



SAMSUNG ELECTRONICS Co., Ltd.

2024 Interim Business Report

For the quarter ended September 30, 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. Business Overview』.

Table of Contents

Certification	3
I. Corporate Overview	4
II. Businesses Overview.....	5
III. Financial Affairs.....	29
IV. Management Discussion and Analysis.....	141
V. Auditor’s Report	141
VI. Corporate Governance	146
VII. Information on Shareholders	147
VIII. Executives and Employees	150
IX. Affiliates and Subsidiaries	151
X. Transactions with affiliates and subsidiaries	152
XI. Other Information.....	155
XII. Appendix.....	157

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 interim business report of Samsung Electronics Co., Ltd. for the nine-month period ended September 30, 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: November 14, 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, 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, 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, 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, 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 229 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, network systems, and PC. 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 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 197 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 47 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) for sales of finished products; SEH (Hungary) for manufacturing TVs, and SEPM (Poland) for manufacturing home appliances.

We have 21 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 32 subsidiaries in Asia (excluding 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 29 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 3Q24, the Company recorded total revenue of KRW 225,082.6 billion, an increase of 17.7% 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.

In 3Q24, reported revenue was KRW 134,357.5 billion (59.7% of total net sales) for DX; KRW 80,965.2 billion (36.0%) for DS; KRW 21,031.7 billion (9.3%) for SDC; and KRW 10,348.9 billion (4.6%) for Harman.

(KRW 100 mil)

Organization	Major products	Revenue	Portion
DX Division	TVs, monitors, refrigerators, washing machines, air conditioners, smartphones, network systems, PC, etc.	1,343,575	59.7%
DS Division	DRAM, NAND flash, mobile APs, etc.	809,652	36.0%
SDC	OLED smartphone panels, etc.	210,317	9.3%
Harman	Digital cockpits, car audio products, portable speakers, etc.	103,489	4.6%
Others	Overlapping internal transactions between Divisions	-216,207	-9.6%
Total		2,250,826	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 3Q24, on a year-on-year basis, the average selling price (ASP) of TVs decreased by approximately 2% and the ASP of smartphones increased by around 3%. Memory-product ASP rose by approximately 55%, and the ASP of OLED panels for smartphones decreased by approximately 29%, while the digital cockpit ASP increased by approximately 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	87,051	16.6%	Qualcomm, MediaTek, etc.
	Display panel	Color picture signaler for TV, monitor	59,019	11.2%	CSOT, SDP, etc.
	Camera module	Camera for smartphone	42,741	8.1%	Samsung Electro-Mechanics , Partron , etc.
	Others	-	336,932	64.1%	
	Sub total			525,743	100.0%
DS Division	Chemical	Disk processing	20,179	16.4%	Soulbrain, DongWoo Fine-Chem, etc.
	Wafer	Semiconductor disk	16,186	13.1%	SK Siltron, Siltronic, etc.
	Others	-	86,945	70.5%	
	Sub total			123,310	100.0%
SDC	FPCA	Circuit	18,631	20.0%	BH, CU-Tech, etc.
	Cover glass	Tempered glass	12,131	13.0%	Apple, LENS, etc.
	Others	-	62,364	67.0%	
	Sub total			93,126	100.0%
Harman	SoC	CPU	5,628	10.0%	Nvidia, Intel, etc.
	Communication module	Vehicular communication	3,330	5.9%	WNC (Wistron NeWeb Corp.), etc.
	Others	-	47,503	84.1%	
	Sub total			56,461	100.0%
Others	-	-	297	-	
Total			798,937	-	

Purchase price does not include sales between Divisions.

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

Samsung Electro-Mechanics is a subsidiary.

B. Production material price trends

On a year-on-year basis, mobile APs—a major production material for the DX Division—saw a price increase of approximately 6%, while the prices of camera modules and TV- and monitor-use display panels increased in the region of 4% and 11%, respectively. The price of wafers for semiconductor disks decreased by approximately 3%, and the price of FPCAs for SDC declined by approximately 23%. The price of tempered glass cover glass fell by approximately 26%. 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)

Organization	Item	Capacity		
		3Q24	2023	2022
DX Division	TV, monitor, etc.	38,533	53,552	55,747
	Smartphone, etc.	199,650	284,700	332,170
DS Division	Memory	1,693,103,022	1,926,651,546	1,905,731,836
SDC	Display panel	1,688	2,320	2,700
Harman	Digital cockpit	6,681	10,912	11,257

(1,000 units)

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 3Q24, the DX Division's output of TVs, monitors, etc., was 31,052 thousand units (major production sites: Mexico, Vietnam, Brazil, and Hungary), and smartphone output was 147,714 thousand units (major production sites: Korea [Gumi], Vietnam, India, and Brazil). The DS Division's memory output in 1Gb equivalents was 1,693,103 million (major production sites: Korea [Hwaseong, Pyeongtaek, etc.] and China). SDC's display panel output in 8th generation glass equivalents was 1,291 thousand units (major production sites in Korea [Cheonan, Asan]). Harman's Digital cockpit output was 4,673 thousand units (major production sites in Mexico, Hungary, and China).

(1,000 units)

Organization	Item	Output		
		3Q24	2023	2022
DX Division	TV, monitor, etc	31,052	40,085	41,802
	Smartphone, etc	147,714	189,991	229,180
DS Division	Memory	1,693,103,022	1,926,651,546	1,905,731,836
SDC	Display panel	1,291	1,407	2,008
Harman	Digital cockpit	4,673	7,658	8,334

Output for major product categories on a consolidated basis.

(Utilization rate)

DX utilization rates in 3Q24 were calculated as actual output relative to production capacity. The utilization rates were 80.6% for TVs, monitors, etc. and 74.0% for smartphones, etc.

(1,000 units)

Organization	Item	3Q24		
		Production capacity	Output	Utilization rate
DX Division	TV, monitor, etc	38,533	31,052	80.6%
	Smartphone, etc	199,650	147,714	74.0%

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 274 days in 3Q24. 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	3Q24		
		Potential production time	Actual production time	Utilization rate
DS Division	Memory	65,760	65,760	100.0%
SDC	Display panel	32,880	32,880	100.0%

In 3Q24, Harman’s utilization rate was 69.9% and was calculated as actual output relative to production capacity.

(1,000 units)

Organization	Item	3Q24		
		Production capacity	Output	Utilization rate
Harman	Digital cockpit	6,681	4,673	69.9%

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	Riyadh , KSA
	Africa	Johannesburg, South Africa
	Latin America	Sao Paolo, 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 September 30, 2024, the total book value was KRW 195,028.8 billion, which is an increase of KRW 7,772.5 billion from year-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	736,899	3,285,615	467,203	140,587	4,731,884
	- Accumulated depreciation (including impairment loss)	-1,586	-304,518	-2,452,523	-	-100,694	-2,859,321
Change*	General acquisition and capital expenditure	1,382	64,265	340,670	△ 53,033	15,219	368,503
	Depreciation	-376	-31,587	-245,538	-	-11,655	-289,156
	Disposal/discard/Impairment	-145	-4,571	-1,101	-494	-237	-6,548
	Others	98	3,532	3,833	-2,005	-532	4,926
Sep 30, 2024	Book value	100,953	464,020	930,956	411,671	42,688	1,950,288
	- Acquisition cost	102,626	799,461	3,630,425	411,671	148,376	5,092,559
	- Accumulated depreciation (including impairment loss)	-1,673	-335,441	-2,699,469	-	-105,688	-3,142,271

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

(Capex)

The Company's capex in 3Q24 was approximately KRW 35.8 trillion, with investments concentrating on capacity expansions and migration to advanced nodes; and directing at infrastructure for the DS Division and SDC. The Company continued to invest to strengthen competitiveness for next-generation DRAM technology and prepare for mid- to long-term demand. For system semiconductors, we are also investing to secure capacity for advanced technologies. Furthermore, we will focus on enhancing our investment efficiency by fortifying fundamentals.

[Capex, by organization]

(KRW 100 mil)

Organization	Purpose	Period	Assets	Investment
DS division	Establishment, addition, upgrade	January–September 2024	Buildings, facilities, etc.	303,111
SDC	Establishment, addition, upgrade	January–September 2024	Buildings, facilities, etc.	38,654
Other	Establishment, addition, upgrade	January–September 2024	Buildings, facilities, etc.	16,644
Total				358,409

4. Revenue and long-term contracts

A. Revenue

In 3Q24, the Company recorded total revenue of KRW 225,082.6 billion, an increase of 17.7% year-on-year. By organization, when compared to the same period last year, revenue increased by a respective 3.0% and 80.3% in the DX Division and DS Division; and decreased by a respective 1.3% and 1.1% in SDC and Harman.

(KRW 100 mil)

Organization	Revenue types	Product categories	3Q24	2023	2022
DX Division	Goods, products, services, other	TVs, monitors, refrigerators, washing machines, air conditioners, smartphones, Network systems, computers, etc.	1,343,575	1,699,923	1,824,897
DS Division	Goods, products, services, other	DRAM, NAND flash, mobile APs, etc.	809,652	665,945	984,553
SDC	Goods, products, services, other	OLED panels for smartphones, etc.	210,317	309,754	343,826
Harman	Goods, products, services, other	Digital cockpit, car-audios, portable-speakers, etc.	103,489	143,885	132,137
Others	Overlapping internal transactions between Divisions		-216,207	-230,152	-263,099
Total			2,250,826	2,589,355	3,022,314

Includes inter-divisional transactions.

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

(KRW 100 mil)

Classification	3Q24	2023	2022
TVs, monitors, etc.	223,594	303,752	332,795
Smartphones, etc.	894,130	1,086,325	1,154,254
Memory	615,054	441,254	685,349
Display panels	210,317	309,754	343,826

Includes inter-divisional transactions.

(2) Revenue, by type

(KRW 100 mil)

Classification	3Q24	2023	2022
Products	2,167,263	2,461,380	2,903,461
Services and other revenue	83,563	127,975	118,853
Total	2,250,826	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	3Q24	2023	2022
Domestic	165,934	205,196	221,799
Export	Americas	461,333	510,934
	Europe	226,537	239,342
	Asia and Africa	259,949	326,262
	China	494,274	422,007
Total	1,608,027	1,703,741	2,118,675

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

(3) Sales ratio (global), by channel

Channel	Wholesale	Retail	Special/direct sales	Others
Ratio	16%	25%	50%	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 3Q24, major customers (listed alphabetically) included Apple, Deutsche Telekom, Hong Kong Techtronics, Supreme Electronics, and Verizon. Sales to the five major customers accounted for approximately 15% of total sales.

F. Long-term contracts

As of September 30, 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 September 30, 2024, a price fluctuation of marketable equity securities (listed stocks) of 1% changes ‘other comprehensive income’ (before income tax) by KRW 69,740 million and ‘profit before tax’ by KRW 1,060 million. The figures as of the same date in 2023 were KRW 65,826 million and KRW 3,519 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.

(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 September 30, 2024, the figures for total liabilities and total equity are as follows:

(KRW mil)

	Sep 30, 2024	Dec 31, 2023
Total liabilities	105,025,954	92,228,115
Total equity	386,281,363	363,677,865
Total liabilities to equity ratio	27.2%	25.4%

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 September 30, 2024, the Company had 4,876 currency forward contracts involving 32 foreign currencies, such as USD and EUR, etc., and the book value of assets and liabilities as well as related gain and loss were as follows:

	Assets	Liabilities	Valuation gain	Valuation loss
Currency forwards	60,497	94,661	665,199	528,177

(KRW mil)

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 September 30, 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 dated 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 dated April 1, 2021.

Fair value of the above put option as of September 30, 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	Jul 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	Jan 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 September 30, 2024, the Company's year-to-date R&D expenses were KRW 24,746.5 billion. Among this, KRW 24,736.1 billion was recognized as expenditures, excluding government subsidies and capitalized expenses.

(R&D expenses)

		(KRW mil)		
		3Q24	2023	2022
Total R&D expenditures		24,746,494	28,352,769	24,929,171
(Government subsidies)		-10,371	-13,045	-9,973
R&D expenditures		24,736,123	28,339,724	24,919,198
Accounting	Capitalization of development expenses (intangible asset)	-	-	-
	R&D costs (expenses)	24,736,123	28,339,724	24,919,198
R&D expenses/revenue ratio		11.0%	10.9%	8.2%

Consolidated basis.

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

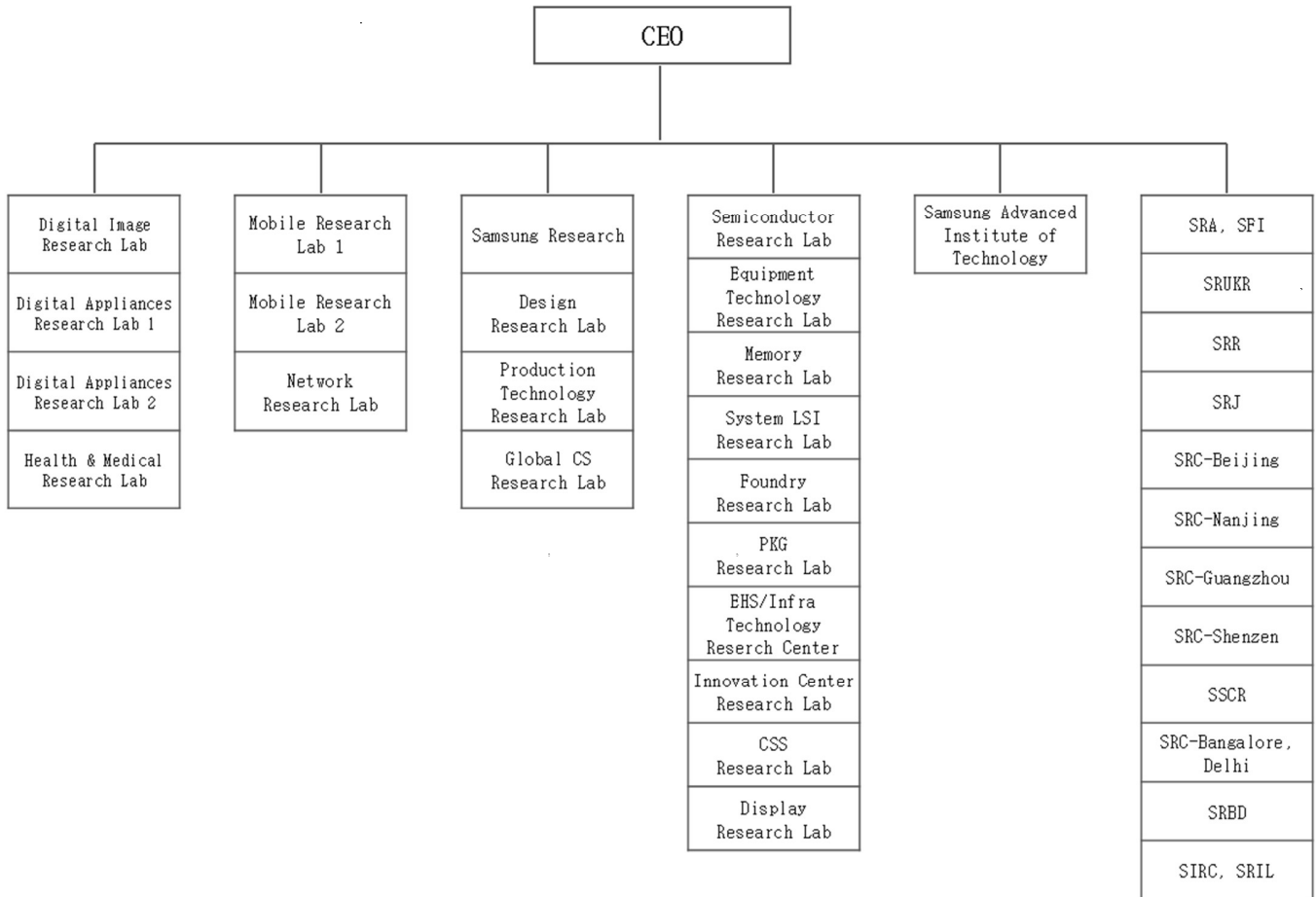
C. R&D organization and operations

(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 September 30, 2024.

D. R&D results

The Company's key R&D results by organization in 3Q24 are as follows:

DX Division	
Research project	Details
Galaxy Foldable	<ul style="list-style-type: none"> • Release of Galaxy Z Fold6 • Release of Galaxy Z Flip6
Galaxy S24	<ul style="list-style-type: none"> • Release of Galaxy S24 · S24+ · S24 Ultra
Galaxy A	<ul style="list-style-type: none"> • Rollout of A55 5G • Release of A35 5G • Release of A25 LTE • Launch of A15 LTE · 5G
Galaxy Book	<ul style="list-style-type: none"> • Release of Galaxy Book4 Ultra • Release of Galaxy Book4 Pro 360 • Release of Galaxy Book4 Pro • Release of Galaxy Book4 Edge
Neo QLED 8K	<ul style="list-style-type: none"> • Release of mini LED-based UHD & Slim 8K TV
Neo QLED 4K	<ul style="list-style-type: none"> • Release of mini LED-based TV with 4 series, featuring 7 different sizes

Refrigerator	<ul style="list-style-type: none"> • Launch of Bespoke AI hybrid models with energy-efficient power saving mode with application of Peltier elements • Release of Bespoke AI Kimchi Plus with automatic door-opening function
Washing machine	<ul style="list-style-type: none"> • Launch of Bespoke Grande AI “OneBody Top-Fit” washer/dryer
Vacuum cleaner	<ul style="list-style-type: none"> • Launch of wet & dry robot vacuum cleaner Bespoke AI Steam for Korean market
RAN S/W package	<ul style="list-style-type: none"> • Completed functional test of vRAN-based 5G RedCap energy-saving technology, an industry’s first
Base station	<ul style="list-style-type: none"> • Development of a new high-power–high-efficiency MMU (base station capable of large-scale data transmission using multiple antennas)
DS Division	
Research project	Details
Mobile DRAM	<ul style="list-style-type: none"> • Achieved verification of industry’s fastest LPDDR5X operation
HBM	<ul style="list-style-type: none"> • Developed the industry’s first 36GB HBM3E 12H DRAM
NAND	<ul style="list-style-type: none"> • Mass produced the industry’s first 9th-generation V-NAND
Automotive	<ul style="list-style-type: none"> • Developed the industry’s first 8th generation V-NAND-based SSDs for automobiles
Image sensor	<ul style="list-style-type: none"> • Unveiled HP9, the industry’s first 200-megapixel mobile image sensor for telephoto cameras
Exynos	<ul style="list-style-type: none"> • Unveiled Exynos W1000, a wearable SoC based on state-of-the-art technology
SDC	
Research project	Details
OLED	<ul style="list-style-type: none"> • Developed Galaxy S24 AMOLED • Deployed the 13.4" Round OLED Display in BMW Mini • Release of Surface Pro 10 • Developed foldable OLED for Galaxy Z Fold6 • Developed OLED for Google Pixel 9 Pro XL
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 260,602 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 September 30, 2024]

(Unit: No. of patents)

	Korea	US	Europe	China	Japan	Others	Total
Number	60,782	97,662	46,969	27,471	8,883	18,835	260,602

In 3Q24, the Company invested KRW 24.7 trillion in R&D and registered 5,478 domestic and 6,981 US patents.

(Number of patent registrations per year)

(Unit: No. of patents)

	3Q24	2023	2022
Korea	5,478	8,908	9,136
US	6,981	8,958	8,500

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 3Q24, the Company acquired 372 US design patents, in part for the aforementioned purposes.

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 domestic greenhouse gas emission and energy use are provided below:

(Unit: tCO₂-eq, TJ)

	2023	2022	2021
Greenhouse gas (tCO ₂ -eq)	17,337,196	19,285,537	19,267,217
Energy (TJ)	301,616	290,024	274,297

Amounts include those reported by HQ and subsidiaries to the government

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, etc. 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

The TV industry has produced continual innovations in 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 flat panel TVs (LCD), Smart TVs, super-large TVs (QLED/OLED/Neo QLED/8K), Micro LED, and more.

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 phone 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 870 million units in 2024, 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, September 2024)

The smartphone industry has grown significantly since 2007. In 2024, the smartphone portion of total HHP sales volume was approximately 86%, and the feature phone portion of the total was approximately 14%, with the latter related to demand in emerging markets (TechInsights, September 2024). For 2024, the penetration rate of smartphones is expected to have reached 53.1%, rising slightly from 52.5% in 2023 (TechInsights, June 2024).

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 201.39 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 1.2% year on year, resulting in a projected annual volume of approximately 203.8 million units (Omdia, September 2024).

< Market share of TV >

Product	3Q24	2023	2022
TV	28.9%	30.1%	29.7%

Global market share in revenue; from Omdia (Figure for 3Q24 is a Company estimate.)

2) Mobile industry

The smartphone market is expected to increase from 1.15 billion units in 2023 to 1.2 billion units in 2024 due to strengthened consumer sentiment backed by an economic recovery and increased demand for foldable phones (TechInsights, September 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 to around 150 million units with the arrival of the replacement cycle. (TechInsights, August 2024)

< Market share of Smartphone >

Product	3Q24	2023	2022
Smartphone	19.2%	19.7%	21.7%

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

□ 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.

During this period, the global TV market grew continually until 2011 and reached sales of 249 million units, but the sales volume declined to 233 million units in 2012 and to 201 million units in 2023. In contrast, we have expanded our global market share from 14.2% in 2006 to 30.1% in 2023 thanks to the timely launches of new products and the enhancement of our marketing competitiveness.

In the TV market this year, super big TVs of 75 inches or more and premium TVs priced over USD 1,500 are driving market growth. The demand for such products are especially strong in North America, Europe, Korea, Southeast Asia, and China, but intensifying competition and ongoing increases in panel prices is pressuring profitability.

However, Samsung sees such challenges as opportunities, and we are incorporating cutting-edge AI technologies into numerous segments, including Neo QLED, OLED, and QLED flagship TVs—with a particular focus on 98-inch super big 8K TVs—as well as Lifestyle TVs and soundbars. Through this, we are significantly widening the technological gap with competitors.

Neo QLED 8K TVs for 2024 feature 8K Upscaling Pro to improve low-resolution content (e.g., SD/HD/Full HD) to 8K levels by using Samsung's semiconductor and AI technologies. We also actively integrate AI technologies for sound quality, enabling TVs to recognize and separate dialogue from background sounds for clearer speaking while delivering immersive 3D sounds that track the movement of objects.

Furthermore, TVs featuring AI can conveniently connect to various home appliances such as smartphones and soundbars, offering new value and user experiences beyond traditional TV services. AI-enabled TVs can also adjust and optimize energy usage of connected appliances; and they can also monitor its surroundings with sensors and cameras and notify users who are out of the house. At the same time, all personal information and device security are thoroughly protected by Knox, Samsung's security solution.

With adoption of AI core technologies, we have further established product lineups that are needed to keep expanding the super-big TV market. To lead market growth in 90-inch and over TVs, we expanded our 98-inch lineup to include UHD models, following Neo QLED 8K/4K, QLED. We also strengthened our 85-inch Neo QLED, 83-inch OLED, and 77-inch OLED lineups for the global market.

Moreover, we are also extending our future-technology, next-generation micro LED TVs to 114-inch products, following the 89-inch and 101-inch TVs, while commercializing AI-driven text-to-speech technology that converts captions to voice in real time using optical character recognition. In addition, we enhanced Relumino Mode, which amplifies contrast, brightness, and contours for greater accessibility. Through this, we are giving our best efforts to offer TVs for all.

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, November 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 functions supported by generative AI, such as searches, real-time interpretation/translation, automatic summarization, and photo editing, Dynamic AMOLED 2X (120Hz) displays, digital key and content sharing using UWB (ultra wideband), ultrasonic fingerprint-on-display (FoD), and cameras specialized for night mode and 8K video recording.

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 Z Fold, enabled by foldable displays. In 2020, we launched Galaxy Z Flip, a vertically folding smartphone. The Z Flip series, characterized by its iconic design and high portability, 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 fifth and sixth generations of the Galaxy Z series, continuing to lead the foldable market.

In January 2024, Samsung unveiled the Galaxy S24 series featuring the introduction of Samsung's Galaxy AI, a technology that offers a whole new experience by transforming how users interact with the world and provides boundless potential through functions such as enhanced search experiences, creative photo editing, real-time translation, and convenient text summarization.

In July 2024, we launched the Galaxy Z Fold6 and Galaxy Z Flip6, offering a new level of foldable productivity with Galaxy AI features optimized for large displays and foldable form factors. In addition to the outstanding portability as the thinnest and lightest models among the Galaxy Z series to date, we further enhanced performance and durability to bring product completeness to an even higher level.

In addition, we provide richer mobile 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; Smart watches that offer advanced fitness and wellness features with biometric sensor technology; smart rings that provide customized health information with comfortable wearability; and wireless earbuds that deliver rich, superior 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) and Samsung Health. We are evolving Samsung Wallet into a service that can replace physical wallets through functionalities that can be used for ID cards, tickets, and more, going well beyond a mere payment system. Samsung Health will strengthen its position as a comprehensive health management platform through new form factors and AI features.

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. The Galaxy S24 series incorporates recycled cobalt and rare earth elements, while the Galaxy Z Fold6 and Galaxy Z Flip6 models also use recycled gold and copper.

