) Increases in valuation of present value for the year ended December 31, 2020, amounting to ₩44,138 thousand are included in increase of provisions.

(2) Nature of provision and expected timing for outflow of economic benefits (Unit: Korean won in thousands):

| | Within 12 months | After 12 months | Total |
|---|---|---|---|
| Provision for construction (product) warranties (*1) | ₩ 17,590,725 | ₩ - | ₩ 17,590,725 |
| Restoration liabilities (*2) | - | 1,214,451 | 1,214,451 |
| Others (*3) | 8,941,109 | - | 8,941,109 |
| Total | ₩ 26,531,834 | ₩ 1,214,451 | ₩ 27,746,285 |

(*1) Estimated provision for construction warranties that would be expected in past service revenue.
(*2) Measured at present value of future restoration estimation costs on leased assets.
(*3) Liability of compensation for damages and estimated provision related to hardware and SI construction work.

## 17. RETIREMENT BENEFIT PLAN:

(1) Defined contribution plan

The Company operates a defined contribution plan for employees. Obligation of the Company is to make payments to third-party funds. The benefits for employees are determined by the payments made to the funds and the investment earnings from the funds. Plan asset is managed by the third party and is segregated from the Company's assets.

The contributions to defined contribution plan for the years ended December 31, 2021 and 2020, are ₩43,577,405 thousand and ₩42,470,232 thousand, respectively. Other accounts payable in relation to defined contribution plans as of December 31, 2021 and 2020, are ₩5,725,298 thousand and ₩4,589,693 thousand, respectively.

(2) Defined benefit plan

The Company operates a defined benefit plan for employees, and according to the plan, employees will be paid their average salary of the final three months multiplied by the number of years vested, adjusted for payment rate and others. The valuations of related plan assets and defined benefit liability are performed by an independent reputable actuary using the projected unit credit method at its present value, relevant current service cost and past service costs.

1) As of December 31, 2021 and 2020, amounts recognized in the separate statements of financial position related to retirement benefit obligation are as follows (Unit: Korean won in thousands):

| | December 31, 2021 | | December 31, 2020 | |
|---|---|---|---|---|
| Present value of defined benefit obligation | ₩ | 15,108,413 | ₩ | 13,775,250 |
| Fair value of plan assets | | (15,141,174) | | (13,660,014) |
| Retirement benefit obligation (assets) | ₩ | (32,761) | ₩ | 115,236 |

2) Changes in defined benefit obligation for the years ended December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | Year ended December 31, 2021 | | Year ended December 31, 2020 | |
|---|---|---|---|---|
| Beginning balance | ₩ | 13,775,250 | ₩ | 12,847,181 |
| Current service cost | | 2,590,446 | | 2,283,406 |
| Interest cost | | 187,784 | | 215,717 |
| Actuarial loss (gain) | | (44,874) | | 13,531 |
| Benefits paid | | (1,145,690) | | (1,584,585) |
| Transfer to affiliated company | | (254,503) | | - |
| Ending balance | ₩ | 15,108,413 | ₩ | 13,775,250 |

3) Income and loss related to defined benefit plan for the years ended December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| Description | Year ended December 31, 2021 | | Year ended December 31, 2020 | |
|---|---|---|---|---|
| Service cost: | ₩ | 2,590,446 | ₩ | 2,283,406 |
| Current service cost | | 2,590,446 | | 2,283,406 |
| Net interest on the net defined benefit liability (asset): | | 1,659 | | (2,574) |
| Interest cost | | 187,784 | | 215,717 |
| Interest on plan assets | | (186,125) | | (218,291) |
| Others | | 20,884 | | 22,039 |
| Total | ₩ | 2,612,989 | ₩ | 2,302,871 |

On the other hand, defined benefit plan gain or loss is allocated to each item as follows (Unit: Korean won in thousands):

| | Year ended December 31, 2021 | | Year ended December 31, 2020 | |
|---|---|---|---|---|
| Amounts included in the retirement benefits | ₩ | 2,124,049 | ₩ | 1,909,020 |
| Amounts included in the service fee | | 20,884 | | 22,039 |
| Amounts included in the cost of production | | 468,056 | | 371,812 |
| Total | ₩ | 2,612,989 | ₩ | 2,302,871 |

4) Changes in plan assets for the years ended December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | Year ended December 31, 2021 | | Year ended December 31, 2020 | |
|---|---|---|---|---|
| Beginning balance | ₩ | 13,660,014 | ₩ | 12,993,406 |
| Expected return on plan assets | | 186,125 | | 218,291 |
| Actuarial gain (loss) | | 35,613 | | 20,941 |
| Transfer to affiliated company | | 110,800 | | - |
| Other | | (20,884) | | (22,039) |
| Benefits paid | | (1,123,494) | | (1,584,585) |
| Employer contribution to plan assets | | 2,293,000 | | 2,034,000 |
| Ending balance | ₩ | 15,141,174 | ₩ | 13,660,014 |

5) All of the plan assets are invested in financial instruments that guarantee principal and interest rate as of December 31, 2021 and 2020.

6) Actuarial assumptions used as of December 31, 2021 and 2020, are as follows:

| Description | December 31, 2021 | December 31, 2020 |
|---|---|---|
| Discount rate (%) | 2.38 | 1.44 |
| Expected rate of salary increase (%) | 5.00 | 5.00 |

7) The sensitivity analysis of the defined benefit obligation as of December 31, 2021, is as follows (Unit: Korean won in thousands):

| Description | Center scenario | + 1% | - 1% |
|---|---|---|---|
| Change in discount rate | ₩ 15,108,413 | ₩ 14,585,485 | ₩ 15,667,880 |
| Change in rate of salary increase | 15,108,413 | 15,650,781 | 14,590,967 |

(*) The above sensitivity is estimated based on the assumption that all other respective assumptions remain unchanged.

8) Remeasurements related to net defined benefit liability for the years ended December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| Description | Year ended December 31, 2021 | Year ended December 31, 2020 |
|---|---|---|
| Actuarial gains arising from changes in demographic assumptions | ₩ - | ₩ (35,760) |
| Actuarial gains (losses) arising from changes in financial assumptions | (504,688) | 162,294 |
| Actuarial losses arising from experience | 497,139 | (113,003) |
| Return on plan assets, excluding amounts included in interest income | (35,613) | (20,941) |
| Actuarial losses arising from transfer in/out adjustments | (37,325) | - |
| Total | ₩ (80,487) | ₩ (7,410) |

9) Estimated contribution that will be paid in the next fiscal year is as follows (Unit: Korean won in thousands):

| | Year ending December 31, 2022 |
|---|---|
| Estimated contributions to plan assets (*) | ₩ 2,485,296 |

(*) The expected amount for 2022 is calculated assuming that the ratio of the plan assets to the retirement benefit allowance at the end of 2021 will be maintained at the end of 2022.

## 18. OTHER LIABILITIES:

Other liabilities as of December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands)

| | December 31, 2021 | | December 31, 2020 | |
|---|---|---|---|---|
| | Current | Non-current | Current | Non-current |
| Advance receipts | ₩ 4,917,595 | ₩ - | ₩ 2,961,042 | ₩ - |
| Withholding value-added tax | 54,864,376 | - | 31,762,597 | - |
| Withholdings | 41,310,940 | - | 32,311,239 | - |
| Government subsidies | 160,342 | - | 164,766 | - |
| Contract liabilities | 145,883,549 | - | 107,602,458 | - |
| Other long-term employee liabilities | - | 17,383,790 | - | 11,518,365 |
| Total | ₩ 247,136,802 | ₩ 17,383,790 | ₩ 174,802,102 | ₩ 11,518,365 |

## 19. CONTRACT ASSETS AND LIABILITIES:

(1) Contract assets as of December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | December 31, 2021 | | December 31, 2020 | |
|---|---|---|---|---|
| Construction contracts | ₩ | 274,647,056 | ₩ | 155,462,061 |
| Deductions: allowance for losses | | (6,024,624) | | (6,121,097) |
| Total | ₩ | 268,622,432 | ₩ | 149,340,964 |

During the current year, there are no changes in estimates or important assumptions applied when assessing the loss allowance for contract assets in a construction contract.

(2) Changes in ECLs of contract assets as of December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | December 31, 2021 | | December 31, 2020 | |
|---|---|---|---|---|
| Beginning balance | ₩ | 6,121,097 | ₩ | 5,888,883 |
| Increase in allowance for loss | | (96,473) | | 232,214 |
| Ending balance | ₩ | 6,024,624 | ₩ | 6,121,097 |

(3) Contract costs as of December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | December 31, 2021 | | December 31, 2020 | |
|---|---|---|---|---|
| Costs to fulfil a contract | ₩ | 98,848,713 | ₩ | 46,089,376 |

Among the costs incurred before signing the contract (or expected contract) and the costs incurred in connection with the contract, the cost of creating, increasing the value and recovering the Company's resources to fulfill its future performance obligations was recognized as the costs to fulfil a contract. In the current year, there is no impairment loss recognized regarding the costs to fulfil a contract.

(4) Contract liabilities as of December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | December 31, 2021 | | December 31, 2020 | |
|---|---|---|---|---|
| Construction contracts | ₩ | 107,674,514 | ₩ | 80,676,534 |
| Equipment supply and maintenance | | 38,209,035 | | 26,925,924 |
| Total | ₩ | 145,883,549 | ₩ | 107,602,458 |

The contract liabilities related to the construction contract are the balances received from the customers in accordance with the construction contract. This occurs when the amount received under the milestone exceeds the revenue recognized up to that point in accordance with the cost-based input method. There was no significant change in balance of the contract liabilities during the reporting period.

(5) No revenue related to performance obligations carried out in prior year is recognized in December 31, 2021. The following table shows how much of the revenue recognized relates to carryforward contract liabilities as of December 31, 2021 (Unit: Korean won in thousands):

| | December 31, 2021 | | December 31, 2020 | |
|---|---|---|---|---|
| Construction contracts | ₩ | 80,519,278 | ₩ | 55,717,927 |
| Equipment supply and maintenance | | 20,618,153 | | 45,505,126 |
| Total | ₩ | 101,137,431 | ₩ | 101,223,053 |

(6) As of January 1, 2021, changes in estimation of the total contract amount and the total contract cost for contracts that recognize revenue over time by using the cost-based input method, effects of profit or loss of current and future reporting periods and changes in contract assets and liabilities are as follows (Unit: Korean won in thousands):

| | Changes in estimation of the total contract amount | Changes in estimation of the total contract cost | Effects of profit or loss in the current period | Effects of profit or loss in future period | Change in contract asset (liability) (*) |
|---|---|---|---|---|---|
| LG CNS | ₩ 44,267,883 | ₩ 50,859,153 | ₩ (4,091,560) | ₩ (2,499,710) | ₩ (4,091,560) |

(*)The contract loss provisions related to construction contracts as of December 31, 2021, are ₩5,683,494 thousand.

(7) In the current year, the major contract in which the amount of contract is 5% or more of the sales amount of the prior year, as contracts recognized revenue using the cost-based input method are follows (Unit: Korean won in thousands):

| | | | | Contract assets | | Trade receivables | |
|---|---|---|---|---|---|---|---|
| | Contract date | Complete date on contract | Stage of completion | Total amount | Accumulated impairment loss | Total amount | Bad debt allowances |
| LG CNS 01 | 2021.05.24 | 2024.10.30 | 15.28% | ₩ 124,981 | ₩ - | ₩ 314,600 | ₩ - |

## 20. ISSUED CAPITAL:

Details of issued capital as of December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| Type of stock | Number of authorized shares | Number of issued shares | Number of shares owned by related party | Par value (in Korean won) | Amount of issued capital (*) | Amount of capital surplus |
|---|---|---|---|---|---|---|
| Common stock | 400,000,000 | 87,197,353 | 45,623,918 | ₩ 500 | ₩ 47,198,411 | ₩ 46,625,595 |

(*) As the Company purchased 7,199,469 shares via tender offer at ₩12,000 per share and had retired them before the prior year, the issued capital and number of issued stocks multiplied by face value are not equal.

## 21. CAPITAL SURPLUS:

Details of capital surplus as of December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | December 31, 2021 | December 31, 2020 |
|---|---|---|
| Paid-in capital in excess of par value | ₩ 46,625,595 | ₩ 46,625,595 |
| Gains on sale of treasury stock | 454,597 | 454,597 |
| Other capital surplus | 90,945,903 | 90,945,903 |
| Total | ₩ 138,026,095 | ₩ 138,026,095 |

## 22. ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS):

(1) Details of accumulated other comprehensive income (loss) as of December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | Year ended December 31, 2021 | Year ended December 31, 2020 |
|---|---|---|
| Loss on valuation of financial assets at FVTOCI | ₩ (13,731,028) | ₩ (14,990,368) |

Losses/gains on valuation of financial assets measured at FVTOCI related to equity instruments are recognized in the cumulative gain or loss, except for the amount replaced with retained earnings at the time of disposal. Gains and losses related to debt instruments are calculated by adding or deducting the amount reclassified to profit or loss as a result of accumulated depreciation and reversal from cumulative gain or loss.

Equity instruments designated as FVTOCI are not recognized for impairment. Accumulated gains and losses arising from the valuation of those equity instruments are not subsequently reclassified to profit or loss.

