



SAMSUNG ELECTRONICS Co., Ltd.

2024 Interim Business Report

For the quarter ended March 31, 2024

Certain statements in the document, other than purely historical information, including estimates, projections, statements relating to our business plans, objectives and expected operating results, and the assumptions upon which those statements are based, are “forward-looking statements.” Forward-looking statements are based on current expectations and assumptions that are subject to risks and uncertainties which may cause actual results to differ materially from the forward-looking statements. A detailed discussion of risks and uncertainties that could cause actual results and events to differ materially from such forward-looking statements is included in our financial reports available on our website.

See, also, 『Note on Forward-Looking Statements』 in preamble of 『II. Businesses Overview』.

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Certification

Letter of Certification

We, Jong-hee Han and Hark-kyu Park, as a CEO and the executive in charge of reporting, respectively, certify that we have thoroughly reviewed the annual business report of Samsung Electronics Co., Ltd. for the three-month period ended March 31, 2024.

Based on our knowledge, this report does not contain any untrue statements of material facts or omit any material facts; and it does not contain any statements that are intentionally misleading for the users of the information in the report.

We confirm that Samsung Electronics operates the Internal Controls over Financial Reporting, as defined in Article 8 of the Act on External Audit of Stock Companies.

Date: May 16, 2024

Jong-hee Han



Vice Chairman and CEO
Samsung Electronics Co., Ltd.

Executive responsible for reporting: Hark-kyu Park



President and CFO
Samsung Electronics Co., Ltd.

I. Corporate Overview

1. Overview

Pursuant to the reporting guidelines set forth by the Financial Supervisory Service of the Republic of Korea (the FSS), the Overview section is not included in the 1Q and 3Q reports. Overview Section is reported in the half-year and full-year business reports.

2. Company History

Pursuant to the reporting guidelines set forth by the FSS of South Korea, the Company history section, reported in the full-year business report, is not included in the interim reports.

3. Changes in Paid-in Capital

Pursuant to the reporting guidelines set forth by the FSS of South Korea, the Changes in paid-in capital section, reported in the full-year business report, is not included in the interim reports.

4. Stock Information

Pursuant to the reporting guidelines set forth by the FSS of South Korea, the Stock information section, reported in the half-year and full-year business reports, is not included in the 1Q and 3Q reports.

5. Changes to Articles of Incorporation

Pursuant to the reporting guidelines set forth by the FSS of South Korea, the Changes to Articles of Incorporation section, reported in the half-year and full-year business reports, is not included in the 1Q and 3Q reports.

II. Businesses Overview

Note on forward-looking statements

This report includes forward-looking statements that relate to future events and can be generally identified by phrases containing words such as “believes,” “expects,” “anticipates,” “foresees,” “forecasts,” “estimates” or other words or phrases of similar meaning. These forward-looking statements are not guarantees of future performance and may involve known and unknown risks, uncertainties and other factors that may affect our actual results, performance, achievements or financial position, making them materially different from the actual future results, performance, achievements or financial position expressed or implied by these forward-looking statements. Unless otherwise specified, all data presented in this report is from our consolidated financial statements.

Uncertain events that could positively or negatively affect the Company’s management condition and financial performance include, but are not limited to:

- Trends of financial markets domestically and abroad, including changes in exchange rates and interest rates
- The Company’s strategic decision making, including disposals and purchases of businesses
- Unexpected sudden changes in core businesses such as CE, IM, Semiconductor, DP and Harman
- Other changes domestically and abroad that can affect management condition and financial performance

The Company assumes no obligation to revise or update this report to reflect risks or uncertainties that arise after the reporting period.

(Responsibility statement)

In accordance with article 3(2) c) of the Transparency Law (Luxembourg), Jong-hee Han and Hark-kyu Park, as a CEO and the executive in charge of reporting confirm that, to the best of their knowledge, the consolidated financial statements and the statutory non-consolidated financial statements prepared in accordance with the applicable set of accounting standards give a true and fair view of the assets, liabilities, financial position and profit or loss of the Company and the undertakings included in the consolidation taken as a whole and that the management report includes a fair review of the development and performance of the business and the position of the Company and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties that they face.

1. Overview

In addition to our headquarters in Korea, Samsung Electronics Co., Ltd. (Samsung Electronics, SEC, or the Company) consists of 227 subsidiaries across the world responsible for sales and production, which include 9 regional headquarters for the Device eXperience (DX) Division, 5 regional headquarters for the Device Solutions (DS) Division, and subsidiaries of Samsung Display (SDC) and Harman.

The Company’s business divisions form a two-pronged framework consisting of finished products businesses and component businesses. For finished products, the DX Division is responsible for the production and sales of TVs, monitors, refrigerators, washing machines, air conditioners, smartphones, computers, and network systems. For components, the DS Division manufactures and sells DRAM, NAND flash, and mobile Aps; and SDC manufactures and sells panels, including mobile OLED panels. Harman (acquired in 2017) manufactures and sells automotive products such as digital cockpits, car- audio products, and consumer audio products such as portable speakers and soundbars.

☞ See C. Current status of each division and D. Financial summary by organization in 『7. Other information』 for more details about each Division.

The Company's corporate headquarters—which oversees the DX and DS Divisions—and 32 consolidated subsidiaries are located in Korea. The headquarters is divided along Divisions and/or Businesses, which are located in Suwon, Gumi, Gwangju, Giheung, Hwaseong, Pyeongtaek, etc. The Company's unlisted domestic subsidiaries include Samsung Display for display panel production, Samsung Electronics Sales for domestic retail sales, Samsung Electronics Service for after-sales services, and Samsung Electronics Logitech for logistics.

We have 195 unlisted overseas subsidiaries for product manufacturing, sales, and R&D, with locations in the US, Europe/CIS, Middle East/Africa, and Asia, etc.

We have 46 subsidiaries in the Americas, including SEA (New Jersey; responsible for the sales of finished products including TV and smartphones), SII (California; manufacturing of TVs), SSI (California; sales of semiconductors and DPs), SAS (Texas; manufacturing of semiconductor products), SEDA (Brazil; manufacturing of multiple finished products) and Harman (Connecticut; automotive components).

In Europe and CIS, we operate 68 subsidiaries, including SEUK (UK), SEG (Germany), SEF (France), SEI (Italy), SERC (Russia) for sales of finished products; SEH (Hungary) and SERK (Russia) for manufacturing TVs, and SEPM (Poland) for manufacturing home appliances.

We have 20 subsidiaries in Middle East and Africa, including SGE (UAE) and SSA (South Africa) for sales of finished products and SEEG (Egypt) and SSAP (South Africa) for manufacturing TVs.

There are 31 subsidiaries in Asia (ex China), including SESP (Singapore), SEAU (Australia), SEPCO (Philippines), and SME (Malaysia), which are responsible for regional sales. In addition, we operate numerous production sites including SEV and SEVT (Vietnam) for smartphones, SEHC (Vietnam) for TVs, SDV (Vietnam) for display panels, and SIEL (India) for multiple products.

We operate 30 subsidiaries in China, including SCIC (Beijing) and SEHK (Hong Kong) for the sales of finished products in those regions; and SSS (Shanghai) and SSCX (Xian) for semiconductor and display panel sales. Production sites for finished products include SSEC (Suzhou) and semiconductor production facilities are located in SCS (Xian) among others.

In 1Q24, the Company recorded total revenue of KRW 71,915.6 billion, an increase of 12.8% year-on-year. Major customers (listed in alphabetical order) included Apple, Deutsche Telekom, Hong Kong Techtronics, Supreme Electronics, and Verizon.

2. Key products and services

A. Revenue

SEC is involved in the production and sales of finished products, including TVs, refrigerators, washers, air conditioners, smartphones, and components such as semiconductors (e.g., DRAM, NAND flash, mobile APs) and mobile OLED panels. Through Harman, the Company also produces and sells digital cockpits, car audio products, portable speakers, and more.

Reported revenue in 1Q24, was KRW 47,292.7 billion (65.8% of total net sales) for DX; KRW 23,137.3 billion (32.2%) for DS; KRW 5,386.4 billion (7.5%) for SDC; and KRW 3,200.3 billion (4.5%) for Harman.

(KRW 100 mil)

Organization	Major products	Revenue	Portion
DX Division	TVs, monitors, refrigerators, washing machines, air conditioners, smartphones, network systems, computers, etc.	472,927	65.8%
DS Division	DRAM, NAND flash, mobile APs, etc.	231,373	32.2%
SDC	OLED smartphone panels, etc.	53,864	7.5%
Harman	Digital cockpits, car audio products, portable speakers, etc.	32,003	4.5%
Others	Overlapping internal transactions between Divisions	△71,011	△10.0%
Total		719,156	100.0%

Includes inter-divisional transactions.

☞ See 『4. Revenue and long-term contracts』 for information by each product.

B. Changes in average selling price

In 1Q24, on a year-on-year basis, the average selling price (ASP) of TVs stayed similar and the ASP of smartphones increased by around 17%. Memory-product ASP rose by approximately 28%, and the APS for OLED panels for smartphones decreased by approximately 34%. The ASP of digital cockpits increased by around 1%.

3. Production materials and production facilities

A. Key production materials

For the DX Division, key materials include mobile AP solutions and camera modules, which are supplied by Qualcomm, Semco, etc., and display panels for TVs and monitors, which are supplied by CSOT, etc. For the DS Division, key materials include chemicals and wafers, supplied by Soulbrain, SK Siltron, etc., and for SDC, key materials include FPCAs and cover glass, with suppliers such as BH, Apple, etc. For Harman, key materials include system-on-chip (SoC) products, including microcontroller units, communication modules, etc., which are supplied by Nvidia and WNC, etc.

(KRW 100 mil)

Organization	Item	Specific usage	Purchase price	Portion	Main supplier(s)
DX Division	Mobile AP solutions	CPU	34,915	18.7%	Qualcomm, MediaTek, etc.
	Display panel	Color picture signaler for TV, monitor	19,091	10.2%	CSOT, AUO, etc.
	Camera module	Camera for smartphone	17,150	9.2%	Semco, Powerlogics, etc.
	Others	-	115,575	61.9%	
	Sub total			186,731	100.0%
DS Division	Chemical	Disk processing	6,404	15.6%	Soulbrain, DongWoo Fine-Chem, etc.
	Wafer	Semiconductor disk	5,583	13.6%	SK Siltron, SUMCO, etc.
	Others	-	29,012	70.8%	
	Sub total			40,999	100.0%
SDC	FPCA	Circuit	4,330	17.7%	BH, YP Electronics, etc.
	Cover glass	Tempered glass	2,506	10.2%	Apple, Biel, etc.
	Others	-	17,662	72.1%	
	Sub total			24,498	100.0%
Harman	SoC	CPU	2,046	18.2%	Nvidia, Intel, etc.
	Communication module	Vehicular communication	1,017	9.0%	WNC (Wistron NeWeb Corp.), etc.
	Others	-	8,205	72.8%	
	Sub total			11,268	100.0%
Others	-	-	92	-	
Total			263,588	-	

Purchase price does not include sales between Divisions.

Semco is a subsidiary.

Portion of purchase price of each item compared to total purchase price for each Division's raw materials.

B. Production material price trends

On a year-on-year basis, the prices of mobile APs and camera modules, which are major production materials for the DX Division, increased by approximately 8% and 13%, respectively. The price of TV- and monitor-use display panels increased in the region of 10%. The price of wafers for semiconductor disks stayed similar, and the price of FPCAs for SDC decreased by approximately 38%. The price of tempered glass cover glass fell by approximately 37%. For Harman, the price of SoCs decreased by about 5% and the price of communication modules decreased by approximately 9%.

※ Data include internal transactions between Divisions, etc.

C. Production capacity, output, utilization rate

(Capacity)

(1,000 units)

Organization	Item	Capacity		
		1Q24	2023	2022
DX Division	TV, monitor, etc.	13,210	53,552	55,747
	Smartphone, etc.	66,600	284,700	332,170
DS Division	Memory	577,186,808	1,926,651,546	1,905,731,836
SDC	Display panel	569	2,320	2,700
Harman	Digital cockpit	2,841	10,912	11,257

Production capacity for major product categories on a consolidated basis.

The DX Divisions' production capacity, by major product, is calculated as follows:

- the average number of lines (×) the average output per hour (×) the average operation hours per day (×) standard days of operation

Memory production capacity for the DS Division is calculated as follows:

- converted output (after packaging, 1Gb equivalent) ÷ the utilization rate

SDC's production capacity is calculated as follows:

- the total producible panel surface area ÷ the dimensions of eighth generation glass (2,200x2,500mm)

Harman's production capacity for Digital cockpit is calculated as follows:

- the number of production (assembly and test) cells for each customer/product (×) the production capacity per hour by production cell (×) the standard operation hours per day (×) standard days of operation

(Output)

In 1Q24, the DX Division's output of TVs, monitors, etc., was 9,919 thousand units (major production sites in Mexico, Vietnam, Brazil, and Hungary), and smartphone output was 52,909 thousand units (major production sites in Korea [Gumi], Vietnam, India, and Brazil). The DS Division's memory output in 1Gb equivalents was 577,187 million (major production sites: Korea [Hwaseong, Pyeongtaek, etc.] and China). SDC's display panel output in 8th generation glass equivalents was 387,000 units (major production sites in Korea [Cheonan, Asan]). Harman's Digital cockpit output was 1.811 million units (major production sites in Mexico, Hungary, and China).

(1,000 units)

Organization	Item	Output		
		1Q24	2023	2022
DX Division	TV, monitor, etc.	9,919	40,085	41,802
	Smartphone, etc.	52,909	189,991	229,180
DS Division	Memory	577,186,808	1,926,651,546	1,905,731,836
SDC	Display panel	387	1,407	2,008
Harman	Digital cockpit	1,811	7,658	8,334

Output for major product categories on a consolidated basis.

(Utilization rate)

DX utilization rates in 1Q24 were calculated as actual output relative to production capacity. The utilization rates were 75.1% for TVs, monitors, etc. and 79.4% for smartphones, etc.

(1,000 units)

Organization	Item	1Q24		
		Production capacity	Output	Utilization rate
DX Division	TV, monitor, etc.	13,210	9,919	75.1%
	Smartphone, etc.	66,600	52,909	79.4%

The DS Division and SDC respectively operate memory and display panel production in three shifts covering 24 hours a day. Cumulative operating days including holidays were 365 days in 1Q24. The utilization rate was calculated as the actual production time relative to the potential production capacity [operating days (×) number of production lines (×) 24 hours].

(Hours)

Organization	Item	1Q24		
		Potential production time	Actual production time	Utilization rate
DS Division	Memory	21,840	21,840	100%
SDC	Display panel	10,920	10,920	100%

In 1Q24, Harman’s utilization rate was 63.7% and was calculated as actual output relative to production capacity.

(1,000 units)

Organization	Item	1Q24		
		Production capacity	Output	Utilization rate
Harman	Digital cockpit	2,841	1,811	63.7%

D. Production facilities and investment

(Key facilities for production and operation)

The Company’s operational activities include production, development, marketing, and sales. In Korea, operations are located in Suwon, Gumi, Gwangju, Hwaseong, Pyeongtaek, and Asan. Overseas operations in North America, Europe, and China include a total of nine regional headquarters under the DX Division, five regional headquarters under the DS Division, and subsidiaries of SDC and Harman.

[Operations]

Region	Operations	Location
Korea (DX Division, DS Division, SDC – 12 work sites)	Suwon	Suwon
	Seocho	Seoul
	Woomyeon	Seoul
	Giheung	Yongin
	Hwaseong	Hwaseong

	Pyeongtaek	Pyeongtaek
	Cheonan	Cheonan
	Onyang	Onyang
	Asan	Asan
	Gumi1	Gumi
	Gumi2	Gumi
	Gwangju	Gwangju
Overseas (DX Division – 9 regional headquarters)	North America	New Jersey, US
	Europe	Surrey, UK
	China	Beijing, China
	Southeast Asia	Singapore, Singapore
	Southwest Asia	Haryana, India
	CIS	Moscow, Russia
	Middle East	Dubai, UAE
	Africa	Johannesburg, South Africa
	Latin America	Sao Paulo, Brazil
Overseas (DS Division – 5 regional headquarters)	Americas	San Jose, US
	Europe	Munich, Germany
	China	Shanghai, China
	Southeast Asia	Singapore, Singapore
	Japan	Tokyo, Japan
Harman	North America HQ	Connecticut, US
	Harman Becker Automotive Systems, Inc.	Michigan, USA
	Harman Becker Automotive Systems GmbH	Karlsbad, Germany
	Harman Consumer Nederland B.V.	Amsterdam, Netherlands

The Company's property, plant and equipment include land, buildings and structures, machinery and equipment, and construction in progress. As of March 31, 2024, the total book value was KRW 191,155.6 billion, which is an increase of KRW 3,899.3 billion from end-2023.

(KRW 100 mil)Classification		Land	Buildings and structures	Machinery and equipment	Under construction	Other tangible assets	Total
Dec 31, 2023	Book value	99,994	432,381	833,092	467,203	39,893	1,872,563
	- Acquisition cost	101,580	736,900	3,285,615	467,203	140,586	4,731,884
	- Accumulated depreciation (including impairment loss)	-1,586	-304,519	-2,452,523	-	-100,693	-2,859,321
Change	General acquisition and capital expenditure	564	12,496	58,712	41,952	4,012	117,736
	Depreciation ¹⁾	-123	-10,302	-78,039	-	-3,849	-92,313
	Disposal/discard/impairment	-6	-1,052	-134	-	-115	-1,307
	Others ²⁾	215	4,953	3,681	5,493	535	14,877
Mar 31, 2024	Book value	100,644	438,476	817,312	514,648	40,476	1,911,556
	- Acquisition cost	102,312	754,494	3,366,763	514,648	145,294	4,883,511
	- Accumulated depreciation (including impairment loss)	-1,668	-316,018	-2,549,451	-	-104,818	-2,971,955

Market value of major tangible assets is omitted as objective assessment is difficult.

1) Land-depreciation is depreciation expense of right-of-use asset as per K-IFRS 1116 (Lease).

2) Includes effects of FX rates and government subsidies.

(Capex)

The Company's capex in 1Q24 was approximately KRW 11.3 trillion, with investments concentrating on capacity expansions and migration to advanced nodes; and also on infrastructure for the DS Division and SDC. To prepare for improved global market conditions, the Company in 2024 will keep monitoring investments to strengthen competitiveness for next-generation technologies and prepare for medium- to long-term demand while also fortifying its fundamentals by enhancing investment efficiency.

[Capex, by organization]

(KRW 100 mil)

Organization	Purpose	Period	Assets	Investment
DS division	Establishment, addition, upgrade	January–March 2024	Buildings, facilities, etc.	96,663
SDC	Establishment, addition, upgrade	January– March 2024	Buildings, facilities, etc.	11,410
Other	Establishment, addition, upgrade	January– March 2024	Buildings, facilities, etc.	5,014
Total				113,087

4. Revenue and long-term contracts

A. Revenue

In 1Q24, the Company recorded total revenue of KRW 71,915.6 billion, an increase of 12.8% year-on-year. By organization, when compared to the same period last year, revenue increased by 2.3% and 68.5% in the DX Division and DS Division, respectively, and decreased by 18.6% in SDC. Revenue of Harman increased 1.1%.

(KRW 100 mil)

Organization	Revenue types	Product categories	1Q24	2023	2022
DX Division	Goods, products, services, other	TVs, monitors, refrigerators, washing machines, air conditioners, smartphones, network systems, computers, etc.	472,927	1,699,923	1,824,897
DS Division	Goods, products, services, other	DRAM, NAND flash, mobile APs, etc.	231,373	665,945	984,553
SDC	Goods, products, services, other	OLED panels for smartphones, etc.	53,864	309,754	343,826
Harman	Goods, products, services, other	Digital cockpit, car-audios, portable-speakers, etc.	32,003	143,885	132,137
Others	Overlapping internal transactions between Divisions		-71,011	-230,152	-263,099
Total			719,156	2,589,355	3,022,314

Includes inter-divisional transactions.

(1) Sales, by major product (consolidated basis)

(KRW 100 mil)

Classification	1Q24	2023	2022
TVs, monitors, etc.	72,340	303,752	332,795
Smartphones, etc.	327,914	1,086,325	1,154,254
Memory	174,943	441,254	685,349
Display panels	53,864	309,754	343,826

Includes inter-divisional transactions.

(2) Revenue, by type

(KRW 100 mil)

Classification	1Q24	2023	2022
Products	694,159	2,461,380	2,903,461
Services and other revenue	24,997	127,975	118,853
Total	719,156	2,589,355	3,022,314

Other revenue consists of royalty income, etc.

(3) Revenue, by region (on a separate basis)

(KRW 100 mil)

Classification	1Q24	2023	2022	
Domestic	60,791	205,196	221,799	
Export	Americas	141,301	510,934	659,617
	Europe	74,994	239,342	265,147
	Asia and Africa	87,764	326,262	425,114
	China	147,546	422,007	546,998

Total	512,396	1,703,741	2,118,675
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Domestic consumption and exports on a separate basis.

B. Sales channels

(1) Domestic

Seller	Sales channel	Consumer
Manufacturer and buyer	Exclusive agencies	Consumer
	Distributor (general merchandise stores, discount stores, department stores, home-shopping, online, etc.)	
	Telecommunication service provider (SKT Co., Ltd., KT Corp., LG Uplus Corp.)	
	Direct Sales (B2B and online channels)	

(2) Overseas

Seller	Sales channel				Consumer
Production subsidiaries	Regional sales office	Retailer			Consumer
		Dealer		Retailer	
		Distributor	Dealer	Retailer	
		Telecommunication service provider, automotive OEM			
		Direct sales (B2B and online channels)			
	Regional distribution office	Regional sales office	Retailer		
			Dealer	Retailer	
			Distributor	Dealer	

(3) Sales ratio (global), by channel

Channel	Wholesale	Retail	Special/direct sales	Others
Ratio	18%	26%	46%	9%

C. Sales methods and conditions

(1) Domestic

Classification	Channel	Collection	Incidental expense sharing
Exclusive	Retailer	Credit specific	Case specific cost sharing as determined by mutual agreement
Distributor	General merchandise store, discount store, department store, home shopping, online, etc.	Case specific and contract specific	Case specific cost sharing as determined by mutual agreement
Telecommunication service provider	SKT Co., Ltd., KT Corp., LG Uplus Corp.	Case specific and contract specific	Case specific cost sharing as determined by mutual agreement (joint marketing)
B2B and online channels	Corporate clients, etc.	Case specific and contract specific	N/A

(2) Overseas

Classification	Channel	Collection	Incidental expense sharing
Retailer	Retail store	Case specific and contract specific	Case specific cost sharing as determined by mutual agreement
Dealer	General merchandise store, discount store, department store	Case specific and contract specific	Case specific cost sharing as determined by mutual agreement
Distributor	Direct sales to local distributors	Case specific and contract specific	Case specific cost sharing as determined by mutual agreement
B2B and online channels	Corporate clients, etc.	Case specific and contract specific	N/A

D. Sales strategy

- Expand market leadership based on premium products
- Provide differentiated value to customers through brand, products, and services
- Strengthen marketing activities to boost demand from customer/market

E. Major customers

In 1Q24, major customers (listed alphabetically) included Apple, Deutsche Telekom, Hong Kong Tech tronics, Supreme Electronics, and Verizon. Sales to the five major customers accounted for approximately 13% of total sales.

F. Long-term contracts

As of March 31, 2024, there were no long-term contracts that have a significant impact on the Company's financial statement.

5. Risk management and derivative trading

A. Financial risk management policy

The Company focuses on minimizing market risk, credit risk, and liquidity risk arising from operating activities. To mitigate these risks, the Company monitors each risk factor and operates corresponding financial risk management policies and programs.

The Company manages financial risks by establishing global financial risk management policies and periodically assessing risks associated with our customers and business partners; and via monitoring foreign exchange hedging and balance of funds.

Meanwhile, the Company manages exchange rate risk via monitoring exchange rates and executing transactions through local finance centers in each major region (United States, United Kingdom, Singapore, China, Brazil, and Russia). Liquidity risk is managed by managing capital as a whole by each region.

The Company's assets that are under financial risk management consist of cash and cash equivalents, short-term financial instruments, financial assets at amortized cost, trade receivables and others. The Company's liabilities under financial risk management consist of trade payables, borrowings, and others.

B. Major financial risks

(1) Market risk

(Foreign exchange risk)

The Company operates internationally and is exposed to foreign exchange risks as it conducts transactions in currencies other than the functional currency. Major currencies that are exposed to foreign exchange risk include USD, EUR, and others.

The Company focuses on minimizing the impact of foreign exchange fluctuation by maintaining an equal amount of assets and liabilities denominated in each foreign currency. To minimize foreign exchange positions, the Company's foreign exchange management policy requires transactions for normal business (including imports and exports) and for financing (such as deposits/borrowings) to be in the functional currency or for the cash-in currency to match the cash-out currency. If foreign exchange positions arise, the Company uses bond sales, forward exchanges, etc., to mitigate impacts of exchange-rate fluctuations. While such measures can reduce foreign exchange risk, they cannot remove the risk entirely. The Company efficiently manages foreign exchange risk through regular monitoring and assessments, and speculative foreign exchange transactions are strictly forbidden.

(Interest rate risk)

Interest rate risk arises from changes in the market interest rate and subsequent fluctuations in cash flows from interest income and expenses from investment and financial activities, mainly in deposits and variable-rate borrowings. The Company employs internal fund sharing to minimize external borrowings and minimize financial costs and uncertainties associated with interest rate changes.

(Stock price risk)

The Company's investment portfolio consists of direct and indirect investments in equity securities classified as financial assets at fair value through other comprehensive income and financial assets at fair value through profit or loss, which is in line with the Company's strategy.

As of March 31, 2024, a price fluctuation of marketable equity securities (listed stocks) of 1% changes 'other comprehensive income' (before income tax) by KRW 58,830 million and 'profit before tax' by KRW 2,333 million. The figures as of the same date in 2023 were KRW 111,415 million and KRW 5,354 million, respectively.

(2) Credit risk

Credit risk arises during the normal course of transactions and investing activities where clients or other parties fail to discharge an obligation. The Company sets and manages the client's and counterparty's credit limit, and evaluates their financial credit rating on a periodic basis based on the client's and counterparty's financial conditions, default history and other important factors. Adequate insurance coverage is maintained for trade receivables related to trading partners situated in higher risk countries.

Credit risk can arise from transactions with financial institutions, which include financial instrument transactions such as cash and cash equivalents, savings, and derivative instruments. To minimize such risk, the Company transacts only with banks that have a strong international credit rating (S&P A and above), and all new transactions with financial institutions with no prior transaction history are carried out after a soundness evaluation, etc. The Company generally enters into a financial agreement with no restrictions, such as debt ratio covenants, provision of collateral, and loans or borrowings repayment. The Company requires separate approval for contracts with restrictions.

The Company estimates that its maximum exposure to credit risk is equivalent to the carrying amount of its financial assets, which has been reflected after deducting the impairment losses.

(3) Liquidity risk

Liquidity risk refers to the possibility of a company having difficulties in fulfilling its obligations related to financial liabilities. Our main sources of liquidity are cash generated by business operations and funds procured from capital market and financial institutions. The main demands on our liquidity include investment for production and R&D, working capital, and dividend payouts.

The nature of our business requires making large investments, so maintaining an adequate liquidity is crucial. We maintain and manage our liquidity by estimating required cash, managing income and expenses, etc.

The Company effectively manages its liquidity risk by periodically forecasting projected cash flows and by utilizing regional cash pooling, which allows for the use of internal funds when an entity in a region lacks liquidity. The cash-pooling program allows sharing of surplus funds among entities and contributes to minimizing liquidity risk and reducing capital operation expenses and financial expenses.

In addition, the Company's headquarters provides payment guarantees to overseas subsidiaries to secure credit limit to brace for potential large liquidity needs. As of the reporting period end date, our investment ratings from international rating agencies Moody's and S&P are Aa2 and AA-, respectively, allowing us to raise capital in the capital market in a timely manner.

(4) Capital risk

The purpose of capital management is to protect our capability of continuously providing profit to our shareholders and stakeholders and to maintain a sound capital structure. To this end, the Company monitors capital on the basis of credit rating and the ratio of total liabilities to total equity.

As of March 31, 2024, the figures for total liabilities and total equity are as follows:

	Mar 31, 2024	Dec 31, 2023
Total liabilities	98,983,688	92,228,115
Total equity	371,916,124	363,677,865
Total liabilities to equity ratio	26.6%	25.4%

(KRW mil)

C. Derivative instruments and put options

The Company hedges foreign currency positions by trading currency forward contracts of currencies other than won for the purpose of managing foreign exchange risk. Currency forwards are bought through a bank in the purpose of trade and hedging.

As of March 31, 2024, the Company had 2,843 currency forward contracts involving 28 foreign currencies, such as USD, EUR, and JPY, and the book value of assets and liabilities as well as related gain and loss were as follows:

(KRW mil)

	Assets	Liabilities	Valuation gain	Valuation loss
Currency forwards	100,657	55,998	176,423	183,687

According to the shareholders' agreement signed with Rainbow Robotics, its major shareholder, etc., the Company has the right, within a specific time period, to demand that the major shareholder, etc., sell all or part of their Rainbow Robotics shares to the Company or the third party designated by the Company. Moreover, the major shareholder, etc., of Rainbow Robotics has the right to demand that the Company sell all or part of the Company's Rainbow Robotics shares back to the major shareholder, etc., under certain conditions. Fair value of the above call option as of March 31, 2024, was evaluated by Deloitte Anjin LLC.

Furthermore, Samsung Display (a subsidiary of the Company) may exercise its put option to sell part of its shares of Corning Incorporated back to Corning, according to the stock trade contract with Corning on April 8, 2021.

Samsung Display may exercise its put option to sell all or part of its shares of TCL China Star Optoelectronics Technology Co. Ltd. (CSOT) to TCL Technology Group Corporation (TCL), if CSOT remains unlisted within the listing period, according to the shareholders' agreement executed with TCL and CSOT on April 1, 2021.

Fair value of the above put option as of March 31, 2024, was evaluated by Earnest & Young Global Limited.

6. Major contracts and research and development activities

A. Major contracts

Account	Contract information	Contents
Google	Type	Patent cross-license agreement
	Date	Jan 25, 2014
	Purpose and contents	Secure business flexibility through mutual patent licensing
	Other	Permanent license contract (including patent applications in the next 10 years)
GlobalFoundries Inc.	Type	Process technology license agreement
	Date	Feb 28, 2014
	Purpose and contents	Expand customer base of 14nm process
Google	Type	EMADA
	Date	Feb 27, 2019–Dec 31, 2024 (extended)
	Purpose and contents	Licensing agreement for using Google apps (Play Store, YouTube, etc.) in 32 European countries (EEA)
Ericsson	Type	Patent cross-license agreement
	Date	May 7, 2021

	Purpose and contents	Secure business flexibility through mutual patent licensing
Qualcomm	Type	Patent cross-license agreement
	Date	July 6, 2022
	Purpose and contents	Secure business flexibility through mutual patent licensing and signing of covenant not to sue
Huawei	Type	Patent cross-license agreement
	Date	Jul 13, 2022
	Purpose and contents	Secure business flexibility through mutual patent licensing
Nokia	Type	Patent cross-license agreement
	Date	January 19, 2023
	Purpose and contents	Secure business flexibility through mutual patent licensing

Information that are trade secrets, such as contract amounts, etc., are not stated herein.

B. Summary of R&D activities and expenditures

The Company is leading the global market by continuously developing creative and innovative products and industry-leading technology through shifting its way of thinking and understanding customer demand. The Company is doing its utmost to cement its position in the global IT industry and become a worldwide leader in industrial technology by creating and securing next-generation technology.

As of March 31, 2024, the Company's year-to-date R&D expenses were KRW 7,820.1 billion. Among this, KRW 7,820 billion was recognized as expenditures, excluding government subsidies and capitalized expenses.

(R&D expenses)

		(KRW mil)		
		1Q24	2023	2022
Total R&D expenditures		7,820,071	28,352,769	24,929,171
(Government subsidies)		-31	-13,045	-9,973
R&D expenditures		7,820,040	28,339,724	24,919,198
Accounting	Capitalization of development expenses (intangible asset)	-	-	-193,708
	R&D costs (expenses)	7,820,040	24,919,198	22,401,726
R&D expenses/revenue ratio ¹⁾		10.9%	10.9%	8.2%

Consolidated basis.

1) Calculated using total R&D expenditures, which includes government subsidies.

C. R&D organization and operations

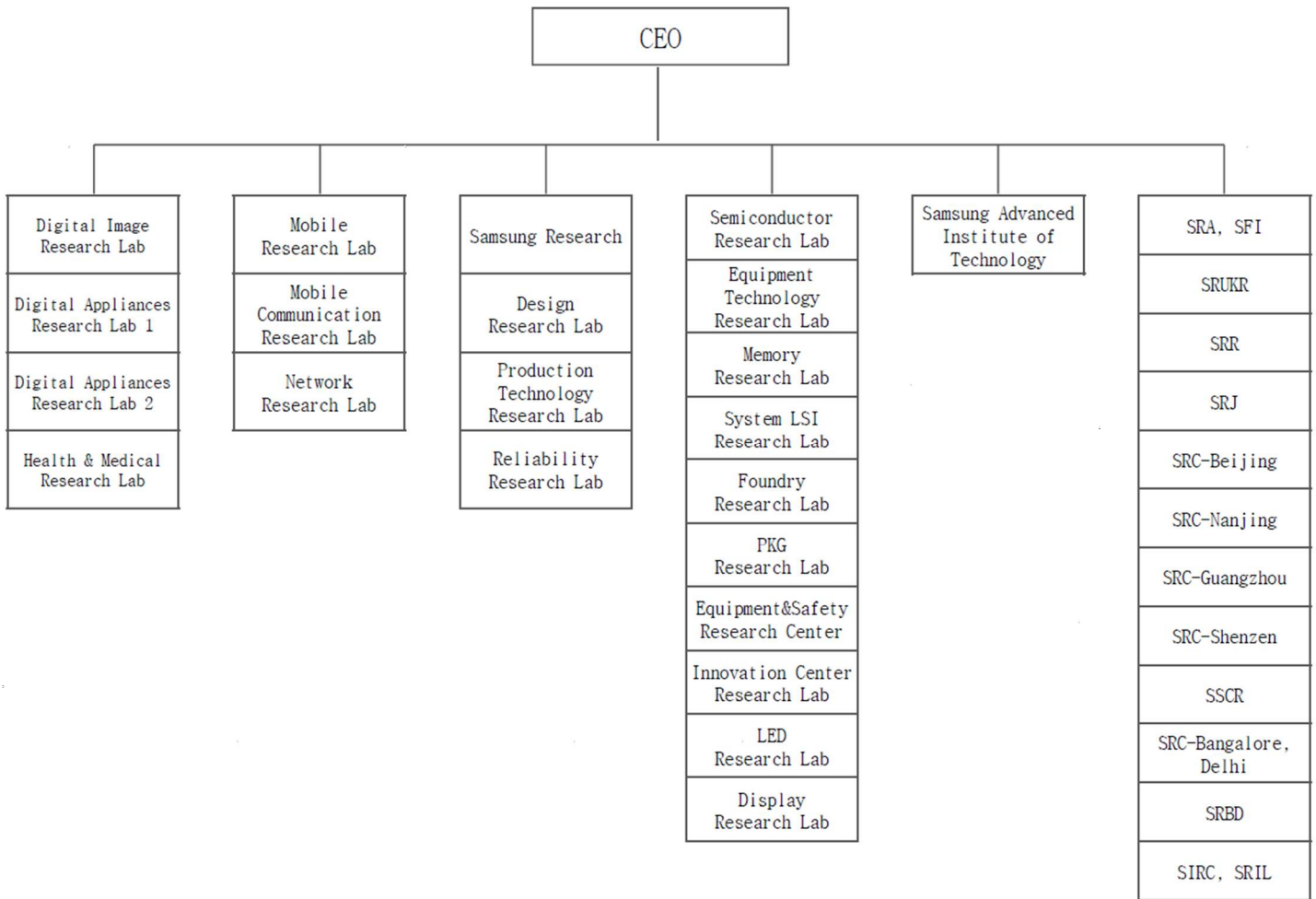
(Domestic)

The Company's R&D organizations are systematically structured into three levels based on the timing of technological commercialization. R&D teams of business units under each Division develop market-ready technologies with a 1–2

year outlook, while research institutes under each Division, such as Samsung Research and semiconductor research centers, drive development of promising technologies with a mid- to long-term outlook of 3–5 years. Also, Samsung Advanced Institute of Technology (SAIT), our comprehensive research institute, pioneers the development of core technology as seeds for future growth engines. SAIT operates at a company level and offers direction for R&D related to promising growth areas, strengthens technological competitiveness for our main businesses, and performs R&D activities to establish a creative R&D framework.

(Overseas)

The Company operates R&D organizations in the US (SRA, SFI), Ukraine (SRUKR), Russia (SRR), Japan (SRJ), China (SRC- Beijing, SRC-Nanjing, SRC-Guangzhou, SRC-Shenzhen, SSCR), India (SRI-Bangalore and SRI-Delhi), Bangladesh (SRBD), Israel (SIRC and SRIL), etc., to carry out research activities for product development and basic technological research.



As of March 31, 2024.

D. R&D results

The Company's key R&D results by organization in 2023 are as follows:

DX Division	
Research project	Details
Galaxy S24	Release of Galaxy S24 · S24+ · S24 Ultra
Galaxy A	Rollout of A55 5G Release of A35 5G Release of A25 LTE Launch of A15 LTE · 5G
Galaxy Book	Release of Galaxy Book4 Ultra Release of Galaxy Book4 Pro 360 Release of Galaxy Book4 Pro
Neo QLED 8K	Release of mini LED-based UHD & Slim 8K TV
Neo QLED 4K	Release of mini LED-based TV with 3 series, featuring 7 different sizes
Refrigerator	Launch of Bespoke AI hybrid models with energy-efficient power saving mode with application of Peltier elements
Washing machine	Launch of Bespoke Grande AI "OneBody Top-Fit" washer/dryer
Vacuum cleaner	Launch of wet & dry robot vacuum cleaner Bespoke AI Steam for Korean market
DS Division	
Research project	Details
HBM	Developed the industry's first 36GB HBM3E 12H DRAM
SSD	Launch of SSD 990 EVO for consumer devices, offering both functionality and versatility
Exynos	Unveiled Exynos 1480, a mobile AP based on state-of-the-art technology
SDC	
Research project	Details
OLED	Developed Galaxy S24 AMOLED
QD-Display	· Developed 31.5"UHD, 27"QHD, QD-OLED

Please refer to 『Appendix-4. R&D results (detailed)』 for more details.

7. Other information

A. Intellectual property

Intellectual property activities are an integral part of our R&D strategies—SEC registered its first US patent in 1984 and currently holds 250,691 patents around the world. The Company holds the highest number of its patents in the US and aims to address conflicts in the US more effectively.

(Number of patents registered in each country)

[As of March 31, 2024]

(Unit: No. of patents)

Country	Korea	US	Europe	China	Japan	Others	Total
No. of patents	58,997	94,903	45,448	24,709	8,938	17,696	250,691

In 1Q24, the Company invested KRW 7.8 trillion in R&D and registered 1,979 domestic and 2,505 US patents.

(Number of patent registrations per year)

(Unit: No. of patents)

Country	1Q24	2023	2022
Korea	1,979	8,909	9,136
US	2,505	8,952	8,490

These patents are mostly related to smartphones, smart TVs, memory, and system LSI products for the Company's strategic business products or for future use. These patents not only protect the Company's business but also play a role in keeping similar technology and patents, as well as competitors, in check. Additionally, the Company is focusing on securing early patents in new technologies ahead of others, in order to protect opportunities and have the freedom to operate when entering new businesses.

The Company has licensing agreements with Google (signed in January 2014), Ericsson (May 2021), Qualcomm (July 2022), Huawei (July 2022), and Nokia (January 2023) through which the Company has secured an extensive patent protection in mainstay businesses as well as in the fields of new business.

The Company has also been focusing on securing design patents to protect its original design applied to smartphones and smart TVs. In 1Q24, the Company acquired 138 US design patents.

B. Environmental regulations

The Company strictly abides by environmental regulations on products and in the workplace, as prescribed by law. In addition, in accordance with "the low carbon green growth policy" of the Korean government, the Company reports "the amount of greenhouse gas emission and energy use" to the government and provides related information to stakeholders by providing various reports, including the Samsung Sustainability Report.

(Environmental regulation of products)

Environmental regulation of products are becoming stricter, reflecting the concerns of governments and regulators about potential direct and indirect impact of products to consumers' health and safety as consumers. Accordingly, the Company is working to minimize the environmental impact throughout the entire life cycle of products from the development stage of components and products to manufacturing, distribution, use, and disposal. The Company offers "Eco-Partner Certification" to suppliers for components free of harmful substances, and runs an "eco-design evaluation" system to reflect eco-friendly elements on products (reduced use of resources, energy and harmful substances, and the use of eco-friendly materials) at the development stage, and operates a "waste electronics collection recycle system" in Europe, North America, Korea, and India for collecting and recycling waste electronics. These activities are in line with domestic and foreign environmental laws on electronics and are a differentiation factor for the Company and its products.

Relevant laws are as follows:

1. law on collection and recycle of waste electronics (e.g., EU WEEE Directive)
2. limit on the use of harmful substances (e.g., EU RoHS Directive, REACH Regulation)
3. regulation on energy efficiency (e.g., EU ErP Directive)

(Environmental regulations in the workplace)

The Company operates environmental pollution prevention facilities to reduce air pollution, water pollution, and waste disposal, and to minimize the discharge of pollutants, thereby minimizing impact on the surrounding environment.

Environmental management of workplace is supervised by the relevant government authorities. All production facilities, domestic and overseas, have acquired the International Occupational Health and Safety Management System Certification (ISO 14001, ISO 45001) to strengthen compliance.

Major relevant domestic and international laws are as follows:

1. Regulations related to emission of pollutants: Water Quality and Ecosystem Conservation Act, Clean Air Conservation Act, Wastes Control Act, Noise and Vibration Control Act, Environmental Impact Assessment Act
2. Management of greenhouse gas emission: Act on Allocation and Trading of Greenhouse Gas Emission, Framework Act on Carbon Neutrality and Green Growth for Coping with Climate Crisis
3. Others: Toxic Chemicals Control Act, Act on the Registration and Evaluation, etc. of Chemical Substances, Odor Control Law, Soil Environment Conservation Act

(Greenhouse gas emission and energy consumption management)

According to Article 27 (Greenhouse Gas Target Control of Controlled Emitter) of the Framework Act on Carbon Neutrality and Green Growth for Coping with Climate Crisis, the Company falls under the category of “controlled emitter,” which is an entity designated for greenhouse gas target management. Therefore, in accordance with Article 27 (3) of the above mentioned Act and Article 24 (Reporting and Verification of Amounts of Emissions) of the Act on the Allocation and Trading of Greenhouse-gas Emission Permits, the Company’s greenhouse gas emissions and energy usage, verified by a third-party, have been reported since May 2011 to the relevant authorities and opened to stakeholders. The reported amount of greenhouse gas emission and energy use are provided below:

(Unit: tCO₂-eq, TJ)

	2023	2022	2021
Greenhouse gas (tCO ₂ -eq)	17,344,446	19,285,537	19,267,835
Energy (TJ)	301,604	290,111	274,298

Consolidated basis;
 Domestic manufacturing facilities, office buildings, buildings owned by the Company, leased buildings, etc.
 Reported Greenhouse gas emission excludes ozone depletion substances (ODS).
 Amounts may differ based on results of governmental evaluations on emissions.

From 2015, in accordance with the Article 8 (Designation of Business Entities Eligible for Allocation) of the Act on the Allocation and Trading of Greenhouse-Gas Emission Permits, the Company is an eligible business entity under the Act.

C. Current status of each division

[DX Division]

□ Industry overview

1) TV Industry

TVs, key products of the DX Division, and the TV industry have experienced continual innovations targeting picture quality. The black- and-white TV was first developed in 1926, and the color TV in 1954. Further developments in the industry led to the creation of products such as flat panel TVs (LCD/PDP), Smart TVs, super-large TVs (QLED/OLED/Neo QLED), and Micro LED. TVs incorporate not only various technologies—chip design, circuit development, image/signal processing, and AI picture quality improvement—but also operating systems and various software to ensure smooth operation of platforms and applications. With the advancement of IoT technology, TVs can control an increasing array of digital appliances, emphasizing the TV as a central screen hub more than ever before.

The TV industry is fiercely competing to achieve the highest picture quality by integrating technologies such as Micro LED, Neo QLED and OLED. The TV market, previously dominated by models in the 55- to 65-inch range, is now fueled by ultra-large products of over 75 inches, which reach up to 98 inches in size.

Surpassing the previous 4K standard, 8K TVs are opening new markets, and TVs are now implementing technologies capable of automatically upscaling HD and FHD to higher levels.

TVs are transforming into a futuristic digital appliance as the industry adopts AI technologies. Firms, working to incorporate AI technologies into TVs, are adopting AI SoCs, optimizing picture and sound quality, and further strengthen the AI function that upscales content from lower definitions. With such technologies, TVs are able to connect digital appliances and conduct real-time monitoring while also offering new services such as maximizing energy efficiency providing an emergency alarm system.

Meanwhile, the way people perceive TV has changed dramatically following the COVID pandemic. Customers use their TVs to not only watch movies, news, or other traditional content, but also to download and enjoy images of artwork that feature in museums throughout the world. Moreover, using TVs for gaming, health-care, online meetings and education services, and other services is also gaining positive feedback from users. We release Lifestyle product lines every year that emphasize design, mobility, and connectivity to meet the evolving needs of customer who value individuality in this rapidly expanding niche market.

2) Mobile industry

The mobile phone industry started with first generation analogue devices in the early 1980s that only supported voice communication and evolved to second generation, digital devices that used technology such as CDMA and GSM, where users could send voice and text messages. Third generation mobile communication standards such as WCDMA allowed users to send photos and videos.

Today, fourth generation LTE mobile communication technology with ultra-high speed data transmission is commonplace. In early 2019, the fifth generation mobile communication service, known as 5G, was launched in Korea and the US and has since been commercialized globally. The sales of 5G smartphones increased from 270 million units in 2020 to 730 million units in 2023, and the spread of 5G communications has accelerated the ecosystem of 5G convergent services, including AI, XR, and the autonomous vehicle and infrastructure industry. (*TechInsights*, April 2024)

The smartphone industry has grown significantly since 2007. In 2023, the smartphone portion of total HHP sales volume was approximately 85%, and the feature phone portion of the total was approximately 15%, with the latter related to demand in emerging markets (*TechInsights*, March 2024). For 2024, the penetration rate of smartphones is expected to have reached 53.1%, rising slightly from 52.5% in 2023 (*TechInsights*, December 2023).

Also, as the smartphone market shows high saturation, the importance of competitiveness of the overall experience based on software for applications, UX, games, media, digital wallets, AI, security, etc., is rising alongside that of competitive hardware, which includes high-performance APs, high-definition displays, foldable form factors, multiple cameras, sensors, waterproof & dustproof features, biometric recognition, and more.

□ Market condition

1) TV Industry

TV demand slightly decreased from 203.28 million units in 2022 to 201.35 million units in 2023 due to impacts from weak consumer sentiment caused by global uncertainties. In 2024, with growing expectations for a demand increase from sport events such as Paris 2024 Olympics, volume is forecast to grow by 1.8% year on year, resulting in a projected annual volume of approximately 204.94 million units (*Omdia*, March 2024).

< Market share of TV >

Product	1Q24	2023	2022
TV	30.0%	30.1%	29.7%

Global market share in revenue; from Omdia (Figure for 1Q24 is a Company estimate.)

2) Mobile industry

The smartphone market is expected to increase from 1.15 billion units in 2023 to 1.18 billion units in 2024 due to strengthened consumer sentiment backed by an economic recovery and increased demand for foldable phones. (*TechInsights*, March 2024). The tablet market, which grew to 180 million units in 2021 backed by increased demand for on-line use during COVID pandemic, decreased to 140 million units in 2023, weighed on by weak replacement demand. In 2024, demand is expected to recover gradually with the arrival of the replacement cycle. (*TechInsights*, March 2024)

< Market share of Smartphone >

Product	1Q24	2023	2022
Smartphone	20.3%	19.7%	21.7%

Global market share in quantity; data from research firm *TechInsights*.
TechInsights acquired *Strategy Analytics*

□ Business condition

1) TV Industry

We have maintained the top position in the overall TV market for eighteen straight years since claiming the number one spot in 2006.

In 2018, we released world’s first 8K TV in the global market, once again leading the premium segment in the TV industry. Our QLED lineup includes sizes ranging from mid-sized to ultra-large screens, giving customers a variety of choices. In addition, the significantly improved picture quality was well received by consumers and experts alike. We achieved solid results by introducing ultra-large screens in the UHD lineup as well as in the QLED lineup.

Even during the persistent global economic challenges, we expanded our market leadership and dominance with the launches of QLED 4K/8K TVs and new models in our Lifestyle line, including The Terrace, The Premiere, and The Sero. Also, we continued to strengthen our premium lineup by launching Neo QLED and OLED TVs featuring significantly upgraded contrast and picture quality, and we created new markets through the sales of various products such as Lifestyle models and sound bars. We have positioned the smart ecosystem as a new growth engine through collaborations with a number of partners in areas such as TV plus, OTT, gaming, and home training.

Sustainability is a company-level focus, and we continue to work to increase the eco-friendliness throughout the entire process of our products, from materials to packaging. We also offer support to emphasize visual and auditory accessibility so that everybody can use our products more easily.

We will increase our market share by focusing on premium, flagship products, such as Neo QLED, Super Big TVs, and OLED products; and for Lifestyle TVs, we will expand our lineups and improve product performance to continue to provide our customers with products tailored to their specific needs. Furthermore, we will lead the AI screen era by integrating various AI-related technologies into TVs; and we will enhance value in the daily lives of our customers through R&D for innovative products and functions, such as transparent micro LED and AI upscaling.

2) Mobile industry

SEC has always been at the forefront of the smartphone market, and we led the global market in shipments for thirteen consecutive years. (*TechInsights*, May 2024).

To solidify our status in the overall mobile market, we continue to bolster the competitiveness of our products, including tablets, wearables (smart watches, wireless earphones, etc.), and accessories as well as our content and services businesses, such as digital health and digital wallet.

For smartphones, we establish optimal portfolios for each region, accounting for varying market conditions and the competitive environment, to offer a wide smartphone lineup ranging from mass-market to premium devices. We have been providing premium smartphones and delivering differentiated user experiences that can meet customer needs via our cutting-edge technology, which includes Dynamic AMOLED 2X (120Hz) displays, digital key and content sharing using UWB (ultra wideband), water- and dust-proofing, high-speed cable and wireless charging, ultrasonic fingerprint-on-display (FoD), cameras specialized for night mode and 8K video recording, and generative AI supported functions such as searches, real-time interpretation/translation, automatic summarization, and photo editing.

In 2019, we secured early leadership in the 5G market with the release of the world's first 5G smartphone while also creating a new market with Galaxy Fold, enabled by foldable displays. In 2020, we launched Galaxy Z Flip, a vertically folding smartphone. The Z Flip series, characterized by its iconic and youthful design, has played a significant role in boosting preference for Galaxy products among woman and the younger generation. We continued enhancing unique foldable experiences by leveraging our technology leadership and focusing usability centering on customer values. Thus, we subsequently released the third and fourth generations of the Galaxy Z series, continuing to lead the foldable market.

In January 2024, we launched the Galaxy S24 series featuring the introduction of Samsung's Galaxy AI, a technology that breaks language barriers and enhances productivity and creativity with the new AI experience for our customers. Also, given the hyper-connectivity of our society, we are committed to providing safer service environments for AI and multi-device users based on the strength of our security system.

In addition, we provide richer experiences for our smartphone users with Galaxy Ecosystem products, including tablets that help boost productivity via virtual meetings, multitasking, and note-taking with large-screen display and S Pen; and wearables such as smart watches that provide sophisticated fitness and wellness functions thanks to the adoption of innovative biosensor technologies, while our wireless earphones provide rich, clear sound experiences.

Not content to dwell on our achievements in hardware, we have been focusing on delivering practical and helpful services such as Samsung Wallet (formerly Samsung Pay), Samsung Health, and Bixby. We are advancing Samsung Wallet into a service that can replace physical wallets by offering functionalities that can be used for ID cards, tickets, and more. Samsung Health will strengthen its position as a comprehensive health management platform through new form factors and AI features.

Moreover, we are strengthening strategic partnerships to expand our ecosystem and striving to diversify our revenue structure via SmartThings, Bixby, and cloud, while also enhancing our service businesses based on our extensive global installed base.

We continue to innovate eco-friendly technologies, including those aimed at expanding adoption of recycled materials in our products. A prime example is the adoption of repurposed materials from discarded fishing nets in various projects, starting from the Galaxy S22 series. For Galaxy Z Fold5 and Galaxy Z Flip5, we went beyond plastics and included recycled glass and aluminum, while the Galaxy S24 series incorporates recycled cobalt and rare earth elements.

In addition, Samsung in May 2023 introduced a self-repair program, and we are expanding the program's target models and countries, adding to our efforts to preserve the environment by minimizing e-waste.

Going forward, we will use our industry-leading R&D capabilities to keep providing our customers with new values via continual technological innovations and our thorough preparations for the future.

[DS Division]

□ Industry overview

In general, our Semiconductor business is divided into Memory (storage) and System LSI (logical processing). Memory semiconductor is divided into RAM products (random access memory, ones that can be both written on and read) and ROM products (read only memory).

RAM is called volatile memory as any stored information is deleted when the power is turned off. It is used for temporary loading and storage of application programs. ROM is nonvolatile and holds memory even when power is removed; it is used in input/output system, IC cards, and more.

For System LSI products, there are many categories for various applications. SoCs for mobile devices that are equipped with CPUs, GPUs, ISPs (image signal processors), and modems are our major products. The Company manufactures mobile APs for smartphones and tablets, and image sensors.

The Foundry Business makes customized semiconductors for fabless companies based on customer designs. The business resembles OEMs in the traditional manufacturing industry in the sense that companies consign the manufacturing of their products to fabrication plants, also called foundries or fabs. Many integrated device manufacturers have transitioned to fabless players due to the advancement of semiconductor processing technologies and an increased investment burden. Consequently, only a few companies (approximately five) with large capex dominate the overall foundry market.

□ Market condition

The memory market has seen strong overall demand from customers amid expectations that prices will keep rising. The demand for generative AI continued to trend solidly, and the demand for DDR5 and high-density SSDs stayed strong quarter-on-quarter. In particular, customers of high-density SSDs linked with generative AI increasingly sought to secure supply, resulting in additional demand growth in that segment. In PC and mobile, content-per-box continued to grow for both DRAM and NAND; and demand remained strong quarter-on-quarter thanks to active sell-in led by mobile OEM customers in China.

Along with the increase in ASP, we achieved qualitative growth by addressing the demand for high-value-added products such as HBM, DDR5, server SSD, and UFS 4.0. As a result, our memory business returned to profit.

The foundry market is showing gradual changes in some applications thanks to launches of flagship smartphones in 2H23 and rising demand for HPC for use in the AI industry. Overall in 2024, we expect the market for cutting-edge advanced technology to grow, including for 3-nano chips which we will mass produce in earnest, and customer demand to keep recovering. In mid- to long-term, we expect growth to keep trending upward, with large language models leading demand increases in GPU/AI, HBM, etc., coupled with a rising demand in the mobile and automotive sectors.