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

In the memory market in 3Q24, AI and conventional server demand was strong as major datacenter and tech companies continued to invest. However, for the mobile segment, the supply-demand situation was impacted somewhat due to inventory adjustments by some customers and rising supply of legacy products in the Chinese market. With decoupling of market demand by application and product, we focused on depleting aging inventories—which consist mainly of legacy products—to further improve our inventory mix while actively responding to the demand for high-profitable, cutting-edge products for AI and server.

In the 4Q24, we are likely to see the same trends that were exhibited in the third quarter, with strong demand for servers driven by AI, while inventory adjustments by some mobile customers are likely to continue. In this environment, we will maintain efforts from the third quarter to improve our profitability-focused portfolio. Also, we plan to accelerate conversions of legacy lines and aim to strengthen fundamentals by pushing to normalize the inventory mix by the end of the year.

In the foundry market, we saw a demand increase centered on high-performance computing (HPC) and AI applications using advanced technology. However, due to the delayed recovery of the global finished-product market, demand is still relatively weak for mobile products/PC applications and for mature technology. Nonetheless, in the mid to long term, we expect to see continued growth in the foundry market as HPC/AI applications are likely to keep expanding, centering on advanced technologies, and a recovery in demand for finished products, including mobile, PC, and automotive applications.

< Market share of DRAM >

Product	3Q24	2023	2022
DRAM	42.2%	42.2%	43.1%

Global market share in revenue; data from research firm *DRAMeXchange*. (Figure for 3Q24 is a Company estimate.)

□ Business condition

In the memory market, for server, demand for AI is likely to remain strong, and we expect some mobile customers to continue adjusting inventory. We will continue to monitor factors that influence demand, such as geopolitical issues and interest rates and stimulus packages in major countries. Also, in line with our strategies to improve our profitability-focused portfolio, we aim to strengthen fundamentals by continuing our efforts from the third quarter to normalize the inventory mix by the end of the year. Also, we will enhance our business competitiveness by expanding the sales base of high-profitable products and by accelerating the migration to advanced technologies.

For DRAM, we plan to grow sales in line with our increase in HBM capacity, accelerate the transition to 1b nano for server DDR5, and actively increase the sales portion of high-density modules based on 32Gb DDR5. In addition, we will secure leadership in high-value-added products by starting mass-volume business for 10.7Gbps LPDDR5x and GDDR7, which we were the first in the industry to develop. For NAND, amid continued strength in server SSD demand, we will actively respond to the demand for TLC SSDs, which account for the main share of the market, and further expand sales of V8-based PCIe Gen5. In 4Q, for the high-potential QLC SSD market, we will start mass production of 64TB products and sample 128TB products. In the first half of 2025, we plan to expand our QLC SSD lineup with the inclusion of 128TB products, which are slated to be mass produced in the same period.

For System LSI, despite strong sales of smartphones in the premium segment and emerging markets, we expect to see only slight year-on-year growth due to inventory adjustments in 2H related to accumulated channel inventory. We are actively promoting the expansion of orders for high-margin products while also strengthening cost competitiveness.

In SoCs, revenue is growing on the global release of Galaxy S24FE and strong sales of A series (A55/A35) products for the volume market. We are also enhancing our business competitiveness by expanding the supply of high-spec on-device

AI products, diversifying applications, and broadening our customer base. For image sensors, demand is increasing as our leading 200-megapixel sensor extends its application from wide-angle to telephoto cameras by leveraging improvements of its zoom functionality. In the automotive sensor market, orders are rising for new high-resolution sensors from major global automakers. For smartphone OLED mDDIs, we are increasing supply to global top-tier customers based on our advanced technology competitiveness and products featuring differentiated technology. For pDDIs, we are focusing on growth via OLED-oriented pDDI and TCON (timing controller), transitioning from a focus on LCD. For Power, we're expanding sales in mobile products by broadening our customer base and portfolio of memory products; and in Security, we are driving revenue growth by launching high-spec products tailored to the increasing security needs for smartphones and consumer applications.

In the Foundry business we are materializing strategies for each technology and application in line with market changes while also strengthening competitiveness in our technological development, manufacturing, and business capabilities. For advanced technologies, we started mass production using GAA 3nm technology in 2022; and we are developing subsequent generations by leveraging our experience and expertise. We are currently mass producing 3rd-generation 4nm products, thus adding to our market competitiveness based on stable yields. For advanced technologies, to ensure continual technological competitiveness, we target the timely development of 2nm technology all as we continue to focus on expanding our customer base. To address demand for mature technologies, we are implementing strategies to improve profitability and ensure long-term utilization through steady development work and investments in specialized technologies. Furthermore, the Company remains focused on optimizing line operations and expanding capacity considering the entire commercialization procedure, from development through to mass production. We aim to expand our business opportunities in response to the evolving market through our continued efforts to continually enhance collaboration with customers and strengthen competitiveness across the board, including development, orders, production and supply.

[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 in 2024 is anticipated to grow to 1.51 billion units, a 1.44 billion units year-on year increase. For smartphone-use OLED panels, the market is forecast to reach 0.81 billion units in 2024, up from 0.61 billion units in 2023, and the OLED portion of smartphone panels is expected to increase to 55.3% in 2024 from 42.7% in 2023 (Omdia, October 2024).

The market for large display panels is expected to grow to 0.88 billion units in 2024 from 0.81 billion units in 2023 (Omdia, September 2024).

< Market share of smartphone panel >

Product	3Q24	2023	2022
Smartphone panels	42.4%	50.1%	56.7%

Global market share in revenue; figure for 3Q24 is estimate from research firm *Omdia*.

□ 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, we expect competition between panel makers to intensify, and we will maintain our leadership in the high-end market and expand sales by continuing to develop differentiated technologies, including for high resolution and low power consumption.

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, AUTO, gaming, and auto products and further solidify our business leadership.

For large panel business, we will center capacity on premium TVs and monitors and strengthen business competitiveness by enhancing stability by improving yield and reducing losses.

[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. 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 increasing integration of AI, they are transforming into technology-centric IT devices. Such changes have brought IT companies into the consumer audio market, and they are now competing with traditional audio-focused firms that possess sound engineering technologies.

The consumer audio market is expected to see high growth in segments such as TWS headphones, home audio products, and gaming headphones, and consumer desire is continuing to grow for premium audio experiences such as high-quality and lossless sound. In response to such trends, Harman is enhancing its business capabilities and competitiveness in high-growth areas and continuously launching new products to address market demands. To cater to consumer needs for premium audio experiences, Harman in 4Q23 acquired Roon Labs LLC, a US company that specializes in high-quality and lossless audio playback technology, offering our consumers with high quality audio experiences. We plan to differentiate our lineup and strengthen market competitiveness by integrating Roon's technology into products in other divisions.

□ Market condition

Despite persistent economic uncertainties, such as rising raw material prices caused by recent geopolitical issues in Europe and the Middle East coupled with intensifying U.S.-China trade tensions, a majority of the instabilities in the global automotive supply chain have been resolved. Moreover, it is anticipated that high interest rates and inflation are likely to gradually normalize. Overall, we expect global automobile production in 2025 to increase by 1.8% year-on-year (S&P Global Light Vehicle Production Forecast, October 2024).

< Market share of digital cockpit >

Product	3Q24	2023	2022
Digital cockpits	13.3%	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 data (by value) from TechInsights

□ **Business condition**

Harman is positioned to stay at the forefront in the digital cockpit and car audio markets, which are key markets for in-cabin experiences in the 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.

Through its proprietary sound engineering capabilities and multi-brand strategies targeting diverse consumer groups, Harman has expanded its brand recognition and influence as professional audio company among consumers and audiophiles alike. We will further fortify our reputation and position in the audio industry by enhancing collaboration with other divisions and launching new products.

D. Financial summary, by organization

In 3Q24 by organization, DX accounted for 59.7% of revenue with reported revenue of KRW 134,357.5 billion; DS contributed approximately 36.0% with revenue of KRW 80,965.2 billion; SDC was responsible for 9.3% with revenue of KRW 21,031.7 billion; and Harman contributed 4.6% with revenue of KRW 10,348.9 billion.

In 3Q24, DX accounted for an operating profit of KRW 10,170 billion; DS with KRW 12,292.2 billion; SDC with KRW 2,864.3 billion; and Harman with KRW 916.3 billion.

(KRW 100 mil)

Organization	Classification	3Q24		2023		2022	
		Amount	Portion of corresponding total	Amount	Portion of corresponding total	Amount	Portion of corresponding total
DX Division	Revenue	1,343,575	59.7%	1,699,923	65.7%	1,824,897	60.4%
	Operating profit	101,700	38.8%	143,847	219.0%	127,461	29.4%
	Total assets	2,477,397	36.2%	2,342,534	37.2%	2,279,669	38.6%
DS Division	Revenue	809,652	36.0%	665,945	25.7%	984,553	32.6%
	Operating profit	122,292	46.6%	-148,795	-226.6%	238,158	54.9%
	Total assets	3,272,169	47.9%	2,871,411	45.6%	2,620,558	44.3%
SDC	Revenue	210,317	9.3%	309,754	12.0%	343,826	11.4%
	Operating profit	28,643	10.9%	55,665	84.8%	59,530	13.7%
	Total assets	783,134	11.5%	792,752	12.6%	737,798	12.5%
Harman	Revenue	103,489	4.6%	143,885	5.6%	132,137	4.4%
	Operating profit	9,163	3.5%	11,737	17.9%	8,805	2.0%
	Total assets	192,884	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. Condensed Financial Statements

A. Consolidated financial statements

(KRW mil)

Classification	3Q24	55th	54th
	September 30, 2024	December 31, 2023	December 31, 2022
Current assets	219,235,111	195,936,557	218,470,581
- Cash and cash equivalents	43,131,359	69,080,893	49,680,710
- Short-term financial instruments	60,616,598	22,690,924	65,102,886
- Other current financial assets	28,571	635,393	443,690
- Trade receivables	44,692,044	36,647,393	35,721,563
- Inventories	53,356,759	51,625,874	52,187,866
- Others	17,409,780	15,256,080	15,333,866
Non-current assets	272,072,206	259,969,423	229,953,926
- Other non-current financial assets	10,826,180	8,912,691	12,802,480
- Investment in associates and joint ventures	12,235,974	11,767,444	10,893,869
- Property, plant, and equipment	195,028,773	187,256,262	168,045,388
- Intangible assets	23,077,457	22,741,862	20,217,754
- Others	30,903,822	29,291,164	17,994,435
Total assets	491,307,317	455,905,980	448,424,507
Current liabilities	87,031,889	75,719,452	78,344,852
Non-current liabilities	17,994,065	16,508,663	15,330,051
Total liabilities	105,025,954	92,228,115	93,674,903
Equity attributable to owners of the parent company	376,152,198	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	365,359,495	346,652,238	337,946,407
- Others	5,491,296	1,280,130	1,938,328
Non-controlling interests	10,129,165	10,444,090	9,563,462
Total Equity	386,281,363	363,677,865	354,749,604
	Jan-Sep 2024	Jan-Dec 2023	Jan-Dec 2022
Revenue	225,082,634	258,935,494	302,231,360
Operating profit	26,233,258	6,566,976	43,376,630
Profit for the period	26,696,957	15,487,100	55,654,077
- Owners of the parent company	26,045,230	14,473,401	54,730,018
- Non-controlling interests	651,727	1,013,699	924,059
Basic earnings per share (KRW)	3,834	2,131	8,057
Diluted earnings per share (KRW)	3,834	2,131	8,057
Number of companies subject to consolidation accounting	230	233	233

Data shown in conformity with K-IFRS.

Please refer to the footnotes of the 54th-55th Consolidated Audit Report and 56th 3Q Consolidated Review Report for the calculation of basic earnings per share (ordinary shares).

B. Separate financial statements

(KRW mil)

Classification	3Q24	55th	54th
	September 30, 2024	December 31, 2023	December 31, 2022
Current assets	88,773,816	68,548,442	59,062,658
- Cash and cash equivalents	5,582,718	6,061,451	3,921,593
- Short-term financial instruments	11,063,471	50,071	137
- Trade receivables	35,176,097	27,363,016	20,503,223
- Inventories	30,958,795	29,338,151	27,990,007
- Others	5,992,735	5,735,753	6,647,698
Non-current assets	234,608,995	228,308,847	201,021,092
- Other non-current financial assets	2,100,328	1,854,504	1,364,608
- Subsidiary, associate, and joint venture investments	57,436,120	57,392,438	57,397,249
- Property, plant and equipment	145,113,639	140,579,161	123,266,986
- Intangible assets	10,522,995	10,440,211	8,561,424
- Others	19,435,913	18,042,533	10,430,825
Total assets	323,382,811	296,857,289	260,083,750
Current liabilities	74,771,238	41,775,101	46,086,047
Non-current liabilities	8,539,578	30,294,414	4,581,512
Total liabilities	83,310,816	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	235,134,369	219,963,351	204,388,016
- Others	-363,781	-476,984	-273,232
Total Equity	240,071,995	224,787,774	209,416,191
Evaluation method of subsidiary, associate, and joint venture investment securities	Cost methods	Cost methods	Cost methods
	Jan-Sep 2024	Jan-Dec 2023	Jan-Dec 2022
Revenue	160,802,657	170,374,090	211,867,483
Operating profit	13,734,791	-11,526,297	25,319,329
Profit for the period	22,530,464	25,397,099	25,418,778
Basic earnings per share (KRW)	3,317	3,739	3,742
Diluted earnings per share (KRW)	3,317	3,739	3,742

Data shown in conformity with K-IFRS.

Please refer to the footnotes of the 54th-55th Audit Report and 56th 3Q Separate Review 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	September 30,	December 31,	September 30,	December 31,
		2024	2023	2024	2023
		KRW	KRW	USD	USD
Assets					
Current assets					
Cash and cash equivalents	3, 25	43,131,359	69,080,893	31,892,251	51,079,892
Short-term financial instruments	3, 25	60,616,598	22,690,924	44,821,211	16,778,155
Short-term financial assets at amortized cost	3, 25	-	608,281	-	449,776
Short-term financial assets at fair value through profit or loss	3, 4, 25	28,571	27,112	21,126	20,047
Trade receivables	3, 25	44,692,044	36,647,393	33,046,255	27,097,867
Non-trade receivables	3, 25	7,721,652	6,633,248	5,709,555	4,904,766
Prepaid expenses		3,491,001	3,366,130	2,581,321	2,488,989
Inventories	5	53,356,759	51,625,874	39,453,131	38,173,277
Other current assets	3, 25	6,197,127	5,038,838	4,582,288	3,725,825
Assets held-for-sale	28	-	217,864	-	161,093
		219,235,111	195,936,557	162,107,138	144,879,687
Non-current assets					
Financial assets at fair value through other comprehensive income	3, 4, 25	9,640,598	7,481,297	7,128,465	5,531,831
Financial assets at fair value through profit or loss	3, 4, 25	1,185,582	1,431,394	876,645	1,058,403
Investments in associates and joint ventures	6	12,235,974	11,767,444	9,047,541	8,701,100
Property, plant and equipment	7	195,028,773	187,256,262	144,208,453	138,461,291
Intangible assets	8	23,077,457	22,741,862	17,063,966	16,815,820
Net defined benefit assets	11	4,028,515	4,905,219	2,978,770	3,627,024
Deferred income tax assets		13,002,200	10,211,797	9,614,105	7,550,821
Other non-current assets	3, 25	13,873,107	14,174,148	10,258,072	10,480,671
		272,072,206	259,969,423	201,176,017	192,226,961
Total assets		491,307,317	455,905,980	363,283,155	337,106,648

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	September 30,	December 31,	September 30,	December 31,
		2024	2023	2024	2023
		KRW	KRW	USD	USD
Liabilities and Equity					
Current liabilities					
Trade payables	3, 25	12,861,787	11,319,824	9,510,281	8,370,120
Short-term borrowings	3, 9, 25	11,035,119	7,114,601	8,159,603	5,260,688
Other payables	3, 25	15,533,843	15,324,119	11,486,056	11,330,982
Advances received	14	1,733,635	1,492,602	1,281,887	1,103,662
Withholdings	3, 25	861,723	892,441	637,176	659,890
Accrued expenses	3, 14, 25	28,951,863	26,013,273	21,407,628	19,234,771
Current income tax liabilities		4,882,420	3,358,715	3,610,166	2,483,506
Current portion of long-term liabilities	3, 9, 10, 25	2,111,782	1,308,875	1,561,497	967,810
Provisions	12	7,158,071	6,524,876	5,292,831	4,824,633
Other current liabilities	3, 14, 25	1,901,646	2,308,472	1,406,118	1,706,934
Liabilities held-for-sale	28	-	61,654	-	45,589
		87,031,889	75,719,452	64,353,243	55,988,585
Non-current liabilities					
Debentures	3, 10, 25	19,537	537,618	14,446	397,526
Long-term borrowings	3, 9, 25	3,765,437	3,724,850	2,784,245	2,754,234
Long-term other payables	3, 25	5,326,842	5,488,283	3,938,781	4,058,154
Net defined benefit liabilities	11	487,239	456,557	360,275	337,588
Deferred income tax liabilities		539,914	620,549	399,224	458,847
Long-term provisions	12	3,357,773	2,878,450	2,482,809	2,128,388
Other non-current liabilities	3, 14, 25	4,497,323	2,802,356	3,325,417	2,072,122
		17,994,065	16,508,663	13,305,197	12,206,859
Total liabilities		105,025,954	92,228,115	77,658,440	68,195,444

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	September 30,	December 31,	September 30,	December 31,
		2024	2023	2024	2023
		KRW	KRW	USD	USD
Equity attributable to owners of					
the parent company					
Preference shares	15	119,467	119,467	88,336	88,336
Ordinary shares	15	778,047	778,047	575,305	575,305
Share premium		4,403,893	4,403,893	3,256,333	3,256,333
Retained earnings	16	365,359,495	346,652,238	270,154,637	256,322,090
Other components of equity	17	5,491,296	1,280,130	4,060,382	946,556
		376,152,198	353,233,775	278,134,993	261,188,620
Non-controlling interests		10,129,165	10,444,090	7,489,722	7,722,584
Total equity		386,281,363	363,677,865	285,624,715	268,911,204
Total liabilities and equity					
		491,307,317	455,905,980	363,283,155	337,106,648

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 September 30,				For the nine-month periods ended September 30,			
		2024	2023	2024	2023	2024	2023	2024	2023
		KRW	KRW	USD	USD	KRW	KRW	USD	USD
Revenue	26	79,098,731	67,404,652	58,487,296	49,840,444	225,082,634	191,155,556	166,430,921	141,344,513
Cost of sales	18	49,095,083	46,618,726	36,301,956	34,470,885	139,293,441	134,273,009	102,996,554	99,284,339
Gross profit		30,003,648	20,785,926	22,185,340	15,369,559	85,789,193	56,882,547	63,434,367	42,060,174
Selling and administrative expenses	18, 19	20,820,277	18,352,392	15,394,959	13,570,152	59,555,935	53,140,288	44,036,934	39,293,067
Operating profit	26	9,183,371	2,433,534	6,790,381	1,799,407	26,233,258	3,742,259	19,397,433	2,767,107
Other non-operating income	20	712,914	244,352	527,144	180,679	1,476,696	949,823	1,091,901	702,319
Other non-operating expense	20	553,052	206,403	408,938	152,619	1,179,941	579,442	872,474	428,452
Share of net profit of associates and joint ventures	6	183,411	262,677	135,618	194,229	596,758	676,459	441,256	500,188
Financial income	21	3,617,510	4,112,158	2,674,864	3,040,618	10,688,757	12,797,135	7,903,496	9,462,476
Financial expense	21	2,823,742	2,903,717	2,087,935	2,147,071	8,193,049	10,104,258	6,058,116	7,471,305
Profit before income tax		10,320,412	3,942,601	7,631,134	2,915,243	29,622,479	7,481,976	21,903,496	5,532,333
Income tax expense (benefit)	22	219,508	(1,901,570)	162,309	(1,406,062)	2,925,522	(1,660,366)	2,163,194	(1,227,711)
Profit for the period		10,100,904	5,844,171	7,468,825	4,321,305	26,696,957	9,142,342	19,740,302	6,760,044
Profit attributable to:									
Owners of the parent company		9,781,547	5,501,304	7,232,686	4,067,782	26,045,230	8,449,574	19,258,401	6,247,796
Non-controlling interests		319,357	342,867	236,139	253,523	651,727	692,768	481,901	512,248
Earnings per share <i>(in Korean won and in US dollars)</i>	23								
- Basic		1,440	810	1.06	0.60	3,834	1,244	2.83	0.92
- Diluted		1,440	810	1.06	0.60	3,834	1,244	2.83	0.92

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))

	Not es	For the three-month periods ended September 30,				For the nine-month periods ended September 30,			
		2024	2023	2024	2023	2024	2023	2024	2023
		KRW	KRW	USD	USD	KRW	KRW	USD	USD
Profit for the period		10,100,904	5,844,171	7,468,825	4,321,305	26,696,957	9,142,342	19,740,302	6,760,044
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	301,501	(326,750)	222,936	(241,606)	1,579,654	1,144,740	1,168,030	846,445
Share of other comprehensive income (loss) of associates and joint ventures, net of tax	17	(2,227)	3,617	(1,647)	2,674	(22,543)	26,314	(16,669)	19,457
Remeasurement of net defined benefit liabilities (assets), net of tax	17	21,182	(39,469)	15,662	(29,184)	(89,519)	(390,020)	(66,192)	(288,389)
Items that may be reclassified subsequently to profit or loss:									
Share of other comprehensive income (loss) of associates and joint ventures, net of tax	17	(69,879)	34,057	(51,670)	25,182	62,295	119,485	46,062	88,350
Foreign currency translation differences for foreign operations, net of tax	17	(5,077,267)	1,914,792	(3,754,240)	1,415,838	2,954,177	6,568,676	2,184,382	4,857,019
Gain (loss) on valuation of cash flow hedge derivatives	17	(18,470)	(13,386)	(13,656)	(9,897)	(44,890)	(578)	(33,193)	(427)
Other comprehensive income (loss) for the period, net of tax		(4,845,160)	1,572,861	(3,582,615)	1,163,007	4,439,174	7,468,617	3,282,420	5,522,455
Total comprehensive income for the period		5,255,744	7,417,032	3,886,210	5,484,312	31,136,131	16,610,959	23,022,722	12,282,499
Comprehensive income attributable to:									
Owners of the parent company		4,934,790	7,089,926	3,648,890	5,242,443	30,275,707	15,851,327	22,386,506	11,720,811
Non-controlling interests		320,954	327,106	237,320	241,869	860,424	759,632	636,216	561,688

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 nine-month period ended September 30, 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		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		-	-	-	26,045,230	-	26,045,230	651,727	26,696,957
Gain on valuation of financial assets at fair value through other comprehensive income, net of tax	17	-	-	-	19,311	1,371,323	1,390,634	189,020	1,579,654
Share of other comprehensive income (loss) of associates and joint ventures, net of tax	17	-	-	-	-	45,689	45,689	(5,937)	39,752
Foreign currency translation differences for foreign operations, net of tax		-	-	-	-	2,929,088	2,929,088	25,089	2,954,177
Remeasurement of net defined benefit liabilities (assets), net of tax	17	-	-	-	-	(90,044)	(90,044)	525	(89,519)
Loss on valuation of cash flow hedge derivatives	17	-	-	-	-	(44,890)	(44,890)	-	(44,890)
Total comprehensive income for the period		-	-	-	26,064,541	4,211,166	30,275,707	860,424	31,136,131
Dividends declared		-	-	-	(7,357,284)	-	(7,357,284)	(1,093,231)	(8,450,515)
Capital transactions under common control		-	-	-	-	-	-	(12,245)	(12,245)
Changes in consolidated entities		-	-	-	-	-	-	(69,873)	(69,873)
Total transactions with owners		-	-	-	(7,357,284)	-	(7,357,284)	(1,175,349)	(8,532,633)
Balance as of September 30, 2024		119,467	778,047	4,403,893	365,359,495	5,491,296	376,152,198	10,129,165	386,281,363

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 nine-month period ended September 30, 2024	Not es	Prefere nce shares	Ordina ry shares	Share premiu m	Retaine d earnings	Other compon ents of equity	Equity attributa ble to owners of the parent company	Non- controlli ng interests	Total
Balance as of January 1, 2024		88,336	575,305	3,256,333	256,322,090	946,556	261,188,620	7,722,584	268,911,204
Profit for the period		-	-	-	19,258,401	-	19,258,401	481,901	19,740,302
Gain on valuation of financial assets at fair value through other comprehensive income, net of tax	17	-	-	-	14,279	1,013,986	1,028,265	139,765	1,168,030
Share of other comprehensive income (loss) of associates and joint ventures, net of tax	17	-	-	-	-	33,783	33,783	(4,390)	29,393
Foreign currency translation differences for foreign operations, net of tax		-	-	-	-	2,165,830	2,165,830	18,552	2,184,382
Remeasurement of net defined benefit liabilities (assets), net of tax	17	-	-	-	-	(66,580)	(66,580)	388	(66,192)
Loss on valuation of cash flow hedge derivatives	17	-	-	-	-	(33,193)	(33,193)	-	(33,193)
Total comprehensive income for the period		-	-	-	19,272,680	3,113,826	22,386,506	636,216	23,022,722
Dividends declared		-	-	-	(5,440,133)	-	(5,440,133)	(808,358)	(6,248,491)
Capital transactions under common control		-	-	-	-	-	-	(9,054)	(9,054)
Changes in consolidated entities		-	-	-	-	-	-	(51,666)	(51,666)
Total transactions with owners		-	-	-	(5,440,133)	-	(5,440,133)	(869,078)	(6,309,211)
Balance as of September 30, 2024		88,336	575,305	3,256,333	270,154,637	4,060,382	278,134,993	7,489,722	285,624,715