Changes in fair value due to credit risk of financial liabilities measured at FVTOCI are recognized in the cumulative gain or loss. Accumulated gains and losses arising from the valuation are not subsequently reclassified to profit or loss.

(2) Changes in accumulated other comprehensive income (loss) for the years ended December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | Year ended December 31, 2021 | | Year ended December 31, 2020 | |
|---|---|---|---|---|
| Beginning balance | ₩ | (14,990,368) | ₩ | (14,868,543) |
| Change in fair value of equity instruments designated as financial assets at FVTOCI | | 1,667,479 | | (159,099) |
| Profit on disposal of financial assets measured at FVTOCI | | (4,609) | | (1,228) |
| Income tax effect | | (403,530) | | 38,502 |
| Ending balance | ₩ | (13,731,028) | ₩ | (14,990,368) |

## 23. RETAINED EARNINGS AND DIVIDENDS:

(1) Details of retained earnings as of December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | Year ended December 31, 2021 | | Year ended December 31, 2020 | |
|---|---|---|---|---|
| Retained earnings with limited disposal (*) | ₩ | 23,599,206 | ₩ | 23,599,206 |
| Retained earnings without limited disposal | | 1,177,527,844 | | 1,038,078,167 |
| Total | ₩ | 1,201,127,050 | ₩ | 1,061,677,373 |

(*) This reserve may only be used to offset future deficit, if any, or may be transferred to capital stock.

(2) Changes in retained earnings for the years ended December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | Year ended December 31, 2021 | Year ended December 31, 2020 |
|---|---|---|
| Beginning balance | ₩ 1,061,677,373 | ₩ 1,007,540,859 |
| Profit for the year | 213,942,404 | 153,535,878 |
| Dividends (*) | (74,553,737) | (99,404,982) |
| Actuarial gain | 80,487 | 7,410 |
| Related deferred tax | (19,477) | (1,792) |
| Ending balance | ₩ 1,201,127,050 | ₩ 1,061,677,373 |

(*) Details of dividend payments for the years ended December 31, 2021 and 2020, are as follows:

| | Year ended December 31, 2021 | | Year ended December 31, 2020 | |
|---|---|---|---|---|
| Number of issued and outstanding shares | | 87,197,353 | | 87,197,353 |
| Number of dividend shares | | 87,197,353 | | 87,197,353 |
| Dividend per share (Unit: Korean won) | ₩ | 855 | ₩ | 1,140 |
| Total dividends (Unit: Korean won in thousands) | ₩ | 74,553,737 | ₩ | 99,404,982 |

(3) Separate statements of appropriations of retained earnings for the years ended December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands)

| Date of appropriations: March 25, 2021 | Year ended December 31, 2021 | Year ended December 31, 2020 |
|---|---|---|
| UNAPPROPRIATED RETAINED EARNINGS: | | |
| Unappropriated retained earnings carried over from prior year | ₩ 943,285,149 | ₩ 864,297,390 |
| Profit for the year | 213,942,404 | 153,535,878 |
| Actuarial gains and losses on defined benefit plans | 61,010 | 5,618 |
| | 1,157,288,563 | 1,017,838,886 |
| TRANSFER FROM VOLUNTARY RESERVES: | | |
| Reserves for research and development | - | - |
| APPROPRIATIONS: | | |
| Legal reserve | - | - |
| Dividends | 95,045,115 | 74,553,737 |
| | (95,045,115) | (74,553,737) |
| UNAPPROPRIATED RETAINED EARNINGS TO BE CARRIED FORWARD TO SUBSEQUENT YEAR | ₩ 1,062,243,448 | ₩ 943,285,149 |

**24. <u>OPERATING INCOME AND LOSS:</u>**

(1) The Company is making profit by transferring goods and services over time or at a point in time in the following key business unit. The classification of key business unit is consistent with the disclosure of revenue by reportable segments in accordance with K-IFRS 1108 (Unit: Korean won in thousands):

| | | 2021 | 2020 |
|---|---|---|---|
| Sales recorded at a point in time: | | | |
| Sales of merchandise | Equipment supply | ₩ 560,960,290 | ₩ 431,522,078 |
| | Others | 163,519,419 | 164,349,791 |
| Total of sales recorded at a point in time | | 724,479,709 | 595,871,869 |
| Sales recorded over time: | | | |
| Service revenue | Maintenance | 1,419,375,080 | 1,207,050,856 |
| Construction revenue | Development service | 1,305,553,642 | 918,754,616 |
| | Revenue from construction contract | 377,372,591 | 386,123,098 |
| Total of sales recorded over time | | 3,102,301,313 | 2,511,928,570 |
| Total | | ₩ 3,826,781,022 | ₩ 3,107,800,439 |

(2) Details of operating income for the years ended December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | 2021 | 2020 |
|---|---|---|
| Sales of merchandise | ₩ 724,479,709 | ₩ 595,871,869 |
| Service revenue | 1,419,375,080 | 1,207,050,856 |
| Construction revenue | 1,682,926,233 | 1,304,877,714 |
| REVENUE | 3,826,781,022 | 3,107,800,439 |
| Cost of merchandise | 651,536,690 | 538,046,386 |
| Service cost | 1,209,484,295 | 1,010,124,969 |
| Construction cost | 1,416,553,888 | 1,095,193,026 |
| COST OF GOODS SOLD | 3,277,574,873 | 2,643,364,381 |
| GROSS MARGIN | 549,206,149 | 464,436,058 |
| Salaries and wages | 113,402,869 | 121,908,727 |
| Severance benefits | 9,307,103 | 9,795,041 |
| Welfare | 24,185,509 | 20,876,903 |
| Depreciation | 6,327,443 | 7,000,309 |
| Amortization of intangible assets | 4,117,772 | 3,262,693 |
| Research and development expenses | 33,603,810 | 31,986,395 |
| Commission | 8,078,349 | 6,069,240 |
| Training expenses | 5,365,596 | 4,253,768 |
| Service contract expenses | 33,008,194 | 23,092,983 |
| Rent expense | 4,379,320 | 3,686,926 |
| Bad debt expenses (reversal) | 853,924 | (4,782,857) |
| Increase in provision (reversal) | 613,323 | (2,304,887) |
| Others | 30,755,589 | 28,973,705 |
| SELLING AND ADMINISTRATIVE EXPENSES | (273,998,801) | (253,818,946) |
| OPERATING INCOME | ₩ 275,207,348 | ₩ 210,617,112 |

## 25. CLASSIFICATION OF EXPENSES BY NATURE:

1) For the year ended December 31, 2021 (Unit: Korean won in thousands):

| Account | Changes in inventories | Selling and administrative expenses | Manufacturing cost | Total |
|---|---|---|---|---|
| Changes in inventories: | ₩ (16,526,518) | ₩ - | ₩ 939,283,870 | ₩ 922,757,352 |
| Merchandise | (16,941,222) | - | 668,477,912 | 651,536,690 |
| Other inventories | 414,704 | - | 270,805,958 | 271,220,662 |
| Employee benefits | - | 146,895,481 | 644,851,639 | 791,747,120 |
| Depreciation and amortization | - | 10,445,215 | 62,536,112 | 72,981,327 |
| Commission expenses | - | 8,078,349 | 197,271,442 | 205,349,791 |
| Lease expenses | - | 4,379,320 | 100,004,708 | 104,384,028 |
| Outsourcing services | - | 33,008,194 | 981,617,905 | 1,014,626,099 |
| Other expenses | - | 71,192,242 | 368,535,715 | 439,727,957 |
| Total | ₩ (16,526,518) | ₩ 273,998,801 | ₩ 3,294,101,391 | ₩ 3,551,573,674 |

2) For the year ended December 31, 2020 (Unit: Korean won in thousands):

| Account | Changes in inventories | Selling and administrative expenses | Manufacturing cost | Total |
|---|---|---|---|---|
| Changes in inventories: | ₩ 20,911,161 | ₩ - | ₩ 835,685,087 | ₩ 856,596,248 |
| Merchandise | 21,260,463 | - | 516,785,923 | 538,046,386 |
| Other inventories | (349,302) | - | 318,899,164 | 318,549,862 |
| Employee benefits | - | 152,580,670 | 558,326,583 | 710,907,253 |
| Depreciation and amortization | - | 10,263,002 | 65,005,070 | 75,268,072 |
| Commission expenses | - | 6,069,240 | 148,344,446 | 154,413,686 |
| Lease expenses | - | 3,686,926 | 28,641,051 | 32,327,977 |
| Outsourcing services | - | 23,092,983 | 649,603,473 | 672,696,456 |
| Other expenses | - | 58,126,125 | 336,847,510 | 394,973,635 |
| Total | ₩ 20,911,161 | ₩ 253,818,946 | ₩ 2,622,453,220 | ₩ 2,897,183,327 |

## 26. FINANCIAL INCOME AND FINANCIAL EXPENSES:

(1) Financial income for the years ended December 31, 2021 and 2020, is as follows (Unit: Korean won in thousands):

| | 2021 | | 2020 | |
|---|---|---|---|---|
| Interest income | ₩ | 6,048,739 | ₩ | 6,351,998 |
| Dividend income | | 22,338,388 | | 17,179,726 |
| Gain on foreign currency transactions | | 475,959 | | 1,664,443 |
| Gain on foreign currency translation | | 215,388 | | - |
| Gain on valuation of financial assets at FVTPL | | 57,177 | | 151,693 |
| Total | ₩ | 29,135,651 | ₩ | 25,347,860 |

(2) Interest income included in financial income for the years ended December 31, 2021 and 2020, is as follows (Unit: Korean won in thousands):

| | 2021 | | 2020 | |
|---|---|---|---|---|
| Interest income by effective interest method | | | | |
| Financial assets at amortized cost | ₩ | 6,048,739 | ₩ | 6,351,998 |

(3) Financial expenses for the years ended December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | 2021 | | 2020 | |
|---|---|---|---|---|
| Interest expense | ₩ | 12,540,401 | ₩ | 14,822,553 |
| Loss on foreign currency transactions | | 788,521 | | 1,626,876 |
| Loss on foreign currency translation | | - | | 155,716 |
| Loss on disposal of financial assets measured at FVTPL | | 16,900 | | 8 |
| Loss on disposal of financial assets measured at FVTOCI | | 17,501 | | - |
| Loss on valuation of financial assets measured at FVTPL | | 22,198 | | 201,952 |
| Total | ₩ | 13,385,521 | ₩ | 16,807,105 |

(4) Interest expense included in financial expenses for the years ended December 31, 2021 and 2020, is as follows (Unit: Korean won in thousands):

| | 2021 | | 2020 | |
|---|---|---|---|---|
| Interest expense on debentures | ₩ | 10,898,614 | ₩ | 12,680,766 |
| Interest expense on lease | | 985,968 | | 1,097,940 |
| Other interest expense | | 1,382,864 | | 1,331,836 |
| Less: interest expense capitalized (*) | | (727,045) | | (287,989) |
| Total | ₩ | 12,540,401 | ₩ | 14,822,553 |

(*) Capitalization interest rates used for the years ended December 31, 2021 and 2020, are 2.23% and 2.37%, respectively.

## 27. OTHER NON-OPERATING INCOME AND EXPENSES:

Other non-operating income and expenses for the years ended December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | | 2021 | | 2020 |
|---|---|---|---|---|
| Rental income | ₩ | 2,974,146 | ₩ | 2,433,119 |
| Commission | | 685,838 | | 382,879 |
| Gains on foreign currency transaction | | 6,451,161 | | 9,764,675 |
| Gain on foreign currency translation | | 2,045,348 | | 2,708,066 |
| Gain on disposal of tangible assets | | 529,930 | | 455,138 |
| Gain on disposal of intangible assets | | - | | 989 |
| Gain on transactions of derivatives | | 4,967,716 | | 17,740,512 |
| Gain on valuation of derivatives | | 1,621,136 | | 2,309,579 |
| Reversal of impairment of investments in associates | | 1,872 | | 107,521 |
| Miscellaneous gain | | 675,578 | | 174,735 |
| Gain from assets contributed | | 280,448 | | - |
| Others | | 1,873,975 | | 12,225,275 |
| OTHER NON-OPERATING INCOME | ₩ | 22,107,148 | ₩ | 48,302,488 |
| | | | | |
| Other bad debt expenses | ₩ | 1,010,469 | ₩ | 1,938,867 |
| Loss on foreign currency transaction | | 5,159,484 | | 7,051,410 |
| Loss on foreign currency translation | | 1,326,948 | | 6,068,653 |
| Loss on disposal of tangible assets | | 247,734 | | 1,305,616 |
| Loss on impairment of tangible assets | | - | | 4,339 |
| Loss on disposal of intangible assets | | 5,698 | | 310,105 |
| Loss on impairment of intangible assets | | 2,673,417 | | - |
| Loss on transaction of derivatives | | 12,315,065 | | 18,795,478 |
| Loss on valuation of derivatives | | 2,564,026 | | 326,494 |
| Loss on disposal of investments in subsidiaries | | 16,760 | | 3,500 |
| Impairment loss on investments in subsidiaries | | 4,654,288 | | 20,402,336 |
| Impairment loss on investments in associates | | 4,094,500 | | - |
| Donations and contributions | | 1,390,000 | | 1,483,833 |
| Miscellaneous loss | | 58,076 | | 56,425 |
| Others | | 20,614 | | 1,584,746 |
| OTHER NON-OPERATING EXPENSES | ₩ | 35,537,079 | ₩ | 59,331,802 |

## 28. NET GAINS (LOSSES) ON FINANCIAL INSTRUMENTS:

Net gains (losses) on financial instruments for the years ended December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | Year ended December 31, 2021 | Year ended December 31, 2020 |
|---|---|---|
| Financial assets: | | |
| Financial assets at FVTPL | ₩ 7,226,323 | ₩ 20,017,724 |
| Financial assets at FVTOCI | 1,712,781 | (57,795) |
| Financial assets at amortized cost (*) | 7,683,718 | 5,882,277 |
| Subtotal | 16,622,822 | 25,842,206 |
| Financial liabilities: | | |
| Financial liabilities at FVTPL | (14,879,090) | (19,121,972) |
| Financial liabilities at amortized cost | (14,302,952) | (11,578,704) |
| Subtotal | (29,182,042) | (30,700,676) |
| Total | ₩ (12,559,220) | ₩ (4,858,470) |

(*) Net gain or loss arising from cash and cash equivalents is included.