< Market share of DRAM >

Product	1Q24	2023	2022
DRAM	43.9%	42.2%	43.1%

Global market share in revenue; data from research firm *DRAMeXchange*.

□ Business condition

For the server market in memory, we expect the recovery trend to continue throughout the second quarter, led by demand for generative AI. In particular, the increasing supply of AI servers and subsequent expansion of associated cloud services should boost demand for not only HBM, which is directly linked with AI, but also conventional servers and storage in parallel. As a result, we expect overall server demand to remain strong. For mobile, continued sell-in focusing on Chinese OEM customers is likely to keep demand stable in the second quarter. However, for PC, under the effects of slow seasonality, customers are likely to temporarily adjust their finished-goods inventories in preparation for 2H releases of new products focused on on-device AI. Thus, considering the expected demand increase in 2Q centering on server and storage products and the likely supply constraints in 2H for cutting-edge products in particular, we expect overall market prices to increase, although showing variations by application.

In this environment, in order to optimize our business portfolio, we plan to allocate production more to high-value-added server and storage products (e.g., HBM, DDR5, and high-density SSDs) than to PC and mobile products. We started mass producing HBM3E 8H products in 2Q to address the demand for generative AI, and also plan to mass-produce 12H products before end-2Q. In the second quarter, we aim to bolster our leadership in the server market by mass producing and shipping a 128GB product based on 1b nanometer 32Gb DDR5. For NAND, we plan to expand SSD sales for server and ensure a timely response to AI demand by developing and providing samples of ultra-high-density 64TB SSDs during 2Q. In addition, we will enhance our leadership in sustainable technology by mass producing V9, an industry first.

System LSI expects to experience persistent price pressure with set manufacturers facing rising costs and limited increases in global mobile demand. However, we aim to overcome such challenges by expanding application of new on-device AI chips, developing next-generation products in a timely manner, strengthening collaboration with our customers, and enhancing cost competitiveness. For SoCs, we are expanding application models by successfully launching new SoC products featuring on-device AI and high performance IPs. Also, we are developing products with 3-nano technology and continuing to expand our customer base and product lineups—such as automotive-use SoCs—and strengthening cooperation with customers in developing next-generation technologies for data center AI chips, robotics, and more.

Samsung’s image sensors are leading the market for ultra-high-pixel products of over 100 megapixels with their differentiated camera resolutions and zoom performances on the back of our superior micro pixel technology. We are also strengthening product lineups by developing automotive image sensors based on those used in smartphones and

preparing sensors that can be used in XR and robotics. Regarding SLSI products, for OLED mDDIs for smartphones, we keep strengthening collaboration with current and Chinese customers based on our advanced technology and differentiated products. For pDDIs, we are expanding the business beyond the existing TV/IT LCD to IT OLED pDDIs and TCON. For power ICs, we're aiming to expand sales in the mobile sectors and diversify applications to include memory and automotive. Regarding security, we're working to increase sales through expansion of NFC applications for mobile flagships and the development of security solutions for smartphones/TVs.

In Foundry, we specify strategies for each node and application to align with changes in the market while enhancing the competitiveness of our customer base, technology, and capacity across all business areas. In advanced technologies, the 3-nano product for crypto is currently being mass produced, and we are on track to start mass producing and shipping chips for wearables in 2Q and mobile in 4Q. Also, we are developing 2-nano and 1.4-nano chips using our next-generation advanced technologies, aiming to capture demand and secure customers in the mid to long term based on our technological leadership. To meet demand in the long term, we are further preparing measures to expand our supply capacity. For mature nodes, we are enhancing our business structure by expanding applications within HPC, automotive, and AI to utilize long-term capacity while also focusing on developing derivative and specialty processes by leveraging our years of stable mass production experience. We aim to enhance demand stability and our profitability by responding to diverse customer needs with our differentiated technologies. The Company will continue to bolster its overall competitiveness in collaborations, development, order intake, production, and supply to expand business opportunities in line with the changing market environment.

[SDC]

□ Industry overview

Display refers to screens in electronic devices. Active matrix technology is most commonly used in displays, including OLED (organic light emitting diode), QD-OLED (quantum dot organic light emitting diode), and TFT-LCD (thin film transistor liquid crystal display).

OLED panels use organic materials, which offer sharp contrast and color, high color gamut, and fast response rates. Such differentiating features provide advantages for use in smartphones where display features (multimedia contents, online experience, etc.) are important, and as a result, OLED adoption in the smartphone market is growing rapidly.

The market had raised concerns over the production of high-resolution, durable panels, but we overcame various technological challenges and advanced the business. OLED panels make up for the shortcomings of LCD panels, and they can be increasingly adopted into variable applications in foldables, IT (tablet/notebook PCs), automotives, etc. The OLED market is forecast to keep growing. QD-OLED, a self-emissive display with quantum dots (semiconductor particles a few nanometers in size) in the panel to maximize color gamut and viewing angle, is capturing attention under expectations that it will lead the premium TV and monitor markets.

□ Market condition

The market for smartphone display panels is anticipated to decrease to 1.37 billion units in 2024 from 1.44 billion units in 2023. For smartphone-use OLED panels, the market is forecast to grow to 0.73 billion units in 2024 from 0.61 billion units in 2023, and the OLED portion of smartphone panels in 2024 is expected to increase to 53.6% from 42.7% in 2023 (Omdia, December 2023; Omdia, April 2024). The market for large display panels is expected to grow to 0.86 billion units in 2024 from 0.81 billion units in 2023 (Omdia, April 2024).

< Market share of smartphone panel >

Product	1Q24	2023	2022
Smartphone panels	36.6%	50.7%	56.7%

Global market share in revenue from research firm Omdia; 1Q24 figure is an estimate.

□ Business condition

The Company has continued to stay atop the mobile OLED market in terms of market share since it successfully commercialized OLED products in 2007, marking a world’s first. We diversified our product group to include displays for foldable products, tablets, watches, laptops, and automotive applications, solidifying our position as the top player in the OLED display market.

With both flexible and rigid OLED, our optimal smartphone product portfolio ranges from mass-market to premium devices as we proactively address customers’ specific needs; and we are recognized as having best-in-class technology through our introduction of foldable and IT(tablet/Note PC) products with differentiated technologies and designs.

In smartphone display market in 2024, we expect competition between panel makers to intensify, especially in high-end segments. We will focus on expanding sales based on our differentiated technology and functionality.

Furthermore, we are diversifying our mobile panel business—which concentrates on smartphones—by ramping up investment in 8.6G IT OLED lines in order to expand into IT, gaming, and auto products and further solidify our business leadership.

In the large panel business, we increased the proportion of monitor products while strengthening fundamentals in areas such as yield improvement and cost reduction, which helped enhance the competitiveness of the business.

[Harman]

□ Industry overview

Harman competes in the automotive and lifestyle audio industries. The automotive component business accounts for the largest portion of Harman’s business, and it operates business in areas such as digital cockpits, car audio, and telematics.

Consumer view vehicles not only as a mode of transportation, but as an opportunity to enjoy in-cabin experiences. To meet such needs, automotive manufactures are using Harman’s components (e.g. digital cockpits, car audio) to offer more convenient and personally-tailored experiences, focusing on service differentiation.

With the shift towards software-defined vehicles, led by IT transformation of cars, manufacturers are exploring various opportunities by adopting centralized architectures and strengthening software functionalities. This should spark rapid technological changes in automotive components, and as a result, intensifying competition among component suppliers.

The Lifestyle audio business has two segments: consumer audio and professional audio solutions. And to offer our customers even greater audio experiences, we acquired Roon Labs LLC in 4Q23. Consumer audio products (e.g., true wireless stereo, portable speakers, headphones) were formerly confined to audio playback devices, but thanks to the recent adoption of wireless technologies and integration of artificial intelligence, they are transforming into technology-centric IT devices. Such changes have prompted IT companies to enter the consumer audio market, which is dominated by traditional audio-focused firms.

The consumer audio market is projected to see significant growth in the segments like TWS headphones, Wi-Fi home speakers, and gaming speakers. In particular, the TWS market, in which mobile manufacturers hold a significant market share, is likely to show the fastest growth rate.

The professional audio solution industry (commercial audio, audio for large venues, etc., special lighting, video control solutions, etc.), is segmented by product and has seen the entrance of numerous companies offering a wide range of

products and applications.

□ Market condition

We expect instability in the global automotive supply chain, high interest rates, and elevated inflation to gradually normalize in 2024. However, geopolitical issues in Europe and the Middle East are likely to keep presenting uncertainties involving rising raw material prices, further instability in the supply chain, and a continuation of tight monetary policies. Considering these factors, we anticipate that global automobile production in 2024 will be similar to that of the previous year (S&P Global Light Vehicle Production Forecast, March 2024).

< Market share of digital cockpit >

Product	1Q24	2023	2022
Digital cockpits	14.5%	16.5%	17.9%

Digital cockpits refer to the digital automotive component which enables safe driving environment via infotainment system, etc. Figures based on the global market share data (by value) from TechInsights

Global market share in revenue; figure for 1Q24 is estimate from research firm *TechInsights* and *S&P Global*.

□ Business condition

Harman is positioned to stay at the forefront in digital cockpits and car audio markets, which are key markets for in-cabin experiences in automotive component industry. To fortify Harman's position, we will continue to actively address the ongoing IT transformation in vehicles by integrating our technologies, including wireless communication and display, into Harman's automotive business. Amid the shift toward software-defined vehicles, Harman remains committed to elevating customer in-cabin experiences by consistently pursuing the development of distinctive, innovative technologies.

The same factors that Harman relies on within the automotive market will also be used in the consumer audio and professional audio solution market. Having won three Grammy Awards and two Academy Awards, Harman's brands have earned a strong reputation amongst everyday consumers and audiophiles alike. New offerings in up-and-coming segments such as connected wireless and smart audio continue to help bring in new consumers and further enhance brand reputation.

Furthermore, Harman has kept advancing its Digital Transformation Solutions (DTS) business. DTS focuses on software solution development, system integration, and maintenance services for corporate customers to enhance their competitiveness.

D. Financial summary, by organization

In 1Q24 by organization, DX accounted for 65.8% of revenue with reported revenue of KRW 47,292.7 billion; DS contributed approximately 32.2% with revenue of KRW 23,137.3 billion; SDC was responsible for 7.5% with revenue of KRW 5,386.4 billion; and Harman contributed 4.5% with revenue of KRW 3,200.3 billion.

For operating profit, DX recorded KRW 4,074.9 billion; DS with KRW 1,914.0 billion; SDC with KRW 340.7 billion; and Harman with KRW 240.8 billion.

(KRW 100 mil)

Organization	Classification	1Q24		2023		2022	
		Amount	Portion of corresponding total	Amount	Portion of corresponding total	Amount	Portion of corresponding total
DX Division	Revenue	472,927	65.8%	1,699,923	65.7%	1,824,897	60.4%
	Operating profit	40,749	61.7%	143,847	219.0%	127,461	29.4%
	Total assets	2,510,431	38.3%	2,342,534	37.2%	2,279,669	38.6%
DS Division	Revenue	231,373	32.2%	665,945	25.7%	984,553	32.6%
	Operating profit	19,140	29.0%	-148,795	-226.6%	238,158	54.9%
	Total assets	3,032,181	46.2%	2,871,411	45.6%	2,620,558	44.3%
SDC	Revenue	53,864	7.5%	309,754	12.0%	343,826	11.4%
	Operating profit	3,407	5.2%	55,665	84.8%	59,530	13.7%
	Total assets	720,837	11.0%	792,752	12.6%	737,798	12.5%
Harman	Revenue	32,003	4.5%	143,885	5.6%	132,137	4.4%
	Operating profit	2,408	3.6%	11,737	17.9%	8,805	2.0%
	Total assets	183,571	2.8%	179,566	2.9%	171,023	2.9%

Includes inter-divisional transactions.

□ Reasonable allocation of common SG&A (selling general & administrative) expenses and assets

(1) For common SG&A expenses, specific expenses that are allocable to a specific product/model are allocated to Divisions that are responsible for such product/model. However, common expenses that cannot be attributed to a specific product/model category are reasonably allocated throughout the Company based on an allocation standard (expense-to-revenue ratio, number of personnel, etc.).

(2) For common assets, assets that can be directly allocated (inventory assets, fixed assets, investment assets, etc.) are allocated to the corresponding organizational unit. Assets that are commonly managed and cannot be directly allocated are allocated to each Division based on an allocation standard (expense-to-revenue ratio, pre-tax profit, etc.).

III. Financial Affairs

1. Financial Statements

A. Consolidated financial statements

(KRW mil)

Classification	1Q24	55th	54th
	March 31, 2024	December 31, 2023	December 31, 2022
Current assets	208,544,280	195,936,557	218,470,581
- Cash and cash equivalents	61,906,097	69,080,893	49,680,710
- Short-term financial instruments	35,458,597	22,690,924	65,102,886
- Other current financial assets	28,132	635,393	443,690
- Trade receivables	41,145,391	36,647,393	35,721,563
- Inventories	53,347,700	51,625,874	52,187,866
- Others	16,658,363	15,256,080	15,333,866
Non-current assets	262,355,532	259,969,423	229,953,926
- Other non-current financial assets	9,594,423	8,912,691	12,802,480
- Investment in associates and joint ventures	11,907,773	11,767,444	10,893,869
- Property, plant, and equipment	191,155,560	187,256,262	168,045,388
- Intangible assets	23,246,603	22,741,862	20,217,754
- Others	26,451,173	29,291,164	17,994,435
Total assets	470,899,812	455,905,980	448,424,507
Current liabilities	81,770,355	75,719,452	78,344,852
Non-current liabilities	17,213,333	16,508,663	15,330,051
Total liabilities	98,983,688	92,228,115	93,674,903
Equity attributable to owners of the parent company	362,315,069	353,233,775	345,186,142
- Capital stock	897,514	897,514	897,514
- Share premium	4,403,893	4,403,893	4,403,893
- Retained earnings	350,847,854	346,652,238	337,946,407
- Others	6,165,808	1,280,130	1,938,328
Non-controlling interests	9,601,055	10,444,090	9,563,462
Total Equity	371,916,124	363,677,865	354,749,604
	Jan-Mar 2024	Jan-Dec 2023	Jan-Dec 2022
Revenue	71,915,601	258,935,494	302,231,360
Operating profit	6,606,009	6,566,976	43,376,630
Profit for the period	6,754,708	15,487,100	55,654,077
- Owners of the parent company	6,621,030	14,473,401	54,730,018
- Non-controlling interests	133,678	1,013,699	924,059
Basic earnings per share (KRW)	975	2,131	8,057
Diluted earnings per share (KRW)	975	2,131	8,057
Number of companies subject to consolidation accounting	228	233	233

Data shown in conformity with K-IFRS.

Please refer to the footnotes of the 53rd-55th Consolidated Audit Report for the calculation of basic earnings per share (ordinary shares).

B. Separate financial statements

(KRW mil)

Classification	1Q2 4	55th	54th
	Mar 31, 2024	December 31, 2023	December 31, 2022
Current assets	82,288,911	68,548,442	59,062,658
- Cash and cash equivalents	12,282,309	6,061,451	3,921,593
- Short-term financial instruments	50,247	50,071	137
- Trade receivables	32,832,663	27,363,016	20,503,223
- Inventories	30,849,308	29,338,151	27,990,007
- Others	6,274,384	5,735,753	6,647,698
Non-current assets	229,794,377	228,308,847	201,021,092
- Other non-current financial assets	2,049,692	1,854,503	1,364,608
- Subsidiary, associate, and joint venture investments	57,280,254	57,392,438	57,397,249
- Property, plant and equipment	141,929,781	140,579,161	123,266,986
- Intangible assets	10,671,387	10,440,211	8,561,424
- Others	17,863,263	18,042,533	10,430,825
Total assets	312,083,288	296,857,289	260,083,750
Current liabilities	49,615,928	41,775,101	46,086,047
Non-current liabilities	30,327,907	30,294,414	4,581,512
Total liabilities	79,943,835	72,069,515	50,667,559
- Capital stock	897,514	897,514	897,514
- Share premium	4,403,893	4,403,893	4,403,893
- Retained earnings	227,247,811	219,963,351	204,388,016
- Others	-409,765	-476,984	-273,232
Total Equity	232,139,453	224,787,774	209,416,191
Evaluation method of subsidiary, associate, and joint venture investment securities	Cost methods	Cost methods	Cost methods
	Jan-Mar 2024	Jan-Dec 2023	Jan-Dec 2022
Revenue	51,239,617	170,374,090	211,867,483
Operating profit	2,007,380	-11,526,297	25,319,329
Profit for the period	9,737,437	25,397,099	25,418,778
Basic earnings per share (KRW)	1,434	3,739	3,742
Diluted earnings per share (KRW)	1,434	3,739	3,742

Data shown in conformity with K-IFRS.

Please refer to the footnotes of the 53rd–55th Consolidated Audit Report for the calculation of basic earnings per share (ordinary shares).

2. Consolidated Financial Statements

Samsung Electronics Co., Ltd. and its subsidiaries

INTERIM CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

(In millions of Korean won and in thousands of US dollars (Note 2.3))

	Notes	March 31, 2024 KRW	December 31, 2023 KRW	March 31, 2024 USD	December 31, 2023 USD
Assets					
Current assets					
Cash and cash equivalents	3, 25	61,906,097	69,080,893	46,607,861	52,009,621
Short-term financial instruments	3, 25	35,458,597	22,690,924	26,696,068	17,083,542
Short-term financial assets at amortized cost	3, 25	-	608,281	-	457,963
Short-term financial assets at fair value through profit or loss	3, 4, 25	28,132	27,112	21,180	20,412
Trade receivables	3, 25	41,145,391	36,647,393	30,977,541	27,591,088
Non-trade receivables	3, 25	7,421,330	6,633,248	5,587,371	4,994,040
Prepaid expenses		3,345,205	3,366,130	2,518,538	2,534,292
Inventories	5	53,347,700	51,625,874	40,164,415	38,868,087
Other current assets	3, 25	5,891,828	5,038,838	4,435,839	3,793,640
Assets held-for-sale	28	-	217,864	-	164,025
		208,544,280	195,936,557	157,008,813	147,516,710
Non-current assets					
Financial assets at fair value through other comprehensive income	3, 4, 25	8,180,091	7,481,297	6,158,627	5,632,519
Financial assets at fair value through profit or loss	3, 4, 25	1,414,332	1,431,394	1,064,822	1,077,668
Investments in associates and joint ventures	6	11,907,773	11,767,444	8,965,124	8,859,473
Property, plant and equipment	7	191,155,560	187,256,262	143,917,194	140,981,490
Intangible assets	8	23,246,603	22,741,862	17,501,902	17,121,893
Net defined benefit assets	11	4,557,943	4,905,219	3,431,584	3,693,041
Deferred income tax assets		11,057,769	10,211,797	8,325,173	7,688,257
Other non-current assets	3, 25	10,835,461	14,174,148	8,157,802	10,671,432
		262,355,532	259,969,423	197,522,228	195,725,773
Total assets		470,899,812	455,905,980	354,531,041	343,242,483

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

Samsung Electronics Co., Ltd. and its subsidiaries

INTERIM CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

(In millions of Korean won and in thousands of US dollars (Note 2.3))

	Notes	March 31, 2024 KRW	December 31, 2023 KRW	March 31, 2024 USD	December 31, 2023 USD
Liabilities and Equity					
Current liabilities					
Trade payables	3, 25	12,419,094	11,319,824	9,350,087	8,522,469
Short-term borrowings	3, 9, 25	9,634,548	7,114,601	7,253,658	5,356,441
Other payables	3, 25	16,707,439	15,324,119	12,578,696	11,537,222
Advances received	14	1,689,893	1,492,602	1,272,287	1,123,750
Withholdings	3, 25	939,908	892,441	707,638	671,901
Accrued expenses	3, 14, 25	25,178,608	26,013,273	18,956,470	19,584,872
Current income tax liabilities		4,172,785	3,358,715	3,141,606	2,528,709
Current portion of long-term liabilities	3, 9, 10, 25	1,447,491	1,308,875	1,089,787	985,426
Provisions	12	7,457,013	6,524,876	5,614,236	4,912,448
Other current liabilities	3, 14, 25	2,123,576	2,308,472	1,598,798	1,738,002
Liabilities held-for-sale	28	-	61,654	-	46,418
		81,770,355	75,719,452	61,563,263	57,007,658
Non-current liabilities					
Debentures	3, 10, 25	560,590	537,618	422,057	404,762
Long-term borrowings	3, 9, 25	3,861,524	3,724,850	2,907,264	2,804,365
Long-term other payables	3, 25	5,234,343	5,488,283	3,940,832	4,132,018
Net defined benefit liabilities	11	480,564	456,557	361,807	343,733
Deferred income tax liabilities		578,137	620,549	435,268	467,199
Long-term provisions	12	3,179,028	2,878,450	2,393,427	2,167,127
Other non-current liabilities	3, 14, 25	3,319,147	2,802,356	2,498,919	2,109,838
		17,213,333	16,508,663	12,959,574	12,429,042
Total liabilities		98,983,688	92,228,115	74,522,837	69,436,700

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

Samsung Electronics Co., Ltd. and its subsidiaries

INTERIM CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

(In millions of Korean won and in thousands of US dollars (Note 2.3))

	Notes	March 31, 2024 KRW	December 31, 2023 KRW	March 31, 2024 USD	December 31, 2023 USD
Equity attributable to owners of the parent company					
Preference shares	15	119,467	119,467	89,944	89,944
Ordinary shares	15	778,047	778,047	585,776	585,776
Share premium		4,403,893	4,403,893	3,315,603	3,315,603
Retained earnings	16	350,847,854	346,652,238	264,146,324	260,987,529
Other components of equity	17	6,165,808	1,280,130	4,642,114	963,784
		362,315,069	353,233,775	272,779,761	265,942,636
Non-controlling interests		9,601,055	10,444,090	7,228,443	7,863,147
Total equity		371,916,124	363,677,865	280,008,204	273,805,783
Total liabilities and equity		470,899,812	455,905,980	354,531,041	343,242,483

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

Samsung Electronics Co., Ltd. and its subsidiaries

INTERIM CONSOLIDATED STATEMENTS OF PROFIT OR LOSS

(In millions of Korean won and in thousands of US dollars (Note 2.3))

	Notes	For the three-month periods ended March 31,			
		2024	2023	2024	2023
		KRW	KRW	USD	USD
Revenue	26	71,915,601	63,745,371	54,143,816	47,992,613
Cost of sales	18	45,886,332	46,007,093	34,546,901	34,637,819
Gross profit		26,029,269	17,738,278	19,596,915	13,354,794
Selling and administrative expenses	18, 19	19,423,260	17,098,100	14,623,383	12,872,817
Operating profit	26	6,606,009	640,178	4,973,532	481,977
Other non-operating income	20	445,281	504,295	335,243	379,674
Other non-operating expense	20	381,393	203,982	287,143	153,574
Share of net profit of associates and joint ventures	6	214,833	213,841	161,743	160,997
Financial income	21	3,484,504	4,628,049	2,623,413	3,484,365
Financial expense	21	2,662,511	3,956,001	2,004,551	2,978,394
Profit before income tax		7,706,723	1,826,380	5,802,237	1,375,045
Income tax expense	22	952,015	251,780	716,753	189,560
Profit for the period		6,754,708	1,574,600	5,085,484	1,185,485
Profit attributable to					
Owners of the parent company		6,621,030	1,401,252	4,984,841	1,054,975
Non-controlling interests		133,678	173,348	100,643	130,510
Earnings per share (in Korean won and in US dollars)	23				
- Basic		975	206	0.73	0.16
- Diluted		975	206	0.73	0.16

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

Samsung Electronics Co., Ltd. and its subsidiaries

INTERIM CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(In millions of Korean won and in thousands of US dollars (Note 2.3))

	Notes	For the three-month periods ended March 31,			
		2024	2023	2024	2023
		KRW	KRW	USD	USD
Profit for the period		6,754,708	1,574,600	5,085,484	1,185,485
Other comprehensive income (loss)					
Items that will not be reclassified subsequently to profit or loss:					
Gain on valuation of financial assets at fair value through other comprehensive income, net of tax	17	511,479	996,481	385,083	750,231
Share of other comprehensive income of associates and joint ventures, net of tax	17	(12,818)	29,888	(9,650)	22,502
Remeasurement of net defined benefit liabilities (assets), net of tax	17	(82,243)	(247,624)	(61,919)	(186,431)
Items that may be reclassified subsequently to profit or loss:					
Share of other comprehensive income of associates and joint ventures, net of tax	17	52,627	135,760	39,621	102,211
Foreign currency translation differences for foreign operations, net of tax	17	4,514,980	5,056,887	3,399,238	3,807,229
Gain on valuation of cash flow hedge derivatives	17	10,927	8,108	8,227	6,104
Other comprehensive income for the period, net of tax		4,994,952	5,979,500	3,760,600	4,501,846
Total comprehensive income for the period		11,749,660	7,554,100	8,846,084	5,687,331
Comprehensive income attributable to:					
Owners of the parent company		11,534,271	7,286,763	8,683,922	5,486,058
Non-controlling interests		215,389	267,337	162,162	201,273

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

Samsung Electronics Co., Ltd. and its subsidiaries

INTERIM CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

(In millions of Korean won)

For the three-month period ended March 31, 2024	Notes	Preference shares	Ordinary shares	Share premium	Retained earnings	Other components of equity	Equity attributable to owners of the parent company	Non- controllin g interests	Total
Balance as of January 1, 2024		119,467	778,047	4,403,893	346,652,238	1,280,130	353,233,775	10,444,090	363,677,865
Profit for the period		-	-	-	6,621,030	-	6,621,030	133,678	6,754,708
Gain on valuation of financial assets at fair value through other comprehensive income, net of tax	17	-	-	-	27,563	435,213	462,776	48,703	511,479
Share of other comprehensive income (loss) of associates and joint ventures, net of tax	17	-	-	-	-	48,594	48,594	(8,785)	39,809
Foreign currency translation differences for foreign operations, net of tax	17	-	-	-	-	4,473,803	4,473,803	41,177	4,514,980
Remeasurement of net defined benefit liabilities (assets), net of tax	17	-	-	-	-	(82,859)	(82,859)	616	(82,243)
Gain on valuation of cash flow hedge derivatives	17	-	-	-	-	10,927	10,927	-	10,927
Total comprehensive income for the period		-	-	-	6,648,593	4,885,678	11,534,271	215,389	11,749,660
Dividends declared		-	-	-	(2,452,977)	-	(2,452,977)	(1,026,368)	(3,479,345)
Capital transactions under common control		-	-	-	-	-	-	(15)	(15)
Changes in consolidated entities		-	-	-	-	-	-	(32,041)	(32,041)

Total transactions with owners	-	-	-	(2,452,977)	-	(2,452,977)	(1,058,424)	(3,511,401)
Balance as of March 31, 2024	119,467	778,047	4,403,893	350,847,854	6,165,808	362,315,069	9,601,055	371,916,124

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

Samsung Electronics Co., Ltd. and its subsidiaries

INTERIM CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

(In thousands of US dollars (Note 2.3))

For the three-month period ended March 31, 2024	Notes	Preference shares	Ordinary shares	Share premium	Retained earnings	Other components of equity	Equity attributable to owners of the parent company	Non-controlling interests	Total
Balance as of January 1, 2024		89,944	585,776	3,315,603	260,987,529	963,784	265,942,636	7,863,147	273,805,783
Profit for the period		-	-	-	4,984,841	-	4,984,841	100,643	5,085,484
Gain on valuation of financial assets at fair value through other comprehensive income, net of tax	17	-	-	-	20,751	327,664	348,415	36,668	385,083
Share of other comprehensive income (loss) of associates and joint ventures, net of tax	17	-	-	-	-	36,585	36,585	(6,614)	29,971
Foreign currency translation differences for foreign operations, net of tax	17	-	-	-	-	3,368,237	3,368,237	31,001	3,399,238
Remeasurement of net defined benefit liabilities (assets), net of tax	17	-	-	-	-	(62,383)	(62,383)	464	(61,919)
Gain on valuation of cash flow hedge derivatives	17	-	-	-	-	8,227	8,227	-	8,227
Total comprehensive income for the period		-	-	-	5,005,592	3,678,330	8,683,922	162,162	8,846,084
Dividends declared		-	-	-	(1,846,797)	-	(1,846,797)	(772,732)	(2,619,529)
Capital transactions under common control		-	-	-	-	-	-	(11)	(11)
Changes in consolidated entities		-	-	-	-	-	-	(24,123)	(24,123)
Total transactions with owners		-	-	-	(1,846,797)	-	(1,846,797)	(796,866)	(2,643,663)
Balance as of March 31, 2024		89,944	585,776	3,315,603	264,146,324	4,642,114	272,779,761	7,228,443	280,008,204

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

Samsung Electronics Co., Ltd. and its subsidiaries

INTERIM CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

(In millions of Korean won)

For the three-month period ended March 31, 2023	Notes	Preference shares	Ordinary shares	Share premium	Retained earnings	Other components of equity	Equity attributable to owners of the parent company	Non-controlling interests	Total
Balance as of January 1, 2023		119,467	778,047	4,403,893	337,946,407	1,938,328	345,186,142	9,563,462	354,749,604
Profit for the period		-	-	-	1,401,252	-	1,401,252	173,348	1,574,600
Gain (Loss) on valuation of financial assets at fair value through other comprehensive income, net of tax		-	-	-	(12,830)	986,324	973,494	22,987	996,481
Share of other comprehensive income of associates and joint ventures, net of tax		-	-	-	-	159,976	159,976	5,672	165,648
Foreign currency translation differences for foreign operations, net of tax		-	-	-	-	4,991,533	4,991,533	65,354	5,056,887
Remeasurement of net defined benefit liabilities (assets), net of tax		-	-	-	-	(247,600)	(247,600)	(24)	(247,624)
Gain on valuation of cash flow hedge derivatives		-	-	-	-	8,108	8,108	-	8,108
Total comprehensive income for the period		-	-	-	1,388,422	5,898,341	7,286,763	267,337	7,554,100
Dividends declared		-	-	-	(2,452,977)	-	(2,452,977)	(50,097)	(2,503,074)
Capital transactions under common control		-	-	-	-	-	-	(948)	(948)
Others		-	-	-	-	-	-	(266)	(266)
Total transactions with owners		-	-	-	(2,452,977)	-	(2,452,977)	(51,311)	(2,504,288)
Balance as of March 31, 2023		119,467	778,047	4,403,893	336,881,852	7,836,669	350,019,928	9,779,488	359,799,416

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

Samsung Electronics Co., Ltd. and its subsidiaries

INTERIM CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

(In thousands of US dollars (Note 2.3))

For the three-month period ended March 31, 2023	Notes	Preference shares	Ordinary shares	Share premium	Retained earnings	Other components of equity	Equity attributable to owners of the parent company	Non- controlling interests	Total
Balance as of January 1, 2023		89,944	585,776	3,315,603	254,433,083	1,459,328	259,883,734	7,200,139	267,083,873
Profit for the period		-	-	-	1,054,975	-	1,054,975	130,510	1,185,485
Gain (Loss) on valuation of financial assets at fair value through other comprehensive income, net of tax		-	-	-	(9,660)	742,584	732,924	17,307	750,231
Share of other comprehensive income of associates and joint ventures, net of tax		-	-	-	-	120,443	120,443	4,270	124,713
Foreign currency translation differences for foreign operations, net of tax		-	-	-	-	3,758,025	3,758,025	49,204	3,807,229
Remeasurement of net defined benefit liabilities (assets), net of tax		-	-	-	-	(186,413)	(186,413)	(18)	(186,431)
Gain on valuation of cash flow hedge derivatives		-	-	-	-	6,104	6,104	-	6,104
Total comprehensive income for the period		-	-	-	1,045,315	4,440,743	5,486,058	201,273	5,687,331
Dividends declared		-	-	-	(1,846,797)	-	(1,846,797)	(37,717)	(1,884,514)
Capital transactions under common		-	-	-	-	-	-	(714)	(714)

control									
Others	-	-	-	-	-	-	-	(200)	(200)
Total transactions with owners	-	-	-	(1,846,797)	-	(1,846,797)	(38,631)	(1,885,428)	(1,885,428)
Balance as of March 31, 2023	89,944	585,776	3,315,603	253,631,601	5,900,071	263,522,995	7,362,781	270,885,776	270,885,776

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

Samsung Electronics Co., Ltd. and its subsidiaries

INTERIM CONSOLIDATED STATEMENTS OF CASH FLOWS

(In millions of Korean won and in thousands of US dollars (Note 2.3))

	Notes	For the three-month periods ended March 31,			
		2024	2023	2024	2023
		KRW	KRW	USD	USD
Operating activities					
Profit for the period		6,754,708	1,574,600	5,085,484	1,185,485
Adjustments	24	8,747,019	11,708,097	6,585,455	8,814,792
Changes in assets and liabilities arising from operating activities	24	(3,395,289)	(6,440,539)	(2,556,244)	(4,848,953)
Cash generated from operations		12,106,438	6,842,158	9,114,695	5,151,324
Interest received		1,098,569	1,085,460	827,091	817,221
Interest paid		(164,248)	(219,559)	(123,659)	(165,302)
Dividends received		35,935	38,957	27,055	29,330
Income tax paid		(1,210,388)	(1,455,242)	(911,278)	(1,095,622)
Net cash from operating activities		11,866,306	6,291,774	8,933,904	4,736,951
Investing activities					
Net decrease (increase) in short-term financial instruments		(12,174,719)	27,560,017	(9,166,102)	20,749,385
Net decrease in short-term financial assets at amortized cost		620,858	416,095	467,432	313,270
Net increase in short-term financial assets at fair value through profit or loss		(1,020)	(3,831)	(768)	(2,884)
Disposal of long-term financial instruments		4,100,008	2,960,801	3,086,814	2,229,128
Acquisition of long-term financial instruments		(129,053)	(534)	(97,161)	(402)
Disposal of financial assets at fair value through other comprehensive income		53,306	5,607	40,133	4,221
Acquisition of financial assets at fair value through other comprehensive income		(24,070)	(2,362)	(18,122)	(1,778)
Disposal of financial assets at fair value through profit or loss		92,282	17,096	69,477	12,871
Acquisition of financial assets at fair value through profit or loss		(5,924)	(11,284)	(4,460)	(8,495)
Disposal of investment in associates and joint ventures		11,731	4,661	8,832	3,509
Acquisition of investment in associates and joint ventures		(6,342)	(62,182)	(4,775)	(46,816)
Disposal of property, plant and equipment		14,964	44,774	11,266	33,709

Acquisition of property, plant and equipment	(13,421,626)	(13,243,589)	(10,104,873)	(9,970,833)
Disposal of intangible assets	340	6,142	256	4,624
Acquisition of intangible assets	(1,143,551)	(1,070,220)	(860,957)	(805,747)
Cash inflow from disposal of held-for-sale assets	101,563	-	76,465	-
Cash outflow from other investing activities	(99,498)	(149,721)	(74,911)	(112,722)
Net cash provided by (used in) investing activities	(22,010,751)	16,471,470	(16,571,454)	12,401,040

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

Samsung Electronics Co., Ltd. and its subsidiaries

INTERIM CONSOLIDATED STATEMENTS OF CASH FLOWS

(In millions of Korean won and in thousands of US dollars (Note 2.3))

	Notes	For the three-month periods ended March 31,			
		2024	2023	2024	2023
		KRW	KRW	USD	USD
Financing activities					
Net increase (decrease) in short-term borrowings		2,451,071	(777,531)	1,845,362	(585,388)
Increase in long-term borrowings		118,450	58,036	89,179	43,694
Repayment of debentures and long-term borrowings		(295,008)	(259,113)	(222,106)	(195,081)
Dividends paid		(1,012,836)	(243)	(762,544)	(183)
Transactions with non-controlling interests		(15)	(948)	(11)	(713)
Net cash provided by (used in) financing activities		1,261,662	(979,799)	949,880	(737,671)
Effect of foreign exchange rate changes		1,707,987	1,485,222	1,285,910	1,118,193
Net increase (decrease) in cash and cash equivalents		(7,174,796)	23,268,667	(5,401,760)	17,518,513
Cash and cash equivalents, beginning of the period		69,080,893	49,680,710	52,009,621	37,403,612
Cash and cash equivalents, end of the period		61,906,097	72,949,377	46,607,861	54,922,125

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

3. Notes to Consolidated Financial Statements

1. General Information

1.1 Company Overview

Samsung Electronics Co., Ltd. (“SEC”) was incorporated under the laws of the Republic of Korea in 1969 and listed its shares on the Korea Stock Exchange in 1975. SEC and its subsidiaries (collectively referred to as the “Company”) operate four business divisions: DX, DS, SDC and Harman. DX (Device eXperience) division comprises businesses for digital televisions, refrigerators, smartphones and communication systems. DS (Device Solutions) division comprises businesses for memory, foundry, and system Large Scale Integration (LSI). SDC includes display panels products. Harman division includes connected car systems, audio and visual products, enterprise automation solutions and connected services. SEC is domiciled in the Republic of Korea and is located in Suwon, the Republic of Korea.

These consolidated financial statements have been prepared in accordance with Korean International Financial Reporting Standards (“Korean IFRS”) 1110, *Consolidated Financial Statements*. SEC, as the controlling company, consolidates its 227 subsidiaries, including Samsung Display Co., Ltd. and Samsung Electronics America Inc. The Company also applies the equity method of accounting for its 37 associates and joint ventures, including Samsung Electro-Mechanics Co., Ltd.

1.2 Consolidated Subsidiaries

The consolidated subsidiaries as of March 31, 2024 are as follows:

Region	Subsidiaries	Industry	Percentage of ownership (%) ^(*)
America	Samsung Electronics America, Inc. (SEA)	Sale of electronic devices	100.0
	Samsung International, Inc. (SII)	Manufacture of electronic devices	100.0
	Samsung Mexicana S.A. de C.V (SAMEX)	Manufacture of electronic devices	100.0
	Samsung Electronics Home Appliances America, LLC (SEHA)	Manufacture of home appliances	100.0
	Samsung Research America, Inc. (SRA)	R&D	100.0
	Samsung Next LLC (SNX)	Management of overseas subsidiaries	100.0
	Samsung Next Fund LLC (SNXF)	Technology business, venture capital investments	100.0
	NeuroLogica Corp.	Manufacture and sale of medical equipment	100.0
	Samsung HVAC America, LLC	Sale of air conditioning products	100.0
	Joyent, Inc.	Cloud services	100.0
	SmartThings, Inc.	Sale of smart home electronics	100.0
	TeleWorld Solutions, Inc. (TWS)	Installation of network devices	100.0
	Samsung Semiconductor, Inc. (SSI)	Sale of semiconductor and display panels	100.0
	Samsung Federal, Inc. (SFI)	R&D	100.0
	Samsung Austin Semiconductor LLC. (SAS)	Manufacture of semiconductors	100.0
	Samsung Oak Holdings, Inc. (SHI)	Management of overseas subsidiaries	100.0
	SEMES America, Inc.	Maintenance of semiconductor equipment	100.0
	Samsung Display America Holdings, Inc. (SDAH)	Management of overseas subsidiaries	100.0
	eMagin Corporation	Development and manufacture of display panels	100.0
	Samsung Electronics Canada, Inc. (SECA)	Sale of electronic devices	100.0
AdGear Technologies Inc.	Digital advertising platforms	100.0	

^(*) Ownership represents the Company’s ownership of the voting rights in each entity, including subsidiaries’ ownerships.

Region	Subsidiaries	Industry	Percentage of ownership (%) ^(*)
America	Samsung Eletronica da Amazonia Ltda. (SEDA)	Manufacture and sale of electronic devices	100.0

Samsung Electronics Mexico S.A. De C.V. (SEM)	Sale of electronic devices	100.0
Samsung Electronics Digital Appliance Mexico, SA de CV (SEDAM)	Manufacture of home appliances	100.0
Samsung Electronics Latinoamerica (Zona Libre), S. A. (SELA)	Sale of electronic devices	100.0
Samsung Electronics Latinoamerica Miami, Inc. (SEMI)	Sale of electronic devices	100.0
Samsung Electronica Colombia S.A. (SAMCOL)	Sale of electronic devices	100.0
Samsung Electronics Argentina S.A. (SEASA)	Marketing and services	100.0
Samsung Electronics Chile Limitada (SECH)	Sale of electronic devices	100.0
Samsung Electronics Peru S.A.C. (SEPR)	Sale of electronic devices	100.0
Samsung Electronics Venezuela, C.A. (SEVEN)	Marketing and services	100.0
Samsung Electronics Panama. S.A. (SEPA)	Consulting	100.0
Harman International Industries, Inc.	Management of overseas subsidiaries	100.0
Harman Becker Automotive Systems, Inc.	Manufacture, sale and R&D of audio products	100.0
Harman Connected Services, Inc.	Connected service provider	100.0
Harman Connected Services Engineering Corp.	Connected service provider	100.0
Harman da Amazonia Industria Eletronica e Participacoes Ltda.	Manufacture and sale of audio products	100.0
Harman de Mexico, S. de R.L. de C.V.	Manufacture of audio products	100.0
Harman do Brasil Industria Eletronica e Participacoes Ltda.	Sales and R&D of audio products	100.0
Harman International Industries Canada Ltd.	Sale of audio products	100.0
Harman International Mexico, S. de R.L. de C.V.	Sale of audio products	100.0
Harman KG Holding, LLC	Management of overseas subsidiaries	100.0
Harman Professional, Inc.	Sales and R&D of audio products	100.0
Roon Labs, LLC.	Sale of audio products	100.0
Beijing Integrated Circuit Industry International Fund LP	Venture capital investments	61.4
China Materialia New Materials 2016 Limited Partnership	Venture capital investments	99.0

(*) Ownership represents the Company's ownership of the voting rights in each entity, including subsidiaries' ownerships.

Region	Subsidiaries	Industry	Percentage of ownership (%) ^(*)
Europe/CIS	Samsung Electronics (UK) Ltd. (SEUK)	Sale of electronic devices	100.0
	Samsung Electronics Ltd. (SEL)	Management of overseas subsidiaries	100.0
	Samsung Semiconductor Europe Limited (SSEL)	Sale of semiconductor and display panels	100.0
	Samsung Electronics GmbH (SEG)	Sale of electronic devices	100.0
	Samsung Electronics Holding GmbH (SEHG)	Management of overseas subsidiaries	100.0
	Samsung Semiconductor Europe GmbH (SSEG)	Sale of semiconductor and display panels	100.0
	Samsung Electronics France S.A.S (SEF)	Sale of electronic devices	100.0
	Samsung Electronics Italia S.P.A. (SEI)	Sale of electronic devices	100.0
	Samsung Electronics Iberia, S.A. (SESA)	Sale of electronic devices	100.0
	Samsung Electronics Portuguesa, Unipessoal, Lda. (SEP)	Sale of electronic devices	100.0
	Samsung Electronics Hungarian Private Co., Ltd. (SEH)	Manufacture and sale of electronic devices	100.0
	Samsung Electronics Europe Logistics B.V. (SELS)	Logistics	100.0
	Samsung Electronics Benelux B.V. (SEBN)	Sale of electronic devices	100.0
	Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	Management of overseas subsidiaries	100.0
	Samsung Electronics Nordic Aktiebolag (SENA)	Sale of electronic devices	100.0
	Samsung Electronics Slovakia s.r.o (SESK)	Manufacture of TV and monitors	100.0
	Samsung Display Slovakia, s.r.o., v likvidácii (SDSK)	Toll processing of display panels	100.0
	Samsung Electronics Polska, SP.Zo.o (SEPOL)	Sale of electronic devices	100.0
	Samsung Electronics Poland Manufacturing SP.Zo.o (SEPM)	Manufacture of home appliances	100.0
	Samsung Electronics Romania LLC (SEROM)	Sale of electronic devices	100.0
	Samsung Electronics Austria GmbH (SEAG)	Sale of electronic devices	100.0
	Samsung Electronics Switzerland GmbH (SESG)	Sale of electronic devices	100.0
	Samsung Electronics Czech and Slovak s.r.o. (SECZ)	Sale of electronic devices	100.0
	Samsung Electronics Baltics SIA (SEB)	Sale of electronic devices	100.0
	Samsung Electronics Greece S.M.S.A (SEGR)	Sale of electronic devices	100.0
	Samsung Electronics Air Conditioner Europe B.V. (SEACE)	Sale of air conditioning products	100.0
	Samsung Nanoradio Design Center (SNDC)	R&D	100.0
	Samsung Denmark Research Center ApS (SDRC)	R&D	100.0
	Samsung Cambridge Solution Centre Limited (SCSC)	R&D	100.0
	SAMSUNG Zhilabs, S.L.	Development and sale of network solutions	100.0
	FOODIENT LTD.	R&D	100.0
	Samsung Electronics Rus Company LLC (SERC)	Sale of electronic devices	100.0
	Samsung Electronics Rus Kaluga LLC (SERK)	Manufacture of TV	100.0
Samsung Electronics Ukraine Company LLC (SEUC)	Sale of electronic devices	100.0	
Samsung R&D Institute Ukraine (SRUKR)	R&D	100.0	
Samsung Electronics Central Eurasia LLP (SECE)	Sale of electronic devices	100.0	
Samsung Electronics Overseas B.V. (SEO)	Sale of electronic devices	100.0	
Samsung R&D Institute Rus LLC (SRR)	R&D	100.0	
Samsung Electronics Caucasus Co., Ltd (SECC)	Marketing	100.0	
Samsung Electronics Uzbekistan Ltd. (SEUZ)	Marketing	100.0	

(*) Ownership represents the Company's ownership of the voting rights in each entity, including subsidiaries' ownerships.

Region	Subsidiaries	Industry	Percentage of ownership (%) ^(*)
	AKG Acoustics GmbH	Manufacture and sale of audio products	100.0
	Apostera UA, LLC	Connected Service Provider	100.0
	Harman Audio Iberia Espana Sociedad Limitada	Sale of audio products	100.0
	Harman Becker Automotive Systems GmbH	Manufacture, sales and R&D of audio products	100.0
	Harman Becker Automotive Systems Italy S.R.L.	Sale of audio products	100.0
	Harman Becker Automotive Systems Manufacturing Kft	Manufacture and R&D of audio products	100.0
	Harman Belgium SA	Sale of audio products	100.0
	Harman Connected Services AB.	Connected service provider	100.0
	Harman Finland Oy	Connected service provider	100.0
	Harman Connected Services GmbH	Connected service provider	100.0
	Harman Connected Services Poland Sp.zoo	Connected service provider	100.0
	Harman Connected Services UK Ltd.	Connected service provider	100.0
	Harman Consumer Nederland B.V.	Sale of audio products	100.0
Europe/CIS	Harman Deutschland GmbH	Sale of audio products	100.0
	Harman France SNC	Sale of audio products	100.0
	Harman Holding GmbH & Co. KG	Management company	100.0
	Harman Hungary Financing Ltd.	Financing company	100.0
	Harman Inc. & Co. KG	Management of overseas subsidiaries	100.0
	Harman International Estonia OU	R&D	100.0
	Harman International Industries Limited	Sale and R&D of audio products	100.0
	Harman International Romania SRL	R&D	100.0
	Harman Management GmbH	Management of overseas subsidiaries	100.0
	Harman Professional Kft	Manufacture and R&D of audio products	100.0
	Harman Professional Denmark ApS	Sale and R&D of audio products	100.0
	Red Bend Software SAS	Software design	100.0
	Studer Professional Audio GmbH	Sale and R&D of audio products	100.0
	Harman Connected Services OOO	Connected service provider	100.0
	Harman RUS CIS LLC	Sale of audio products	100.0

(*) Ownership represents the Company's ownership of the voting rights in each entity, including subsidiaries' ownerships.

Region	Subsidiaries	Industry	Percentage of ownership (%) ^(*)
Middle East & Africa	Samsung Gulf Electronics Co., Ltd. (SGE)	Sale of electronic devices	100.0
	Samsung Electronics Turkiye (SETK)	Sale of electronic devices	100.0
	Samsung Electronics Industry and Commerce Ltd. (SETK-P)	Manufacture of electronic devices	100.0
	Samsung Electronics Levant Co., Ltd. (SELV)	Sale of electronic devices	100.0
	Samsung Electronics Maghreb Arab (SEMAG)	Sale of electronic devices	100.0
	Samsung Electronics Egypt S.A.E (SEEG)	Manufacture and sale of electronic devices	100.0
	Samsung Electronics Israel Ltd. (SEIL)	Marketing	100.0
	Samsung Electronics Tunisia S.A.R.L (SETN)	Marketing	100.0
	Samsung Electronics Pakistan(Private) Ltd. (SEPAK)	Marketing	100.0
	Samsung Electronics Saudi Arabia Ltd. (SESAR)	Sale of electronic devices	100.0
	Samsung Semiconductor Israel R&D Center, Ltd. (SIRC)	R&D	100.0
	Corephotonics Ltd.	R&D	100.0
	Samsung Electronics South Africa(Pty) Ltd. (SSA)	Sale of electronic devices	100.0
	Samsung Electronics South Africa Production (Pty) Ltd. (SSAP)	Manufacture of TV and monitors	100.0
	Samsung Electronics West Africa Ltd. (SEWA)	Marketing	100.0
	Samsung Electronics East Africa Ltd. (SEEA)	Marketing	100.0
	Global Symphony Technology Group Private Ltd.	Management of overseas subsidiaries	100.0
	Harman Connected Services Morocco	Connected service provider	100.0
	Harman Industries Holdings Mauritius Ltd.	Management of overseas subsidiaries	100.0
	Red Bend Ltd.	Manufacture of audio products	100.0
Asia (Excluding China)	Samsung Asia Pte. Ltd. (SAPL)	Management of overseas subsidiaries	100.0
	Samsung Electronics Singapore Pte. Ltd. (SESP)	Sale of electronic devices	100.0
	Samsung Malaysia Electronics (SME) Sdn. Bhd. (SME)	Sale of electronic devices	100.0
	Samsung Electronics Display (M) Sdn. Bhd. (SDMA)	Manufacture of electronic devices	100.0
	Samsung Electronics (M) Sdn. Bhd. (SEMA)	Manufacture of home appliances	100.0
	Samsung Vina Electronics Co., Ltd. (SAVINA)	Sale of electronic devices	100.0
	Samsung Electronics Vietnam Co., Ltd. (SEV)	Manufacture of electronic devices	100.0
	Samsung Electronics Vietnam THAINGUYEN Co., Ltd. (SEVT)	Manufacture of communication equipment	100.0
	Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	Manufacture and sale of electronic devices	100.0
	Samsung Display Vietnam Co., Ltd. (SDV)	Manufacture of display panels	100.0
	PT Samsung Electronics Indonesia (SEIN)	Manufacture and sale of electronic devices	100.0
	PT Samsung Telecommunications Indonesia (STIN)	Sale of electronic devices and services	100.0
	Thai Samsung Electronics Co., Ltd. (TSE)	Manufacture and sale of electronic devices	91.8
	Laos Samsung Electronics Sole Co., Ltd. (LSE)	Marketing	100.0
	Samsung Electronics Philippines Corporation (SEPCO)	Sale of electronic devices	100.0
	Samsung Electronics Australia Pty. Ltd. (SEAU)	Sale of electronic devices	100.0
	Samsung Electronics New Zealand Limited (SENZ)	Sale of electronic devices	100.0
	Samsung India Electronics Private Ltd. (SIEL)	Manufacture and sale of electronic devices	100.0
	Red Brick Lane Marketing Solutions Pvt. Ltd.	Marketing	100.0
	Samsung Display Noida Private Limited (SDN)	Manufacture of display panels	100.0
	Samsung R&D Institute India-Bangalore Private Limited (SRI-Bangalore)	R&D	100.0
	Samsung R&D Institute BanglaDesh Limited (SRBD)	R&D	100.0
	Samsung Nepal Services Pvt, Ltd (SNSL)	Service	100.0
Samsung Japan Corporation (SJC)	Sale of semiconductor and display panels	100.0	
Samsung R&D Institute Japan Co. Ltd. (SRJ)	R&D	100.0	

^(*) Ownership represents the Company's ownership of the voting rights in each entity, including subsidiaries' ownerships.

Region	Subsidiaries	Industry	Percentage of ownership (%) ^(*)
Asia (Excluding China)	Samsung Electronics Japan Co., Ltd. (SEJ)	Sale of electronic devices	100.0
	Harman Connected Services Corp. India Pvt. Ltd.	Connected service provider	100.0
	Harman International (India) Private Limited	Sale of audio products, R&D	100.0
	Harman International Industries PTY Ltd.	Management of overseas subsidiaries	100.0
	Harman International Japan Co., Ltd.	Sale of audio products, R&D	100.0
	Harman Singapore Pte. Ltd.	Sale of audio products	100.0
China	Samsung (CHINA) Investment Co., Ltd. (SCIC)	Sale of electronic devices	100.0
	Samsung Electronics Hong Kong Co., Ltd. (SEHK)	Sale of electronic devices	100.0
	Samsung Electronics Taiwan Co., Ltd. (SET)	Sale of electronic devices	100.0
	Tianjin Samsung Electronics Co., Ltd. (TSEC)	Manufacture of TV and monitors	91.2
	Suzhou Samsung Electronics Co., Ltd. (SSEC)	Manufacture of home appliances	88.3
	Samsung Suzhou Electronics Export Co., Ltd. (SSEC-E)	Manufacture of home appliances	100.0
	Samsung Electronics Suzhou Computer Co., Ltd. (SESC)	R&D	100.0
	Tianjin Samsung Telecom Technology Co., Ltd. (TSTC)	Manufacture of communication equipment	90.0
	Beijing Samsung Telecom R&D Center (SRC-Beijing)	R&D	100.0
	Samsung Electronics China R&D Center (SRC-Nanjing)	R&D	100.0
	Samsung Mobile R&D Center China-Guangzhou (SRC-Guangzhou)	R&D	100.0
	Samsung R&D Institute China-Shenzhen (SRC-Shenzhen)	R&D	100.0
	Shanghai Samsung Semiconductor Co., Ltd. (SSS)	Sale of semiconductor and display panels	100.0
	Samsung (China) Semiconductor Co., Ltd. (SCS)	Manufacture of semiconductors	100.0
	Samsung Semiconductor Xian Co., Ltd. (SSCX)	Sale of semiconductor and display panels	100.0
	Samsung Electronics Suzhou Semiconductor Co., Ltd. (SESS)	Toll processing of semiconductors	100.0
	Tianjin Samsung LED Co., Ltd. (TSLED)	Manufacture of LED	100.0
	Samsung Semiconductor (China) R&D Co., Ltd. (SSCR)	R&D	100.0
	Samsung Display Dongguan Co., Ltd. (SDD)	Manufacture of display panels	100.0
	Samsung Display Tianjin Co., Ltd. (SDT)	Manufacture of display panels	95.0
	SEMES (XIAN) Co., Ltd.	Semiconductor/FPD equipment services	100.0
	Samsung Semiconductor Investment L.P.I	Technology business, Venture capital investments	99.0
	Harman (China) Technologies Co., Ltd.	Manufacture of audio products	100.0
	Harman (Suzhou) Audio and Infotainment Systems Co., Ltd.	Sale of audio products	100.0
	Harman Automotive Electronic Systems (Suzhou) Co., Ltd.	Manufacture and R&D of audio products	100.0
	Harman Commercial (Shanghai) Co., Ltd.	Sale of audio products	100.0
	Harman Connected Services Solutions (Chengdu) Co., Ltd.	Connected service provider	100.0
	Harman Holding Limited	Sale of audio products	100.0
	Harman International (China) Holdings Co., Ltd.	Sale and R&D of audio products	100.0
	Harman Technology (Shenzhen) Co., Ltd.	Sale and R&D of audio products	100.0

(*) Ownership represents the Company's ownership of the voting rights in each entity, including subsidiaries' ownerships.