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 nine-month period ended September 30, 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		-	-	-	8,449,574	-	8,449,574	692,768	9,142,342
Gain (loss) on valuation of financial assets at fair value through other comprehensive income, net of tax	17	-	-	-	3,086,721	(1,952,180)	1,134,541	10,199	1,144,740
Share of other comprehensive income of associates and joint ventures, net of tax	17	-	-	-	-	143,912	143,912	1,887	145,799
Foreign currency translation differences for foreign operations, net of tax		-	-	-	-	6,513,750	6,513,750	54,926	6,568,676
Remeasurement of net defined benefit liabilities (assets), net of tax	17	-	-	-	-	(389,872)	(389,872)	(148)	(390,020)
Gain on valuation of cash flow hedge derivatives	17	-	-	-	-	(578)	(578)	-	(578)
Total comprehensive income for the period		-	-	-	11,536,295	4,315,032	15,851,327	759,632	16,610,959
Dividends declared		-	-	-	(7,357,283)	-	(7,357,283)	(101,939)	(7,459,222)
Capital transactions under common control		-	-	-	-	-	-	(9,439)	(9,439)
Changes in consolidated entities		-	-	-	-	-	-	250	250
Others		-	-	-	-	-	-	491	491
Total transactions with owners		-	-	-	(7,357,283)	-	(7,357,283)	(110,637)	(7,467,920)
Balance as of September 30, 2023		119,467	778,047	4,403,893	342,125,419	6,253,360	353,680,186	10,212,457	363,892,643

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 nine-month period ended September 30, 2023	Note	Prefer- ence shares	Ordina- ry shares	Share premi- um	Retaine- d earnings	Other compon- ents of equity	Equity attributa- ble to owners of the parent company	Non- controlli- ng interests	Total
Balance as of January 1, 2023		88,336	575,305	3,256,333	249,884,813	1,433,241	255,238,028	7,071,428	262,309,456
Profit for the period		-	-	-	6,247,796	-	6,247,796	512,248	6,760,044
Gain (loss) on valuation of financial assets at fair value through other comprehensive income, net of tax	17	-	-	-	2,282,388	(1,443,484)	838,904	7,541	846,445
Share of other comprehensive income of associates and joint ventures, net of tax	17	-	-	-	-	106,412	106,412	1,395	107,807
Foreign currency translation differences for foreign operations, net of tax		-	-	-	-	4,816,406	4,816,406	40,613	4,857,019
Remeasurement of net defined benefit liabilities (assets), net of tax	17	-	-	-	-	(288,280)	(288,280)	(109)	(288,389)
Gain on valuation of cash flow hedge derivatives	17	-	-	-	-	(427)	(427)	-	(427)
Total comprehensive income for the period		-	-	-	8,530,184	3,190,627	11,720,811	561,688	12,282,499
Dividends declared		-	-	-	(5,440,133)	-	(5,440,133)	(75,376)	(5,515,509)
Capital transactions under common control		-	-	-	-	-	-	(6,979)	(6,979)
Changes in consolidated entities		-	-	-	-	-	-	185	185
Others		-	-	-	-	-	-	363	363
Total transactions with owners		-	-	-	(5,440,133)	-	(5,440,133)	(81,807)	(5,521,940)
Balance as of September 30, 2023		88,336	575,305	3,256,333	252,974,864	4,623,868	261,518,706	7,551,309	269,070,015

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 nine-month periods ended September 30,			
		2024	2023	2024	2023
		KRW	KRW	USD	USD
Operating activities					
Profit for the period		26,696,957	9,142,342	19,740,302	6,760,044
Adjustments	24	30,074,094	30,111,057	22,237,429	22,264,761
Changes in assets and liabilities arising from operating activities	24	(3,323,423)	(12,933,333)	(2,457,410)	(9,563,184)
Cash generated from operations		53,447,628	26,320,066	39,520,321	19,461,621
Interest received		2,868,496	3,771,363	2,121,027	2,788,627
Interest paid		(497,008)	(686,134)	(367,498)	(507,342)
Dividends received		230,260	61,552	170,259	45,513
Income tax paid		(5,089,026)	(5,274,649)	(3,762,935)	(3,900,188)
Net cash provided by operating activities		50,960,350	24,192,198	37,681,174	17,888,231
Investing activities					
Net decrease (increase) in short-term financial instruments		(37,039,380)	43,136,356	(27,387,711)	31,895,946
Net decrease in short-term financial assets at amortized cost		620,858	416,095	459,076	307,670
Net increase in short-term financial assets at fair value through profit or loss		(1,429)	(1,509)	(1,057)	(1,116)
Disposal of long-term financial instruments		4,100,008	4,564,561	3,031,634	3,375,134
Acquisition of long-term financial instruments		(3,485,364)	(534)	(2,577,153)	(395)
Disposal of financial assets at fair value through other comprehensive income		189,411	5,105,980	140,055	3,775,471
Acquisition of financial assets at fair value through other comprehensive income		(151,906)	(106,890)	(112,323)	(79,037)
Disposal of financial assets at fair value through profit or loss		269,724	44,404	199,440	32,833
Acquisition of financial assets at fair value through profit or loss		(40,512)	(101,842)	(29,955)	(75,304)
Disposal of investment in associates and joint ventures		28,878	24,517	21,353	18,128
Acquisition of investment in associates and joint ventures		(10,999)	(71,875)	(8,133)	(53,146)
Disposal of property, plant and equipment		79,578	68,377	58,842	50,559
Acquisition of property, plant and equipment		(36,320,811)	(42,398,379)	(26,856,386)	(31,350,270)
Disposal of intangible assets		15,869	11,253	11,734	8,321
Acquisition of intangible assets		(1,677,059)	(2,248,152)	(1,240,053)	(1,662,332)
Cash outflow from business combination		(142,156)	-	(105,113)	-
Cash inflow from disposal of held-for-sale assets		101,563	-	75,098	-
Cash outflow from other investing activities		(50,053)	(843,076)	(37,010)	(623,388)
Net cash provided by (used in) investing activities		(73,513,780)	7,599,286	(54,357,662)	5,619,074

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 nine-month periods ended September 30,			
		2024	2023	2024	2023
		KRW	KRW	USD	USD
Financing activities					
Net increase (decrease) in short-term borrowings		4,023,575	(702,893)	2,975,118	(519,734)
Increase in long-term borrowings		404,900	234,455	299,392	173,361
Repayment of debentures and long-term borrowings		(1,004,724)	(871,679)	(742,914)	(644,538)
Dividends paid		(8,427,664)	(7,369,130)	(6,231,595)	(5,448,893)
Transactions with non-controlling interests		(12,245)	(9,190)	(9,056)	(6,795)
Net cash used in financing activities		(5,016,158)	(8,718,437)	(3,709,055)	(6,446,599)
Effect of foreign exchange rate changes		1,620,054	2,390,527	1,197,902	1,767,606
Net increase (decrease) in cash and cash equivalents		(25,949,534)	25,463,574	(19,187,641)	18,828,312
Cash and cash equivalents, beginning of the period		69,080,893	49,680,710	51,079,892	36,734,981
Cash and cash equivalents, end of the period		43,131,359	75,144,284	31,892,251	55,563,293

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 226 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 September 30, 2024 are as follows:

Region	Subsidiaries	Business	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 and 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 Lennox HVAC North America, LLC	Sale of air conditioning products	50.1
	Joyent, Inc.	Cloud services	100.0
America	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
	Sonio Corporation	Sale of software	100.0

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

Region	Subsidiaries	Business	Percentage of ownership (%)^(*)
	Samsung Electronica 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
America	Harman International Industries, Inc.	Management of overseas subsidiaries	100.0
	Harman Becker Automotive Systems, Inc.	Manufacture and sale of audio products and R&D	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.	Sale of audio products and R&D	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.	Sale of audio products and R&D	100.0
	Roon Labs, LLC.	Sale of audio products	100.0
	Beijing Integrated Circuit Industry International Fund, L.P	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	Business	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 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
Europe/CIS	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
	Oxford Semantic Technologies Limited (OST)	R&D	100.0
	Sonio SAS	Sale of software, 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 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	Business	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 and sale of audio products and R&D	100.0
	Harman Becker Automotive Systems Italy S.R.L.	Sale of audio products	100.0
	Harman Becker Automotive Systems Manufacturing Kft	Manufacture of audio products and R&D	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 of audio products and R&D	100.0
	Harman International Romania SRL	R&D	100.0
	Harman Management GmbH	Management of overseas subsidiaries	100.0
	Harman Professional Kft	Manufacture of audio products and R&D	100.0
	Harman Professional Denmark ApS	Sale of audio products and R&D	100.0
	Red Bend Software SAS	Software design	100.0
	Studer Professional Audio GmbH	Sale of audio products and R&D	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	Business	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 Middle east and North Africa (SEMENA)	Management of overseas subsidiaries	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 (SRIBangalore)	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

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

Region	Subsidiaries	Business	Percentage of ownership (%)^(*)
Asia (Excluding China)	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	Sale of audio products and R&D	100.0
	Harman International Industries PTY Ltd.	Management of overseas subsidiaries	100.0
	Harman International (Thailand) Co., Ltd.	Manufacturing and sale of audio products	100.0
	Harman International Japan Co., Ltd.	Sale of audio products and 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
	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 of audio products and R&D	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 of audio products and R&D	100.0
	Harman Technology (Shenzhen) Co., Ltd.	Sale of audio products and R&D	100.0

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

Region	Subsidiaries	Business	Percentage of ownership (%) ^(*)
Domestic	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	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #22	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #26	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #28	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #29	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #32	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #33	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #37	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #40	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #42	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #43	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #45	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #52	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #55	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #56	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #57	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #62	Venture capital investments in technology business	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 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

(In millions of Korean won)	September 30, 2024					
	As of September 30, 2024		For the three-month period ended		For the nine-month period ended	
	Assets	Liabilities	Sales	Profit (loss)	Sales	Profit (loss)
Major subsidiaries^(*)						
Samsung Display Co., Ltd.	64,435,972	6,945,024	7,210,694	1,574,730	18,286,880	4,810,511
Samsung Electronics America, Inc. (SEA)	44,062,285	16,215,351	10,614,272	221,799	30,674,582	555,774
Samsung Asia Pte. Ltd. (SAPL)	27,625,323	265,991	-	335,101	-	4,950,820
Samsung Austin Semiconductor LLC. (SAS)	23,415,564	13,562,762	1,204,206	476,266	3,378,359	732,721
Harman and its subsidiaries(*2)	19,288,358	6,349,252	3,526,058	319,585	10,324,797	723,077
Samsung (China) Semiconductor Co., Ltd. (SCS)	17,266,856	788,489	2,588,077	238,418	8,609,499	882,856
Samsung Semiconductor, Inc. (SSI)	16,801,434	9,877,915	12,717,008	56,683	30,443,783	257,885
Samsung (CHINA) Investment Co., Ltd. (SCIC)	14,687,239	14,118,807	661,677	35,767	2,101,375	47,383
Samsung Electronics Vietnam THAINGUYEN Co., Ltd. (SEVT)	11,918,023	3,287,829	7,922,490	492,134	26,411,478	2,010,454
Samsung India Electronics Private Ltd. (SIEL)	9,110,491	3,492,215	4,630,555	451,767	13,533,065	1,211,772
Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	8,416,388	3,011,274	-	39,279	-	160,555
Samsung Electronics Vietnam Co., Ltd. (SEV)	7,073,742	2,050,853	6,099,276	379,408	17,049,546	1,306,961
Samsung Display Vietnam Co., Ltd. (SDV)	7,060,626	2,078,678	5,938,972	252,940	15,048,714	632,663
Shanghai Samsung Semiconductor Co., Ltd. (SSS)	6,833,077	6,155,939	7,712,379	130,195	23,590,340	362,423
Samsung Eletronica da Amazonia Ltda. (SEDA)	4,914,859	1,618,006	1,941,237	32,740	6,122,245	245,822
Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	4,276,215	775,613	1,843,288	116,637	5,311,618	230,777
Samsung Electronics (UK) Ltd. (SEUK)	2,950,376	1,928,270	1,540,621	13,453	4,595,930	28,912
Samsung Electronics Europe Logistics B.V. (SELS)	2,605,733	1,887,926	3,580,674	(236,880)	12,133,190	501,382
Samsung International, Inc. (SII)	2,533,374	639,832	2,196,876	36,584	5,836,412	397,426
Samsung Electronics Taiwan Co., Ltd. (SET)	2,492,132	1,776,421	1,627,959	1,476	4,521,464	61,324
Thai Samsung Electronics Co., Ltd. (TSE)	2,489,754	600,594	1,159,388	(1,026)	3,513,176	30,903
SEMES Co., Ltd.	2,264,972	621,216	569,591	38,985	1,814,825	116,029
Samsung Electronics Mexico S.A. De C.V. (SEM)	2,120,419	1,068,700	1,036,889	45,131	3,221,591	71,307
Samsung Japan Corporation (SJC)	1,893,266	1,608,931	1,080,751	(1,262)	2,607,115	918
Samsung Electronics GmbH (SEG)	1,860,074	1,823,986	1,412,462	27,011	4,724,019	(31,852)

(*) 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

<i>(In millions of Korean won)</i>	September 30, 2023					
	As of December 31, 2023		For the three-month period ended		For the nine-month period ended	
	Assets	Liabilities	Sales	Profit (loss)	Sales	Profit (loss)
Major subsidiaries^(*)						
Samsung Display Co., Ltd.	65,328,568	7,266,213	7,427,496	4,090,757	18,462,908	6,495,536
Samsung Electronics America, Inc. (SEA)	41,926,899	15,322,780	10,216,410	(273,767)	30,193,962	21,005
Samsung Asia Pte. Ltd. (SAPL)	22,234,942	282,614	-	4,109,008	-	11,075,857
Harman and its subsidiaries ^(*)	17,956,557	6,009,675	3,791,817	320,808	10,443,291	606,707
Samsung Austin Semiconductor LLC. (SAS)	16,714,945	7,791,914	1,080,710	8,389	3,172,155	260,833
Samsung (China) Semiconductor Co., Ltd. (SCS)	15,808,283	870,453	1,890,492	205,634	6,901,659	736,368
Samsung Semiconductor, Inc. (SSI)	12,796,440	6,276,293	6,241,452	99,630	16,318,423	282,091
Samsung Electronics Vietnam THANGUYEN Co., Ltd. (SEVT)	12,554,481	3,593,527	8,761,281	1,180,774	24,108,238	2,347,215
Samsung (CHINA) Investment Co., Ltd. (SCIC)	10,222,557	8,797,991	922,821	(28,228)	2,497,085	149,741
Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	9,660,481	4,585,806	-	32,306	-	64,391
Samsung India Electronics Private Ltd. (SIEL)	7,738,259	3,373,730	4,460,246	399,072	11,773,610	967,435
Samsung Display Vietnam Co., Ltd. (SDV)	7,383,485	1,570,459	6,689,888	514,812	16,903,470	1,085,346
Samsung Electronics Vietnam Co., Ltd. (SEV)	7,301,860	2,215,062	6,016,323	711,676	16,050,234	1,621,889
Samsung Eletronica da Amazonia Ltda. (SEDA)	5,542,627	1,587,911	1,864,916	58,195	5,519,363	222,840
Shanghai Samsung Semiconductor Co., Ltd. (SSS)	5,262,086	4,552,030	3,470,620	57,582	10,059,823	172,515
Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	4,043,677	843,736	1,642,747	67,493	4,738,599	419,734
Thai Samsung Electronics Co., Ltd. (TSE)	3,039,379	640,512	1,100,817	36,409	3,503,091	222,348
Samsung Electronics (UK) Ltd. (SEUK)	2,902,722	1,976,067	1,480,770	(15,082)	4,331,645	57,282
SEMES Co., Ltd.	2,187,919	659,607	413,797	(42,157)	1,823,533	40,800
Samsung Electronics Mexico S.A. De C.V. (SEM)	2,153,032	1,038,115	959,167	6,318	2,711,330	89,370
Samsung Electronics GmbH (SEG)	2,097,706	2,033,152	1,528,115	(84,348)	4,577,315	(29,366)
Samsung International, Inc. (SII)	1,879,442	383,763	2,060,157	102,369	5,728,487	871,140
Samsung Electronics Taiwan Co., Ltd. (SET)	1,797,627	1,139,056	1,054,741	8,202	2,934,200	9,655
Samsung Electronics Benelux B.V. (SEBN)	1,794,552	639,120	655,903	(31,236)	2,117,941	101,437
Samsung Electronics Europe Logistics B.V. (SELS)	1,639,004	1,443,005	3,884,218	150,578	11,929,548	377,341

^(*) 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.

1.4 Changes in Consolidation Scope

Changes in consolidation scope during the nine-month period ended September 30, 2024 are as follows:

Change	Region	Subsidiary	Description
Newly included	America	Sonio Corporation	Acquisition
	Europe • CIS	Oxford Semantic Technologies Limited	Acquisition
		Sonio SAS	Acquisition
	Middle East • Africa	Samsung Electronics Middle east and North Africa (SEMENA)	Establishment
Asia(Excluding China)	Harman International (Thailand) Co., Ltd.	Establishment	
Excluded	America	Harman Financial Group LLC	Liquidation
	Europe • CIS	Samsung Display Slovakia, s.r.o., v likvidacii (SDSK)	Liquidation
		Samsung Electronics Overseas B.V. (SEO)	Liquidation
	Asia(Excluding China)	DOWOINSYS VINA COMPANY LIMITED	Sale of business
	China	Tianjin Samsung Electronics Co., Ltd. (TSEC)	Liquidation
		Dowooinsys Co., Ltd.	Sale of business
Domestic	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. 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 nine-month period ended September 30, 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 September 30, 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 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 ₩ 1,352.4 to \$1, the average exchange rate for the nine-month period ended September 30, 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 September 30, 2024 and December 31, 2023 are as follows:

(1) As of September 30, 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	43,131,359	-	-	-	43,131,359
Short-term financial instruments	60,616,598	-	-	-	60,616,598
Short-term financial assets at amortized cost	-	-	-	-	-
Short-term financial assets at fair value through profit or loss	-	-	28,571	-	28,571
Trade receivables	44,692,044	-	-	-	44,692,044
Financial assets at fair value through other comprehensive income	-	9,640,598	-	-	9,640,598
Financial assets at fair value through profit or loss	-	-	1,185,582	-	1,185,582
Other	12,704,838	-	376,784	19,502	13,101,124
Total	161,144,839	9,640,598	1,590,937	19,502	172,395,876

(*) 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	12,861,787	-	-	12,861,787
Short-term borrowings	271,753	-	10,763,366	11,035,119
Other payables	14,107,676	-	-	14,107,676
Current portion of long-term liabilities	1,060,156	-	1,051,626	2,111,782
Debentures	19,537	-	-	19,537
Long-term borrowings	6,829	-	3,758,608	3,765,437
Long-term other payables	4,728,755	-	-	4,728,755
Other	13,197,743	50,873	43,788	13,292,404
Total	46,254,236	50,873	15,617,388	61,922,497

(*) 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
Others	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 September 30, 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>	September 30, 2024	December 31, 2023
Non-current		
Equity instruments	9,640,598	7,481,297

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

<i>(In millions of Korean won)</i>	September 30, 2024	December 31, 2023
Current		
Debt instruments	28,571	27,112
Non-current		
Equity instruments	594,107	812,358
Debt instruments	591,475	619,036
Subtotal	1,185,582	1,431,394
Total	1,214,153	1,458,506

(B) Details of listed equity securities of financial assets at fair value as of September 30, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won, number of shares and percentage)</i>	September 30, 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	1,344,294	1,038,711
Hotel Shilla Co., Ltd.	2,004,717	5.1	13,957	95,825	131,108
iMarketKorea Inc.	647,320	1.9	324	5,457	5,560
Wonik Holdings Co., Ltd.	3,518,342	4.6	30,821	8,813	11,857
Wonik IPS Co., Ltd.	3,701,872	7.5	32,428	114,943	125,679
Wacom Co., Ltd.	8,398,400	5.8	62,013	53,031	50,358
Corning Incorporated	77,000,000	9.0	3,831,362	4,587,655	3,140,978
Other			553,970	869,971	1,093,963
Total			5,457,033	7,079,989	5,598,214

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

5. Inventories

Inventories as of September 30, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	September 30, 2024			December 31, 2023		
	Gross amount	Valuation allowance	Carrying amount	Gross amount	Valuation allowance	Carrying amount
Finished goods	14,805,469	(1,005,275)	13,800,194	16,120,367	(1,567,353)	14,553,014
Work in process	24,928,549	(1,577,455)	23,351,094	26,501,664	(4,303,216)	22,198,448
Raw materials and supplies	16,055,985	(1,404,171)	14,651,814	15,222,937	(1,525,583)	13,697,354
Materials in transit	1,553,657	-	1,553,657	1,177,058	-	1,177,058
Total	57,343,660	(3,986,901)	53,356,759	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 nine-month periods ended September 30, 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	10,999	71,875
Disposal	(28,908)	(24,517)
Share of profit	596,758	676,459
Other ^(*)	(110,319)	16,067
Balance as of September 30	12,235,974	11,633,753

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

(B) Major investments in associates and joint ventures as of September 30, 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 components 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 significant associates and joint ventures as of September 30, 2024 and December 31, 2023 are as follows:

(1) Investments in associates

(In millions of Korean won)

September 30, 2024

Investee	Acquisition cost	Net asset value of equity shares ^(*)	Carrying amount
Samsung Electro-Mechanics Co., Ltd.	359,237	1,956,167	1,964,026
Samsung SDS Co., Ltd.	147,963	2,039,607	2,051,408
Samsung Biologics Co., Ltd.	1,424,358	3,306,203	3,310,763
Samsung SDI Co., Ltd.	1,242,605	3,919,498	2,935,455
Cheil Worldwide, Inc.	506,162	391,782	692,286
Other	678,311	844,623	1,069,479
Total	4,358,636	12,457,880	12,023,417

^(*) The Company's portion of net asset value of associates 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 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)

September 30, 2024

Investee	Acquisition cost	Net asset value of equity shares ^(*)	Carrying amount
Samsung Corning Advanced Glass LLC	215,000	138,870	138,868
Other	259,994	74,075	73,689
Total	474,994	212,945	212,557

(*) 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 nine-month period ended September 30, 2024

(In millions of Korean won)	Balance as of January 1	Share of profit	Share of other comprehensive income (loss)	Other ^(*)	Balance as of September 30
Samsung Electro-Mechanics Co., Ltd.	1,841,393	114,638	28,341	(20,346)	1,964,026
Samsung SDS Co., Ltd.	1,966,206	129,414	2,963	(47,175)	2,051,408
Samsung Biologics Co., Ltd.	3,073,595	238,363	(1,195)	-	3,310,763
Samsung SDI Co., Ltd.	2,912,564	43,281	(6,927)	(13,463)	2,935,455
Cheil Worldwide, Inc.	669,363	48,454	6,701	(32,232)	692,286
Samsung Corning Advanced Glass LLC	138,938	(70)	-	-	138,868
Other	1,165,385	22,678	9,869	(54,764)	1,143,168
Total	11,767,444	596,758	39,752	(167,980)	12,235,974

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

(2) For the nine-month period ended September 30, 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 September 30
Samsung Electro-Mechanics Co., Ltd.	1,764,249	93,372	26,161	(37,156)	1,846,626
Samsung SDS Co., Ltd.	1,870,338	124,751	21,276	(55,910)	1,960,455
Samsung Biologics Co., Ltd.	2,808,673	177,431	(1,709)	-	2,984,395
Samsung SDI Co., Ltd.	2,691,223	179,930	55,152	(13,867)	2,912,438
Cheil Worldwide, Inc.	649,161	48,624	5,916	(33,394)	670,307
Samsung Corning Advanced Glass LLC	137,745	(1,904)	-	-	135,841
Other	972,480	54,255	39,003	57,953	1,123,691
Total	10,893,869	676,459	145,799	(82,374)	11,633,753

^(*) 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 September 30, 2024 and December 31, 2023, and for the nine-month periods ended September 30, 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	6,122,408	8,575,897	4,808,895	9,683,238	2,305,760
Non-current assets	6,481,510	4,226,797	11,217,445	28,461,639	503,753
Current liabilities	3,267,728	2,404,111	3,563,760	10,704,290	1,211,679
Non-current liabilities	772,236	1,005,515	1,871,031	6,305,377	219,464
Non-controlling interests	211,368	363,591	-	1,666,032	11,918
Condensed statements of comprehensive income:					
Revenue	7,801,822	10,185,908	3,290,883	13,833,051	3,179,995
Profit from continuing operations, net of tax ^(*)	479,587	567,197	761,822	825,837	168,996
Loss from discontinued operations, net of tax ^(*)	(8,846)	-	-	-	-
Other comprehensive income ^(*)	121,155	35,297	(765)	198,907	23,317
Total comprehensive income ^(*)	591,896	602,494	761,057	1,024,744	192,313
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	6,592,508	9,899,748	2,621,080	17,143,535	2,991,311
Profit from continuing operations, net of tax ^(*)	400,245	551,507	567,008	1,512,989	169,611
Loss from discontinued operations, net of tax ^(*)	(20,717)	-	-	-	-
Other comprehensive income (loss) ^(*)	123,264	94,190	(5,462)	340,547	24,651
Total comprehensive income ^(*)	502,792	645,697	561,546	1,853,536	194,262
2. Dividends from associates					
Dividends	37,155	55,911	-	13,867	33,394

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

- (2) Summary of financial information of major joint ventures and dividends received from joint ventures as of September 30, 2024 and December 31, 2023, and for the nine-month periods ended September 30, 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	109,181	116,372
Non-current assets	198,268	185,100
Current liabilities	28,677	22,684
Non-current liabilities	1,033	911
Condensed statements of comprehensive income:		
Revenue	114,093	80,203
Loss from continuing operations, net of tax	(2,475)	(3,808)
Profit from discontinued operations, net of tax	-	-
Other comprehensive income	-	-
Total comprehensive loss	(2,475)	(3,808)
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 nine-month periods ended September 30, 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	20,643	2,035	52,375	1,880
Other comprehensive income (loss)	9,563	306	39,244	(241)
Total comprehensive income (loss)	30,206	2,341	91,619	1,639

- (F) Details of marketable investments in associates as of September 30, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won and number of shares)</i>	September 30, 2024		December 31, 2023
	Number of shares		
	held	Market value	Market value
Samsung Electro-Mechanics Co., Ltd.	17,693,084	2,344,334	2,710,580
Samsung SDS Co., Ltd.	17,472,110	2,702,935	2,970,259
Samsung Biologics Co., Ltd.	22,217,309	21,706,311	16,885,155
Samsung SDI Co., Ltd.	13,462,673	5,095,622	6,354,382
Cheil Worldwide, Inc.	29,038,075	534,010	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. On August 14, 2024, Seoul Administrative Court announced a decision to cancel the second measure charged by the Korea Securities and Futures Commission, but on August 28, 2024, 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 to December 31, 2022, 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 nine-month periods ended September 30, 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	36,850,301	38,286,686
Depreciation	(28,915,583)	(26,469,065)
Disposal/Scrap/Impairment	(654,829)	(265,236)
Other ^(*)	492,622	1,208,190
Balance as of September 30	195,028,773	180,805,963

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

(B) Details of depreciation of property, plant and equipment for the nine-month periods ended September 30, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Cost of sales	25,632,347	23,577,699
Selling and administrative expenses and other	3,283,236	2,891,366
Total	28,915,583	26,469,065

(C) Right-of-use assets as of September 30, 2024 amount to ₩ 5,473,932 million (December 31, 2023: ₩ 5,449,032 million). During the nine-month periods ended September 30, 2024 and 2023, newly recognized right-of-use assets amount to ₩ 1,009,402 million and ₩ 1,586,885 million, respectively, with relevant depreciation of ₩ 906,841 million and ₩ 902,719 million, respectively.