## 29. INCOME TAX:

(1) Composition of income tax expense for the years ended December 31, 2021 and 2020, is as follows (Unit: Korean won in thousands):

| | | 2021 | | 2020 |
|---|---|---|---|---|
| Current income tax payable | ₩ | 86,492,360 | ₩ | 46,861,657 |
| Adjustment relating to prior income tax expense | | 7,053,512 | | (896,483) |
| Tax expenses related to the variation of temporary difference: | | (29,960,729) | | 8,627,501 |
| Beginning deferred tax assets due to temporary differences | | 32,740,642 | | 41,331,433 |
| Ending deferred tax assets due to temporary differences | | 62,278,363 | | 32,740,642 |
| Deferred tax directly reflected in equity | | (423,008) | | 36,710 |
| Income tax expense | ₩ | 63,585,143 | ₩ | 54,592,675 |

(2) Reconciliation between accounting income and income tax expense of the Company for the years ended December 31, 2021 and 2020, is as follows (Unit: Korean won in thousands):

| | | 2021 | | 2020 |
|---|---|---|---|---|
| Profit before income tax expense | ₩ | 277,527,547 | ₩ | 208,128,553 |
| Tax at the applicable tax rate | | 66,699,667 | | 49,905,110 |
| Adjustments: | | (3,114,524) | | 4,687,565 |
| Non-taxable income | | (74,191) | | (72,863) |
| Non-deductible expense | | 2,498,504 | | 1,619,641 |
| Adjustment relating to prior income tax expense | | 7,053,511 | | (896,483) |
| Effect of tax credit and exemption | | (10,535,033) | | (2,867,085) |
| Temporary differences not recognized as deferred tax assets | | 939,290 | | 4,488,514 |
| Foreign tax adjustment | | (5,498,837) | | 2,775,600 |
| Others | | 2,502,232 | | (359,759) |
| Income tax expense | ₩ | 63,585,143 | ₩ | 54,592,675 |

(3) Income tax directly reflected in equity for the years ended December 31, 2021 and 2020, is as follows (Unit: Korean won in thousands):

| | | 2021 | | 2020 |
|---|---|---|---|---|
| Gain (loss) on valuation of financial assets measured at FVTOCI | ₩ | (403,530) | ₩ | 38,502 |
| Remeasurement factor on a defined benefit plan | | (19,478) | | (1,792) |
| Total deferred tax directly reflected in equity | ₩ | (423,008) | ₩ | 36,710 |

(4) Changes in deferred tax assets (liabilities) for the years ended December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

1) For the year ended December 31, 2021

| | Beginning balance | Reflected in income (loss) | Reflected in equity | Ending balance |
|---|---|---|---|---|
| Temporary differences: | | | | |
| Valuation of derivative instruments | ₩ (479,906) | ₩ 708,085 | ₩ - | ₩ 228,179 |
| Investment stocks accounted in equity method | 806,871 | (806,871) | | - |
| Property, plant and equipment | 6,905,422 | 1,312,524 | - | 8,217,946 |
| Financial lease | 270,093 | 81,047 | - | 351,140 |
| Intangible assets | 578,212 | (1,072) | - | 577,140 |
| Financial assets at FVTOCI | 378,271 | (168,026) | (403,530) | (193,285) |
| Accrued expense | 9,430,279 | 23,131,497 | - | 32,561,776 |
| Provisions | 12,293,169 | 731,387 | (19,478) | 13,005,078 |
| Doubtful receivable | 960,293 | - | - | 960,293 |
| Government subsidies | 260,303 | (10,036) | - | 250,267 |
| Others | 1,710,573 | 1,003510 | - | 2,714,083 |
| Carried forward tax credit | (372,938) | 3,978,684 | - | 3,605,746 |
| Deferred income tax assets (liabilities) | ₩ 32,740,642 | ₩ 29,960,729 | ₩(423,008) | ₩ 62,278,363 |

2) For the year ended December 31, 2020

| | Beginning balance | Reflected in income (loss) | Reflected in equity | Ending balance |
|---|---|---|---|---|
| Temporary differences: | | | | |
| Valuation of derivative instruments | ₩ (412,720) | ₩ (67,186) | ₩ - | ₩ (479,906) |
| Investment stocks accounted in equity method | | 806,871 | | 806,871 |
| Property, plant and equipment | 5,940,237 | 965,185 | - | 6,905,422 |
| Financial lease | 101,093 | 169,000 | | 270,093 |
| Intangible assets | 754,359 | (176,147) | - | 578,212 |
| Financial assets at FVTOCI | 1,148,219 | (808,450) | 38,502 | 378,271 |
| Accrued expense | 8,792,141 | 638,138 | - | 9,430,279 |
| Provisions | 18,876,349 | (6,581,388) | (1,792) | 12,293,169 |
| Doubtful receivable | 984,796 | (24,503) | - | 960,293 |
| Government subsidies | 237,654 | 22,649 | - | 260,303 |
| Others | 1,620,262 | 90,311 | - | 1,710,573 |
| Carried forward tax credit | 3,289,043 | (3,661,981) | - | (372,938) |
| Deferred income tax assets (liabilities) | ₩ 41,331,433 | ₩ (8,627,501) | ₩ 36,710 | ₩ 32,740,642 |

(5) As of December 31, 2021 and 2020, temporary differences not recognized as deferred tax assets (liabilities) related to investment asset and equity interest are as follows (Unit: Korean won in thousands):

| | December 31, 2021 | December 31, 2020 |
|---|---|---|
| Investments in subsidiaries | ₩ 1,719,890 | ₩ 21,711,908 |
| Investments in associates | 22,724,029 | 18,454,529 |
| Total | ₩ 24,443,919 | ₩ 40,166,437 |

## 30. RELATED-PARTY TRANSACTIONS:

(1) Details of related parties as of December 31, 2021 and 2020, are as follows:

| Year ended December 31, 2021 | | |
|---|---|---|
| Entity controlled by the Company ("Controlled entity") | Subsidiaries and jointly controlled entity of Controlled entity (domestic) (*1) | Subsidiaries and jointly controlled entity of Controlled entity (overseas) (*1) |
| Parent company: | | |
| LG Corp. | S&I Corporation Co., Ltd. and eight others (*2) | LG Holdings Japan Co., Ltd. |
| | LG Management Development Institute | S&I (Nanjing) Co., Ltd. and 12 others (*2) |
| | LG Sports Ltd. | |
| Subsidiary: | | |
| LG CNS Co., Ltd. | Biztechpartners Co., Ltd. | LG CNS China Inc. and 13 others |
| | Haemgbokmaru Co., Ltd. | |
| | Open Source Consulting Co., Ltd. | |
| | RightBrain Co., Ltd. (*3) | |
| Jointly controlled entity: | | |
| LG CNS Co., Ltd. | Tmoney Co., Ltd. and two others | T-money Asia sdn bhd and another |
| | Songdo U-Life LLC and two others | RECAUDO BOGOTA S.A.S. |
| | Daegu clean energy Co., Ltd. | Hellas SmarTicket Societe Anonyme |
| | Cloudgram Co., Ltd. | |
| | KoreaDRD Co., Ltd. | |
| | HEMPKING | |
| | Danbi Inc. | |

| Entity controlled by the Company ("Controlled entity") | Subsidiaries and jointly controlled entity of Controlled entity (domestic) (*1) | Subsidiaries and jointly controlled entity of Controlled entity (overseas) (*1) |
|---|---|---|
| Associates and jointly controlled entities of parent company: | | |
| LG Electronics Inc. | Hi Plaza Inc. | LG Electronics Mexico S.A.DE C.V. and others |
| | High-M Solutec Co., Ltd. | |
| | HITeleservice Co., Ltd. | |
| | Ace R&A Co., Ltd. | |
| | LG Innotek Co., Ltd. | |
| | Innowith Co., Ltd. | |
| | LG Hanuri Co. Ltd. | |
| | ZKW Lighting Systems Korea Co., Ltd. | |
| | Hi-Caresolution Corp (*4) | |
| | LG Magna e-Powertrain Co., Ltd. (*5) | |
| LG Chem Ltd. | Haemgboknuri Co., Ltd. | LG Chem America, Inc. and others |
| | FarmHannong | |
| | LG ENERGY SOLUTION, LTD. | |
| | Aremnuri. Co. Ltd. (*6) | |
| | LG BCM (*7) | |
| LG Uplus Corp. | CS Leader | Dacom America, Inc. |
| | Ain Teleservice | |
| | Medialog Corp. | |
| | CS ONE Partner | |

| Year ended December 31, 2021 | | |
|---|---|---|
| Entity controlled by the Company ("Controlled entity") | Subsidiaries and jointly controlled entity of Controlled entity (domestic) (*1) | Subsidiaries and jointly controlled entity of Controlled entity (overseas) (*1) |
| | WithU | |
| | LG Hellovision Co., Ltd. | |
| | LG Uplus Homeservice Co., Ltd. | |
| | CV Partners Co., Ltd. | |
| | Murex wave active senior investment association (*8) | |
| LG Household & Health Care Ltd. | Coca-Cola Beverage Co. | Beijing LG Household Chemical Co., Ltd. and others |
| | Hankook Beverage Co., Ltd. | |
| | HTB Co., Ltd. | |
| | Balkeunnuri Co., Ltd. | |
| | FMG Co., Ltd. | |
| | LG Farouk | |
| | TAI GUK PHARM Co., Ltd. | |
| | Ulleungdo Choosan Water | |
| | RUCIPELLO KOREA INC. | |
| | MiGenstory Co., Ltd. | |
| | RoaKorea Co., Ltd. | |
| | Gowoonnuri (*9) | |
| GIIR Corp. | HS Ad Co., Ltd. | GIIR America Inc. and another |
| | L.Best | |
| LG Hitachi Co., Ltd. | | |
| ZKW Holding GmbH | ZKW Lighting Systems Korea | ZKW Group GmbH and others |
| ZKW Austria Immobilien Holding GmbH | | ZKW Austria Immobilien GmbH |
| Conglomerate of many companies (*12): | | |
| LG Display | Nanumnuri Co., Ltd. | LG Display Nanjing Co. Ltd. and others |
| SEETEC Co., Ltd. | | |
| DACOM Crossing | | |
| Robostar Co., Ltd. | | Robostar (Shanghai) Co., Ltd. |
| LX Holdings Corp.(*10) | | |
| LX Hausys, Ltd. (*11) | GREENNURI CO.,LTD | LX Hausys America, Inc. and others |
| LX Semicon Co., Ltd. (*11) | | LX Semicon U.S.A Inc. and another |
| LX International Corp. (*11) | DANGJIN TANK TERMINAL | LX International (America) Inc. and others |
| | LX Pantos Co., Ltd. | |
| | PANTOS BUSAN NEWPORT LOGISTICS CENTER CO.,LTD.大 | |
| | HELISTAR AIR CO., LTD. | |
| | Hanultari Co., Ltd. | |
| LX MMA Corp. (*11) | | |

(*1) Joint ventures of associates are excluded.
(*2) Direct shareholding of the relationship between corporate subsidiaries is included.
(*3) Classified as a subsidiary due to acquisition of equity during the current year.
(*4) Established from Hi-M.Solutek due to equity spin-off during the current year.
(*5) Established as a subsidiary of LG ELECTRONICS INC. during the current year.
(*6) Established as a subsidiary of LG ENERGY SOLUTION, LTD. during the current year.
(*7) Established as a subsidiary of LG CHEM LTD. during the current year.
(*8) Established as a subsidiary of LG Uplus Corp during the current year.
(*9) Established as a subsidiary of Coca-Cola Beverage Co. during the current year.
(*10) Established from LG Corp due to equity spin-off during the current year.
(*11) An affiliate of LX Holdings Corp. established from LG Corp., which is established due to equity sign-off .

As of July 1, 2021, LG Hausys, Ltd., Silicon Works Inc., LG International Corp., LG MMA Corp. and Pantos Co., Ltd. have changed their names to LX HAUSYS, LTD., LX Semicon Co., Ltd., LX INTERNATIONAL CORP., LX MMA Corp. and LX Pantos Co., Ltd., respectively.