Region	Subsidiaries	Industry	Percentage of ownership (%) ^(*)
	Samsung Display Co., Ltd.	Manufacture and sale of display panels	84.8
	SU Materials	Manufacture of display panel components	50.0
	STECO Co., Ltd.	Manufacture of semiconductor components	70.0
	SEMES Co., Ltd.	Manufacture and sale of semiconductor/FPD	91.5
	Samsung Electronics Service Co., Ltd.	Repair services for electronic devices	99.3
	Samsung Electronics Service Customer Satisfaction Co., Ltd.	Call center for repair services for electronic devices	100.0
	Samsung Electronics Sales Co., Ltd.	Sale of electronic devices	100.0
	Samsung Electronics Logitech Co., Ltd.	General logistics agency	100.0
	Samsung Medison Co., Ltd.	Manufacture and sale of medical equipment	68.5
	Stella Forest of Hope	Manufacture of food	100.0
	Mirero System Co., Ltd.	Development and supply of semiconductor process defect and quality control software	99.9
	Harman International Korea	Software development and supply	100.0
	Samsung Venture Capital Union #21	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #22	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #26	Technology business, Venture capital investments	99.0
Domestic	Samsung Venture Capital Union #28	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #29	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #32	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #33	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #37	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #40	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #42	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #43	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #45	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #52	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #55	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #56	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #57	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #62	Technology business, Venture capital investments	99.0
	Growth Type Private Equity Trust Specialized In Semiconductors	Investment on semiconductor industry	66.7
	System LSI Mutual Benefit Private Equity Trust	Investment on semiconductor industry	62.5
	Semiconductor Ecosystem General Private Equity Trust	Investment on semiconductor industry	66.7

(*) Ownership represents the Company's ownership of the voting rights in each entity, including subsidiaries' ownerships.

1.3 Summary of Financial Data of Major Consolidated Subsidiaries

Summary of financial data of major consolidated subsidiaries is as follows:

(1) 2024

<i>(In millions of Korean won)</i>	As of March 31, 2024		For the three-month period ended March 31, 2024	
	Assets	Liabilities	Sales	Profit for the period
Major subsidiaries^(*)				
Samsung Display Co., Ltd.	59,679,316	5,958,648	4,416,769	1,988,742
Samsung Electronics America, Inc. (SEA)	44,265,159	16,100,432	10,802,156	320,694
Samsung Asia Pte. Ltd. (SAPL)	27,595,924	346,498	-	4,268,036
Samsung Austin Semiconductor LLC. (SAS)	19,369,723	9,909,787	1,047,393	137,751
Harman and its subsidiaries ^(**)	18,357,132	5,833,817	3,188,425	181,434
Samsung (China) Semiconductor Co., Ltd. (SCS)	16,604,495	981,073	3,062,668	278,116
Samsung Semiconductor, Inc. (SSI)	12,864,862	5,982,046	6,886,736	71,338
Samsung Electronics Vietnam THAINGUYEN Co., Ltd. (SEVT)	11,371,976	3,602,504	11,035,651	955,233
Samsung (CHINA) Investment Co., Ltd. (SCIC)	10,943,384	10,374,957	824,353	56,727
Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	9,889,972	4,646,810	-	74,334
Samsung India Electronics Private Ltd. (SIEL)	9,036,280	3,998,663	4,473,966	485,100
Samsung Electronics Vietnam Co., Ltd. (SEV)	6,257,264	2,015,234	5,682,381	404,813
Shanghai Samsung Semiconductor Co., Ltd. (SSS)	6,111,601	5,690,425	7,245,188	112,888
Samsung Display Vietnam Co., Ltd. (SDV)	6,074,465	1,448,676	3,580,221	167,858
Samsung Eletronica da Amazonia Ltda. (SEDA)	5,367,477	1,820,201	2,127,073	151,276
Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	4,332,474	934,331	1,685,609	55,077
Thai Samsung Electronics Co., Ltd. (TSE)	3,034,988	651,231	1,246,205	30,487
Samsung Electronics (UK) Ltd. (SEUK)	2,977,640	1,972,562	1,662,705	44,582
Samsung Electronics Mexico S.A. De C.V. (SEM)	2,751,099	1,518,190	1,093,900	40,778
Samsung Electronics Europe Logistics B.V. (SELS)	2,709,719	2,040,913	4,310,686	465,913
Samsung Electronics Taiwan Co., Ltd. (SET)	2,452,532	1,739,421	1,493,143	52,453
Samsung International, Inc. (SII)	2,354,443	643,332	1,657,803	144,799
Samsung Electronics GmbH (SEG)	2,246,143	2,155,995	1,803,932	24,164
SEMES Co., Ltd.	2,210,055	645,361	576,056	36,966
Samsung Electronics Benelux B.V. (SEBN)	1,953,646	784,939	847,508	70,004

^(*) Summary of financial information is based on separate financial statements of each subsidiary.

^(**) Consolidated financial data of an intermediate company that includes Harman International Industries, Inc. and its subsidiaries.

(2) 2023

(In millions of Korean won)

Major subsidiaries ^(*1)	As of December 31, 2023		For the three-month period ended March 31, 2023	
	Assets	Liabilities	Sales	Profit for the period
Samsung Display Co., Ltd.	65,328,568	7,266,213	5,590,642	1,533,158
Samsung Electronics America, Inc. (SEA)	41,926,899	15,322,780	10,820,272	215,264
Samsung Asia Pte. Ltd. (SAPL)	22,234,942	282,614	-	6,633,188
Harman and its subsidiaries(*2)	17,956,557	6,009,675	3,162,476	80,823
Samsung Austin Semiconductor LLC. (SAS)	16,714,945	7,791,914	955,210	104,118
Samsung (China) Semiconductor Co., Ltd. (SCS)	15,808,283	870,453	2,570,175	326,822
Samsung Semiconductor, Inc. (SSI)	12,796,440	6,276,293	4,963,535	126,986
Samsung Electronics Vietnam THAINGUYEN Co., Ltd. (SEVT)	12,554,481	3,593,527	8,617,574	296,034
Samsung (CHINA) Investment Co., Ltd. (SCIC)	10,222,557	8,797,991	871,611	165,215
Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	9,660,481	4,585,806	-	8,475
Samsung India Electronics Private Ltd. (SIEL)	7,738,259	3,373,730	3,813,918	333,280
Samsung Display Vietnam Co., Ltd. (SDV)	7,383,485	1,570,459	5,188,088	450,095
Samsung Electronics Vietnam Co., Ltd. (SEV)	7,301,860	2,215,062	5,696,296	462,841
Samsung Eletronica da Amazonia Ltda. (SEDA)	5,542,627	1,587,911	1,915,702	132,232
Shanghai Samsung Semiconductor Co., Ltd. (SSS)	5,262,086	4,552,030	2,919,973	64,077
Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	4,043,677	843,736	1,497,391	198,526
Thai Samsung Electronics Co., Ltd. (TSE)	3,039,379	640,512	1,218,750	89,052
Samsung Electronics (UK) Ltd. (SEUK)	2,902,722	1,976,067	1,527,336	72,350
SEMES Co., Ltd.	2,187,919	659,607	726,353	24,283
Samsung Electronics Mexico S.A. De C.V. (SEM)	2,153,032	1,038,115	842,543	59,287
Samsung Electronics GmbH (SEG)	2,097,706	2,033,152	1,641,944	60,288
Samsung International, Inc. (SII)	1,879,442	383,763	1,755,989	365,590
Samsung Electronics Taiwan Co., Ltd. (SET)	1,797,627	1,139,056	945,813	2,199
Samsung Electronics Benelux B.V. (SEBN)	1,794,552	639,120	831,705	106,217
Samsung Electronics Europe Logistics B.V. (SELS)	1,639,004	1,443,005	4,242,449	184,428

(*1) Summary of financial information is based on separate financial statements of each subsidiary.

(*2) Consolidated financial data of an intermediate company that includes Harman International Industries, Inc. and its subsidiaries.

1.4 Changes in Consolidation Scope

Changes in consolidation scope during the three-month period ended March 31, 2024 are as follows:

Change	Region	Subsidiary	Description
Excluded	America	Harman Financial Group LLC	Liquidation
	Asia(Excluding China)	DOWOINSYS VINA COMPANY LIMITED	Sale of business
		Dowooinsys Co., Ltd.	Sale of business
	Europe/CIS	Gf-System Co., Ltd.	Sale of business
		Samsung Venture Capital Union #48	Liquidation

2. Material Accounting Policies

2.1 Basis of Presentation

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

The interim consolidated financial statements for the three-month period ended March 31, 2024 have been prepared in accordance with Korean IFRS 1034, *Interim Financial Reporting*. These interim consolidated financial statements have been prepared in accordance with the Korean IFRS which is effective as of March 31, 2024.

(A) New and amended standards adopted by the Company

The Company applied the following amended standards for the first time for the annual reporting period commencing January 1, 2024:

Amendments to Korean IFRS 1001, *Presentation of Financial Statements*

The amendments to Korean-IFRS 1001 clarify that the classification of liabilities as current or non-current should be based on rights that are in existence at the end of the reporting period and that the classification is unaffected by management’s intentions or expectations about whether an entity will exercise its right to defer settlement of a liability. The amendments also introduce a definition of settlement to make clear that settlement includes the transfer to the counterparty of the entity’s own equity instruments, however, it would be excluded if an option to settle the liability by the transfer of the entity’s own equity instruments is recognized separately from the liability as an equity component of a compound financial instrument. The application of amendments does not have a significant impact on the Company’s interim consolidated financial statements.

Amendments to Korean IFRS 1116, *Leases*

The amendments add requirements for the subsequent measurement of sale-and-leaseback transactions that are accounted for as sales in accordance with Korean IFRS 1115, *Revenue from Contracts with Customers*. The amendments require the seller-lessee to calculate the ‘lease payments’ or ‘revised lease payments’ in a way that does not result in the seller-lessee recognizing any gain or loss for the rights of use that the seller-lessee continues to retain after the lease commences. The application of amendments does not have a significant impact on the Company’s interim consolidated financial statements.

Amendments to Korean IFRS 1007, *Statement of Cash Flows*, and 1107, *Financial Instruments: Presentation*

The amendments add to the disclosure objectives in Korean IFRS 1007, *Statement of Cash Flows*, that information about supplier financing arrangements should be disclosed to enable users of financial statements to assess the impact of those arrangements on the Company’s liabilities and cash flows. The amendments also amend Korean IFRS 1107, *Financial Instruments: Presentation*, to add supplier financing arrangements as an example of a requirement to disclose information about an entity’s exposure to concentrations of liquidity risk. The application of amendments does not have a significant impact on the Company’s interim consolidated financial statements.

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

The amended accounting standard issued that is not yet effective for the annual reporting period commencing January 1, 2024 and has not been early adopted by the Company is as follows:

Amendments to Korean IFRS 1021, *The Effects of Changes in Foreign Exchange Rates*

The amendments require exchangeability of two currencies should be assessed in order to clarify reporting of foreign currency transactions in the absence of normal-functioning foreign exchange market. The amendments also require applicable spot exchange rate should be determined when the assessment indicates two currencies lack exchangeability. The amendments are effective for annual reporting periods beginning on or after January 1, 2025, with early application permitted.

2.2 Accounting Policies

Material accounting policies and method of computation used in the preparation of the interim consolidated financial statements are consistent with those of the annual consolidated financial statements for the year ended December 31, 2023, except for the changes due to the application of amendments of standards described in Note 2.1 and as described below.

Income tax expense for the interim period is recognized based on management's best estimate of the weighted average annual income tax rate expected for the full financial year considering global minimum top-up tax. The estimated average annual effective income tax rate is applied to the pre-tax income of the interim period.

2.3 Convenience Translation into United States Dollar Amounts

The US dollar amounts provided in the consolidated financial statements represent supplementary information solely for the convenience of the reader. All Korean won amounts are expressed in US dollars at the rate of ₩ 1,328.2 to \$1, the average exchange rate for the three-month period ended March 31, 2024. Such presentation is not in accordance with generally accepted accounting principles and should not be construed as a representation that the Korean won amounts shown could be readily converted, realized or settled in US dollars at this or at any other rate.

2.4 Material Accounting Estimates and Assumptions

In preparing the interim consolidated financial statements, the management of the Company makes judgements, estimates and assumptions on matters which affect the application of policies and reported amounts of assets, liabilities, income and expenses. Estimates and assumptions are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. The resulting accounting estimates, by definition, seldom equal the related actual results

Material accounting estimates and assumptions made in the preparation of the interim consolidated financial statements are consistent with those applied in the preparation of the annual consolidated financial statements for the year ended December 31, 2023, except for the estimates used to determine the income tax expense.

3. Financial Instruments by Category

Categorizations of financial assets and liabilities as of March 31, 2024 and December 31, 2023 are as follows:

(1) As of March 31, 2024

<i>(In millions of Korean won)</i>	Financial assets measured at amortized cost	Financial assets measured at fair value through other comprehensive income	Financial assets measured at fair value through profit or loss	Other financial assets ^(*)	Total
Financial assets					
Cash and cash equivalents	61,906,097	-	-	-	61,906,097
Short-term financial instruments	35,458,597	-	-	-	35,458,597
Short-term financial assets at amortized cost	-	-	-	-	-
Short-term financial assets at fair value through profit or loss	-	-	28,132	-	28,132
Trade receivables	41,145,391	-	-	-	41,145,391
Financial assets at fair value through other comprehensive income	-	8,180,091	-	-	8,180,091
Financial assets at fair value through profit or loss	-	-	1,414,332	-	1,414,332
Other	11,559,628	-	486,073	73,929	12,119,630
Total	150,069,713	8,180,091	1,928,537	73,929	160,252,270

(*) Other financial assets include derivatives designated as hedging instruments which are not subject to categorizations.

<i>(In millions of Korean won)</i>	Financial liabilities measured at amortized cost	Financial liabilities measured at fair value through profit or loss	Other financial liabilities ^(*)	Total
Financial liabilities				
Trade payables	12,419,094	-	-	12,419,094
Short-term borrowings	311,521	-	9,323,027	9,634,548
Other payables	15,019,429	-	-	15,019,429
Current portion of long-term liabilities	400,730	-	1,046,761	1,447,491
Debentures	560,590	-	-	560,590
Long-term borrowings	-	-	3,861,524	3,861,524
Long-term other payables	4,658,208	-	-	4,658,208
Other	11,569,291	33,656	22,381	11,625,328
Total	44,938,863	33,656	14,253,693	59,226,212

(*) Other financial liabilities include collateralized borrowings, lease liabilities and derivatives designated as hedging instruments, which are not subject to categorizations.

(2) As of December 31, 2023

<i>(In millions of Korean won)</i>	Financial assets measured at amortized cost	Financial assets measured at fair value through other comprehensive income	Financial assets measured at fair value through profit or loss	Other financial assets^(*)	Total
Financial assets					
Cash and cash equivalents	69,080,893	-	-	-	69,080,893
Short-term financial instruments	22,690,924	-	-	-	22,690,924
Short-term financial assets at amortized cost	608,281	-	-	-	608,281
Short-term financial assets at fair value through profit or loss	-	-	27,112	-	27,112
Trade receivables	36,647,393	-	-	-	36,647,393
Financial assets at fair value through other comprehensive income	-	7,481,297	-	-	7,481,297
Financial assets at fair value through profit or loss	-	-	1,431,394	-	1,431,394
Other	14,294,254	-	475,244	70,777	14,840,275
Total	143,321,745	7,481,297	1,933,750	70,777	152,807,569

(*) Other financial assets include derivatives designated as hedging instruments which are not subject to categorizations.

<i>(In millions of Korean won)</i>	Financial liabilities measured at amortized cost	Financial liabilities measured at fair value through profit or loss	Other financial liabilities^(*)	Total
Financial liabilities				
Trade payables	11,319,824	-	-	11,319,824
Short-term borrowings	504,552	-	6,610,049	7,114,601
Other payables	13,996,395	-	-	13,996,395
Current portion of long-term liabilities	310,436	-	998,439	1,308,875
Debentures	537,618	-	-	537,618
Long-term borrowings	-	-	3,724,850	3,724,850
Long-term other payables	4,907,875	-	-	4,907,875
Other	11,330,545	49,904	33,559	11,414,008
Total	42,907,245	49,904	11,366,897	54,324,046

(*) Other financial liabilities include collateralized borrowings, lease liabilities and derivatives designated as hedging instruments, which are not subject to categorizations.

4. Financial Assets at Fair Value

(A) Details of financial assets at fair value as of March 31, 2024 and December 31, 2023 are as follows:

(1) Financial assets at fair value through other comprehensive income

<i>(In millions of Korean won)</i>	March 31, 2024	December 31, 2023
Non-current		
Equity instruments	8,180,091	7,481,297

(2) Financial assets at fair value through profit or loss

<i>(In millions of Korean won)</i>	March 31, 2024	December 31, 2023
Current		
Debt instruments	28,132	27,112
Non-current		
Equity instruments	713,275	812,358
Debt instruments	701,057	619,036
Subtotal	1,414,332	1,431,394
Total	1,442,464	1,458,506

(B) Details of listed equity securities of financial assets at fair value as of March 31, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won and number of shares and percentage)</i>	March 31, 2024			December 31, 2023	
	Number of shares owned	Percentage of ownership^(*) (%)	Acquisition cost	Carrying amount (Market value)	Carrying amount (Market value)
Samsung Heavy Industries Co., Ltd.	134,027,281	15.2	932,158	1,147,274	1,038,711
Hotel Shilla Co., Ltd.	2,004,717	5.1	13,957	120,283	131,108
iMarketKorea Inc.	647,320	1.9	324	5,502	5,560
Wonik Holdings Co.,Ltd.	3,518,342	4.6	30,821	14,496	11,857
Wonik IPS Co., Ltd.	3,701,872	7.5	32,428	153,628	125,679
Wacom Co., Ltd.	8,398,400	5.5	62,013	49,826	50,358
Corning Incorporated	80,000,000	9.3	3,980,636	3,551,242	3,140,978
Other			463,089	1,073,965	1,093,963
Total			5,515,426	6,116,216	5,598,214

(*) Ownership represents the Company's ownership of the total ordinary shares issued by each entity.

5. Inventories

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

<i>(In millions of Korean won)</i>	March 31, 2024			December 31, 2023		
	Gross amount	Valuation allowance	Carrying amount	Gross amount	Valuation allowance	Carrying amount
Finished goods	15,448,722	(1,101,316)	14,347,406	16,120,367	(1,567,353)	14,553,014
Work in process	25,366,463	(2,559,954)	22,806,509	26,501,664	(4,303,216)	22,198,448
Raw materials and supplies	16,640,738	(1,865,309)	14,775,429	15,222,937	(1,525,583)	13,697,354
Materials in transit	1,418,356	-	1,418,356	1,177,058	-	1,177,058
Total	58,874,279	(5,526,579)	53,347,700	59,022,026	(7,396,152)	51,625,874

6. Investments in Associates and Joint Ventures

(A) Changes in investments in associates and joint ventures for the three-month periods ended March 31, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Balance as of January 1	11,767,444	10,893,869
Acquisition	6,342	62,182
Disposal	(11,731)	(4,661)
Share of profit	214,833	213,841
Other ^(*)	(69,115)	33,392
Balance as of March 31	11,907,773	11,198,623

^(*) Other consists of dividends, impairment, and reclassification.

(B) Major investments in associates and joint ventures as of March 31, 2024 are as follows:

(1) Investments in associates

Investee	Nature of relationship	Percentage of ownership(%) ^(*)	Principal business location	Fiscal period-end
Samsung Electro-Mechanics Co., Ltd.	Manufacture and supply electronic components including passive components, circuit boards, and modules	23.7	Korea	December
Samsung SDS Co., Ltd.	Provide Information Technology(IT) services including computer programming, system integration and management and logistical services	22.6	Korea	December
Samsung Biologics Co., Ltd.	Investment in new business	31.2	Korea	December
Samsung SDI Co., Ltd. ^(*)	Manufacture and supply electronic parts including secondary cell batteries	19.6	Korea	December
Cheil Worldwide, Inc.	Advertising agency	25.2	Korea	December

^(*) Ownership represents the Company's ownership of the total ordinary shares issued by each entity.

^(*) The Company's ownership of ordinary shares outstanding is 20.6%.

(2) Investments in joint ventures

Investee	Nature of relationship with joint venture	Percentage of ownership (%) ^(*)	Principal business location	Fiscal period-end
Samsung Corning Advanced Glass LLC	Manufacture and supply industrial glass devices	50.0	Korea	December

^(*) Ownership represents the Company's ownership of the total ordinary shares issued by the entity.

(C) Details of investments in associates and joint ventures as of March 31, 2024 and December 31, 2023 are as follows:

(1) Investments in associates

<i>(In millions of Korean won)</i>		March 31, 2024		
Investee	Acquisition cost	Net asset value of equity shares ^(*)	Carrying amount	
Samsung Electro-Mechanics Co., Ltd.	359,237	1,879,909	1,886,185	
Samsung SDS Co., Ltd.	147,963	1,970,569	1,981,551	
Samsung Biologics Co., Ltd.	1,424,358	3,124,744	3,129,303	
Samsung SDI Co., Ltd.	1,242,605	3,804,325	2,951,145	
Cheil Worldwide, Inc.	506,162	355,168	655,678	
Other	690,831	844,983	1,091,546	
Total	4,371,156	11,979,698	11,695,408	

^(*) The Company's portion of net asset value of associates is based on the Company's percentage of ownership.

<i>(In millions of Korean won)</i>		December 31, 2023		
Investee	Acquisition cost	Net asset value of equity shares ^(*)	Carrying amount	
Samsung Electro-Mechanics Co., Ltd.	359,237	1,837,925	1,841,393	
Samsung SDS Co., Ltd.	147,963	1,955,699	1,966,206	
Samsung Biologics Co., Ltd.	1,424,358	3,068,636	3,073,595	
Samsung SDI Co., Ltd.	1,242,605	3,726,675	2,912,564	
Cheil Worldwide, Inc.	506,162	368,875	669,363	
Other	690,481	844,645	1,093,799	
Total	4,370,806	11,802,455	11,556,920	

^(*) The Company's portion of net asset value of associates is based on the Company's percentage of ownership.

(2) Investments in joint ventures

(In millions of Korean won)

		March 31, 2024		
Investee	Acquisition cost	Net asset value of equity shares ^(*)	Carrying amount	
Samsung Corning Advanced Glass LLC	215,000	138,229	138,228	
Other	259,994	74,287	74,137	
Total	474,994	212,516	212,365	

^(*) The Company's portion of net asset value of joint ventures is based on the Company's percentage of ownership.

(In millions of Korean won)

		December 31, 2023		
Investee	Acquisition cost	Net asset value of equity shares ^(*)	Carrying amount	
Samsung Corning Advanced Glass LLC	215,000	138,939	138,938	
Other	259,994	72,215	71,586	
Total	474,994	211,154	210,524	

^(*) The Company's portion of net asset value of joint ventures is based on the Company's percentage of ownership.

(D) Details of the changes in the book value of investments in associates and joint ventures using the equity method are as follows:

(1) For the three-month period ended March 31, 2024

(In millions of Korean won)

	Balance as of January 1	Share of profit (loss)	Share of other comprehensive income (loss)	Other^(*)	Balance as of March 31
Samsung Electro-Mechanics Co., Ltd.	1,841,393	45,620	19,518	(20,346)	1,886,185
Samsung SDS Co., Ltd.	1,966,206	48,113	14,407	(47,175)	1,981,551
Samsung Biologics Co., Ltd.	3,073,595	56,544	(836)	-	3,129,303
Samsung SDI Co., Ltd.	2,912,564	34,211	17,833	(13,463)	2,951,145
Cheil Worldwide, Inc.	669,363	12,260	6,287	(32,232)	655,678
Samsung Corning Advanced Glass LLC	138,938	(710)	-	-	138,228
Other	1,165,385	18,795	(17,400)	(1,097)	1,165,683
Total	11,767,444	214,833	39,809	(114,313)	11,907,773

^(*) Other consists of acquisitions, disposals, dividends, impairment and reclassification.

(2) For the three-month period ended March 31, 2023

<i>(In millions of Korean won)</i>	Balance as of January 1	Share of profit (loss)	Share of other comprehensive income (loss)	Other ^(*)	Balance as of March 31
Samsung Electro-Mechanics Co., Ltd.	1,764,249	27,365	19,529	(37,156)	1,773,987
Samsung SDS Co., Ltd.	1,870,338	45,756	21,635	(55,911)	1,881,818
Samsung Biologics Co., Ltd.	2,808,673	44,686	54	-	2,853,413
Samsung SDI Co., Ltd.	2,691,223	60,907	59,168	(13,867)	2,797,431
Cheil Worldwide, Inc.	649,161	11,400	7,525	(33,393)	634,693
Samsung Corning Advanced Glass LLC	137,745	(1,036)	-	-	136,709
Other	972,480	24,763	57,737	65,592	1,120,572
Total	10,893,869	213,841	165,648	(74,735)	11,198,623

^(*) Other consists of acquisitions, disposals, dividends, impairment, and reclassification.

(E) Summary of the financial information of major associates and joint ventures

(1) Summary of financial information of major associates and dividends received from associates as of March 31, 2024 and December 31, 2023, and for the three-month periods ended March 31, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024				
	Samsung Electro- Mechanics Co., Ltd.	Samsung SDS Co., Ltd.	Samsung Biologics Co., Ltd.	Samsung SDI Co., Ltd.	Cheil Worldwide, Inc.
1. Condensed financial information					
Condensed statements of financial position:					
Current assets	5,606,634	8,255,477	5,602,200	10,044,641	2,309,628
Non-current assets	6,573,296	4,201,862	10,920,992	25,405,992	503,430
Current liabilities	3,208,121	2,431,603	4,646,078	9,831,986	1,348,013
Non-current liabilities	754,850	982,052	1,866,876	5,013,562	214,421
Non-controlling interests	189,981	319,844	-	1,708,004	11,872
Condensed statements of comprehensive income:					
Revenue	2,624,289	3,247,268	946,903	5,130,893	1,018,010
Profit from continuing operations, net of tax ^(*)	183,179	210,895	179,362	273,134	42,727
Loss from discontinued operations, net of tax ^(*)	(373)	-	-	-	-
Other comprehensive income ^(*)	83,481	63,780	383	179,519	21,886
Total comprehensive income ^(*)	266,287	274,675	179,745	452,653	64,613
2. Dividends from associates					
Dividends	20,347	47,175	-	13,463	32,232

^(*) Profit (loss) attributable to owners of the investee

2023

<i>(In millions of Korean won)</i>	Samsung Electro- Mechanics Co., Ltd.	Samsung SDS Co., Ltd.	Samsung Biologics Co., Ltd.	Samsung SDI Co., Ltd.	Cheil Worldwide, Inc.
1. Condensed financial information					
Condensed statements of financial position:					
Current assets	5,208,418	8,160,300	5,521,988	9,187,029	2,372,420
Non-current assets	6,449,453	4,160,724	10,524,209	24,851,831	517,085
Current liabilities	2,900,460	2,391,861	4,157,861	8,518,933	1,375,034
Non-current liabilities	727,087	953,592	2,057,844	5,612,677	216,707
Non-controlling interests	182,613	317,562	-	1,395,877	11,206
Condensed statements of comprehensive income:					
Revenue	2,021,763	3,400,923	720,922	5,354,845	941,601
Profit from continuing operations, net of tax ^(*)	118,079	202,485	141,755	439,283	39,753
Other comprehensive income ^(*)	103,812	95,781	182	358,999	30,281
Total comprehensive income ^(*)	221,891	298,266	141,937	798,282	70,034
2. Dividends from associates					
Dividends	37,155	55,911	-	13,867	33,394

^(*) Profit attributable to owners of the investee.

- (2) Summary of financial information of major joint ventures and dividends received from joint ventures as of March 31, 2024 and December 31, 2023, and for the three-month periods ended March 31, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	Samsung Corning Advanced Glass, LLC	
	2024	2023
Condensed financial information		
Condensed statements of financial position:		
Current assets	119,825	116,372
Non-current assets	182,292	185,100
Current liabilities	24,708	22,684
Non-current liabilities	952	911
Condensed statements of comprehensive income:		
Revenue	35,370	22,099
Profit (loss) for the period	(1,420)	(2,071)
Other comprehensive income	-	-
Total comprehensive income	(1,420)	(2,071)
Dividends from joint ventures		
Dividends	-	-

- (3) Profit (loss) attributable to owners of the parent company from associates and joint ventures which are not individually material for the three-month periods ended March 31, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024		2023	
	Associates	Joint ventures	Associates	Joint ventures
Profit from continuing operations	18,101	694	24,199	564
Other comprehensive income (loss)	(17,824)	424	53,082	4,655
Total comprehensive income	277	1,118	77,281	5,219

(F) Details of marketable investments in associates as of March 31, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won and number of shares)</i>	March 31, 2024		December 31, 2023
	Number of shares held	Market value	Market value
Samsung Electro-Mechanics Co., Ltd.	17,693,084	2,630,962	2,710,580
Samsung SDS Co., Ltd.	17,472,110	2,856,690	2,970,259
Samsung Biologics Co., Ltd.	22,217,309	18,462,584	16,885,155
Samsung SDI Co., Ltd.	13,462,673	6,340,919	6,354,382
Cheil Worldwide, Inc.	29,038,075	545,335	552,595

(G) Other matters

On July 12, 2018, the Korea Securities and Futures Commission determined an initial measure following an investigation relating to Samsung Biologics Co., Ltd., an associate of the Company, and its accounting for its investment in Samsung Bioepis Co., Ltd, a joint venture between Biogen Therapeutics Inc. and Samsung Biologics Co., Ltd. This measure included a recommendation to dismiss the director in charge, prosecution charges, and external auditor designation by the regulator, on the basis that the Joint Venture Agreement was not disclosed in the notes to the financial statements. On November 14, 2018, the Korea Securities and Futures Commission determined a second measure which included a penalty of ₩ 8,000 million, a recommendation to dismiss the CEO, a requirement to restate its financial statements, and further prosecution charges.

To prove justification of its accounting treatment, Samsung Biologics Co., Ltd. filed a suit for cancellation of the aforementioned measures to the Seoul Administrative Court, which is currently in progress. On September 24, 2020, the Seoul Administrative Court announced a decision to cancel the first measure charged by the Korea Securities and Futures Commission and suspended its execution until the final rulings of appeal. On October 16, 2020, the Korea Securities and Futures Commission appealed the decision and the litigation is in progress at Seoul High Court. Samsung Biologics Co., Ltd. also filed for suspending the execution of the initial and second measures. On January 22, 2019 and February 19, 2019, the Seoul Administrative Court pronounced decisions to suspend the second and initial measures, respectively, until the final rulings. The Korea Securities and Futures Commission immediately appealed against the decisions but the appeals were dismissed by the Seoul High Court on May 13, 2019 and May 24, 2019, in relation to the second and first measures, respectively. On May 23, 2019 and June 10, 2019, the Korea Securities and Futures Commission re-appealed against the dismissals relating to the second and first measures, respectively. On September 6, 2019 and October 11, 2019, the Supreme Court of Korea dismissed the Korea Securities and Futures Commission's re-appeal relating to the second and first measures, respectively, and confirmed the decision to suspend the execution of these measures.

Although the future outcome of the administrative litigation cannot be estimated, should Samsung Biologics Co., Ltd. be required to restate its financial statements to amend its historical accounting treatment relating to its investment in Samsung Bioepis Co., Ltd., the Company's share of profit or loss relating to its equity method investment, the amount of investment in associates, and retained earnings, for the years ended December 31, 2015 and onwards, and the profit on disposal of investment for the year ended December 31, 2016, may be impacted. Given the timing of completion and the final result of the administrative litigation between Samsung Biologics Co., Ltd. and the Korea Securities and Futures Commission is uncertain and cannot currently be estimated, it is not possible for the Company to recognize the effects of these proceedings in the current period consolidated financial statements.

7. Property, Plant and Equipment

(A) Changes in property, plant and equipment for the three-month periods ended March 31, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Balance as of January 1	187,256,262	168,045,388
Acquisition and capital expenditures	11,773,595	11,343,333
Depreciation	(9,231,310)	(8,800,895)
Disposals/scrap/impairment	(130,748)	(207,911)
Other ^(*)	1,487,761	1,477,601
Balance as of March 31	191,155,560	171,857,516

^(*) Other includes effects of changes in foreign currency exchange rates.

(B) Details of depreciation of property, plant and equipment for the three-month periods ended March 31, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Cost of sales	8,197,276	7,863,833
Selling and administrative expenses, and other	1,034,034	937,062
Total	9,231,310	8,800,895

(C) Right-of-use assets as of March 31, 2024 amount to ₩ 5,612,305 million (December 31, 2023: ₩ 5,449,032 million). During the three-month periods ended March 31, 2024 and 2023, newly recognized right-of-use assets amount to ₩ 464,894 million and ₩ 604,534 million, respectively, with relevant depreciation of ₩ 292,806 million and ₩ 288,193 million, respectively.

8. Intangible Assets

(A) Changes in intangible assets for the three-month periods ended March 31, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Balance as of January 1	22,741,862	20,217,754
External acquisitions	844,734	3,805,353
Amortization	(719,482)	(785,598)
Disposals/scrap/impairment	(9,522)	(15,204)
Other ^(*)	389,011	395,398
Balance as of March 31	23,246,603	23,617,703

^(*) Other includes the cumulative effect of changes in foreign currency exchange rates and business combinations.

(B) Details of amortization of intangible assets for the three-month periods ended March 31, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Cost of sales	484,976	552,375
Selling and administrative expenses and other	234,506	233,223
Total	719,482	785,598

9. Borrowings

Details of the carrying amounts of borrowings as of March 31, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	Financial institutions	Interest rates (%) as of March 31, 2024	March 31, 2024	December 31, 2023
Short-term borrowings				
Collateralized borrowings ^(*)	Woori Bank and others	0.0~13.2	9,323,027	6,610,049
Non-collateralized borrowings	Citibank and others	0.0~62.2	311,521	504,552
Total			9,634,548	7,114,601
Current portion of long-term borrowings				
Bank borrowings	BNP and others	36.1~61.5	394,084	304,082
Lease liabilities ^(*)	CSSD and others	4.4	1,046,761	998,439
Total			1,440,845	1,302,521
Long-term borrowings				
Lease liabilities ^(*)	CSSD and others	4.4	3,861,524	3,724,850

(*) Collateralized borrowings are secured by trade receivables.

(*) Interest expenses arising from the lease liabilities for the three-month periods ended March 31, 2024 and 2023 amount to ₩ 53,023 million and ₩ 45,462 million, respectively, which are determined using the weighted average incremental borrowing rate. The right-of-use assets are pledged as collateral to the lessor in the event of default.

10. Debentures

Details of the carrying amounts of debentures as of March 31, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	Issue date	Due date	Interest rate (%) as of March 31, 2024	March 31, 2024	December 31, 2023
US dollar denominated straight bonds ^(*)	1997.10.2	2027.10.1	7.7	26,936 (US \$ 20 million)	25,788 (US \$ 20 million)
US dollar denominated debentures ^(*)	2015.5.11	2025.5.15	4.2	538,720 (US \$ 400 million)	515,760 (US \$ 400 million)
Less: Discounts				(347)	(370)
Add: Premium				1,927	2,794
Less: Current portion				(6,646)	(6,354)
Total				560,590	537,618

(*) US dollar denominated straight bonds are repaid annually for twenty years after a ten-year grace period from the date of issuance. Interest is paid semi-annually.

(*) Harman International Industries, Inc. issued US dollar denominated debentures. These debentures are repaid on the maturity and interest is paid semi-annually in arrears.

11. Net Defined Benefit Liabilities (Assets)

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

<i>(In millions of Korean won)</i>	March 31, 2024	December 31, 2023
Present value of funded defined benefit obligations	15,504,318	15,403,976
Present value of unfunded defined benefit obligations	335,832	319,689
Subtotal	15,840,150	15,723,665
Fair value of plan assets	(19,917,529)	(20,172,327)
Total	(4,077,379)	(4,448,662)

(B) The components of defined benefit costs recognized in profit or loss for the three-month periods ended March 31, 2024 and 2023 relating to defined benefit plans are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Current service cost	354,156	323,685
Net interest income	(64,618)	(89,746)
Past service cost	(163)	(255)
Other	4,534	7,929
Total	293,909	241,613

(C) The expenses related to defined benefit plans recognized in the statement of profit or loss for the three-month periods ended March 31, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Cost of sales	117,751	103,181
Selling and administrative expenses and other	176,158	138,432
Total	293,909	241,613

12. Provisions

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

<i>(In millions of Korean won)</i>	Warranty (A)	Royalty expenses (B)	Long-term incentives (C)	Other (D, E)	Total
Balance as of January 1	2,540,212	1,838,052	993,751	4,031,311	9,403,326
Charged to profit or loss	577,767	384,521	41,627	1,442,676	2,446,591
Payment	(473,574)	(317,888)	(188,490)	(317,140)	(1,297,092)
Other ^(*)	39,779	5,671	5,101	32,665	83,216
Balance as of March 31	2,684,184	1,910,356	851,989	5,189,512	10,636,041

^(*) Other includes effects of changes in foreign currency exchange rates.

- (A) The Company accrues warranty provisions for estimated costs of quality assurance, exchanges, repairs, recalls, and future services based on historical experience and terms of warranty programs.
- (B) The Company recognizes provisions for the estimated royalty expenses that are under negotiation with counterparties. The timing and amount of payment depend on the settlement of the negotiations.
- (C) The Company has a long-term incentive plan for its executives based on a three-year management performance criteria and recognizes a provision for the estimated incentive cost.
- (D) The Company records provisions for future expenses expected to be incurred for products that have been discontinued from manufacturing and sales.
- (E) The Company makes provisions for the emission in excess of the emission rights held by the Company for the applicable years. Details of emission rights and liabilities as of March 31, 2024 are as follows:

- (1) The amount of emission rights allocated free of charge in the current commitment period and the estimated amount of emission as of March 31, 2024 are as follows:

<i>(In ten thousand metric tons)</i>	March 31, 2024
Emission rights allocated free of charge	1,689
Estimated volume of emission	1,761

- (2) Changes in the emission rights for the three-month periods ended March 31, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Balance as of January 1	3,137	19,567
Increase (decrease)	-	-
Balance as of March 31	3,137	19,567

- (3) Changes in emissions liabilities for the three-month periods ended March 31, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Balance as of January 1	137	32,838
Charged to profit or loss	35	(1)
Utilization	-	-
Balance as of March 31	172	32,837

13. Commitments and Contingencies

(A) Litigation

As of March 31, 2024, the Company is involved in various claims, disputes, and investigations conducted by regulatory bodies that arose during the normal course of business with numerous entities. Although the outflow of resources and timing of these matters are uncertain, the Company believes the outcome will not have a material impact on the financial position of the Company.

(B) Other commitments

As of March 31, 2024, contractual commitments for the acquisition of property, plant and equipment and intangible assets amount to ₩ 16,672,510 million.

14. Contract Liabilities

The Company has recognized contract liabilities related to contracts with customers as follows:

<i>(In millions of Korean won)</i>	March 31, 2024	December 31, 2023
Contract liabilities(*)	13,586,115	13,327,724

(*) Contract liabilities include advances received, accrued expenses, other current liabilities and others.

15. Share Capital

As of March 31, 2024, the Company's total number of authorized shares is 25,000,000,000 shares (₩ 100 per share). As well as its ordinary shares, the Company also has non-cumulative preference shares that are eligible for an additional 1% cash dividend over par value per annum compared to ordinary shares, but without voting rights. The Company has issued 5,969,782,550 shares of ordinary shares and 822,886,700 shares of preference shares as of March 31, 2024, excluding retired shares. As of March 31, 2024, the number of shares outstanding is the same as the number of shares issued above, and no changes were made to the number of shares outstanding during the three-month period ended March 31, 2024 and the year ended December 31, 2023. Due to the retirement of shares, the total par value of the shares issued which excludes the number of retired shares is ₩ 679,267 million (ordinary shares of ₩ 596,978 million and preference shares of ₩ 82,289 million), which does not agree with paid-in capital of ₩ 897,514 million.

16. Retained Earnings

(A) Retained earnings as of March 31, 2024 and December 31, 2023 consist of the following:

<i>(In millions of Korean won)</i>	March 31, 2024	December 31, 2023
Discretionary reserve and other	208,786,001	208,198,003
Unappropriated retained earnings	142,061,853	138,454,235
Total	350,847,854	346,652,238

(B) Details of interim dividends are as follows:

<i>(In millions of Korean won and number of shares)</i>		2024	2023	
1 st Quarter	Number of shares eligible for dividends	Ordinary shares	5,969,782,550	5,969,782,550

	Preference shares	822,886,700	822,886,700
Dividend rate (based on par value)	Ordinary/Preference	361%	361%
	Ordinary shares	2,155,092	2,155,092
Dividend amount	Preference shares	297,062	297,062
	Total	2,452,154	2,452,154

17. Other Components of Equity

Other components of equity as of March 31, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	March 31, 2024	December 31, 2023
Gain on valuation of financial assets at fair value through other comprehensive income	629,632	194,419
Share of other comprehensive income of associates and joint ventures	233,738	185,144
Gain on overseas business translation	8,124,915	3,651,112
Remeasurement of net defined benefit liabilities (assets)	(2,932,385)	(2,849,526)
Other	109,908	98,981
Total	6,165,808	1,280,130

18. Expenses by Nature

Expenses by nature for the three-month periods ended March 31, 2024 and 2023 consist of the following:

<i>(In millions of Korean won)</i>	2024	2023
Changes in finished goods, work in process, and other	(399,265)	(2,216,760)
Raw materials used, merchandise purchased, and other	24,298,463	27,196,920
Wages and salaries	8,075,000	7,901,166
Post-employment benefit	347,810	278,289
Depreciation	9,231,310	8,800,895
Amortization	719,482	785,598
Welfare	1,724,478	1,541,276
Utilities	2,023,182	1,861,110
Outsourcing	1,770,506	1,680,919
Advertising	1,434,926	1,145,343
Sales promotion	1,837,394	1,672,952
Other	14,246,306	12,457,485
Total^(*)	65,309,592	63,105,193

(*) Equal to the sum of cost of sales and selling and administrative expenses in the consolidated statement of profit or loss.

19. Selling and Administrative Expenses

Selling and administrative expenses for the three-month periods ended March 31, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Selling and administrative expenses		
Wages and salaries	2,179,210	2,072,409
Post-employment benefit	77,591	69,512
Commissions	2,083,504	2,103,924
Depreciation	412,997	403,646
Amortization	175,047	168,939
Advertising	1,434,926	1,145,343
Sales promotion	1,837,394	1,672,952
Transportation	714,535	414,405
Service	1,241,559	1,021,736
Other	1,446,457	1,446,500
Subtotal	11,603,220	10,519,366
Research and development expenses		
Research and development	7,820,040	6,578,734
Total	19,423,260	17,098,100

20. Other Non-Operating Income and Expenses

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

<i>(In millions of Korean won)</i>	2024	2023
Other non-operating income		
Dividend income	39,457	47,894
Rental income	38,914	37,942
Gain on disposal of property, plant and equipment	9,335	34,449
Other	357,575	384,010
Total	445,281	504,295

<i>(In millions of Korean won)</i>	2024	2023
Other non-operating expenses		
Loss on disposal of property, plant and equipment	26,048	9,392
Donations	77,476	73,083
Other	277,869	121,507
Total	381,393	203,982

21. Financial Income and Expenses

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

<i>(In millions of Korean won)</i>	2024	2023
Financial income		
Interest income	1,172,185	1,060,446
Financial assets measured at amortized cost	1,172,152	1,060,380
Financial assets measured at fair value through profit or loss	33	66
Foreign exchange differences	2,120,929	3,120,012
Gain from derivatives	191,390	447,591
Total	3,484,504	4,628,049

<i>(In millions of Korean won)</i>	2024	2023
Financial expenses		
Interest expenses	242,772	291,677
Financial liabilities measured at amortized cost	66,927	151,856
Other financial liabilities	175,845	139,821
Foreign exchange differences	2,240,061	3,375,878
Losses from derivatives	179,678	288,446
Total	2,662,511	3,956,001

The Company recognizes foreign exchange gains and losses arising from foreign currency transactions and translation as financial income and expenses.

22. Income Tax Expense

Income tax expense is recognized based on management's best estimate of the weighted average annual income tax rate expected for the full financial year considering global minimum top-up tax. The average annual tax rate expected as of March 31, 2024 to be effective for the year ended December 31, 2024 is 12.4%.

23. Earnings per Share

(A) Basic earnings per share

Basic earnings per share for the three-month periods ended March 31, 2024 and 2023 are calculated as follows:

(1) Ordinary shares

<i>(In millions of Korean won and thousands of number of shares)</i>	2024	2023
Profit for the period attributable to owners of the parent company	6,621,030	1,401,252
Profit for the period available for ordinary shares	5,818,936	1,231,500
Weighted-average number of ordinary shares outstanding	5,969,783	5,969,783
Basic earnings per ordinary share (in Korean won)	975	206

(2) Preference shares

<i>(In millions of Korean won and thousands of number of shares)</i>	2024	2023
Profit for the period attributable to owners of the parent company	6,621,030	1,401,252
Profit for the period available for preference shares	802,094	169,752
Weighted-average number of preference shares outstanding	822,887	822,887
Basic earnings per preference share (in Korean won)	975	206

(B) Diluted earnings per share

The Company does not have dilutive potential ordinary shares and as a result, basic earnings per share and diluted earnings per share are the same for the three-month periods ended March 31, 2024 and 2023.

24. Statements of Cash Flows

The Company used the indirect method to present cash flows from operating activities. Adjustments and changes in assets and liabilities arising from operating activities for the three-month periods ended March 31, 2024 and 2023 are as follows:

- Adjustments

<i>(In millions of Korean won)</i>	2024	2023
Adjustments:		
Income tax expense	952,015	251,780
Financial income	(2,077,714)	(2,267,376)
Financial expenses	1,520,022	1,797,505
Post-employment benefits	347,810	278,289
Depreciation	9,231,310	8,800,895
Amortization	719,482	785,598
Bad debt expense (reversal)	(31,709)	67,557
Dividend income	(39,457)	(47,894)
Share of profit of associates and joint ventures	(214,833)	(213,841)
Gain on disposal of property, plant and equipment	(9,335)	(34,449)
Loss on disposal of property, plant and equipment	26,048	9,392
Loss (gain) on valuation of inventories	(1,648,575)	2,475,649
Others	(28,045)	(195,008)
Total	8,747,019	11,708,097

- Changes in assets and liabilities arising from operating activities

<i>(In millions of Korean won)</i>	2024	2023
Changes in assets and liabilities :		
Decrease (increase) in trade receivables	(3,609,636)	411,960
Decrease (increase) in other receivables	(223,276)	1,151,428
Decrease (increase) in prepaid expenses	36,117	(422,761)
Decrease (increase) in inventories	627,518	(3,731,787)
Increase in trade payables	446,091	1,071,670
Increase (decrease) in other payables	479,925	(4,473)
Increase (decrease) in advances received	171,189	(47,042)
Increase (decrease) in withholdings	13,584	(528,193)
Decrease in accrued expenses	(1,229,733)	(5,169,031)
Increase in provisions	1,149,499	1,287,161
Payment of post-employment benefits	(289,829)	(162,758)
Others	(966,738)	(296,713)
Total	(3,395,289)	(6,440,539)

For the three-month periods ended March 31, 2024 and 2023, cash outflows from principal portion of lease liabilities (financial activities) amount to ₩ 286,357 million and ₩ 261,755 million, respectively, and cash outflows due to interest expenses (operating activities) in relation to the lease liabilities amount to ₩ 53,023 million and ₩ 45,462 million, respectively.

25. Financial Risk Management

The Company manages its financial risks with a focus on minimizing market risk, credit risk, and liquidity risk arising from its operating activities. To this end, the Company closely monitors and responds to each risk factor.

The Company establishes global financial management standards, periodically measures customer's and counterparty's financial risk, and manages the risk with currency hedges and review of cash flows.

The Company also manages foreign exchange risk by monitoring foreign exchange rate fluctuations through local financial centers in the major regions (United States, United Kingdom, Singapore, China, Brazil, and Russia), which act as an agent for the subsidiaries in each region to manage foreign exchange transactions. In addition, local finance centers in the major regions respond to liquidity risk through a regionally integrated financial structure.

The Company's financial assets subject to financial risk management consist of cash and cash equivalents, short-term financial instruments, financial assets at amortized cost, trade receivables and others, while its financial liabilities consist of trade payables, borrowings, and others.

(A) Market risk

(1) Foreign exchange risk

The Company is exposed to foreign exchange risk arising from its global operations through transactions in currencies other than its functional currency. The main currencies in which the Company is exposed to foreign exchange risk are the US dollar and European Euro.

The Company focuses on minimizing the impact of foreign exchange fluctuation by matching levels of assets and liabilities denominated in each foreign currency. To minimize exchange position, the Company's foreign exchange management policy requires normal business transactions, including import and export, as well as financing transactions, such as depositing and borrowing, to be in local currency or match as closely as possible cash inflows and outflows incurred in the respective foreign currencies. This reduces but may not eliminate the foreign exchange risk to which the Company is exposed. Moreover, the Company periodically evaluates and monitors the foreign exchange risk to efficiently mitigate such risk, and the speculative foreign exchange transactions are strictly prohibited.

(2) Interest rate risk

Interest rate risk for floating interest rate financial instruments can be defined as the risk of changes in the fair value of components of the statement of financial position due to changes in the market interest rates, and the risk of changes in the future cash flows of interest income and expenses arising from investing and financing activities. The Company's exposure to interest rate risk arises primarily from interest-bearing deposits and floating interest rate debt obligations, and the Company manages its exposure to interest rate risk to minimize uncertainty and cost of financing resulting from changes in interest rates.

(3) Price risk

The Company's investment portfolio consists of direct and indirect investments in equity instruments classified as financial assets at fair value through other comprehensive income and financial assets at fair value through profit or loss, which is in line with the Company's strategy.

As of March 31, 2024 and 2023, price fluctuation of marketable equity securities (listed stocks) by 1% would result in

changes in other comprehensive income (before income tax) of ₩ 58,830 million and ₩ 111,415 million, respectively, and changes in profit before tax of ₩ 2,333 million and ₩ 5,354 million, respectively.

(B) Credit risk

Credit risk arises during the normal course of transactions and investing activities where customers or other parties fail to discharge an obligation. The Company monitors and sets the customer's and counterparty's credit limit on a periodic basis based on their financial conditions, default history and other factors. Adequate insurance coverage is maintained for trade receivables related to trading partners situated in high risk countries.

Credit risk also can arise from transactions with financial institutions including transactions in financial instruments such as cash and cash equivalents, deposits, and derivative instruments. To minimize such risk, the Company transacts only with banks that have a strong international credit rating (S&P A and above), and new transactions with financial institutions which the Company does not have an existing relationship are subject to the completion of risk assessments prior to commencement of transactions. The Company generally enters into financial agreements without restrictions, such as debt ratio covenants, provision of collateral and/or repayment of loans/borrowings, and otherwise separate approvals are obtained.

The carrying amount of the Company's financial assets is net of impairment losses and the Company's maximum exposure to credit risk is equal to the carrying amount of its financial assets.

(C) Liquidity risk

Liquidity risk is the risk that a company will have difficulty in meeting all its financial obligations. The Company's main sources of liquidity are cash generated from operations and funds raised from the capital markets and financial institutions, while its main liquidity needs are for investments in production, research and development, working capital and dividends. Due to the nature of the Company's business, which involves large investments, maintaining adequate levels of liquidity is critical. The Company maintains and manages adequate liquidity through forecasting periodic cash flows, estimating required cash levels, and monitoring inflows and outflows of cash.

The Company has established Cash Pooling by region to respond effectively to liquidity risks, even when individual companies within a region are underfunded. Cash Pooling is a system that shares funds between underfunded and overfunded companies, minimizing the liquidity risk of individual companies, easing the burden of fund management, and reducing financial costs.

In addition, the Company has secured credit lines for its overseas subsidiaries by means of payment guarantees from the head office in the event of large liquidity needs, and, at the end of the period, the Company had investment grade ratings of Aa2 from Moody's and AA- from S&P, enabling it to raise funds on the capital market in a timely manner.

(D) Capital risk management

The purpose of capital management is to maintain a sound capital structure and protect the Company's ability to continue to provide benefits to its shareholders and stakeholders as a going concern. The Company monitors capital on the basis of credit ratings and debt ratio.

The debt ratios as of March 31, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	March 31, 2024	December 31, 2023
Total liabilities	98,983,688	92,228,115
Total equity	371,916,124	363,677,865

(E) Fair value measurement

(1) Carrying amounts and fair values of financial instruments by category as of March 31, 2024 and December 31, 2023 are as follows:

(In millions of Korean won)	March 31, 2024		December 31, 2023	
	Carrying amount	Fair value	Carrying amount	Fair value
Financial assets				
Cash and cash equivalents	61,906,097	(*)	69,080,893	(*)
Short-term financial instruments	35,458,597	(*)	22,690,924	(*)
Short-term financial assets at amortized cost	-	(*)	608,281	(*)
Short-term financial assets at fair value through profit or loss	28,132	28,132	27,112	27,112
Trade receivables	41,145,391	(*)	36,647,393	(*)
Financial assets at fair value through other comprehensive income	8,180,091	8,180,091	7,481,297	7,481,297
Financial assets at fair value through profit or loss	1,414,332	1,414,332	1,431,394	1,431,394
Other(*2)	12,119,630	560,002	14,840,275	546,021
Total financial assets	160,252,270		152,807,569	
Financial liabilities				
Trade payables	12,419,094	(*)	11,319,824	(*)
Short-term borrowings	9,634,548	(*)	7,114,601	(*)
Other payables	15,019,429	(*)	13,996,395	(*)
Current portion of long-term liabilities	1,447,491	7,121	1,308,875	6,757
- Long-term borrowings	1,440,845	(*)(*3)	1,302,521	(*)(*3)
- Debentures	6,646	7,121	6,354	6,757
Debentures	560,590	553,826	537,618	529,254
Long-term borrowings	3,861,524	(*)(*3)	3,724,850	(*)(*3)
Long-term other payables	4,658,208	(*)	4,907,875	(*)
Other(*2)	11,625,328	56,037	11,414,008	83,463
Total financial liabilities	59,226,212		54,324,046	

(*1) Assets and liabilities whose carrying amount is a reasonable approximation of fair value are excluded from the fair value disclosures.

(*2) Assets measured at the cost of ₩ 11,559,628 million as of March 31, 2024 (December 31, 2023: ₩ 14,294,254 million) and liabilities measured at the cost of ₩ 11,569,291 million as of March 31, 2024 (December 31, 2023: ₩ 11,330,545 million) are excluded as the carrying amount is a reasonable estimation of fair value.

(*3) Lease liabilities, classified under the current portion of long-term liabilities and long-term borrowings, are excluded from the fair value disclosures in accordance with *Korean IFRS 1107*.