8. Intangible Assets

(A) Changes in intangible assets for the nine-month periods ended September 30, 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	1,987,741	4,695,885
Acquisition due to business combination	162,170	-
Amortization	(2,214,669)	(2,363,112)
Disposal/Scrap/Impairment	(43,129)	(37,095)
Other ^(*)	443,482	623,568
Balance as of September 30	23,077,457	23,137,000

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

(B) Details of amortization of intangible assets for the nine-month periods ended September 30, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Cost of sales	1,500,766	1,661,406
Selling and administrative expenses and other	713,903	701,706
Total	2,214,669	2,363,112

9. Borrowings

Details of the carrying amounts of borrowings as of September 30, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	Financial institutions	Interest rates (%) as of September 30,		
		2024	September 30, 2024	December 31, 2023
Short-term borrowings				
Collateralized borrowings ^(*)	Woori Bank and others	0.4~11.5	10,763,366	6,610,049
Non-collateralized borrowings	Citibank and others	0.0~48.5	271,753	504,552
Total			11,035,119	7,114,601
Current portion of long-term borrowings				
Bank borrowings	BNP and others	0.0~55.3	531,243	304,082
Lease liabilities ^(*)	CSSD and others	4.6	1,051,626	998,439
Total			1,582,869	1,302,521
Long-term borrowings				
Bank borrowings	BNP and others	0.0~7.4	6,829	-
Lease liabilities ^(*)	CSSD and others	4.6	3,758,608	3,724,850
Total			3,765,437	3,724,850

^(*) Collateralized borrowings are secured by trade receivables.

^(*) Interest expenses arising from the lease liabilities for the nine-month periods ended September 30, 2024 and 2023 amount to ₩ 165,307 million and ₩ 144,529 million, respectively, which are determined using the weighted average incremental borrowing rate.

10. Debentures

Details of the carrying amounts of debentures as of September 30, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	Issue date	Due date	Interest rates (%)		
			as of September 30, 2024	September 30, 2024	December 31, 2023
US dollar denominated straight bonds ^(*)	1997.10.2	2027.10.1	7.7	19,794 (US \$ 15 million)	25,788 (US \$ 20 million)
US dollar denominated debentures ^(*)	2015.5.11	2025.5.15	4.2	527,840 (US \$ 400 million)	515,760 (US \$ 400 million)
Less: Discounts				(257)	(370)
Add: Premium				1,073	2,794
Less: Current portion				(528,913)	(6,354)
Total				19,537	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 in arrears.

^(*) 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 statements of financial position as of September 30, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	September 30, 2024	December 31, 2023
Present value of funded defined benefit obligations	15,958,738	15,403,976
Present value of unfunded defined benefit obligations	398,072	319,689
Subtotal	16,356,810	15,723,665
Fair value of plan assets	(19,898,086)	(20,172,327)
Total	(3,541,276)	(4,448,662)

(B) The components of defined benefit costs recognized in profit or loss for the nine-month periods ended September 30, 2024 and 2023 relating to defined benefit plans are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Current service cost	1,047,737	961,884
Net interest income	(196,885)	(263,823)
Past service cost	(572)	(609)
Other	29,624	14,414
Total	879,904	711,866

- (C) The expenses related to defined benefit plans recognized in the statements of profit or loss for the nine-month periods ended September 30, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Cost of sales	353,571	281,444
Selling and administrative expenses and other	526,333	430,422
Total	879,904	711,866

12. Provisions

Changes in the provisions for the nine-month period ended September 30, 2024 are as follows:

<i>(In millions of Korean won)</i>	Warranty (A)	Royalty (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	1,499,314	759,774	190,046	2,191,119	4,640,253
Payment	(1,416,539)	(519,812)	(459,940)	(1,142,644)	(3,538,935)
Other ^(*)	39,784	(50,294)	8,584	13,126	11,200
Balance as of September 30	2,662,771	2,027,720	732,441	5,092,912	10,515,844

^(*) 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 September 30, 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 September 30, 2024 are as follows:

<i>(In ten thousand metric tons)</i>	September 30, 2024
Emission rights allocated free of charge	1,796
Estimated volume of emission	1,811

(2) Changes in the emission rights for the nine-month periods ended September 30, 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)	-	(16,430)
Balance as of September 30	3,137	3,137

(3) Changes in the emission liabilities for the nine-month periods ended September 30, 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	(33)	(15,212)
Utilization	-	(17,491)
Balance as of September 30	104	135

13. Commitments and Contingencies

(A) Litigation

As of September 30, 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 September 30, 2024, contractual commitments for the acquisition of property, plant and equipment and intangible assets amount to ₩ 14,020,069 million.

14. Contract Liabilities

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

<i>(In millions of Korean won)</i>	September 30, 2024	December 31, 2023
Contract liabilities(*)	13,174,413	13,327,724

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

15. Share Capital

As of September 30, 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 September 30, 2024, excluding the number of retired shares. As of September 30, 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 nine-month period ended September 30, 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 September 30, 2024 and December 31, 2023 consist of the following:

<i>(In millions of Korean won)</i>	September 30, 2024	December 31, 2023
Discretionary reserve and other	208,888,506	208,198,003
Unappropriated retained earnings	156,470,989	138,454,235
Total	365,359,495	346,652,238

(B) Details of interim dividends are as follows:

Interim dividends (Record date: March 31, June 30 and September 30, 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%
		Dividend amount		
	Dividend amount	Ordinary shares	2,155,092	2,155,092
		Preference shares	297,062	297,062
Total		2,452,154	2,452,154	
2 nd 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%
		Dividend amount		
	Dividend amount	Ordinary shares	2,155,092	2,155,092
		Preference shares	297,062	297,062
Total		2,452,154	2,452,154	
3 rd 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%
		Dividend amount		
	Dividend amount	Ordinary shares	2,155,092	2,155,092
		Preference shares	297,062	297,062
Total		2,452,154	2,452,154	

17. Other Components of Equity

Other components of equity as of September 30, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	September 30, 2024	December 31, 2023
Gain on valuation of financial assets at fair value through other comprehensive income	1,565,742	194,419
Share of other comprehensive income of associates and joint ventures	230,833	185,144
Gain on overseas business translation	6,580,200	3,651,112
Remeasurement of net defined benefit liabilities (assets)	(2,939,570)	(2,849,526)
Other	54,091	98,981
Total	5,491,296	1,280,130

18. Expenses by Nature

Expenses by nature for the three and nine-month periods ended September 30, 2024 and 2023 consist of the following:

<i>(In millions of Korean won)</i>	2024		2023	
	3 Months	9 Months	3 Months	9 Months
Changes in finished goods, work in process, and other	597,733	(396,638)	(630,592)	(3,783,006)
Raw materials used, merchandise purchased, and other	24,960,996	72,116,219	26,445,655	74,832,914
Wages and salaries	8,647,579	24,876,278	6,920,360	22,911,999
Post-employment benefit	373,411	1,088,347	276,350	827,860
Depreciation	10,308,425	28,915,583	8,900,426	26,469,065
Amortization	749,115	2,214,669	786,661	2,363,112
Welfare	1,613,546	5,014,355	1,538,580	4,820,029
Utilities	2,195,661	6,189,017	1,930,649	5,563,137
Outsourcing	2,012,305	5,779,356	1,760,398	5,171,254
Advertising	1,444,625	4,203,296	1,684,283	3,903,065
Sales promotion	1,937,967	5,554,795	1,831,205	5,072,992
Other	15,073,997	43,294,099	13,527,143	39,260,876
Total^(*)	69,915,360	198,849,376	64,971,118	187,413,297

^(*) 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 and nine-month periods ended September 30, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024		2023	
	3 Months	9 Months	3 Months	9 Months
Selling and administrative expenses				
Wages and salaries	2,176,493	6,537,999	2,041,225	6,215,701
Post-employment benefit	106,070	297,335	67,982	208,139
Commissions	2,266,533	6,547,732	2,090,579	6,265,157
Depreciation	424,337	1,255,711	414,681	1,237,680
Amortization	180,620	532,590	173,252	514,838
Advertising	1,444,625	4,203,296	1,684,283	3,903,065
Sales promotion	1,937,967	5,554,795	1,831,205	5,072,992
Transportation	786,621	2,148,165	397,097	1,231,700
Service	886,518	2,910,159	1,129,564	3,239,695
Other	1,743,523	4,832,030	1,509,981	4,461,489
Subtotal	11,953,307	34,819,812	11,339,849	32,350,456
Research and development expenses				
Research and development	8,866,970	24,736,123	7,012,543	20,789,832
Total	20,820,277	59,555,935	18,352,392	53,140,288

20. Other Non-Operating Income and Expenses

Details of other non-operating income and expenses for the three and nine-month periods ended September 30, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024		2023	
	3 Months	9 Months	3 Months	9 Months
Other non-operating income				
Dividend income	28,901	101,417	34,490	131,278
Rental income	39,082	116,801	37,383	112,288
Gain on disposal of property, plant and equipment	11,370	39,727	28,003	83,050
Other	633,561	1,218,751	144,476	623,207
Total	712,914	1,476,696	244,352	949,823

<i>(In millions of Korean won)</i>	2024		2023	
	3 Months	9 Months	3 Months	9 Months
Other non-operating expenses				
Loss on disposal of property, plant and equipment	75,763	107,000	50,034	70,037
Donations	35,784	141,168	76,808	179,601
Other	441,505	931,773	79,561	329,804
Total	553,052	1,179,941	206,403	579,442

21. Financial Income and Expenses

Details of financial income and expenses for the three and nine-month periods ended September 30, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024		2023	
	3 Months	9 Months	3 Months	9 Months
Financial income				
Interest income:	1,231,838	3,582,119	1,145,777	3,358,496
Financial assets measured at amortized cost	1,231,772	3,581,969	1,145,726	3,358,318
Financial assets measured at fair value through profit or loss	66	150	51	178
Foreign exchange differences	2,151,676	6,470,989	2,540,874	8,419,489
Gain from derivatives	233,996	635,649	425,507	1,019,150
Total	3,617,510	10,688,757	4,112,158	12,797,135

<i>(In millions of Korean won)</i>	2024		2023	
	3 Months	9 Months	3 Months	9 Months
Financial expenses				
Interest expenses:	244,966	682,486	279,290	857,860
Financial liabilities measured at amortized cost	63,833	157,841	159,815	487,721
Other financial liabilities	181,133	524,645	119,475	370,139
Foreign exchange differences	2,322,090	6,874,638	2,455,110	8,387,347
Loss from derivatives	256,686	635,925	169,317	859,051
Total	2,823,742	8,193,049	2,903,717	10,104,258

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 September 30, 2024 to be effective for the year ended December 31, 2024 is 9.9%.

23. Earnings per Share

(A) Basic earnings per share

Basic earnings per share for the three and nine-month periods ended September 30, 2024 and 2023 are calculated as follows:

(1) Ordinary shares

<i>(In millions of Korean won and shares)</i>	2024		2023	
	3 Months	9 Months	3 Months	9 Months
Profit for the period attributable to owners of the parent company	9,781,547	26,045,230	5,501,304	8,449,574
Profit for the period available for ordinary shares	8,596,578	22,890,024	4,834,858	7,425,965
Weighted-average number of ordinary shares outstanding	5,969,782,550	5,969,782,550	5,969,782,550	5,969,782,550
Basic earnings per ordinary share (in Korean won)	1,440	3,834	810	1,244

(2) Preference shares

<i>(In millions of Korean won and shares)</i>	2024		2023	
	3 Months	9 Months	3 Months	9 Months
Profit for the period attributable to owners of the parent company	9,781,547	26,045,230	5,501,304	8,449,574
Profit for the period available for preference shares	1,184,969	3,155,206	666,446	1,023,609
Weighted-average number of preference shares outstanding	822,886,700	822,886,700	822,886,700	822,886,700
Basic earnings per preference share (in Korean won)	1,440	3,834	810	1,244

(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 and nine-month periods ended September 30, 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 nine-month periods ended September 30, 2024 and 2023 are as follows:

- Adjustments

<i>(In millions of Korean won)</i>	2024	2023
Adjustments:		
Income tax expense	2,925,522	(1,660,366)
Financial income	(5,128,916)	(5,173,514)
Financial expenses	2,772,362	3,067,746
Post-employment benefits	1,088,347	827,860
Depreciation	28,915,583	26,469,065
Amortization	2,214,669	2,363,112
(Reversal of) bad debt expense	(9,458)	91,444
Dividend income	(101,417)	(131,278)
Share of profit of associates and joint ventures	(596,758)	(676,459)
Gain on disposal of property, plant and equipment	(39,727)	(83,050)
Loss on disposal of property, plant and equipment	107,000	70,037
Loss (Reversal of loss) on valuation of inventories	(2,437,809)	4,919,360
Other	364,696	27,100
Total	30,074,094	30,111,057

- 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	(7,829,780)	(5,734,362)
Decrease in other receivables	355,257	990,596
Increase in prepaid expenses	(409,024)	(377,419)
Decrease (increase) in inventories	1,007,521	(6,286,040)
Increase in trade payables	893,040	1,380,348
Increase in other payables	839,263	637,296
Increase in advances received	216,611	58,239
Decrease in withholdings	(37,551)	(540,655)
Increase (decrease) in accrued expenses	1,628,874	(4,137,776)
Increase in provisions	1,101,318	1,778,811
Payment of post-employment benefits	(1,042,780)	(536,633)
Other	(46,172)	(165,738)
Total	(3,323,423)	(12,933,333)

For the nine-month periods ended September 30, 2024 and 2023, cash outflows from principal portion of lease liabilities (financial activities) amount to ₩ 885,181 million and ₩ 814,987 million, respectively, and cash outflows due to interest expenses (operating activities) in relation to the lease liabilities amount to ₩ 165,307 million and ₩ 144,529 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 and counterparty financial risk, and manages the risk with currency hedges and review of cash flows, etc.

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 September 30, 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 ₩ 69,740 million and ₩ 65,826 million, respectively, and changes in profit before tax of ₩ 1,060 million and ₩ 3,519 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 September 30, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	September 30, 2024	December 31, 2023
Total liabilities	105,025,954	92,228,115
Total equity	386,281,363	363,677,865
Debt ratio	27.2%	25.4%

(E) Fair value measurement

(1) Carrying amounts and fair values of financial instruments by category as of September 30, 2024 and December 31, 2023 are as follows:

(In millions of Korean won)	September 30, 2024		December 31, 2023	
	Carrying amount	Fair value	Carrying amount	Fair value
Financial assets				
Cash and cash equivalents	43,131,359	(*)	69,080,893	(*)
Short-term financial instruments	60,616,598	(*)	22,690,924	(*)
Short-term financial assets at amortized cost	-		608,281	(*)
Short-term financial assets at fair value through profit or loss	28,571	28,571	27,112	27,112
Trade receivables	44,692,044	(*)	36,647,393	(*)
Financial assets at fair value through other comprehensive income	9,640,598	9,640,598	7,481,297	7,481,297
Financial assets at fair value through profit or loss	1,185,582	1,185,582	1,431,394	1,431,394
Other(*2)	13,101,124	396,286	14,840,275	546,021
Total financial assets	172,395,876		152,807,569	
Financial liabilities				
Trade payables	12,861,787	(*)	11,319,824	(*)
Short-term borrowings	11,035,119	(*)	7,114,601	(*)
Other payables	14,107,676	(*)	13,996,395	(*)
Current portion of long-term liabilities	2,111,782	525,007	1,308,875	6,757
- Long-term borrowings	1,582,869	(*)(*3)	1,302,521	(*)(*3)
- Debentures	528,913	525,007	6,354	6,757
Debentures	19,537	21,479	537,618	529,254
Long-term borrowings	3,765,437	(*)(*3)	3,724,850	(*)(*3)
Long-term other payables	4,728,755	(*)	4,907,875	(*)
Other(*2)	13,292,404	94,661	11,414,008	83,463
Total financial liabilities	61,922,497		54,324,046	

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

(*2) Assets measured at the cost of ₩ 12,704,838 million and ₩ 14,294,254 million as of September 30, 2024 and December 31, 2023, respectively, and liabilities measured at the cost of ₩ 13,197,743 million, ₩ 11,330,545 million as of September 30, 2024 and December 31, 2023 respectively, are excluded as the carrying amount is a reasonable estimate 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 September 30, 2024 and December 31, 2023 are as follows:

September 30, 2024				
<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	-	28,571	-	28,571
Financial assets at fair value through other comprehensive income	6,973,987	-	2,666,611	9,640,598
Financial assets at fair value through profit or loss	106,002	-	1,079,580	1,185,582
Other	-	66,941	329,345	396,286
2) Liabilities				
Current portion of debentures	-	525,007	-	525,007
Debentures	-	21,479	-	21,479
Other	-	94,661	-	94,661
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. Level 2 instruments include derivatives and debentures.

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 September 30, 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	34,864	Discounted cash flow	Permanent growth rate	1.0%
			Weighted average cost of capital	15.8%
MiCo Ceramics Co., Ltd.	45,888	Discounted cash flow	Permanent growth rate	0.0%
			Weighted average cost of capital	10.9%
TCL China Star Optoelectronics Technology Co., Ltd. (CSOT)	1,445,161	Discounted cash flow	Permanent growth rate	0.0%
			Weighted average cost of capital	9.3%
China Star Optoelectronics Semiconductor Display Technology Ltd. (CSOSDT)	266,395	Discounted cash flow	Permanent growth rate	0.0%
			Weighted average cost of capital	9.3%
Others				
Call option on equity instruments	288,546	Binomial model	Risk-free rate	2.9%
			Price volatility	52.6%
Put option on equity instruments	40,799	Binomial model	Risk-free rate	3.5%~4.6%, 1.4%
			Price volatility	25.7%, 35.5%

(4) Changes in Level 3 instruments for the nine-month periods ended September 30, 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	185,466	170,913
Disposals	(104,811)	(80,013)
Amount recognized in profit for the period	(64,210)	367,233
Amount recognized in other comprehensive income	220,924	41,452
Other	108,033	22,416
Balance as of September 30	4,075,536	3,825,228

<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	-	(5,884)
Balance as of September 30	-	1,520

(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 ^(*)	-	188,847	-	(123,174)
Others ^(**)	86,470	-	(80,151)	-

^(*) For equity securities, changes in fair value were calculated based on changes in perpetual growth rate and weighted average cost of capital (-1%~1%), 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 September 30, 2024

<i>(In millions of Korean won)</i>	DX	DS	SDC	Harman	Intercompany reconciliations	Total^(*)
Revenue	44,993,923	29,271,373	7,999,109	3,529,579	(6,695,253)	79,098,731
Depreciation	645,059	8,922,648	606,882	81,078	-	10,308,425
Amortization	405,108	173,843	59,290	47,837	-	749,115
Operating profit	3,372,679	3,864,208	1,513,546	355,346	-	9,183,371

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

Revenue by major product for the three-month period ended September 30, 2024 are as follows:

<i>(In millions of Korean won)</i>	TV, monitor, and other	Smartphone and other	Memory	Display panels	Total^(*)
Revenue	7,581,896	29,980,552	22,273,248	7,999,109	79,098,731

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

(2) For the nine-month period ended September 30, 2024

<i>(In millions of Korean won)</i>	DX	DS	SDC	Harman	Intercompany reconciliations	Total^(*)
Revenue	134,357,477	80,965,214	21,031,687	10,348,923	(21,620,667)	225,082,634
Depreciation	1,927,417	24,769,254	1,815,166	254,625	-	28,915,583
Amortization	1,213,969	499,189	173,765	156,329	-	2,214,669
Operating profit	10,170,049	12,229,183	2,864,337	916,271	-	26,233,258

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

Revenue by major product for the nine-month period ended September 30, 2024 are as follows:

<i>(In millions of Korean won)</i>	TV, monitor, and other	Smartphone and other	Memory	Display panels	Total^(*)
Revenue	22,359,402	89,412,970	61,505,350	21,031,687	225,082,634

(*) Other operating segments are not separately disclosed.

(3) For the three-month period ended September 30, 2023

<i>(In millions of Korean won)</i>	DX	DS	SDC	Harman	Intercompany reconciliations	Total^(*)
Revenue	44,015,400	16,438,381	8,218,580	3,802,481	(5,070,190)	67,404,652
Depreciation	630,205	7,348,081	789,196	84,909	-	8,900,426
Amortization	434,536	186,394	55,773	52,523	-	786,661
Operating profit	3,728,081	(3,753,932)	1,935,165	450,247	-	2,433,534

(*) Other operating segments are not separately disclosed.

Revenue by major product for the three-month period ended September 30, 2023 are as follows:

<i>(In millions of Korean won)</i>	TV, monitor, and other	Smartphone and other	Memory	Display panels	Total^(*)
Revenue	7,318,422	29,248,961	10,530,033	8,218,580	67,404,652

(*) Other operating segments are not separately disclosed.

(4) For the nine-month period ended September 30, 2023

<i>(In millions of Korean won)</i>	DX	DS	SDC	Harman	Intercompany reconciliations	Total^(*)
Revenue	130,444,087	44,902,120	21,315,797	10,464,123	(15,970,571)	191,155,556
Depreciation	1,886,122	21,759,591	2,426,796	247,977	-	26,469,065
Amortization	1,285,032	585,578	166,420	152,204	-	2,363,112
Operating profit	11,766,221	(12,697,630)	3,554,250	830,577	-	3,742,259

(*) Other operating segments are not separately disclosed.