(*12) These companies are not related parties as defined in paragraph 9 of K-IFRS 1024. However, the companies are designated by the Fair Trade Commission as related parties in accordance with the resolution of the Securities and Futures Commission in accordance with the substantive relationship stipulated in paragraph 10 of K-IFRS 1024.

Year ended December 31, 2020

| Controlled entity | Subsidiaries and jointly controlled entity of Controlled entity (domestic) (*1) | Subsidiaries and jointly controlled entity of Controlled entity (overseas) (*1) |
|---|---|---|
| Parent company: | | |
| LG Corp. | S&I Corporation Co., Ltd. and six others (*2) | LG Holdings Japan Co., Ltd. and another (*2) |
| | LG Management Development Institute | Serveone (Nanjing) Co., Ltd. and 12 others |
| | LG Sports Ltd. | |
| Subsidiary (*2): | | |
| LG CNS Co., Ltd. | Biztechpartners Co., Ltd. | LG CNS China Inc. and 13 others |
| | Haemgbokmaru Co., Ltd. | |
| | Sejong Green Power Co., Ltd. (*3) | |
| | Open Source Consulting Co., Ltd. | |
| Jointly controlled entity: | | |
| LG CNS Co., Ltd. | Tmoney Co., Ltd. and two others | T-money Asia sdn bhd and another |
| | Songdo U-Life LLC and two others | RECAUDO BOGOTA S.A.S. |
| | Ulleungdo Natural Energy Co., Ltd. (*4) | Hellas SmarTicket Societe Anonyme |
| | Daegu clean energy Co., Ltd. | |
| | Cloudgram Co., Ltd. (*5) | |
| | KoreaDRD Co., Ltd. (*5) | |
| | HEMPKING (*5) | |
| | Danbee Inc corp. (*6) | |
| Associates and jointly controlled entity of parent company: | | |
| LG Electronics Inc. | Hi Plaza Inc. | LG Electronics Mexico S.A.DE C.V. and others |
| | High-M Solutec Co., Ltd. | |
| | HITeleservice Co., Ltd. | |
| | Ace R&A Co., Ltd. | |
| | LG Innotek Co., Ltd. | |
| | LG Innoteck Alliance Fund (*4) | |
| | Innowith Co., Ltd. | |
| | LG Hanuri Co. Ltd. | |
| | ZKW Lighting Systems Korea Co., Ltd. | |
| LG Chem Ltd. | Haemgboknuri Co., Ltd. | LG Chem America, Inc. and others |
| | FarmHannong | |
| | Ugimagkorea Co., Ltd. (*3) | |
| | LG ENERGY SOLUTION, LTD. (*7) | |
| LG Hausys, Ltd. | Greennuri Co. Ltd. | LG Hausys America, Inc. and others |
| LG Uplus Corp. | CS Leader | Dacom America, Inc. |
| | Ain Teleservice | |

| Year ended December 31, 2020 | | |
| --- | --- | --- |
| Controlled entity | Subsidiaries and jointly controlled entity of Controlled entity (domestic) (*1) | Subsidiaries and jointly controlled entity of Controlled entity (overseas) (*1) |
| | Medialog Corp.<br>CS ONE Partner<br>WithU<br>LG Hellovision Co., Ltd. (*8)<br>LG Uplus Homeservice Co., Ltd. (*9)<br>CV Partners Co., Ltd. (*10) | |
| LG Household & Health Care Ltd. | Coca-Cola Beverage Co.<br>Hankook Beverage Co., Ltd.<br>HTB Co., Ltd.<br>Balkeunnuri Co., Ltd.<br>FMG Co., Ltd.<br>LG Farouk<br>TAI GUK PHARM Co., Ltd.<br>Ulleungdo Choosan Water Development Co., Ltd.<br>MiGenstory Co., Ltd.<br>RUCIPELLO KOREA INC.<br>RoaKorea Co., Ltd. (*11) | Beijing LG Household Chemical Co., Ltd. and others |
| GIIR Corp. | HS Ad Co., Ltd.<br>L.Best | GIIR America Inc. and another |
| LG Hitachi Co., Ltd. | | |
| Silicon Works Inc. | | Silicon Works Inc. and another |
| LG International Corp. | Dangjin Tank Terminal Co., Ltd.<br>Pantos Logistics Co., Ltd.<br>Pantos Logistics Pusan Co., Ltd.<br>Helistar Air Co., Ltd.<br>Hanultari Co., Ltd. | LG International (America) Inc. and others |
| ZKW Holding GmbH | ZKW Lighting Systems Korea | ZKW Group GmbH and others |
| ZKW Austria Immobilien Holding GmbH | | ZKW Austria Immobilien GmbH |
| Joint venture of parent company: | | |
| LG MMA Corp. | | |
| Conglomerate of many companies: | (*12) | |
| LG Display | Nanumnuri Co., Ltd. | LG Display Nanjing Co. Ltd. and others |
| SEETEC Co., Ltd. | | |
| Clean Soul Ltd. (*4) | | |
| DACOM Crossing | | |
| Robostar Co., Ltd. | Robomedi Co., Ltd. (*4) | Robostar(Shanghai) Co., Ltd. |

(*1) Joint ventures of associates are excluded.
(*2) Direct shareholding of the relationship between corporate subsidiaries is included.
(*3) Disposed during the current year.
(*4) Liquidated during the current year.
(*5) Classified as an associate due to the acquisition of equity during the prior year.
(*6) Classified as LG CNS Ltd.'s associate due to the exercise of convertible rights during the prior year.
(*7) Classified as a subsidiary of LG Chem Ltd. due to acquisition of equity during the prior year.
(*8) Merged Hana-broadcasting Co. Ltd. during the previous year.
(*9) Classified as a subsidiary of LG Uplus Corp. due to the acquisition of shares during the prior year.
(*10) Classified as a subsidiary of LG HelloVision Corp. due to the acquisition of shares during the prior year.

(*11) Classified as a subsidiary of LG HOUSEHOLD & HEALTH CARE LTD. due to the acquisition of shares during the prior year.
(*12) These companies are not related parties as defined in paragraph 9 of K-IFRS 1024. However, the companies are designated by the Fair Trade Commission as related parties in accordance with the resolution of the Securities and Futures Commission and in accordance with the substantive relationship stipulated in paragraph 10 of K-IFRS 1024.

(2) Major transactions with the related parties for the years ended December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | December 31, 2021 | | |
|---|---|---|---|
| Description | Revenue and others | Acquisitions of property, plant and equipment | Other purchase |
| Parent company and its subsidiaries: | | | |
| LG Corp. | ₩ 4,727,192 | ₩ - | ₩ 14,941,869 |
| S&I Corporation Co., Ltd. (*1,2) | 46,729,891 | 172,045 | 32,912,879 |
| LG Sports Co., Ltd. | 1,093,910 | - | 40,000 |
| LG Management Development Institute | 23,705,638 | - | 6,620,449 |
| Subtotal | 76,256,631 | 172,045 | 54,515,197 |
| Subsidiaries: | | | |
| LG CNS China Inc. | 81,475,218 | - | 4,886,465 |
| LG CNS Europe B.V. | 40,180,931 | - | 77,587 |
| LG CNS America, Inc. | 45,986,119 | - | 2,034,950 |
| LG CNS India Pvt., Ltd. | 4,170,073 | - | - |
| PT LG CNS Indonesia | 3,323,887 | - | 80,087 |
| LG CNS BRASIL SERVICOS DE TI LTDA | 108,855 | - | - |
| Biztech Partners Co., Ltd. | 1,096,666 | 9,675,439 | 102,847,840 |
| LG CNS COLOMBIA SAS | 1,026,250 | - | - |
| LG CNS JAPAN Co., Ltd. | 4,590,919 | - | 36,452 |
| LG CNS Malaysia SDN Bhd | 723,875 | - | 1,533,546 |
| LG CNS UZBEKISTAN, LLC | - | - | 946,673 |
| Haemgbokmaru Co., Ltd. | 27,860 | - | 1,876,740 |
| LG CNS Vietnam Co., Ltd. | 31,870,779 | - | 2,469,288 |
| Sejong Green Power Co., Ltd. (*3) | 1,200 | - | 339,677 |
| Open Source Consulting Co., Ltd. | 87,503 | - | 2,837,851 |
| RightBrain Co., Ltd. | - | - | 87,000 |
| Subtotal | 214,670,135 | 9,675,439 | 120,054,156 |
| Associates and jointly controlled entity: | | | |
| RECAUDO BOGOTA S.A.S | 510,647 | - | - |
| Tmoney Co., Ltd. (*1) | 21,675,327 | - | 1,273,462 |
| Hellas SmarTicket Societe Anonyme | 9,152,587 | - | - |
| Cloudgram Co., Ltd. | - | - | 2,052,027 |
| KoreaDRD Co., Ltd. | 1,610,000 | - | 773,519 |
| HEMPKING | - | - | 75,150 |
| Subtotal | 32,948,561 | - | 4,174,158 |
| LG Chem Ltd. (*1) | 591,168,064 | 1,817,300 | 12,062,292 |
| LG Household & Health Care Ltd. (*1) | 36,049,631 | - | 3,389,537 |
| LX Hausys, Ltd. (*1,*4) | 9,294,555 | - | - |
| LG Electronics Inc. (*1) | 784,482,466 | 5,000 | 139,445,914 |
| GIIR Corp. (*1) | 6,849,157 | - | 241,555 |

| Description | December 31, 2021<br>Revenue and others | <br>Acquisitions of property, plant and equipment | <br>Other purchase |
|---|---|---|---|
| LX MMA Corp. (*4) | 1,574,184 | - | - |
| LG Hitachi Co., Ltd. | 114,973 | - | 626,173 |
| LG U Plus Co., Ltd. (*1) | 383,632,388 | - | 22,324,412 |
| LX Semicon Co., Ltd. (*4) | 1,585,098 | - | - |
| LX International Corp. (*1,*4) | 13,011,321 | - | 46,051 |
| Subtotal | 1,827,761,837 | 1,822,300 | 178,135,934 |
| Total | ₩ 2,151,637,164 | ₩ 11,669,784 | ₩ 356,879,445 |

| Description | December 31, 2020<br>Revenue and others | <br>Acquisitions of property, plant and equipment | <br>Other purchase |
|---|---|---|---|
| Parent company and its subsidiaries: | | | |
| LG Corp. | ₩ 5,620,371 | ₩ - | ₩ 13,354,294 |
| S&I Corporation Co., Ltd. (*1,2) | 55,753,791 | 74,553 | 31,535,456 |
| LG Sports Co., Ltd. | 1,743,380 | - | 40,022 |
| LG Management Development Institute | 8,781,862 | - | 5,029,011 |
| Subtotal | 71,899,404 | 74,553 | 49,958,783 |
| Subsidiaries: | | | |
| LG CNS China Inc. | 80,995,675 | - | 3,200,758 |
| LG CNS Europe B.V. | 60,727,522 | - | 135,186 |
| LG CNS America, Inc. | 24,574,283 | - | 3,317,597 |
| LG CNS India Pvt., Ltd. | 3,977,539 | - | - |
| PT LG CNS Indonesia | 2,914,043 | - | 911,230 |
| LG CNS BRASIL SERVICOS DE TI LTDA | 203,485 | - | - |
| Biztech Partners Co., Ltd. | 807,974 | 1,380,970 | 75,425,019 |
| LG CNS COLOMBIA SAS | 1,560,521 | - | - |
| LG CNS JAPAN Co., Ltd. | 352,304 | - | 29,840 |
| LG CNS Malaysia SDN Bhd | 9,817 | - | 885,330 |
| LG CNS UZBEKISTAN, LLC | - | - | 942,506 |
| Haemgbokmaru Co., Ltd. | 31,249 | - | 1,799,433 |
| LG CNS Vietnam Co., Ltd. | 9,969,782 | - | 34,027 |
| Sejong Green Power Co., Ltd. (*3) | 2,849 | - | - |
| Open Source Consulting Co., Ltd. | 62,352 | 23,263 | 3,013,512 |
| RightBrain Co., Ltd. | - | - | - |
| Subtotal | 186,189,395 | 1,404,233 | 89,694,438 |
| Associates and jointly controlled entity: | | | |
| RECAUDO BOGOTA S.A.S | - | - | - |
| Tmoney Co., Ltd. (*1) | 22,966,681 | - | 783,750 |
| Hellas SmarTicket Societe Anonyme | 1,324,989 | - | - |
| Cloudgram Co., Ltd. | - | - | 530,973 |
| KoreaDRD Co., Ltd. | 1,812,200 | - | 1,728,686 |
| HEMPKING | - | - | 4,300 |
| Subtotal | 26,103,870 | - | 3,047,709 |
| Top Controlled entity's associates and jointly controlled entity: | | | |
| LG Chem Ltd. (*1) | 369,046,348 | 243,000 | 12,893,636 |

| Description | December 31, 2020 Revenue and others | Acquisitions of property, plant and equipment | Other purchase |
|---|---|---|---|
| LG Household & Health Care Ltd. (*1) | 42,669,898 | - | 3,815,496 |
| LX Hausys, Ltd. (*1,*4) | 26,868,044 | - | 93,386 |
| LG Electronics Inc. (*1) | 629,461,217 | - | 130,282,571 |
| GIIR Corp. (*1) | 7,037,017 | - | 551,602 |
| LX MMA Corp. (*4) | 5,839,721 | - | - |
| LG Hitachi Co., Ltd. | 103,919 | - | 1,329,328 |
| LG U Plus Co., Ltd. (*1) | 347,870,040 | - | 22,434,905 |
| LX Semicon Co., Ltd. (*4) | 5,892,543 | - | - |
| LX International Corp. (*1,*4) | 41,030,595 | 290 | 752,718 |
| Subtotal | 1,475,819,342 | 243,290 | 172,153,642 |
| Total | ₩ 1,760,012,011 | ₩ 1,722,076 | ₩ 314,854,572 |

(*1) This includes transaction details for subsidiaries.
(*2) This includes transaction details for associates.
(*3) The transaction details were excluded from the related parties due to disposal of equity/liquidation during the prior year, and the transaction details shown above are the transactions before the subsidiary was excluded from the related parties.
(*4) An affiliate of LX Holdings Corp. established from spin-off of LG Corp. transaction details were divided and recorded based on the time of the equity spin-off.