- (2) Fair value hierarchy classifications of the financial instruments that are measured or disclosed at fair value as of March 31, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	March 31, 2024			
	Level 1	Level 2	Level 3	Total balance
1) Assets				
Short-term financial assets at fair value through profit or loss	-	28,132	-	28,132
Financial assets at fair value through other comprehensive income	5,882,959	-	2,297,132	8,180,091
Financial assets at fair value through profit or loss	233,257	-	1,181,075	1,414,332
Other	-	110,397	449,605	560,002
2) Liabilities				
Current portion of debentures	-	7,121	-	7,121
Debentures	-	553,826	-	553,826
Other	-	56,037	-	56,037
December 31, 2023				
<i>(In millions of Korean won)</i>	Level 1	Level 2	Level 3	Total balance
1) Assets				
Short-term financial assets at fair value through profit or loss	-	27,112	-	27,112
Financial assets at fair value through other comprehensive income	5,250,993	-	2,230,304	7,481,297
Financial assets at fair value through profit or loss	347,221	-	1,084,173	1,431,394
Other	-	130,364	415,657	546,021
2) Liabilities				
Current portion of debentures	-	6,757	-	6,757
Debentures	-	529,254	-	529,254
Other	-	83,463	-	83,463

The levels of the fair value hierarchy and its application to financial assets and liabilities are described below.

- Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities
- Level 2: Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly
- Level 3: Inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs)

The fair value of financial instruments traded in active markets is based on quoted market prices at the reporting date. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. These instruments are included in Level 1. The instruments included in Level 1 are listed equity investments, most of which are classified as financial assets at fair value through other comprehensive income.

The fair value of financial instruments that are not traded in an active market is determined by using valuation techniques. These valuation techniques maximize the use of observable market data where available and rely as little as possible on entity-specific estimates. If all significant inputs required to measure the fair value of an instrument are observable, the instrument is included in Level 2.

If one or more of the significant inputs are not based on observable market data, the instrument is included in Level 3.

The Company performs the fair value measurements required for financial reporting purposes, including Level 3 fair values, and discusses valuation processes and results in line with the financial reporting timelines. The Company's policy is to recognize transfers between levels at the end of the reporting period if corresponding events or changes in circumstances have occurred.

Specific valuation techniques used to value financial instruments include:

- Quoted market prices or dealer quotes for similar instruments
- The fair value of forward foreign exchange contracts determined using forward exchange rates at the reporting date, with the resulting value discounted to present value

Other techniques, such as discounted cash flow analysis, binomial distribution model, etcetera, are used to determine fair value for the remaining financial instruments. For trade and other receivables that are classified as current assets, the book value approximates a reasonable estimate of fair value.

(3) Valuation technique and the inputs

The Company utilizes a present value technique to discount future cash flows using proper interest rates for corporate bonds, government and public bonds, and bank debentures that are classified as Level 2 in the fair value hierarchy.

The following table presents the valuation technique and the inputs used for major financial instruments classified as Level 3 as of March 31, 2024.

(In millions of Korean won and percentage)

Classification	Fair value	Valuation technique	Level 3 inputs	Input range
Financial assets at fair value through other comprehensive income				
Samsung Venture Investment	33,250	Discounted cash flow	Permanent growth rate	1.0%
			Weighted average cost of capital	16.6%
MiCo Ceramics Co., Ltd.	34,662	Discounted cash flow	Permanent growth rate	0.0%
			Weighted average cost of capital	15.4%
TCL China Star Optoelectronics Technology Co., Ltd. (CSOT)	1,306,526	Discounted cash flow	Permanent growth rate	0.0%
			Weighted average cost of capital	10.5%
China Star Optoelectronics Semiconductor Display Technology Ltd. (CSOSDT)	221,741	Discounted cash flow	Permanent growth rate	0.0%
			Weighted average cost of capital	10.5%
Others				
Call option on equity instruments	422,676	Binomial model	Risk-free rate	3.5%
			Price volatility	69.7%

Put option on equity instruments	26,929	Binomial model	Risk-free rate	3.9%~5.2%, 1.9%
			Price volatility	21.8%, 24.6%

(4) Changes in Level 3 instruments for the three-month periods ended March 31, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Financial assets		
Balance as of January 1	3,730,134	3,303,227
Acquisitions	29,994	45,261
Disposals	(6,092)	(22,638)
Amount recognized in profit for the period	48,572	256,578
Amount recognized in other comprehensive income	16,585	(298,342)
Other	108,619	(620)
Balance as of March 31	3,927,812	3,283,466

<i>(In millions of Korean won)</i>	2024	2023
Financial liabilities		
Balance as of January 1	-	7,404
Amount recognized in profit for the period	-	-
Other	-	-
Balance as of March 31	-	7,404

(5) Sensitivity analysis for recurring fair value measurements categorized within Level 3

Sensitivity analysis of financial instruments is performed to measure favorable and unfavorable changes in the fair value of financial instruments which are affected by the unobservable parameters, using a statistical technique. When the fair value is affected by more than two input parameters, the amounts represent the most favorable or unfavorable.

The results of the sensitivity analysis for effect on income or loss before tax from changes in inputs for major financial instruments which are categorized within Level 3 and subject to sensitivity analysis are as follows:

<i>(In millions of Korean won)</i>	Favorable changes		Unfavorable changes	
	Profit or loss	Equity	Profit or loss	Equity
Financial assets at fair value through other comprehensive income ^(*)	-	161,113	-	(111,219)
Others ^(*)	108,637	-	(108,367)	-

(*) For equity securities, changes in fair value are calculated by increasing or the growth rate (-1%~1%) and the discount rate, which are significant unobservable inputs.

(*) Changes in fair value were calculated based on changes in underlying asset price (20%) and price volatility (10%),

which are significant unobservable inputs.

26. Segment Information

(A) Operating segment information

The chief operating decision-maker has been identified as the Management Committee. The Company determines operating segments based on the segment information reported to the Management Committee. The Management Committee reviews the operating profits of each operating segment in order to evaluate the performance and to make strategic decisions regarding the allocation of resources to each segment.

Revenue consists mostly of product sales. The operating segments are product-based and are identified based on the internal organization and revenue streams. As of the reporting date, the operating segments are comprised of DX, DS, SDC, Harman, and others.

The segment information including depreciation, amortization and operating profits is prepared after adjusting intercompany transactions. Total assets and liabilities of each operating segment are excluded from the disclosure as these have not been provided regularly to the Management Committee.

(1) For the three-month period ended March 31, 2024

<i>(In millions of Korean won)</i>	DX	DS	SDC	Harman	Intercompany reconciliations	Total^(*)
Revenue	47,292,742	23,137,290	5,386,418	3,200,250	(7,101,099)	71,915,601
Depreciation	639,747	7,849,063	607,414	85,397	-	9,231,310
Amortization	402,536	152,446	56,385	53,252	-	719,482
Operating profit	4,074,891	1,914,015	340,684	240,839	-	6,606,009

^(*) Other operating segments are not separately disclosed.

Net revenue by major product for the three-month period ended March 31, 2024 are as follows:

<i>(In millions of Korean won)</i>	TV, monitor, and other	Smartphone and other	Memory	Display panels	Total^(*)
Revenue	7,233,971	32,791,373	17,494,267	5,386,418	71,915,601

^(*) Other operating segments are not separately disclosed.

(2) For the three-month period ended March 31, 2023

<i>(In millions of Korean won)</i>	DX	DS	SDC	Harman	Intercompany reconciliations	Total^(*)
Revenue	46,222,513	13,734,475	6,614,151	3,165,897	(5,991,665)	63,745,371
Depreciation	615,404	7,222,761	832,834	80,028	-	8,800,895
Amortization	417,358	206,609	55,023	49,103	-	785,598
Operating profit	4,208,760	(4,581,854)	776,016	128,949	-	640,178

^(*) Other operating segments are not separately disclosed.

Net revenue by major product for the three-month period ended March 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	TV, monitor, and other	Smartphone and other	Memory	Display panels	Total^(*)
Revenue	7,434,935	30,744,551	8,916,997	6,614,151	63,745,371

^(*) Other operating segments are not separately disclosed.

(B) Regional information

The regional information provided to the Management Committee for the reportable segments as of and for the three-month periods ended March 31, 2024 and 2023 are as follows:

(1) As of and for the period ended March 31, 2024

<i>(In millions of Korean won)</i>	Korea	America	Europe	Asia and Africa	China	Intercompany elimination	Total
Revenue	9,413,447	25,388,843	13,219,027	12,679,313	11,214,971	-	71,915,601
Non-current assets ^(*)	166,034,578	22,724,212	6,421,842	9,071,180	11,840,825	(1,690,474)	214,402,163

^(*) Financial instruments, deferred tax assets, and investments in associates and joint ventures are excluded from non-current assets.

(2) As of and for the period ended March 31, 2023

<i>(In millions of Korean won)</i>	Korea	America	Europe	Asia and Africa	China	Intercompany elimination	Total
Revenue	11,300,428	22,762,451	12,582,923	11,534,339	5,565,230	-	63,745,371
Non-current assets ^(*)	150,663,992	15,167,060	6,135,315	9,249,314	15,224,391	(964,853)	195,475,219

^(*) Financial instruments, deferred tax assets, and investments in associates and joint ventures are excluded from non-current assets.

27. Related Party Transactions

(A) Transactions with related parties

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

		2024			
(In millions of Korean won)	Name of company ^(*)	Sales	Disposal of non-current assets	Purchases	Purchase of non-current assets
Associates and joint ventures	Samsung SDS Co.,Ltd.	63,908	-	473,033	58,026
	Samsung Electro-Mechanics Co., Ltd.	27,477	-	347,141	-
	Samsung SDI Co., Ltd.	36,837	-	179,184	8,556
	Cheil Worldwide Inc.	33,003	-	232,204	6,375
	Other	312,544	122	3,062,248	35,974
	Total	473,769	122	4,293,810	108,931
Other related parties	Samsung C&T Co., Ltd.	7,997	-	53,210	1,588,496
	Other	158,632	-	373,416	1,314,075
	Total	166,629	-	426,626	2,902,571
Other ^(*)	Samsung Engineering Co., Ltd.	147	-	15,656	467,250
	S-1 Corporation	1,868	-	129,073	5,461
	Other	59,727	-	81,136	291,111
	Total	61,742	-	225,865	763,822

(*) Transactions with separate entities that are related parties of the Company.

(*) Although these entities are not related parties of the Company in accordance with *Korean IFRS 1024*, they belong to the same large enterprise group in accordance with the Monopoly Regulation and Fair Trade Act.

		2023			
(In millions of Korean won)	Name of company ^(*)	Sales	Disposal of non-current assets	Purchases	Purchase of non-current assets
Associates and joint ventures	Samsung SDS Co.,Ltd.	74,499	-	485,177	82,168
	Samsung Electro-Mechanics Co., Ltd.	43,706	-	328,465	60
	Samsung SDI Co., Ltd.	41,404	-	197,264	2,072
	Cheil Worldwide Inc.	34,213	-	235,243	76
	Other	250,843	-	3,350,585	28,046
	Total	444,665	-	4,596,734	112,422
Other related parties	Samsung C&T Co., Ltd.	8,878	70	62,594	799,655
	Other	153,664	-	559,486	645,636
	Total	162,542	70	622,080	1,445,291
Other ^(*)	Samsung Engineering Co., Ltd.	439	-	212	310,139
	S-1 Corporation	2,827	-	129,859	3,449
	Other	29,662	-	178,822	84,196
	Total	32,928	-	308,893	397,784

(*) Transactions with separate entities that are related parties of the Company.

(*) Although these entities are not related parties of the Company in accordance with *Korean IFRS 1024*, they belong to the same large enterprise group in accordance with the Monopoly Regulation and Fair Trade Act.

(B) Balances of receivables and payables

Arising from transactions with related parties as of March 31, 2024 and December 31, 2023 are as follows:

(In millions of Korean won)	Name of company ^(*1)	March 31, 2024	
		Receivables	Payables ^(*2)
Associates and joint ventures	Samsung SDS Co.,Ltd.	86,922	516,231
	Samsung Electro-Mechanics Co., Ltd.	21,274	192,361
	Samsung SDI Co., Ltd.	135,571	110,609
	Cheil Worldwide Inc.	32,317	327,367
	Other	298,198	1,160,560
	Total	574,282	2,307,128
Other related parties	Samsung C&T Co., Ltd.	210,807	1,241,553
	Other	28,108	312,183
	Total	238,915	1,553,736
Other ^(*3)	Samsung Engineering Co., Ltd.	143	344,573
	S-1 Corporation	1,199	50,686
	Other	12,809	401,587
	Total	14,151	796,846

^(*1) Balances due from and to separate entities that are related parties of the Company.

^(*2) Payables and others include lease liabilities.

^(*3) Although these entities are not related parties of the Company in accordance with *Korean IFRS 1024*, they belong to the same large enterprise group in accordance with the Monopoly Regulation and Fair Trade Act.

(In millions of Korean won)	Name of company ^(*1)	December 31, 2023	
		Receivables	Payables ^(*2)
Associates and joint ventures	Samsung SDS Co.,Ltd.	84,747	458,723
	Samsung Electro-Mechanics Co., Ltd.	1,894	138,405
	Samsung SDI Co., Ltd.	117,690	92,854
	Cheil Worldwide Inc.	137	440,414
	Other	310,708	1,268,131
	Total	515,176	2,398,527
Other related parties	Samsung C&T Co., Ltd.	213,538	1,955,976
	Other	23,155	318,355
	Total	236,693	2,274,331
Other ^(*3)	Samsung Engineering Co., Ltd.	305	807,098
	S-1 Corporation	1,289	49,955
	Other	16,096	390,073
	Total	17,690	1,247,126

^(*1) Balances due from and to separate entities that are related parties of the Company.

^(*2) Payables and others include lease liabilities.

^(*3) Although these entities are not related parties of the Company in accordance with *Korean IFRS 1024*, they belong to the same large enterprise group in accordance with the Monopoly Regulation and Fair Trade Act.

- (C) For the three-month periods ended March 31, 2024 and 2023 the Company invested ₩ 6,342 million and ₩ 62,182 million, respectively, in associates and joint ventures. In addition, the Company has made capital recovery of ₩ 11,731 million and ₩ 4,661 million from its investments in associates and joint ventures during the three-month periods ended March 31, 2024 and 2023, respectively.
- (D) For the three-month periods ended March 31, 2024 and 2023, the Company declared dividends of ₩ 412,172 million and ₩ 412,942 million, respectively, to related parties. As of March 31, 2024, the dividend payable to related parties amounts to ₩ 412,172 million. In addition, for the three-month periods ended March 31, 2024 and 2023, the Company declared dividends of ₩ 32,058 million and ₩ 32,058 million, respectively, to the entities that are not related parties of the Company in accordance with Korean IFRS 1024, but belong to the same conglomerate according to the Monopoly Regulation and Fair Trade Act. As of March 31, 2024, there is ₩ 32,058 million dividends payable to the entities belong to the same conglomerate according to the Monopoly Regulation and Fair Trade Act.
- (E) For the three-month periods ended March 31, 2024 and 2023, the Company entered into lease agreements with its related parties amounting to ₩ 16,048 million and ₩ 50 million, respectively, and the lease payments made to the related parties were ₩ 7,385 million and ₩ 5,089 million, respectively.
- (F) Key management compensation

The compensation paid or payable to key management (executive directors) for their services for the three-month periods ended March 31, 2024 and 2023 consists of:

<i>(In millions of Korean won)</i>	2024	2023
Short-term employee benefits	3,017	3,330
Post-employment benefits	175	139
Other long-term employee benefits	2,289	1,959

28. Assets and Liabilities Held-for-Sale

During the year ended December 31, 2023, the Company's management decided to sell its 56.8% ownership in Dowoosys Co., Ltd. to three parties, including New Power Plasma Co., Ltd. The sale and purchase agreement was signed on December 7, 2023, and the sale was completed on January 31, 2024.

(1) Details of assets and liabilities classified as held-for-sale as of December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	December 31, 2023
Assets held-for-sale	
Cash and cash equivalents	14,153
Trade receivables	1,316
Inventories	4,697
Other current assets	13,134
Property, plant and equipment and intangible assets	181,251
Other non-current assets	3,313
Total	217,864
Liabilities held-for-sale	
Current liabilities	27,608
Non-current liabilities	34,046
Total	61,654

(2) Details of accumulated other comprehensive income attributable to assets held-for-sale are as follows:

<i>(In millions of Korean won)</i>	December 31, 2023
Foreign currency translation, net of tax	(217)

4. Non-Consolidated Financial Statements

Samsung Electronics Co., Ltd.

INTERIM SEPARATE STATEMENTS OF FINANCIAL POSITION

(In millions of Korean won and in thousands of US dollars (Note 2.3))

	Notes	March 31, 2024 KRW	December 31, 2023 KRW	March 31, 2024 USD	December 31, 2023 USD
Assets					
Current assets					
Cash and cash equivalents	3, 25	12,282,309	6,061,451	9,247,105	4,563,545
Short-term financial instruments	3, 25	50,247	50,071	37,830	37,697
Trade receivables	3, 25	32,832,663	27,363,016	24,719,055	20,601,067
Non-trade receivables	3, 25	1,814,938	1,910,054	1,366,430	1,438,041
Prepaid expenses		1,282,037	1,349,755	965,220	1,016,204
Inventories	5	30,849,308	29,338,151	23,225,826	22,088,106
Other current assets	3, 25	3,177,409	2,475,944	2,392,207	1,864,089
		82,288,911	68,548,442	61,953,673	51,608,749
Non-current assets					
Financial assets at fair value through other comprehensive income	3, 4, 25	2,049,692	1,854,503	1,543,172	1,396,218
Financial assets at fair value through profit or loss	3, 4, 25	-	1	-	1
Investments in subsidiaries, associates and joint ventures	6	57,280,254	57,392,438	43,125,156	43,209,617
Property, plant and equipment	7	141,929,781	140,579,161	106,856,090	105,839,235
Intangible assets	8	10,671,387	10,440,211	8,034,274	7,860,226
Net defined benefit assets	11	3,448,988	3,745,697	2,596,674	2,820,060
Deferred income tax assets		9,996,955	9,931,358	7,526,507	7,477,121
Other non-current assets	3, 25	4,417,320	4,365,478	3,325,713	3,286,681
		229,794,377	228,308,847	173,007,586	171,889,159
Total assets		312,083,288	296,857,289	234,961,259	223,497,908

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

Samsung Electronics Co., Ltd.

INTERIM SEPARATE STATEMENTS OF FINANCIAL POSITION

(In millions of Korean won and in thousands of US dollars (Note 2.3))

		March 31,	December 31,	March 31,	December
	Notes	2024	2023	2024	31,
		KRW	KRW	USD	2023
					USD
Liabilities and Equity					
Current liabilities					
Trade payables	3, 25	12,457,726	7,943,834	9,379,172	5,980,754
Short-term borrowings	3, 9, 25	8,555,367	5,625,163	6,441,165	4,235,073
Other payables	3, 25	14,707,458	15,256,046	11,072,951	11,485,972
Advances received	14	247,532	302,589	186,362	227,813
Withholdings	3, 25	471,283	445,470	354,820	335,385
Accrued expenses	3, 14, 25	6,690,737	6,931,991	5,037,322	5,218,957
Current income tax liabilities		221,148	-	166,498	-
Current portion of long-term liabilities	3, 9, 10, 25	242,227	228,491	182,368	172,026
Provisions	12	5,574,603	4,540,702	4,197,007	3,418,604
Other current liabilities	14	447,847	500,815	337,174	377,053
		49,615,928	41,775,101	37,354,839	31,451,637
Non-current liabilities					
Debentures	3, 10, 25	19,943	19,064	15,015	14,353
Long-term borrowings	3, 9, 25	22,901,308	22,902,035	17,241,936	17,242,484
Long-term other payables	3, 25	4,671,833	4,942,826	3,517,330	3,721,355
Long-term provisions	12	2,719,829	2,413,133	2,047,705	1,816,800
Other non-current liabilities		14,994	17,356	11,289	13,066
		30,327,907	30,294,414	22,833,275	22,808,058
Total liabilities		79,943,835	72,069,515	60,188,114	54,259,695

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

Samsung Electronics Co., Ltd.

INTERIM SEPARATE STATEMENTS OF FINANCIAL POSITION

(In millions of Korean won and in thousands of US dollars (Note 2.3))

	Notes	March 31, 2024 KRW	December 31, 2023 KRW	March 31, 2024 USD	December 31, 2023 USD
Equity					
Preference shares	15	119,467	119,467	89,944	89,944
Ordinary shares	15	778,047	778,047	585,776	585,776
Share premium		4,403,893	4,403,893	3,315,603	3,315,603
Retained earnings	16	227,247,811	219,963,351	171,090,327	165,606,003
Other components of equity	17	(409,765)	(476,984)	(308,505)	(359,113)
Total equity		232,139,453	224,787,774	174,773,145	169,238,213
Total liabilities and equity		312,083,288	296,857,289	234,961,259	223,497,908

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

Samsung Electronics Co., Ltd.

INTERIM SEPARATE STATEMENTS OF PROFIT OR LOSS

(In millions of Korean won and in thousands of US dollars (Note 2.3))

	Note s	For the three-month periods ended March 31,			
		2024	2023	2024	2023
		KRW	KRW	USD	USD
Revenue	26	51,239,617	42,168,679	38,577,282	31,747,954
Cost of sales	18	38,772,850	37,113,489	29,191,303	27,942,003
Gross profit		12,466,767	5,055,190	9,385,979	3,805,951
Selling and administrative expenses	18, 19	10,459,387	8,963,951	7,874,663	6,748,779
Operating profit (loss)	26	2,007,380	(3,908,761)	1,511,316	(2,942,828)
Other non-operating income	20	8,249,118	8,569,984	6,210,596	6,452,169
Other non-operating expense	20	271,087	92,240	204,096	69,446
Financial income	21	1,440,265	2,153,358	1,084,347	1,621,220
Financial expense	21	1,440,379	2,320,148	1,084,433	1,746,792
Profit before income tax		9,985,297	4,402,193	7,517,730	3,314,323
Income tax expense	22	247,860	244,098	186,609	183,777
Profit for the period		9,737,437	4,158,095	7,331,121	3,130,546
Earnings per share	23				
<i>(in Korean won, in US dollars)</i>					
- Basic		1,434	612	1.08	0.46
- Diluted		1,434	612	1.08	0.46

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

Samsung Electronics Co., Ltd.

INTERIM SEPARATE STATEMENTS OF COMPREHENSIVE INCOME

(In millions of Korean won and in thousands of US dollars (Note 2.3))

	Note s	For the three-month periods ended March 31,			
		2024	2023	2024	2023
		KRW	KRW	USD	USD
Profit for the period		9,737,437	4,158,095	7,331,121	3,130,546
Other comprehensive income (loss)					
Items that will not be reclassified subsequently to profit or loss:					
Gain (loss) on valuation of financial assets at fair value through other comprehensive income, net of tax	17	143,659	87,319	108,158	65,741
Remeasurement of net defined benefit liabilities (assets), net of tax	17	(76,440)	(240,124)	(57,550)	(180,784)
Items that may be reclassified subsequently to profit or loss		-	-	-	-
Other comprehensive income (loss) for the period, net of tax		67,219	(152,805)	50,608	(115,043)
Total comprehensive income for the period		9,804,656	4,005,290	7,381,729	3,015,503

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

Samsung Electronics Co., Ltd.

INTERIM SEPARATE STATEMENTS OF CHANGES IN EQUITY

(In millions of Korean won)

For the three-month period ended March 31, 2024	Notes	Preference shares	Ordinary shares	Share premium	Retained earnings	Other components of equity	Total
Balance as of January 1, 2024		119,467	778,047	4,403,893	219,963,351	(476,984)	224,787,774
Profit for the period		-	-	-	9,737,437	-	9,737,437
Gain on valuation of financial assets at fair value through other comprehensive income, net of tax	17	-	-	-	-	143,659	143,659
Remeasurement of net defined benefit assets, net of tax	17	-	-	-	-	(76,440)	(76,440)
Total comprehensive income for the period		-	-	-	9,737,437	67,219	9,804,656
Dividends declared		-	-	-	(2,452,977)	-	(2,452,977)
Total transactions with owners		-	-	-	(2,452,977)	-	(2,452,977)
Balance as of March 31, 2024		119,467	778,047	4,403,893	227,247,811	(409,765)	232,139,453

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

Samsung Electronics Co., Ltd.

INTERIM SEPARATE STATEMENTS OF CHANGES IN EQUITY

(In thousands of US dollars (Note 2.3))

For the three-month period ended March 31, 2024	Notes	Preference shares	Ordinary shares	Share premium	Retained earnings	Other components of equity	Total
Balance as of January 1, 2024		89,944	585,776	3,315,603	165,606,003	(359,113)	169,238,213
Profit for the period		-	-	-	7,331,121	-	7,331,121
Gain on valuation of financial assets at fair value through other comprehensive income, net of tax	17	-	-	-	-	108,158	108,158
Remeasurement of net defined benefit assets, net of tax	17	-	-	-	-	(57,550)	(57,550)
Total comprehensive income for the period		-	-	-	7,331,121	50,608	7,381,729
Dividends declared		-	-	-	(1,846,797)	-	(1,846,797)
Total transactions with owners		-	-	-	(1,846,797)	-	(1,846,797)
Balance as of March 31, 2024		89,944	585,776	3,315,603	171,090,327	(308,505)	174,773,145

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

INTERIM SEPARATE STATEMENTS OF CHANGES IN EQUITY

(In millions of Korean won)

For the three-month period ended March 31, 2023	Notes	Preference shares	Ordinary shares	Share premium	Retained earnings	Other components of equity	Total
Balance as of January 1, 2023		119,467	778,047	4,403,893	204,388,016	(273,232)	209,416,191
Profit for the period		-	-	-	4,158,095	-	4,158,095
Gain on valuation of financial assets at fair value through other comprehensive income, net of tax		-	-	-	-	87,319	87,319
Remeasurement of net defined benefit asset, net of tax		-	-	-	-	(240,124)	(240,124)
Total comprehensive income (loss) for the period		-	-	-	4,158,095	(152,805)	4,005,290
Dividends declared		-	-	-	(2,452,977)	-	(2,452,977)
Total transactions with owners		-	-	-	(2,452,977)	-	(2,452,977)
Balance as of March 31, 2023		119,467	778,047	4,403,893	206,093,134	(426,037)	210,968,504

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

Samsung Electronics Co., Ltd.

INTERIM SEPARATE STATEMENTS OF CHANGES IN EQUITY

(In thousands of US dollars (Note 2.3))

For the three-month period ended March 31, 2023	Notes	Preference shares	Ordinary shares	Share premium	Retained earnings	Other components of equity	Total
Balance as of January 1, 2023		89,944	585,776	3,315,603	153,879,645	(205,711)	157,665,257
Profit for the period		-	-	-	3,130,546	-	3,130,546
Gain (loss) on valuation of financial assets at fair value through other comprehensive income, net of tax		-	-	-	-	65,741	65,741
Remeasurement of net defined benefit assets, net of tax		-	-	-	-	(180,784)	(180,784)
Total comprehensive income (loss) for the period		-	-	-	3,130,546	(115,043)	3,015,503
Dividends declared		-	-	-	(1,846,797)	-	(1,846,797)
Total transactions with owners		-	-	-	(1,846,797)	-	(1,846,797)
Balance as of March 31, 2023		89,944	585,776	3,315,603	155,163,394	(320,754)	158,833,963

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

Samsung Electronics Co., Ltd.

INTERIM SEPARATE STATEMENTS OF CASH FLOWS

(In millions of Korean won and in thousands of US dollars (Note 2.3))

	Notes	For the three-month periods ended March 31,			
		2024	2023	2024	2023
		KRW	KRW	USD	USD
Operating activities					
Profit for the period		9,737,437	4,158,095	7,331,121	3,130,546
Adjustments	24	(1,466,860)	1,420,168	(1,104,370)	1,069,216
Changes in assets and liabilities arising from operating activities	24	(1,439,384)	(7,173,527)	(1,083,683)	(5,400,804)
Cash generated from operations		6,831,193	(1,595,264)	5,143,068	(1,201,042)
Interest received		44,596	45,168	33,575	34,006
Interest paid		(162,952)	(90,232)	(122,683)	(67,934)
Dividends received		8,032,303	8,119,231	6,047,360	6,112,806
Income tax paid		(116,420)	(595,352)	(87,650)	(448,229)
Net cash from operating activities		14,628,720	5,883,551	11,013,670	4,429,607
Investing activities					
Net increase in short-term financial instruments		(176)	(997)	(133)	(751)
Disposal of financial assets at fair value through other comprehensive income		-	22	-	17
Disposal of financial assets at fair value through profit or loss		1	-	1	-
Disposal of investments in subsidiaries, associates and joint ventures		70,048	107,710	52,738	81,093
Acquisition of investments in subsidiaries, associates and joint ventures		(3,592)	(65,354)	(2,704)	(49,204)
Disposal of property, plant and equipment		20,506	52,599	15,439	39,601
Acquisition of property, plant and equipment		(10,147,089)	(11,093,859)	(7,639,540)	(8,352,344)
Disposal of intangible assets		-	6,496	-	4,891
Acquisition of intangible assets		(1,113,016)	(1,031,652)	(837,967)	(776,710)
Cash outflow from other investing activities		(47,862)	(48,418)	(36,034)	(36,453)
Net cash used in investing activities		(11,221,180)	(12,073,453)	(8,448,200)	(9,089,860)

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

Samsung Electronics Co., Ltd.

INTERIM SEPARATE STATEMENTS OF CASH FLOWS

(In millions of Korean won and in thousands of US dollars (Note 2.3))

	Notes	For the three-month periods ended March 31,			
		2024	2023	2024	2023
		KRW	KRW	USD	USD
Financing activities					
Net increase in short-term borrowings		2,866,252	720,314	2,157,944	542,310
Increase in debentures and long-term borrowings		-	10,000,000	-	7,528,800
Repayment of debentures and long-term borrowings		(52,838)	(39,266)	(39,781)	(29,563)
Dividends paid		(261)	(243)	(197)	(183)
Net cash provided by financing activities		2,813,153	10,680,805	2,117,966	8,041,364
Effect of foreign exchange rate changes		165	1,909	124	1,437
Net increase in cash and cash equivalents		6,220,858	4,492,812	4,683,560	3,382,548
Cash and cash equivalents, beginning of the period		6,061,451	3,921,593	4,563,545	2,952,489
Cash and cash equivalents, end of the period		12,282,309	8,414,405	9,247,105	6,335,037

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

5. Notes to non-consolidated Financial Statements

1. General Information

Samsung Electronics Co., Ltd. (the “Company”) was incorporated under the laws of the Republic of Korea in 1969 and listed its shares on the Korea Stock Exchange in 1975. The Company operates two business divisions: Device eXperience (“DX”) and Device Solutions (“DS”). DX division comprises businesses for digital televisions, refrigerators, smartphones, and communication systems. DS division comprises businesses for semiconductor products such as memory, foundry and system Large Scale Integration (LSI). The Company is domiciled in the Republic of Korea and is located in Suwon, the Republic of Korea.

These financial statements have been prepared in accordance with Korean International Financial Reporting Standards (“Korean IFRS”) 1027, *Separate Financial Statements*.

2. Material Accounting Policies

2.1 Basis of Presentation

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

The interim separate financial statements for the three-month period ended March 31, 2024 have been prepared in accordance with Korean IFRS 1034, *Interim Financial Reporting*. These interim separate financial statements have been prepared in accordance with the Korean IFRS which is effective as of March 31, 2024.

(A) New and amended standards adopted by the Company

The Company applied the following amended standards for the first time for the annual reporting period commencing January 1, 2024:

Amendments to Korean IFRS 1001, *Presentation of Financial Statements*

The amendments clarify that the classification of liabilities as current or non-current should be based on rights that are in existence at the end of the reporting period, and that the classification is unaffected by management's intentions or expectations about whether an entity will exercise its right to defer settlement of a liability. The amendments also introduce a definition of settlement to make clear that settlement includes the transfer to the counterparty of the entity's own equity instruments, however, it would be excluded if an option to settle the liability by the transfer of the entity's own equity instruments is recognized separately from the liability as an equity component of a compound financial instrument. The application of amendments does not have a significant impact on the Company's interim separate financial statements.

Amendments to Korean IFRS 1116, *Leases*

The amendments add requirements for the subsequent measurement of sale-and-leaseback transactions that are accounted for as sales in accordance with Korean IFRS 1115, *Revenue from Contracts with Customers*. The amendments require the seller-lessee to calculate the ‘lease payments’ or ‘revised lease payments’ in a way that does not result in the seller-lessee recognizing any gain or loss for the rights of use that the seller-lessee continues to retain after the lease commences. The application of amendments does not have a significant impact on the Company's interim separate financial statements.

Amendments to Korean IFRS 1007, *Statement of Cash Flows*, and 1107, *Financial Instruments: Presentation*

The amendments add to the disclosure objectives in Korean IFRS 1007, *Statement of Cash Flows*, that information about supplier financing arrangements should be disclosed to enable users of financial statements to assess the impact of those arrangements on the Company's liabilities and cash flows. The amendments also amend Korean IFRS 1107, *Financial Instruments: Presentation*, to add supplier financing arrangements as an example of a requirement to disclose information about an entity's exposure to concentrations of liquidity risk. The application of amendments does not have a significant impact on the Company's interim separate financial statements.

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

The amended accounting standard issued that is not yet effective for the annual reporting period commencing January 1, 2024 and has not been early adopted by the Company is as follows:

Amendments to Korean IFRS 1021, *The Effects of Changes in Foreign Exchange Rates*

The amendments require exchangeability of two currencies should be assessed in order to clarify reporting of foreign currency transactions in the absence of normal-functioning foreign exchange market. The amendments also require applicable spot exchange rate should be determined when the assessment indicates two currencies lack exchangeability. The amendments are effective for annual reporting periods beginning on or after January 1, 2025, with early application permitted.

2.2 Accounting Policies

Material accounting policies and method of computation used in the preparation of the interim separate financial statements are consistent with those of the annual separate financial statements for the year ended December 31, 2023, except for the changes due to the application of amendments of standards described in Note 2.1 and as described below.

Income tax expense for the interim period is recognized based on management's best estimate of the weighted average annual income tax rate expected for the full financial year considering global minimum top-up tax. The estimated average annual effective income tax rate is applied to the pre-tax income of the interim period.

2.3 Convenience Translation into United States Dollar Amounts

The US dollar amounts provided in the financial statements represent supplementary information solely for the convenience of the reader. All Korean won amounts are expressed in US dollars at the rate of ₩ 1,328.2 to \$1, the average exchange rate for the three-month period ended March 31, 2024. Such presentation is not in accordance with generally accepted accounting principles, and should not be construed as a representation that the Korean won amounts shown could be readily converted, realized or settled in US dollars at this or at any other rate.

2.4 Material Accounting Estimates and Assumptions

In preparing the interim separate financial statements, the management of the Company makes judgements, estimates and assumptions on matters which affect the application of policies and reported amounts of assets, liabilities, income and expenses. Estimates and assumptions are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. The resulting accounting estimates, by definition, seldom equal the related actual results.

Material accounting estimates and assumptions made in the preparation of the interim separate financial statements are consistent with those applied in the preparation of the annual separate financial statements for the year ended December 31, 2023, except for the estimates used to determine the income tax expense.

3. Financial Instruments by Category

Categorizations of financial assets and liabilities as of March 31, 2024 and December 31, 2023 are as follows:

(1) As of March 31, 2024

<i>(In millions of Korean won)</i>	Financial assets measured at amortized cost	Financial assets measured at fair value through other comprehensive income	Financial assets measured at fair value through profit or loss	Total
Financial assets				
Cash and cash equivalents	12,282,309	-	-	12,282,309
Short-term financial instruments	50,247	-	-	50,247
Trade receivables	32,832,663	-	-	32,832,663
Financial assets at fair value through other comprehensive income	-	2,049,692	-	2,049,692
Financial assets at fair value through profit or loss	-	-	-	-
Other	5,401,137	-	422,676	5,823,813
Total	50,566,356	2,049,692	422,676	53,038,724

<i>(In millions of Korean won)</i>	Financial liabilities measured at amortized cost	Other financial liabilities ^(*)	Total
Financial liabilities			
Trade payables	12,457,726	-	12,457,726
Short-term borrowings	-	8,555,367	8,555,367
Other payables	14,467,296	-	14,467,296
Current portion of long-term liabilities	6,646	235,581	242,227
Debentures	19,943	-	19,943
Long-term borrowings	21,990,000	911,308	22,901,308
Long-term other payables	4,220,795	-	4,220,795
Other	4,399,551	-	4,399,551
Total	57,561,957	9,702,256	67,264,213

(*) Other financial liabilities include lease liabilities which are not subject to categorizations and collateralized borrowing.

(2) As of December 31, 2023

<i>(In millions of Korean won)</i>	Financial assets measured at amortized cost	Financial assets measured at fair value through other comprehensive income	Financial assets measured at fair value through profit or loss	Total
Financial assets				
Cash and cash equivalents	6,061,451	-	-	6,061,451
Short-term financial instruments	50,071	-	-	50,071
Trade receivables	27,363,016	-	-	27,363,016
Financial assets at fair value through other comprehensive income	-	1,854,503	-	1,854,503
Financial assets at fair value through profit or loss	-	-	1	1
Other	4,972,284	-	393,235	5,365,519
Total	38,446,822	1,854,503	393,236	40,694,561

<i>(In millions of Korean won)</i>	Financial liabilities measured at amortized cost	Other financial liabilities^(*)	Total
Financial liabilities			
Trade payables	7,943,834	-	7,943,834
Short-term borrowings	-	5,625,163	5,625,163
Other payables	15,015,578	-	15,015,578
Current portion of long-term liabilities	6,354	222,137	228,491
Debentures	19,064	-	19,064
Long-term borrowings	21,990,000	912,035	22,902,035
Long-term other payables	4,486,390	-	4,486,390
Other	3,652,969	-	3,652,969
Total	53,114,189	6,759,335	59,873,524

(*) Other financial liabilities include lease liabilities which are not subject to categorizations and collateralized borrowing.

4. Financial Assets at Fair Value

(C) Details of financial assets at fair value as of March 31, 2024 and December 31, 2023 are as follows:

(1) Financial assets at fair value through other comprehensive income

<i>(In millions of Korean won)</i>	March 31, 2024	December 31, 2023
Equity instruments	2,049,692	1,854,503

(2) Financial assets at fair value through profit or loss

<i>(In millions of Korean won)</i>	March 31, 2024	December 31, 2023
Debt instruments	-	1

(D) Details of listed equity securities of financial assets at fair value as of March 31, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won, number of shares and percentage)</i>	March 31, 2024			December 31, 2023	
	Number of shares owned	Percentage of ownership^(*)(%)	Acquisition cost	Carrying amount (Market Value)	Carrying amount (Market Value)
Samsung Heavy Industries Co., Ltd.	134,027,281	15.2	932,158	1,147,274	1,038,712
Hotel Shilla Co., Ltd.	2,004,717	5.1	13,957	120,283	131,108
iMarket Korea Inc.	647,320	1.9	324	5,502	5,560
KT Skylife Co., Ltd.	240,000	0.5	3,344	1,349	1,421
Yongpyong Resort Corporation	400,000	0.8	1,869	1,166	1,220
A-Tech Solution Co., Ltd.	1,592,000	15.9	26,348	16,716	17,241
Wonik Holdings Co., Ltd.	1,759,171	2.3	15,410	7,248	5,928
Wonik IPS Co., Ltd.	1,850,936	3.8	16,214	76,814	62,839
Dongjin Semichem Co., Ltd.	2,467,894	4.8	48,277	119,076	95,508
Soulbrain Co., Ltd.	437,339	5.6	40,382	136,668	132,952
S&S Tech Corporation	1,716,116	8.0	65,933	78,341	77,740
YC Corporation	9,601,617	11.7	47,336	70,476	47,864
KCtech Co., Ltd.	1,022,216	4.9	20,720	46,357	27,395
LOTVacuum Co., Ltd.	1,267,668	7.1	18,990	29,283	25,544
New power Co., Ltd.	2,140,939	4.9	12,739	10,705	11,240
Fine Semitech Corporation	1,522,975	7.0	43,009	34,495	37,541
DNF Co., Ltd.	810,030	7.0	20,964	19,076	19,400
Marvell Technology Inc.	173,187	0.0	11,705	16,533	13,468
SoundHound AI Inc.	1,702,957	0.6	13,719	13,509	4,655
Total			1,353,398	1,950,871	1,757,336

(*) Ownership represents the Company's ownership of the total ordinary shares issued by each entity.

5. Inventories

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

(In millions of Korean won)	March 31, 2024			December 31, 2023		
	Gross amount	Valuation allowance	Carrying amount	Gross amount	Valuation allowance	Carrying amount
Finished goods	7,523,393	(781,497)	6,741,896	7,914,117	(1,203,662)	6,710,455
Work in process	21,147,969	(2,121,725)	19,026,244	21,866,523	(3,863,881)	18,002,642
Raw materials and supplies	5,608,077	(1,110,863)	4,497,214	4,910,170	(861,821)	4,048,349
Materials in transit	583,954	-	583,954	576,705	-	576,705
Total	34,863,393	(4,014,085)	30,849,308	35,267,515	(5,929,364)	29,338,151

6. Investments in Subsidiaries, Associates and Joint Ventures

(H) Changes in investments in subsidiaries, associates and joint ventures for the three-month periods ended March 31, 2024 and 2023 are as follows:

(In millions of Korean won)	2024	2023
Balance as of January 1	57,392,438	57,397,249
Acquisition	3,592	65,354
Disposal	(115,776)	(107,735)
Balance as of March 31	57,280,254	57,354,868

(I) Major investments in associates as of March 31, 2024 are as follows (refer to Note 27 for the list of subsidiaries):

Investee	Nature of relationship	Percentage of ownership(% ^(*))	Principal business location	Fiscal period-end
Samsung Electro-Mechanics Co., Ltd.	Manufacture and supply electronic components including passive components, circuit boards, and modules	23.7	Korea	December
Samsung SDS Co., Ltd.	Provide Information Technology(IT) services including computer programming, system integration and management, and logistical services	22.6	Korea	December
Samsung Biologics Co., Ltd.	Investment in new business	31.2	Korea	December
Samsung SDI Co., Ltd. ^{(*)2}	Manufacture and supply electronic parts including secondary cell batteries	19.6	Korea	December
Cheil Worldwide, Inc.	Advertising agency	25.2	Korea	December

(*)1 Ownership represents the Company's ownership of the total ordinary shares issued by each entity.

(*2) The Company's ownership of ordinary shares outstanding is 20.6%.

(J) Fair value of marketable investments in associates as of March 31, 2024 and December 31, 2023 as follows:

<i>(In millions of Korean won and number of shares)</i>	March 31, 2024			December 31, 2023	
	Number of shares held	Market value	Carrying amount	Market value	Carrying amount
Samsung Electro-Mechanics Co., Ltd.	17,693,084	2,630,962	445,244	2,710,580	445,244
Samsung SDS Co., Ltd.	17,472,110	2,856,690	560,827	2,970,259	560,827
Samsung Biologics., Co., Ltd.	22,217,309	18,462,584	1,595,892	16,885,155	1,595,892
Samsung SDI., Co., Ltd.	13,462,673	6,340,919	1,242,605	6,354,382	1,242,605
Cheil Worldwide Inc	29,038,075	545,335	491,599	552,595	491,599

7. Property, Plant and Equipment

(A) Changes in property, plant and equipment for the three-month periods ended March 31, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Balance as of January 1	140,579,161	123,266,986
Acquisition and capital expenditures	8,292,612	9,399,398
Depreciation	(6,907,882)	(6,278,126)
Disposals/scrap/impairment	(32,588)	(31,758)
Other	(1,522)	(923)
Balance as of March 31	141,929,781	126,355,577

(B) Details of depreciation of property, plant and equipment for the three-month periods ended March 31, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Cost of sales	6,349,137	5,803,397
Selling and administrative expenses and other	558,745	474,729
Total	6,907,882	6,278,126

(C) Right-of-use assets as of March 31, 2024 amount to ₩ 1,843,156 million (December 31, 2023: ₩ 1,840,913 million). During the three-month periods ended March 31, 2024 and 2023, newly recognized right-of-use assets amount to ₩ 74,283 million and ₩ 204,006 million, respectively, with relevant depreciation of ₩ 71,861 million and ₩ 50,880 million, respectively.

8. Intangible Assets

(A) Changes in intangible assets for the three-month periods ended March 31, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Balance as of January 1	10,440,211	8,561,424
External acquisitions	816,682	3,410,160
Amortization	(586,939)	(657,121)
Disposals/scrap/impairment	(8,745)	(15,006)
Other	10,178	19,122
Balance as of March 31	10,671,387	11,318,579

(B) Details of amortization of intangible assets for the three-month periods ended March 31, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Cost of sales	440,433	506,898
Selling and administrative expenses and other	146,506	150,223
Total	586,939	657,121

9. Borrowings

Details of the carrying amounts of borrowings as of March 31, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	Financial institutions	Maturity Date	Interest rate (%) as of Mar 31, 2024	March 31, 2024	December 31, 2023
Short-term borrowings					
Collateralized borrowings ^(*)	Woori Bank and other		0.0 ~ 13.2	8,555,367	5,625,163
Total				8,555,367	5,625,163
Current portion of long-term borrowings					
Lease liabilities ^(*)	-		2.8	235,581	222,137
Total				235,581	222,137
Long-term borrowings					
Lease liabilities ^(*)	-		2.8	911,308	912,035
Non-collateralized borrowings	Samsung Display Co., Ltd.	Aug 16, 2025	4.6	21,990,000	21,990,000
Total				22,901,308	22,902,035

(*) Collateralized borrowings are secured by trade receivables.

(*) Interest expenses arising from the lease liabilities for the three-month periods ended March 31, 2024 and 2023 amount to ₩ 7,953 million and ₩ 5,227 million, respectively, which are determined using the weighted average incremental borrowing rate.

10. Debentures

Details of the carrying amounts of debentures as of March 31, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	Issue date	Due date	Interest rate (%) as of Mar 31, 2024	March 31, 2024	December 31, 2023
US dollar denominated straight bonds ^(*)	Oct 2, 1997	Oct 1, 2027	7.7	26,936 (USD 20 million)	25,788 (USD 20 million)
Less: Discounts				(347)	(370)
Less: Current portion				(6,646)	(6,354)
Total				19,943	19,064

(*) US dollar denominated straight bonds are repaid annually for twenty years after a ten-year grace period from the date of issuance. Interest is paid semi-annually in arrears.

11. Net Defined Benefit Liabilities (Assets)

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

<i>(In millions of Korean won)</i>	March 31, 2024	December 31, 2023
Present value of funded defined benefit obligations	12,165,657	11,959,655
Present value of unfunded defined benefit obligations	23,062	22,672
Subtotal	12,188,719	11,982,327
Fair value of plan assets	(15,637,707)	(15,728,024)
Total	(3,448,988)	(3,745,697)

(E) The components of defined benefit costs recognized in profit or loss for the three-month periods ended March 31, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Current service cost	263,395	240,592
Net interest income	(53,911)	(68,812)
Total	209,484	171,780

(F) The expenses related to defined benefit plans recognized in the statements of profit or loss for the three-month periods ended March 31, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Cost of sales	82,912	69,079
Selling and administrative expenses and other	126,572	102,701
Total	209,484	171,780

12. Provisions

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

<i>(In millions of Korean won)</i>	Warranty (A)	Royalty expenses (B)	Long-term incentives (C)	Other (D, E)	Total
Balance as of January 1	673,951	1,815,938	713,719	3,750,227	6,953,835
Charged to profit or loss	248,486	406,635	50,711	1,402,929	2,108,761
Payment	(171,412)	(317,888)	-	(313,582)	(802,882)
Other	-	5,671	-	29,047	34,718
Balance as of March 31	751,025	1,910,356	764,430	4,868,621	8,294,432

- (F) The Company accrues warranty provisions for estimated costs of quality assurance, exchanges, repairs, recalls, and future services based on historical experience and terms of warranty programs.
- (G) The Company recognizes provisions for the estimated royalty expenses that are under negotiation with counterparties. The timing and amount of payment depend on the settlement of the negotiations.
- (H) The Company has a long-term incentive plan for its executives based on a three-year management performance criteria and recognizes a provision for the estimated incentive cost.
- (I) The Company records provisions for future expenses expected to be incurred for products that have been discontinued from manufacturing and sales.
- (J) The Company makes provisions for the emission in excess of the emission rights held by the Company for the applicable years. Details of emission rights and liabilities as of March 31, 2024 are as follows:

- (1) The amount of emission rights allocated free of charge in the current commitment period and the estimated amount of emission as of March 31, 2024 are as follows:

<i>(In ten thousand metric tons)</i>	March 31, 2024
Emission rights allocated free of charge	1,176
Estimated volume of emission	1,329

- (2) Changes in the emission rights for the three-month periods ended March 31, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Balance as of January 1	3,137	19,567
Acquisition	-	-
Utilization	-	-
Balance as of March 31	3,137	19,567

- (3) Changes in the emission liabilities for the three-month periods ended March 31, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Balance as of January 1	-	32,825
Charged to profit or loss	-	-

Utilization	-	-
Balance as of March 31	-	32,825

13. Commitments and Contingencies

(A) Guarantees

(1) Debt guarantees provided by the Company for overseas subsidiaries as of March 31, 2024 are as follows:

(In millions of Korean won and thousands of US dollars)

Debtor	Creditor	Date of maturity	Amount of indebtedness	Guaranteed amount
SETK	BNP and others	December 16, 2024	518,378	1,235,016
SSA	SCB and others	December 16, 2024	48,498	428,282
SEDA	BRADESCO and others	December 16, 2024	279	443,097
Other	Others		-	8,817,861
Total			567,155	10,924,256
			USD 421,112	USD 8,111,268

(2) The ceiling amount of guarantees provided by the Company for the execution of contracts by overseas subsidiaries is ₩ 494,119 million as of March 31, 2024.

(3) The Company has not been provided any collateral or guarantees from its related parties as of March 31, 2024.

(B) Litigation

As of March 31, 2024, the Company is involved in various claims, disputes, and investigations conducted by regulatory bodies that arose during the normal course of business with numerous entities. Although the outflow of resources and timing of these matters are uncertain, the Company believes the outcome will not have a material impact on the financial position of the Company.

(C) Joint liabilities related to the divestiture

The Company, Samsung Display Co., Ltd. and others are jointly and severally liable to fulfill the debts of Samsung Display Co., Ltd. and others which relate to the periods prior to Samsung Display Co., Ltd.'s separation from the Company.

(D) Other commitments

As of March 31, 2024, contractual commitments for the acquisition of property, plant and equipment and intangible assets amount to ₩ 11,990,151 million.

14. Contract Liabilities

The Company has recognized contract related to contracts with customers as follows:

<i>(In millions of Korean won)</i>	March 31, 2024	December 31, 2023
Contract liabilities ^(*)	1,530,629	1,491,085

^(*) Contract liabilities include advances received, accrued expenses, other current liabilities and others.

15. Share Capital

As of March 31, 2024, the Company's total number of authorized shares is 25,000,000,000 shares (₩ 100 per share). As well as its ordinary shares, Company also has non-cumulative preference shares that are eligible for an additional 1% cash dividend over par value per annum compared to ordinary shares, but without voting rights. The Company has issued 5,969,782,550 shares of ordinary shares and 822,886,700 shares of preference shares as of March 31, 2024, excluding the number of retired shares. As of the March 31, 2024, the number of shares outstanding is the same as the number of shares issued above, and no changes were made to the number of shares outstanding during the three month period ended March 31, 2024 and the year ended December 31, 2023. Due to the retirement of shares, the total par value of the shares issued which excludes the number of retired shares is ₩ 679,267 million (ordinary shares of ₩ 596,978 million and preference shares of ₩ 82,289 million), which does not agree with paid-in capital of ₩ 897,514 million.

16. Retained Earnings

(B) Retained earnings as of March 31, 2024 and December 31, 2023 consist of the following:

<i>(In millions of Korean won)</i>	March 31, 2024	December 31, 2023
Legal reserves	450,789	450,789
Discretionary reserves, etc.	226,797,022	219,512,562
Total	227,247,811	219,963,351

(B) Details of interim dividends are as follows (Record date: March 31, 2024 and 2023)

<i>(In millions of Korean won and number of shares)</i>		2024	2023	
1 st Quarter	Number of shares eligible for dividends	Ordinary shares	5,969,782,550	5,969,782,550
		Preference shares	822,886,700	822,886,700
	Dividend rate (based on par value)	Ordinary/Preference	361%	361%
		Ordinary shares	2,155,092	2,155,092
	Dividend amount	Preference shares	297,062	297,062
		Total	2,452,154	2,452,154

17. Other Components of Equity

Other components of equity as of March 31, 2024 and December 31, 2023 consist of the following:

<i>(In millions of Korean won)</i>	March 31, 2024	December 31, 2023
Gain on valuation of financial assets at fair value through other comprehensive income	389,814	246,155
Remeasurement of net defined benefit assets	(2,559,987)	(2,483,547)
Others	1,760,408	1,760,408
Total	(409,765)	(476,984)

18. Expenses by Nature

Expenses by nature for the three-month periods ended March 31, 2024 and 2023 consist of the following:

<i>(In millions of Korean won)</i>	2024	2023
Changes in finished goods, work in process, and other	(1,055,043)	(2,536,693)
Raw materials used, merchandise purchased, and other	24,505,265	25,714,241
Wages and salaries	3,871,247	4,082,252
Post-employment benefit	210,609	173,669
Depreciation	6,907,882	6,278,126
Amortization	586,939	657,121
Welfare	879,011	764,552
Utilities	1,391,476	1,228,172
Outsourcing	951,212	931,459
Advertising	370,551	273,022
Sales promotion	310,302	292,124
Other	10,302,786	8,219,395
Total^(*)	49,232,237	46,077,440

^(*) Equal to the sum of cost of sales and selling and administrative expenses in the interim separate statement of profit or loss.

19. Selling and Administrative Expenses

Selling and administrative expenses for the three-month periods ended March 31, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Selling and administrative expenses		
Wages and salaries	755,594	736,282
Post-employment benefit	36,937	30,975
Commissions	720,785	901,887
Depreciation	118,581	112,775
Amortization	98,233	95,712
Advertising	370,551	273,022
Sales promotion	310,302	292,124
Transportation	227,061	135,831
Service	587,770	273,760
Other	509,078	496,322
Subtotal	3,734,892	3,348,690
Research and development expenses		
Research and development	6,724,495	5,615,261
Total	10,459,387	8,963,951

20. Other Non-Operating Income and Expenses

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

<i>(In millions of Korean won)</i>	2024	2023
Other non-operating income		
Dividend income	8,149,657	8,439,845
Rental income	46,522	45,897
Gain on disposal of property, plant and equipment	9,628	31,902
Other	43,311	52,340
Total	8,249,118	8,569,984

<i>(In millions of Korean won)</i>	2024	2023
Other non-operating expenses		
Loss on disposal of property, plant and equipment	21,264	3,166
Donations	64,584	57,347
Other	185,239	31,727
Total	271,087	92,240

21. Financial Income and Expenses

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

<i>(In millions of Korean won)</i>	2024	2023
Financial income		
Interest income	60,491	61,775
Financial assets measured at amortized cost	60,491	61,775
Foreign exchange differences	1,350,333	1,855,830
Gain from derivatives	29,441	235,753
Total	1,440,265	2,153,358

<i>(In millions of Korean won)</i>	2024	2023
Financial expenses		
Interest expenses	200,943	161,503
Financial liabilities measured at amortized cost	72,674	78,712
Other financial liabilities	128,269	82,791
Foreign exchange differences	1,239,436	2,158,645
Total	1,440,379	2,320,148

The Company recognizes foreign exchange gains and losses arising from foreign currency transactions and translation as financial income and expenses.