Revenue by major product for the nine-month period ended September 30, 2023 are as follows:

<i>(In millions of Korean won)</i>	TV, monitor, and other	Smartphone and other	Memory	Display panels	Total^(*)
Revenue	21,999,115	84,602,205	28,414,389	21,315,797	191,155,556

(*) 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 and nine-month periods ended September 30, 2024 and 2023 are as follows:

(1) As of and for the three-month period ended September 30, 2024

<i>(In millions of Korean won)</i>	Korea	America	Europe	Asia and Africa	China	Intercompany elimination	Total
Revenue	11,341,928	31,181,768	12,237,026	13,123,500	11,214,509	-	79,098,731
Non-current assets ^(*)	170,564,139	24,377,872	6,512,175	8,701,671	10,154,527	(2,204,154)	218,106,230

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

(2) As of and for the nine-month period ended September 30, 2024

<i>(In millions of Korean won)</i>	Korea	America	Europe	Asia and Africa	China	Intercompany elimination	Total
Revenue	30,471,436	84,677,152	37,407,038	37,766,889	34,760,119	-	225,082,634
Non-current assets ^(*)	170,564,139	24,377,872	6,512,175	8,701,671	10,154,527	(2,204,154)	218,106,230

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

(3) As of and for the three-month period ended September 30, 2023

<i>(In millions of Korean won)</i>	Korea	America	Europe	Asia and Africa	China	Intercompany elimination	Total
Revenue	12,422,555	24,194,051	11,730,385	11,797,052	7,260,609	-	67,404,652
Non-current assets ^(*)	158,137,126	17,953,693	6,136,716	9,276,504	13,306,785	(867,861)	203,942,963

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

(4) As of and for the nine-month period ended September 30, 2023

<i>(In millions of Korean won)</i>	Korea	America	Europe	Asia and Africa	China	Intercompany elimination	Total
Revenue	33,992,795	68,278,463	35,377,963	34,344,380	19,161,955	-	191,155,556
Non-current assets ^(*)	158,137,126	17,953,693	6,136,716	9,276,504	13,306,785	(867,861)	203,942,963

^(*) 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 nine-month periods ended September 30, 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.	81,802	-	1,580,188	199,395
	Samsung Electro-Mechanics Co., Ltd.	37,780	-	937,543	-
	Samsung SDI Co., Ltd.	86,152	-	511,733	18,401
	Cheil Worldwide Inc.	34,683	-	719,500	13,760
	Other	843,164	122	9,099,633	163,439
	Total	1,083,581	122	12,848,597	394,995
Other related parties	Samsung C&T Co., Ltd.	19,565	-	172,379	4,920,921
	Other	586,364	-	1,063,359	3,213,117
	Total	605,929	-	1,235,738	8,134,038
Other ^(*)	Samsung E&A Co., Ltd.	1,953	-	37,862	2,637,963
	S-1 Corporation	6,813	-	395,780	19,313
	Other	183,757	-	411,103	559,202
	Total	192,523	-	844,745	3,216,478

^(*) 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.	120,809	-	1,481,041	219,924
	Samsung Electro-Mechanics Co., Ltd.	61,381	-	860,130	60
	Samsung SDI Co., Ltd.	90,332	-	555,308	21,037
	Cheil Worldwide Inc.	37,183	-	638,490	1,162
	Other	697,346	-	9,302,277	119,468
	Total	1,007,051	-	12,837,246	361,651
Other related parties	Samsung C&T Co., Ltd.	41,776	70	196,312	3,907,737
	Other	378,253	-	1,324,851	2,952,677
	Total	420,029	70	1,521,163	6,860,414
Other ^(*)	Samsung E&A Co., Ltd.	1,055	-	23,919	1,922,259
	S-1 Corporation	7,493	-	391,091	28,792
	Other	167,119	-	887,932	302,680
	Total	175,667	-	1,302,942	2,253,731

^(*) 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

Balances of receivables and payables arising from sales and purchases of goods and services as of September 30, 2024 and December 31, 2023 are as follows:

(In millions of Korean won)		Name of company ^(*)	September 30, 2024	
			Receivables	Payables ^(*)
Associates and joint ventures		Samsung SDS Co., Ltd.	8,780	614,294
		Samsung Electro-Mechanics Co., Ltd.	315	160,847
		Samsung SDI Co., Ltd.	123,744	80,769
		Cheil Worldwide Inc.	55	329,371
		Other	229,461	1,184,690
		Total	362,355	2,369,971
Other related parties		Samsung C&T Co., Ltd.	207,266	1,102,293
		Other	21,497	244,223
		Total	228,763	1,346,516
Other ^(*)		Samsung E&A Co., Ltd.	1,558	1,296,518
		S-1 Corporation	983	41,192
		Other	57,567	264,930
		Total	60,108	1,602,640

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

(*) Payables and others include lease liabilities.

(*) 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 ^(*)	December 31, 2023	
			Receivables	Payables ^(*)
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 ^(*)		Samsung E&A Co., Ltd.	305	807,098
		S-1 Corporation	1,289	49,955
		Other	16,096	390,073
		Total	17,690	1,247,126

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

(*) Payables and others include lease liabilities.

(*) 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 nine-month periods ended September 30, 2024 and 2023, the Company invested ₩ 10,999 million and ₩ 71,875 million, respectively, in associates and joint ventures. In addition, the Company has made capital recovery of ₩ 28,878 million and ₩ 24,517 million from its investments in associates and joint ventures during the nine-month periods ended September 30, 2024 and 2023, respectively.

- (D) For the nine-month periods ended September 30, 2024 and 2023, the Company declared dividends of ₩ 1,212,155 million and ₩ 1,238,585 million, respectively, to related parties. In addition, for the nine-month periods ended September 30, 2024 and 2023, the Company declared dividends of ₩ 96,174 million and ₩ 96,174 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 September 30, 2024 and 2023, there is no dividends payable outstanding to the entities that belong to the same large enterprise group according to the Monopoly Regulation and Fair Trade Act.
- (E) For the nine-month periods ended September 30, 2024 and 2023, the Company entered into lease agreements with its related parties amounting to ₩ 28,726 million and ₩ 1,812 million, respectively, and the lease payments made to the related parties are ₩ 20,636 million and ₩ 18,860 million, respectively.
- (F) Key management compensation

The compensation paid or payable to key management (executive directors) for their services for the nine-month periods ended September 30, 2024 and 2023 consists of:

<i>(In millions of Korean won)</i>	2024	2023
Short-term employee benefits	7,186	7,737
Post-employment benefits	468	418
Other long-term employee benefits	6,251	5,876

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. Separate 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))

		September 30,	December 31,	September 30,	December 31,
	Notes	2024	2023	2024	2023
		KRW	KRW	USD	USD
Assets					
Current assets					
Cash and cash equivalents	3, 25	5,582,718	6,061,451	4,127,981	4,481,967
Short-term financial instruments	3, 25	11,063,471	50,071	8,180,567	37,024
Trade receivables	3, 25	35,176,097	27,363,016	26,009,960	20,232,800
Non-trade receivables	3, 25	1,455,772	1,910,054	1,076,429	1,412,335
Prepaid expenses		1,497,782	1,349,755	1,107,492	998,038
Inventories	5	30,958,795	29,338,151	22,891,596	21,693,257
Other current assets	3, 25	3,039,181	2,475,944	2,247,236	1,830,765
		88,773,816	68,548,442	65,641,261	50,686,186
Non-current assets					
Financial assets at fair value through other comprehensive income	3, 4, 25	2,100,328	1,854,503	1,553,028	1,371,259
Financial assets at fair value through profit or loss	3, 4, 25	-	1	-	1
Investments in subsidiaries, associates and joint ventures	6	57,436,120	57,392,438	42,469,497	42,437,198
Property, plant and equipment	7	145,113,639	140,579,161	107,300,133	103,947,243
Intangible assets	8	10,522,995	10,440,211	7,780,928	7,719,716
Net defined benefit assets	11	3,032,337	3,745,697	2,242,175	2,769,649
Deferred income tax assets		12,713,763	9,931,358	9,400,829	7,343,459
Other non-current assets	3, 25	3,689,813	4,365,478	2,728,327	3,227,928
		234,608,995	228,308,847	173,474,917	168,816,453
Total assets		323,382,811	296,857,289	239,116,178	219,502,639

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	September 30,	December 31,	September 30,	December 31,
		2024	2023	2024	2023
		KRW	KRW	USD	USD
Liabilities and Equity					
Current liabilities					
Trade payables	3, 25	11,239,430	7,943,834	8,310,675	5,873,841
Short-term borrowings	3, 9, 25	9,572,235	5,625,163	7,077,916	4,159,366
Other payables	3, 25	13,086,542	15,256,046	9,676,469	11,280,646
Advances received	14	307,649	302,589	227,482	223,741
Withholdings	3, 25	444,119	445,470	328,391	329,390
Accrued expenses	3, 14, 25	9,789,336	6,931,991	7,238,445	5,125,663
Current income tax liabilities		2,446,656	-	1,809,110	-
Current portion of long-term liabilities	3, 9, 10, 25	22,268,174	228,491	16,465,565	168,951
Provisions	12	5,283,184	4,540,702	3,906,499	3,357,492
Other current liabilities	14	333,913	500,815	246,903	370,314
		74,771,238	41,775,101	55,287,455	30,889,404
Non-current liabilities					
Debentures	3, 10, 25	19,537	19,064	14,446	14,096
Long-term borrowings	3, 9, 25	833,820	22,902,035	616,544	16,934,255
Long-term other payables	3, 25	4,791,551	4,942,826	3,542,975	3,654,831
Long-term provisions	12	2,881,359	2,413,133	2,130,539	1,784,322
Other non-current liabilities		13,311	17,356	9,843	12,835
		8,539,578	30,294,414	6,314,347	22,400,339
Total liabilities		83,310,816	72,069,515	61,601,802	53,289,743

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))

		September 30,	December 31,	September 30,	December 31,
	Notes	2024	2023	2024	2023
		KRW	KRW	USD	USD
Equity					
Preference shares	15	119,467	119,467	88,336	88,336
Ordinary shares	15	778,047	778,047	575,305	575,305
Share premium		4,403,893	4,403,893	3,256,333	3,256,333
Retained earnings	16	235,134,369	219,963,351	173,863,389	162,645,614
Other components of equity	17	(363,781)	(476,984)	(268,987)	(352,692)
Total equity		240,071,995	224,787,774	177,514,376	166,212,896
Total liabilities and equity		323,382,811	296,857,289	239,116,178	219,502,639

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))

	Notes	For the three-month periods ended September 30,				For the nine-month periods ended September 30,			
		2024	2023	2024	2023	2024	2023	2024	2023
		KRW	KRW	USD	USD	KRW	KRW	USD	USD
Revenue	26	55,828,922	45,866,224	41,281,101	33,914,469	160,802,657	127,763,991	118,900,929	94,471,432
Cost of sales	18	40,110,052	38,570,371	29,658,232	28,519,759	115,064,366	109,492,430	85,081,057	80,961,048
Gross profit		15,718,870	7,295,853	11,622,869	5,394,710	45,738,291	18,271,561	33,819,872	13,510,384
Selling and administrative expenses	18, 19	11,213,950	9,463,841	8,291,835	6,997,767	32,003,500	28,046,413	23,664,073	20,738,119
Operating profit (loss)	26	4,504,920	(2,167,988)	3,331,034	(1,603,057)	13,734,791	(9,774,852)	10,155,799	(7,227,735)
Other non-operating income	20	248,312	7,368,532	183,607	5,448,450	9,846,280	29,471,874	7,280,550	21,792,135
Other non-operating expense	20	102,321	118,180	75,658	87,385	458,707	249,611	339,178	184,568
Financial income	21	1,377,577	2,080,064	1,018,610	1,538,044	4,448,859	6,062,738	3,289,582	4,482,918
Financial expense	21	1,707,108	2,060,513	1,262,272	1,523,587	4,810,113	6,537,513	3,556,701	4,833,977
Profit before income tax		4,321,380	5,101,915	3,195,321	3,772,465	22,761,110	18,972,636	16,830,052	14,028,773
Income tax expense (benefit)	22	(1,373,230)	(5,314,896)	(1,015,396)	(3,929,948)	230,646	(5,186,903)	170,544	(3,835,308)
Profit for the period		5,694,610	10,416,811	4,210,717	7,702,413	22,530,464	24,159,539	16,659,508	17,864,081
Earnings per share (in Korean won, in US dollars)	23								
- Basic		838	1,534	0.62	1.13	3,317	3,557	2.45	2.63
- Diluted		838	1,534	0.62	1.13	3,317	3,557	2.45	2.63

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	For the three-month periods ended September 30,				For the nine-month periods ended September 30,			
	2024	2023	2024	2023	2024	2023	2024	2023
	KRW	KRW	USD	USD	KRW	KRW	USD	USD
Profit for the period	5,694,610	10,416,811	4,210,717	7,702,413	22,530,464	24,159,539	16,659,508	17,864,081
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 (63,024)	89,733	(46,601)	66,351	183,835	359,845	135,931	266,078
Remeasurement of net defined benefit assets, net of tax	17 21,819	(35,148)	16,133	(25,989)	(72,794)	(370,257)	(53,825)	(273,776)
Items that may be reclassified subsequently to profit or loss:	-	-	-	-	-	-	-	-
Other comprehensive income (loss) for the period, net of tax	(41,205)	54,585	(30,468)	40,362	111,041	(10,412)	82,106	(7,698)
Total comprehensive income for the period	5,653,405	10,471,396	4,180,249	7,742,775	22,641,505	24,149,127	16,741,614	17,856,383

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 nine-month period ended September 30, 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		-	-	-	22,530,464	-	22,530,464
Gain (loss) on valuation of financial assets at fair value through							
other comprehensive income, net of tax	17	-	-	-	(2,162)	185,997	183,835
Remeasurement of net defined benefit assets, net of tax	17	-	-	-	-	(72,794)	(72,794)
Total comprehensive income for the period		-	-	-	22,528,302	113,203	22,641,505
Dividends declared		-	-	-	(7,357,284)	-	(7,357,284)
Total transactions with owners		-	-	-	(7,357,284)	-	(7,357,284)
Balance as of September 30, 2024		119,467	778,047	4,403,893	235,134,369	(363,781)	240,071,995

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 nine-month period ended September 30, 2024	Notes	Preference shares	Ordinary shares	Share premium	Retained earnings	Other components of equity	Total
Balance as of January 1, 2024		88,336	575,305	3,256,333	162,645,614	(352,692)	166,212,896
Profit for the period		-	-	-	16,659,508	-	16,659,508
Gain (loss) on valuation of financial assets at fair value through							
other comprehensive income, net of tax	17	-	-	-	(1,599)	137,530	135,931
Remeasurement of net defined benefit assets, net of tax	17	-	-	-	-	(53,825)	(53,825)
Total comprehensive income for the period		-	-	-	16,657,909	83,705	16,741,614
Dividends declared		-	-	-	(5,440,134)	-	(5,440,134)
Total transactions with owners		-	-	-	(5,440,134)	-	(5,440,134)
Balance as of September 30, 2024		88,336	575,305	3,256,333	173,863,389	(268,987)	177,514,376

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 millions of Korean won)

For the nine-month period ended September 30, 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		-	-	-	24,159,539	-	24,159,539
Gain on valuation of financial assets at fair value through other comprehensive income, net of tax		-	-	-	-	359,845	359,845
Remeasurement of net defined benefit assets net of tax		-	-	-	-	(370,257)	(370,257)
Total comprehensive income (loss) for the period		-	-	-	24,159,539	(10,412)	24,149,127
Dividends declared		-	-	-	(7,357,284)	-	(7,357,284)
Total transactions with owners		-	-	-	(7,357,284)	-	(7,357,284)
Balance as of September 30, 2023		119,467	778,047	4,403,893	221,190,271	(283,644)	226,208,034

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 nine-month period ended September 30, 2023	Notes	Preference shares	Ordinary shares	Share premium	Retained earnings	Other components of equity	Total
Balance as of January 1, 2023		88,336	575,305	3,256,333	151,128,877	(202,034)	154,846,817
Profit for the period		-	-	-	17,864,081	-	17,864,081
Gain on valuation of financial assets at fair value through other comprehensive income, net of tax		-	-	-	-	266,078	266,078
Remeasurement of net defined benefit assets, net of tax		-	-	-	-	(273,776)	(273,776)
Total comprehensive income (loss) for the period		-	-	-	17,864,081	(7,698)	17,856,383
Dividends declared		-	-	-	(5,440,133)	-	(5,440,133)
Total transactions with owners		-	-	-	(5,440,133)	-	(5,440,133)
Balance as of September 30, 2023		88,336	575,305	3,256,333	163,552,825	(209,732)	167,263,067

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 nine-month periods ended September 30,			
		2024	2023	2024	2023
		KRW	KRW	USD	USD
Operating activities					
Profit for the period		22,530,464	24,159,539	16,659,508	17,864,081
Adjustments	24	13,079,638	(8,050,695)	9,671,364	(5,952,857)
Changes in assets and liabilities arising from operating activities	24	(3,000,223)	(15,291,186)	(2,218,429)	(11,306,630)
Cash generated from operations		32,609,879	817,658	24,112,443	604,594
Interest received		199,886	238,470	147,800	176,330
Interest paid		(437,085)	(465,207)	(323,190)	(343,984)
Dividends received		9,417,140	29,490,565	6,963,235	21,805,955
Income tax paid		(607,001)	(2,578,394)	(448,829)	(1,906,520)
Net cash provided by operating activities		41,182,819	27,503,092	30,451,459	20,336,375
Investing activities					
Net increase in short-term financial instruments		(10,218,839)	(1,131)	(7,556,028)	(836)
Disposal of financial assets at fair value through other comprehensive income		2,942	22	2,175	16
Disposal of financial assets at fair value through profit or loss		1	243	1	180
Disposal of investments in subsidiaries, associates and joint ventures		259,625	125,402	191,972	92,725
Acquisition of investments in subsidiaries, associates and joint ventures		(298,671)	(85,106)	(220,844)	(62,929)
Disposal of property, plant and equipment		63,362	134,435	46,851	99,404
Acquisition of property, plant and equipment		(26,410,899)	(33,487,072)	(19,528,784)	(24,761,058)
Disposal of intangible assets		13,041	11,397	9,643	8,427
Acquisition of intangible assets		(1,502,277)	(2,040,397)	(1,110,816)	(1,508,713)
Cash outflow from other investing activities		(78,503)	(73,635)	(58,047)	(54,448)
Net cash used in investing activities		(38,170,218)	(35,415,842)	(28,223,877)	(26,187,232)

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 nine-month periods ended September 30,			
	2024	2023	2024	2023
	KRW	KRW	USD	USD
Financing activities				
Net increase in short-term borrowings	4,031,665	45,578	2,981,099	33,701
Increase in debentures and long-term borrowings	-	21,990,000	-	16,259,877
Repayment of debentures and long-term borrowings	(165,069)	(136,145)	(122,056)	(100,669)
Dividends paid	(7,356,734)	(7,358,197)	(5,439,727)	(5,440,808)
Net cash provided by (used in) financing activities	(3,490,138)	14,541,236	(2,580,684)	10,752,101
Effect of foreign exchange rate changes	(1,196)	(10,534)	(884)	(7,789)
Net increase (decrease) in cash and cash equivalents	(478,733)	6,617,952	(353,986)	4,893,455
Cash and cash equivalents, beginning of the period	6,061,451	3,921,593	4,481,967	2,899,710
Cash and cash equivalents, end of the period	5,582,718	10,539,545	4,127,981	7,793,165

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

5. Notes to Separate 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. 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 nine-month period ended September 30, 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 September 30, 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 ₩ 1,352.4 to \$1, the average exchange rate for the nine-month period ended September 30, 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 September 30, 2024 and December 31, 2023 are as follows:

(1) As of September 30, 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	5,582,718	-	-	5,582,718
Short-term financial instruments	11,063,471	-	-	11,063,471
Trade receivables	35,176,097	-	-	35,176,097
Financial assets at fair value through other comprehensive income	-	2,100,328	-	2,100,328
Financial assets at fair value through profit or loss	-	-	-	-
Other	4,105,576	-	288,546	4,394,122
Total	55,927,862	2,100,328	288,546	58,316,736

<i>(In millions of Korean won)</i>	Financial liabilities measured at amortized cost	Other financial liabilities^(*)	Total
Financial liabilities			
Trade payables	11,239,430	-	11,239,430
Short-term borrowings	-	9,572,235	9,572,235
Other payables	12,836,392	-	12,836,392
Current portion of long-term liabilities	21,990,000	278,174	22,268,174
Debentures	19,537	-	19,537
Long-term borrowings	-	833,820	833,820
Long-term other payables	4,331,988	-	4,331,988
Other	5,588,735	-	5,588,735
Total	56,006,082	10,684,229	66,690,311

^(*) 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 September 30, 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>	September 30, 2024	December 31, 2023
Equity instruments	2,100,328	1,854,503

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

<i>(In millions of Korean won)</i>	September 30, 2024	December 31, 2023
Debt instruments	-	1

(D) Details of listed equity securities of financial assets at fair value as of September 30, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won, number of shares and percentage)</i>	September 30, 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	1,344,294	1,038,712
Hotel Shilla Co., Ltd.	2,004,717	5.1	13,957	95,825	131,108
iMarket Korea Inc.	647,320	1.9	324	5,457	5,560
KT Skylife Co., Ltd.	240,000	0.5	3,344	1,188	1,421
Mona Yongpyong Co., Ltd.	400,000	0.8	1,869	1,688	1,220
A-Tech Solution Co., Ltd.	1,592,000	15.9	26,348	10,603	17,241
Wonik Holdings Co., Ltd.	1,759,171	2.3	15,410	4,407	5,928
Wonik IPS Co., Ltd.	1,850,936	3.8	16,214	57,472	62,839
Dongjin Semichem Co., Ltd.	2,467,894	4.8	48,277	71,569	95,508
Soulbrain Co., Ltd.	437,339	5.6	40,382	97,089	132,952
S&S Tech Corporation	1,716,116	8.0	65,933	44,447	77,740
YC Corporation	9,601,617	11.7	47,336	126,837	47,864
KCtech Co., Ltd.	1,022,216	4.9	20,720	36,442	27,395
LOTVacuum Co., Ltd.	1,267,668	7.1	18,990	13,513	25,544
New power Co., Ltd.	2,140,939	4.9	12,739	11,176	11,240
Fine Semitech Corporation	1,522,975	7.0	43,009	33,049	37,541
DNF Co., Ltd.	810,030	7.0	20,964	9,647	19,400
Marvell Technology Inc.	173,187	0.0	11,705	16,482	13,468
SoundHound AI Inc.	1,702,957	0.5	13,719	10,472	4,655
Total			1,353,398	1,991,657	1,757,336

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

5. Inventories

Inventories as of September 30, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	September 30, 2024			December 31, 2023		
	Gross amount	Valuation allowance	Carrying amount	Gross amount	Valuation allowance	Carrying amount
Finished goods	6,437,667	(619,510)	5,818,157	7,914,117	(1,203,662)	6,710,455
Work in process	21,279,342	(1,170,819)	20,108,523	21,866,523	(3,863,881)	18,002,642
Raw materials and supplies	5,153,418	(732,647)	4,420,771	4,910,170	(861,821)	4,048,349
Materials in transit	611,344	-	611,344	576,705	-	576,705
Total	33,481,771	(2,522,976)	30,958,795	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 nine-month periods ended September 30, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Balance as of January 1	57,392,438	57,397,249
Acquisition	298,671	85,106
Disposal	(254,989)	(125,428)
Balance as of September 30	57,436,120	57,356,927

(I) Major investments in associates as of September 30, 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. ^(*)	Manufacture and supply electronic components 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%.

(J) Fair value of marketable investments in significant associates as of September 30, 2024 and December 31, 2023 as follows:

<i>(In millions of Korean won and number of shares)</i>	September 30, 2024		December 31, 2023		
	Number of shares held	Market value	Carrying amount	Market value	Carrying amount
Samsung Electro-Mechanics Co., Ltd.	17,693,084	2,344,334	445,244	2,710,580	445,244
Samsung SDS Co., Ltd.	17,472,110	2,702,935	560,827	2,970,259	560,827
Samsung Biologics., Co., Ltd.	22,217,309	21,706,311	1,595,892	16,885,155	1,595,892
Samsung SDI., Co., Ltd.	13,462,673	5,095,622	1,242,605	6,354,382	1,242,605
Cheil Worldwide Inc	29,038,075	534,010	491,599	552,595	491,599

7. Property, Plant and Equipment

(A) Changes in property, plant and equipment for the nine-month periods ended September 30, 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	26,610,733	30,375,856
Depreciation	(21,919,842)	(18,935,711)
Disposals/scrap/impairment	(130,374)	(116,364)
Other	(26,039)	(2,029)
Balance as of September 30	145,113,639	134,588,738

(B) Details of depreciation of property, plant and equipment for the nine-month periods ended September 30, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Cost of sales	20,084,542	17,449,986
Selling and administrative expenses and other	1,835,300	1,485,725
Total	21,919,842	18,935,711

(C) Right-of-use assets as of September 30, 2024 amount to ₩ 1,805,633 million (December 31, 2023: ₩ 1,840,913 million). During the nine-month periods ended September 30, 2024 and 2023, newly recognized right-of-use assets amount to ₩ 197,937 million and ₩ 846,906 million, respectively, with relevant depreciation of ₩ 230,161 million and ₩ 177,516 million, respectively.

8. Intangible Assets

(A) Changes in intangible assets for the nine-month periods ended September 30, 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	1,896,992	4,275,619
Amortization	(1,805,729)	(1,974,390)
Disposals/scrap/impairment	(38,905)	(36,598)
Other	30,426	17,835
Balance as of September 30	10,522,995	10,843,890

(B) Details of amortization of intangible assets for the nine-month periods ended September 30, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Cost of sales	1,364,458	1,525,100
Selling and administrative expenses and other	441,271	449,290
Total	1,805,729	1,974,390

9. Borrowings

Details of the carrying amounts of borrowings as of September 30, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	Financial institutions	Maturity date	Interest rate (%) as of September 30, 2024	September 30, 2024	December 31, 2023
Short-term borrowings					
Collateralized borrowings ^(*)	Woori Bank and other	-	0.4~11.5	9,572,235	5,625,163
Current portion of long-term borrowings					
Lease liabilities ^(*)	-	-	2.9	278,174	222,137
Non-collateralized borrowings	Samsung Display Co., Ltd.	August 16, 2025	4.6	21,990,000	-
Total				22,268,174	222,137
Long-term borrowings					
Lease liabilities ^(*)	-	-	2.9	833,820	912,035
Non-collateralized borrowings	-	-	-	-	21,990,000
Total				833,820	22,902,035

^(*) Collateralized borrowings are secured by trade receivables.

^(*) Interest expenses arising from the lease liabilities for the nine-month periods ended September 30, 2024 and 2023 amount to ₩ 24,745 million and ₩ 20,045 million, respectively, which are determined using the weighted average incremental borrowing rate.