Major transactions with the conglomerate of many companies, excluding above transactions with the related parties for the years ended December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| Description | December 31, 2021 Revenue and others | Acquisitions of property, plant and equipment | Other purchase |
|---|---|---|---|
| Conglomerate of many companies: | | | |
| LG Display (*1) | ₩ 236,686,977 | ₩ - | ₩ 88,644 |
| LG TOSTEM BM (*2) | - | - | - |
| LX Holdings Corp. | 7,084,047 | - | - |
| LX Hausys, Ltd. (*1,*3) | 16,596,927 | - | - |
| LX MMA Corp. (*3) | 3,169,173 | - | - |
| LX Semicon Co., Ltd. (*3) | 4,246,480 | - | - |
| LX International Corp. (*1,*3) | 34,023,125 | - | 264,504 |
| Total | ₩ 301,806,729 | ₩ - | ₩ 353,148 |

| Description | December 31, 2020 Revenue and others | Acquisitions of property, plant and equipment | Other purchase |
|---|---|---|---|
| Conglomerate of many companies: | | | |
| LG Display | ₩ 143,616,725 | ₩ - | ₩ 228,490 |
| LG TOSTEM BM (*2) | 9,685 | - | - |
| LX Holdings Corp. | - | - | - |
| LX Hausys, Ltd. (*1,*3) | - | - | - |

| Description | December 31, 2020 Revenue and others | Acquisitions of property, plant and equipment | Other purchase |
|---|---|---|---|
| LX MMA Corp. (*3) | - | - | - |
| LX Semicon Co., Ltd. (*3) | - | - | - |
| LX International Corp. (*1,*3) | - | - | - |
| Total | ₩ 143,626,410 | ₩ - | ₩ 228,490 |

(*1) Transactions with its subsidiaries are included.
(*2) The details of the transaction were excluded from the related parties due to the disposal/liquidation of stock during the prior year, and the details of the transaction were before the exclusion.
(*3) An affiliate of LX Holdings Corp. established from spin-off of LG Corp. transaction details were divided and recorded based on the time of the equity spin-off.

(3) Outstanding receivables and payables from transactions with related parties as of December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| Description | December 31, 2021 Accounts receivable and others (*1) | Loans | Accounts payable and others (*2) |
|---|---|---|---|
| Parent company and its subsidiaries: | | | |
| LG Corp. | ₩ 5,352,781 | ₩ - | ₩ 1,619,843 |
| S&I Corporation Co., Ltd. (*3,4) | 19,172,586 | - | 2,492,866 |
| LG Sports Co., Ltd. | 145,190 | - | - |
| LG Management Development Institute | 8,448,610 | - | 276,491 |
| Subtotal | 33,119,167 | | 4,389,200 |
| Subsidiaries: | | | |
| LG CNS China Inc. | 21,872,556 | - | 342,735 |
| LG CNS Europe B.V. (*6) | 17,321,185 | - | 19,681 |
| LG CNS America Inc. (*7) | 21,254,823 | - | 143,268 |
| LG CNS India Pvt., Ltd. | 4,514,516 | - | - |
| PT LG CNS Indonesia | 1,139,707 | - | - |
| LG CNS BRASIL SERVICOS DE TI LTDA | - | - | - |
| Biztech Partners Co., Ltd. | 308,894 | - | 15,564,090 |
| LG CNS COLOMBIA SAS | 170,105 | - | - |
| LG CNS Philippines, Inc. (*5) | 75,796 | 2,618,900 | - |
| LG CNS JAPAN Co., Ltd. | 1,309,763 | - | - |
| LG CNS Malaysia SDN Bhd | 2,285,958 | - | 46,932 |
| LG CNS UZBEKISTAN, LLC | 684,954 | - | 489,093 |
| Hangbokmaru Co., Ltd. | 107 | - | 22,220 |
| LG CNS Vietnam Co., Ltd. | 17,499,100 | - | 951,064 |
| Sejong Green Power Co., Ltd. | - | - | - |
| Opensource Consulting Co., Ltd. | 5,431 | - | 1,027,718 |
| Subtotal | 88,442,895 | 2,618,900 | 18,606,801 |
| Associates: | | | |
| RECAUDO BOGOTA S.A.S. (*8) | 10,534,378 | - | - |
| Tmoney Co., Ltd. | 2,731,940 | - | 70,928 |
| Hellas SmarTicket Societe | 3,028,447 | - | - |

| Description | December 31, 2021<br>Accounts receivable and others (*1) | Loans | Accounts payable and others (*2) |
|---|---|---|---|
| Anonyme | | | |
| Cloudgram Co., Ltd. | - | - | 4,334 |
| KoreaDRD Co., Ltd. | - | - | 54,483 |
| HEMPKING | - | - | - |
| Subtotal | 16,294,765 | - | 129,745 |
| Top Controlled entity's associates and jointly controlled entity: | | | |
| LG Chem Ltd. (*3) | 229,013,993 | - | 4,144,301 |
| LG Household & Health Care Ltd. (*3) | 5,053,109 | - | 449,202 |
| LG Electronics Inc. (*3,9) | 285,906,708 | - | 31,411,638 |
| GIIR Corp. (*3) | 3,117,889 | - | 42,432 |
| LG Hitachi Co., Ltd. | 110,880 | - | 39,645 |
| LG Uplus Corp. (*3) | 80,135,287 | - | 2,968,793 |
| Subtotal | 603,337,866 | - | 39,056,011 |
| Total | ₩ 741,194,693 | ₩2,618,900 | ₩ 62,181,757 |

| Description | December 31, 2020<br>Accounts receivable and others (*1) | Loans | Accounts payable and others (*2) |
|---|---|---|---|
| Parent company and its subsidiaries: | | | |
| LG Corp. | ₩ 5,285,913 | ₩ - | ₩ 197,746 |
| S&I Corporation Co., Ltd. (*3,4) | 9,361,364 | - | 2,177,852 |
| LG Sports Co., Ltd. | 373,915 | - | - |
| LG Management Development Institute | 7,163,293 | - | 321,586 |
| Subtotal | 22,184,485 | | 2,697,184 |
| Subsidiaries: | | | |
| LG CNS China Inc. | 25,057,627 | - | 283,322 |
| LG CNS Europe B.V. (*6) | 25,098,282 | - | 469,954 |
| LG CNS America Inc. (*7) | 7,189,668 | - | 261,417 |
| LG CNS India Pvt., Ltd. | 4,910,037 | - | - |
| PT LG CNS Indonesia | 1,697,223 | - | - |
| LG CNS BRASIL SERVICOS DE TI LTDA | 3,194 | - | - |
| Biztech Partners Co., Ltd. | 40,386 | - | 18,917,733 |
| LG CNS COLOMBIA SAS | 2,941,119 | - | - |
| LG CNS Philippines, Inc. (*5) | 69,562 | 2,403,512 | - |
| LG CNS JAPAN Co., Ltd. | 13,676 | - | 28,465 |
| LG CNS Malaysia SDN Bhd | 1,666,031 | - | 163,298 |
| LG CNS UZBEKISTAN, LLC | 628,463 | - | 262,005 |
| Hangbokmaru Co., Ltd. | 72 | - | 19,709 |
| LG CNS Vietnam Co., Ltd. | 5,151,354 | - | 56,457 |
| Sejong Green Power Co., Ltd. | 220 | - | - |
| Opensource Consulting Co., Ltd. | 21,175 | - | 483,321 |
| Subtotal | 74,488,089 | 2,403,512 | 20,945,681 |
| Associates: | | | |
| RECAUDO BOGOTA S.A.S. (*8) | 14,172,940 | - | - |
| Tmoney Co., Ltd. | 2,810,693 | - | 138,943 |
| Hellas SmarTicket Societe Anonyme | 62,171 | - | - |
| Cloudgram Co., Ltd. | - | - | - |

| Description | December 31, 2020<br>Accounts receivable and others (*1) | Loans | Accounts payable and others (*2) |
|---|---|---|---|
| KoreaDRD Co., Ltd. | 32,164 | - | - |
| HEMPKING | 946,000 | - | 950,730 |
| Subtotal | 18,023,968 | - | 1,089,673 |
| Top Controlled entity's associates and jointly controlled entity: | | | |
| LG Chem Ltd. (*3) | 102,588,012 | - | 6,936,742 |
| LG Household & Health Care Ltd. (*3) | 3,696,758 | - | 521,245 |
| LG Electronics Inc. (*3,9) | 253,917,269 | - | 27,911,022 |
| GIIR Corp. (*3) | 2,706,102 | - | 124,062 |
| LG Hitachi Co., Ltd. | 90,750 | - | 169,591 |
| LG Uplus Corp. (*3) | 108,199,560 | - | 2,078,655 |
| Subtotal | 471,198,451 | | 37,741,317 |
| Total | ₩ 585,894,993 | ₩2,403,512 | ₩ 62,473,855 |

(*1) Receivables from related party consist of trade receivables, other receivables and prepaid expenses.
(*2) Payables to related party consist of trade payables, other payables, etc.
(*3) It includes transactions with subsidiaries.
(*4) It includes transactions with associates.
(*5) Bad debt allowances of 100% are recorded as of December 31, 2021 and 2020.
(*6) Bad debt allowances are recorded as ₩90,875 thousand and ₩128,950 thousand of receivables as of December 31, 2021 and 2020, respectively.
(*7) Bad debt allowances are recorded as ₩120,750 thousand and ₩45,522 thousand of receivables for the years ended December 31, 2021 and 2020, respectively.
(*8) Bad debt allowances are recorded as ₩1,895,100 thousand and ₩1,894,946 thousand of receivables for the years ended December 31, 2021 and 2020, respectively.
(*9) Bad debt allowances are recorded as ₩495,658 thousand and ₩248,067 thousand of receivables for the years ended December 31, 2021 and 2020, respectively.

Major transactions with the conglomerate of many companies, excluding above transactions with the related parties for the years ended December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| Description | December 31, 2021<br>Accounts receivable and others (*1) | Accounts payable and others (*2) |
|---|---|---|
| Conglomerate of many companies: | | |
| LG Display | ₩ 143,485,417 | ₩ 97,508 |
| LX Holdings Corp. | 183,780 | - |
| LX Hausys, Ltd. (*3) | 4,621,492 | - |
| LX MMA Corp. | 616,136 | - |
| LX Semicon Co., Ltd. | 431,091 | - |
| LX International (*3) | 10,745,132 | 145,539 |
| Total | ₩ 160,083,048 | ₩ 243,047 |

| Description | December 31, 2020 | | | |
|---|---|---|---|---|
| | Accounts receivable and others (*1) | | Accounts payable and others (*2) | |
| Conglomerate of many companies: | | | | |
| LG Display | ₩ | 79,705,869 | ₩ | 251,339 |
| LX Holdings Corp. | | - | | - |
| LX Hausys, Ltd. (*3) | | 5,740,544 | | - |
| LX MMA Corp. | | 1,234,136 | | - |
| LX Semicon Co., Ltd. | | 688,038 | | - |
| LX International (*3) | | 15,856,711 | | 99,044 |
| Total | ₩ | 103,225,298 | ₩ | 350,383 |

(*1) Receivables from related party consist of trade receivables, other receivables and prepaid expenses.
(*2) Payables to related party consist of trade payables, other payables, etc.
(*3) Includes receivables and debts to subsidiaries.

(4) Cash transactions with the related parties for the years ended December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| Description | Year ended December 31, 2021 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Payment in cash (reduction of capital) | | Sale of interests | | Loans | | | |
| | | | | | Loans | | Payback | |
| Subsidiary: | | | | | | | | |
| LG CNS FUND I LLC | ₩ | 8,992,204 | ₩ | - | ₩ | - | ₩ | - |
| RightBrain Co., Ltd. | | 5,949,000 | | - | | - | | - |
| Associates: | | | | | | | | |
| Ulleungdo Natural Energy Co., Ltd. (*1) | | - | | 1,872 | | - | | - |
| Total | ₩ | 14,941,204 | ₩ | 1,872 | ₩ | - | ₩ | - |

(*1) Liquidated and excluded from related parties during the current year.

| Description | Year ended December 31, 2020 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Payment in cash (reduction of capital) | | Sale of interests | | Loans | | | |
| | | | | | Loans | | Payback | |
| Subsidiary: | | | | | | | | |
| LG CNS FUND I LLC | ₩ | 11,148,793 | ₩ | - | ₩ | - | ₩ | - |
| Associates: | | | | | | | | |
| Cloudgram Co., Ltd. | | 19,887,500 | | - | | - | | - |
| KoreaDRD Co., Ltd. | | 597,000 | | - | | - | | - |
| Ulleungdo Natural Energy Co., Ltd. (*1) | | - | | 4,665,821 | | - | | - |
| HEMPKING | | 497,500 | | - | | - | | - |
| KEPCO-LG CNS Mangilao Holdings LLC (*2) | | - | | - | | - | | 7,609,914 |
| Total | ₩ | 32,130,793 | ₩ | 4,665,821 | ₩ | - | ₩ | 7,609,914 |

(*1) ₩4,665,821 thousand was recovered as liquidation dividends during the prior year.
(*2) Disposed and excluded from related parties during the prior year.