22. Income Tax Expense

Income tax expense is recognized based on management's best estimate of the weighted average annual income tax rate expected for the full financial year considering global minimum top-up tax. The average annual tax rate expected as of March 31, 2024 to be effective for the year ended December 31, 2024 is 2.5%.

23. Earnings per Share

(C) Basic earnings per share

Basic earnings per share for the three-month periods ended March 31, 2024 and 2023 are calculated as follows:

(1) Ordinary shares

<i>(In millions of Korean won and thousands of number of shares)</i>	2024	2023
Profit for the period	9,737,437	4,158,095
Profit for the period available for ordinary shares	8,557,811	3,654,369
Weighted-average number of ordinary shares outstanding	5,969,783	5,969,783
Basic earnings per ordinary share (in Korean won)	1,434	612

(2) Preference shares

<i>(In millions of Korean won and thousands of number of shares)</i>	2024	2023
Profit for the period	9,737,437	4,158,095
Profit for the period available for preference shares	1,179,626	503,726
Weighted-average number of preference shares outstanding	822,887	822,887
Basic earnings per preference share (in Korean won)	1,434	612

(D) Diluted earnings per share

The Company does not have dilutive potential ordinary shares and as a result, basic earnings per share and diluted earnings per share are the same for the three-month periods ended March 31, 2024 and 2023.

24. Statements of Cash Flows

(A) The Company used the indirect method to present cash flows from operating activities. Adjustments and changes in assets and liabilities arising from operating activities for the three-month periods ended March 31, 2024 and 2023 are as follows:

- Adjustments

<i>(In millions of Korean won)</i>	2024	2023
Adjustments :		
Income tax expense	247,860	244,098
Financial income	(467,923)	(666,230)
Financial expenses	878,506	1,131,568
Post-employment benefits	210,609	173,669
Depreciation	6,907,882	6,278,126
Amortization	586,939	657,121
Bad debt expense	6,975	10,512
Dividend income	(8,149,657)	(8,439,845)
Gain on disposal of property, plant and equipment	(9,628)	(31,902)
Loss on disposal of property, plant and equipment	21,264	3,166
Loss on valuation of inventories and others	(1,754,124)	2,051,227
Others	54,437	8,658
Total	(1,466,860)	1,420,168

- Changes in assets and liabilities arising from operating activities

<i>(In millions of Korean won)</i>	2024	2023
Changes in assets and liabilities :		
Increase in trade receivables	(5,181,386)	(2,255,442)
Decrease in non-trade receivables	223,291	866,298
Decrease (increase) in prepaid expenses	37,269	(286,879)
Decrease (increase) in inventories	247,137	(4,492,698)
Increase in trade payables	4,386,544	3,306,093
Decrease in other payables	(1,227,176)	(2,759,686)
Increase (decrease) in advances received	(55,057)	13,282
Increase (decrease) in withholdings	25,813	(138,933)
Decrease in accrued expenses	(278,614)	(2,751,744)
Increase in provisions	1,305,879	1,249,224
Payment of post-employment benefits	(220,017)	(99,540)
Others	(703,067)	176,498
Total	(1,439,384)	(7,173,527)

(B) For the three-month periods ended March 31, 2024 and 2023, cash outflows from principal portion of lease liabilities (financial activities) were ₩ 52,838 million and ₩ 39,266 million, respectively, and cash outflows due to interest expenses (operating activities) in relation to the lease liabilities amount to ₩ 7,953 million and ₩ 5,227 million, respectively.

25. Financial Risk Management

The Company manages its financial risks with a focus on minimizing the market risk, the credit risk, and the liquidity risk arising from its operating activities. To this end, the Company closely monitors and responds to each risk factor.

The Company establishes global financial management standards, periodically measures customer and counterparty financial risk, and manages the risk with currency hedges and review of cash flows.

The Company also manages foreign exchange risk by monitoring foreign exchange rate fluctuations through local financial centers in the major regions (United States, United Kingdom, Singapore, China, Brazil, and Russia), which act as an agent for the subsidiaries in each region to manage foreign exchange transactions. In addition, local finance centers in the major regions respond to liquidity risk through a regionally integrated financial structure.

The Company's financial assets subject to financial risk management consist of cash and cash equivalents, short-term financial instruments, financial assets at amortized cost, trade receivables and others, while its financial liabilities consist of trade payables, borrowings, and others.

(F) Market risk

(4) Foreign exchange risk

The Company is exposed to foreign exchange risk arising from its global operations through transactions in currencies other than its functional currency. The main currencies in which the Company is exposed to foreign exchange risk are the US dollar and European Euro.

The Company focuses on minimizing the impact of foreign exchange fluctuation by matching levels of assets and liabilities denominated in each foreign currency. To minimize exchange position, the Company's foreign exchange management policy requires normal business transactions, including import and export, as well as financing transactions, such as depositing and borrowing, to be in local currency or match as closely as possible cash inflows and outflows incurred in the respective foreign currencies. This reduces but may not eliminate, the foreign exchange risk to which the Company is exposed. Moreover, the Company periodically evaluates and monitors the foreign exchange risk to efficiently mitigate such risk, and the speculative foreign exchange transactions are strictly prohibited.

(5) Interest rate risk

Interest rate risk for floating interest rate financial instruments can be defined as the risk of changes in the fair value of components of the statement of financial position due to changes in the market interest rates, and the risk of changes in the future cash flows of interest income and expenses arising from investing and financing activities. The Company's exposure to interest rate risk arises primarily from interest-bearing deposits and floating interest rate debt obligations, and the Company manages its exposure to interest rate risk to minimize uncertainty and cost of financing resulting from changes in interest rates.

(6) Price risk

The Company's investment portfolio consists of direct and indirect investments in equity instruments classified as financial assets at fair value through other comprehensive income, which is in line with the Company's strategy.

As of March 31, 2024 and 2023, price fluctuation of marketable equity securities (listed stocks) by 1% would result in changes in other comprehensive income (before income tax) of ₩ 19,509 million and ₩ 13,678 million, respectively.

(G) Credit risk

Credit risk arises during the normal course of transactions and investing activities where customers or other parties fail to discharge an obligation. The Company monitors and sets the customer's and counterparty's credit limit on a periodic basis based on their financial conditions, default history and other factors. Adequate insurance coverage is maintained for trade receivables related to trading partners situated in high risk countries.

Credit risk also can arise from transactions with financial institutions including transactions in financial instrument such as cash and cash equivalents, deposits, and derivative instruments. To minimize such risk, the Company transacts only with banks that have a strong international credit rating (S&P A and above), and new transactions with financial institutions which the Company does not have an existing relationship are subject to the completion of risk assessments prior to commencement of transactions. The Company generally enters into financial agreements without restrictions, such as debt ratio covenants, provision of collateral and/or repayment of loans/borrowings, and otherwise separate approvals are obtained.

The carrying amount of the Company's financial assets is net of impairment losses and the Company's maximum exposure to credit risk is equal to the carrying amount of its financial assets.

(H) Liquidity risk

Liquidity risk is the risk that a company will have difficulty in meeting all its financial obligations. The Company's main sources of liquidity are cash generated from operations and funds raised from the capital markets and financial institutions, while its main liquidity needs are for investments in production, research and development, working capital and dividends. Due to the nature of the Company's business, which involves large investments, maintaining adequate levels of liquidity is critical. The Company maintains and manages adequate liquidity through forecasting periodic cash flows, estimating required cash levels, and monitoring inflows and outflows of cash.

The Company has established Cash Pooling by region to respond effectively to liquidity risks, even when individual companies within a region are underfunded. Cash Pooling is a system that shares funds between underfunded and overfunded companies, minimizing the liquidity risk of individual companies, easing the burden of fund management, and reducing financial costs.

In addition, the Company has secured credit lines for its overseas subsidiaries by means of payment guarantees from the head office in the event of large liquidity needs, and, at the end of the period, the Company had investment grade ratings of Aa2 from Moody's and AA- from S&P, enabling it to raise funds on the capital market in a timely manner.

(I) Capital risk management

The purpose of capital management is to maintain a sound capital structure and protect the Company's ability to continue to provide benefits to its shareholders and stakeholders as a going concern. The Company monitors capital on the basis of credit ratings and debt ratio.

The debt ratios as of March 31, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	March 31, 2024	December 31, 2023
Total liabilities	79,943,835	72,069,515
Total equity	232,139,453	224,787,774
Debt ratio	34.4%	32.1%

(J) Fair value measurement

(6) Carrying amounts and fair values of financial instruments by category as of March 31, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	<i>March 31, 2024</i>		<i>December 31, 2023</i>	
	<i>Carrying amount</i>	<i>Fair value</i>	<i>Carrying amount</i>	<i>Fair value</i>
<i>Financial assets</i>				
<i>Cash and cash equivalents</i>	12,282,309	(*1)	6,061,451	(*1)
<i>Short-term financial instruments</i>	50,247	(*1)	50,071	(*1)
<i>Trade receivables</i>	32,832,663	(*1)	27,363,016	(*1)
<i>Financial assets at fair value through other comprehensive income</i>	2,049,692	2,049,692	1,854,503	1,854,503
<i>Financial assets at fair value through profit or loss</i>	-	-	1	1
<i>Other(*2)</i>	5,823,813	422,676	5,365,519	393,235
Total financial assets	53,038,724		40,694,561	
<i>Financial liabilities</i>				
<i>Trade payables</i>	12,457,726	(*1)	7,943,834	(*1)
<i>Short-term borrowings</i>	8,555,367	(*1)	5,625,163	(*1)
<i>Other payables</i>	14,467,296	(*1)	15,015,578	(*1)
<i>Current portion of long-term liabilities</i>	242,227	7,121	228,491	6,757
- <i>Long-term borrowings</i>	235,581	(*3)	222,137	(*3)
- <i>Debentures</i>	6,646	7,121	6,354	6,757
<i>Debentures</i>	19,943	22,864	19,064	21,695
<i>Long-term borrowings</i>	22,901,308	(*1)(*3)	22,902,035	(*3)
<i>Long-term other payables</i>	4,220,795	(*1)	4,486,390	(*1)
<i>Other</i>	4,399,551	(*1)	3,652,969	(*1)
Total financial liabilities	67,264,213		59,873,524	

(*1) Carrying amount is a reasonable approximation of fair value.

(*2) Assets measured at the cost of ₩ 5,401,137 million on March 31, 2024, which is a reasonable estimate of fair value, are excluded from the fair value disclosures.

(*3) Lease liabilities, classified under the current portion of long-term liabilities and long-term borrowings, are excluded from the fair value disclosures in accordance with Korean IFRS 1107.

(7) Fair value hierarchy classifications of the financial instruments that are measured or disclosed at fair value as of March 31, 2024 and December 31, 2023 are as follows:

March 31, 2024				
<i>(In millions of Korean won)</i>	Level 1	Level 2	Level 3	Total balance
1) Assets				
Financial assets at fair value through other comprehensive income	1,950,871	-	98,821	2,049,692
Financial assets at fair value through profit or loss	-	-	-	-
Other	-	-	422,676	422,676
2) Liabilities				
Current portion of debentures	-	7,121	-	7,121
Debentures	-	22,864	-	22,864

December 31, 2023				
<i>(In millions of Korean won)</i>	Level 1	Level 2	Level 3	Total balance
1) Assets				
Financial assets at fair value through other comprehensive income	1,757,336	-	97,167	1,854,503
Financial assets at fair value through profit or loss	-	-	1	1
Other	-	-	393,235	393,235
2) Liabilities				
Current portion of debentures	-	6,757	-	6,757
Debentures	-	21,695	-	21,695

The levels of the fair value hierarchy and its application to financial assets and liabilities are described below.

- Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities
- Level 2: Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly
- Level 3: Inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs)

The fair value of financial instruments traded in active markets is based on quoted market prices at the reporting date. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. These instruments are included in Level 1. The instruments included in Level 1 are listed equity investments, most of which are classified as financial assets at fair value through other comprehensive income.

The fair value of financial instruments that are not traded in an active market is determined by using valuation techniques. These valuation techniques maximize the use of observable market data where available and rely as little as possible on entity-specific estimates. If all significant inputs required to measure the fair value of an instrument are observable, the instrument is included in Level 2.

If one or more of the significant inputs are not based on observable market data, the instrument is included in Level 3.

The Company performs the fair value measurements required for financial reporting purposes, including Level 3 fair values, and discusses valuation processes and results in line with the financial reporting timelines. The Company's policy is to recognize transfers between levels at the end of the reporting period if corresponding events or changes in circumstances have occurred.

Specific valuation techniques used to value financial instruments include:

- Quoted market prices or dealer quotes for similar instruments
- The fair value of forward foreign exchange contracts determined using forward exchange rates at the reporting date, with the resulting value discounted to present value

Other techniques, such as discounted cash flow analysis, binomial distribution model, etcetera, are used to determine fair value for the remaining financial instruments. For trade and other receivables that are classified as current assets, the book value approximates a reasonable estimate of fair value.

(8) Valuation technique and the inputs

The Company utilizes a present value technique to discount future cash flows using proper interest rates for corporate bonds, government and public bonds, and bank debentures that are classified as Level 2 in the fair value hierarchy.

The following table presents the valuation technique and the inputs used for major financial instruments classified as Level 3 as of March 31, 2024.

(In millions of Korean won, and percentage)

Classification	Fair value	Valuation technique	Level 3 inputs	Input range
Financial assets at fair value through other comprehensive income				
Samsung Venture Investment	33,250	Discounted cash flow	Permanent growth rate	1%
			Weighted average cost of capital	16.6%
MiCo Ceramics Co., Ltd.	34,662	Discounted cash flow	Permanent growth rate	0.0%
			Weighted average cost of capital	15.4%
Call option on equity instruments	422,676	Binomial model	Risk-free rate	3.5%
			Price volatility	69.7%

(9) Changes in Level 3 instruments:

(In millions of Korean won)

	2024	2023
Financial assets		
Balance as of January 1	490,403	116,726
Acquisitions	-	27,784
Disposals	-	(61)
Amount recognized in profit for the period	29,440	234,641

Amount recognized in other comprehensive income	1,654	(80)
Balance as of March 31	521,497	379,010

(10) Sensitivity analysis for recurring fair value measurements categorized within Level 3

Sensitivity analysis of financial instruments is performed to measure favorable and unfavorable changes in the fair value of financial instruments which are affected by the unobservable parameters, using a statistical technique. When the fair value is affected by more than two input parameters, the amounts represent the most favorable or unfavorable.

The results of the sensitivity analysis for effect on income or loss before tax from changes in inputs for major financial instruments which are categorized within Level 3 and subject to sensitivity analysis are as follows:

<i>(In millions of Korean won)</i>	Classification	Favorable changes		Unfavorable changes	
		Profit or loss	Equity	Profit or loss	Equity
	Financial assets at fair value through other comprehensive income ^(*)	-	2,585	-	(2,639)
	Other ^(*)	103,163	-	(102,740)	-

^(*) For equity securities, changes in fair value are calculated by increasing or decreasing the discount rate and growth rate (-1.0% ~1.0%), which are significant unobservable inputs.

^(*) Changes in fair value were calculated based on changes in underlying asset price (20%) and price volatility (10%), which are significant unobservable inputs.

26. Segment Information

The chief operating decision-maker has been identified as the Management Committee. The Company determines operating segments based on the segment information reported to the Management Committee. The Management Committee reviews the operating profits of each operating segment in order to evaluate the performance and to make strategic decisions regarding the allocation of resources to each segment.

Revenue consists mostly of product sales. The operating segments are product-based and are identified based on the internal organization and revenue streams. As of the reporting date, the operating segments are comprised of DX, DS, and others.

Total assets and liabilities of each operating segment are excluded from the disclosure as these have not been provided regularly to the Management Committee.

(1) For the three-month period ended March 31, 2024

<i>(In millions of Korean won)</i>	DX	DS	Total^(*)
Revenue	30,581,450	22,829,373	51,239,617
Depreciation	133,744	6,723,408	6,907,882
Amortization	393,261	136,186	586,939
Operating profit	938,898	1,067,002	2,007,380

^(*) Other operating segments are not separately disclosed.

(2) For the three-month period ended March 31, 2023

<i>(In millions of Korean won)</i>	DX	DS	Total^(*)
Revenue	29,236,174	13,344,621	42,168,679
Depreciation	135,333	6,092,841	6,278,126
Amortization	406,889	192,726	657,121
Operating profit	1,221,642	(4,982,377)	(3,908,761)

^(*) Other operating segments are not separately disclosed.

27. Related Party Transactions

(A) Subsidiaries

List of subsidiaries as of March 31, 2024 is as follows:

Region	Subsidiaries	Industry	Percentage of ownership (%) ^(*)
	Samsung Electronics America, Inc. (SEA)	Sale of electronic devices	100.0
	Samsung International, Inc. (SII)	Manufacture of electronic devices	100.0
	Samsung Mexicana S.A. de C.V (SAMEX)	Manufacture of electronic devices	100.0
	Samsung Electronics Home Appliances America, LLC (SEHA)	Manufacture of home appliances	100.0
	Samsung Research America, Inc. (SRA)	Research & Development (R&D)	100.0
	SAMSUNG NEXT LLC (SNX)	Management of overseas subsidiaries	100.0
	SAMSUNG NEXT FUND LLC (SNXF)	Technology business, venture capital investments	100.0
	NeuroLogica Corp.	Manufacture and sale of medical equipment	100.0
	Samsung HVAC America, LLC	Sale of air conditioning products	100.0
	Joyent, Inc.	Cloud services	100.0
	SmartThings, Inc.	Sale of smart home electronics	100.0
	TeleWorld Solutions, Inc. (TWS)	Installation of network devices	100.0
	Samsung Semiconductor, Inc. (SSI)	Sale of semiconductor and display panels	100.0
	Samsung Federal, Inc. (SFI)	R&D	100.0
	Samsung Austin Semiconductor LLC. (SAS)	Manufacture of semiconductors	100.0
	Samsung Oak Holdings, Inc. (SHI)	Management of overseas subsidiaries	100.0
	SEMES America, Inc.	Semiconductor equipment maintenance	100.0
	Samsung Display America Holdings, Inc. (SDAH)	Management of overseas subsidiaries	100.0
	eMagin Corporation	Development and manufacture of display panel	100.0
	Samsung Electronics Canada, Inc. (SECA)	Sale of electronic devices	100.0
	AdGear Technologies Inc.	Digital advertising platforms	100.0
	Samsung Elettronica da Amazonia Ltda. (SEDA)	Manufacture and sale of electronic devices	100.0
	Samsung Electronics Mexico S.A. De C.V. (SEM)	Sale of electronic devices	100.0
America	Samsung Electronics Digital Appliance Mexico, SA de CV (SEDAM)	Manufacture of home appliances	100.0
	Samsung Electronics Latinoamerica(Zona Libre), S. A. (SELA)	Sale of electronic devices	100.0
	Samsung Electronics Latinoamerica Miami, Inc. (SEMI)	Sale of electronic devices	100.0
	Samsung Electronica Colombia S.A. (SAMCOL)	Sale of electronic devices	100.0
	Samsung Electronics Argentina S.A. (SEASA)	Marketing and services	100.0
	Samsung Electronics Chile Limitada (SECH)	Sale of electronic devices	100.0
	Samsung Electronics Peru S.A.C. (SEPR)	Sale of electronic devices	100.0
	Samsung Electronics Venezuela, C.A. (SEVEN)	Marketing and services	100.0
	Samsung Electronics Panama. S.A. (SEPA)	Consulting	100.0
	Harman International Industries, Inc.	Management of overseas subsidiaries	100.0
	Harman Becker Automotive Systems, Inc.	Manufacture, sales and R&D of audio products	100.0
	Harman Connected Services, Inc.	Connected service provider	100.0
	Harman Connected Services Engineering Corp.	Connected service provider	100.0
	Harman da Amazonia Industria Eletronica e Participacoes Ltda.	Manufacture and sale of audio products	100.0
	Harman de Mexico, S. de R.L. de C.V.	Manufacture of audio products	100.0
	Harman do Brasil Industria Eletronica e Participacoes Ltda.	Sales and R&D of audio products	100.0
	Harman Financial Group LLC	Management company	100.0
	Harman International Industries Canada Ltd.	Sale of audio products	100.0
	Harman International Mexico, S. de R.L. de C.V.	Sale of audio products	100.0
	Harman KG Holding, LLC	Management of overseas subsidiaries	100.0
	Harman Professional, Inc.	Sales and R&D of audio products	100.0
	Roon Labs, LLC.	Sale of audio products	100.0
	Beijing Integrated Circuit Industry International Fund, L.P.	Venture capital investment fund	61.4
	China Materialia New Materials 2016 Limited Partnership	Venture capital investment fund	99.0

(*) Ownership represents the Company's ownership of the voting rights in each entity, including subsidiaries' ownerships.

Region	Subsidiaries	Industry	Percentage of ownership (%) ^(*)
	Samsung Electronics (UK) Ltd. (SEUK)	Sale of electronic devices	100.0
	Samsung Electronics Ltd. (SEL)	Management of overseas subsidiaries	100.0
	Samsung Semiconductor Europe Limited (SSEL)	Sale of semiconductor and display panels	100.0
	Samsung Electronics GmbH (SEG)	Sale of electronic devices	100.0
	Samsung Electronics Holding GmbH (SEHG)	Management of overseas subsidiaries	100.0
	Samsung Semiconductor Europe GmbH (SSEG)	Sale of semiconductor and display panels	100.0
	Samsung Electronics France S.A.S (SEF)	Sale of electronic devices	100.0
	Samsung Electronics Italia S.P.A. (SEI)	Sale of electronic devices	100.0
	Samsung Electronics Iberia, S.A. (SESA)	Sale of electronic devices	100.0
	Samsung Electronics Portuguesa, Unipessoal, Lda. (SEP)	Sale of electronic devices	100.0
	Samsung Electronics Hungarian Private Co., Ltd. (SEH)	Manufacture and sale of electronic devices	100.0
	Samsung Electronics Europe Logistics B.V. (SELS)	Logistics	100.0
	Samsung Electronics Benelux B.V. (SEBN)	Sale of electronic devices	100.0
	Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	Management of overseas subsidiaries	100.0
	Samsung Electronics Nordic Aktiebolag (SENA)	Sale of electronic devices	100.0
	Samsung Electronics Slovakia s.r.o (SESK)	Manufacture of TV and monitors	100.0
	Samsung Display Slovakia, s.r.o., v likvidácii (SDSK)	Toll processing of display panel	100.0
	Samsung Electronics Polska, SP.Zo.o (SEPOL)	Sale of electronic devices	100.0
	Samsung Electronics Poland Manufacturing SP.Zo.o (SEPM)	Manufacture of home appliances	100.0
	Samsung Electronics Romania LLC (SEROM)	Sale of electronic devices	100.0
	Samsung Electronics Austria GmbH (SEAG)	Sale of electronic devices	100.0
	Samsung Electronics Switzerland GmbH (SESG)	Sale of electronic devices	100.0
	Samsung Electronics Czech and Slovak s.r.o. (SECZ)	Sale of electronic devices	100.0
Europe & CIS	SAMSUNG ELECTRONICS BALTICS SIA (SEB)	Sale of electronic devices	100.0
	Samsung Electronics Greece S.M.S.A (SEGR)	Sale of electronic devices	100.0
	Samsung Electronics Air Conditioner Europe B.V. (SEACE)	Sale of air conditioning products	100.0
	Samsung Nanoradio Design Center (SNDC)	R&D	100.0
	Samsung Denmark Research Center ApS (SDRC)	R&D	100.0
	Samsung Cambridge Solution Centre Limited (SCSC)	R&D	100.0
	SAMSUNG Zhilabs, S.L.	Development and sale of network solution	100.0
	FOODIENT LTD.	R&D	100.0
	Samsung Electronics Rus Company LLC (SERC)	Sale of electronic devices	100.0
	Samsung Electronics Rus Kaluga LLC (SERK)	Manufacture of TV	100.0
	Samsung Electronics Ukraine Company LLC (SEUC)	Sale of electronic devices	100.0
	Samsung R&D Institute Ukraine (SRUKR)	R&D	100.0
	Samsung Electronics Central Eurasia LLP (SECE)	Sale of electronic devices	100.0
	Samsung Electronics Overseas B.V. (SEO)	Sale of electronic devices	100.0
	Samsung R&D Institute Rus LLC (SRR)	R&D	100.0
	Samsung Electronics Caucasus Co., Ltd (SECC)	Marketing	100.0
	Samsung Electronics Uzbekistan Ltd. (SEUZ)	Marketing	100.0
	AKG Acoustics GmbH	Manufacture and sale of audio products	100.0
	Apostera UA, LLC	Connected Service Provider	100.0
	Harman Audio Iberia Espana Sociedad Limitada	Sale of audio products	100.0
	Harman Becker Automotive Systems GmbH	Manufacture, sales and R&D of audio products	100.0
	Harman Becker Automotive Systems Italy S.R.L.	Sale of audio products	100.0
	Harman Becker Automotive Systems Manufacturing Kft	Manufacture, sales and R&D of audio products	100.0
	Harman Belgium SA	Sale of audio products	100.0
	Harman Connected Services AB.	Connected service provider	100.0

^(*) Ownership represents the Company's ownership of the voting rights in each entity, including subsidiaries' ownerships.

Region	Subsidiaries	Industry	Percentage of ownership (%) ^(*)
Europe & CIS	Harman Finland Oy	Connected service provider	100.0
	Harman Connected Services GmbH	Connected service provider	100.0
	Harman Connected Services Poland Sp.zoo	Connected service provider	100.0
	Harman Connected Services UK Ltd.	Connected service provider	100.0
	Harman Consumer Nederland B.V.	Sale of audio products	100.0
	Harman Deutschland GmbH	Sale of audio products	100.0
	Harman France SNC	Sale of audio products	100.0
	Harman Holding GmbH & Co. KG	Management company	100.0
	Harman Hungary Financing Ltd.	Financing company	100.0
	Harman Inc. & Co. KG	Management of overseas subsidiaries	100.0
	Harman International Estonia OU	R&D	100.0
	Harman International Industries Limited	Sale and R&D of audio products	100.0
	Harman International Romania SRL	R&D	100.0
	Harman Management GmbH	Management of overseas subsidiaries	100.0
	Harman Professional Kft	Manufacture, and R&D of audio products	100.0
	Harman Professional Denmark ApS	Sales, and R&D of audio products	100.0
	Red Bend Software SAS	Software design	100.0
	Studer Professional Audio GmbH	Sales, and R&D of audio products	100.0
	Harman Connected Services OOO	Connected service provider	100.0
	Harman RUS CIS LLC	Sale of audio products	100.0
Middle East & Africa	Samsung Gulf Electronics Co., Ltd. (SGE)	Sale of electronic devices	100.0
	Samsung Electronics Turkiye (SETK)	Sale of electronic devices	100.0
	Samsung Electronics Industry and Commerce Ltd. (SETK-P)	Manufacture of electronic devices	100.0
	Samsung Electronics Levant Co., Ltd. (SELV)	Sale of electronic devices	100.0
	Samsung Electronics Maghreb Arab (SEMAG)	Sale of electronic devices	100.0
	Samsung Electronics Egypt S.A.E (SEEG)	Manufacture and sale of electronic devices	100.0
	Samsung Electronics Israel Ltd. (SEIL)	Marketing	100.0
	Samsung Electronics Tunisia S.A.R.L (SETN)	Marketing	100.0
	Samsung Electronics Pakistan(Private) Ltd. (SEPAK)	Marketing	100.0
	Samsung Electronics Saudi Arabia Ltd. (SESAR)	Sale of electronic devices	100.0
	Samsung Semiconductor Israel R&D Center, Ltd. (SIRC)	R&D	100.0
	Corephotonics Ltd.	R&D	100.0
	Samsung Electronics South Africa(Pty) Ltd. (SSA)	Sale of electronic devices	100.0
	Samsung Electronics South Africa Production (pty) Ltd. (SSAP)	Manufacture of TV and monitors	100.0
	Samsung Electronics West Africa Ltd. (SEWA)	Marketing	100.0
	Samsung Electronics East Africa Ltd. (SEEA)	Marketing	100.0
	Global Symphony Technology Group Private Ltd.	Management of overseas subsidiaries	100.0
	Harman Connected Services Morocco	Connected service provider	100.0
	Harman Industries Holdings Mauritius Ltd.	Management of overseas subsidiaries	100.0
	Red Bend Ltd.	Manufacture of audio products	100.0

^(*) Ownership represents the Company's ownership of the voting rights in each entity, including subsidiaries' ownerships.

Region	Subsidiaries	Industry	Percentage of ownership (%) ^(*)
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	Samsung Asia Pte. Ltd. (SAPL)	Management of overseas subsidiaries	100.0
	Samsung Electronics Singapore Pte. Ltd. (SESP)	Sale of electronic devices	100.0
	Samsung Malaysia Electronics (SME) Sdn. Bhd. (SME)	Sale of electronic devices	100.0
	Samsung Electronics Display (M) Sdn. Bhd. (SDMA)	Manufacture of electronic devices	100.0
	Samsung Electronics (M) Sdn. Bhd. (SEMA)	Manufacture of home appliances	100.0
	Samsung Vina Electronics Co., Ltd. (SAVINA)	Sale of electronic devices	100.0
	Samsung Electronics Vietnam Co., Ltd. (SEV)	Manufacture of electronic devices	100.0
	Samsung Electronics Vietnam THANGUYEN Co., Ltd. (SEVT)	Manufacture of communication equipment	100.0
	Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	Manufacture and sale of electronic devices	100.0
	Samsung Display Vietnam Co., Ltd. (SDV)	Manufacture of display panels	100.0
	PT Samsung Electronics Indonesia (SEIN)	Manufacture and sale of electronic devices	100.0
	PT Samsung Telecommunications Indonesia (STIN)	Sale of electronic devices and services	100.0
	Thai Samsung Electronics Co., Ltd. (TSE)	Manufacture and sale of electronic devices	91.8
	Laos Samsung Electronics Sole Co., Ltd. (LSE)	Marketing	100.0
Asia	Samsung Electronics Philippines Corporation (SEPCO)	Sale of electronic devices	100.0
(Excluding	Samsung Electronics Australia Pty. Ltd. (SEAU)	Sale of electronic devices	100.0
China)	Samsung Electronics New Zealand Limited (SENZ)	Sale of electronic devices	100.0
	Samsung India Electronics Private Ltd. (SIEL)	Manufacture and sale of electronic devices	100.0
	Red Brick Lane Marketing Solutions Pvt. Ltd.	Marketing	100.0
	Samsung Display Noida Private Limited (SDN)	Manufacture of display panels	100.0
	Samsung R&D Institute India-Bangalore Private Limited (SRI-Bangalore)	R&D	100.0
	Samsung R&D Institute BanglaDesh Limited (SRBD)	R&D	100.0
	Samsung Nepal Services Pvt, Ltd (SNSL)	Services	100.0
	Samsung Japan Corporation (SJC)	Sale of semiconductor and display panels	100.0
	Samsung R&D Institute Japan Co. Ltd. (SRJ)	R&D	100.0
	Samsung Electronics Japan Co., Ltd. (SEJ)	Sale of electronic devices	100.0
	Harman Connected Services Corp. India Pvt. Ltd.	Connected service provider	100.0
	Harman International (India) Private Limited	Sales, and R&D of audio products	100.0
	Harman International Industries PTY Ltd.	Management of overseas subsidiaries	100.0
	Harman International Japan Co., Ltd.	Sales, and R&D of audio products	100.0
	Harman Singapore Pte. Ltd.	Sale of audio products	100.0

(*) Ownership represents the Company's ownership of the voting rights in each entity, including subsidiaries' ownerships.

Region	Subsidiaries	Industry	Percentage of ownership (%) ^(*)
China	Samsung (CHINA) Investment Co., Ltd. (SCIC)	Sale of electronic devices	100.0

Samsung Electronics Hong Kong Co., Ltd. (SEHK)	Sale of electronic devices	100.0
Samsung Electronics Taiwan Co., Ltd. (SET)	Sale of electronic devices	100.0
Tianjin Samsung Electronics Co., Ltd. (TSEC)	Manufacture of TV and monitors	91.2
Suzhou Samsung Electronics Co., Ltd. (SSEC)	Manufacture of home appliances	88.3
Samsung Suzhou Electronics Export Co., Ltd. (SSEC-E)	Manufacture of home appliances	100.0
Samsung Electronics Suzhou Computer Co., Ltd. (SESC)	R&D	100.0
Tianjin Samsung Telecom Technology Co., Ltd. (TSTC)	Manufacture of communication equipment	90.0
Beijing Samsung Telecom R&D Center (SRC-Beijing)	R&D	100.0
Samsung Electronics China R&D Center (SRC-Nanjing)	R&D	100.0
Samsung Mobile R&D Center China-Guangzhou (SRC-Guangzhou)	R&D	100.0
Samsung R&D Institute China-Shenzhen (SRC-Shenzhen)	R&D	100.0
Shanghai Samsung Semiconductor Co., Ltd. (SSS)	Sale of semiconductor and display panels	100.0
Samsung (China) Semiconductor Co., Ltd. (SCS)	Manufacture of semiconductors	100.0
Samsung Semiconductor Xian Co., Ltd. (SSCX)	Sale of semiconductor and display panels	100.0
Samsung Electronics Suzhou Semiconductor Co., Ltd. (SESS)	Toll processing of semiconductor	100.0
Tianjin Samsung LED Co., Ltd. (TSLED)	Manufacture of Light-Emitting Diode	100.0
Samsung Semiconductor (China) R&D Co., Ltd. (SSCR)	R&D	100.0
Samsung Display Dongguan Co., Ltd. (SDD)	Manufacture of display panels	100.0
Samsung Display Tianjin Co., Ltd. (SDT)	Manufacture of display panels	95.0
SEMES (XIAN) Co., Ltd.	Semiconductor equipment services	100.0
Samsung Semiconductor Investment L.P. I	Investment in new technology and venture firm	99.0
Harman (China) Technologies Co., Ltd.	Manufacture of audio products	100.0
Harman (Suzhou) Audio and Infotainment Systems Co., Ltd.	Sale of audio products	100.0
Harman Automotive Electronic Systems (Suzhou) Co., Ltd.	Manufacture, and R&D of audio products	100.0
Harman Commercial (Shanghai) Co., Ltd.	Sale of audio products	100.0
Harman Connected Services Solutions (Chengdu) Co., Ltd.	Connected Service Provider	100.0
Harman Holding Limited	Sale of audio products	100.0
Harman International (China) Holdings Co., Ltd.	Sales, and R&D of audio products	100.0
Harman Technology (Shenzhen) Co., Ltd.	Sales, and R&D of audio products	100.0

^(*) Ownership represents the Company's ownership of the voting rights in each entity, including subsidiaries' ownerships.

Region	Subsidiaries	Industry	Percentage of ownership (%) ^(*)
	Samsung Display Co., Ltd.	Manufacture and sale of display panels	84.8
	SU Materials Co., Ltd.	Manufacture of display components	50.0
	STECO Co., Ltd.	Manufacture of semiconductor components	70.0
	SEMES Co., Ltd.	Manufacture and sale of semiconductor/FPD	91.5
	Samsung Electronics Service Co., Ltd.	Repair services for electronic devices	99.3
	Samsung Electronics Service Customer Satisfaction Co., Ltd.	Call center for electronic device repair services	100.0
	Samsung Electronics Sales Co., Ltd.	Sale of electronic devices	100.0
	Samsung Electronics Logitech Co., Ltd.	General logistics agency	100.0
	Samsung Medison Co., Ltd.	Manufacture and sale of medical equipment	68.5
	Stellar Forest Co., Ltd.	Manufacture and processing of food products	100.0
	Mirero System Co., Ltd.	Development and supply of semiconductor process defect and quality control software	99.9
	Harman International Korea, Co., Ltd.	Software development and supply	100.0
	Samsung Venture Capital Union #21	Venture capital investment fund	99.0
	Samsung Venture Capital Union #22	Venture capital investment fund	99.0
	Samsung Venture Capital Union #26	Venture capital investment fund	99.0
Domestic	Samsung Venture Capital Union #28	Venture capital investment fund	99.0
	Samsung Venture Capital Union #29	Venture capital investment fund	99.0
	Samsung Venture Capital Union #32	Venture capital investment fund	99.0
	Samsung Venture Capital Union #33	Venture capital investment fund	99.0
	Samsung Venture Capital Union #37	Venture capital investment fund	99.0
	Samsung Venture Capital Union #40	Venture capital investment fund	99.0
	Samsung Venture Capital Union #42	Venture capital investment fund	99.0
	Samsung Venture Capital Union #43	Venture capital investment fund	99.0
	Samsung Venture Capital Union #45	Venture capital investment fund	99.0
	Samsung Venture Capital Union #52	Venture capital investment fund	99.0
	Samsung Venture Capital Union #55	Venture capital investment fund	99.0
	Samsung Venture Capital Union #56	Venture capital investment fund	99.0
	Samsung Venture Capital Union #57	Venture capital investment fund	99.0
	Samsung Venture Capital Union #62	Venture capital investment fund	99.0
	Growth Type Private Equity Trust Specialized In Semiconductors	Investment in semiconductor industry	66.7
	System LSI Mutual Benefit Private Equity Trust	Investment in semiconductor industry	62.5
	Semiconductor Ecosystem General Private Equity Trust	Investment in semiconductor industry	66.7

^(*) Ownership represents the Company's ownership of the voting rights in each entity, including subsidiaries' ownerships.

(B) Transactions with related parties

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

(In millions of Korean won)	Name of company ^(*)	2024			
		Sales and other	Disposal of non-current assets	Purchases and other	Purchase of non-current assets
Subsidiaries	Samsung Display Co., Ltd.	5,751,594	-	416,024	-
	Samsung Electronics America, Inc. (SEA)	7,779,844	-	55,726	-
	Samsung Asia Pte. Ltd. (SAPL)	1	-	3,463	-
	Samsung Austin Semiconductor LLC (SAS)	17	-	1,047,408	-
	Harman and its subsidiaries ^(*)	-	-	12,797	-
	Samsung (China) Semiconductor Co., Ltd. (SCS)	95,163	8,022	3,062,665	276
	Samsung Semiconductor, Inc. (SSI)	6,333,302	-	212,593	-
	Samsung Electronics Vietnam THAINGUYEN Co., Ltd. (SEVT)	797,606	-	7,557,636	2,173
	Samsung (CHINA) Investment Co., Ltd. (SCIC)	1,567,406	-	1,680	-
	Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	-	-	-	-
	Samsung India Electronics Private Ltd. (SIEL)	883,124	-	1,584,965	-
	Samsung Electronics Vietnam Co., Ltd. (SEV)	445,343	-	3,811,160	132
	Shanghai Samsung Semiconductor Co., Ltd. (SSS)	7,166,624	-	-	-
	Samsung Display Vietnam Co., Ltd. (SDV)	282,979	-	-	-
	Samsung Eletronica da Amazonia Ltda. (SEDA)	1,097,478	-	2,518	-
	Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	191,157	-	1,415,650	-
	Thai Samsung Electronics Co., Ltd. (TSE)	546,129	-	556,164	-
	Samsung Electronics (UK) Ltd. (SEUK)	455,976	-	28,141	-
	Samsung Electronics Mexico S.A. De C.V. (SEM)	877,062	-	2,946	-
	Samsung Electronics Europe Logistics B.V. (SELS)	1,465,464	-	420	-
	Samsung Electronics Taiwan Co., Ltd. (SET)	1,268,209	-	1,011	-
	Samsung International, Inc. (SII)	77,033	1,753	1,621,858	-
	Samsung Electronics GmbH (SEG)	1,095,509	-	1,448	-
	SEMES Co., Ltd.	2,752	-	510,256	-
	Samsung Electronics Benelux B.V. (SEBN)	316,092	-	221	-
	Other	14,177,349	6,469	3,388,017	2,610
	Total	52,673,213	16,244	25,294,767	5,191
Associates and joint ventures	Samsung SDS Co.,Ltd.	63,611	-	426,809	56,161
	Samsung Electro-Mechanics Co., Ltd.	26,334	-	224,751	-
	Samsung SDI Co., Ltd.	27,414	-	84,918	8,555
	Cheil Worldwide Inc.	32,883	-	213,706	500
	Other	171,073	122	216,700	1,326
	Total	321,315	122	1,166,884	66,542
Other related parties ^(*)	Samsung C&T Co., Ltd.	5,638	-	25,941	1,069,473
	Other	126,490	-	178,474	11,483
	Total	132,128	-	204,415	1,080,956
Other	Samsung Engineering Co., Ltd.	97	-	15,634	425,183
	S-1 Corporation	855	-	109,196	5,275
	Other	50,183	-	39,240	183,624
	Total	51,135	-	164,070	614,082

(*) Transactions with separate entities that are related parties of the Company.

(*) Transactions with the intermediate parent company, Harman International Industries, Inc., and its subsidiaries.

(*) Although these entities are not related parties of the Company in accordance with Korean IFRS 1024, they belong to the same large enterprise group in accordance with the Monopoly Regulation and Fair Trade Act.

		2023			
(In millions of Korean won)	Name of company ^(*)	Sales and other	Disposal of non-current assets	Purchases and other	Purchase of non-current assets
Subsidiaries	Samsung Display Co., Ltd.	70,280	-	246,945	-
	Samsung Electronics America, Inc. (SEA)	7,948,315	-	47,891	-
	Samsung Asia Pte. Ltd. (SAPL)	25	-	7,247	-
	Samsung (China) Semiconductor Co., Ltd. (SCS)	26,771	7,746	2,568,002	4,519
	Harman and its subsidiaries ²	-	-	16,155	-
	Samsung Electronics Vietnam THAINGUYEN Co., Ltd. (SEVT)	1,197,919	-	5,882,577	55
	Samsung (CHINA) Investment Co., Ltd. (SCIC)	3,396,290	-	2,170	-
	Samsung Semiconductor, Inc. (SSI)	4,462,782	-	163,588	-
	Samsung Austin Semiconductor LLC. (SAS)	15	-	955,210	296
	Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	-	-	-	-
	Samsung Electronics Vietnam Co., Ltd. (SEV)	752,605	-	3,777,503	767
	Samsung India Electronics Private Ltd. (SIEL)	743,963	-	1,154,941	-
	Samsung Display Vietnam Co., Ltd. (SDV)	363,141	-	-	-
	Samsung Eletronica da Amazonia Ltda. (SEDA)	368,998	-	1,548	-
	Shanghai Samsung Semiconductor Co., Ltd. (SSS)	2,351,702	-	-	-
	Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	116,420	1	1,227,542	-
	Thai Samsung Electronics Co., Ltd. (TSE)	1,066,940	-	576,597	-
	Samsung Electronics (UK) Ltd. (SEUK)	694,744	-	28,431	-
	Samsung Electronics Europe Logistics B.V. (SELS)	1,280,262	-	1,682	-
	Samsung International, Inc. (SII)	68,340	-	1,712,017	-
Samsung Electronics Mexico S.A. De C.V. (SEM)	661,264	-	1,428	-	
Samsung Display Dongguan Co., Ltd. (SDD)	22,374	-	-	-	
Samsung Electronics GmbH (SEG)	931,103	-	1,690	-	
SEMES Co., Ltd.	3,090	-	651,390	-	
Samsung Electronics Benelux B.V. (SEBN)	967,576	-	387	-	
Other	16,044,657	372	3,331,760	-	
Total		43,539,576	8,119	22,356,701	5,637
Associates and joint ventures	Samsung SDS Co.,Ltd.	74,142	-	436,230	80,134
	Samsung Electro-Mechanics Co., Ltd.	42,941	-	245,333	-
	Samsung SDI Co., Ltd.	29,407	-	107,443	2,072
	Cheil Worldwide Inc.	34,011	-	228,990	76
	Other	166,772	-	206,284	1,811
Total		347,273	-	1,224,280	84,093
Other related parties ^(*)	Samsung C&T Co., Ltd.	5,204	70	12,947	726,138
	Other	127,304	-	309,789	61,757
Total		132,508	70	322,736	787,895
Other	Samsung Engineering Co., Ltd.	402	-	108	306,488
	S-1 Corporation	1,529	-	109,148	3,194
	Other	21,933	-	66,671	44,620
Total		23,864	-	175,927	354,302

(*) Transactions with separate entities that are related parties of the Company.

(²) Transactions with the intermediate parent company, Harman International Industries, Inc., and its subsidiaries.

(³) Although these entities are not related parties of the Company in accordance with Korean IFRS 1024, they belong to the same large enterprise group in accordance with the Monopoly Regulation and Fair Trade Act.

(C) Balances of receivables and payables

Balances of receivables and payables arising from transactions with related parties as of March 31, 2024 and December 31, 2023 are as follows:

(In millions of Korean won)	Name of company ^(*1)	March 31, 2024	
		Receivables and other ^(*2)	Payables and other ^(*3)
	Samsung Display Co., Ltd.	30,256	147,803
	Samsung Electronics America, Inc. (SEA)	4,815,874	1,139,477
	Samsung Asia Pte. Ltd. (SAPL)	162	1,086
	Samsung Austin Semiconductor LLC. (SAS)	2,915	451,222
	Harman and its subsidiaries ^(*4)	1,430	3,033
	Samsung (China) Semiconductor Co., Ltd. (SCS)	100,920	1,138,122
	Samsung Semiconductor, Inc. (SSI)	4,916,742	273,110
	Samsung Electronics Vietnam THAINGUYEN Co., Ltd. (SEVT)	974,522	4,366,469
	Samsung (CHINA) Investment Co., Ltd. (SCIC)	208,522	931
	Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	-	-
	Samsung India Electronics Private Ltd. (SIEL)	985,447	739,917
	Samsung Electronics Vietnam Co., Ltd. (SEV)	558,065	1,953,682
	Shanghai Samsung Semiconductor Co., Ltd. (SSS)	5,056,951	60
Subsidiaries	Samsung Display Vietnam Co., Ltd. (SDV)	120,428	-
	Samsung Eletronica da Amazonia Ltda. (SEDA)	390,429	3,769
	Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	126,802	573,361
	Thai Samsung Electronics Co., Ltd. (TSE)	202,775	213,997
	Samsung Electronics (UK) Ltd. (SEUK)	146,851	29,460
	Samsung Electronics Mexico S.A. De C.V. (SEM)	661,120	1,170
	Samsung Electronics Europe Logistics B.V. (SELS)	595,687	526
	Samsung Electronics Taiwan Co., Ltd. (SET)	562,327	190,607
	Samsung International, Inc. (SII)	116,179	322,380
	Samsung Electronics GmbH (SEG)	172,873	6,419
	SEMES Co., Ltd.	82,277	883,488
	Samsung Electronics Benelux B.V. (SEBN)	63,125	2,668
	Other	7,801,623	1,814,749
	Total	28,694,302	14,257,506
	Samsung SDS Co., Ltd.	86,564	473,884
	Samsung Electro-Mechanics Co., Ltd.	20,645	146,843
Associates and joint ventures	Samsung SDI Co., Ltd.	127,023	59,437
	Cheil Worldwide Inc.	32,251	312,975
	Other	154,732	149,675
	Total	421,215	1,142,814
Other related parties	Samsung C&T Corporation	187,188	863,159
	Other	17,078	162,255
	Total	204,266	1,025,414
	Samsung Engineering Co., Ltd.	107	297,426
Other ^(*5)	S-1 Corporation	829	40,581
	Other	3,596	362,905
	Total	4,532	700,912

^(*1) Transactions with separate entities that are related parties of the Company.

^(*2) The Company has not recognized bad debt allowance in relation to the receivables due from subsidiaries as of March 31, 2024.

^(*3) Payables and others include lease liabilities.

^(*4) Transactions with the intermediate parent company, Harman International Industries, Inc., and its subsidiaries.

^(*5) Although these entities are not related parties of the Company in accordance with Korean IFRS 1024, they belong to the same large enterprise group in accordance with the Monopoly Regulation and Fair Trade Act.

(In millions of Korean won)	Name of company ^(*1)	December 31, 2023	
		Receivables and other ^(*2)	Payables and other ^(*3)
	Samsung Display Co., Ltd.	74,259	196,686
	Samsung Electronics America, Inc. (SEA)	3,841,560	1,119,907
	Samsung Asia Pte. Ltd. (SAPL)	2,091	1,147
	Harman and its subsidiaries ^(*4)	5,179	9,659
	Samsung Austin Semiconductor LLC. (SAS)	9,575	303,203
	Samsung (China) Semiconductor Co., Ltd. (SCS)	68,251	687,410
	Samsung Semiconductor, Inc. (SSI)	5,271,414	209,789
	Samsung Electronics Vietnam THAINGUYEN Co., Ltd. (SEVT)	925,410	2,324,691
	Samsung (CHINA) Investment Co., Ltd. (SCIC)	181,785	201,966
	Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	2,760	-
	Samsung India Electronics Private Ltd. (SIEL)	922,630	297,628
	Samsung Display Vietnam Co., Ltd. (SDV)	90,305	46
	Samsung Electronics Vietnam Co., Ltd. (SEV)	502,410	1,377,493
Subsidiaries	Samsung Eletronica da Amazonia Ltda. (SEDA)	256,936	1,226
	Shanghai Samsung Semiconductor Co., Ltd. (SSS)	3,906,968	281
	Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	148,857	367,007
	Thai Samsung Electronics Co., Ltd. (TSE)	280,682	267,659
	Samsung Electronics (UK) Ltd. (SEUK)	64,642	40,118
	SEMES Co., Ltd.	68,340	917,707
	Samsung Electronics Mexico S.A. De C.V. (SEM)	252,813	2,021
	Samsung Electronics GmbH (SEG)	72,258	4,448
	Samsung International, Inc. (SII)	129,178	54,694
	Samsung Electronics Taiwan Co., Ltd. (SET)	362,737	87,718
	Samsung Electronics Benelux B.V. (SEBN)	52,172	6,266
	Samsung Electronics Europe Logistics B.V. (SELS)	413,581	415
	Other	6,556,255	2,607,878
	Total	24,463,048	11,087,063
	Samsung SDS Co., Ltd.	84,541	418,787
	Samsung Electro-Mechanics Co., Ltd.	1,857	86,166
Associates and joint ventures	Samsung SDI Co., Ltd.	114,103	50,149
	Cheil Worldwide Inc.	51	429,435
	Other	164,058	183,813
	Total	364,610	1,168,350
Other related parties	Samsung C&T Corporation	190,443	1,876,745
	Other	13,835	149,585
	Total	204,278	2,026,330
Other ^(*5)	Samsung Engineering Co., Ltd.	269	766,329
	S-1 Corporation	598	39,223
	Other	4,342	265,721
	Total	5,209	1,071,273

(*1) Transactions with separate entities that are related parties of the Company.

(*2) The Company has not recognized bad debt allowance in relation to the receivables due from subsidiaries as of December 31, 2023.

(*3) Payables and others include lease liabilities.

(*4) Transactions with the intermediate parent company, Harman International Industries, Inc., and its subsidiaries.

(*5) Although these entities are not related parties of the Company in accordance with Korean IFRS 1024, they belong to the same large enterprise group in accordance with the Monopoly Regulation and Fair Trade Act.

(D) For the three-month period ended March 31, 2024 and 2023, the Company had no lending to its subsidiaries but had borrowing from its subsidiaries amounting to ₩ 0 million and ₩ 10,000,000 million, respectively. In addition, the Company had no lending to or borrowing from associates and joint ventures during the three-month periods ended March 31, 2024

and 2023.

- (E) For the three-month periods ended March 31, 2024 and 2023, the Company invested ₩ 3,592 million and ₩ 6,372 million, respectively, in subsidiaries, and has made capital recovery of ₩ 115,776 million and ₩ 107,217 million from its investments in subsidiaries, respectively. In addition, the Company invested ₩ 0 million and ₩ 58,982 million in associates and joint ventures and has made a recovery of ₩ 0 million and ₩ 518 million from its investments in associates and joint ventures for the three-month periods ended March 31, 2024 and 2023, respectively.
- (F) For the three-month periods ended March 31, 2024 and 2023, the Company declared dividends of ₩ 412,172 million and ₩ 412,942 million, respectively, to related parties. As of March 31, 2024, the dividends payable to related parties amount to ₩ 412,172 million. In addition, for the three-month periods ended March 31, 2024 and 2023, the Company declared dividends of ₩ 32,058 million and ₩ 32,058 million, respectively, to the entities that are not related parties of the Company in accordance with Korean IFRS 1024, but belong to the same conglomerate according to the Monopoly Regulation and Fair Trade Act. As of March 31, 2024, there is ₩ 32,058 million dividends payable to the entities belong to the same conglomerate according to the Monopoly Regulation and Fair Trade Act..
- (G) For the three-month periods ended March 31, 2024 and 2023, the Company entered into lease agreements with its related parties amounting to ₩ 16,025 million and ₩ 0 million, respectively, and the lease payments made to the related parties are ₩ 16,006 million and ₩ 6,313 million, respectively.
- (H) As of March 31, 2024, the Company provides guarantees in relation to borrowings of the related parties (refer to Note 13)
- (I) Key management compensation

The compensation paid or payable to key management (executive directors) for their services for the three-month periods ended March 31, 2024 and 2023 consists of:

<i>(In millions of Korean won)</i>	2024	2023
Short-term employee benefits	3,017	3,330
Post-employment benefits	175	139
Other long-term employee benefits	2,289	1,959

6. Dividends

We continue to work to enhance shareholder value alongside our efforts to strengthen competitiveness of our products and businesses. Based on the previous shareholder return policy covering FY2021 to FY2023, we distributed an annual return of

9.8 trillion won in regular dividends as a part of a total return of 50% of free cash flow. In January 2024, we announced our shareholder return policy for FY2024 to FY2026, which maintains the terms of the previous shareholder return policy: Samsung Electronics will pay an annual regular dividend of 9.8 trillion won as a part of total shareholder returns of 50% of the free cash flow for the period covering FY2024 to FY2026. At the close of each year, we will consider executing an early return of capital beyond regular dividends if we forecast there is potential for a significant surplus. Furthermore, the Company will consider implementing a new policy flexibly before the expiration of the policy for FY2024 to FY2026 in consideration of M&A activities and cash positions.

[Key dividend indices]

Classification		1Q24	2023	2022
Par value per share (KRW)		100	100	100
Consolidated net profit ¹⁾ (KRW mil)		6,621,030	14,473,401	54,730,018
Separate net profit (KRW mil)		9,737,437	25,397,099	25,418,778
EPS ²⁾ (KRW)		975	2,131	8,057
Total cash dividend (KRW mil)		2,452,154	9,809,438	9,809,438
Total stock dividend (KRW mil)		-	-	-
Dividend payout ratio (%)		37.0	67.8	17.9
Cash dividend yield (%)	Common	0.5	1.9	2.5
	Preferred	0.5	2.4	2.7
Stock dividend yield (%)	Common	-	-	-
	Preferred	-	-	-
Cash dividend per share (KRW)	Common	361	1,444	1,444
	Preferred	361	1,445	1,445
Stock dividend per share (share)	Common	-	-	-
	Preferred	-	-	-

Dividends were KRW 2,452,154 million (KRW 361 per share) in the first quarter of 2024 and in the first three quarters of 2022 and 2023. For further information relating to total cash dividend, refer to retained earnings in 「3. Note to Consolidated Financial Statements」 in 「III. Financial Affairs」.