10. Debentures

Details of the carrying amounts of debentures as of September 30, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	Issue date	Due date	Interest rate (%) as of September 30, 2024	September 30, 2024	December 31, 2023
US dollar denominated straight bonds ^(*)	October 2, 1997	October 1, 2027	7.7	19,794 (USD 15 million)	25,788 (USD 20 million)
Less: Discounts				(257)	(370)
Less: Current portion				-	(6,354)
Total				19,537	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 September 30, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	September 30, 2024	December 31, 2023
Present value of funded defined benefit obligations	12,522,968	11,959,655
Present value of unfunded defined benefit obligations	23,739	22,672
Subtotal	12,546,707	11,982,327
Fair value of plan assets	(15,579,044)	(15,728,024)
Total	(3,032,337)	(3,745,697)

(E) The components of defined benefit costs recognized in profit or loss for the nine-month periods ended September 30, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Current service cost	790,186	721,775
Net interest income	(161,733)	(206,435)
Total	628,453	515,340

(F) The expenses related to defined benefit plans recognized in the statements of profit or loss for the nine-month periods ended September 30, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024	2023
Cost of sales	250,687	202,355
Selling and administrative expenses and other	377,766	312,985
Total	628,453	515,340

12. Provisions

Changes in the provisions for the nine-month period ended September 30, 2024 are as follows:

<i>(In millions of Korean won)</i>	Warranty (A)	Royalty (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	638,348	781,888	152,131	2,128,922	3,701,289
Payment	(542,741)	(519,812)	(262,023)	(1,127,486)	(2,452,062)
Other	-	(50,294)	-	11,775	(38,519)
Balance as of September 30	769,558	2,027,720	603,827	4,763,438	8,164,543

- (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 September 30, 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 September 30, 2024 are as follows:

<i>(In ten thousand metric tons)</i>	September 30, 2024
Emission rights allocated free of charge	1,283
Estimated volume of emission	1,378

- (2) Changes in the emission rights for the nine-month periods ended September 30, 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	-	1,265
Utilization	-	(17,695)
Balance as of September 30	3,137	3,137

- (3) Changes in the emission liabilities for the nine-month periods ended September 30, 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	-	(15,348)
Utilization	-	(17,477)
Balance as of September 30	-	-

13. Commitments and Contingencies

(A) Guarantees

(1) Debt guarantees provided by the Company for overseas subsidiaries as of September 30, 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	June 13, 2025	669,497	1,249,661
SME	SCB	November 8, 2024	1,883	145,156
Others	Others	-	-	9,329,217
Total			671,380	10,724,034
			USD 508,793	USD 8,126,731

(2) The ceiling amount of guarantees provided by the Company for the execution of contracts by overseas subsidiaries is ₩ 490,338 million as of September 30, 2024.

(3) The Company has not been provided any collateral or guarantees from its related parties as of September 30, 2024.

(B) Litigation

As of September 30, 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 September 30, 2024, contractual commitments for the acquisition of property, plant and equipment and intangible assets amount to ₩ 12,401,388 million.

14. Contract Liabilities

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

<i>(In millions of Korean won)</i>	September 30, 2024	December 31, 2023
Contract liabilities ^(*)	1,550,097	1,491,085

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

15. Share Capital

As of September 30, 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 September 30, 2024, excluding the number of retired shares. As of September 30, 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 nine-month period ended September 30, 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 September 30, 2024 and December 31, 2023 consist of the following:

<i>(In millions of Korean won)</i>	September 30, 2024	December 31, 2023
Legal reserves	450,789	450,789
Discretionary reserve and other	234,683,580	219,512,562
Total	235,134,369	219,963,351

(B) Details of interim dividends are as follows (Record date: September 30, 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%
		Dividend amount		
		Ordinary shares	2,155,092	2,155,092
		Preference shares	297,062	297,062
	Total	2,452,154	2,452,154	
2 nd 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%
		Dividend amount		
		Ordinary shares	2,155,092	2,155,092
		Preference shares	297,062	297,062
	Total	2,452,154	2,452,154	
3 rd 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%
		Dividend amount		
		Ordinary shares	2,155,092	2,155,092
		Preference shares	297,062	297,062
	Total	2,452,154	2,452,154	

17. Other Components of Equity

Other components of equity as of September 30, 2024 and December 31, 2023 consist of the following:

<i>(In millions of Korean won)</i>	September 30, 2024	December 31, 2023
Gain on valuation of financial assets at fair value through other comprehensive income	432,152	246,155
Remeasurement of net defined benefit liabilities (assets)	(2,556,341)	(2,483,547)
Others	1,760,408	1,760,408
Total	(363,781)	(476,984)

18. Expenses by Nature

Expenses by nature for the three and nine-month periods ended September 30, 2024 and 2023 consist of the following:

<i>(In millions of Korean won)</i>	2024		2023	
	3 Months	9 months	3 Months	9 months
Changes in finished goods, work in process, and other	442,390	(1,213,583)	327,935	(4,130,316)
Raw materials used, merchandise purchased, and other	23,005,765	69,035,177	24,687,598	71,987,905
Wages and salaries	4,209,338	11,812,367	2,716,624	10,772,706
Post-employment benefit	210,778	632,526	173,803	521,862
Depreciation	7,973,786	21,919,842	6,432,818	18,935,711
Amortization	608,344	1,805,729	656,866	1,974,390
Welfare	791,072	2,467,043	778,649	2,445,405
Utilities	1,508,133	4,240,197	1,305,906	3,717,654
Outsourcing	1,176,621	3,370,609	936,144	2,795,393
Advertising	361,304	1,174,868	643,777	1,299,175
Sales promotion	328,654	1,026,958	252,133	864,804
Other	10,707,817	30,796,133	9,121,959	26,354,154
Total^(*)	51,324,002	147,067,866	48,034,212	137,538,843

(*) 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 and nine-month periods ended September 30, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024		2023	
	3 Months	9 months	3 Months	9 months
Selling and administrative expenses				
Wages and salaries	609,620	1,965,121	591,864	1,976,526
Post-employment benefit	36,872	110,687	31,500	94,104
Commissions	807,374	2,368,248	756,087	2,471,999
Depreciation	118,933	357,176	119,777	348,326
Amortization	98,366	294,905	98,775	292,024
Advertising	361,304	1,174,868	643,777	1,299,175
Sales promotion	328,654	1,026,958	252,133	864,804
Transportation	225,777	634,573	128,634	399,842
Service	288,787	1,103,666	427,007	1,078,175
Other	677,003	1,784,498	571,123	1,650,370
Subtotal	3,552,690	10,820,700	3,620,677	10,475,345
Research and development expenses				
Research and development	7,661,260	21,182,800	5,843,164	17,571,068
Total	11,213,950	32,003,500	9,463,841	28,046,413

20. Other Non-Operating Income and Expenses

Details of other non-operating income and expenses for the three and nine-month periods ended September 30, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024		2023	
	3 Months	9 months	3 Months	9 months
Other non-operating income				
Dividend income	50,211	9,419,973	7,246,537	29,092,317
Rental income	46,865	139,445	46,261	136,660
Gain on disposal of property, plant and equipment	7,916	30,916	16,261	85,536
Other	143,320	255,946	59,473	157,361
Total	248,312	9,846,280	7,368,532	29,471,874

<i>(In millions of Korean won)</i>	2024		2023	
	3 Months	9 months	3 Months	9 months
Other non-operating expenses				
Loss on disposal of property, plant and equipment	71,578	94,587	41,702	47,040
Donations	13,073	92,937	58,689	136,328
Other	17,670	271,183	17,789	66,243
Total	102,321	458,707	118,180	249,611

21. Financial Income and Expenses

Details of financial income and expenses for the three and nine-month periods ended September 30, 2024 and 2023 are as follows:

<i>(In millions of Korean won)</i>	2024		2023	
	3 Months	9 months	3 Months	9 months
Financial income				
Interest income:	114,172	262,245	129,961	280,542
- Financial assets measured at amortized cost	114,172	262,245	129,961	280,542
Foreign exchange differences	1,263,405	4,186,614	1,743,306	5,339,646
Gain from derivatives	-	-	206,797	442,550
Total	1,377,577	4,448,859	2,080,064	6,062,738

<i>(In millions of Korean won)</i>	2024		2023	
	3 Months	9 months	3 Months	9 months
Financial expenses				
Interest expenses:	231,397	560,154	368,665	846,643
- Financial liabilities measured at amortized cost	106,191	193,491	299,577	633,049
- Other financial liabilities	125,206	366,663	69,088	213,594
Foreign exchange differences	1,419,283	4,145,270	1,691,848	5,597,291
Loss from derivatives	56,428	104,689	-	93,579
Total	1,707,108	4,810,113	2,060,513	6,537,513

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 September 30, 2024 to be effective for the year ended December 31, 2024 is 1.0%.

23. Earnings per Share

(C) Basic earnings per share

Basic earnings per share for the three and nine-month periods ended September 30, 2024 and 2023 are calculated as follows:

(1) Ordinary shares

<i>(In millions of Korean won and shares)</i>	2024		2023	
	3 Month	9 month	3 Month	9 month
Profit for the period	5,694,610	22,530,464	10,416,811	24,159,539
Profit for the period available for ordinary shares	5,004,746	19,801,048	9,154,883	21,232,772
Weighted-average number of ordinary shares outstanding	5,969,782,550	5,969,782,550	5,969,782,550	5,969,782,550
Basic earnings per ordinary share (in Korean won)	838	3,317	1,534	3,557

(2) Preference shares

<i>(In millions of Korean won and shares)</i>	2024		2023	
	3 Month	9 month	3 Month	9 month
Profit for the period	5,694,610	22,530,464	10,416,811	24,159,539
Profit for the period available for preference shares	689,864	2,729,416	1,261,928	2,926,767
Weighted-average number of preference shares outstanding	822,896,700	822,896,700	822,896,700	822,896,700
Basic earnings per preference share (in Korean won)	838	3,317	1,534	3,557

(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 and nine-month periods ended September 30, 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 nine-month periods ended September 30, 2024 and 2023 are as follows:

- Adjustments

<i>(In millions of Korean won)</i>	2024	2023
Adjustments :		
Income tax expense	230,646	(5,186,903)
Financial income	(699,700)	(1,082,050)
Financial expenses	1,565,567	1,820,509
Post-employment benefits	632,526	521,862
Depreciation	21,919,842	18,935,711
Amortization	1,805,729	1,974,390
(Reversal of) bad debt expense	(1,739)	21,150
Dividend income	(9,419,973)	(29,092,317)
Gain on disposal of property, plant and equipment	(30,916)	(85,536)
Loss on disposal of property, plant and equipment	94,587	47,040
Loss (Reversal of loss) on valuation of inventories	(3,055,369)	4,052,533
Other	38,438	22,916
Total	13,079,638	(8,050,695)

- 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	(8,263,996)	(5,895,993)
Decrease in non-trade receivables	458,555	836,995
Increase in prepaid expenses	(428,530)	(255,602)
Decrease (increase) in inventories	1,466,935	(7,678,307)
Increase in trade payables	3,447,423	2,201,322
Decrease in other payables	(1,815,074)	(3,493,328)
Increase(decrease) in advances received	5,060	(77,280)
Decrease in withholdings	(1,351)	(105,642)
Increase (decrease) in accrued expenses	1,793,005	(1,741,372)
Increase in provisions	1,249,226	1,301,987
Payment of post-employment benefits	(720,176)	(355,697)
Other	(191,300)	(28,269)
Total	(3,000,223)	(15,291,186)

(B) For the nine-month periods ended September 30, 2024 and 2023, cash outflows from principal portion of lease liabilities (financial activities) amount to ₩ 158,622 million and ₩ 129,808 million, respectively, and cash outflows due to interest expenses (operating activities) in relation to the lease liabilities amount to ₩ 24,745 million and ₩ 20,045 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 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 September 30, 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 ₩ 19,917 million and ₩ 17,370 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 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.

(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 September 30, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	September 30, 2024	December 31, 2023
Total liabilities	83,310,816	72,069,515
Total equity	240,071,995	224,787,774
Debt ratio	34.7%	32.1%

(J) Fair value measurement

- (6) Carrying amounts and fair values of financial instruments by category as of September 30, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	September 30, 2024		December 31, 2023	
	Carrying amount	Fair value	Carrying amount	Fair value
Financial assets				
Cash and cash equivalents	5,582,718	(*)	6,061,451	(*)
Short-term financial instruments	11,063,471	(*)	50,071	(*)
Trade receivables	35,176,097	(*)	27,363,016	(*)
Financial assets at fair value through other comprehensive income	2,100,328	2,100,328	1,854,503	1,854,503
Financial assets at fair value through profit or loss	-	-	1	1
Other ^(*)2)	4,394,122	288,546	5,365,519	393,235
Total financial assets	58,316,736		40,694,561	
Financial liabilities				
Trade payables	11,239,430	(*)	7,943,834	(*)
Short-term borrowings	9,572,235	(*)	5,625,163	(*)
Other payables	12,836,392	(*)	15,015,578	(*)
Current portion of long-term liabilities	22,268,174	-	228,491	6,757
- Long-term borrowings	22,268,174	(*) ^(*)3)	222,137	(*)
- Debentures	-	-	6,354	6,757
Debentures	19,537	21,479	19,064	21,695
Long-term borrowings	833,820	(*)	22,902,035	(*) ^(*)3)
Long-term other payables	4,331,988	(*)	4,486,390	(*)
Other	5,588,735	(*)	3,652,969	(*)
Total financial liabilities	66,690,311		59,873,524	

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

(*)2 Assets measured at the cost of ₩ 4,105,576 million as of September 30, 2024 (December 31, 2023: ₩ 4,972,284 million) 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 September 30, 2024 and December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	September 30, 2024			
	Level 1	Level 2	Level 3	Total balance
1) Assets				
Financial assets at fair value through other comprehensive income	1,991,657	-	108,671	2,100,328
Financial assets at fair value through profit or loss	-	-	-	-
Other	-	-	288,546	288,546
2) Liabilities				
Current portion of debentures	-	-	-	-
Debentures	-	21,479	-	21,479

<i>(In millions of Korean won)</i>	December 31, 2023			
	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 September 30, 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	34,864	Discounted cash flow	Permanent growth rate	1.0%
			Weighted average cost of capital	15.8%
MiCo Ceramics Co., Ltd.	45,888	Discounted cash flow	Permanent growth rate	0.0%
			Weighted average cost of capital	10.9%
Other				
Call option on equity instruments	288,546	Binomial model	Risk-free rate	2.9%
			Price volatility	52.6%

(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	(2,942)	(343)
Amount recognized in profit for the period	(104,689)	347,859
Amount recognized in other comprehensive income	14,445	930
Balance as of September 30	397,217	492,956

(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:

(In millions of Korean won)	Favorable changes		Unfavorable changes	
	Profit or loss	Equity	Profit or loss	Equity
Financial assets at fair value through other comprehensive income ^(*)	-	4,888	-	(3,639)
Other ^(**)	76,426	-	(76,259)	-

^(*) For equity securities, changes in fair value were calculated based on changes in perpetual growth rate and weighted average cost of capital (-1%~1%), 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 September 30, 2024

<i>(In millions of Korean won)</i>	DX	DS	Total^(*)
Revenue	29,216,447	28,757,745	55,828,922
Depreciation	147,862	7,777,830	7,973,786
Amortization	395,135	156,652	608,344
Operating profit	1,361,823	3,144,210	4,504,920

(*) Other operating segments are not separately disclosed.

(2) For the nine-month period ended September 30, 2024

<i>(In millions of Korean won)</i>	DX	DS	Total^(*)
Revenue	88,036,790	79,680,231	160,802,657
Depreciation	417,769	21,352,927	21,919,842
Amortization	1,185,224	449,092	1,805,729
Operating profit	3,968,453	9,765,496	13,734,791

(*) Other operating segments are not separately disclosed.

(3) For the three-month period ended September 30, 2023

<i>(In millions of Korean won)</i>	DX	DS	Total^(*)
Revenue	30,085,839	16,035,215	45,866,224
Depreciation	132,414	6,249,870	6,432,818
Amortization	424,665	171,897	656,866
Operating profit	2,056,695	(4,225,064)	(2,167,988)

(*) Other operating segments are not separately disclosed.

(4) For the nine-month period ended September 30, 2023

<i>(In millions of Korean won)</i>	DX	DS	Total^(*)
Revenue	84,861,437	43,891,179	127,763,991
Depreciation	402,448	18,382,015	18,935,711
Amortization	1,254,681	542,963	1,974,390
Operating profit	4,313,707	(14,092,471)	(9,774,852)

(*) Other operating segments are not separately disclosed.

27. Related Party Transactions

(A) Subsidiaries

List of subsidiaries as of September 30, 2024 is as follows:

Region	Subsidiaries	Business	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 and 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 Lennox HVAC America, LLC	Sale of air conditioning products	50.1
	Joyent, Inc.	Cloud services	100.0
	SmartThings, Inc.	Sale of smart home electronics	100.0
	TeleWorld Solutions, Inc. (TWS)	Installation and optimization 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
	Sonio Corporation	Sale of Software	100.0
	Samsung Eletronica da Amazonia Ltda. (SEDA)	Manufacture and sale of electronic devices	100.0
America	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 services	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.	Sale of audio products and R&D	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.	Sale of audio products and R&D	100.0
	Roon Labs, LLC.	Sale of audio products	100.0
	Beijing Integrated Circuit Industry International Fund, L.P.	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	Business	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 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
Europe & CIS	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
	Oxford Semantic Technologies Limited (OST)	R&D	100.0
	Sonio SAS	Sale and R&D of Software	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 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
		Manufacture and sale of audio products and	
	Harman Becker Automotive Systems GmbH	R&D	100.0
	Harman Becker Automotive Systems Italy S.R.L.	Sale of audio products	100.0
	Harman Becker Automotive Systems Manufacturing Kft	Manufacture of audio products and R&D	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

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

Region	Subsidiaries	Business	Percentage of ownership (%) ^(*)
Europe & CIS	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	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
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 Middle east and North Africa (SEMENA)	Management of overseas subsidiaries	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	Business	Percentage of ownership (%) ^(*)
	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
Asia (Excluding China)	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)	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	Sale of audio products and R&D	100.0
	Harman International Industries PTY Ltd.	Management of overseas subsidiaries	100.0
	Harman International (Thailand) Co., Ltd.	Manufacturing and sale of audio products	100.0
	Harman International Japan Co., Ltd.	Sale of audio products and R&D	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	Business	Percentage of ownership (%) ^(*)
	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
	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
China	Samsung Electronics Suzhou Semiconductor Co., Ltd. (SESS)	Toll processing of semiconductor	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 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 of audio products and R&D	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 of audio products and R&D	100.0
	Harman Technology (Shenzhen) Co., Ltd.	Sale of audio products and R&D	100.0

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

Region	Subsidiaries	Business	Percentage of ownership (%) ^(*)
Domestic	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
	Samsung Electronics Sales Co., Ltd.	Sale of electronic devices	100
	Samsung Electronics Logitech Co., Ltd.	General logistics agency	100
	Samsung Medison Co., Ltd.	Manufacture and sale of medical equipment	68.5
	Stellar Forest Co., Ltd.	Manufacture and processing of food products	100
	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
	Samsung Venture Capital Union #21	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #22	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #26	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #28	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #29	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #32	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #33	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #37	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #40	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #42	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #43	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #45	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #52	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #55	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #56	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #57	Venture capital investments in technology business	99.0
	Samsung Venture Capital Union #62	Venture capital investments in technology business	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 nine-month periods ended September 30, 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.	5,962,471	-	1,383,724	-
	Samsung Electronics America, Inc. (SEA)	23,142,060	49	174,789	-
	Samsung Asia Pte. Ltd. (SAPL)	31	-	13,762	-
	Samsung Austin Semiconductor LLC. (SAS)	48	-	3,378,375	-
	Harman and its subsidiaries ^(**)	1,194	-	50,634	-
	Samsung (China) Semiconductor Co., Ltd. (SCS)	453,350	10,944	8,609,236	276
	Samsung Semiconductor, Inc. (SSI)	27,755,656	-	666,052	-
	Samsung (CHINA) Investment Co., Ltd. (SCIC)	2,466,942	-	10,210	-
	Samsung Electronics Vietnam THAINGUYEN Co., Ltd. (SEVT)	2,121,281	461	17,741,385	3,752
	Samsung India Electronics Private Ltd. (SIEL)	2,769,064	-	4,711,518	-
	Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	-	-	-	-
	Samsung Electronics Vietnam Co., Ltd. (SEV)	1,330,312	-	11,400,397	132
	Samsung Display Vietnam Co., Ltd. (SDV)	1,217,039	-	-	-
	Shanghai Samsung Semiconductor Co., Ltd. (SSS)	22,382,749	-	-	-
	Samsung Eletronica da Amazonia Ltda. (SEDA)	2,079,696	148	5,885	-
	Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	426,881	272	4,576,809	-
	Samsung Electronics (UK) Ltd. (SEUK)	1,505,079	-	90,952	-
	Samsung Electronics Europe Logistics B.V. (SELS)	4,837,630	-	2,089	-
	Samsung International, Inc. (SII)	204,449	1,753	5,708,717	-
	Samsung Electronics Taiwan Co., Ltd. (SET)	3,782,624	-	1,096	-
	Thai Samsung Electronics Co., Ltd. (TSE)	2,062,356	-	1,669,807	-
	SEMES Co., Ltd.	5,100	-	1,448,507	-
	Samsung Electronics Mexico S.A. De C.V. (SEM)	2,471,136	-	8,171	-
	Samsung Japan Corporation (SJC)	2,131,447	-	62,778	-
	Samsung Electronics GmbH (SEG)	2,771,236	-	4,944	-
	Other	39,789,685	18,635	10,204,583	2,610
		Total	151,669,516	32,262	71,924,420
Associates and joint ventures	Samsung SDS Co., Ltd	80,825	-	1,446,214	187,965
	Samsung Electro-Mechanics Co., Ltd	33,016	-	622,550	-
	Samsung SDI Co., Ltd	57,505	-	241,670	18,401
	Cheil Worldwide Inc.	34,198	-	670,250	2,437
	Other	452,628	122	646,815	5,092
	Total	658,172	122	3,627,499	213,895
Other related parties	Samsung C&T Corporation	11,828	-	85,660	3,810,608
	Other	490,391	-	485,931	129,045
	Total	502,219	-	571,591	3,939,653
Other ^(***)	Samsung E&A Co., Ltd	1,812	-	36,864	2,582,657
	S-1 Corporation	4,105	-	332,875	17,380
	Other	154,011	-	207,578	360,261
	Total	159,928	-	577,317	2,960,298

(*) 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.	216,439	-	1,335,779	-
	Samsung Electronics America, Inc. (SEA)	23,301,646	-	163,818	-
	Samsung Asia Pte. Ltd. (SAPL)	7,246,164	-	18,688	-
	Harman and its subsidiaries(*2)	-	-	37,924	-
	Samsung (China) Semiconductor Co., Ltd. (SCS)	87,599	36,769	6,899,486	11,638
	Samsung Austin Semiconductor LLC. (SAS)	1,207	106	3,172,155	1,058
	Samsung Electronics Vietnam THAINGUYEN Co., Ltd. (SEVT)	2,861,458	196	15,973,022	353
	Samsung Semiconductor, Inc. (SSI)	14,736,063	-	495,258	-
	Samsung (CHINA) Investment Co., Ltd. (SCIC)	4,543,608	-	7,843	-
	Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	-	-	-	-
	Samsung Display Vietnam Co., Ltd. (SDV)	1,075,640	-	-	-
	Samsung India Electronics Private Ltd. (SIEL)	2,660,260	210	3,607,393	-
	Samsung Electronics Vietnam Co., Ltd. (SEV)	1,694,382	-	10,727,931	767
	Samsung Elettronica da Amazonia Ltda. (SEDA)	1,037,947	-	13,061	-
	Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	404,634	4,054	4,035,135	-
	Shanghai Samsung Semiconductor Co., Ltd. (SSS)	8,531,291	-	-	-
	Samsung International, Inc. (SII)	195,233	51	5,600,812	-
	Thai Samsung Electronics Co., Ltd. (TSE)	1,837,851	-	1,792,890	-
	Samsung Electronics (UK) Ltd. (SEUK)	1,448,281	-	87,410	-
	Samsung Electronics Europe Logistics B.V. (SELS)	3,831,916	-	6,794	-
	Samsung Electronics Mexico S.A. De C.V. (SEM)	2,084,854	-	5,058	-
	Samsung Display Dongguan Co., Ltd. (SDD)	83,115	-	-	-
	Samsung Electronics Taiwan Co., Ltd. (SET)	2,563,740	-	891	-
	SEMES Co., Ltd.	5,525	-	1,607,210	-
	Samsung Electronics GmbH (SEG)	2,689,625	-	5,109	-
	Other	40,713,476	3,540	10,002,227	2,164
Total		123,851,954	44,926	65,595,894	15,980
Associates and joint ventures	Samsung SDS Co., Ltd	119,639	-	1,334,908	213,727
	Samsung Electro-Mechanics Co., Ltd	58,528	-	616,465	-
	Samsung SDI Co., Ltd	55,502	-	276,577	20,955
	Cheil Worldwide Inc.	35,321	-	609,075	1,163
	Other	398,466	-	687,589	4,383
Total		667,456	-	3,524,614	240,228
Other related parties	Samsung C&T Corporation	18,793	70	31,527	3,556,019
	Other	294,039	-	614,475	155,459
Total		312,832	70	646,002	3,711,478
Other ^(*)	Samsung E&A Co., Ltd	917	-	23,761	1,872,404
	S-1 Corporation	3,576	-	329,834	12,575
	Other	140,115	-	248,556	247,512
Total		144,608	-	602,151	2,132,491

(*) 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.