(5) Details of payment guarantees provided to related parties as of December 31, 2021, are as follows:

| Related party | Guarantees | Limit of guarantees |
|---|---|---|
| LG CNS India Pvt., Ltd. | Credit line | INR 130,000,000 |
| PT LG CNS Indonesia | Credit line | USD 1,200,000 |
| PT LG CNS Indonesia | Credit line | USD 500,000 |
| PT LG CNS Indonesia | Credit line | USD 700,000 |
| PT LG CNS Indonesia | Credit line | USD 800,000 |
| PT LG CNS Indonesia | Credit line | USD 500,000 |
| PT LG CNS Indonesia | Credit line | USD 5,000,000 |
| PT LG CNS Indonesia | Payment guarantees | IDR 28,645,755,534 |
| LG CNS America Inc. | Credit line | USD 10,000,000 |
| LG CNS America Inc. | Credit line | USD 5,000,000 |
| LG CNS America Inc. | Payment guarantees | USD 4,138,394 |
| LG CNS COLOMBIA SAS | Credit line | USD 3,000,000 |
| LG CNS COLOMBIA SAS | Credit line | USD 10,000,000 |
| LG CNS Europe B.V. | Credit line | EUR 1,200,000 |
| LG CNS MALAYSIA SDN BHD | Credit line | MYR 7,000,000 |
| LG CNS MALAYSIA SDN BHD | Payment guarantees | MYR 1,111,607 |
| LG CNS MALAYSIA SDN BHD | Payment guarantees | MYR 917,727 |
| LG CNS MALAYSIA SDN BHD | Payment guarantees | MYR 2,110,000 |
| LG CNS MALAYSIA SDN BHD | Payment guarantees | MYR 2,110,000 |
| LG CNS JAPAN Co., Ltd. | Payment guarantees | JPY 6,000,000 |
| Hellas SmarTicket Societe Anonyme | Payment guarantees | EUR 28,000,000 |

(6) The compensation and benefits for the Company’s key management (registered executives, including non-permanent and non-registered executives) who have significant control on and responsibility for planning, operating and controlling the activities of the Company for the years ended December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | Year ended December 31, 2021 | Year ended December 31, 2020 |
|---|---|---|
| Short-term employee benefits | ₩ 21,990,100 | ₩ 19,775,314 |
| Severance benefits | 2,612,990 | 2,302,871 |
| Other long-term employee liabilities | 5,111 | 4,509 |
| Total | ₩ 24,608,201 | ₩ 22,082,694 |

## 31. FUNDING ARRANGEMENTS AND PLEDGING:

(1) Financing agreements (Unit: Korean won and U.S. dollars in thousands):

| Category (*1, 2) | Financial institution | Limit of credit |
|---|---|---|
| Comprehensive import and export | Shinhan Bank | USD 5,000 |
| Overdraft | Woori Bank | ₩ 5,000,000 |
| Forward exchange | Kookmin Bank and others | USD 85,300 |
| Other payment guarantee | KEB Hana Bank and others | ₩ 109,600,000 |

(*1) Both blanket credit agreement and individual credit agreement are presented.
(*2) Payment guarantees provided for the related parties are described in Note 30 (5).

(2) Restricted financial assets as of December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| Account | December 31, 2021 | | December 31, 2020 | | Restrictions on use |
|---|---|---|---|---|---|
| Long-term financial institution deposits | ₩ | 12,000,000 | ₩ | 12,000,000 | Support fund for partners |
| Long-term deposits | | 9,500 | | 9,500 | Deposit for overdraft |
| Total | ₩ | 12,009,500 | ₩ | 12,009,500 | |

(3) Details of pledging

1) Performance guarantee
The Company provides the following performance guarantees for contracts and warrants to customers by insuring guarantee insurance as of December 31, 2021 (Unit: Korean won in thousands):

| | Amounts of guarantees | | Insurance company |
|---|---|---|---|
| Guarantees of contract and warranties, etc. | ₩ | 65,408,965 | Seoul Guarantee Insurance |
| | | 506,019,331 | Korea Software Financial Cooperative |
| | | 63,273,338 | KEB Hana Bank and others |
| Total | ₩ | 634,701,634 | |

2) Collateral
Out of financial assets at FVTPL, capital stock investments to Korea Software Financial Cooperative and Engineering Financial Cooperative of Korea amounting to ₩1,341 million and ₩775 million, respectively, are provided as collateral in relation to performance guarantee provided by the cooperatives.

(4) There are no non-financial assets and financial assets pledged as collateral for the year ended December 31, 2021, under review.

**32. LEASES:**

(1) The Company as lessee

1) The carrying amounts of the right-of-use assets as of December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | December 31, 2021 | | | | |
|---|---|---|---|---|---|
| | Buildings | Vehicles | Furniture and fixtures | Others | Total |
| Acquisition cost | ₩ 66,722,216 | ₩ 2,237,988 | ₩ 2,151,603 | ₩ - | ₩ 71,111,807 |
| Accumulated depreciation | (19,319,907) | (1,085,947) | (138,979) | - | (20,544,833) |
| Total | ₩ 47,402,309 | ₩ 1,152,041 | ₩ 2,012,624 | ₩ - | ₩ 50,566,974 |

| | December 31, 2020 | | | | |
|---|---|---|---|---|---|
| | Buildings | Vehicles | Furniture and fixtures | Others | Total |
| Acquisition cost | ₩ 69,140,527 | ₩ 2,357,361 | ₩ 1,909,948 | ₩ 63,010 | ₩ 73,470,846 |
| Accumulated depreciation | (17,121,096) | (843,550) | (1,564,596) | (55,133) | (19,584,375) |
| Total | ₩ 52,019,431 | ₩ 1,513,811 | ₩ 345,352 | ₩ 7,877 | ₩ 53,886,471 |

2) Changes in the book value of the right-of-use assets in 2021 and 2020 are as follows (Unit: Korean won in thousands):

| | December 31, 2021 | | | | |
|---|---|---|---|---|---|
| | Buildings | Vehicles | Furniture and fixtures | Others | Total |
| Beginning balance | ₩ 52,019,431 | 1,513,811 | ₩ 345,352 | ₩ 7,877 | ₩ 53,886,471 |
| Additional (renewal) contracts | 6,017,937 | 745,529 | 2,120,856 | - | 8,884,322 |
| Depreciation of right-of-use assets | (9,295,552) | (943,788) | (675,476) | (20,482) | (10,935,298) |
| Termination of contracts | (20,543) | (163,511) | (739,639) | (5,042) | (928,735) |
| Others | (1,318,964) | - | 961,531 | 17,647 | (339,786) |
| Ending balance | ₩ 47,402,309 | ₩1,152,041 | ₩ 2,012,624 | ₩ - | ₩ 50,566,974 |

| | December 31, 2020 | | | | |
|---|---|---|---|---|---|
| | Buildings | Vehicles | Furniture and fixtures | Others | Total |
| Beginning balance | ₩ 55,301,418 | ₩ 963,121 | ₩ 1,101,600 | ₩ 39,381 | ₩ 57,405,520 |
| Additional (renewal) contracts | 4,844,191 | 1,558,635 | 30,747 | - | 6,433,573 |
| Depreciation of right-of-use assets | (9,345,625) | (820,734) | (786,995) | (31,504) | (10,984,858) |
| Termination of contracts | (155,638) | (197,286) | - | - | (352,924) |
| Others | 1,375,085 | 10,075 | - | - | 1,385,160 |
| Ending balance | ₩ 52,019,431 | ₩1,513,811 | ₩ 345,352 | ₩ 7,877 | ₩ 53,886,471 |

The Company has operating lease contracts for buildings, furniture and fixtures; vehicles; etc. The average lease term is 16.1 years. During the current year, about 15.33% of the leases for buildings and vehicles have expired. Expired contracts have been replaced by new leases with the underlying assets identified. The carrying amount of the licensed assets added during the current year is ₩8,884,322 thousand.

3) The amounts recognized as profit or loss in 2021 and 2020 are as follows (Unit: Korean won in thousands):

| | | 2021 | | 2020 |
|---|---|---|---|---|
| Depreciation of right-of-use assets | ₩ | 10,935,298 | ₩ | 10,984,858 |
| Interest expense of lease liabilities | | 985,968 | | 1,097,940 |
| Expenses related to short-term leases | | 825,914 | | 1,197,055 |
| Expenses related to leases of low-value assets | | 126,673 | | 148,120 |
| Expenses related to variable lease payments not included in the measurement of lease liabilities (*) | | 201,416 | | 39,659 |

(*) The Company leases some of the equipment (multifunction devices, etc.), and the lease payments for the lease contract are variable lease fees that vary depending on the amount of use. The Company concludes a contract with these variable lease terms due to reduced fixed costs. Variable lease payments account for about 1.63% and 0.32% of total lease payments as of December 31, 2021 and 2020.

As of December 31, 2021, the lease agreement is for short-term leases of low-value assets of ₩30,078 thousand, and the total cash outflow due to leases is ₩12,391,212 thousand.

4) The details of the liquidity classification of lease liabilities as of December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | | December 31, 2021 | | December 31, 2020 |
|---|---|---|---|---|
| Current liabilities | ₩ | 9,854,903 | ₩ | 11,004,547 |
| Non-current liabilities | | 39,705,653 | | 41,710,487 |
| Total | ₩ | 49,560,556 | ₩ | 52,715,034 |

5) The details of lease liabilities as of December 31, 2021 and 2020, are as follows:

| | | Minimum lease payments (2021) | | Minimum lease payments (2020) |
|---|---|---|---|---|
| Less than 1 year | ₩ | 10,020,211 | ₩ | 11,018,014 |
| 1 year-5 years | | 29,079,012 | | 26,081,095 |
| More than 5 years | | 14,021,820 | | 19,655,408 |
| Total | ₩ | 53,121,043 | ₩ | 56,754,517 |

(2) The Company as lessor

1) The Company has a lease agreement to lease office buildings to 10 companies other than LG Chem Co., Ltd., and the future lease payment plan as of December 31, 2021 and 2020, is as follows (Unit: Korean won in thousands):

| | December 31, 2021 | | |
|---|---|---|---|
| | Less than 1 year | 1 year-5 years | Total |
| LG CHEM LTD. | ₩ 1,205,961 | ₩ - | ₩ 1,205,961 |
| CJ E&M Corp. and nine other companies | 1,739,606 | 1,791,648 | 3,531,254 |

| | December 31, 2020 | | |
|---|---|---|---|
| | Less than 1 year | 1 year-5 years | Total |
| LG CHEM LTD. | ₩ 1,205,961 | ₩ - | ₩ 1,205,961 |
| CJ E&M Corp. and seven other companies | 877,674 | 780,346 | 1,658,020 |

2) The lease income recognized by the Company in relation to the lease agreement for the years ended December 31, 2021 and 2020, is ₩2,974,146 thousand and ₩2,433,119 thousand, respectively.

## 33. PENDING LITIGATION AND DISPUTES:

Pending litigation and disputes as of December 31, 2021, are as follows (Unit: Korean won in thousands):

| | Amount of lawsuit | Plaintiff | Defendant |
|---|---|---|---|
| Claims for National Defense Network | ₩ 5,000,000 | Republic of Korea | LG CNS Co., Ltd. and others |
| ASAN Hospital service charge | 10,000,000 | LG CNS Co., Ltd. | ASAN Foundation |
| Claims for ASAN Hospital | 37,933,444 | ASAN Foundation | LG CNS Co., Ltd. |
| Claims for damages from the Korea Customs Service | 15,170,000 | Republic of Korea | LG CNS Co., Ltd. and others |
| Request for cancellation of unfair sanctions | 50,000 | LG CNS Co., Ltd. | Republic of Korea |
| Request for payment of KCTC reduction | 10,847,942 | LG CNS Co., Ltd. | Republic of Korea |
| KCTC Ssangyong's late compensation claim | 5,000,000 | LG CNS Co., Ltd | SsangYong Information and Communication Corp. |
| Itmate’s service charge claim | 1,554,285 | Itmate | LG CNS Co., Ltd. |
| KCTC Ssangyong’s service charge claim | 3,870,344 | SsangYong Information and Communication Corp. | LG CNS Co., Ltd. |
| DOHWA ENGINEERING Co., Ltd.’s requesting for return of payment | 1,841,258 | DOHWA ENGINEERING Co., Ltd. | LG CNS Co., Ltd. and others |

The final result of the litigation and effect on the separate financial statements cannot be estimated at the end of the reporting period.