1) Equity attributable to owners of the parent.

2) Basic earnings per common share on a consolidated basis. For further information relating to the calculation of basic EPS, see Earnings Per Share in 3 Note to Consolidated Financial Statements」 in 「III. Financial Affairs」.

The history of dividend payouts is as follows:

Number of continuous dividend payments		Average dividend yield	
Quarterly/biannual dividends	End-year dividends	Past 3 years	Past 5 years
39	43	2.1%	2.5%

The number of continuous dividend payments includes the quarterly dividend for the quarter and the end-year dividend for the recent business year. Continuous payment of the end-year dividend started in 1981, biannual dividend in 1999, and quarterly dividend in 2017.

The average dividend yield is based on common shares. The average dividend yield of preferred shares for the past 3 years and past 5 years are 2.4% and 2.9% respectively.

The “past 3 years” refers to the period from 2021 through 2023, and the “past 5 years” refers to the period from 2019 through 2023-

For the dividend yield of 1Q24, please refer to the table [Key dividend indices] above (common shares at 0.5%, preferred shares at 0.5%).

7. Matters about financing through the issuance of securities

7-1 Financing through the issuance of securities

[Issuance of equity securities]

N/A

[Issuance of debt securities]

A. List of issued debt securities

(As of March 31, 2024)

(KRW mil, %)

Issuing company	Type of securities	Issuance method	Date of Issuance	Total nominal amount	Interest rate	Rating (rating institution)	Maturity date	Payment status	Management company
Samsung Electronics	Corporate bonds	Public offering	Oct 2, 1997	134,680	7.7	Aa2(Moody's), AA-(S&P)	Oct 1, 2027	Partial redemption	Goldman Sachs et al.
Harman International Industries, Inc	Corporate bonds	Public offering	May 11, 2015	538,720	4.2	A (S&P)	May 15, 2025	Unredeemed	J.P.Morgan et al.
Total	-	-	-	673,400	-	-	-	-	-

B. Commercial Paper Unredeemed Balance

(Reporting Date: March 31, 2024)

(KRW mil)

Maturity		Under 10 days	Above 10 days / under 30 days	Above 30 days / under 90 days	Above 90 days / under 180 days	Above 180 days / under 1 year	Above 1 year / under 2 years	Above 2 years / under 3 years	Above 3 years	Total
Unredeemed balance	Public	-	-	-	-	-	-	-	-	-
	Private	-	-	-	-	-	-	-	-	-
	Total	-	-	-	-	-	-	-	-	-

C. Short-term Bond Unredeemed Balance

Not Applicable

(Reporting Date: March 31, 2024)

(KRW mil)

Maturity		Under 10 days	Above 10 days / under 30 days	Above 30 days / under 90 days	Above 90 days / under 180 days	Above 180 days / under 1 year	Total	Issue limit	Balance limit
Unredeemed balance	Public	-	-	-	-	-	-	-	-
	Private	-	-	-	-	-	-	-	-
	Total	-	-	-	-	-	-	-	-

D. Corporate Bond Unredeemed Balance

(Reporting Date: March 31, 2024)

(KRW mil)

Maturity		Under 1 year	Above 1 year / under 2 years	Above 2 years / under 3 years	Above 3 years / under 4 years	Above 4 years / under 5 years	Above 5 years / under 10 years	Above 10 years	Total
Unredeemed balance	Public	6,734	545,454	6,734	6,734	-	-	-	565,656
	Private	-	-	-	-	-	-	-	-
	Total	6,734	545,454	6,734	6,734	-	-	-	565,656

※ Based on consolidated financial statements

※ The exchange rate as of the reporting date has been applied.

- Corporate Bond Unredeemed Balance (Samsung Electronics)

(Reporting Date: March 31, 2024)

(KRW mil)

Maturity		Under 1 year	Above 1 year / under 2 years	Above 2 years / under 3 years	Above 3 years / under 4 years	Above 4 years / under 5 years	Above 5 years / under 10 years	Above 10 years	Total
Unredeemed balance	Public	6,734	6,734	6,734	6,734	-	-	-	26,936
	Total	6,734	6,734	6,734	6,734	-	-	-	26,936

※ The exchange rate as of the reporting date has been applied.

- Corporate Bond Unredeemed Balance (Harman)

(Reporting Date: March 31, 2024)

(KRW mil)

Maturity		Under 1 year	Above 1 year / under 2 years	Above 2 years / under 3 years	Above 3 years / under 4 years	Above 4 years / under 5 years	Above 5 years / under 10 years	Above 10 years	Total
Unredeemed balance	Public	-	538,720	-	-	-	-	-	538,720
	Total	-	538,720	-	-	-	-	-	538,720

※ The exchange rate as of the reporting date has been applied.

E. Hybrid Bond Unredeemed Balance

Not Applicable

(Reporting Date: March 31, 2024)

(KRW mil)

Maturity		Under 1 year	Above 1 year / under 5 years	Above 5 years / under 10 years	Above 10 years / under 15 years	Above 15 years / under 20 years	Above 20 years / under 30 years	Above 30 years	Total
Unredeemed balance	Public	-	-	-	-	-	-	-	-
	Private	-	-	-	-	-	-	-	-
	Total	-	-	-	-	-	-	-	-

F. Contingent Convertible Bond Unredeemed Balance

Not Applicable

(Reporting Date: March 31, 2024)

(KRW mil)

Maturity		Under 1 year	Above 1 year / under 2 years	Above 2 years / under 3 years	Above 3 years / under 4 years	Above 4 years / under 5 years	Above 5 years / under 10 years	Above 10 years / under 20 years	Above 20 years / under 30 years	Above 30 years	Total
Unredeemed balance	Public	-	-	-	-	-	-	-	-	-	-
	Private	-	-	-	-	-	-	-	-	-	-
	Total	-	-	-	-	-	-	-	-	-	-

G. Details and Compliance of the Bond Management Contract (Samsung Electronics)

(Reporting Date: March 31, 2024)

(KRW mil, %)

Name of security	Date of issuance	Maturity date	Issued amount	Settlement date of bond management contract	Debenture management company
US\$ 100,000,000 7.7% debenture	Oct 2, 1997	Oct 1, 2027	134,680	Oct 2, 1997	The Bank of New York Mellon Trust Company, N.A.

(Reporting Date: March 31, 2024)

Financial ratios	Contract details	Not applicable
	Implementation status	Not applicable
Constraint on collateral	Contract details	Less than 10% of net tangible assets
	Implementation status	Compliant (there is no collateral for the relevant assets)
Constraint on disposal of assets	Contract details	Certain requirements, such as transfer of obligations on the bond, must be satisfied to dispose all or most of an asset
	Implementation status	Compliant (disposed assets accounted for 0.0% of the total assets during 2024 1Q)
Constraint on governance	Contract Details	Not applicable
	Implementation status	Not applicable
Submission of implementation report	Implementation status	Not applicable

※ The exchange rate as of the base date has been applied.

※ The date of the bond management contract was signed on the same day as the Fiscal Agency Agreement; accordingly, the Bank of New York Mellon Trust Company, N.A. is under the authority of the Fiscal Agent.

※ The net tangible assets subjected to the limitation of collaterals are production facilities and stocks owned by the Company.

※ Implementation status base date is the most recent reporting date of financial statements on which external auditor's opinion has been expressed.

※ The constraint on governance is as of the reporting date.

7-2 Use of funds financed through the issuance of securities

Not applicable

8. Other financial information

A. Restatement of financial statements and other matters to note

(1) Restatement of financial statements: Not Applicable

(2) Acquisition, divestment, asset sales, and sale of business

[Equity Acquisition of eMagin Corporation]

On October 18, 2023, Samsung Display America Holdings, Inc.(SDAH), the company's subsidiary, acquired 100% ownership of eMagin Corporation (CEO: Andrew Sculley, Location: New York, USA) to secure technological competitiveness in micodisplay field.

[Equity Sale of DOWOOINSYS]

On January 31, 2024, Samsung Display Co., Ltd., the company's subsidiary, sold 56.8% of equity stake in DOWOOINSYS among total 69.0% stake held by Samsung Venture Investment Co. No. 29 and No.48 to three companies including Newpower Co., Ltd., to focus its capabilities on main business and R&D amid increasingly intensified competition in OLED industry.

(3) Information on the accounting treatment of the sales of assets related to asset backed securities and contingent liabilities

Accounting Treatment of the sale of assets related to asset backed securities:

- Not applicable

Litigation

The Company is involved in various claims, disputes, and investigations conducted by regulatory bodies, which arose during the normal course of business with numerous entities. Although the outflow of resources and timing of these matters are uncertain, as of the reporting date, the Company believes the outcome will not have a material impact on the financial position of the Company.

Debt guarantee

- Domestic: Not applicable

- Overseas:

(USD thousand)

Company	Relationship	Creditor	Guarantee	Transactions			Limit of guarantee
			Expiry date	Beginning of period	Increase/decrease	End of period	
SEA	Subsidiary	BOA etc.	Dec 16, 2024	-	-	-	1,278,000
SEM	Subsidiary	BBVA etc.	Mar 27, 2025	-	-	-	715,000
SAMCOL	Subsidiary	Citibank etc.	Dec 16, 2024	-	-	-	210,000
SEDA	Subsidiary	BRADESCO etc.	Dec 16, 2024	-	207	207	329,000
SECH	Subsidiary	Citibank etc.	Dec 16, 2024	-	-	-	62,000
SEPR	Subsidiary	BBVA etc.	Dec 16, 2024	-	-	-	150,000
SSA	Subsidiary	SCB etc.	Dec 16, 2024	-	36,010	36,010	318,000
SEMAG	Subsidiary	SocGen etc.	Dec 16, 2024	8,065	△8,065	-	96,000
SETK	Subsidiary	BNP etc.	Dec 16, 2024	320,893	64,001	384,894	917,000
SETK-P	Subsidiary	BNP etc.	Dec 16, 2024	-	-	-	70,000
SECE	Subsidiary	Citibank	Dec 16, 2024	-	-	-	114,000
SEEG	Subsidiary	HSBC	Jun 13, 2024	-	-	-	85,000
SEIN	Subsidiary	BNP etc.	Nov 08, 2024	-	-	-	70,000
SJC	Subsidiary	Mizuho Bank etc.	Dec 16, 2024	-	-	-	817,268
SEUC	Subsidiary	Credit Agricole etc.	Dec 16, 2024	-	-	-	125,000
SEDAM	Subsidiary	Citibank etc.	Dec 16, 2024	-	-	-	537,000
SECA	Subsidiary	BoA	Nov 08, 2024	-	-	-	70,000
SELA	Subsidiary	Citibank	Dec 16, 2024	-	-	-	60,000
SEEH	Subsidiary	HSBC etc.	Dec 16, 2024	-	-	-	888,400
SELV	Subsidiary	Citibank	Dec 16, 2024	-	-	-	10,000
SEIL	Subsidiary	Citibank	Dec 16, 2024	-	-	-	15,600
SAPL	Subsidiary	BOA etc.	Dec 16, 2024	-	-	-	404,000
SAVINA	Subsidiary	HSBC	Jun 13, 2024	-	-	-	51,000
SCIC	Subsidiary	HSBC etc.	Dec 16, 2024	-	-	-	270,000
SESP	Subsidiary	SCB	Nov 08, 2024	-	-	-	30,000
SME	Subsidiary	SCB	Nov 08, 2024	-	-	-	110,000
SAMEX	Subsidiary	Citibank	Dec 16, 2024	-	-	-	5,000
SEASA	Subsidiary	Citibank	Dec 16, 2024	-	-	-	2,000
SSAP	Subsidiary	SCB	Nov 08, 2024	-	-	-	35,000
SEPM	Subsidiary	HSBC	Jun 13, 2024	-	-	-	35,000
SESAR	Subsidiary	HSBC	Jun 13, 2024	-	-	-	20,000
SEUZ	Subsidiary	Citibank	Dec 16, 2024	-	-	-	10,000
AdGear Technologies Inc.	Subsidiary	BOA	Nov 08, 2024	-	-	-	2,000
Harman International Industries, Inc.	Subsidiary	JP Morgan	Jun 13, 2024	-	-	-	100,000
Harman International Japan Co., Ltd.	Subsidiary	MUFG	Nov 08, 2024	-	-	-	25,000
Harman Holding Limited	Subsidiary	HSBC	Jun 13, 2024	-	-	-	30,000
Harman do Brasil Indústria Eletronica e Participacoes Ltda.	Subsidiary	SocGen	Nov 08, 2024	-	-	-	15,000
Harman da Amazonia Indústria Eletronica e Participacoes Ltda.							
Harman International Industries Limited	Subsidiary	HSBC	Jun 13, 2024	-	-	-	30,000
SDN	Subsidiary	SIEL	Feb 19, 2026	510,977	△1,336	509,641	599,578
SAS	Subsidiary	Epcor	The date of debt expiration	-	-	-	340,000
Total				839,935	90,817	930,752	9,050,846

- ※ On a consolidated basis. Debt guarantees for SDN are provided by Samsung Display Co., Ltd. and SAS by SEA, respectively.
- ※ SEC requires Board approval for individual guarantees exceeding 2.5% of total equity. When the guarantee amount is between 0.1% and/or less than 2.5%, the approval decision is delegated to the Management Committee. Samsung Display Co., Ltd requires Board approval for individual guarantees over KRW 10,000 million.
- ※ SEC claims fees on the debt guarantees depending on the maturity date of each debt guarantee, general loan interest rate, etc. In 2023, the Company claimed approximately USD 2,141,000 in guarantee fees and collected the amount in 2024. In 2023, Samsung Display Co., Ltd. claimed approximately USD 3,066,000 in guarantee fees to SDN and collected the amount in 2024.

Refer to the notes to the consolidated financial statements for the information on contingent liabilities.

(4) Other matters requiring attention in relation to the use of the financial statements

A. Emphasis of matter and key audit matter in Independent auditor's report

Period	Emphasis of matter	Key audit matter
1Q24	Not applicable	Not applicable
2023	Not applicable	(Consolidated financial statement) 1. Valuation of memory semiconductor inventory at net realizable value 2. Accuracy and completeness of sales deduction related to sales promotion activities of products (Separate financial statement) 1. Valuation of memory semiconductor inventory at net realizable value 2. Accuracy and completeness of sales deduction related to sales promotion activities of products
2022	Not applicable	(Consolidated financial statement) 1. Sales deduction related to sales promotion activities of products (Separate financial statement) 1. Sales deduction related to sales promotion activities of products

B. Allowance for bad debt

The allowances for bad debt by account over the past 3 years are as follows:

(KRW mil, %)

Period	Account	Receivables amount	Allowance amount	Allowance
1Q24	Trade receivables	41,471,936	326,545	0.8%
	Short-term loans	21,824	202	0.9%
	Other receivables	7,504,353	83,023	1.1%
	Advances	1,155,479	3,402	0.3%
	Trade receivables (long-term)	25,255	-	0.0%
	Other receivables (long-term)	860,953	203	0.0%
	Advances (long-term)	5,326,197	8,558	0.2%
	Long-term loans	246,295	82,413	33.5%
	Total	56,612,292	504,346	0.9%
2023	Trade receivables	37,002,849	355,456	1.0%
	Short-term loans	21,279	204	1.0%
	Other receivables	6,715,263	82,015	1.2%
	Advances	994,525	3,316	0.3%
	Trade receivables (long-term)	23,889	-	0.0%
	Other receivables (long-term)	759,704	209	0.0%
	Advances (long-term)	4,964,481	9,255	0.2%
	Long-term loans	239,149	77,608	32.5%

Period	Account	Receivables amount	Allowance amount	Allowance
	Total	50,721,139	528,063	1.0%
2022	Trade receivables	36,033,784	312,221	0.9%
	Short-term loans	22,403	215	1.0%
	Other receivables	6,227,068	77,859	1.3%
	Advances	1,741,031	3,965	0.2%
	Trade receivables (long-term)	204,248	-	0.0%
	Other receivables (long-term)	824,468	242	0.0%
	Advances (long-term)	2,382,711	10,969	0.5%
	Long-term loans	225,983	1,206	0.5%
	Total	47,661,696	406,677	0.9%

※ Based on consolidated financial statements

※ Receivables amount represents the value after deducting present value discount.

Allowance for bad debt by year

(KRW mil)

	1Q24	2023	2022
1. Allowance for bad debt (beginning balance)	528,063	406,677	397,525
2. Net bad debt expense (① - ②+③)	△8,555	14,647	16,658
① Bad debt expense, etc (Write-off)	444	19,179	9,711
② Bad debt recovered	-	4	-
③ Others	△8,999	△ 4,528	6,947
3. Bad debts expense	△32,272	136,033	25,810
4. Allowance for bad debts (Ending balance)	504,346	528,063	406,677

※ Based on consolidated financial statements.

The guideline for bad debt allowances for trade receivables

(1) Calculation of bad debt allowance

- Bad debt allowance is calculated using an expected credit loss impairment model which is based on write-off experience rate and future expected bad debt amount.

(2) Calculation basis of write-off experience rate and future expected bad debt:

- Write-off experience rate for each aging group of receivables is calculated based on the actual rate of credit losses to three-year average receivables balance.
- Future expected bad debt is determined taking into consideration cases of debtor bankruptcy, compulsory execution, death, disappearance, credit information of debtor and forward-looking information.

[Bad debt allowance by circumstance]

Circumstance	Rate of allowance
Dispute or conflict	25%
Receivable through utilization of third party collection agency	50%
Receivable under litigation	75%
Customer filed or in the process of filing bankruptcy	100%

(3) Instruction: Write-off is recorded when trade receivables contain the following characteristics:

- Objective proof of bad debts, such as bankruptcy, compulsory execution, discontinuance of business, debtor's death or disappearance
- Legal action has failed or the right of collection has been extinguished.
- When the third party collection agency notifies that collection is not possible.
- When the collateral is sold or insurance is received.
- When collection expense exceeds receivables amount.

The outstanding period of trade receivables

(Reporting Date: March 31, 2024)

(KRW mil, %)

	Less than 6 months	6 months ~ 1 year	1 year ~ 3 years	More than 3 years	Total
Amount	41,273,424	22,588	94,751	106,428	41,497,191
Ratio	99.4%	0.1%	0.2%	0.3%	100.0%

※ Base on consolidated financial statements

※ Receivables amount represents the value after deducting present value discount.

C. Inventory

- The inventory status by Division over the last three years is as follows:

(KRW mil, %)

Division	Category	1Q24	2023	2022	Note
DX	Finished goods	6,864,708	7,229,898	7,712,885	
	Work in process	821,978	967,513	1,013,606	
	Raw material	10,422,836	9,608,619	10,520,293	
	Material in transit	938,329	1,014,420	943,322	
	Total	19,047,851	18,820,450	20,190,106	
DS	Finished goods	6,470,099	6,476,768	6,601,087	
	Work in process	21,619,837	20,961,730	18,756,104	
	Raw material	3,806,704	3,484,046	3,639,061	
	Material in transit	135,218	76,226	61,352	
	Total	32,031,858	30,998,770	29,057,604	
SDC	Finished goods	296,964	284,394	811,518	
	Work in process	433,999	296,788	542,473	
	Raw material	692,591	564,573	788,521	
	Material in transit	12,658	6,509	23,626	
	Total	1,436,212	1,152,264	2,166,138	
Harman	Finished goods	760,507	725,484	799,919	
	Work in process	107,752	104,514	119,890	
	Raw material	725,525	700,011	913,085	
	Material in transit	426,330	319,785	269,715	
	Total	2,020,114	1,849,794	2,102,609	
Total	Finished goods	14,347,406	14,553,014	16,032,226	
	Work in process	22,806,509	22,198,448	20,077,519	
	Raw material	14,775,429	13,697,354	14,979,280	
	Material in transit	1,418,356	1,177,058	1,098,841	
	Total	53,347,700	51,625,874	52,187,866	
Inventory ratio (%) [Inventory ÷ Total Assets] × 100		11.3%	11.3%	11.6%	
Inventory turnover (x) [Yearly COGS ÷ {(Beginning inventory + Ending inventory)÷2}]		3.5	3.5	4.1	

※ Based on consolidated financial statements

Inventory counts

(1) Inspection date

- End of May and November (twice a year)
- For the difference between the inspection date and year-end, the Company verifies receiving and shipping of inventory during the period thereby confirming existence of inventory on the reporting date.

(2) Inspection method

- Internal warehouse: Closed & entire quantity inspection
- ※ Sample tests on semi-conductor and display panel in the production lines and SVC materials in automated warehouses
- Outside warehouse
 - Conduct both sample tests and total inspections on third-party inventory and inventory-in-transit by requiring their custodians to submit confirmation documents
- External auditors join and observe the inspection and carry out sample tests to confirm the existence and completeness.

Inventory aging and valuation

Inventory is recognized at the lower of cost or net realizable value. Inventory as of March 31, 2024 are as follows:

(KRW mil)

Category	Acquisition cost	Inventory valuation reserve	Balance	Note
Finished goods	15,448,722	△1,101,316	14,347,406	
Work in process	25,366,463	△2,559,954	22,806,509	
Raw material	16,640,738	△1,865,309	14,775,429	
Material in transit	1,418,356	-	1,418,356	
Total	58,874,279	△5,526,579	53,347,700	

※ Based on consolidated financial statements

D. Fair value estimation

Refer to 3. Financial Instruments by Category and 25. Financial Risk Management in 『III. Financial Affairs』 .

IV. Management Discussion and Analysis

Pursuant to the reporting guidelines set forth by the *Financial Supervisory Service* of the Republic of Korea, the Management Discussion and Analysis section, reported in the full-year business report, is not included in the 1Q, half-year, and 3Q reports.

V. Auditor's Report

1. Introduction

Samjong KPMG conducted audit on the consolidated/separate financial statements of the Company for the year ended December 31, 2023 and review for the period ended March 31, 2024. The company received an unqualified opinion for the year 2023, and the financial statements for the the period ended March 31, 2024 are presented fairly, in all material respects, in accordance with Korean IFRS 1034 Interim Financial Reporting.

Deloitte Anjin conducted audit on the consolidated/separate financial statements of the Company for the year ended December 31, 2022 and expressed an unqualified opinion.

All of the Company's subsidiaries received unqualified opinions for the disclosure periods.

Period end	Company Auditor	Audit Opinion	Emphasis of Matter	Key Audit Matter(s)
Mar 31, 2024	Samjong KPMG	Not applicable	Not applicable	Not applicable
Dec 31, 2023	Samjong KPMG	Unqualified	Not applicable	(Consolidated) 1. Valuation of memory semiconductor inventory at net realizable value 2. Accuracy and completeness of sales deduction related to sales promotion activities of products (Separate) 1. Valuation of memory semiconductor inventory at net realizable value 2. Accuracy and completeness of sales deduction related to sales promotion activities of products
Dec 31, 2022	Deloitte Anjin	Unqualified	Not applicable	(Consolidated) 1. Sales deduction related to sales promotion activities of products (Separate) 1. Sales deduction related to sales promotion activities of products

※ Audit opinion on both separate and consolidated financial statements.

[Audit Contract Description]

(KRW mil)

Fiscal Period	Auditor	Description	Contract		Actual	
			Audit fee	Total Hours	Fee Claimed	Hours spent
Quarter ended Mar 31, 2024	Samjong KPMG	- Review of the interim separate/consolidated financial statements - Audit of separate/consolidated financial statements - Audit of separate/consolidated Internal Control over Financial Reporting	7,800	78,000	1,261	12,614
Year ended Dec 31, 2023	Samjong KPMG	- Review of the interim separate/consolidated financial statements - Audit of separate/consolidated financial statements - Audit of separate/consolidated Internal Control over Financial Reporting	7,800	85,700	7,800	85,036
Year ended Dec 31, 2022	Deloitte Anjin	- Review of the interim separate/consolidated financial statements - Audit of separate/consolidated financial statements - Audit of Internal Control over Financial Reporting (ICFR)	8,424	78,000	8,424	78,146

< Review plan for the period ended March 31, 2024 >

Review Period		Planned Dates
2024 1Q	Pre-review	Mar 11, 2024 ~ Mar 29, 2024
	Review	Apr 8 2024~ May 14 2024

※ Above schedule is for the review of separate and consolidated financial statements

[Non-Audit Service Contract Description]

(KRW mil)

Fiscal Period	Contract Date	Non-audit Service Description	Period for Service	Compensation	Note
Quarter ended Mar 31, 2024	Feb 2017 Sep 2018 May 2019	Tax advisory services(overseas subsidiaries)	Jan – Mar 2024	35	Samjong KPMG
		Tax advisory services(overseas subsidiaries)	Jan – Mar 2024	-	
		Tax advisory services(overseas subsidiaries)	Jan – Mar 2024	73	
Year ended Dec 31, 2023	Feb 2017 Sep 2018 May 2019 May 2023	Tax advisory services(overseas subsidiaries)	Jan – Dec 2023	202	Samjong KPMG
		Tax advisory services(overseas subsidiaries)	Jan – Dec 2023	27	
		Tax advisory services(overseas subsidiaries)	Jan – Dec 2023	79	
		Tax advisory services(overseas subsidiaries)	May – Jul 2023	25	
Year ended Dec 31, 2022	-	-	-	-	-

[Details of internal audit committee's discussion with Auditors]

No.	Date	Participants	Method	Details of discussion
1	Jan 29, 2024	Audit Committee: 3 members Company: Head of Audit Team Auditor: Signing partner and 5 others	Face-to-face meeting	<ul style="list-style-type: none"> - Annual audit plan and its progress - Key Audit Matters and other areas of focus - Progress of audit of Internal Control over Financial Reporting - Other required communications at the completion stage of the audit
2	Apr 26, 2024	Audit Committee: 3 members Company: Head of Audit Team Auditor: Signing partner and 5 others	Face-to-face meeting	<ul style="list-style-type: none"> - Reporting on progress of quarterly review - Audit plan for the year 2024 - Other required communications at the planning stage of the audit

2. Change of Independent Auditor

There are 227 subsidiaries as of March 31, 2024. Harman International Korea, Inc., the Company's domestic subsidiary, changed its external auditor from Samil PwC to Samjong KPMG and Harman International Industries, Inc. changed from PwC to KPMG. Also, eMagin Corporation, the Company's newly acquired affiliate, and Samsung Federal Inc., which was established in 2023, appointed KPMG as external auditor. Appointment of external auditor is decided at each entity's own discretion.

Details of change in subsidiaries' external auditors during the period are as follows:

Subsidiaries	Previous auditor	Current Auditor
Harman International Korea, Inc.	Samil PwC	Samjong KPMG
Harman International Industries, Inc.	PwC	KPMG

The Company has changed its external auditor from Deloitte Anjin to Samjong KPMG since 2023. Upon the expiration of contract with Deloitte Anjin at the end of 2022, which was the designated auditor, the audit committee has newly appointed Samjong KPMG as the Company's external auditor for three years for the period 2023-2025, in accordance with Article 10 (1), (3) and (4) of the "Act on External Audit of Stock Companies".

For the year ended December 31, 2023, the Company holds 232 subsidiaries. In 2023, 8 domestic subsidiaries, including Samsung Display Co., Ltd., changed external auditor from Deloitte Anjin to Samjong KPMG and SU Materials Co., Ltd. from E&Y Hanyoung to Samjong KPMG. Among overseas subsidiaries, 30 companies including Samsung Electronics America, Inc. (SEA) switched from Deloitte to KPMG, 65 including Samsung (China) Semiconductor Co., Ltd. (SCS) from PwC to KPMG, 6 including Samsung Electronics Benelux B.V. (SEBN) from E&Y to KPMG, and Laos Samsung Electronics Sole Co., Ltd (LSE) from KPP Co., Ltd to KPMG. Samsung Venture Investment Co. No. 62 established in 2023 and Stellar Forest Co., Ltd. established in 2022 appointed Samjong KPMG, and Samsung Electronics Uzbekistan FC LCC (SEUZ) and DOWOOINSYS VINA COMPANY LIMITED appointed KPMG as their external auditors. As the Company switched its external auditor, those subsidiaries newly designated and shifted their auditors in pursuit of efficient consolidated audit at each entity's own discretion. Details of change in subsidiaries' external auditors during the year are as follows:

Subsidiaries	Previous auditor	Current Auditor
Samsung Display Co., Ltd.	Deloitte Anjin	Samjong KPMG
Samsung Electronics Service Co., Ltd.	Deloitte Anjin	Samjong KPMG
Samsung Electronics Service CS Co., Ltd.	Deloitte Anjin	Samjong KPMG
Samsung Electronics Sales Co., Ltd.	Deloitte Anjin	Samjong KPMG
Samsung Electronics Logitech Co., Ltd.	Deloitte Anjin	Samjong KPMG
Dowooinsys Co., Ltd.	Deloitte Anjin	Samjong KPMG
Gf-System Co., Ltd.	Deloitte Anjin	Samjong KPMG
Mirero System Co., Ltd.	Deloitte Anjin	Samjong KPMG
SU Materials Co., Ltd.	E&Y Hanyoung	Samjong KPMG
Samsung Electronics America, Inc. (SEA)	Deloitte	KPMG
Samsung Semiconductor, Inc. (SSI)	Deloitte	KPMG
Samsung Mexicana S.A. de C.V (SAMEX)	Deloitte	KPMG
Samsung International, Inc. (SII)	Deloitte	KPMG
Samsung Austin Semiconductor LLC. (SAS)	Deloitte	KPMG
Samsung Electronics Mexico S.A. De C.V. (SEM)	Deloitte	KPMG
Samsung Electronics (UK) Ltd. (SEUK)	Deloitte	KPMG
Samsung Electronics Holding GmbH (SEHG)	Deloitte	KPMG
Samsung Semiconductor Europe GmbH (SSEG)	Deloitte	KPMG
Samsung Electronics GmbH (SEG)	Deloitte	KPMG
Samsung Semiconductor Europe Limited (SSEL)	Deloitte	KPMG
Samsung Vina Electronics Co., Ltd. (SAVINA)	Deloitte	KPMG
Samsung Electronics Singapore Pte. Ltd. (SESP)	Deloitte	KPMG

Samsung Asia Pte. Ltd. (SAPL)	Deloitte	KPMG
Samsung Electronics Australia Pty. Ltd. (SEAU)	Deloitte	KPMG
Thai Samsung Electronics Co., Ltd. (TSE)	Deloitte	KPMG
Samsung Display Vietnam Co., Ltd. (SDV)	Deloitte	KPMG
Samsung R&D Institute BanglaDesh Limited (SRBD)	Deloitte	KPMG
Samsung Electronics Vietnam Co., Ltd. (SEV)	Deloitte	KPMG
Samsung Electronics Vietnam THAINGUYEN Co., Ltd. (SEVT)	Deloitte	KPMG
Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	Deloitte	KPMG
Samsung (CHINA) Investment Co., Ltd. (SCIC)	Deloitte	KPMG
Samsung Electronics Taiwan Co., Ltd. (SET)	Deloitte	KPMG
Shanghai Samsung Semiconductor Co., Ltd. (SSS)	Deloitte	KPMG
Samsung Gulf Electronics Co., Ltd. (SGE)	Deloitte	KPMG
Samsung Electronics Saudi Arabia Ltd. (SESAR)	Deloitte	KPMG
Samsung Electronics South Africa(Pty) Ltd. (SSA)	Deloitte	KPMG
Samsung Electronics Turkiye (SETK)	Deloitte	KPMG
Samsung Electronics Industry and Commerce Ltd. (SETK-P)	Deloitte	KPMG
Samsung Eletronica da Amazonia Ltda. (SEDA)	Deloitte	KPMG
Samsung Japan Corporation (SJC)	PwC	KPMG
Samsung R&D Institute Japan Co. Ltd. (SRJ)	PwC	KPMG
Samsung Electronics Japan Co., Ltd. (SEJ)	PwC	KPMG
Samsung Oak Holdings, Inc. (SHI)	PwC	KPMG
Samsung Electronics Canada, Inc. (SECA)	PwC	KPMG
Samsung Research America, Inc (SRA)	PwC	KPMG
SAMSUNG NEXT LLC (SNX)	PwC	KPMG
SAMSUNG NEXT FUND LLC (SNXF)	PwC	KPMG
Samsung Electronics Home Appliances America, LLC (SEHA)	PwC	KPMG
Samsung Electronics Digital Appliance Mexico, SA de CV (SEDAM)	PwC	KPMG
Samsung Electronics Latinoamerica Miami, Inc. (SEMI)	PwC	KPMG
Samsung Electronics France S.A.S (SEF)	PwC	KPMG
Samsung Electronics Hungarian Private Co. Ltd. (SEH)	PwC	KPMG
Samsung Electronics Czech and Slovak s.r.o. (SECZ)	PwC	KPMG
Samsung Electronics Italia S.P.A. (SEI)	PwC	KPMG
Samsung Electronics Europe Logistics B.V. (SELS)	PwC	KPMG
Samsung Electronics Romania LLC (SEROM)	PwC	KPMG
Samsung Electronics Overseas B.V. (SEO)	PwC	KPMG
Samsung Electronics Polska, SP.Zo.o (SEPOL)	PwC	KPMG
Samsung Electronics Nordic Aktiebolag (SENA)	PwC	KPMG
Samsung Electronics Austria GmbH (SEAG)	PwC	KPMG
Samsung Electronics Switzerland GmbH (SESG)	PwC	KPMG
SAMSUNG ELECTRONICS BALTICS SIA (SEB)	PwC	KPMG
Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	PwC	KPMG
Samsung Electronics Poland Manufacturing SP.Zo.o (SEPM)	PwC	KPMG
Samsung Electronics Greece S.M.S.A (SEGR)	PwC	KPMG
Samsung Nanoradio Design Center (SNDC)	PwC	KPMG
Samsung Electronics Air Conditioner Europe B.V. (SEACE)	PwC	KPMG
Samsung Denmark Research Center ApS (SDRC)	PwC	KPMG
Samsung Cambridge Solution Centre Limited (SCSC)	PwC	KPMG
Samsung R&D Institute India-Bangalore Private Limited (SRI-Bangalore)	PwC	KPMG
Samsung Electronics New Zealand Limited (SENZ)	PwC	KPMG

PT Samsung Electronics Indonesia (SEIN)	PwC	KPMG
PT Samsung Telecommunications Indonesia (STIN)	PwC	KPMG
Samsung Display Noida Private Limited (SDN)	PwC	KPMG
Samsung Display Dongguan Co., Ltd. (SDD)	PwC	KPMG
Samsung Display Tianjin Co., Ltd. (SDT)	PwC	KPMG
Samsung Electronics Hong Kong Co., Ltd. (SEHK)	PwC	KPMG
Suzhou Samsung Electronics Co., Ltd. (SSEC)	PwC	KPMG
Samsung Suzhou Electronics Export Co., Ltd. (SSEC-E)	PwC	KPMG
Samsung Mobile R&D Center China-Guangzhou (SRC-Guangzhou)	PwC	KPMG
Samsung R&D Institute China-Shenzhen (SRC-Shenzhen)	PwC	KPMG
Samsung Electronics Suzhou Semiconductor Co., Ltd. (SESS)	PwC	KPMG
SEMES (XIAN) Co., Ltd.	PwC	KPMG
Beijing Samsung Telecom R&D Center (SRC-Beijing)	PwC	KPMG
Samsung Electronics Suzhou Computer Co., Ltd. (SESC)	PwC	KPMG
Samsung Semiconductor (China) R&D Co., Ltd. (SSCR)	PwC	KPMG
Samsung Electronics China R&D Center (SRC-Nanjing)	PwC	KPMG
Samsung (China) Semiconductor Co., Ltd. (SCS)	PwC	KPMG
Samsung SemiConductor Xian Co., Ltd. (SSCX)	PwC	KPMG
Samsung Electronics West Africa Ltd. (SEWA)	PwC	KPMG
Samsung Electronics East Africa Ltd. (SEEA)	PwC	KPMG
Samsung Electronics Israel Ltd. (SEIL)	PwC	KPMG
Samsung Electronics Tunisia S.A.R.L (SETN)	PwC	KPMG
Samsung Electronics Pakistan(Private) Ltd. (SEPAK)	PwC	KPMG
Samsung Electronics South Africa Production (pty) Ltd. (SSAP)	PwC	KPMG
Samsung Semiconductor Israel R&D Center, Ltd. (SIRC)	PwC	KPMG
Samsung Electronics Maghreb Arab (SEMAG)	PwC	KPMG
Samsung Electronics Latinoamerica(Zona Libre), S. A. (SELA)	PwC	KPMG
Samsung Electronica Colombia S.A. (SAMCOL)	PwC	KPMG
Samsung Electronics Chile Limitada (SECH)	PwC	KPMG
Samsung Electronics Peru S.A.C. (SEPR)	PwC	KPMG
Samsung Electronics Ukraine Company LLC (SEUC)	PwC	KPMG
Samsung R&D Institute Ukraine (SRUKR)	PwC	KPMG
Samsung Electronics Central Eurasia LLP (SECE)	PwC	KPMG
Samsung Electronics Iberia, S.A. (SESA)	E&Y	KPMG
Samsung Electronics Benelux B.V. (SEBN)	E&Y	KPMG
Samsung Electronics Portuguesa, Unipessoal, Lda. (SEP)	E&Y	KPMG
Samsung Electronics Philippines Corporation (SEPCO)	E&Y	KPMG
Samsung Electronics Levant Co.,Ltd. (SELV)	E&Y	KPMG
Samsung Electronics Caucasus Co. Ltd (SECC)	E&Y	KPMG
Laos Samsung Electronics Sole Co., Ltd (LSE)	KPP Co., Ltd	KPMG

There are 232 subsidiaries as of December 31, 2022, and Samsung R&D Institute Ukraine (SRUKR) newly appointed PwC, and Samsung Venture Investment Co. No. 52, No. 55, No. 56, and No. 57 appointed Samjong KPMG as external auditors, respectively. Appointment of external auditor is decided at each entity's own discretion.

3. Regarding Internal Control

Pursuant to the reporting guidelines set forth by the *Financial Supervisory Service* of South Korea, the Internal Control section, reported in the half-year and full-year Business Report, is not included in the 1Q and 3Q reports.

VI. Corporate Governance

1. Board of Directors

Pursuant to the reporting guidelines set forth by the FSS of the Republic of Korea, the Board of Directors section, reported in the half-year and full-year business reports, is not included in the 1Q and 3Q reports.

2. Audit System

Pursuant to the reporting guidelines set forth by the FSS of the Republic of Korea, the Audit System section, reported in the half-year and full-year business reports, is not included in the 1Q and 3Q reports.

3. General meeting of shareholders

A. Voting method

As of March 31, 2024, the Company has not adopted cumulative voting or paper voting and has adopted electronic voting, which was used at the AGM on March 20, 2024.

On January 30, 2020, the Board resolved to adopt electronic voting to enhance convenience in exercising voting rights for shareholders in accordance with Article 368-4 (Exercise of Voting Rights by Electronic Means) of the Commercial Act. E-voting has been used at every AGM since it was introduced at the AGM on March 18, 2020.

The convocation notice of general meeting of shareholders includes the information that voting rights can be exercised electronically. Owners of shares as of the last day of every settlement term can exercise their voting rights via the electronic voting system of Korea Securities Depository ten days prior to general meeting date until the day before the meeting, without being present at the meeting.

[As of March 31, 2024]

Classification	Cumulative voting	Paper voting	Electronic voting
Adoption	Excluded	Not adopted	Adopted
Implementation	-	-	AGM (2023)

The Company as of the reporting date employs proxy voting and it contacts shareholders directly to recommend delegating voting rights, contacts shareholders by mail or email, and also made a power of attorney form available on the Company website.

B. Minority shareholder rights

No minority shareholder rights were exercised during the reporting period.

C. Competition over management rights

No competition over management rights occurred during the reporting period.

D. Voting shares

As of March 31, 2024, SEC has 5,969,782,550 issued shares of common stock, and 822,886,700 issued shares of preferred stock with no voting rights. There are 603,800,392 shares of common stock with limited voting rights under relevant laws. Thus, the total number of shares with full voting rights is 5,365,982,158.

[As of March 31, 2024]

Classification	Share type	Number of shares	Note
Number of issued shares (A)	Common	5,969,782,550	-
	Preferred	822,886,700	-
Shares with no voting rights (B)	Common	-	-
	Preferred	-	-
Shares with no voting rights according to Articles of Incorporation (C)	Common	-	-
	Preferred	822,886,700	-
Shares with limited voting rights under relevant laws (D)	Common	603,324,100	Restricted by the Monopoly Regulation and Fair Trade Act: 508,157,148 shares held by Samsung Life Insurance & 88,802,052 shares held by Samsung Fire & Marine Insurance 4,484,150 shares held by Samsung Welfare Foundation 1,880,750 shares held by Samsung Foundation of Culture
	Common	476,292	Restricted by the Insurance Business Act: Shares held by Samsung Life Insurance in certain special accounts
Shares with voting rights (E = A - B - C - D)	Common	5,365,982,158	-
	Preferred	-	-

Pursuant to Korea's Monopoly Regulation and Fair Trade Act, owners can exercise certain rights on some shares (603,324,100) in accordance with related laws, including the right to vote on agendas such as the appointment or dismissal of directors and revisions to the Articles of Incorporation.

E. Stock affairs

Preemptive rights in the Articles of Incorporation

1. New shares to be issued by the Company shall be allocated to the shareholders in proportion to their respective shareholdings in accordance with Paragraph 6, Article 8. If shares are not subscribed for as a result of waiver or loss of the preemptive right of the shareholders to subscribe for new shares, or if fractional shares remain at the time of allocation of new shares, such shares may be disposed of by a resolution of the Board of Directors in accordance with applicable laws and regulations.
2. Notwithstanding the above Paragraph 1, new shares may be allocated to persons other than shareholders in the following cases:
 - a. If the Company issues new shares or causes underwriters to underwrite new shares by a resolution of the Board of Directors in accordance with applicable laws and regulations including the Financial Investment Services and Capital Markets Act;
 - b. If the Company allocates new shares preferentially to members of the Employee Stock Ownership Association by a resolution of the Board of Directors in accordance with applicable laws and regulations including the Financial Investment Services and Capital Markets Act;
 - c. If the Company issues new shares for the issuance of depositary receipts (DR) by a resolution of the Board of Directors in accordance with the applicable laws and regulations including the Financial Investment Services and Capital Markets Act;
 - d. If the Company issues new shares by public offering in accordance with Article 11-3;
 - e. If new shares are issued by the exercise of stock options in accordance with Article 11-4;
 - f. If the Company issues new shares to the extent of 20% of the total issued and outstanding shares to domestic or foreign financial institutions for the purpose of obtaining financing urgently or to the relevant partner company for the purpose of inducing technology therefrom, etc., by a resolution of the Board of Directors; provided that the issue price of the new shares shall not be less than the price prescribed by the Financial Investment Services and Capital Markets Act and other applicable laws and regulations.

☞ (Note) Paragraph 6, Article 8

In the case of rights issue, bonus issue or stock dividend, the holders of common shares shall be entitled to common shares, and the holders of preferred shares shall be entitled to preferred shares, in proportion to their respective shareholdings; provided that in the case of rights issue and stock dividend the Company may, if necessary, issue only one kind of shares, where all the shareholders shall be entitled to such kind of shares to be issued.

☞ (Note) Article 11-3 (Public Offering)

1. The Company may issue new shares by public offering to the extent that the new shares do not exceed 20% of the total number of issued and outstanding shares by a resolution of the Board of Directors, pursuant to Article 165-6, Paragraph 1, Item 3 of the Financial Investment Services and Capital Markets Act.
2. If the Company issues new shares by public offering, the type, quantity and issue price of the shares to be newly issued shall be determined by a resolution of the Board of Directors; provided that the issue price of such new shares shall not be less than the price prescribed by the Financial Investment Services and Capital Markets Act and other applicable laws and regulations.

☞ (Note) Article 11-4 (Stock Options)

1. The Company may grant stock options to its officers and employees (including officers and employees of the related companies as set forth in Article 542-3, Paragraph 1 of the Commercial Code; the same shall apply for the purpose of this Article) by a special resolution of the general meeting of shareholders pursuant to Article 542-3 of the Commercial Code, to the extent permitted by the Commercial Code; provided, however, that the Company may grant the stock options to its officers and employees (except for the directors of the Company) by a resolution of the Board of Directors to the extent determined by the relevant laws and regulations.
2. The person to whom stock options may be granted are the officers and employees who have contributed or have the capacity to contribute to the establishment, management, overseas business, technical innovation, etc. of the Company; provided, however, that the officers and employees who may not be entitled to stock options under the relevant laws and regulations shall be excluded.
3. The shares to be issued to the officers or employees by the exercise of their stock options (in case the Company pays, either in cash or treasury shares, the difference between the exercise price of stock options and the market price, they refer to the shares which are the basis for such calculation) shall be common shares in registered form or preferred shares in registered form
4. Total number of shares to be delivered in accordance with the exercise of stock options shall be up to the extent permitted by the relevant laws and regulations.

Preemptive rights in the Articles of Incorporation

5. The stock options may be exercised until an expiry date determined by a resolution of the general meeting of shareholders or the Board of Directors and such expiry date shall be determined within a period not exceeding eight (8) years from the date when two (2) years have elapsed from the date of the general meeting of shareholders or the date of the Board of Directors' meeting at which a resolution to grant such stock options is adopted; provided, however, that the person to whom a stock option is granted should serve the Company for at least two (2) years after the date of such resolution in order to exercise such stock option, unless otherwise set forth by relevant laws and regulations.
6. The terms and conditions for stock options, such as the contents and exercise price thereof shall be determined by a special resolution of the general meeting of shareholders or by a resolution of the Board of Directors in accordance with the relevant laws and regulations and the Articles of Incorporation; provided, however, that such matters which are not provided for as matters reserved for resolutions of the general meeting of shareholders or the Board of Directors' meeting under the relevant laws and regulations or the Articles of Incorporation may be determined by the Board of Directors or a committee authorized by the Board of Directors.
7. The Company may cancel the grant of stock options by a resolution of the Board of Directors in any of the following cases:
 - a. In case the relevant officer or employee voluntarily retires from his/her office or leaves the Company after the grant of stock options;
 - b. In case the relevant officer or employee causes substantial damages to the Company due to his/her willful misconduct or negligence;
 - c. In case any of the causes for cancellation set forth in the stock option agreement occurs.

Settlement date	Dec 31	Annual General Meetings of Shareholders	Within 3 months after the end of every business year
Record date (closing period)		Last day of fiscal year (One month from Jan 1)	
Transfer agent	Korea Securities Depository (T: +82-51-519-1500): 40 Munhyeongeumyung-ro, Nam-gu, Busan, Korea		
Shareholder benefit	n/a	Published on	Joongang Daily

With Act on Electronic Registration of Stocks, Bonds, etc. ("Electronic Securities Act") taking effect Sep 16, 2019, rights specified on stocks and subscription warrants are subject to mandatory electronic registration, therefore, "Stock types" are no longer applicable. Related information is published on Joongang Daily in pursuant to our Articles of Incorporation, as well as on our website (<https://www.samsung.com/sec/ir>).

F. Results of shareholder meetings

[As of March 31, 2024]

Date	Agenda	Results
AGM (Mar 20, 2024)	<ol style="list-style-type: none"> 1 Approval of audited financial statements for FY2023, including Statements of Financial Position, Statements of Profit or Loss, Statements of Appropriation of Retained Earnings 2 Election of Je-Yoon Shin as Independent Director 3 Election of Hye-Kyung Cho as Independent Director for Audit Committee Member 4 Election of Myung-Hee Yoo as Audit Committee Member 5 Approval of Director Remuneration Limit (FY2024) 6 Approval of Amendments to the Articles of Incorporation 	<p>Approved</p> <p>Approved</p> <p>Approved</p> <p>Approved</p> <p>Approved</p> <p>Approved</p>
AGM (Mar 15, 2023)	<ol style="list-style-type: none"> 1 Approval of FY22 financial statements, including balance sheet, income statement, and the statement of appropriation of retained earnings, etc. 2 Appointment of Jong-hee Han as Executive Director 3 Approval of remuneration limit for Directors 	<p>Approved</p> <p>Approved</p> <p>Approved</p>
EGM (Nov 3, 2022)	<ol style="list-style-type: none"> 1 Appointment of Independent Directors <ol style="list-style-type: none"> 1-1 Appointment of Eun-nyeong Heo as an Independent Director 1-2 Appointment of Myung-hee Yoo as an Independent Director 	<p>Approved</p> <p>Approved</p>
AGM (Mar 16, 2022)	<ol style="list-style-type: none"> 1 Approval of FY21 financial statements, including balance sheet, income statement, and the statement of appropriation of retained earnings, etc. 2 Appointment of Directors <ol style="list-style-type: none"> 2-1. Appointment of Independent Directors <ol style="list-style-type: none"> 2-1-1 Appointment of Han-jo Kim as Independent Director 2-1-2 Appointment of Wha-jin Han as Independent Director 2-1-3: Appointment of Jun-sung Kim as Independent Director 2-2: Appointment of Executive Directors <ol style="list-style-type: none"> 2-2-1 Appointment of Kye-hyun Kyung as Executive Director 2-2-2 Appointment of Tae-moon Roh as Executive Director 2-2-3 Appointment of Hark-kyu Park as Executive Director 2-2-4: Appointment of Jung-bae Lee as Executive Director 2-3: Appointment of Audit Committee Member <ol style="list-style-type: none"> 2-3-1: Appointment of Han-jo Kim as Audit Committee Member 2-3-2: Appointment of Jeong Kim as Audit Committee Member 3. Approval of remuneration limit for Directors 	<p>Approved</p> <p>Approved</p> <p>Approved</p> <p>Approved</p> <p>Approved</p> <p>Approved</p> <p>Approved</p> <p>Approved</p> <p>Approved</p> <p>Approved</p> <p>Approved</p> <p>Approved</p> <p>Approved</p>

VII. Information on Shareholders

1. Ownership of shares by the major shareholder(s) and related parties

[As of March 31, 2024]

Name	Relationship ¹⁾	Type of share	Ownership				Notes
			Period start		Period end		
			Shares	Stake (%)	Shares	Stake (%)	
Samsung Life Insurance	Major shareholder	Common	508,157,148	8.51	508,157,148	8.51	-
		Preferred	43,950	0.01	43,950	0.01	-
Samsung Life Insurance (special accounts)	Major shareholder	Common	8,097,938	0.14	7,284,757	0.12	Open market transactions
		Preferred	417,085	0.06	389,221	0.05	Open market transactions
Samsung C&T	Affiliate	Common	298,818,100	5.01	298,818,100	5.01	-
Samsung Fire & Marine Insurance	Affiliate	Common	88,802,052	1.49	88,802,052	1.49	-
Samsung Welfare Foundation	Funded foundation	Common	4,484,150	0.08	4,484,150	0.08	-
Samsung Foundation Of Culture	Funded foundation	Common	1,880,750	0.03	1,880,750	0.03	-
Ra-hee Hong	Related party of the major shareholder	Common	117,302,806	1.96	97,978,700	1.64	Over-the-counter
		Preferred	206,633	0.03	206,633	0.03	-
Jae-yong Lee	Related party of the major shareholder	Common	97,414,196	1.63	97,414,196	1.63	-
		Preferred	137,757	0.02	137,757	0.02	-
Boo-jin Lee	Executive member of affiliate	Common	55,394,044	0.93	52,992,821	0.89	Over-the-counter
		Preferred	137,755	0.02	137,755	0.02	-
Seo-hyun Lee	Related party of the major shareholder	Common	55,394,044	0.93	47,290,190	0.79	Over-the-counter
		Preferred	137,755	0.02	137,755	0.02	-
Jong-hee Han	Executive member of affiliate	Common	15,000	0.00	15,000	0.00	-
Kye-hyun Kyung	Executive member of affiliate	Common	21,050	0.00	21,050	0.00	-
Tae-moon Roh	Executive member of affiliate	Common	13,000	0.00	13,000	0.00	-
Hark-kyu Park	Executive member of affiliate	Common	22,500	0.00	22,500	0.00	-

Name	Relationship ¹⁾	Type of share	Ownership				Notes
			Period start		Period end		
			Shares	Stake (%)	Shares	Stake (%)	
Jung-bae Lee	Executive member of affiliate	Common	15,000	0.00	15,000	0.00	-
Han-jo Kim	Executive member of affiliate	Common	3,655	0.00	3,655	0.00	-
Hye-Kyung Cho	Executive member of affiliate	Common	0	0.00	500	0.00	Newly appointed
Total		Common	1,235,835,433	20.7	1,205,193,569	20.19	-
		Preferred	1,080,935	0.13	1,053,071	0.13	-

1) In accordance with Article 3 Paragraph 1 of Enforcement Decree of the Act on Corporate Governance of Financial Companies. Common shares carry full voting rights while preferred shares do not. (Owners of certain common shares have limited voting rights in accordance with relevant laws.)
For changes after March 31, 2024, please refer to 'Ownership status of securities, etc. of executives and major shareholder' published in Korean in DART (<https://dart.fss.or.kr>).

2. Matters related to the major shareholder

A. Overview of the major shareholder (corporation or organization)

(1) Basic information of the major shareholder (Samsung Life Insurance Co., Ltd.)

- 1) Legal, commercial name: Samsung Life Insurance Co., Ltd.
- 2) Date of establishment: April 24, 1957
- 3) Address, phone number, and English language website of the corporate headquarters
 - Address: 11, Seocho-daero 74-gil, Seocho-gu, Seoul, Republic of Korea
 - Phone: +82-2-1588-3114
 - Website: <https://www.samsunglife.com>
- 4) CEO and major shareholder of the major shareholder (Samsung Life Insurance)

Name	Number of investors	CEO		Major shareholder	
		Name	Share ratio (%)	Name	Share ratio (%)
Samsung Life Insurance Co., Ltd	74,343	Won-hak Hong	0.00	Samsung C&T	19.34

As of March 31, 2024, based on common shares.

5) Changes to the CEO and major shareholder of the major shareholder (Samsung Life Insurance)

Date of change	CEO		Major shareholder	
	Name	Share ratio (%)	Name	Share ratio (%)
Mar 21, 2024	Won-hak Hong	0.00	-	-

Mar 21, 2024: Young-muk Jeon resigned from his position as CEO, and Executive Director Won-hak Hong was appointed as CEO

(2) Financial status of the recent settlement term of the major shareholder (Samsung Life Insurance)

(KRW mil)

Classification	
Name of the corporation or organization	Samsung Life Insurance Co., Ltd
Total assets	315,771,608
Total liabilities	272,373,717
Total equity	43,397,891
Revenue	9,318,986
Operating profit	746,311
Net profit	663,292

The financial status is as of Mar 31, 2024, based on the consolidated K-IFRS financial statements.

(3) Business conditions of the major shareholder (Samsung Life Insurance)

Samsung Life Insurance is a company in which life insurance and its related reinsurance contract are the key purpose of business operations, and it operates businesses in accordance with the Insurance Business Act and other related laws.

Its key subsidiary, Samsung Card, is a specialized credit finance business company that operates specialized credit finance businesses (including credit card business, facility leasing business, and installment financing business) in accordance with the Specialized Credit Finance Business Act and other related laws.

☞ Please refer to the business report (interim and half-year) of Samsung Life Insurance published in DART (<https://dart.fss.or.kr>) for more details of the major shareholder.