(C) Balances of receivables and payables

Balances of receivables and payables arising from transactions with related parties as of September 30, 2024 and December 31, 2023 are as follows:

(In millions of Korean won)	Name of company ^(*1)	September 30, 2024	
		Receivables and other ^(*2)	Payables and other ^(*3)
	Samsung Display Co., Ltd.	21,463	227,428
	Samsung Electronics America, Inc. (SEA)	4,871,644	386,484
	Samsung Asia Pte. Ltd. (SAPL)	806	1,240
	Samsung Austin Semiconductor LLC. (SAS)	4,328	536,321
	Harman and its subsidiaries ^(*4)	2,468	6,799
	Samsung (China) Semiconductor Co., Ltd. (SCS)	48,155	835,064
	Samsung Semiconductor, Inc. (SSI)	8,964,837	227,630
	Samsung (CHINA) Investment Co., Ltd. (SCIC)	160,821	1,111
	Samsung Electronics Vietnam THAINGUYEN Co., Ltd. (SEVT)	1,000,308	3,230,789
	Samsung India Electronics Private Ltd. (SIEL)	787,888	429,810
	Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	2,057	-
	Samsung Electronics Vietnam Co., Ltd. (SEV)	451,364	2,046,466
	Samsung Display Vietnam Co., Ltd. (SDV)	155,406	-
Subsidiaries	Shanghai Samsung Semiconductor Co., Ltd. (SSS)	5,307,471	-
	Samsung Eletronica da Amazonia Ltda. (SEDA)	317,000	5,138
	Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	70,043	513,302
	Samsung Electronics (UK) Ltd. (SEUK)	118,566	26,642
	Samsung Electronics Europe Logistics B.V. (SELS)	593,065	1,116
	Samsung International, Inc. (SII)	28,398	458,028
	Samsung Electronics Taiwan Co., Ltd. (SET)	576,263	54,174
	Thai Samsung Electronics Co., Ltd. (TSE)	141,139	189,580
	SEMES Co., Ltd.	101,305	750,925
	Samsung Electronics Mexico S.A. De C.V. (SEM)	284,248	1,172
	Samsung Japan Corporation (SJC)	753,055	56,332
	Samsung Electronics GmbH (SEG)	111,405	6,828
	Other	7,316,657	1,618,277
	Total	32,190,160	11,610,656
	Samsung SDS Co., Ltd	8,577	577,887
	Samsung Electro-Mechanics Co., Ltd	238	91,089
Associates and joint ventures	Samsung SDI Co., Ltd	113,554	25,949
	Cheil Worldwide Inc.	9	322,923
	Other	99,872	101,099
	Total	222,250	1,118,947
Other related parties	Samsung C&T Corporation	183,474	1,045,458
	Other	14,541	158,552
	Total	198,015	1,204,010
Other ^(*5)	Samsung E&A Co., Ltd	1,522	1,292,969
	S-1 Corporation	685	28,694
	Other	4,351	238,272
	Total	6,558	1,559,935

(*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 September 30, 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 ^(*)	December 31, 2023	
		Receivables and other ^(*)	Payables and other ^(*)
	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 ^(*)	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
	Samsung C&T Corporation	190,443	1,876,745
Other related parties	Other	13,835	149,585
	Total	204,278	2,026,330
	Samsung E&A Co., Ltd.	269	766,329
Other ^(*)	S-1 Corporation	598	39,223
	Other	4,342	265,721
	Total	5,209	1,071,273

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

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

(*) Payables and others include lease liabilities.

(*) 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.

- (D) For the nine-month periods ended September 30, 2024 and 2023, the Company had no lending to its subsidiaries but had borrowing from its subsidiaries amounting to ₩ 0 million and ₩ 21,990,000 million, respectively. In addition, the Company had no lending to or borrowing from associates and joint ventures during the nine-month periods ended September 30, 2024 and 2023.
- (E) For the nine-month periods ended September 30, 2024 and 2023, the Company invested ₩ 298,671 million and ₩ 26,124 million, respectively, in subsidiaries, and has made capital recovery of ₩ 305,353 million and ₩ 124,910 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 nil and ₩ 518 million from its investments in associates and joint ventures for the nine-month periods ended September 30, 2024 and 2023, respectively.
- (F) For the nine-month periods ended September 30, 2024 and 2023, the Company declared dividends of ₩ 1,212,155 million and ₩ 1,238,585 million, respectively, to related parties. In addition, for the nine-month periods ended September 30, 2024 and 2023, the Company declared dividends of ₩ 96,174 million and ₩ 96,174 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 September 30, 2024, there is no dividends payable outstanding to these entities that belong to the same large enterprise group according to the Monopoly Regulation and Fair Trade Act.
- (G) For the nine-month periods ended September 30, 2024 and 2023, the Company entered into lease agreements with its related parties amounting to ₩ 23,465 million and nil, respectively, and the lease payments made to the related parties are ₩ 45,128 million and ₩ 13,582 million, respectively.
- (H) As of September 30, 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 nine-month periods ended September 30, 2024 and 2023 consists of:

<i>(In millions of Korean won)</i>	2024	2023
Short-term employee benefits	7,186	7,737
Post-employment benefits	468	418
Other long-term employee benefits	6,251	5,876

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		3Q24	2023	2022
Par value per share (KRW)		100	100	100
Consolidated net profit (KRW mil)		26,045,230	14,473,401	54,730,018
Separate net profit (KRW mil)		22,530,464	25,397,099	25,418,778
EPS (KRW)		3,834	2,131	8,057
Total cash dividend (KRW mil)		7,356,462	9,809,438	9,809,438
Total stock dividend (KRW mil)		-	-	-
Dividend payout ratio (%)		28.2	67.8	17.9
Cash dividend yield (%)	Common	1.7	1.9	2.5
	Preferred	2.0	2.4	2.7
Stock dividend yield (%)	Common	-	-	-
	Preferred	-	-	-
Cash dividend per share (KRW)	Common	1,083	1,444	1,444
	Preferred	1,083	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 three quarters 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」.

Consolidated net profit is equity attributable to owners of the parent.

EPS is 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
42	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 3Q24, please refer to the table [Key dividend indices] above (common shares at 1.7%, preferred shares at 2.0%).

7. Matters about financing through the issuance of securities

7-1 Financing through the issuance of securities

[Issuance of equity securities]

Not Applicable

[Issuance of debt securities]

A. List of issued debt securities

(As of September 30, 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	131,960	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	527,840	4.2	A (S&P)	May 15, 2025	Unredeemed	J.P.Morgan et al.
Total	-	-	-	659,800	-	-	-	-	-

B. Commercial Paper Unredeemed Balance

Not Applicable

(Reporting Date: September 30, 2024)

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: September 30, 2024)

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: September 30, 2024)

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	527,840	6,598	6,598	6,598	-	-	-	547,634
	Private	-	-	-	-	-	-	-	-
	Total	527,840	6,598	6,598	6,598	-	-	-	547,634

※ Based on consolidated financial statements

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

- Corporate Bond Unredeemed Balance (Samsung Electronics Co., Ltd.)

(Reporting Date: September 30, 2024)

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	-	6,598	6,598	6,598	-	-	-	19,794
	Total	-	6,598	6,598	6,598	-	-	-	19,794

- Corporate Bond Unredeemed Balance (Harman International Industries, Inc. and its subsidiaries)

(Reporting Date: September 30, 2024)

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	527,840	-	-	-	-	-	-	527,840
	Total	527,840	-	-	-	-	-	-	527,840

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

E. Hybrid Bond Unredeemed Balance

Not Applicable

(Reporting Date: September 30, 2024)

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: September 30, 2024)

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: September 30, 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	131,960	Oct 2, 1997	The Bank of New York Mellon Trust Company, N.A.

(Reporting Date: September 30, 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 3Q)
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 DOWOINSYS]

On January 31, 2024, Samsung Display Co., Ltd., the company's subsidiary, sold 56.8% of equity stake in DOWOINSYS 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.	Jun 13, 2025	-	-	-	1,278,000
SEM	Subsidiary	BBVA etc.	Aug 19, 2025	-	-	-	715,000
SAMCOL	Subsidiary	Citibank etc.	Jun 13, 2025	-	-	-	210,000
SEDA	Subsidiary	BRADESCO etc.	Sep 30, 2025	-	-	-	329,000
SECH	Subsidiary	Citibank etc.	Jun 13, 2025	-	-	-	64,000
SEPR	Subsidiary	BBVA etc.	Jun 13, 2025	-	-	-	150,000
SSA	Subsidiary	SCB etc.	Jun 13, 2025	-	-	-	318,000
SEMAG	Subsidiary	SocGen etc.	Dec 16, 2024	8,065	△8,065	-	96,000
SETK	Subsidiary	BNP etc.	Jun 13, 2025	320,893	186,472	507,365	947,000
SETK-P	Subsidiary	BNP etc.	Dec 16, 2024	-	-	-	70,000
SECE	Subsidiary	Citibank	Dec 16, 2024	-	-	-	114,000
SEEG	Subsidiary	HSBC	Jun 13, 2025	-	-	-	85,000
SEIN	Subsidiary	BNP etc.	Jun 13, 2025	-	-	-	70,000
SJC	Subsidiary	Mizuho Bank etc.	May 31, 2025	-	-	-	832,731
SEUC	Subsidiary	Credit Agricole etc.	Jun 13, 2025	-	-	-	125,000
SEDAM	Subsidiary	Citibank etc.	Jun 13, 2025	-	-	-	537,000
SECA	Subsidiary	BoA	Nov 08, 2024	-	-	-	70,000
SELA	Subsidiary	Citibank	Dec 16, 2024	-	-	-	60,000

SEEH	Subsidiary	HSBC etc.	Sep 5, 2025	-	-	-	856,400
SELV	Subsidiary	Citibank	Dec 16, 2024	-	-	-	10,000
SEIL	Subsidiary	Citibank	Dec 16, 2024	-	-	-	15,600
SAPL	Subsidiary	BOA etc.	Jun 13, 2025	-	-	-	404,000
SAVINA	Subsidiary	HSBC	Jun 13, 2025	-	-	-	51,000
SCIC	Subsidiary	HSBC etc.	Jun 13, 2025	-	-	-	270,000
SESP	Subsidiary	SCB	Nov 08, 2024	-	-	-	30,000
SME	Subsidiary	SCB	Nov 08, 2024	-	1,427	1,427	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, 2025	-	-	-	35,000
SESAR	Subsidiary	HSBC	Jun 13, 2025	-	-	-	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, 2025	-	-	-	100,000
Harman International Japan Co., Ltd.	Subsidiary	MUFG	Nov 08, 2024	-	-	-	25,000
Harman Holding Limited	Subsidiary	HSBC	Jun 13, 2025	-	-	-	30,000
Harman do Brasil Industria Eletronica e Participacoes Ltda.	Subsidiary	SocGen	Nov 08, 2024	-	-	-	15,000
Harman da Amazonia Industria Eletronica e Participacoes Ltda.							
Harman International Industries Limited	Subsidiary	HSBC	Jun 13, 2025	-	-	-	30,000
SDN	Subsidiary	SIEL	Feb 19, 2026	510,977	△3,332	507,645	597,229
SAS	Subsidiary	Epcor	The date of debt expiration	-	-	-	340,000
Total				839,935	176,502	1,016,438	9,063,960

- ※ 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
3Q24	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
3Q24	Trade receivables	45,028,187	336,143	0.7%
	Short-term loans	105,871	82,810	78.2%
	Other receivables	7,803,585	81,933	1.0%
	Advances	1,309,954	4,356	0.3%
	Trade receivables (long-term)	25,496	-	0.0%
	Other receivables (long-term)	905,310	177	0.0%
	Advances (long-term)	5,456,774	7,453	0.1%
	Long-term loans	144,863	1,136	0.8%
	Total	60,780,040	514,008	0.8%
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%
	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 account

Allowance for bad debt by year

(KRW mil)

	3Q24	2023	2022
1. Allowance for bad debt (beginning balance)	528,063	406,677	397,525
2. Net bad debt expense (① - ②+③)	3,331	14,647	16,658
① Bad debt expense, etc (Write-off)	6,126	19,179	9,711
② Bad debt recovered	-	4	-
③ Others	△2,795	△4,528	6,947
3. Bad debts expense	△7,421	136,033	25,810
4. Allowance for bad debts (Ending balance)	514,007	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: September 30, 2024)

(KRW mil, %)

	Less than 6 months	6 months ~ 1 year	1 year ~ 3 years	More than 3 years	Total
Amount	44,823,708	34,156	94,699	101,120	45,053,683
Ratio	99.5%	0.1%	0.2%	0.2%	100.0%

※ Base on consolidated financial statements

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

C. Inventory

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

(KRW mil, %)

Division	Category	3Q24	2023	2022	Note
DX	Finished goods	6,690,420	7,229,898	7,712,885	
	Work in process	818,255	967,513	1,013,606	
	Raw material	10,291,671	9,608,619	10,520,293	
	Material in transit	1,266,972	1,014,420	943,322	
	Total	19,067,318	18,820,450	20,190,106	
DS	Finished goods	5,787,291	6,476,768	6,601,087	
	Work in process	22,148,765	20,961,730	18,756,104	
	Raw material	3,579,456	3,484,046	3,639,061	
	Material in transit	80,794	76,226	61,352	
	Total	31,596,306	30,998,770	29,057,604	
SDC	Finished goods	350,377	284,394	811,518	
	Work in process	416,414	296,788	542,473	
	Raw material	725,772	564,573	788,521	
	Material in transit	20,236	6,509	23,626	
	Total	1,512,799	1,152,264	2,166,138	
Harman	Finished goods	867,356	725,484	799,919	
	Work in process	107,472	104,514	119,890	
	Raw material	713,338	700,011	913,085	
	Material in transit	684,955	319,785	269,715	
	Total	2,373,121	1,849,794	2,102,609	
Total	Finished goods	13,800,194	14,553,014	16,032,226	
	Work in process	23,351,094	22,198,448	20,077,519	
	Raw material	14,651,814	13,697,354	14,979,280	
	Material in transit	1,553,657	1,177,058	1,098,841	
	Total	53,356,759	51,625,874	52,187,866	
Inventory ratio (%) [Inventory ÷ Total Assets] × 100		10.9%	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.
- ※ For the HQ, the most recent inventory inspection was conducted from May 31 to Jun 3, 2024, and the subsidiaries conducted the inventory inspection during the same period as HQ.

Inventory aging and valuation

Inventory is recognized at the lower of cost or net realizable value. Inventory as of September 30, 2024 are as follows:

(KRW mil)

Category	Acquisition cost	Inventory valuation reserve	Balance	Note
Finished goods	14,805,469	△ 1,005,275	13,800,194	
Work in process	24,928,549	△ 1,577,455	23,351,094	
Raw material	16,055,985	△ 1,404,171	14,651,814	
Material in transit	1,553,657	-	1,553,657	
Total	57,343,660	△ 3,986,901	53,356,759	

- ※ 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 FSS, the Management Discussion and Analysis section, reported in the full-year business report, is not included in the interim 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 September 30, 2024. The company received an unqualified opinion for the year 2023, and the financial statements for the the period ended September 30, 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)
Sep 30, 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 Sep 30, 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	4,991	49,913
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 Schedule for the period ended September 30, 2024 >

Review Period		Planned Dates
2024 1Q	Pre-review	Mar 11, 2024 ~ Mar 29, 2024
	Review	Apr 8, 2024 ~ May 14, 2024
2024 2Q	Pre-review	Jun 10, 2024 ~ Jun 27, 2024
	Review	Jul 8, 2024 ~ Aug 13, 2024
2024 3Q	Pre-review	Sep 9, 2024 ~ Sep 27, 2024
	Review	Oct 8, 2024 ~ Nov 13, 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 Sep 30, 2024	Feb 2017	Tax advisory services(overseas subsidiaries)	Jan – Jun 2024	43	Samjong KPMG
	Sep 2018	Tax advisory services(overseas subsidiaries)	Jan – May 2024	-	
	May 2019	Tax advisory services(overseas subsidiaries)	Jan – Jun 2024	73	
Year ended Dec 31, 2023	Feb 2017	Tax advisory services(overseas subsidiaries)	Jan – Dec 2023	202	Samjong KPMG
	Sep 2018	Tax advisory services(overseas subsidiaries)	Jan – Dec 2023	27	
	May 2019	Tax advisory services(overseas subsidiaries)	Jan – Dec 2023	79	
	May 2023	ESG certification(domestic 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	- 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	- Reporting on progress of quarterly review - Audit plan for the year 2024 - Other required communications at the planning stage of the audit
3	Jul 29, 2024	Audit Committee: 3 members Company: Head of Audit Team Auditor: Signing partner and 5 others	Face-to-face meeting	- Reporting on progress of yearly audit - Plan for the Key Audit Matters selection - Discussion of quarterly review focus areas and other required communications
4	Oct 25, 2024	Audit Committee: 3 members Company: Head of Audit Team Auditor: Signing partner and 5 others	Face-to-face meeting	- Reporting on progress of yearly audit - Plan for the Key Audit Matters selection - Progress of audit of Internal Control over Financial Reporting - Discussion of quarterly review focus areas and other required communications

2. Change of Independent Auditor

There are 229 subsidiaries as of September 30, 2024. During the period ended September 30, 2024, Harman International Industries, Inc. and 16 other overseas subsidiaries changed its external auditor from PwC to KPMG, and Harman International Korea, Inc., the Company's domestic subsidiary, changed from Samil PwC to Samjong KPMG. Also, eMagin Corporation, newly acquired in 2023, and Samsung Federal Inc., 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
Harman (China) Technologies Co., Ltd.	PwC	KPMG
Harman (Suzhou) Audio and Infotainment Systems Co., Ltd.	PwC	KPMG
Harman Automotive Electronic Systems (Suzhou) Co., Ltd.	PwC	KPMG
Harman Commercial (Shanghai) Co., Ltd.	PwC	KPMG
Harman Connected Services Solutions (Chengdu) Co., Ltd.	PwC	KPMG
Harman Holding Limited	PwC	KPMG
Harman International (China) Holdings Co., Ltd.	PwC	KPMG
Harman Technology (Shenzhen) Co., Ltd.	PwC	KPMG
Harman Becker Automotive Systems GmbH	PwC	KPMG
Harman Becker Automotive Systems Manufacturing Kft	PwC	KPMG
Harman Connected Services GmbH	PwC	KPMG
Harman Consumer Nederland B.V.	PwC	KPMG
Harman Deutschland GmbH	PwC	KPMG
Harman Holding GmbH & Co. KG	PwC	KPMG
Harman Hungary Financing Ltd.	PwC	KPMG
Harman Professional Kft	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
Dowoinsys 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.

VI. Corporate Governance

1. Board of Directors

Pursuant to the reporting guidelines set forth by the FSS of South 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, 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

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

VII. Information on Shareholders

1. Ownership of shares by the major shareholder(s) and related parties

[As of September 30, 2024]

Name	Relationship	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	5,771,050	0.10	Open market transactions
		Preferred	417,085	0.06	422,795	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	-
Samsung Life Public Welfare Foundation	Funded foundation	Common	0	0.00	1,250	0.00	Donations from individuals unrelated to the Company
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	47,745,681	0.80	Over-the-counter
		Preferred	137,755	0.02	137,755	0.02	-
Seo-hyun Lee	Executive member of affiliate	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	25,000	0.00	Open market transactions
Kye-hyun Kyung	Executive member of affiliate	Common	21,050	0.00	0	0.00	Resigned
Tae-moon Roh	Executive member of affiliate	Common	13,000	0.00	23,000	0.00	Open market transactions
Hark-kyu Park	Executive member of affiliate	Common	22,500	0.00	34,000	0.00	Open market transactions
Jung-bae Lee	Executive member of affiliate	Common	15,000	0.00	21,800	0.00	Open market transactions
Han-jo Kim	Executive member of affiliate	Common	3,655	0.00	3,655	0.00	-

Name	Relationship	Type of share	Ownership				Notes
			Period start		Period end		
			Shares	Stake (%)	Shares	Stake (%)	
Hye-Kyung Cho	Executive member of affiliate	Common	0	0.00	500	0.00	Newly appointed
Total		Common	1,235,835,433	20.70	1,198,451,222	20.08	-
		Preferred	1,080,935	0.13	1,086,645	0.13	-

Relationship 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 September 30, 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	67,928	Won-hak Hong	0.00	Samsung C&T	19.34

As of September 30, 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	312,665,253
Total liabilities	277,382,931
Total equity	35,282,322
Revenue	22,759,623
Operating profit	2,448,075
Net profit	2,165,949

The financial status is as of September 30, 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	110,810	Se-chul Oh	0.00	Jae-yong Lee	19.06
		Hai-lin Jeong	0.00		
		Jae-eon Lee	0.00		

As of September 30, 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	-	-
Apr 19, 2024	-	-	Jae-yong Lee	19.06

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.

※ Apr 19, 2024: The share ratio of the major shareholder changed (18.26%→19.06%) due to the cancellation of treasury shares (7,807,563 common shares).

(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	62,356,760
Total liabilities	23,942,808
Total equity	38,413,952
Revenue	32,110,475
Operating profit	2,348,833
Net profit	2,116,205

The financial status is as of September 30, 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 September 30, 2024]

(Shares)

Name Gender Date of birth	Position	Registered Executive	Full-time/ part-time	Responsibility	Major career	Number of shares owned		Relationship with major shareholder	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	25,000	-	Executive Member of an affiliate	55	Mar 17, 2026
Tae-moon Roh Male Sep 1968	President	Executive Director	Full	-Head of MX Business	-Doctor's degree in Electrical Engineering from Pohang University of Science and Technology -Head of MX Business	23,000	-	Executive Member of an affiliate	31	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	34,000	-	Executive Member of an affiliate	31	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	21,800	-	Executive Member of an affiliate	31	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 -Vice Chairman, Hana Financial Group	3,655	-	Executive Member of an affiliate	67	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	31	Mar 15, 2025
Eun-nyeong Heo Male Aug 1964	Director	Independent Director	Part	-Head of 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	23	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 -Trade Minister, Ministry of Trade, Industry and Energy	-	-	Executive Member of an affiliate	23	Nov 2, 2025
Je-yoon Shin Male Mar 1958	Director	Independent Director	Part	-Head of Independent Director Recommendation Committee -Compensation Committee -Sustainability Committee	-Bachelor's Degree in Economics from Seoul National University -Chair of Financial Services Commission	-	-	Executive Member of an affiliate	7	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	7	Mar 19, 2027

Number of shares owned is 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>).

Relationship with major shareholder is 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 was newly appointed as Independent Director, Hye-kyung Cho was newly appointed as Independent Director for Audit Committee member, and Myung-hee Yoo was appointed as member of the Audit Committee at the AGM. Independent Director Eun-nyeong Heo and Independent Director Myung-hee Yoo were appointed as members of the Related Party Transaction Committee; Independent Director Je-yoon Shin was appointed as member of the Independent Director Recommendation Committee, Compensation Committee, and Sustainability Committee; and Independent Director Hye-Kyung Cho was appointed as member of the Sustainability Committee at the Board meeting.

Mar 20, 2024: Independent Director Sun-uk Kim vacated her position.

Mar 22, 2024: Term expired for Independent Director Jeong Kim.

Apr 26, 2024: Independent Director Eun-nyeong Heo was appointed as the Head of the Related Party Transaction Committee.

May 21, 2024: Kye-hyun Kyung resigned from his position as Executive Director.

Jul 29, 2024: Independent Director Je-Yoon Shin was appointed as the Head of the Independent Director Recommendation Committee

A. Registered Executives with concurrent positions

[As of September 30, 2024]

Concurrent office holder		Company		
Name	Position	Name of company	Position	Period
Myung-hee Yoo	Independent Director	HD Hyundai Construction Equipment	Independent Director	2022-present
Hye-kyung Cho	Independent Director	Hyundai E&C	Independent Director	2021-present

2. Remuneration for Directors

Pursuant to the reporting guidelines set forth by the FSS, 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, 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 the end of 3Q24, the Company provides comprehensive debt guarantees to support the flexible financing of overseas subsidiaries including Samsung Electronics America, Inc. (SEA).