## 34. RISK MANAGEMENT:

(1) Capital risk management

The Company performs capital management to maintain the ability to continuously provide profits to shareholders and interest parties and to maintain optimum capital structure to reduce capital expenses. In order to maintain such optimum structure, the Company may adjust dividend payments, redeem paid-in capital to shareholders, issue stocks to reduce liability or sell assets.

The Company's capital structure consists of net liability, which is borrowings, less cash and cash equivalents and equity. The overall capital risk management policy of the Company is unchanged from prior year. In addition, items managed as capital by the Company as of December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | December 31, 2021 | December 31, 2020 |
|---|---|---|
| Total borrowings | ₩ 499,245,296 | ₩ 588,782,663 |
| Less: cash and cash equivalents | 545,373,508 | 667,029,770 |
| Borrowings, net | (46,128,212) | (78,247,107) |
| Total equity | 1,372,620,528 | 1,231,911,511 |
| Debt ratio (*) | - | - |

(*) At the end of the current year and previous year, net borrowings are negative, so the total borrowing capital ratio is not calculated.

(2) Financial risk management

The Company is exposed to various financial risks, such as market (foreign currency, interest rate and price), credit and liquidity, related to financial instruments. The purpose of risk management of the Company is to identify the potential risks to financial performance and reduce, eliminate and evade those risks to a degree acceptable to the Company. The Company makes use of derivative financial instruments to hedge certain risks, such as foreign exchange and interest rate. Overall, financial risk management policy of the Company is the same as in the prior year.

1) Foreign currency risk

The Company is exposed to foreign currency risk as it makes transactions denominated in foreign currencies. The book value of the Company's monetary assets and liabilities denominated in foreign currencies that are not the functional currency as of December 31, 2021 and 2020, is as follows (Unit: Korean won in thousands):

| | December 31, 2021 | |
|---|---|---|
| Currency | Assets | Liabilities |
| USD | ₩ 89,275,729 | ₩ 21,978,151 |
| EUR | 24,333,049 | 4,853,877 |
| JPY | 1,809,248 | 42,897 |
| CNY | 590,361 | 385,658 |
| Others | 47,050,490 | 125,748 |
| Total | ₩ 163,058,877 | ₩ 27,386,331 |

| | December 31, 2020 | |
|---|---|---|
| Currency | Assets | Liabilities |
| USD | ₩ 59,711,340 | ₩ 23,444,321 |
| EUR | 21,074,193 | 23,299,975 |
| JPY | 705,019 | 2,257,494 |
| CNY | 237,835 | 206,905 |
| Others | 56,433,964 | 376,599 |

| | | |
|---|---|---|
| Total | ₩ 138,162,351 | ₩ 49,585,294 |

The Company internally assesses the foreign currency risk from changes in exchange rates on a regular basis. The Company's sensitivity to a 10% increase and 10% decrease in the Korean won (functional currency of the Company) against the major foreign currencies as of December 31, 2021 and 2020, is as follows (Unit: Korean won in thousands):

| Currency | December 31, 2021<br>10% increase against foreign currency | December 31, 2021<br>10% decrease against foreign currency |
|---|---|---|
| USD | ₩ 5,101,156 | ₩ (5,101,156) |
| EUR | 1,476,521 | (1,476,521) |
| JPY | 133,889 | (133,889) |
| CNY | 15,517 | (15,517) |
| Others | 3,556,896 | (3,556,896) |
| Total | ₩ 10,283,979 | ₩ (10,283,979) |

| Currency | December 31, 2020<br>10% increase against foreign currency | December 31, 2020<br>10% decrease against foreign currency |
|---|---|---|
| USD | ₩ 2,749,040 | ₩ (2,749,040) |
| EUR | (168,714) | 168,714 |
| JPY | (117,678) | 117,678 |
| CNY | 2,344 | (2,344) |
| Others | 4,249,148 | (4,249,148) |
| Total | ₩ 6,714,140 | ₩ (6,714,140) |

The above sensitivity analysis is conducted for monetary assets and liabilities denominated in foreign currencies other than functional currency as of December 31, 2021.

As of December 31, 2021, the Company entered into cross-forward foreign currency contracts to manage its foreign currency exchange rate risk related to its expected sale and purchase. The evaluation of unsettled currency forward contracts as of December 31, 2021, is as follows (Unit: Korean won in thousands):

| | | Valuation gain and loss | | Fair value | |
|---|---|---|---|---|---|
| | Notional amount | Gain | Loss | Assets | Liabilities |
| Currency forward | ₩ 219,102,691 | ₩1,621,136 | ₩2,564,026 | ₩ 1,621,136 | ₩ 2,564,026 |

2) Price risk

The Company does not have equity instrument exposed to the price risk fluctuations.

3) Credit risk

Credit risk refers to the risk of financial losses to the Company when the counterparty defaults on the obligations of the contract.

The maximum amount of financial loss to be incurred by the counterparty due to non-fulfillment of obligations in case of collateral or other credit enhancement is equivalent to the carrying amount of each financial asset in the separate financial statements. The maximum amount the Company will be required to pay if it is warranted due to the financial guarantees it provides is ₩95,884 million (the financial guarantee limit described in Note 30 (5)).

To minimize credit risk, the Company uses independent external credit rating agencies' information to classify exposure based on the extent of default. If the information from credit rating agencies is not available, the Company uses officially available financial information to determine the ratings of key customers and other debtors. The Company's total exposure and the counterparty's credit rating are constantly reviewed, and the total amount of these transactions is evenly distributed among the authorized accounts.

The exposure to credit risk based on book value by major industries, to which the Company's customers belong, is as follows (Unit: Korean won in thousands):

| | Manufacturing | Financial service | Other service | Public institutions | Others | Total |
|---|---|---|---|---|---|---|
| Financial assets at FVTPL | ₩ - | ₩ 1,621,136 | ₩ - | ₩ - | ₩23,281,345 | ₩ 24,902,481 |
| Financial assets at amortized cost | 766,532,758 | 308,901,261 | 29,288,416 | 34,322,362 | 5,748,870 | 1,144,793,667 |
| Financial assets at FVTOCI | - | - | - | - | 769,139 | 769,139 |
| Limit of payment guarantee | - | - | 95,884,244 | - | - | 95,884,244 |
| Total | ₩766,532,758 | ₩310,522,397 | ₩125,172,660 | ₩34,322,362 | ₩29,799,354 | ₩1,266,349,531 |

The carrying amount of financial assets at FVTPL is the best indication of the maximum exposure to credit risk. The Company has not provided any collateral for its financial assets other than those stated in Note 31.

4) Liquidity risk

The Company manages liquidity risk by establishing short-, medium- and long-term funding plan and continuously monitoring actual cash outflow and its budget to match the maturity profiles of financial assets and liabilities. Management of the Company believes that financial liability may be redeemed by cash flows arising from operating activities and financial assets.

Maturity analysis of non-derivative financial liabilities according to their remaining maturity as of December 31, 2021, is as follows (Unit: Korean won in thousands):

| | Within one year | One year–five years | After five years | Total |
|---|---|---|---|---|
| Non-interest-bearing financial instruments | ₩ 792,945,273 | ₩ 1,364,150 | ₩ - | ₩ 794,309,423 |
| Fixed interest rate financial instrument | 99,461,400 | 322,881,000 | 100,993,000 | 523,335,400 |
| Limit of payment guarantee | 95,884,244 | - | - | 95,884,244 |
| Lease liabilities | 10,020,211 | 29,079,012 | 14,021,820 | 53,121,043 |
| Total | ₩ 998,311,129 | ₩ 353,324,162 | ₩ 115,014,820 | ₩ 1,466,650,110 |

(*1) It includes the payment guarantees for foreign subsidiaries (USD 40,838,394, EUR 29,200,000, JPY 6,000,000, MYR 13,249,335, INR 130,000,000 and IDR 28,645,755,534) in paragraph 30 (5). Based on the expectation as of December 31, 2021, the Company believes that possibility of payment on guaranteed amount is not higher. However, the expectation could be changed because warrantees may request payment to the Company according to the credit loss on the financial assets held by the warrantees.

The above maturity analysis is based on the earliest maturity date that the Company is required to pay on the basis of undiscounted cash flows and includes the cash flows of principal and interest.

The Company manages liquidity through cash inflows from financial assets and financing arrangements with financial institutions. The financial assets' maturity structures as of December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | December 31, 2021 | | | |
|---|---|---|---|---|
| | Within one year | One year–five years | After five years | Total |
| Financial institution deposits | ₩ 100,000,000 | ₩ 12,000,000 | ₩ - | ₩ 112,000,000 |
| Trading receivables and other receivables | 1,020,297,018 | 7,449,724 | 5,046,925 | 1,032,793,667 |
| Investment in equity and debt instruments | - | - | 24,050,484 | 24,050,484 |
| Total | ₩ 1,120,297,018 | ₩ 19,449,724 | ₩ 29,097,409 | ₩ 1,168,844,151 |

| | December 31, 2020 | | | |
|---|---|---|---|---|
| | Within one year | One year–five years | After five years | Total |
| Financial institution deposits | ₩ 122,000,000 | ₩ - | ₩ - | ₩ 122,000,000 |
| Trading receivables and other receivables | 779,887,101 | 6,927,845 | 6,628,161 | 793,443,107 |
| Investment in equity and debt instruments | - | - | 19,473,889 | 19,473,889 |
| Total | ₩ 901,887,101 | ₩ 6,927,845 | ₩ 26,102,050 | ₩ 934,916,996 |

Meanwhile, the maturity analysis of derivative financial assets (liabilities) as of the end of the current year is as follows (Unit: Korean won in thousands):

| | | Within one year | One year–five years | Total |
|---|---|---|---|---|
| Derivative assets for trading | | | | |
| Foreign currency derivatives (*) | Inflows | ₩ 219,354,066 | ₩ - | ₩ 219,354,066 |
| | Outflows | (220,296,956) | - | (220,296,956) |
| Total | | ₩ (942,890) | ₩ - | ₩ (942,890) |

(*) As all foreign currency derivative contracts are subject to total settlement, cash flows are recorded separately from outflows and inflows.

(3) Estimation of fair value

The fair values of financial instruments (i.e., financial assets measured at FVTPL and financial assets measured at FVTOCI) traded in active markets are determined with reference to quoted market prices. The Company uses the current bid price as the quoted market price for its financial assets.

The fair values of financial instruments not traded on an active market (i.e., over-the-counter derivatives) are determined using a valuation technique. The Company uses various valuation techniques using assumptions based on current market conditions. The fair values of long-term liabilities and financial liabilities available for settlement are determined using prices from observable current market transactions and dealer quotes for similar instruments. When such prices are not available, a discounted cash flow ("DCF") analysis or other valuation technique is performed to measure their fair values.

The fair values of trade receivables and trade payables are approximated as their carrying value, less impairment loss. The Company estimates the fair values of financial liabilities as the present value of future contractual cash flows, discounted based on current market rates applied to similar financial instruments.

Financial instruments that are measured subsequent to initial recognition at fair value are grouped into Level 1 to Level 3, based on the degree to which the fair value is observable, as described below.

- Level 1: Fair value measurements are derived from quoted prices (unadjusted) in active markets for identical assets or liabilities.

- Level 2: Fair value measurements are derived from inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e., as prices) or indirectly (i.e., derived from prices).

- Level 3: Fair value measurements are derived from valuation techniques that include inputs for the asset or liability and are not based on observable market data (unobservable inputs).

1) Financial instruments that are measured subsequently to initial recognition at fair value by fair value hierarchy levels as of December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | December 31, 2021 | | | | |
|---|---|---|---|---|---|
| | Book value | Level 1 | Level 2 | Level 3 | Total |
| Financial assets: | | | | | |
| Financial assets at FVTPL | ₩24,902,481 | ₩ - | ₩1,621,136 | ₩23,281,345 | ₩24,902,481 |
| Non-designated derivative instrument for trading | 1,621,136 | - | 1,621,136 | - | 1,621,136 |
| Investment | 23,281,345 | - | - | 23,281,345 | 23,281,345 |
| Financial assets at FVTOCI | 769,139 | - | - | 769,139 | 769,139 |
| Non-marketable equity securities | 769,139 | - | - | 769,139 | 769,139 |
| Total | ₩25,671,620 | ₩ - | ₩1,621,136 | ₩24,050,484 | ₩ 25671,620 |
| Financial liabilities: | | | | | |
| Financial liabilities at FVTPL | ₩ 2,564,026 | ₩ - | ₩2,564,026 | ₩ - | ₩ 2,564,026 |
| Derivative instrument for trading | 2,564,026 | - | 2,564,026 | - | 2,564,026 |
| Total | ₩ 2,564,026 | ₩ - | ₩2,564,026 | ₩ - | ₩ 2,564,026 |

| | December 31, 2020 | | | | |
|---|---|---|---|---|---|
| | Book value | Level 1 | Level 2 | Level 3 | Total |
| Financial assets: | | | | | |
| Financial assets at FVTPL | ₩19,367,076 | ₩ - | ₩ 2,309,579 | ₩ 17,057,497 | ₩19,367,076 |
| Non-designated derivative instrument for trading | 2,309,579 | - | 2,309,579 | - | 2,309,579 |
| Investment | 17,057,497 | - | - | 17,057,497 | 17,057,497 |
| Financial assets at FVTOCI | 2,416,392 | 1,634,949 | - | 781,443 | 2,416,392 |
| Marketable equity securities | 1,634,949 | 1,634,949 | - | - | 1,634,949 |
| Non-marketable equity securities | 781,443 | - | - | 781,443 | 781,443 |
| Total | ₩21,783,468 | ₩1,634,949 | ₩ 2,309,579 | ₩ 17,838,940 | ₩21,783,468 |
| Financial liabilities: | | | | | |
| Financial liabilities at FVTPL | ₩ 326,494 | ₩ - | ₩ 326,494 | ₩ - | ₩ 326,494 |
| Derivative instrument for trading | 326,494 | - | 326,494 | - | 326,494 |
| Total | ₩ 326,494 | ₩ - | ₩ 326,494 | ₩ - | ₩ 326,494 |

There are no significant shifts between Levels 1 and 2 during the current and prior years.