B. Certain transaction that may cause changes in the major shareholder

N/A

C. Overview of the major shareholder of the major shareholder

(1) Basic information of the major shareholder (Samsung C&T) of the major shareholder (Samsung Life Insurance)

1) Legal, commercial name: Samsung C&T Corporation

2) Date of establishment and period of existence: Dongwha Real Estate was first established on December 23, 1963, and the company name was changed to Cheil Industries in July 2014. It merged with Samsung C&T Corporation (founded as Samsung Sanghoe on March 1, 1938, and established as Samsung C&T in January 1951) and changed the company name to Samsung C&T Corporation on September 2, 2015 (merger registration date).

3) Address, phone number, and English language website of the corporate headquarters

- Address: 26, Sangil-ro 6-gil, Gangdong-gu, Seoul, Republic of Korea

- Phone: +82-2-2145-5114

- Website: <https://www.samsungcnt.com>

4) CEO and major shareholder of the major shareholder (Samsung C&T) of the major shareholder

Name	Number of investors	CEO		Major shareholder	
		Name	Share ratio (%)	Name	Share ratio (%)
Samsung C&T	115,427	Jae-eon Lee	0.00	Jae-yong Lee	18.26
		Se-chul Oh	0.00		
		Hai-lin Jeong	0.00		

As of Mar 31, 2024, based on common shares

5) Changes to the CEO and major shareholder of the major shareholder (Samsung C&T) of the major shareholder(Samsung Life Insurance)

Date of change	CEO		Major shareholder	
	Name	Share ratio (%)	Name	Share ratio (%)
Mar 17, 2023	Seung-hwan Han	-	-	-
Mar 17, 2023	Hai-lin Jeong	0.00	-	-
Apr 21, 2023	-	-	Jae-yong Lee	18.26
Mar 15, 2024	Jung-suk Koh	-	-	-
Mar 15, 2024	Jae-eon Lee	0.00	-	-

Mar 17, 2023: Seung-hwan Han resigned from his position as CEO, and Executive Director Hai-lin Jeong was appointed as CEO.

Apr 21, 2023: The share ratio of the major shareholder was changed (18.13%→18.26%) due to the cancellation of treasury shares (1,295,411 common shares).

May 15, 2024: Jung-suk Koh resigned from his position as CEO, and Jae-eon Lee was appointed as CEO.

(2) Financial status of the recent settlement term of the major shareholder (Samsung C&T) of the major shareholder (Samsung Life Insurance)

(KRW mil)

Classification	
Name of the corporation or organization	Samsung C&T
Total assets	69,330,328
Total liabilities	27,461,534
Total equity	41,868,794
Revenue	10,795,789
Operating profit	712,311
Net profit	822,138

The financial status is as of Mar 31, 2024, based on the consolidated K-IFRS financial statements.

(3) Business conditions of the major shareholder (Samsung C&T) of the major shareholder (Samsung Life Insurance)

Samsung C&T is consisted of Engineering & Construction, Trading & Investment, Fashion, and Resort Groups as well as biomedicine OEM and biosimilar businesses. The Engineering & Construction Group operates businesses in building, civil infrastructure, plant, and housing areas domestically and globally; Trading & Investment trades internationally in various fields,

including resource development, steel, chemical, industrial materials, and textiles. The Fashion Group imports and sells clothing. The Resort Group manages landscaping business, Everland (dry park), Caribbean Bay (water park), golf course, food supply services, and food distribution business (Samsung Welstory).

☞ Please refer to the business report (interim and half-year) of Samsung C&T published in DART (<https://dart.fss.or.kr>) for more details of the major shareholder of the major shareholder.

VIII. Executives and Employees

1. Executives and employees

A. Registered Executives

[As of Mar 31, 2024]

(Shares)

Name Gender Date of birth	Position	Registered Executive	Full-time/ part-time	Responsibility	Major career	Number of shares owned ¹⁾		Relationship with major shareholder ²⁾	Length of service (months)	Term expiration
						Common	Preferred			
Jong-hee Han Male Mar 1962	Vice Chairman	Executive Director	Full	-CEO (head of DX)	-Bachelor's degree in Electronic Engineering from Inha University -Head of DX Division	15,000	-	Executive Member of an affiliate	49	Mar 17, 2026
Kye-hyun Kyung Male Mar 1963	President	Executive Director	Full	-CEO (head of DS)	-Doctor's degree in Control and Measurement Engineering from Seoul National University -Head of DS Division	21,050	-	Executive Member of an affiliate	25	Mar 15, 2025
Tae-moon Roh Male Sep 1968	President	Executive Director	Full	-Head of MX	-Doctor's degree in Electrical Engineering from Pohang University of Science and Technology -Head of MX Business	13,000	-	Executive Member of an affiliate	25	Mar 15, 2025
Hark-kyu Park Male Nov 1964	President	Executive Director	Full	-CFO	-Master's degree in Business and Technology Management from Korea Advanced Institute of Science and Technology -Head of Corporate Management Office	22,500	-	Executive Member of an affiliate	25	Mar 15, 2025
Jung-bae Lee Male Feb 1967	President	Executive Director	Full	-Head of Memory Business	-Doctor's degree in Electronic Engineering from Seoul National University -Head of Memory Business	15,000	-	Executive Member of an affiliate	25	Mar 15, 2025
Han-jo Kim Male Jul 1956	Director	Independent Director	Part	-Board Chair -Head of Audit Committee -Related Party Transactions Committee -Compensation Committee -Head of Sustainability Committee	-Bachelor's degree in French language and Literature from Yonsei University -Chairman of Hana Foundation	3,655	-	Executive Member of an affiliate	61	Mar 19, 2025
Jun-sung Kim Male Oct 1967	Director	Independent Director	Part	-Compensation Committee -Sustainability Committee	-Bachelor's degree in Economics & Business Administration from Carnegie Mellon University -Managing Director of Government of Singapore Investment Corporation (GIC) Total Return Group	-	-	Executive Member of an affiliate	25	Mar 15, 2025
Eun-nyeong Heo Male Aug 1964	Director	Independent Director	Part	-Related Party Transactions Committee -Independent Director Recommendation Committee -Sustainability Committee	-Doctor's degree in Mineral Economics from The Pennsylvania State University -Professor of College of Engineering at Seoul National University	-	-	Executive Member of an affiliate	17	Nov 2, 2025
Myung-hee Yoo Female Jun 1967	Director	Independent Director	Part	-Audit Committee -Related Party Transactions Committee -Independent Director Recommendation Committee -Sustainability Committee	-Doctor's degree in Administrative Law from Vanderbilt University -Visiting Professor of Graduate School of International Studies at Seoul National University	-	-	Executive Member of an affiliate	17	Nov 2, 2025
Je-Yoon Shin		Independent	Part	-Independent Director	-Bachelor's Degree in			Executive		

Male Mar 1958	Director	Director		Recommendation Committee - Compensation Committee - Sustainability Committee	Economics from Seoul National University - Senior Advisor at Bae, Kim & Lee LLC	-	-	Member of an affiliate	1	Mar 28, 2027
Hye_Kyung Cho Female Jul 1964	Director	Independent Director	Part	- Audit Committee - Sustainability Committee	- Doctor's degree in Robotics from Seoul National University - Professor of Applied AI at Hansung University	500	-	Executive Member of an affiliate	1	Mar 19, 2027

1) As of the reporting date; for changes after the reporting date, please refer to 'Ownership status of securities, etc. of executives and major shareholder' published in Korean in DART (<https://dart.fss.or.kr>).

2) In accordance with Article 3 Paragraph 1 of the Enforcement Decree of the Act on Corporate Governance of Financial Companies.

Mar 20, 2024: Je-Yoon Shin and Hye Kyung Cho were newly appointed as Independent Directors and Independent Director Sun-uk Kim resigned at the AGM

Mar 22, 2024: Term of Independent Director Jeong Kim expired

B. Registered Executives with concurrent positions

[As of Mar 31, 2024]

Concurrent office holder		Company		
Name	Position	Name of company	Position	Period
Hye-Kyung Cho	Independent Director	Hyundai E&C	Independent Director	2021-present
Myung-hee Yoo	Independent Director	HD Hyundai Construction Equipment	Independent Director	2022-present

2. Remuneration for Directors

Pursuant to the reporting guidelines set forth by the FSS of the Republic of Korea, the Remuneration for Directors section, reported in the half-year and full-year business reports, is not included in the 1Q and 3Q reports.

IX. Affiliates and Subsidiaries

Pursuant to the reporting guidelines set forth by the FSS of the Republic of Korea, the Affiliates and Subsidiaries section, reported in the half-year and full-year business reports, is not included in the 1Q and 3Q reports.

X. Transactions with Affiliates and Subsidiaries

1. Credit offerings for affiliates and subsidiaries

As of Mar 31, 2024, SEC provides a debt guarantee for financing of subsidiaries, including Samsung Electronics America, Inc. (SEA) and other subsidiaries as listed below

(USD thousand)

Company	Relation	Creditor	Type	Purpose	Guarantee start date	Guarantee expiry date	Limit of guarantee		Transactions			Interest Rate (%)
							Period start	Period end	Period start	Change	Period end	
SEA	Affiliate	BOA, etc.	Payment guarantee	Operating fund	Apr 16, 2023	Dec 16, 2024	1,278,000	1,278,000	-	-	-	
SEM	Affiliate	BBVA, etc.	Payment guarantee	Operating fund	Jun 14, 2023	Mar 27, 2025	715,000	715,000	-	-	-	
SAMCOL	Affiliate	Citibank, etc.	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	210,000	210,000	-	-	-	
SEDA	Affiliate	BRADESCO, etc.	Payment guarantee	Operating fund	Oct 01, 2023	Dec 16, 2024	329,000	329,000	-	207	207	16.9%
SECH	Affiliate	Citibank, etc.	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	62,000	62,000	-	-	-	
SEPR	Affiliate	BBVA, etc.	Payment guarantee	Operating fund	Jun 01, 2023	Dec 16, 2024	150,000	150,000	-	-	-	
SSA	Affiliate	SCB, etc.	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	318,000	318,000	-	36,010	36,010	6.8%
SEMAG	Affiliate	SocGen, etc.	Payment guarantee	Operating fund	Nov 09, 2023	Dec 16, 2024	96,000	96,000	8,065	-8,065	-	
SETK	Affiliate	BNP, etc.	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	917,000	917,000	320,893	64,001	384,894	49.5%
SETK-P	Affiliate	BNP, etc.	Payment guarantee	Operating fund	Nov 09, 2023	Dec 16, 2024	70,000	70,000	-	-	-	
SECE	Affiliate	Citibank	Payment guarantee	Operating fund	Dec 17, 2023	Dec 16, 2024	114,000	114,000	-	-	-	
SEEG	Affiliate	HSBC, etc.	Payment guarantee	Operating fund	Jun 14, 2023	Jun 13, 2024	85,000	85,000	-	-	-	
SEIN	Affiliate	BNP, etc.	Payment guarantee	Operating fund	Jun 14, 2023	Nov 08, 2024	70,000	70,000	-	-	-	
SJC	Affiliate	Mizuho Bank, etc.	Payment guarantee	Operating fund	Apr 28, 2023	Dec 16, 2024	835,508	817,268	-	-	-	
SEUC	Affiliate	Credit Agricole, etc.	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	125,000	125,000	-	-	-	
SEDAM	Affiliate	Citibank, etc.	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	537,000	537,000	-	-	-	
SECA	Affiliate	BOA	Payment guarantee	Operating fund	Nov 09, 2023	Nov 08, 2024	70,000	70,000	-	-	-	
SELA	Affiliate	Citibank	Payment guarantee	Operating fund	Dec 17, 2023	Dec 16, 2024	60,000	60,000	-	-	-	
SEEH	Affiliate	HSBC, etc.	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	888,400	888,400	-	-	-	
SELV	Affiliate	Citibank	Payment guarantee	Operating fund	Dec 17, 2023	Dec 16, 2024	10,000	10,000	-	-	-	
SEIL	Affiliate	Citibank	Payment guarantee	Operating fund	Dec 17, 2023	Dec 16, 2024	15,600	15,600	-	-	-	
SAPL	Affiliate	BOA, etc.	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	404,000	404,000	-	-	-	
SAVINA	Affiliate	HSBC	Payment guarantee	Operating fund	Jun 14, 2023	Jun 13, 2024	51,000	51,000	-	-	-	
SCIC	Affiliate	HSBC, etc.	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	270,000	270,000	-	-	-	
SESP	Affiliate	SCB	Payment guarantee	Operating fund	Nov 09, 2023	Nov 08, 2024	30,000	30,000	-	-	-	
SME	Affiliate	SCB	Payment guarantee	Operating fund	Nov 09, 2023	Nov 08, 2024	110,000	110,000	-	-	-	
SAMEX	Affiliate	Citibank	Payment guarantee	Operating fund	Dec 17, 2023	Dec 16, 2024	5,000	5,000	-	-	-	
SEASA	Affiliate	Citibank	Payment	Operating	Dec 17, 2023	Dec 16, 2024	2,000	2,000	-	-	-	

			guarantee	fund							
SSAP	Affiliate	SCB	Payment guarantee	Operating fund	Nov 09, 2023	Nov 08, 2024	35,000	35,000	-	-	-
SEPM	Affiliate	HSBC	Payment guarantee	Operating fund	Jun 14, 2023	Jun 13, 2024	35,000	35,000	-	-	-
SESAR	Affiliate	HSBC	Payment guarantee	Operating fund	Jun 14, 2023	Jun 13, 2024	20,000	20,000	-	-	-
SEUZ	Affiliate	Citibank	Payment guarantee	Operating fund	Dec 17, 2023	Dec 16, 2024	10,000	10,000	-	-	-

Company (relation)	Creditor	Type	Purpose	Guarantee start date	Guarantee expiry date	Limit of guarantee		Transactions			Interest Rate (%)
						Period start	Period end	Period start	Change	Period end	
AdGear Technologies Inc. (affiliate)	BOA	Payment guarantee	Operating fund	Nov 09, 2023	Nov 08, 2024	2,000	2,000	-	-	-	-
Harman International Industries, Inc. (affiliate)	JP Morgan	Payment guarantee	Operating fund	Jun 14, 2023	Jun 13, 2024	100,000	100,000	-	-	-	-
Harman International Japan Co., Ltd. (affiliate)	MUFG	Payment guarantee	Operating fund	Nov 09, 2023	Nov 08, 2024	25,000	25,000	-	-	-	-
Harman Holding Limited (affiliate)	HSBC	Payment guarantee	Operating fund	Jun 14, 2023	Jun 13, 2024	30,000	30,000	-	-	-	-
Harman do Brasil Industria Eletronica e Participacoes Ltda. (affiliate)	SocGen	Payment guarantee	Operating fund			15,000	15,000	-	-	-	-
Harman da Amazonia Industria Eletronica e Participacoes Ltda. (affiliate)											
Harman International Industries Limited (affiliate)	HSBC	Payment guarantee	Operating fund	Nov 09, 2023	Nov 08, 2024	30,000	30,000	-	-	-	-
Total						8,129,508	8,111,268	328,958	92,153	421,111	

Separate basis.

The approval decision is resolved by the Management Committee when the guarantee amount per transaction is between 0.1% and/or less than 2.5%, and by the Board of Directors when the guarantee amount per transaction is 2.5% and above.

SEC receives fees on the debt it guarantees depending on the maturity date of each debt guarantee, general loan interest rate, etc. SEC claimed approximately USD 2,141 thousand in guarantee fees in 2023, and it received the fees in 2024.

2. Acquisitions and disposals of assets with affiliates and subsidiaries

In 1Q24, the Company sold assets to affiliates, including Samsung Electronics Suzhou Semiconductor Co., Ltd. (SESS), to increase production capacity of such affiliates. Also, the Company acquired assets including facility equipment from affiliates to improve production efficiency.

(KRW mil)

Company	Relationship	Transaction type	Transaction date ¹⁾	Asset	Purpose of transaction	Amount ²⁾	Gain or loss on disposal
SESS	Affiliate	Asset sale/purchase	Mar 16, 2024	Machinery, etc.	Enhance capacity and production efficiency	9,049	-8
SCS	Affiliate	Asset sale	Feb 28, 2024	Machinery, etc.	Enhance capacity and production efficiency	8,022	7,289
SEVT	Affiliate	Asset purchase	Mar 20, 2024	Machinery, etc.	Enhance capacity and production efficiency	2,173	-
SII	Affiliate	Asset sale	Feb 15, 2024	Machinery, etc.	Enhance capacity and production efficiency	1,753	60
SEV	Affiliates	Asset purchase	Jan 17, 2024	Machinery, etc.	Enhance capacity and production efficiency	132	-

Samsung Biologics	Affiliates	Asset sale	Feb 28, 2024	Vehicle and delivery equipment.	Enhance asset efficiency	122	-14
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Separate basis

The above acquisition and disposal transactions of assets are not subject to the Board's approval.

1) Most recent transaction.

2) Properly calculated by an appropriate method based upon market value assessment. Transaction was made under normal conditions (e.g., terms of cash payment within the 15th, 30th of the following month of transaction).

Transactions worth less than KRW 100 million were excluded according to Corporate Disclosure Guidelines.

3. Business transactions with affiliates and subsidiaries

In 1Q24, no business transactions with affiliates and subsidiaries that are subject to public disclosure.

(KRW mil)

Company	Relationship	Transaction type	Transaction date	Details	Amount
-	-	-	-	-	-

Separate basis

Transactions worth 5% and above of revenue of the current business year are subject to public disclosure.

XI. Other Information

1. Changes in public disclosure

- N/A

2. Contingent liabilities

A. Litigation

The Company is involved in various claims, disputes, and investigations conducted by regulatory bodies, which arose during the normal course of business with numerous entities. Although the outflow of resources and timing of these matters are uncertain, as of the reporting date, the Company believes the outcome will not have a material impact on the financial position of the Company.

Samsung Electronics and its spun-off companies, including SDC, are liable to fulfill in solidarity the debts of SDC which relate to the periods prior to SDC's separation from the Company.

For information related to other contingent liabilities and commitments, see retained earnings in 『3. Notes to consolidated financial statements』 and 『5. Notes to non-consolidated financial statements』 in 『III. Financial Affairs』.

B. Guarantees

Company	Relation	Creditor	Type	Purpose	Guarantee start date	Guarantee end date	Limit of guarantee		Transactions			Interest rate
							Period start	Period end	Period start	Change	Period end	
SEA	Affiliate	BOA, etc.	Payment guarantee	Operating fund	Apr 16, 2023	Dec 16, 2024	1,278,000	1,278,000	-	-	-	
SEM	Affiliate	BBVA, etc.	Payment guarantee	Operating fund	Jun 14, 2023	Mar 27, 2025	715,000	715,000	-	-	-	
SAMCOL	Affiliate	Citibank, etc.	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	210,000	210,000	-	-	-	
SEDA	Affiliate	BRADESCO, etc.	Payment guarantee	Operating fund	Oct 01, 2023	Dec 16, 2024	329,000	329,000	-	207	207	16.9%
SECH	Affiliate	Citibank, etc.	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	62,000	62,000	-	-	-	
SEPR	Affiliate	BBVA, etc.	Payment guarantee	Operating fund	Jun 01, 2023	Dec 16, 2024	150,000	150,000	-	-	-	
SSA	Affiliate	SCB, etc.	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	318,000	318,000	-	36,010	36,010	6.8%
SEMAG	Affiliate	SocGen, etc.	Payment guarantee	Operating fund	Nov 09, 2023	Dec 16, 2024	96,000	96,000	8,065	-8,065	-	
SETK	Affiliate	BNP, etc.	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	917,000	917,000	320,893	64,001	384,894	49.5%
SETK-P	Affiliate	BNP, etc.	Payment guarantee	Operating fund	Nov 09, 2023	Dec 16, 2024	70,000	70,000	-	-	-	
SECE	Affiliate	Citibank	Payment guarantee	Operating fund	Dec 17, 2023	Dec 16, 2024	114,000	114,000	-	-	-	
SEEG	Affiliate	HSBC	Payment guarantee	Operating fund	Jun 14, 2023	Jun 13, 2024	85,000	85,000	-	-	-	
SEIN	Affiliate	BNP, etc.	Payment guarantee	Operating fund	Jun 14, 2023	Nov 08, 2024	70,000	70,000	-	-	-	
SJC	Affiliate	Mizuho Bank, etc.	Payment guarantee	Operating fund	Apr 28, 2023	Dec 16, 2024	835,508	817,268	-	-	-	
SEUC	Affiliate	Credit Agricole, etc.	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	125,000	125,000	-	-	-	
SEDAM	Affiliate	Citibank, etc.	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	537,000	537,000	-	-	-	
SECA	Affiliate	BOA	Payment guarantee	Operating fund	Nov 09, 2023	Nov 08, 2024	70,000	70,000	-	-	-	
SELA	Affiliate	Citibank	Payment	Operating	Dec 17, 2023	Dec 16, 2024	60,000	60,000	-	-	-	

			guarantee	fund								
SEEH	Affiliate	HSBC, etc.	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	888,400	888,400	-	-	-	
SELV	Affiliate	Citibank	Payment guarantee	Operating fund	Dec 17, 2023	Dec 16, 2024	10,000	10,000	-	-	-	
SEIL	Affiliate	Citibank	Payment guarantee	Operating fund	Dec 17, 2023	Dec 16, 2024	15,600	15,600	-	-	-	
SAPL	Affiliate	BOA, etc.	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	404,000	404,000	-	-	-	
SAVINA	Affiliate	HSBC	Payment guarantee	Operating fund	Jun 14, 2023	Jun 13, 2024	51,000	51,000	-	-	-	
SCIC	Affiliate	HSBC, etc.	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	270,000	270,000	-	-	-	
SESP	Affiliate	SCB	Payment guarantee	Operating fund	Nov 09, 2023	Nov 08, 2024	30,000	30,000	-	-	-	
SME	Affiliate	SCB	Payment guarantee	Operating fund	Nov 09, 2023	Nov 08, 2024	110,000	110,000	-	-	-	
SAMEX	Affiliate	Citibank	Payment guarantee	Operating fund	Dec 17, 2023	Dec 16, 2024	5,000	5,000	-	-	-	
SEASA	Affiliate	Citibank	Payment guarantee	Operating fund	Dec 17, 2023	Dec 16, 2024	2,000	2,000	-	-	-	
SSAP	Affiliate	SCB	Payment guarantee	Operating fund	Nov 09, 2023	Nov 08, 2024	35,000	35,000	-	-	-	
SEPM	Affiliate	HSBC	Payment guarantee	Operating fund	Jun 14, 2023	Jun 13, 2024	35,000	35,000	-	-	-	
SESAR	Affiliate	HSBC	Payment guarantee	Operating fund	Jun 14, 2023	Jun 13, 2024	20,000	20,000	-	-	-	
SEUZ	Affiliate	Citibank	Payment guarantee	Operating fund	Dec 17, 2023	Dec 16, 2024	10,000	10,000	-	-	-	

(USD thousand)

Company (relation)	Creditor	Type	Purpose	Guarantee start date	Guarantee expiry date	Limit of Guarantee		Transactions			Interest rate
						Period start	Period end	Period start	Change	Period end	
AdGear Technologies Inc. (affiliate)	BOA	Payment guarantee	Operating fund	Nov 09, 2023	Nov 08, 2024	2,000	2,000	-	-	-	
Harman International Industries, Inc. (affiliate)	JP Morgan	Payment guarantee	Operating fund	Jun 14, 2023	Jun 13, 2024	100,000	100,000	-	-	-	
Harman International Japan Co., Ltd. (affiliate)	MUFG	Payment guarantee	Operating fund	Nov 09, 2023	Nov 08, 2024	25,000	25,000	-	-	-	
Harman Holding Limited (affiliate)	HSBC	Payment guarantee	Operating fund	Jun 14, 2023	Jun 13, 2024	30,000	30,000	-	-	-	
Harman do Brasil Industria Eletronica e Participacoes Ltda. (affiliate)	SocGen	Payment guarantee	Operating fund	Nov 09, 2023	Nov 08, 2024	15,000	15,000	-	-	-	
Harman da Amazonia Industria Eletronica e Participacoes Ltda. (affiliate)											
Harman International Industries Limited (affiliate)	HSBC	Payment guarantee	Operating fund	Jun 14, 2023	Jun 13, 2024	30,000	30,000	-	-	-	
SDN (affiliate)	SIEL	Payment guarantee	Operating fund, etc.	Nov 22, 2021	Feb 19, 2026	601,149	599,578	510,977	-1,336	509,641	8.1%
SAS (affiliate)	Epcor	Payment guarantee	Operating fund, etc.	Apr 26, 2022	Debt expiry date	340,000	340,000	-	-	-	
Total						9,070,657	9,050,846	839,935	90,817	930,752	

Consolidated basis.

Debt guarantees for SDN are provided by SDC, SAS by SEA.

SEC requires Board approval for individual guarantees exceeding 2.5% of total equity; the approval decision is delegated to the Management Committee when the guarantee amount is between 0.1% and/or less than 2.5%.

SDC requires Board approval for individual guarantees over KRW 10,000 million. In 2023, the Company claimed approximately USD 2,141,000 in guarantee fees, and it received the fees in 2024.

In 2023, Samsung Display Co., Ltd. claimed approximately USD 3,066,000 in guarantee fees to SDN, and it received the fees in 2024.

3. Sanctions and others

Pursuant to the reporting guidelines set forth by the FSS of the Republic of Korea, the Sanctions and others section, reported in the half-year and full-year business reports, is not included in the 1Q and 3Q

4. Subsequent events and other matters

Pursuant to the reporting guidelines set forth by the FSS of the Republic of Korea, the Subsequent events and other matters section, reported in the half-year and full-year business reports, is not included in the 1Q and 3Q reports.

XII. Appendix

1. Subsidiaries subject to consolidated financial statements (detailed)

Pursuant to the reporting guidelines set forth by the FSS of the Republic of Korea, the Subsidiaries subject to consolidated financial statements (detailed) section, reported in the half-year and full-year business reports, is not included in the 1Q and 3Q reports.

2. Affiliates

Pursuant to the reporting guidelines set forth by the FSS of the Republic of Korea, the Affiliates & subsidiaries (detailed) section, reported in the half-year and full-year business reports, is not included in the 1Q and 3Q reports.

3. Equity investments in other corporations (Details)

Pursuant to the reporting guidelines set forth by the FSS of the Republic of Korea, the Equity investments in other corporations (detailed), reported in the half-year and full-year business reports, is not included in the 1Q and 3Q reports.

4. R&D results (detailed)

DX Division	
Research project	Details
Visual Display	
Neo QLED 8K ~Mar 2024	<ul style="list-style-type: none"> □ Ultra high-resolution, slim 8K TV based on Mini LED technology (65 · 75 · 85") <ul style="list-style-type: none"> - QN900 (65 · 75 · 85") / QN800 (65 · 75 · 85") / QN700 (55 · 65 · 75 ") <ul style="list-style-type: none"> · QLED 8K resolution offers real-life viewing experiences with enhanced contrast of sophisticated Mini LED - Offers immersive and realistic viewing experience with Neural Quantum Processor 8K - Offers spatial sound that envelops the space with OTS (object tracking sound)
Neo QLED 4K (~Mar 2024)	<ul style="list-style-type: none"> □ Mini LED-based products come in 3 series and up to 7 sizes (43 · 50 · 55 · 65 · 75 · 85 · 98") □ Slim design by adopting Mini LED, premium look with bezel-less/metal design <ul style="list-style-type: none"> - New LED with Quantum Nano-Layer Multi-Cell structure, enabling slim design, high luminance efficiency, luminance profile control - Adjusts picture quality using AI functions based on user's preferences of genre-specific picture quality - Provides quick access and personalized recommendations with New Home, which offers convenient serviceability
OLED TV (~Mar 2024)	<ul style="list-style-type: none"> □ Quantum-Dot-based self-emitting Display Flat 4K TV (55 · 65 · 77") <ul style="list-style-type: none"> - S95 (55 · 65 · 77"): OLED TV that provides the true value of TV, featuring QD-OLED display with 144Hz VRR; OLED Glare Free-True Reality quality; Infinity One Design (an ultra slim flat form factor equipped with top speaker); Object Tracking Sound; and ATMOS - S90 (55 · 65 · 77"): Provides picture quality of OLED Display featuring 144Hz VRR and immersive sound with Laser Slim Design featuring OTS Lite and ATMOS, strengthening Samsung OLED lineups beyond Neo QLED to enhance positioning in the premium TV market □ White OLED-based self-emitting Display Flat 4K TV (42 · 48 · 55 · 65 · 77 · 83") <ul style="list-style-type: none"> - S90 (42 · 48 · 55 · 65 · 77 · 83"): same features as above - S85 (55 · 65 · 77 · 83"): Features white OLED display—which has been prepared as a new lineup for OLED sales expansion and profit/loss improvement—and offers premium spatial sound with OTS Lite/ ATMOS and a contour design with sleek curves
QLED TV (~Mar 2024)	<ul style="list-style-type: none"> □ Flat QLED 4K TV (32 · 43 · 50 · 55 · 60 · 65 · 70 · 75 · 82 · 85 · 98") □ Specs and features <ul style="list-style-type: none"> - Flagship QLED maximizes viewing experience with unrivaled picture quality within 4K (AI/brightness/viewing angle) and sound quality (OTS) - Maximizes immersive experience with ideal brightness contrast, free viewing angle, life-like color, and optimal brightness - Optimizes viewing experience by identifying user context based on voice recognition and AI technologies - Convenient calibration of picture quality with the touch of a button from a mobile device without expensive, professional equipment - Upgraded gaming experience for casual gamers through Game Bar
UHD TV (~Mar 2024)	<ul style="list-style-type: none"> □ Flat UHD TV (43 · 50 · 55 · 58 · 65 · 70 · 75 · 82 · 85 · 98") □ Specs and features <ul style="list-style-type: none"> - UHD Smart TV with slim, bezel-less design provides colors close to real-life - UHD picture quality expresses picture quality of original content through Dynamic Crystal Color and Dual LED - Provides a multi-media screen experience, rich content, and complete smart experience via smart home experience - Enhances smart experiences with the addition of Game Hub, IoT Hub, Chat Together, Voice Ready, Daily+, SmartThings Mobile Plugin

DX Division

Research project	Details
Lifestyle TV ~April 2023	<ul style="list-style-type: none"> □ The SERO (43") <ul style="list-style-type: none"> - Simple, modern vertical screen that rotates 360 degrees with flat-type speaker - Easily installed in any living space, mobile floor stand included - Significantly improved VoC compared to existing products with anti-glare/anti-reflective screen even for rotated form factor □ The Frame (32 · 43 · 50 · 55 · 65 · 75 · 85") <ul style="list-style-type: none"> - Design resembles a real picture frame; completes a picture frame experience - Exhibit various famous paintings and pictures; adopted lifestyle design which blends in with the interior - Additional introduction of 85" to meet the needs for ultra-large Lifestyle products - Completes the Real Frame experience with the anti-glare/anti-reflective screen that shows a paper-like image □ The Serif (43 · 50 · 55 · 65") <ul style="list-style-type: none"> - I-shaped serif font design; distinct from other products; works as beautiful interior design object - Additional introduction of 65" to expand the position of large screen products - Design that resembles a piece of furniture with the anti-glare/anti-reflective screen that shows a matte image - Offers a dark color option other than white (Ivy Green) □ The Terrace (55 · 65 · 75") <ul style="list-style-type: none"> - Differentiated product tailored to a lifestyle of relaxing and enjoying entertainment outdoors □ The Premiere (100–130") <ul style="list-style-type: none"> - Ultra-short-throw laser projector with high-resolution, providing a top-notch Smart UX/OTT experience - Complements any environment with blended design, can be placed directly in front of a wall and has an easily adjustable screen size. - Complete experience of our TV models including the differentiated picture quality and sound □ The Freestyle (30–100") <ul style="list-style-type: none"> - Movable Smart Screen that enables users to enjoy content anytime, anywhere - Easy to set up in various locations and provides an optimal viewing experience regardless of angle/distance (Auto Focus/Auto Keystone) Added usability via the basic cradle, enabling easy placement in various locations; and the socket adapter expands usability.
Micro-LED TV ~December 2023	<ul style="list-style-type: none"> □ The Wall 2.0 (110") <ul style="list-style-type: none"> - Released completed version of Micro-LED to strengthen technology leadership and dominance of Micro-LED market - Ultra-large Home Screen that reproduces the real world on display - Micro-LED picture quality with a sense of space and depth that seems like the real thing without limitation on resolution □ Micro-LED Screen (76 · 89 · 101 · 114") <ul style="list-style-type: none"> - Next-generation flagship model that satisfies premium customer and distribution needs - Released completed version of TFT glass-based 12.7" module (pitch 0.51) microLED Screen □ microLED Processor: creates vivid 3D picture quality based on AI scaling + HDR enhancing features
Sound Bar ~March 2022	<ul style="list-style-type: none"> □ Soundbar <ul style="list-style-type: none"> - Bar-shaped audio product well suited to TVs - Adopted AI solution enabling voice recognition - Adopted 3D surround system, creating enriching sounds close to first-hand experiences □ Sound Bar Q990B <ul style="list-style-type: none"> - Industry's first wireless ATMOS transmission from TV to soundbar - Provides the optimal Cinema True ATMOS just like in the cinema, utilizing all channels of TV and soundbar □ Equipped with soundbar room-correction technology

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Research project	Details
Monitor ~Sep 2023	<ul style="list-style-type: none"> □ Space monitor <ul style="list-style-type: none"> - Application of integrated arm stand that minimizes space needed for the monitor □ Neo QLED Gaming monitor (49") <ul style="list-style-type: none"> - Strengthened black gamut based on enhanced brightness contrast by applying Neo QLED - More immersive gaming experience with 1000R curvature—the world's highest □ High-resolution QHD monitor (34") <ul style="list-style-type: none"> - Offers picture solution comfortable to the eye with Intelligent Eye Care solution, etc. □ LCD Smart monitor <ul style="list-style-type: none"> - Enjoy VOD services without using a PC via Smart TV services (Netflix, YouTube, etc.) □ Smart monitor M80B (32") <ul style="list-style-type: none"> - Ultra-slim, flat back, lifestyle design that adopts Warm White color - Includes magnetic-mount webcam - Strengthened smart experiences (watching VOD/connecting mobile devices/PC-less function/IoT/communication/game) □ Gaming monitor G85NB (32") <ul style="list-style-type: none"> - World's first UHD 240Hz 1ms (GTG) gaming monitor with premium gaming performance features (1000R Curved) - Odyssey Neo that offers a new level of picture quality experience (Mini LED, Quantum HDR2000) □ World's first 1000R large game screen G97NB (55") <ul style="list-style-type: none"> - Offers top-notch immersive experience with a large screen-size without viewing-angle limitations—even near-field viewing angles—via 1000R, 16:9, 55" Big Curved Screen - Provides a new immersive experience, almost like sitting in the cockpit of a space shuttle, by allowing users to rotate the screen vertically and in any direction - Game-exclusive panel that offers a 4K 165Hz refresh rate and 1ms response time □ QD-OLED gaming monitor (G85SB 34") <ul style="list-style-type: none"> - Exquisite expression of various colors with the combination of True RGB self-luminous display and quantum dot technology - Can play games with an extremely fast response time of 0.1ms and clear screen with 175Hz refresh rate - Implemented an all-in-one game streaming discovery platform, including cloud gaming and consoles, with the adoption of the Samsung Gaming Hub □ 5K ultra-high resolution monitor (S90PC 27") <ul style="list-style-type: none"> - 5K (5120x2880) resolution that expresses more information, with at least 50% more pixels compared to a 4K monitor - Matte Display reduces glare without a monitor hood and eliminates distortion, thus protecting your eyesight - Equipped with thunderbolt 4 and miniDP, compatible with both MAC/Windows - "Smart Screen" can be customized to satisfy your work/daily life/space needs □ DUHD Flagship Gaming Monitor (G95NC 57") <ul style="list-style-type: none"> - Allows users to experience maximum immersion with the new super large form factor (57") and ultra-high definition Dual UHD (7680X2160) - Can play games with a clear screen with 240Hz refresh rate and extremely fast 1 ms response time
Signage ~June 2023	<ul style="list-style-type: none"> □ LCD-based B2B Smart Signage (LFD, Video Wall, Outdoor, etc.) (13 · 24 · 32 · 43 · 49 · 50 · 55 · 65 · 75 · 85 · 98") □ Indoor/outdoor signage using LED □ All-in-one Kiosk (24"), all additional equipment embedded <ul style="list-style-type: none"> - Payment platform for developing Tizen payment module and ordering app, antibacterial finishing □ Flip-edu (75 · 85") interactive feature for education
Refrigerators ~Feb 2024	<ul style="list-style-type: none"> □ 177cm one-door built-in fridge enters the European market <ul style="list-style-type: none"> - Expanded lineup of built-in packages - Highest energy rating based on new standards - Secured superior capacity of the indirect cooling system - Differentiated features of fresh storage of food (high-humidity refrigeration) and temperature flexibility (freezer→refrigerator) □ Address replacement demand and new demand for 48" refrigerators in the North American market <ul style="list-style-type: none"> - Large capacity of 27.4cf for a built-in refrigerator - Differentiated Ice & Water Solution (Auto Fill Water Pitcher, Dual Auto Ice Maker) - Soft-closing doors give the product an high-quality, luxurious ambience □ Introduced a super-gap energy model in Korea (achieved first-class rating for its ultra-energy-efficiency, 22% achieved the first-class) <ul style="list-style-type: none"> - Applies one of the world's most efficient compressor (W1, EER 9.3) - Reduced the SET heat load (with increased VIP Coverage) - Enhanced heat dissipation in machine room (additional side cooling on the comp side) □ Global Wide BMF Refrigerator <ul style="list-style-type: none"> - Offers high-efficiency energy rating, incorporates AI Energy mode, and saves energy cost - Expands usable interior space with SpaceMax, offering convenient storage - Offers smart services (e.g. automatic lighting adjustments by time of day) based on SmartThings

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Research project	Details
	<ul style="list-style-type: none"> □ Custom Refrigerator for home specs in China home (W83cm) <ul style="list-style-type: none"> - Enables seamless installation to fit perfectly in the kitchen with zero gap on both left/right sides to give a built-in look - Application of AI energy mode to reduce actual energy usage (China Energy Label Grade 1) - Provides specialize storage for food materials at optimal temperature and humidity with dry/wet boxes - Applies Wide Open, an automatic wide door opening feature □ Refrigerator applying Peltier <ul style="list-style-type: none"> - Achieves highest efficiency and maximum energy grade by applying Peltier and utilizing waste heat - Combines advantages of two cooling methods (compressor + Peltier) to create value <ul style="list-style-type: none"> · Achieves energy savings of 30% for Energy Grade 1, compared to the previous 22% savings for the same grade) · Offers additional useable interior space with more compact Peltier cooling system (875L → 900L)
Washer ~Feb 2024	<ul style="list-style-type: none"> □ Grande AI 24kg washer <ul style="list-style-type: none"> - 24kg, Flat Design (glass type) - Features pet-care cycle (removes stains, smell, and allergens) - Applied auto door opening (door opens automatically after the washing cycle ends) □ BESPOKE Grande AI OneBody Top-Fit <ul style="list-style-type: none"> - BESPOKE Grande AI all-in-one washer for Korean market - One-body design with 21 kg washer and 17 kg dryer all-in-one combo - Simple flat design □ BESPOKE AI Washer-Dryer Combo <ul style="list-style-type: none"> - ONE Solution: Convenient washing and drying without transferring laundry - AI Home: Easy operation with touch screen and voice-recognition - AI customized course: Operation of optimized course based on laundry type
Air conditioner ~Aug 2023	<ul style="list-style-type: none"> □ Increased revenue in the European market with an enhanced lineup that adopts the new the EHS platform <ul style="list-style-type: none"> - Low-frequency noise regulation: met limits for noise regulation of each European country, centering on Germany - Reinforced low-temperature performance: full heating performance at -25°C - High-temperature discharged water: discharged water of up to 70°C in a single heat pump cycle - Differentiated design: deep dark color 1 fan outdoor AC unit that harmoniously blends in with the living environment □ BESPOKE wind-free air conditioner WindowFit <ul style="list-style-type: none"> - Wind-free mode cools air without directly blowing wind into the room - Low-noise mode, with a 32dB level, reduces vibration and noise for better sleep - Selection of high efficient energy saving modes tailored to different situations - Enhanced cooling capabilities and larger fans enable stronger and more consistent cooling for a wider area - Safe and simple installation kit allows for a seamless installation □ Infinite Line 1Way BESPOKE wind-free built-in air conditioner <ul style="list-style-type: none"> - Ambient indirect edge lighting that creates a natural ambiance in the space - Wind-free on wider area with high-efficiency energy saving mode - 8-stage care system including for management of air quality and the inside of the air conditioner - AI energy mode for energy reduction tailored to different situations □ New platform for the new Eco Heating System refrigerant (R290) for the European market <ul style="list-style-type: none"> - Introduced a new refrigerant (R290) solution to comply with 2027 regulations - High-temperature discharged water (max 75 °C) for boiler market's alternatives - Achieved low noise (minimum 35dBA)

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Research project	Details
Vacuums ~Mar 2023	<ul style="list-style-type: none"> □ Bespoke Jet AI Vacuum (up to 280W suction) <ul style="list-style-type: none"> - Continued to enhance suction power and the original POD (Clean Station); increased market share - Enabled world's strongest suction power of up to 280W, which ensures powerful and hygienic cleaning - Auto setting of the optimal cleaning mode and provides maintenance guidance based on self-diagnosis □ Jet Stick Vacuum 4.0 High-temperature cleaning brush <ul style="list-style-type: none"> - Damp cloth brush that directly sprays high-temperature water onto stains - Effectively removes stains by directly spraying high-temperature water (approximately 50 °C or above) onto the floor - Quick preheating (around 20 seconds) and at least 30 minutes of use with one battery - Convenient cleaning with light wet mop of 1.51kg without attaching additional battery □ Bespoke Jet Bot Combo—wet & dry robot vacuum for Korean market <ul style="list-style-type: none"> - Able to separate wet and dry functions/AI-floor recognition/AI-object recognition - Rotational wet mop featuring automatic removal, with features preventing carpet contamination - Self-cleaning station; automatic mop cleaning/drying with steam sterilization
Range hoods Feb 2022	<ul style="list-style-type: none"> □ Expanded lineup of premium hoods for home <ul style="list-style-type: none"> - Unparalleled performance compared to existing products <ul style="list-style-type: none"> · Optimal air flow with a smart monitoring ventilation system equipped with Triple Air Sensor · Industry's strongest suction power of 780CMH; industry's lowest noise (29dB, Quiet Mark certification) - Improved user convenience by pairing with an electric range and by adopting stainless steel filters with easy-to-clean coatings - Design that reflects various needs of consumers (Bespoke colors) - Entered the B2C market with easy-to-install products and adoption of installment process
Inverter dehumidifier May 2022	<ul style="list-style-type: none"> □ Ultra-quiet inverter dehumidifier with first-class energy efficiency rating in Korea <ul style="list-style-type: none"> - Fast and strong large-capacity dehumidifier with a wide blade - Smart space care that keeps spaces from bathroom to dressing room pleasant - Dries a wide range of clothing—even delicate items—with swing blade - Simple design and compact size that fits anywhere - Low-noise mode that remains quiet throughout extended hours of use
Dishwasher June 2022	<ul style="list-style-type: none"> □ In-house technology platform that has a competitive edge in the European/Korean markets <ul style="list-style-type: none"> - Fit for Tall Tubs for the European market - Secured competitiveness with top-notch energy/water/low-noise specifications - Strengthened premium experiences via differentiating features, such as an automatic dispenser (for Korean detergents) and a simple UX - Differentiated specifications of Z-wash, Smart, Flexible Basket
Gas oven Aug 2023	<ul style="list-style-type: none"> □ Dacor 48" Pro-Range for North American market <ul style="list-style-type: none"> - Introduced 48" All Gas Pro range with transitional (Chef) look design on the exterior - Incorporated healthier cooking POD features, such as air fry and air sous-vide - Equipped with a 7" pop-up display □ Dacor 48" Pro-Range (Dual Fuel) for North American market <ul style="list-style-type: none"> - Introduced 48" Dual Fuel Pro range, with transitional (Chef) look design on the exterior - Dual fuel, with electricity for the oven and gas for the cooktop - Applied 6 burners + griddle cooktop specifications - Combination of small oven 12" (new platform) + big oven 36" (previous platform) - Provides Steam Assist function
Mobile eXperience	
Galaxy Foldable ~Aug 2023	<ul style="list-style-type: none"> □ Galaxy Z Fold 4 (August 2022) <ul style="list-style-type: none"> - Screen: Main display 7.6", cover display 6.2" - Size (W x H x D): (folded) 67.1mm x 155.1mm x 14.2–15.8mm (unfolded) 130.1mm x 155.1mm x 6.3mm - Platform (H/W, S/W): Snapdragon 8+ Gen 1, Android 12.0, One UI 4.1.1 - Improved camera experience via Nightography picture/video, high-resolution (50M/8K), Space Zoom (30X) lens - Easier and faster multi-tasking with the new Taskbar feature - Easy-to-use Multi window thanks to various entry points - AI-based recommendation of related features after recognition of text from an image □ Galaxy Z Flip 4 (August 2022) <ul style="list-style-type: none"> - Screen: Main display 6.7", cover display 1.9" - Size (W x H x D): (folded) 71.9mm x 84.9mm x 15.9–17.1mm (unfolded) 71.9mm x 165.2mm x 6.9mm - Platform (H/W, S/W): Snapdragon 8+ Gen 1, Android 12.0, One UI 4.1.1 - Supports 25W charging and offers 3700mAh battery - Supports FlexCam, optimized for taking pictures/videos from various angles - Easy and quick switch to and manipulation of applications in Flex mode - Expanded the Cover screen function (simple reply, Samsung Wallet platform, increased Quick settings, etc.)

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Research project	Details
	<ul style="list-style-type: none"> □ Galaxy Z Fold5 (2023.08.) <ul style="list-style-type: none"> - Screen: Main display 6.7", cover display 6.2" - Size (W x H x D): (folded) 67.1mm x 154.9mm x 13.4mm (unfolded) 129.9mm x 154.9mm x 6.1mm - Platform (H/W, S/W): SM8550, Snapdragon 8 Gen 2, Android 13.0, One UI 5.1 - Slim, flat-folding design with the application of the Dumbbell Flex Hinge (waterdrop design) - Improved portability with an enhanced grip by reducing weight and thickness - Enhanced user experience by optimization for a large screen - Two-handed mode: Touch and hold the app/content with one hand and perform the action you like to carry out with the other <ul style="list-style-type: none"> • Taskbar optimization: Shows more recently used apps (2→4 apps); automatically extends the navigation bar • Enhanced Multi window switch function: Able to switch popup windows into the multi-window easily on the home screen • Gaming optimization: Set the preferred resolution for most-used games in advance - Enhanced durability: Strengthened shock absorption layers within display and changed structure of the hinge set - Slim and lightweight S-Pen and Case: Reduced the thickness and weight of S-Pen and its case by changing their shape
	<ul style="list-style-type: none"> □ Galaxy Z Flip 5 (August 2023) <ul style="list-style-type: none"> - Screen: Main display 6.7", cover display 3.4" - Size (W x H x D): (folded) 71.9mm x 85.1mm x 15.1mm (unfolded) 71.9mm x 165.1mm x 6.9mm - Platform (H/W, S/W): Snapdragon 8 Gen 2, Android 13.0, One UI 5.1 - Enlarged cover screen (1.9" → 3.4") with an optimized design - Enhanced grip by reducing thickness and applying a slim, flat-folding design with a new hinge - Provided key functions for differentiated user experiences and strengthened usability with the large cover screen <ul style="list-style-type: none"> • Provided Fast Scroll function for 13 key widgets (music, alarm, etc.) and main apps (Samsung Wallet, message reply) • Add more buttons (6 → 9) on the Quick Settings panel (Mobile Data, Screen Recording, Modes 3, etc.) - Provided various photo effects and functions using the large cover screen - Enhanced durability: Strengthened shock absorption layers within display and changed structure of the hinge set
Galaxy S (~Jan 2024)	<ul style="list-style-type: none"> □ Galaxy S22 · S22+ · S22 Ultra (February 2022) <ul style="list-style-type: none"> - Design: Enhanced Galaxy Design attractiveness with geometric bold design and integrity on quality - Screen: S22 6.1", S22+ 6.6", S22 Ultra 6.8" - Size (W x H x D): S22 70.6mm x 146.0mm x 7.6 mm, S22+ 75.8mm x 157.4mm x 7.6 mm, S22 Ultra 77.9mm x 163.3mm x 8.9 mm - Platform (H/W, S/W): Snapdragon 8 Gen 1 Exynos2200, Android 12.0, One UI 4.1 - Strengthened camera video filming and low-light function performance <ul style="list-style-type: none"> • Video: Improved HDR and OIS+AI Stabilizer performance to support rich colors and minimize shaking/jittering • Enhanced low-light performance: Applies Big Pixel sensor and On-device AI algorithm - Integrated Ultra/Note by equipping with S Pen* Optimized latency: 5.6ms (S21 Ultra) → 2.8ms (S22 Ultra) - Improved outdoor visibility of display* Peak brightness: 1,500nit (S21 Ultra) → 1,750nit (S22 Ultra) - Battery that can be used all-day and 45W ultra-fast charging speed (S22 Ultra/S22+) - Enhanced durability: Adopts Amor AL and Victus+ Glass with a 10% improvement in durability - Improved completion of Galaxy foundation experience <ul style="list-style-type: none"> • One UI 4.1: sophisticated, sensible interaction experience and personal experience of users - Galaxy Eco: improved end-to-end completion and enhanced convenient experience

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Research project	Details
	<ul style="list-style-type: none"> □ Galaxy S23 · S23+ · S23 Ultra (February 2023) <ul style="list-style-type: none"> - Design: Ultimate Premium Experience designed for today and beyond <ul style="list-style-type: none"> * Unrivaled Camera, Ultimate Gaming, Eco-conscious Design - Screen: S23 6.1", S23+ 6.6", S23 Ultra 6.8" - Size (W x H x D): S23 70.9 x 146.3 x 7.6 mm, S23+ 76.2 x 157.8 x 7.6 mm, 195g S23 Ultra 78.1 x 163.4 x 8.9 mm, 233g - Platform (H/W, S/W): Snapdragon 8 Gen 2, Android 13, One UI 5.1 - Enhanced low-light performance based on AI and improved video experience <ul style="list-style-type: none"> · Capable of expressing precise color and tone in portrait mode even in the dark with improved color solutions leveraging AI-based scene optimization technology · Less camera shake for videos thanks to increased Optical Image Stabilization (OIS) correction angle (S22 Ultra 1.5° → S23 Ultra3°) - Offers crisp and clear, high-resolution details and high-resolution camera experience <ul style="list-style-type: none"> · S23 Ultra adopted ultra-high-resolution 200MP camera · Provides optimal picture quality with auto adjustment of pixel size for sections with different lighting conditions - Improved basic performance, such as heat dissipation and durability against drops <ul style="list-style-type: none"> · Offers seamless gaming experience by enhancing heat dissipation performance, including improved power efficiency and revamped heat dissipation structure · Greater drop protection with adoption of Victus 2 Glass with durability enhanced by 21% - S23 Ultra offers top-notch productivity experience with S-pen <ul style="list-style-type: none"> · AI-based recommendation of related features after text recognition from an image/video - Improved connected experience with multiple devices (phone-PC) <ul style="list-style-type: none"> · Capable of mirroring the smartphone screen on a PC and continuing browsing on the same webpage - Adds to our sustainability story with the adoption of eco-friendly materials overall from dyes to the actual materials <ul style="list-style-type: none"> · Packaging box is 100% recycled paper · Adopts recycled PBT resin to bond metal (10%), recycled metal materials adopted in side keys (28%), etc. · Incorporated recycled glass into the front and back glass panels (22%), natural dyes when processing metals, recycled PET films, etc. - Strengthened privacy and security <ul style="list-style-type: none"> · Visualization of security status; notification of sensitive information when sharing images; and limiting access to private information when repairing products □ Galaxy S24 · S24+ · S24 Ultra (Jan 2024) <ul style="list-style-type: none"> - Introducing innovative Galaxy Intelligence experience by adopting Galaxy AI features <ul style="list-style-type: none"> · Offers AI features including circle to search, real-time interpretation, photo/note/chat assist - Screen: S24 6.2", S24+ 6.7", S24 Ultra 6.8" - Size (W x H x D): S24 70.6 x 147.0 x 7.6 mm 167g, S24+ 75.9 x 158.5 x 7.7 mm, 196g S24 Ultra 79.0 x 162.3 x 8.6 mm, 232g - Platform (H/W, S/W): Snapdragon 8 Gen 3/Exynos 2400, Android 14, One UI 6.1 - Strengthen immersive display experience through application of Slim even BM - Elevates a sense of design cohesion with one-mass design - Enhances camera shooting and gallery viewing/editing with the improved AI ProVisual Engine <ul style="list-style-type: none"> · Enables clear and high quality pictures with space zoom and nightography features for camera · Offers Instant Slow-mo and Edit Suggestion - Improves outdoor visibility of the display * Peak brightness: 1,750nit → 2,600nit - S24 Ultra enhances durability and maximizes premium quality with a titanium metal frame - S24 Ultra features a high-resolution telephoto camera * 10MP (S23 Ultra) → 50MP (S24 Ultra)