2) Valuation method and input variables of financial instruments, which are included in Level 2 of the financial instruments that are measured at fair value in the separate statements of financial position, are as follows (Unit: Korean won in thousands):

| | Fair value | Valuation technique | Input factor |
|---|---|---|---|
| Financial assets: | | | |
| Derivative instrument for trading | ₩ 1,621,136 | Forward pricing model | Forward exchange rate |
| Financial liabilities: | | | |
| Derivative instrument for trading | ₩ 2,564,026 | Forward pricing model | Forward exchange rate |

3) The levels of the fair value of financial instruments without subsequent measurement at fair value as of December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | December 31, 2021 | | | | |
|---|---|---|---|---|---|
| | Book value | Level 1 | Level 2 | Level 3 | Total |
| Financial assets: | | | | | |
| Financial institution deposits | ₩112,000,000 | - | ₩ - | ₩112,000,000 | ₩ 112,000,000 |
| Trade receivables (*1) | 1,002,969,791 | - | - | 1,002,969,791 | 1,002,969,791 |
| Loans (*1) | 8,117,329 | - | - | 8,117,329 | 8,117,329 |
| Other accounts receivable (*1) | 12,056,714 | - | - | 12,056,714 | 12,056,714 |
| Accrued income (*1) | 822,289 | - | - | 822,289 | 822,289 |
| Deposits (*1) | 8,827,544 | - | - | 8,827,544 | 8,827,544 |
| Total | ₩1,144,793,667 | ₩ - | ₩ - | ₩1,144,793,667 | ₩ 1,144,793,667 |
| Financial liabilities: | | | | | |
| Trade payables (*1) | ₩ 602,820,782 | ₩ | ₩ - | ₩ 602,820,782 | ₩ 602,820,782 |
| Other accounts payable (*1,*2) | 38,329,514 | - | - | 38,329,514 | 38,329,514 |
| Accrued expenses (*1,*2) | 7,211,201 | - | - | 7,211,201 | 7,211,201 |
| Dividends payable (*1) | 4,422 | - | - | 4,422 | 4,422 |
| Deposits received | 1,364,150 | - | 1,364,150 | - | 1,364,150 |
| Long-term borrowings | 499,245,297 | - | 495,725,611 | - | 495,725,611 |
| Lease liabilities | 49,560,557 | - | - | 49,560,557 | 49,560,557 |
| Total | ₩1,198,535,923 | ₩ | ₩497,089,761 | ₩ 697,926,476 | ₩ 1,195,016,237 |

(*1) Short-term receivables and short-term payment obligations that have been shown as Level 3, the discount effect of which is not important, are measured at the original amount.
(*2) Other accounts payable and accrued expenses that are not related financial liabilities are excluded.

| | December 31, 2020 | | | | |
|---|---|---|---|---|---|
| | Book value | Level 1 | Level 2 | Level 3 | Total |
| Financial assets: | | | | | |
| Financial institution deposits | ₩ 122,000,000 | ₩ - | ₩ - | ₩122,000,000 | ₩ 122,000,000 |
| Trade receivables (*1) | 772,009,964 | - | - | 772,009,964 | 772,009,964 |
| Loans (*1) | 5,131,482 | - | - | 5,131,482 | 5,131,482 |
| Other accounts receivable (*1) | 8,458,090 | - | - | 8,458,090 | 8,458,090 |
| Accrued income (*1) | 422,450 | - | - | 422,450 | 422,450 |
| Deposits (*1) | 7,421,121 | - | - | 7,421,121 | 7,421,121 |
| Total | ₩ 915,443,107 | ₩ - | ₩ - | ₩915,443,107 | ₩ 915,443,107 |
| Financial liabilities: | | | | | |
| Trade payables (*1) | ₩ 452,833,838 | ₩ - | ₩ - | ₩452,833,838 | ₩ 452,833,838 |
| Other accounts payable (*1,*2) | 21,459,539 | - | - | 21,459,539 | 21,459,539 |
| Accrued expenses (*1,*2) | 5,098,608 | - | - | 5,098,608 | 5,098,608 |
| Dividends payable (*1) | 4,018 | - | - | 4,018 | 4,018 |

| | | | | | |
|---|---|---|---|---|---|
| Deposits received | 1,364,150 | - | 1,364,150 | - | 1,364,150 |
| Long-term borrowings | 588,782,663 | - | 596,597,046 | - | 596,597,046 |
| Lease liabilities | 52,715,034 | - | - | 52,715,034 | 52,715,034 |
| Total | ₩1,122,257,850 | ₩ - | ₩597,961,196 | ₩532,111,037 | ₩1,130,072,233 |

(*1) Short-term receivables and short-term payment obligations that have been shown as Level 3, the discount effect of which is not important, are measured at the original amount.
(*2) Other accounts payable and accrued expenses that are not related financial liabilities are excluded.

4) Changes in Level 3 financial assets for the years ended December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | December 31, 2021 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Beginning balance | Net income (loss) | Comprehensive income | Purchases | Disposals | Replacement | Ending balance |
| Financial assets: | | | | | | | |
| Investment | ₩ 17,057,497 | ₩ 34,979 | ₩ - | ₩ 6,623,720 | ₩ (434,851) | ₩ - | ₩ 23,281,345 |
| Non-marketable equity securities | 781,443 | - | (4,608) | - | (7,696) | - | 769,139 |
| Total | ₩ 17,838,940 | ₩ 34,979 | ₩ (4,608) | ₩ 6,623,720 | ₩ (442,547) | ₩ - | ₩ 24,050,484 |

| | December 31, 2020 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Beginning balance | Net income (loss) | Comprehensive income | Purchases | Disposals | Replacement | Ending balance |
| Financial assets: | | | | | | | |
| Investment | ₩ 11,021,048 | ₩ (50,259) | ₩ - | ₩ 7,290,225 | ₩(3,753,517) | ₩2,550,000 | ₩ 17,057,497 |
| Non-marketable equity securities | 3,581,443 | - | (1,228) | - | (248,772) | (2,550,000) | 781,443 |
| Total | ₩ 14,602,491 | ₩ (50,259) | ₩ (1,228) | ₩ 7,290,225 | ₩(4,002,289) | ₩ - | ₩ 17,838,940 |

Total gains and losses recognized in other comprehensive income relate to equity securities held at the end of the current year and are recognized as changes in FVTOCI measurement gains and losses on financial assets (see Note 22).

5) A description of the valuation techniques and the inputs used in the fair value measurement of financial instruments classified as Level 2 and Level 3 is as follows:

- Currency forward and interest rate swap

In principle, the fair value of currency forward was measured based on forward currency rates whose period is coincident with the residual period of the currency forward and that are advertised in the market at the end of the reporting period. If forward currency rates whose period is coincident with the residual period are not advertised in the market, the fair value of currency forward was measured by estimating the forward currency rates whose period is similar to the residual period of the currency forward. The estimation of the forward currency was performed using interpolation to advertised periodical forward currency rates. Discount rates used to measure the fair value of currency forward were determined based on yield curve from yields advertised in the market.

Discount rates and forward currency rates used to measure the fair value of interest rate swaps were determined based on the applicable yield curves derived from interest rates that are advertised in the market at the end of the reporting period. The fair value of interest rate swaps measured on the amount of money discounted at an appropriate discount rate to future cash flows of interest rate swaps was estimated based on the forward currency rate that is obtained by the method described above.

As the input variables that are used to measure the fair value of currency forward and interest rate swaps for the end of the reporting period are derived via the forward exchange rate and the yield curve in the market, the fair values of currency forward and interest rate swap were classified as Level 2 fair value measurement.

- Corporate bonds

The fair value of corporate bonds was measured using DCF. The discount rates used in DCF were determined based on advertised-in-market swap rates and credit spreads of the bonds, whose credit rating and period were similar to those of corporate bonds and cumulative redeemable preference stocks. The discount rates that influence the fair value of corporate bonds and cumulative redeemable preference stocks significantly were classified as Level 2 fair value measurement because they resulted in observable information in the market.

- Unlisted securities and unlisted securities-linked convertible securities

The fair value of non-listed shares and unlisted securities-linked convertible securities, which are measured using the DCF model that is not based on observable market prices or rates, will be used to estimate the future cash flows, such as sales growth, pretax operating profit margin and the weighted-average cost of capital. Capital asset pricing model ("CAPM") was used to calculate the weighted-average cost of capital. The key assumptions of estimation listed above are determined to have a significant impact on the fair value of non-listed shares, and the Company has classified the fair value hierarchy system as Level 3 of the fair value measurement for non-listed shares.

6) A description of the valuation processes in the fair value measurement for Level 2 and Level 3 that the Company is carrying out is as follows:

The Company measures fair value of assets and liabilities for financial reporting purposes and reports the result of fair value measurements to the chief finance officer directly.

Undesirable inputs that are used to estimate Level 3 fair value measurement are derived in a manner that is described below.

- Stock volatilities and stock correlation used in measurement of the financial instruments linked to stocks (e.g., investments in convertible bonds, equity-linked securities and consideration for conversion rights) were measured based on change in stock price during certain period before the reporting period.

- Pretax profit margin and sales growth rate, which are used to measure the fair value of non-listed shares, are estimated based on the average value of pretax operating margin and sales growth rate of comparable listed companies.

- Weighted-average cost of capital discount rate that is used to measure the fair value of non-listed shares is estimated by the weighted-average, after-tax and outside capital cost; capital cost estimates of the share value beta reflected for the purpose of the issuer of the shares; and capital structure based on the equity beta of comparable public companies derived based on the CAPM.

On the other hand, when it was difficult to use objective financial indicators necessary for measuring the fair value of unlisted stocks, market observable transaction price was used for fair value evaluation.

7) There is no significant change in business and economic environment affecting the fair value of the financial assets and liabilities during the current year.

## 35. NON-CASH INVESTING AND FINANCING ACTIVITIES:

(1) Significant non-cash investing and financing activities for the years ended December 31, 2021 and 2020, are as follows (Unit: Korean won in thousands):

| | 2021 | 2020 |
|---|---|---|
| Reclassification of current borrowings | ₩ 89,937,197 | ₩ 89,898,487 |
| Reclassification of construction in progress to property, plant and equipment account | 21,091,108 | 1,427,550 |
| Other accounts payable related to acquisition of property, plant and equipment and intangible assets | 3,960,862 | 3,544,966 |
| Reclassification between property, plant and equipment and investment properties | 5,533,298 | 3,190,025 |
| Reclassification of FVTPL financial assets | - | 2,550,000 |
| Recognizing right-of-use assets | 7,550,720 | 7,370,830 |
| Recognizing lease liabilities | 7,096,763 | 7,254,636 |
| Reclassification of current lease liabilities | 7,969,907 | 8,036,250 |
| Reclassification between buildings and furniture and fixtures | 588,097 | - |

(2) Details of changes in liabilities arising from financing activities for the year ended December 31, 2021, are as follows (Unit: Korean won in thousands):

| | Beginning | Cash flow | Non-cash change (other) | Non-cash change (liquidity reclassification) | Others | Ending |
|---|---|---|---|---|---|---|
| Current portion of long-term borrowings | ₩ 89,972,432 | ₩(90,000,000) | ₩ - | ₩89,937,197 | ₩ 73,131 | ₩ 89,982,760 |
| Long-term borrowings | 498,810,231 | 34,024 | - | (89,937,197) | 355,478 | 409,262,536 |
| Current portion of lease liabilities | 11,004,547 | (11,237,209) | 1,930,612 | 7,969,907 | 187,046 | 9,854,903 |
| Lease liabilities | 41,710,487 | - | 5,166,151 | (7,969,907) | 798,922 | 39,705,653 |
| Total | ₩ 641,497,697 | ₩(101,203,185) | ₩7,096,763 | ₩ - | ₩ 1,414,577 | ₩548,805,852 |

## 36. EVENTS AFTER THE REPORTING PERIOD:

(1) Participation in capital increase of Opensource Consulting Co., Ltd.
The board of directors decided to participate in the capital increase of Opensource Consulting, Co., Ltd. on February 24, 2022, and plan to acquire an additional 17% share.

## 37. APPROVAL OF SEPARATE FINANCIAL STATEMENTS:

The separate financial statements are approved by the board of directors on February 9, 2022, and are expected to be finally approved at the shareholders' meeting on March 24, 2022.