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Research project	Details
Galaxy Tab ~August 2023	<ul style="list-style-type: none"> □ Galaxy Tab S8 · S8+ · S8 Ultra (February 2022) <ul style="list-style-type: none"> - Screen: Tab S8 11" WQXGA+ (2560 x 1600) Tab S8+ 12.4" WQXGA+ (2800 x 1752) Tab S8 Ultra 14.6" WQXGA+ (2960 x 1848) - Size (W x H x D) & weight: Tab S8 165.3mm x 253.8mm x 6.3mm, 503g Tab S8+ 185.0mm x 285.0mm x 5.7mm, 567g S8 Ultra 208.6mm x 326.4mm x 5.5mm, 726g - Platform (H/W, S/W): Snapdragon 8 Gen 1, Android 12, One UI 4.1 - Memory: 8GB+128GB / 8GB+256GB / 12GB+256GB / 16G+512G, microSD up to 1TB - Enhanced video call experienced [Tab S8 Ultra] Provides dual front cameras (12M 80-degrees, 12M 120-degrees) and Auto Framing function [Tab S8+ / Tab S8] Provides 12M 120-degree front camera and Auto Framing function - Enhanced AP Sustain performance by improving heat sink design (gpu 70%, cpu 25%↑ compared to previous model), enhanced gaming performance - Improved S pen latency (5.6ms → 2.65ms) and optimized prediction algorithm Provides seamless and precise writing experience when writing & drawing, just like a real pen, enhancements to lessen the parallax effect - Enhanced the audio experience of video calls by upgrading 3 MIC noise cancellation performance (3 types of noise cancellation mode) - Equipped with WiFi 6E function—a first for a tablet—and improved big data transmission time between devices - Reduced charging time of Phone Power Share by half compared to the previous model by adopting D2D 15W charging function □ Galaxy Tab S9 · S9+ · S9 Ultra (August 2023) <ul style="list-style-type: none"> - Screen: Tab S9 11" WQXGA+ (2560 x 1600) Tab S9+ 12.4" WQXGA+ (2800 x 1752) Tab S9 Ultra 14.6" WQXGA+ (2960 x 1848) - Size (W x H x D) & weight: Tab S9 165.8mm x 254.3mm x 5.9mm, 498g Tab S9+ 185.4mm x 285.4mm x 5.7mm, 581g S9 Ultra 208.6mm x 326.4mm x 5.5mm, 732g - Platform (H/W, S/W): Snapdragon 8 Gen 2, Android 13, One UI 5.1 - Provided large-screen experience adapted with rich color impression and various environment settings <ul style="list-style-type: none"> · Adopted Dynamic AMOLED 2X technology for all models in Tab S9 series, offering clear and comfortable screen experience · Implemented Vision Booster technology that ensures a vibrant screen, even in direct sunlight - Secured mobility and dependability so users can use the product anywhere without any concerns <ul style="list-style-type: none"> · Achieved IP68 rating, the highest level of waterproof/dustproof accreditation · Armor Aluminum frame protects the product from impacts - Enhanced usability eco-system by introducing an S-Pen that can be charged in either direction, and enhanced durability of accessories. <ul style="list-style-type: none"> · Strengthened compatibility by making the keyboard and other accessories compatible with Tab FE models · Introduced a new two-way heat dissipation structure using a vapor chamber, allowing users to use the product for a long time without discomfort - Secured sufficient Android App Eco system in various areas <ul style="list-style-type: none"> · Strengthened key android productivity apps, including apps for taking notes, managing documents, and browsing— e.g., Samsung note, Good note · Secured key apps to improve usability in drawing and photo/video editing: LumaFusion, Clip studio, etc. - Utilized eco-friendly materials throughout the product, incorporating recycled components for the exterior and tempered glass <ul style="list-style-type: none"> · Newly adopted recycled plastic on the S-Pen dock surface · Used new recycled materials for tempered glass of the display (10%, Gorilla Glass 5) - Used 100% recycled paper and armor aluminum (20%) for package box and recycled plastic for interior materials
Galaxy A ~Mar 2024	<ul style="list-style-type: none"> □ Galaxy A23 (March 2022) <ul style="list-style-type: none"> - Screen: 6.6" FHD+ (2408 x 1080) 90Hz - Size (W x H x D) & weight: 76.9mm x 165.4mm x 8.4mm, 195g - Platform (H/W, S/W):SDM680, Android 12, One UI 4.1 - 6.6" FHD+ display, supports 90Hz screen refresh rate (previous model: A22 6.4" HD+ 90Hz) - Vivid pictures in the dark without camera shake with the adoption of high-definition 50MP OIS camera - Adoption of high-capacity 5,000mAh battery and supports 25W ultra-fast charging

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Research project	Details
	<ul style="list-style-type: none"> □ Galaxy A13 5G (January 2022) <ul style="list-style-type: none"> - Screen: 6.5" HD+ (1600 x 720) 90Hz - Size (W x H x D) & weight: 76.5mm x 164.5mm x 8.8mm, 195g - 6.5" HD+ display, supports 90Hz screen refresh rate (previous model: A12 6.5" HD+ 60Hz) - Super-low priced 5G model for LTE user migration and expansion of the 5G market - Strengthened AP (P35 → D700) to address entry market - Higher definition of pictures compared to the previous model (A12 16MP) with the application of 50MP camera
	<ul style="list-style-type: none"> □ Galaxy A13 LTE (March 2022) <ul style="list-style-type: none"> - Screen: 6.6" FHD+ (2408 x 1080) 60Hz - Size (W x H x D) & weight: 76.4mm x 165.1mm x 8.8mm, 195g - Platform (H/W, S/W): Exynos850, Android 12, One UI Core 4.1 - Provides better large screen experience compared to the previous model (A12 6.5" HD+) by adopting 6.6" FHD+ display - Higher definition of pictures compared to the previous model (A12 48MP) by adopting 50MP camera - Able to use up to two days on a single charge by applying 5,000mAh high-capacity battery and AI Power mode
	<ul style="list-style-type: none"> □ Galaxy A73 5G (April 2022) <ul style="list-style-type: none"> - Screen: 6.7" FHD+ Super AMOLED+ (1080 x 2400) 120Hz - Size (W x H x D) & weight: 76.1mm x 163.7mm x 7.6mm, 181g - Platform (H/W, S/W): SDM778G, Android 12, One UI 4.1 - Vivid pictures in the dark without camera shake with the support of 108MP high-resolution picture quality and OIS - Soft and clear screen experience with the adoption of high refresh rate of 120Hz and sAMOLED display - Adopts 5,000mAh high-capacity battery (2-day battery life) and supports 25W ultra-fast charging speed - Offers strong durability with the adoption of Gorilla Glass 5 and IP67 rating - Provides the latest flagship experience with the support of One UI 4.1
	<ul style="list-style-type: none"> □ Galaxy A53 5G (April 2022) <ul style="list-style-type: none"> - Screen: 6.5" FHD+ Super AMOLED (1080 x 2400) 120Hz - Size (W x H x D) & weight: 74.8mm x 159.6mm x 8.1mm, 189g - Platform (H/W, S/W): Exynos1280, Android 12, One UI 4.1 - 8.1t slim design and 5,000 mAh high-capacity battery (0.3t↓, 500 mAh↑ compared to previous model) - Soft and clear screen experience provided by the combination of high refresh rate of 120Hz and fast response speed of sAMOLED - Enhanced glass durability with the adoption of Gorilla Glass 5 - Provides the latest flagship experience with the support of One UI 4.1
	<ul style="list-style-type: none"> □ Galaxy A33 5G (April 2022) <ul style="list-style-type: none"> - Screen: 6.4" FHD+ Super AMOLED (1080 x 2400) 90Hz - Size (W x H x D) & weight: 74.0mm x 159.7mm x 8.1mm, 186g - Platform (H/W, S/W): Exynos1280, Android 12, One UI 4.1 - Delivers enhanced screen experience with the support of 6.4" FHD+ display and 90Hz (previous model: A32-5G HD+ TFT 60Hz) - High-definition pictures without camera shake with the adoption of 48MP OIS camera - Enhanced durability with the adoption of Gorilla Glass 5 and support of IP67 rating for dust and water resistance - Adopts 5,000 mAh high-capacity battery (2-day battery) and supports 25W ultra-fast charging speed
	<ul style="list-style-type: none"> □ Galaxy A23 5G (September 2022) <ul style="list-style-type: none"> - Screen: 6.6" FHD+ TFT LCD (1080 x 2408) 120Hz - Size (W x H x D) & weight: 76.9mm x 165.4mm x 8.4mm, 197g - Platform (H/W, S/W): SDM695, Android 12, One UI 4.1 - Upgraded AP performance compared to previous model (A22-5G D700) with the application of SDM695 - High-resolution pictures without camera shake with the adoption of 50MP OIS camera (OIS is not supported in the North America region) - Provides enhanced large-screen experience compared to previous model (A22-5G 6.6" HD+ 90Hz) by adopting 6.6" FHD+ - Applies 5,000mAh large-capacity battery (2-day battery) and supports 25W ultra-fast charging
	<ul style="list-style-type: none"> □ Galaxy A14 5G (January 2023) <ul style="list-style-type: none"> - Screen: 6.6" FHD+ TFT LCD (2408 x 1080) 90Hz - Size (W x H x D) & weight: 78.0 x 167.7 x 9.1mm, 201g - Platform (H/W, S/W): D700/Exynos1330, Android 13, One UI core 5.0 - High-resolution pictures (5MP → 13MP) with adoption of higher spec front camera compared to previous model (A13- 5G) - Enhanced screen experience compared to previous model (A13-5G 6.5" HD+) with adoption of 6.6" FHD+ large-screen display - Applies 5,000mAh large-capacity battery

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Research project	Details
	<ul style="list-style-type: none"> □ Galaxy A54 5G (March 2023) <ul style="list-style-type: none"> - Screen: 6.4" FHD+ Super AMOLED (2340 x 1080) 19.5:9 120Hz - Size (W x H x D) & weight: 76.7 x 158.2 x 8.2mm, 202 g - Platform (H/W, S/W): Exynos1380, Android 13, One UI 5.1 - Improved visibility through enhanced performance of AP picture quality, fine-tuning by light condition, and peak brightness of 1,000nit - Maximized performance by offering optimal refresh rate of 120Hz and boosted battery efficiency - Provides rich haptics experience thanks to elaborate adjustment of linear motor vibration - Enhanced balanced design and premium CMF (adopts 6.4", 19.5:9) - Offers the latest flagship experience with One UI 5.1
	<ul style="list-style-type: none"> □ Galaxy A34 5G (March 2023) <ul style="list-style-type: none"> - Screen: 6.6" FHD+ Super AMOLED (2340 x 1080) 120Hz - Size (W x H x D) & weight: 78.1 x 161.3 x 8.2mm, 199g - Platform (H/W, S/W): D1080, Android 13, One UI 5.1 - Offers enhanced screen experience by featuring 6.6" FHD+, 1,000nit brightness, and 120Hz refresh rate - High-resolution pictures without camera shake with adoption of 48MP OIS camera - Equipped with a linear motor, which provides haptics experience of a flagship model
	<ul style="list-style-type: none"> □ Galaxy A14 (March 2023) <ul style="list-style-type: none"> - Screen: 6.6" FHD+ TFT LCD (2408 x 1080) 60Hz - Size (W x H x D) & weight: 78.0 x 167.7 x 9.1mm, 201g - Platform (H/W, S/W): Exynos 850/G80, Android 13, One UI core 5.1 - Offers enhanced selfie experience (8MP → 13MP) with adoption of higher spec front camera compared to previous model (A13) - Applies 5,000mAh large-capacity battery
	<ul style="list-style-type: none"> □ Galaxy A24 (May 2023) <ul style="list-style-type: none"> - Screen: 6.5" FHD+ sAMOLED U-Cut (1080 x 2340) 90Hz - Size (W x H x D) & weight: 77.6mm x 162.1mm x 8.3mm, 195g - Platform (H/W, S/W): G99, Android 13, One UI core 5.1 - Enhanced selfie experience (8MP → 13MP) with adoption of higher spec front camera compared to A23 - Records videos without camera shake via the adoption of new VDIS in addition to the previous OIS feature - Offers improved outdoor visibility compared to the A23, with wider color gamut spectrum, providing a brighter and more convenient screen experience
	<ul style="list-style-type: none"> □ Galaxy A05s (October 2023) <ul style="list-style-type: none"> - Screen: 6.7" FHD+ TFT LCD U-cut (1080 x 2400) 90Hz - Size (W x H x D) & weight: 77.8mm x 168.0mm x 8.8mm, 194g - Platform (H/W, S/W): SDM680, Android 13, One UI core 5.1 - Drives market volume/share in entry-level LTE market - Higher spec than the previous A04S: Equipped with high-performance AP (Exynos850 8nm → SDM680 6nm) and high- spec front camera (5MP → 13MP) - Adoption of high-capacity global 5,000 mAh battery and supports 25W ultra-fast charging (15W → 25W)
	<ul style="list-style-type: none"> □ Galaxy A05 (October 2023) <ul style="list-style-type: none"> - Screen: 6.7" HD+ TFT LCD U-cut (720 x 1600) 60Hz - Size (W x H x D) & weight: 78.2mm x 168.8mm x 8.8mm, 195g - Platform (H/W, S/W): G85, Android 13, One UI Core 5.1 - Provides enhanced multimedia experiences with supports of large screen (6.7") and high-resolution camera (50MP) - Improves customers' product usability by incorporating high-performance AP (CPU 33% ↑, GPU 150% compared to the previous model) - Able to use long period on a 30-minute-charge with 25W fast charging
	<ul style="list-style-type: none"> □ Galaxy A25 5G (January 2024) <ul style="list-style-type: none"> - Screen: 6.5" FHD+ Super AMOLED (2340 x 1080) 19.5:9 120Hz - Size (W x H x D): 76.5 x 161.0 x 8.3 mm, 197g - Platform (H/W, S/W): Exynos 1280, Android 14, One UI 6.0 - Supports 6.5" FHD+ and 120Hz refresh rates for an improved viewing experience - Enables high-resolution shake-free photos with 50MP OIS wide-angle camera - Adoption of high-capacity 5,000mAh battery

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Research project	Details
	<ul style="list-style-type: none"> □ Galaxy A15 (January 2024) <ul style="list-style-type: none"> - Screen: 6.5" FHD+ Super AMOLED (2340 x 1080) 19.5:9 90Hz - Size (W x H x D): 76.8 x 160.1 x 8.4 mm, 200g - Platform (H/W, S/W): [5G] D6100+ / [LTE] G99, Android 14, One UI 6.0 - Enhances picture quality by upgrading display compared to the previous model (A14) (LCD → Super AMOLED) - Adoption of high-capacity 5,000mAh battery that supports 25W fast charging - Enhances security and privacy protection with Knox Vault □ Galaxy A55 5G (2024.03.) <ul style="list-style-type: none"> - Screen: 6.6" FHD+ Super AMOLED (2340 x 1080) 19.5:9 120Hz - Size (W x H x D): 77.4 x 161.1 x 8.2 mm, 213g - Platform (H/W, S/W): Exynos 1480, Android 14.0, One UI 6.1 - Provides stronger nightography and video recording experience with enhanced camera sensor and AP - Enhances design competitiveness by applying metal + glass and creating young & energetic CMF design - Provides improved screen viewing experience with 6.6" FHD+ large screen display, compared to the previous A54-5g with 6.4" □ Galaxy A35 5G (2024.03.) <ul style="list-style-type: none"> - Screen: 6.6" FHD+ Super AMOLED (2340 x 1080) 19.5:9 120Hz - Size (W x H x D): 78.0 x 161.7 x 8.2 mm, 209g - Platform (H/W, S/W): Exynos 1380, Android 14.0, One UI 6.1 - Applies HID (hole-in-display) and back glass for unique and distinctive design - Enhances security with Knox Vault and guarantees quality by providing four OS updates and five security maintenance releases
Galaxy Book ~February 2023	<ul style="list-style-type: none"> □ Galaxy Book2 Pro 360 (April 2022) <ul style="list-style-type: none"> - Screen: 15.6" FHD Super AMOLED (16:9), up to 500nit (HDR), Color Volume 120% <li style="padding-left: 40px;">13.3" FHD Super AMOLED (16:9), up to 500nit (HDR), Color Volume 120% - Size (W x H x D) & weight: 15.6" 354.85 x 227.97 x 11.9mm, 1.41kg <li style="padding-left: 40px;">13.3" 302.5 x 202 x 11.5 mm, 1.04kg - Platform, OS: Intel® Core™ Processor 12th Gen CPU, Windows 11 - sAMOLED: Default 370nit/HDR 500nit, Color volume 120% - S Pen & Touchscreen support - 1080p FHD Camera (87-degree wide angle, supports Auto Framing, which recognizes users and adjusts them to the center of the screen) - SSD: Gen4 SSD, Expendable SSD (M.2 2230) - Supports WiFi 6E - Battery: 15.6" 68Wh (21hrs), 13.3" 63Wh (21hrs) - Galaxy Apps: Quick Share, 2nd Screen, Multi-Control, etc. <ul style="list-style-type: none"> · QR Sign-in: logs into Galaxy Book with a QR scan linked to the account on your phone - Security: supports Secured-Core PC with enhanced security for each stage for hardware, firmware, and software □ Galaxy Book2 Pro (April 2022) <ul style="list-style-type: none"> - Screen: 15.6" FHD AMOLED (16:9), up to 500nit (HDR), Color Volume 120% <li style="padding-left: 40px;">13.3" FHD AMOLED (16:9), up to 500nit (HDR), Color Volume 120% - Size (W x H x D) & weight: 15.6" 355.4 x 225.8 x 11.7mm, 1.11kg <li style="padding-left: 40px;">13.3" 304.4 x 199.8 x 11.2mm, 0.87kg - Platform, OS: Intel® Core™ Processor 12th Gen CPU, Windows 11 - AMOLED: Default 400nit/HDR 500nit, Color volume 120% - 1080p FHD Camera (87-degree wide angle, supports Auto Framing, which recognizes users and adjusts them to the center of the screen) - SSD: Gen4 SSD, Expendable SSD (15.6" Only, M.2 2280) - Supports WiFi 6E, 5G Sub6 (15.6" Only) - Battery: 15.6" 68Wh (21hrs), 13.3" 63Wh (21hrs) - Galaxy Apps: Quick Share, 2nd Screen, Multi-Control, etc. <ul style="list-style-type: none"> · QR Sign-in: logs into Galaxy Book with a QR scan linked to the account on your phone - Security: supports Secured-Core PC with enhanced security for each stage for hardware, firmware, and software

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Research project	Details
	<ul style="list-style-type: none"> □ Galaxy Book2 Go 5G (December 2022) <ul style="list-style-type: none"> - Screen: 14" IPS (1920 x 1080) - Size (W x H x D): 323.9mm x 224.8mm x 15.5mm - Platform: Snapdragon 7C+ Gen 3, Window 11 - Developed Mass WoA product adopting 7C+ Gen3 (CPU 63%↑, GPU 102%↑ compared to Snapdragon 7C Gen 2) - Improved picture quality of display (TN →IPS) - Supports WiFi 6E, 5G Sub6 - Adopted 5G model for the mass market which supports ENDC/eSIM - Supports 45W charging - Completed eight tests from the MIL-STD-810H certification - Shock, high/low temperature, thermal shock, dust, vibration, low pressure, humidity
	<ul style="list-style-type: none"> □ Galaxy Book2 Pro 360 (2023) (December 2022) <ul style="list-style-type: none"> - Screen: 13.3" FHD AMOLED (16:9), Touch Screen, Color Volume (DCI-P3) 100%, S Pen - Size (W x H x D) & weight: 13.3" 302.5 x 202.0 x 11.5mm, 1.04kg - Platform, OS: Snapdragon 8cx Gen 3, Windows 11 Home - AMOLED: 13.3" FHD Super AMOLED (16:9), Color Volume (DCI-P3) 100%, up to 370nit, S Pen - Speakers: Stereo 2 x 4W (Smart AMP), AKG, Dolby Atmos - SSD: eUFS on board, 256GB - WiFi 6E (802.11ax) - Battery: 63Wh (Video Play 35hrs↑) - Galaxy ecosystem: Smart Switch, Samsung Account, Samsung Apps, Keyboard & Touch Pad Sharing between Galaxy devices - Security: fingerprint recognition, Secured Core PC (Level 3, H/W & F/W Protection) - AI: Noise Reduction, Video Call with Neural Engine
	<ul style="list-style-type: none"> □ Galaxy Book3 Ultra (February 2023) <ul style="list-style-type: none"> - Screen: 16.0" OLED 120Hz, 370nit/500nit, 16:10 (2880 x 1800, 3K) - Size (W x D x H): 355.4 x 250.5 x 16.5mm, 1.79kg, - Intel® Core™ Processor 13th Gen CPU, Win 11, LPDDR5, NVIDIA® GeForce RTX™ 4050/4070, 76W Battery, FHD MIPI Camera, A/C/D AI, B Glass, TA 100W - Adopts 13th Gen Intel® Core™ H-series mobile processor and next-generation Nvidia® GeForce RTX™ 40 Series graphics - 3K high-resolution display that adopts WQXGA+; color volume 120% - Touch pad 39% larger in size (compared to Galaxy Book 2 Pro 33.7 cm / 39.6cm) - Fast charging speed of 100W; charges 55% of battery in 30 minutes - Quad Speaker: features AKG and Dolby Atmos - Supports Galaxy Ecosystem <ul style="list-style-type: none"> · Multi Control: capable of using keyboard and mouse on a smartphone and a tablet; can transfer files or copy and paste files and images between devices · Second Screen: using Galaxy Tab as a dual monitor; capable of extending or replicating PC screen - Quick Share: wireless file sharing between Galaxy devices, such as phone and tablet
	<ul style="list-style-type: none"> □ Galaxy Book3 Pro 360 (February 2023) <ul style="list-style-type: none"> - Screen: 16.0" WQXGA+ AMOLED (16:10) 2880 x 1800, Touch Screen, DCI-P3 120%, S Pen - Size (W x H x D) & weight: 16.0" 355.4 x 252.2 x 12.8mm, 1.66kg - Platform, OS: Intel® Core™ Processor 13th Gen CPU, Windows 11 - Dynamic AMOLED 2X: 3K (2880x1800), 500nit (HDR), 120Hz, DCI-P3 120% - S Pen & Touchscreen support - 1080p FHD Camera (87-degree wide angle, supports Auto Framing, which recognizes users and adjusts them to the center of the screen) - Quad SPK (AKG/Dolby, Max 5Wx2, 2Wx2), Studio Grade Dual Mic - SSD: Gen4 SSD - Supports WiFi 6E - Battery: 76Wh - Galaxy Apps: Quick Share, 2nd Screen, Multi-Control, Samsung Pass, etc. - Security: supports Secured-Core PC with enhanced security for each stage for hardware, firmware, and software

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Research project	Details
	<ul style="list-style-type: none"> □ Galaxy Book3 Pro (February 2023) <ul style="list-style-type: none"> - Screen: 16" WQXGA+ AMOLED (16:10), up to 500nit (HDR), 120Hz, DCI-P3 120% 14" WQXGA+ AMOLED (16:10), up to 500nit (HDR), 120Hz, DCI-P3 120% - Size (W x H x D) & weight: 16" 355.4 x 250.4 x 12.5mm 1.56kg 14" 312.3 x 223.8 x 11.3mm 1.17kg - Platform, OS: Intel® Core™ Processor 13th Gen CPU, Windows 11 - Dynamic AMOLED 2X: 3K (2880 x 1800), 500nit (HDR), 120Hz, DCI-P3 120% - 1080p FHD Camera (87-degree wide angle, supports Auto Framing, which recognizes users and adjusts them to the center of the screen) - Quad SPK (AKG/Dolby, Max 5Wx2, 2Wx2), Studio Grade Dual Mic - SSD: Gen4 SSD, Expendable SSD (M.2 2280) - Supports WiFi 6E - Battery: 16" 76Wh, 14" 63Wh - Galaxy Apps: Quick Share, 2nd Screen, Multi-Control, Samsung Pass, etc. - Security: supports Secured-Core PC with enhanced security for each stage for hardware, firmware, and software
	<ul style="list-style-type: none"> □ Galaxy Book3 360 (February 2023) <ul style="list-style-type: none"> - Screen: 15.6" FHD Super AMOLED (16:9), up to 500nit (HDR), DCI-P3 120% 13.3" FHD Super AMOLED (16:9), up to 500nit (HDR), DCI-P3 120% - Size (W x H x D) & weight: 15.6" 355.4 x 228.0 x 13.7mm, 1.49kg 13.3" 304.4 x 202.0 x 12.9 mm, 1.16kg - Platform, OS: Intel 13th Gen CPU (EVO Verified by Intel), Windows 11 - sAMOLED: 1080p FHD, 500nit (HDR), 60Hz, DCI-P3 120% - S Pen & Touchscreen support - 1080p FHD Camera (87-degree wide angle, supports Auto Framing, which recognizes users and adjusts them to the center of the screen) - Stereo SPK (Dolby, 2Wx2), Studio Grade Dual Mic - SSD: Gen4 DRAM-less SSD, Expendable SSD (15.6") - Supports WiFi 6E - Battery: 15.6" 68Wh, 13.3" 61.1Wh - Galaxy Apps: Quick Share, 2nd Screen, Multi-Control, Samsung Pass, etc. - Security: supports Secured-Core PC with enhanced security for each stage for hardware, firmware, and software
	<ul style="list-style-type: none"> □ Galaxy Book4 Ultra (2024.01.) <ul style="list-style-type: none"> - Screen: 16" WQXGA+ AMOLED (16:10) Touch Screen, Anti-Reflection - Size (W x D x H) & weight: 355.4 x 250.4 x 16.5mm, 1.86kg - Platform, OS: Intel® Core™ Ultra Processor, Windows 11 - Dynamic AMOLED 2X: 3K (2880x1800), 120Hz, color volume 120% (DCI-P3 basis), 500nit (HDR) - Graphic: NVIDIA® GeForce RTX™ 4050/4070 - AKG Quad speaker (Woofer Max 5W x 2, Tweeter 2W x 2), Smart Amp, Dolby Atmos®, 2M Camera - Memory, SSD : LPDDR5X, NVMe SSD - Bluetooth v5.3, WiFi 6E, 802.11 ax 2x2 - Battery: 76Wh (typical)
	<ul style="list-style-type: none"> □ Galaxy Book4 Pro (2024.01.) <ul style="list-style-type: none"> - Screen: 16" WQXGA+ AMOLED (16:10) Touch Screen, Anti-Reflection 14" WQXGA+ AMOLED (16:10) Touch Screen, Anti-Reflection - Size (W x H x D) & weight: 16" 355.4 x 250.4 x 12.5mm, 1.56kg 14" 312.3 x 223.8 x 11.6mm, 1.23kg - Platform, OS: Intel® Core™ Ultra Processor, Windows 11 - Dynamic AMOLED 2X: 3K (2880x1800), 120Hz, 120% color volume (DCI-P3 basis), 500nit (HDR) - Graphic: Intel® Arc™ Graphics - AKG Quad speaker (Woofer Max 5W x 2, Tweeter 2W x 2), Smart Amp, Dolby Atmos®, 2M Camera - Memory, SSD : LPDDR5X, NVMe SSD - Bluetooth v5.3, WiFi 6E, 802.11 ax 2x2 - Battery: 16" 76Wh, 14" 63Wh (typical)

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Research project	Details
	<ul style="list-style-type: none"> □ Galaxy Book4 Pro 360 (2024.01.) <ul style="list-style-type: none"> - Screen: 16" WQXGA+ AMOLED (16:10) Touch Screen, Anti-Reflection, supports S-pen - Size (W x H x D) & weight: 355.4 x 252.2 x 12.8mm, 1.66kg - Platform, OS: Intel® Core™ Ultra Processor, Windows 11 - Dynamic AMOLED 2X: 3K (2880x1800), 120Hz, 120% color volume (DCI-P3 basis), 500nit (HDR), S-pen - Graphic: Intel® Arc™ Graphics - AKG Quad speaker (Woofer Max 5W x 2, Tweeter 2W x 2), Smart Amp, Dolby Atmos®, 2M Camera - Memory, SSD: LPDDR5X, NVMe SSD - Bluetooth v5.3, WiFi 6E, 802.11 ax 2x2 - Battery: 76Wh (typical)
Galaxy Watch ~August 2023	<ul style="list-style-type: none"> □ Galaxy Watch5 & Galaxy Watch5 Pro (August 2022) <ul style="list-style-type: none"> - Display: Watch5 Pro (46mm) : 34.6mm AMOLED (450 x 450) 330PPI Watch5 (44mm) : 34.6mm AMOLED (450 x 450) 330PPI Watch5 (40mm) : 30.4mm AMOLED (396 x 396) 330PPI - Size (W x H x D) & weight: Watch5 Pro (46mm) 45.4 x 45.4 x 10.5 mm 46.5g Watch5 (44mm) 44.4 x 43.3 x 9.8 mm 33.5g Watch5 (40mm) 40.4 x 39.3 x 9.8 mm 28.7g - Platform (H/W, S/W): Exynos W920, Wear OS Powered by Samsung (Wear OS 3.5) - Signature circular design with adoption of sapphire crystal glass - Enhanced integrated health monitoring function equipped with the advanced BioActive Sensor <ul style="list-style-type: none"> • Improved accuracy of body composition, heart rate, blood pressure, and ECG; and advanced sleep monitoring function - Equipped with One UI Watch 4.5 based on Wear OS, which enables various Google mobile services and apps - Premium titanium body; optimized for outdoor activities with enhanced GPS tracking features (Watch5 Pro) <ul style="list-style-type: none"> • Enhanced performance and durability for better utilization in outdoor activities, such as hiking and cycling • Provides Magnetic D-Buckle Sport Band, which offers better durability, convenience, and style • Save and share workout journey using Route Workout and GPS Exchange Format (GPX) files • Provides turn-by-turn navigation along previous routes through the Track Back feature - Enables lengthy use for outdoor activities via the adoption of large-capacity battery (590mAh) □ Galaxy Watch6 & Galaxy Watch6 Classic (August 2023) <ul style="list-style-type: none"> - Display: Watch6 Classic (47mm): 37.3mm Super AMOLED (480 x 480) Watch6 Classic (43mm): 33.3mm Super AMOLED (432 x 432) Watch6 (44mm): 37.3mm Super AMOLED (480 x 480) Watch6 (40mm): 33.3mm Super AMOLED (432 x 432) - Size (W x H x D) & weight: Watch6 Classic (47mm) → 46.5 x 46.5 x 10.9 mm 59.0g Watch6 Classic (43mm) → 42.5 x 42.5 x 10.9 mm 52.0g Watch6 (44mm) → 44.4 x 42.8 x 9.0 mm 33.3g Watch6 (40mm) → 40.4 x 38.8 x 9.0 mm 28.7g - Platform (H/W, S/W): Exynos W930, Wear OS Powered by Samsung (Wear OS 4) - Design and performance that improve visibility <ul style="list-style-type: none"> • Reduced bezel thickness and increased display size (by about 20%) compared to the previous model • Featured high-resolution Super AMOLED display with peak brightness of 2,000nit <ul style="list-style-type: none"> - Provided enhanced sleep monitoring experience • Shows sleep score via in-depth analyses of each measured factor and integrates the results • Offers enhanced, personalized sleep coaching program <ul style="list-style-type: none"> - Introduced new features, including a more personalized fitness management program • Provides a customized exercise guide by measuring heart rate within 5 cardiorespiratory capacity zones • Offers recording functions for track exercise, such as designation of the lane using the track running function • Features alarm functions to detect irregular heart rhythms <ul style="list-style-type: none"> - Applied one-click band for effortless and convenient watch strip replacement - Strengthened performance by increasing battery capacity - Applied 47/44mm 425mAh, 43/40mm 300mAh

DX Division

Research project	Details
Galaxy buds ~August 2022	<ul style="list-style-type: none"> □ Galaxy Buds 2 Pro (August 2022) <ul style="list-style-type: none"> - Kernel-type premium TWS that offers high-quality 24bit Hi-Fi audio and comfortable fit - Size (W x H x D): Earbuds 21.6mm x 19.9mm x 18.7mm Cradle 50.2mm x 50.1mm x 27.7mm - Platform (H/W, S/W): BES2700YP 1Chip solution, RTOS <ul style="list-style-type: none"> • First Samsung Buds to apply 24bit/48kHz Hi-Fi technologies to offer a high-quality audio experience by minimizing loss of sound quality of the original recording; Intelligence ANC which adopts All High-SNR MIC, noise cancelling solution, and voice detect technology • Strengthened listening experience of the immersive 360 Audio feature via multi-channel audio and enhanced technology that tracks head movements • Provides clear and upgraded call quality through improved VPU and personalized beamforming technology - Offers comfortable and stable fit thanks to the ergonomic design <ul style="list-style-type: none"> • Improved fit through smaller size—15% size reduction compared to previous model—and enhanced structure of vent holes - Strengthened user experience via easy connection between Galaxy Devices - Expanded the Auto Switch feature from smartphones, tablets, and watches to TVs, and the transition between devices is made easier and faster
Networks	
RAN S/W Package ~November 2023	<ul style="list-style-type: none"> □ vRAN* SW Package (November 2023) <ul style="list-style-type: none"> * vRAN (virtualized RAN) <ul style="list-style-type: none"> - Integrated 4th generation CPU from company “I” into our vRAN SW Package, applying it to a vRAN commercial network for the first time in industry <ul style="list-style-type: none"> • Successfully conducted data call on vRAN commercial network equipped with 4th generation CPU, following previous success in large-scale vRAN commercialization utilizing 3rd generation CPU
Base stations ~May 2023	<ul style="list-style-type: none"> □ Domestic 3.5GHz NR 32T32R TDD MMU (February 2022) <ul style="list-style-type: none"> - Applied Mechanical PSA (phase shift antenna) for the first time <ul style="list-style-type: none"> * Automatically controls the antenna angle (tilt 0-12°) inside the MMU with a motor □ Developed high-performance RFIC + DFE integrated chip (April 2022) <ul style="list-style-type: none"> * RFIC (Radio Frequency Integrated Circuit): high-frequency integrated circuit suitable for wireless communication * DFE (Digital Front End): last stage of digital signal processing for communication □ Two types of FDD RU for Dish (Dual Band/Tri Band RU) (September 2022) <ul style="list-style-type: none"> - Developed 5G FDD RU product that complies with the O-RAN standard and supports multiple frequency bands at the same time <ul style="list-style-type: none"> * frequency supported by RU: n71 (600MHz), n29 (700MHz), n66 (AWS: 1.7GHz/2.1GHz), n70 (AWS: 1.7GHz/1.9GHz) □ Gen.3 Dual Band NR 2T2R AU (October 2022) <ul style="list-style-type: none"> - Developed the world's first Dual Band (28GHz+39GHz) AU - Upgraded product performance by increasing output and capacity twofold with the same size compared to the existing 2nd generation AU □ Domestic 3.5GHz NR 64T64R MMU (November 2022) <ul style="list-style-type: none"> - Developed 64T64R Massive MIMO MMU, which was commercialized in the domestic market for the first time - Increased antenna elements twofold and output by 2.7 times compared to the existing 32T32R MMU (old model) for the domestic market □ 3.5GHz CBRS NR Strand Smallcell (March 2023) <ul style="list-style-type: none"> - Developed Strand Small Cell (small cell solution designed to be installed on cables) for the first commercial use - Cell solution that integrates baseband, radio, and antenna into a single form factor - Equipped with the Company's newest in-house chipset—2nd generation 5G modem SoC—and its small size enables installation on cables □ C-band NR 64T64R MMU (2023.05.) for North America <ul style="list-style-type: none"> - More compact and lightweight 64T64R MMU allows higher output with low-power mode compared to the 1st generation
DRAM for mobile Sep 2023	<ul style="list-style-type: none"> □ Development of industry's first LPCAMM <ul style="list-style-type: none"> - Developed LPDDR-based modules, leading the next-generation markets like PC and laptops - Improved performance by 50%, power efficiency by 70%, and mounting area by 60% compared to SO-DIMMs, and improved flexibility in manufacturing as well as user convenience with easy upgrade/replacement - Set to be tested using next-generation systems with major customers and slated for commercialization in 2024: expected to gain wide adoption in next-generation PCs, laptops and data centers.

DX Division

Research project	Details
<p>DRAM for server December 2022 – September 2023</p>	<ul style="list-style-type: none"> □ Development of industry's most advanced 12nm-class DRAM <ul style="list-style-type: none"> - Developed the industry's first 12nm-class 16Gb DDR5 DRAM, securing high-performance and low power features optimized for next-generation computing services - Improved productivity by approximately 20% and reduced power consumption by approximately 23% compared to previous models - Mass produced starting in 2023, providing optimal memory solutions for next-generation systems for customers, with applications expected to expand to data centers, AI, and next generation computing □ Mass production of the industry's most advanced 12nm-class DRAM <ul style="list-style-type: none"> - Enhanced productivity and improved low power consumption characteristics compared to 14-nano DRAM, improving productivity by approximately 20% and reducing power consumption by approximately 23%, which maximizes next-generation computing - Produced via our completed highly advanced node that applies cutting-edge technologies, such as a capacitor utilizing a new material with a high dielectric constant - Provide high-performance and high-density DRAM solutions to meet demand for the high-throughput computing market and expand 12nm-class DRAM lineup, which will be supplied to various applications □ Development of the largest-capacity 32Gb DDR5 DRAM to date <ul style="list-style-type: none"> - 40 years after the development of 64Kb DRAM in 1983, capacity has increased by 500,000 times - Enables the production of 128GB modules without TSV processes; improved power efficiency by 10% compared to 12-nano 16Gb based modules with the same capacity - Provides high density DRAM solutions optimized for AI and enables 1TB module production - Expects to enter mass production within 2024 to be supplied to various applications such as AI and next-generation computing
<p>Graphic DRAM July 2022–July 2023</p>	<ul style="list-style-type: none"> □ Development of GDDR6 DRAM, industry's one of the fastest graphic DRAMs <ul style="list-style-type: none"> - First in the industry to deliver speeds up to 24Gbps by applying 3rd generation 10nm-class (1z) process - Met customer needs by enhancing performance by more than 30% compared to the previous product, leading to processing speeds of up to 1.1TB per second; supporting operation voltage of 1.1V; and improving power efficiency by 20% - Secured compatibility by being fully compliant with specifications of JEDEC, an international semiconductor standardization body - Expanded applications, including next-generation graphics cards, AI, and HPC □ Development of GDDR6W, graphics memory that applies advanced packaging technology <ul style="list-style-type: none"> - GDDR6W is manufactured by introducing Fan-Out Wafer-Level Packaging (FOWLP) technology—a construction and stacking technology—without developing a new memory die - Increased performance (bandwidth) and capacity by twofold while maintaining the same packaging size of GDDR6 □ Development of the industry's first GDDR7 DRAM <ul style="list-style-type: none"> - With the development of industry's fastest 32Gbps GDDR7 DRAM, we improved performance by 1.4 times and power efficiency by 20% compared to the previous 24Gbps GDDR6 - Minimized heat generation during high-speed operation through optimization of the circuit design with new package materials - Set to be tested using next-generation systems with major customers within this year and planned for a timely commercialization to gain wide adoption in next-generation graphic cards, high-performance computing and AI
<p>HBM October 2022–February 2024</p>	<ul style="list-style-type: none"> □ Developed AI-accelerator equipped with HBM-PIM and GPU <ul style="list-style-type: none"> - Materialized HBM-PIM Cluster by installing HBM-PIM memory in AMD's GPU accelerator - Compared to existing GPU accelerators, on average, the addition of HBM-PIM improved performance by more than double and reduced energy consumption by more than 50% - In preparation to provide software that supports accelerators equipped with HBM-PIM, so consumers are expected to be able to use PIM memory solutions in an integrated software environment □ Unveiled ultra-high performance HBM3E DRAM Shinebolt that will lead AI technology innovation <ul style="list-style-type: none"> - Provides high-performance of up to 9.8Gbps per one data input/output pin, allowing speed capable of processing up to 1.2TB of data per second - Achieves high-level stacking for HBM chips by optimizing non-conductive film technology for dense chip stacking without gaps, and improved heat transfer coefficient by maximizing heat conduction - Currently mass-producing 8-layer and 12-layer HBM3 products and delivering samples of the next-generation HBM3E to customers □ Developed industry's first 36GB HBM3E 12H DRAM <ul style="list-style-type: none"> - Achieved industry's highest capacity of 36GB by stacking 12 layers - With Advanced TC NCF technology, achieved 12-layer stacks by maintaining the same height as 8-layer HBM3 and also improved both performance and capacity by over 50% - Enhanced vertical integration with 7 micrometer chip spacing—the industry's smallest— and applied various bump sizes - Started sample shipping to customers, with mass production expected in 2H

DX Division

Research project	Details
NAND November 2022	<ul style="list-style-type: none"> □ Mass production of 8th generation V-NAND <ul style="list-style-type: none"> - Mass production of 1Tb 8th generation V-NAND, which is among the highest capacities in the world - Significantly enhanced bit productivity per wafer and secured one of the industry's highest bit density - Enhanced performance by 1.2 times compared to existing model, featuring an input and output (I/O) speed of up to 2.4Gbps with the adoption of a next-generation interface - Expected to lead the trend of expanding storage capacity in next-generation enterprise servers and extend use into the automotive market, in which reliability is critical
eStorage ~May 2022	<ul style="list-style-type: none"> □ Development of highly advanced UFS 4.0 <ul style="list-style-type: none"> - Improved reading/writing speed by approximately twofold compared to UFS 3.1 product - Enhanced power efficiency by approximately 46% for processing the same amount of data, which allows longer hours of use - Improved a function that reads and saves customer's important data by adopting the latest security technologies - Expected to expand into consumer devices, such as smartphones, automotives, and VR/AR
SSD for server July 2022	<ul style="list-style-type: none"> □ Development of '2nd generation smart SSD' with upgraded processing functionality <ul style="list-style-type: none"> - Enhances processing functionality by twofold and cuts processing time by over 50%, energy consumption by up to 70%, and CPU utilization by up to 97% - Processes data directly, thereby improving system performance and energy efficiency at the same time - Actively address various market needs, including database and video transcoding - Lead standardization of computational storage and increase development of next-generation storage products
SSD for Client January 2023	<ul style="list-style-type: none"> □ Mass production of PM9C1a, a high-performance PC SSD equipped with a 5nm controller <ul style="list-style-type: none"> - Elevated performance with a new 5nm controller and 7th generation V-NAND - Enhanced speed by up to 1.8 times and power efficiency by up to 70% vs the previous generation - Supports device authentication and verification technology with strengthened security solutions such as the new adoption of the Device Identifier Composition Engine (DICE) security standard
Brand SSD April 2022–January 2024	<ul style="list-style-type: none"> □ Released portable SSD 'T7 Shield' for experts that offers both performance and durability <ul style="list-style-type: none"> - Built with dust and water resistance and drop resistance up to 3m - Transmits data stably without performance degradation, including when recording and editing high-resolution videos □ Unveiled high-performance SSD '990 PRO' optimized for gaming <ul style="list-style-type: none"> - Offers unparalleled performance by featuring the latest V-NAND technology and a new proprietary controller - Enhanced speed by up to 55% and power efficiency by up to 50% compared to previous model - Offers optimal performance for an environment in which ultra-high speed data processing is required, such as high-performance graphic games and 4K/8K high-resolution videos □ Released high-performance SSD '990 PRO' 4TB <ul style="list-style-type: none"> - Offers the fastest random read speed among PCIe 4.0-based consumer SSDs by applying state-of-art 8th generation V-NAND and achieving industry's highest performance - Optimized for tasks that require ultra-fast data processing, such as high-performance games and 3D/4K graphics - Strengthened compatibility and heat dissipation through design and application of a heat diffuser and heat sink □ Launched ultra-fast portable SSD 'T9' <ul style="list-style-type: none"> - Supports new data transmission interface, USB 3.2 Gen2x2, achieving approximately 2x improvement in consecutive reading/writing compared to the previous generation - Improves surface materials and achieves software optimization to reduce degradation and overheating during transmission of large files □ Launched 8TB portable SSD T5 EVO, the largest capacity in industry <ul style="list-style-type: none"> - Provides consecutive reading/writing with a speed of up to 460MB/s based on USB3.2 Gen1 - Enhanced portability with compact size and weight, and metal ring - Equipped with overheating prevention and hardware data encryption technologies □ Launched customer SSD '990 EVO' with high-performance and versatility <ul style="list-style-type: none"> - Improved reading/writing speed by up to 43% compared to 970 EVO Plus - Enhanced power efficiency by up to 70% with new 5nm controller - Supports the next generation interface PCIe 5.0 x2 - Enhances cost competitiveness with host memory buffer technology

DX Division	
Research project	Details
CXL May 2022 – May 2023	<ul style="list-style-type: none"> □ Development of industry's first high-capacity 512GB CXL DRAM <ul style="list-style-type: none"> - Enhanced capacity of CXL DRAM by four times, which allows expansion of over tens of terabytes per server - Equipped with CXL-exclusive controller, reducing data latency by 1/5 □ Development of CXL-based PNM solution for high-capacity AI models <ul style="list-style-type: none"> - PNM's (Processing-near-Memory) computational functions are performed closer to the memory to reduce the bottleneck between the CPU and memory data transference and to improve system performance - Enhanced performance by approximately twofold in applications, such as recommendation systems or in-memory databases, that require high memory bandwidth □ Development of industry's first CXL 2.0 DRAM <ul style="list-style-type: none"> - Overcomes limitations of DRAM modules, enabling expansion of bandwidth and capacity - Reduced server operation costs by supporting memory pooling, which assists splitting-use of CXL DRAM - Expands CXL ecosystem through continued collaboration with data centers and server and chipset companies; and become an industry leader by promptly addressing demand in the next-generation computing market
Brand Card May 2022-Feb 2024	<ul style="list-style-type: none"> □ Released memory card 'PRO Endurance' with enhanced performance and durability <ul style="list-style-type: none"> - Adopts high-quality server-level NAND durability that allows up to 16 years of continuous recording time - Optimized for high-resolution (4K, Full HD) video recording equipment, such as surveillance video and black box - Keeps stable recording performance even in tough conditions, applies 6-proof protection - Supports speed of Class 10, UHS Class U3, and video speed of Class V30; can continuously record Full HD · 4K high-resolution videos □ Released memory card 'PRO Ultimate' with enhanced speed and stability <ul style="list-style-type: none"> - 'PRO Ultimate' provides the highest level of 200MB/s read speed and 130MB/s write speed under the UHS-I standard, improving power efficiency by 37% compared to previous models and achieving data protection against extreme external conditions such as water, moisture, abrasion, X-ray, and temperature. - Provides the optimal SD Cards/Micro SD Cards for high-resolution content work catering to professional photographers and creators who use devices like drones, action cameras, and DSLR □ Developed industry-first SD Express microSD Card <ul style="list-style-type: none"> - Offers industry's highest continuous reading performance of 800MB/s and 256GB capacity - First to apply Dynamic Thermal Guard technology—which has been used in SSDs—to effectively addressed overheating in small form factors □ Mass produced high-density 1TB UHS-I micro SDcard, based on the most recent V-NAND <ul style="list-style-type: none"> - Achieved terabyte-level capacity in microSD cards with 8th generation V-NAND - Ensures data protection data in extreme environments (e.g. water, abrasion from dropping)
Automotives July 2023-October 2023	<ul style="list-style-type: none"> □ Mass production of ultra-low-power UFS 3.1 for vehicles <ul style="list-style-type: none"> - Began mass production of Infotainment (IVI) UFS 3.1 for vehicles, which has the lowest power consumption in the industry and is optimized for EVs and autonomous vehicles - Offers 33% lower power consumption compared to the previous generation, with a maximum read speed of 2,000MB/s and a maximum write speed of 700MB/s for 256GB - Strengthened storage product lineup for automotives by establishing lineup of 128GB/256GB/512GB products to meet various customer needs; and established UFS 3.1 products for advanced driver assistance systems □ Unveiled key solutions for vehicles to reach no.1 in automotive memory market in 2025 <ul style="list-style-type: none"> - Unveiled Detachable AutoSSD that allows multiple SoCs to use a single SSD divided through storage virtualization, supporting consecutive read speed up to 6,500MB/s and providing 4TB capacity - Showcased high bandwidth GDDR7 for vehicles and LPDDR5X with reduced packaging size

DS Division	
Research project	Details
System LSI	

<p>Image Sensor January 2022–December 2023</p>	<ul style="list-style-type: none"> □ Unveiled 200-megapixel image sensor, industry's smallest pixel size (HP3, 0.56um/200Mp) <ul style="list-style-type: none"> - Reduced camera module area by up to 20% with 12% smaller pixels compared to the previous HP1 (0.64um) - With the Super Quad Phase Detection (QPD) technology, enables auto-focusing feature for all 200 megapixels - Utilizes Tetra2pixel technology, which offers vivid picture quality even in low-light environments - Improves picture resolution for 200 megapixel and usability of a 50 megapixel sensor zoom by applying AI-based image process solutions □ Launched 200-megapixel image sensor combined with ultra-high resolution technologies (HP2, 0.6um/200Mp) <ul style="list-style-type: none"> - Applied Dual Vertical Transfer Gate technology—industry's first—and enhanced color expression and picture quality - Leveraged Tetra2pixel technology, offering vivid picture quality even in low-lit environments - Adopted Dual Slope Gain, creating an HDR image as high as 50MP—industry's first - Applied Super QPD, which allows the sensor to use all its pixels for auto-focusing □ Launched industry's highest- performance image sensor for vehicles (1H1, 2.1um/8.3Mp) <ul style="list-style-type: none"> - Enables automotive 120dB HDR, LFM (LED flicker mitigation) and motion-artifact free simultaneously - Applies DTI (deep trench isolation) to prevent interference between adjacent pixels and improves low-light SNR □ Unveiled ISOCELL vision 63D iTOF (indirect time of flight) sensor (63D, 3.5um/0.3Mp) <ul style="list-style-type: none"> - Measures three dimensional information of objects by sensing light wavelengths - An industry-first single-chip iTOF sensor which reduces system power consumption by 40% compared to the previous sensor (33D) - Supports surface light source and point light source modes and extends maximum measurement distance to 10m □ Unveiled ISOCELL Vision 931 Global Shutter sensor (931, 2.2um/0.4Mp) <ul style="list-style-type: none"> - Simultaneously exposes all pixels to light, just like the human eye, increasing speed and accuracy. - Recognizes even minute movements in the user's pupils, facial expressions, hand motions, etc.
<p>Exynos January 2022–March 2024</p>	<ul style="list-style-type: none"> □ Released premium mobile AP 'Exynos 2200' <ul style="list-style-type: none"> - Adopted the next-generation GPU Xclipse jointly developed with AMD, maximized gaming performance and power efficiency - Enabled Ray Tracing technology based on hardware on mobile devices—a first in the industry - Strengthened performance and security by adopting the core based on the latest ARM CPU architecture 'ArmV9' - Enhanced NPU performance by more than twofold compared to the previous model, significantly enhanced machine learning performance □ Secured internationally standardized 5G non-terrestrial networks (NTN) modem technology for satellite communications <ul style="list-style-type: none"> - Reflects the latest standard (Release-17) of 3GPP, which unites telecommunications standard development organizations - Adopted technologies that accurately predict low Earth orbit satellite locations and minimize frequency offsets - Supports two-way transmission of large-capacity data, including text messaging and video sharing □ Unveiled Exynos Connect U100, an ultra-wideband (UWB) chipset for short-range wireless communications <ul style="list-style-type: none"> - Provides an accuracy of single-digit centimeters and 5-degrees and under - Low-power, one-chip solution optimized for various mobile, automotive, and IoT devices - Equipped with a scrambled timestamp sequence (STS) function and a secure hardware encryption engine to prevent external hacking - Certified by FiRa Consortium, an organization that certifies UWB products for conformity to interoperability standards □ Expands Samsung Electronics-AMD partnership for next-generation graphic design asset <ul style="list-style-type: none"> - Offers console-level gaming experiences on various devices beyond smartphones - Expands eco-system for next-generation graphic solution R&D □ First Infotainment collaboration with Hyundai Motor Company <ul style="list-style-type: none"> - Supplies Exynos Auto V920 for premium infotainment to Hyundai - Significantly enhanced performance compared to the previous V910 model, offering optimal mobility experiences for drivers - Offers high level of safety by adopting ASIL-B safety standard for vehicle system □ Unveiled advanced Mobile AP Exynos 2400 <ul style="list-style-type: none"> - Offers industry's highest performance of ray tracing with 2.1 times higher level of performance compared to the previous model - With enhanced AI performance, it provides on-device generative AI functions without internet connection - First Exynos to adopt Non-Terrestrial Network technology □ Unveiled latest technology mobile AP Exynos 1480 <ul style="list-style-type: none"> - Improved power efficiency by 22% over the previous model by applying the latest 4nm technology - Features content recognition image processing with powerful AI function - Enhanced graphics performance over the previous generation with AMD RDNA-based Xclipse 530 GPU
<p>SLSI January 2022</p>	<ul style="list-style-type: none"> □ Released all-in-one fingerprint security IC for biometric payment cards (S3B512C) <ul style="list-style-type: none"> - Combines hardware security chip (SE, Secure Element), fingerprint sensor, and Secure Processor in one IC □ Received globally accredited certifications in security, EAL6+ from Common Criteria (CC) and global online card payment technical standard (EMVCo) and proved security in line with Mastercard's Biometric Evaluation Plan Summary.
<p>Foundry</p>	

World's first 3nm process that adopts GAA technology June 2022	<ul style="list-style-type: none"> □ World's first mass production of 3nm process that adopts Gate-All-Around (GAA) transistor technology <ul style="list-style-type: none"> - Maximized power efficiency and performance by implementing 'MBCFET', our in-house GAA technology that utilizes nanosheets - 1st-generation 3nm process reduced power consumption by 45%, improved performance by 23%, and reduced surface area by 16% compared to 5nm □ GAA technology overcomes the performance limitations of FinFET, allowing to continue to make smaller chips <ul style="list-style-type: none"> - The gate surrounds all four faces of the channel, which enables finer control of current flow and reduces operating voltage and power consumption - The structure in which the channels are piled up vertically boosts performance as it increases channel width per unit area and allows greater amount of current to flow - The width of channels can be adjusted, giving better design flexibility - Providing verified 3nm design infrastructure and services with ecosystem partners - Planning to expand adoption into high-performance, low-power system semiconductors for HPC, mobile SoCs, etc.
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SDC	
Research project	Details
Display panel	
55/65" QD-Display January 2022	<ul style="list-style-type: none"> □ World's first QD-Display for TV (55" UHD, 65" UHD) <ul style="list-style-type: none"> - Exceptional wide color gamut of BT2020 90% - Expresses outstanding brightness and color at any angle with QD display which emits light evenly across all directions - Excellent HDR performance, deep and detailed black expression
34" QD-Display March 2022	<ul style="list-style-type: none"> □ World's first QD-Display for monitor (34" QHD) <ul style="list-style-type: none"> - Provides superb gaming experience by supporting 175Hz, 0.1ms, 1800r, HDR True Black, and G-Sync - Outstanding color, viewing angle, and contrast ratio and minimized exposure to blue light
Foldable OLED for Galaxy Z Fold 4 August 2022	<ul style="list-style-type: none"> □ Promoting additional improvements compared to previous model <ul style="list-style-type: none"> - Significantly improved display quality in the location of the Under Panel Camera while maintaining camera performance and emphasized large-screen experience - Enhanced energy efficiency with Eco2 OLED Plus with improved transmittance efficiency - Reduced costs and weight via integrated FRP-Digitizer panel
14/16" OLED for Galaxy Book 3 Pro February 2023	<ul style="list-style-type: none"> □ Development of the world's first large-sized (16") OCTA technology <ul style="list-style-type: none"> - Expanded the application of OCTA—touch-integrated technology—from smartphone OLED to middle-sized laptop OLED panels - Minimized the dead space of panels via development of new materials and process technologies - Reduced power consumption with the first adoption of OLED notebooks with refresh rate of 48–120Hz
16" OLED Development for HP Elitebook April 2023	<ul style="list-style-type: none"> □ Achieves power-efficiency and durability through improvements in OLED organic materials <ul style="list-style-type: none"> - 16" WQ+ (2,880 x 1,800, 16:10) - Applied 48Hz–120Hz, VRR (Variable Refresh Rate) and received AMD Freesync Premium Pro certification; provides an optimal gaming environment
OLED for Google Pixel 8 pro October 2023	<ul style="list-style-type: none"> □ Through application of new OLED materials that are highly efficient and long-lasting, high luminance (HBM 1,600nits, peak 2,400nits) was achieved. <ul style="list-style-type: none"> - 6.7" WQXGA+ (1,344 x 2,992) - Applied 1–120Hz VRR (variable refresh rate) and technology to minimize dead space
Galaxy S24 AMOLED Jan 2024	<ul style="list-style-type: none"> □ Galaxy S24 (6.16"FHD+, 6.66"WQ+, 6.79WQ+) <ul style="list-style-type: none"> - Combines high-resolution low power consumption technology with technology to minimize panel dead space - Achieves high-luminance, low power and slim bezel and improves image quality and user experience
31.5"UHD, 27"QHD QD-OLED Jan 2024	<ul style="list-style-type: none"> □ Developed 31.5" (140ppi), 27" (360Hz) QD-OLED monitor <ul style="list-style-type: none"> - Developed self-emitting display with high-resolution (140ppi) and high refresh rate (360Hz) with precision inkjet printing technology and Samsung's AI-based operating algorithms