(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	Nov 09, 2023	Jun 13, 2025	1,278,000	1,278,000	-	-	-	
SEM	Affiliate	BBVA, etc.	Payment guarantee	Operating fund	Nov 09, 2023*	Aug 19, 2025	715,000	715,000	-	-	-	
SAMCOL	Affiliate	Citibank, etc.	Payment guarantee	Operating fund	Nov 09, 2023	Jun 13, 2025	210,000	210,000	-	-	-	
SEDA	Affiliate	BRADESCO, etc.	Payment guarantee	Operating fund	Nov 09, 2023	Sep 30, 2025	329,000	329,000	-	-	-	
SECH	Affiliate	Citibank, etc.	Payment guarantee	Operating fund	Dec 17, 2023	Jun 13, 2025	62,000	64,000	-	-	-	
SEPR	Affiliate	BBVA, etc.	Payment guarantee	Operating fund	Dec 17, 2023	Jun 13, 2025	150,000	150,000	-	-	-	
SSA	Affiliate	SCB, etc.	Payment guarantee	Operating fund	Nov 09, 2023	Jun 13, 2025	318,000	318,000	-	-	-	
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	Nov 09, 2023	Jun 13, 2025	917,000	947,000	320,893	186,472	507,365	47.0%
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, 2024	Jun 13, 2025	85,000	85,000	-	-	-	
SEIN	Affiliate	BNP, etc.	Payment guarantee	Operating fund	Nov 09, 2023	Jun 13, 2025	70,000	70,000	-	-	-	
SJC	Affiliate	Mizuho Bank, etc.	Payment guarantee	Operating fund	Nov 09, 2023	May 31, 2025	835,508	832,731	-	-	-	
SEUC	Affiliate	Credit Agricole, etc.	Payment guarantee	Operating fund	Nov 09, 2023	Jun 13, 2025	125,000	125,000	-	-	-	
SEDAM	Affiliate	Citibank, etc.	Payment guarantee	Operating fund	Nov 09, 2023	Jun 13, 2025	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	Nov 01, 2023	Sep 05, 2025	888,400	856,400	-	-	-	
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	Nov 09, 2023	Jun 13, 2025	404,000	404,000	-	-	-	
SAVINA	Affiliate	HSBC	Payment guarantee	Operating fund	Jun 14, 2024	Jun 13, 2025	51,000	51,000	-	-	-	
SCIC	Affiliate	HSBC, etc.	Payment guarantee	Operating fund	Dec 17, 2023	Jun 13, 2025	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	-	1,427	1,427	0.0%
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, 2024	Jun 13, 2025	35,000	35,000	-	-	-	
SESAR	Affiliate	HSBC	Payment guarantee	Operating fund	Jun 14, 2024	Jun 13, 2025	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, 2024	Jun 13, 2025	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, 2024	Jun 13, 2025	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, 2024	Jun 13, 2025	30,000	30,000	-	-	-	
Total						9,070,657	9,063,960	839,935	176,502	1,016,438	

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.

The Company manages its liquidity risk by periodically forecasting projected cash flows and utilizing regional cash pooling, which allows for the use of internal funds when an entity in a region lacks liquidity. Subsidiaries participating in the cash pooling system in each region can access funds from the pooling parent entities, including SEA, SEEH, SAPL, and SCIC, as needed. Borrowing limits are allocated specifically to each pooling parent entity to prepare for the case that participating subsidiaries need significant liquidity, but does not need separate corporate guarantees for borrowings. For regions where cash pooling is restricted due to local regulations, the Company sets guarantee limits for each subsidiary through comprehensive debt guarantees to ensure efficient management of liquidity risk.

2. Acquisitions and disposals of assets with affiliates and subsidiaries

In 3Q24, 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	Sep 15, 2024	Machinery, etc.	Enhance capacity and production efficiency	20,119	4,827
SCS	Affiliate	Asset sale/purchase	Aug 14, 2024	Machinery, etc.	Enhance capacity and production efficiency	11,220	7,566
SEVT	Affiliate	Asset sale/purchase	Jun 28, 2024	Machinery, etc.	Enhance capacity and production efficiency	4,213	26
SII	Affiliate	Asset sale	Feb 15, 2024	Machinery, etc.	Enhance capacity and production efficiency	1,753	60
TSLED	Affiliate	Asset sale	Sep 23, 2024	Machinery, etc.	Enhance capacity and production efficiency	845	266

SEHC	Affiliate	Asset sale	Aug 07, 2024	Machinery, etc.	Enhance capacity and production efficiency	272	-8
SSEC	Affiliate	Asset sale	Apr 14, 2024	Machinery, etc.	Enhance capacity and production efficiency	250	2
SEDA	Affiliate	Asset sale	Apr 23, 2024	Machinery, etc.	Enhance capacity and production efficiency	149	-
SEV	Affiliate	Asset purchase	Jan 17, 2024	Machinery, etc.	Enhance capacity and production efficiency	132	-
Samsung Biologics	Affiliate	Asset sale	Feb 28, 2024	Vehicle and delivery equipment.	Enhance asset efficiency	122	-14

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 3Q24, the Company had transactions (e.g., sales and purchases) with affiliates, including Samsung Semiconductor, Inc. (SSI).

(KRW mil)

Company	Relationship	Transaction type	Transaction date	Details	Amount
SSI	Affiliate	Sales, purchases, etc.	2024.01~2024.09	Semiconductor, etc.	28,421,708
SEA	Affiliate	Sales, purchases, etc.	2024.01~2024.09	Smartphone, consumer electronics, etc.	23,316,849
SSS	Affiliate	Sales, purchases, etc.	2024.01~2024.09	Semiconductor, etc.	22,382,749
SEVT	Affiliate	Sales, purchases, etc.	2024.01~2024.09	Smartphone, etc.	19,862,666
SEV	Affiliate	Sales, purchases, etc.	2024.01~2024.09	Smartphone, etc.	12,730,709
SCS	Affiliate	Sales, purchases, etc.	2024.01~2024.09	Semiconductor, etc.	9,062,586

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

(USD thousand)

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	Nov 09, 2023	Jun 13, 2025	1,278,000	1,278,000	-	-	-	
SEM	Affiliate	BBVA, etc.	Payment guarantee	Operating fund	Nov 09, 2023	Aug 19, 2025	715,000	715,000	-	-	-	
SAMCOL	Affiliate	Citibank, etc.	Payment guarantee	Operating fund	Nov 09, 2023	Jun 13, 2025	210,000	210,000	-	-	-	
SEDA	Affiliate	BRADESCO, etc.	Payment guarantee	Operating fund	Nov 09, 2023	Sep 30, 2025	329,000	329,000	-	-	-	
SECH	Affiliate	Citibank, etc.	Payment guarantee	Operating fund	Dec 17, 2023	Jun 13, 2025	62,000	64,000	-	-	-	
SEPR	Affiliate	BBVA, etc.	Payment guarantee	Operating fund	Dec 17, 2023	Jun 13, 2025	150,000	150,000	-	-	-	
SSA	Affiliate	SCB, etc.	Payment guarantee	Operating fund	Nov 09, 2023	Jun 13, 2025	318,000	318,000	-	-	-	
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	Nov 09, 2023	Jun 13, 2025	917,000	947,000	320,893	186,472	507,365	47.0%
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, 2024	Jun 13, 2025	85,000	85,000	-	-	-	
SEIN	Affiliate	BNP, etc.	Payment guarantee	Operating fund	Nov 09, 2023	Jun 13, 2025	70,000	70,000	-	-	-	
SJC	Affiliate	Mizuho Bank, etc.	Payment guarantee	Operating fund	Nov 09, 2023	May 31, 2025	835,508	832,731	-	-	-	
SEUC	Affiliate	Credit Agricole, etc.	Payment guarantee	Operating fund	Nov 09, 2023	Jun 13, 2025	125,000	125,000	-	-	-	
SEDAM	Affiliate	Citibank, etc.	Payment guarantee	Operating fund	Nov 09, 2023	Jun 13, 2025	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	Nov 01, 2023	Sep 05, 2025	888,400	856,400	-	-	-	
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	Nov 09, 2023	Jun 13, 2025	404,000	404,000	-	-	-	-
SAVINA	Affiliate	HSBC	Payment guarantee	Operating fund	Jun 14, 2024	Jun 13, 2025	51,000	51,000	-	-	-	-
SCIC	Affiliate	HSBC, etc.	Payment guarantee	Operating fund	Dec 17, 2023	Jun 13, 2025	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	-	1,427	1,427	0.0%
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, 2024	Jun 13, 2025	35,000	35,000	-	-	-	-
SESAR	Affiliate	HSBC	Payment guarantee	Operating fund	Jun 14, 2024	Jun 13, 2025	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, 2024	Jun 13, 2025	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, 2024	Jun 13, 2025	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, 2024	Jun 13, 2025	30,000	30,000	-	-	-	-
SDN (affiliate)	SIEL	Payment guarantee	Operating fund, etc.	Nov 22, 2021	Feb 19, 2026	601,149	597,229	510,977	-3,332	507,645	8.1%
SAS (affiliate)	Epcor	Payment guarantee	Operating fund, etc.	Apr 26, 2022	Debt expiry date	340,000	340,000	-	-	-	-
Total						9,070,657	9,063,960	839,935	176,502	1,016,438	-

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 South 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, 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, 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, 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, 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 ~March 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") - QLED 8K resolution offers real-life viewing experience 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 ~March 2024	<ul style="list-style-type: none"> □ Mini LED-based products come in 4 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 ~March 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 ~March 2024	<ul style="list-style-type: none"> □ Flat QLED 4K TV (32 · 43 · 50 · 55 · 60 · 65 · 70 · 75 · 82 · 85 · 98") <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 ~March 2024	<ul style="list-style-type: none"> □ Flat UHD TV (43 · 50 · 55 · 58 · 60 · 65 · 70 · 75 · 82 · 85 · 98") <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 - Enhanced Smart experiences with the addition of Game Hub, IoT Hub, Chat Together, Voice Ready, Daily+ and SmartThings Mobile Plugin functions

DX Division	
Research project	Details
Lifestyle TV ~April 2024	<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") / Freestyle Rev (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"> □ Micro-LED Screen (76 · 89 · 101 · 114" TFT based) <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"> □ 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
Monitor ~September 2023	<ul style="list-style-type: none"> □ Smart monitor M80B (32") <ul style="list-style-type: none"> - Ultra-slim, flat back, lifestyle design that adopts Warm White color - An in-box magnetic-mount webcam for video communication - 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

DX Division	
Research project	Details
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
Home appliances	
Refrigerators ~August 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 □ 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) □ Built-In BMF refrigerator for European market <ul style="list-style-type: none"> - Achieves highest-efficiency energy rating for large capacity (380L ↑) Built-In BMF in the European market - Applies AI Energy mode, reducing energy consumption by 10% or more compared to products of the same class - Offers full indirect cooling system and switch function from freezer mode to refrigerator mode □ Introduced 4-door kimchi refrigerator equipped with subdivisions and maturing function in the Korean market <ul style="list-style-type: none"> - Provides separate spaces for storing food ingredients and low temperature maturation <ul style="list-style-type: none"> · Enhanced usability with various modes such as kimchi maturation, meat thawing, dough fermentation, etc. - Introduced high-efficiency model with Grade 1 energy label based on revised energy standard □ Introduced auto-open 4-door Kimchi refrigerator for Korean market <ul style="list-style-type: none"> - Enhanced convenience in use with the application of an automatic door opening feature - Storage of various food ingredients is possible with odor reducing kimchi container <ul style="list-style-type: none"> · Customized maturation space available for ripening, thawing, and fermentation
Washer ~February 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

DX Division

Research project	Details
Air conditioner ~July 2024	<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℃ - High-temperature discharged water: discharged water of up to 70℃ 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℃) for boiler market's alternatives - Achieved low noise (minimum 35dBA) □ Indoor EHS hydro units (integrated tank and wall-mounted) for European market <ul style="list-style-type: none"> - Integrated energy management solution enhances customer experience and convenience(with energy saving based on CX-MDE) - Reduces annual power consumption by 15% compared to competitors thanks to AI Energy and industry's most efficient performance in water heating - Slim Fit design to capture growing demand for multi-family housing (e.g. apartment) in European market □ Introduced new innovative high-efficiency platform for the main product of system air conditioners, DVM S <ul style="list-style-type: none"> - Achieved top energy-efficiency rating in Canada, securing leadership in IEER efficiency compared to competitors' products - Achieved maximum capacity in Canadian market (maximum 20 tons vs. Company D's maximum 14 tons) - Maximum heating operation temperature range in Canada <ul style="list-style-type: none"> · Samsung Electronics -30~24℃; Company D -25~16℃; Company X -30~16℃
Vacuums ~March 2024	<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℃ or above) onto the floor - Quick preheating (around 20 seconds) and at least 30 minutes of use with one battery - Enables convenient cleaning with lightweight damp cloth (1.51kg); no need to attach extra battery □ Bespoke AI steam 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 February 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

DX Division	
Research project	Details
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, and Flexible Basket
Gas oven ~August 2023	<ul style="list-style-type: none"> □ Dacor 48" Pro-Range for North American market <ul style="list-style-type: none"> - 48" all Gas Pro range introduction, Transitional(Chef) look design on the exterior adoption - 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 ~July 2024	<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
	<ul style="list-style-type: none"> □ 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.)
	<ul style="list-style-type: none"> □ Galaxy Z Fold5 (August 2023) <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): 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

DX Division

Research project	Details
	<ul style="list-style-type: none"> □ Galaxy Z Fold6 (July 2024) <ul style="list-style-type: none"> - Enhanced product competitiveness by offering excellent portability with thin and light weight - Differentiated user experience through further advanced Galaxy AI - Screen (Main/Sub): 7.6" QXGA+(2160 x 1856) / 6.3" HD+ (968 x 2376) - Size (W x H x D): Open 132.6 x 153.5 x 5.6 mm; Close 68.1 x 153.5 x 12.1 mm; 239g - Platform (H/W, S/W): Snapdragon 8 Gen 3; Android 14; One UI 6.1.1 - Innovative Galaxy Intelligence experiences with foldable form factor and Galaxy AI features <ul style="list-style-type: none"> • Circle to Search, real-time translation, note/chat assist, etc. • Conversation/Translation Mode using dual screen, etc. - Improved camera/gallery experience <ul style="list-style-type: none"> • Photo/drawing assist, weather and time wallpapers, etc. - Weight reduced by 14g; thickness (Close) reduced by 1.3mm; Cover Display increased by 0.1" □ Galaxy Z Flip6 (July 2024) <ul style="list-style-type: none"> - Enhanced product competitiveness by improving durability - Differentiated user experience through further advanced Galaxy AI - Screen (Main/Sub): 6.7" FHD+ (2640 x 1080) / 3.4" (720 x 748) - Size (W x H x D): Open 71.9 x 165.1 x 6.9 mm; Close 71.9 x 85.1 x 14.9 mm; 187g - Platform(H/W, S/W): Snapdragon 8 Gen 3; Android 14; One UI 6.1.1 - Innovative Galaxy Intelligence experiences with foldable form factor and Galaxy AI features <ul style="list-style-type: none"> • Circle to Search, real-time translation, photo/note/chat assist, etc. • Conversation Translation Mode using dual screen, Reply Recommendation in FlexWindow, etc. - Applies high-resolution camera(Wide 50MP) and provides enhanced Flex camera experiences <ul style="list-style-type: none"> • Provides clear details in low light/long distance • Offers convenient hands-free shooting with AI-based Flex Zoom function - Improved durability of the display folding part <ul style="list-style-type: none"> • Strengthened screen durability and improved bending of the folding part
Galaxy S ~January 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

DX Division

Research project	Details
	<p>□ Galaxy S23 · S23+ · S23 Ultra (February 2023)</p> <p>Design: Ultimate Premium Experience designed for today and beyond</p> <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 Ultra 3°) - 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
	<p>□ Galaxy S24 · S24+ · S24 Ultra (January 2024)</p> <ul style="list-style-type: none"> - Introduced 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)

DX Division

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) <li style="padding-left: 40px;">Tab S8+ 12.4" WQXGA+ (2800 x 1752) <li style="padding-left: 40px;">Tab S8 Ultra 14.6" WQXGA+ (2960 x 1848) - Size (W x H x D): Tab S8 165.3mm x 253.8mm x 6.3mm; 503g <li style="padding-left: 40px;">Tab S8+ 185.0mm x 285.0mm x 5.7mm; 567g <li style="padding-left: 40px;">Tab 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) <li style="padding-left: 40px;">Tab S9+ 12.4" WQXGA+ (2800 x 1752) <li style="padding-left: 40px;">Tab S9 Ultra 14.6" WQXGA+ (2960 x 1848) - Size (W x H x D): Tab S9 165.8mm x 254.3mm x 5.9mm; 498g <li style="padding-left: 40px;">Tab S9+ 185.4mm x 285.4mm x 5.7mm; 581g <li style="padding-left: 40px;">Tab 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. · 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 ~September 2024	<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): 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 □ Galaxy A23 (March 2022) <ul style="list-style-type: none"> - Screen: 6.6" FHD+ (2408 x 1080) 90Hz - Size (W x H x D): 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 <ul style="list-style-type: none"> · Adoption of high-capacity 5,000mAh battery and supports 25W ultra-fast charging

DX Division

Research project	Details
	<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): 76.4mm x 165.1mm x 8.8mm; 195g - Platform (H/W, S/W): Exynos85; 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): 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): 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): 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): 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" FHD+ 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): 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
	<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): 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

DX Division

Research project	Details
	<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): 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): 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): 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): 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"> <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
	<ul style="list-style-type: none"> <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
	<ul style="list-style-type: none"> □ Galaxy A55 5G (March 2024) <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"

DX Division

Research project	Details
	<ul style="list-style-type: none"> □ Galaxy A35 5G (March 2024) <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 A06 (September 2024) <ul style="list-style-type: none"> - Expands entry segment volume with A06, the successor to A05 and the cheapest LTE model for SEC - Screen: 6.7"HD+ TFT LCD (1600 x 720) 60Hz - Size (W x H x D): 77.3 x 167.3 x 8.0 mm; 189g - Platform (H/W, S/W): G85; Android 14; One UI 6.1 - Applies large screen slim design with thickness of 8.00mm - Supports side fingerprint and strengthens data security with Samsung Knox Vault security solution
Galaxy Book ~September 2024	<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): 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: 12th Gen Intel® Core™ Processor; 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): 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: 12th Gen Intel® Core™ Processor; 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 □ 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; Windows 11 - Developed Mass WoA product adopting 7C+ Gen 3 (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 <ul style="list-style-type: none"> · Shock, high/low temperature, thermal shock, dust, vibration, low pressure, humidity

DX Division

Research project	Details
	<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): 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(13 Gen); 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(13 Gen); 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
	<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% <li style="padding-left: 40px;">14" WQXGA+ AMOLED (16:10), up to 500nit (HDR); 120Hz, DCI-P3 120% - Size (W x H x D) 16" 355.4 x 250.4 x 12.5mm; 1.56kg <li style="padding-left: 40px;">14" 312.3 x 223.8 x 11.3mm; 1.17kg - Platform, OS: Intel® Core™ Processor(13 Gen); 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

DX Division

Research project	Details
	<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% <li style="padding-left: 40px;">13.3" FHD Super AMOLED (16:9), up to 500nit (HDR), DCI-P3 120% - Size (W x H x D): 15.6" 355.4 x 228.0 x 13.7mm; 1.49kg <li style="padding-left: 40px;">13.3" 304.4 x 202.0 x 12.9 mm; 1.16kg - Platform, OS: Intel® Core™ Processor(13 Gen); 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 (January 2024) <ul style="list-style-type: none"> - Screen: 16" WQXGA+ AMOLED (16:10) Touch Screen, Anti-Reflection - Size (W x D x H): 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 360 (January 2024) <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): 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)
	<ul style="list-style-type: none"> □ Galaxy Book4 Pro (January 2024) <ul style="list-style-type: none"> - Screen: 16" WQXGA+ AMOLED (16:10) Touch Screen; Anti-Reflective <li style="padding-left: 40px;">14" WQXGA+ AMOLED (16:10) Touch Screen; Anti-Reflective - Size (W x H x D): 16" 355.4 x 250.4 x 12.5mm; 1.56kg <li style="padding-left: 40px;">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)
	<ul style="list-style-type: none"> □ Galaxy Book4 Edge (June 2024) <ul style="list-style-type: none"> - Screen: 16" WQXGA+ AMOLED (16:10) Touch Screen, Anti-Reflective <li style="padding-left: 40px;">14" WQXGA+ AMOLED (16:10) Touch Screen, Anti-Reflective - Size (W x H x D): 16" 355.4 x 250.4 x 12.3mm; 1.55kg 14" 312.3 x 223.8 x 10.9mm; 1.16kg - Platform/OS: Qualcomm Snapdragon X Elite (12 core), Windows 11 - Dynamic AMOLED 2X: 3K (2880x1800), 120Hz, color volume 120% (DCI-P3 basis), 400nit (HDR) - Graphic: Qualcomm Adreno - Quad speaker (16" Woofer Max 5W x2, Tweeter 2W x 2, 14" Woofer Max 4W x2, Tweeter 2.7W x 2), Dolby Atmos, 2M Camera - Memory, SSD: 16"16GB, eUFS 512GB,1TB / 14"16GB, eUFS 512GB - Bluetooth v5.3, WiFi 7, 802.11 a/b/g/n/ac/ax/be - Battery: 16"60.6Wh, 14"55.9Wh - Features AI functions to lead Next Gen AI PC market

DX Division

Research project	Details
	<ul style="list-style-type: none"> □ Galaxy Book5 Pro 360 (September 2024) <ul style="list-style-type: none"> - Screen: 16" WQXGA+ AMOLED (16:10) Touch Screen, Anti-Reflective, supports S Pen - Size (W x H x D): 355.4 x 252.2 x 12.8mm; 1.69kg - Platform/OS : Intel® Core™ Ultra Processor, Windows 11 - Dynamic AMOLED 2X : 3K(2880x1800), 120Hz, color volume 120% (DCI-P3 basis), 500nit(HDR), S Pen - Graphic : Intel® Arc™ Graphics - Quad speaker (Woofer Max 5W x 2, Tweeter 3.3W x 2), Smart Amp, Dolby Atmos®, 2M Camera - Memory, SSD : LPDDR5X, NVMe SSD - Bluetooth v5.4, WiFi 7, 802.11 be 2x2 - Battery : 76Wh (typical)
Galaxy Watch ~July 2024	<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): 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): 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 - Provided enhanced sleep monitoring experience <ul style="list-style-type: none"> • Shows sleep score via in-depth analyses of each measured factor and integrates the results • Offers enhanced, personalized sleep coaching program - Introduced new features, including a more personalized fitness management program <ul style="list-style-type: none"> • 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 - Applied one-click band for effortless and convenient watch strip replacement - Strengthened performance by increasing battery capacity <ul style="list-style-type: none"> • Applied 47/44mm 425mAh, 43/40mm 300mAh

DX Division

Research project	Details
	<ul style="list-style-type: none"> □ Galaxy Watch7 / Galaxy Watch Ultra (July 2024) <ul style="list-style-type: none"> - Screen: Watch7 (44mm) 37.3mm Super AMOLED (480 x 480) Watch7 (40mm) 33.3mm Super AMOLED (432 x 432) Watch Ultra (47mm) 37.3mm Super AMOLED (480 x 480) - Size (W x H x D): Watch7 (44mm) 44.4 x 44.4 x 9.7 mm; 33.8g Watch7 (40mm) 40.4 x 40.4 x 9.7 mm; 28.8g Watch Ultra (47mm) 47.1 x 47.4 x 12.1 mm; 60.5g - Platform (H/W, S/W): Exynos W1000 (5Core,3nm); Wear OS Powered by Samsung (Wear OS 5) - High usability with powerful hardware <ul style="list-style-type: none"> • Equipped with 3nm processor for fast CPU speed and improved efficiency of current consumption • Equipped with dual frequency GPS system to improve GPS accuracy in complex environments - Enhanced health monitoring function <ul style="list-style-type: none"> • Offers AGEs Index measurements • Supports sleep apnea detection and accurate sleep measurements using advanced sleep AI algorithm - Enhanced outdoor fitness experience by offering maximized performance (Ultra only) <ul style="list-style-type: none"> • Offers signature circular design with new cushion design added • Applies dynamic lug system for easy attachment and perfect fit • Supports 10ATM water resistance and other functions to measure various fitness activities in extreme environments • Provides long battery life with 100 hours of power saving mode and 48-hours in exercise power saving mode • Battery: 47mm 590mAh, 44mm 425mAh, 40mm 300mAh
Galaxy buds ~July 2024	<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 □ Galaxy Buds3 Pro / Buds3 (July 2024) <ul style="list-style-type: none"> - Improved wearability through new Stem design <ul style="list-style-type: none"> • Secured desirability with differentiated futuristic blade design - Personalized sound experience through AI reflecting audio device characteristics <ul style="list-style-type: none"> • Optimized noise according to surroundings and real-time sound according to wearing conditions - Seamless communication experience through an interpretation listening mode - Size (H x W x D): Buds3 Pro 18.1 x 19.8 x 33.2 mm; 5.4g Buds3 18.1 x 20.4 x 31.9 mm; 4.7g Cradle 48.7 x 58.9 x 24.4 mm; 46.5g - Platform (H/W, S/W): BES2800 (6nm)/BES2700 (14nm); RTOS - Improved audio quality <ul style="list-style-type: none"> • Supports 24bit/96kHz UHQ *Buds2 Pro (24bit/48kHz Hi-Fi) • Applies separate 2 Way Speaker Buds3 Pro • Supports Adaptive EQ *Buds2 Pro(Fixed EQ) - Improves call quality through design optimization <ul style="list-style-type: none"> • Enhances voice clarity through application of Complex DNN/VPU solution • Enhances voice bandwidth with support for Super Wideband calls - Offers intuitive operation experience with Cradle Button Pairing - Enhances experiences of intelligence functions <ul style="list-style-type: none"> • Supports Buds3 Pro Siren/Voice Detect and Adaptive Noise Control - Battery: Buds3 Pro 53mAh, Buds3 48mAh, Cradle 515mAh

DX Division	
Research project	Details
Galaxy ring July 2024	<ul style="list-style-type: none"> □ Galaxy Ring (July 2024) <ul style="list-style-type: none"> - Expands Galaxy Health experiences with a design that can be worn at all times in daily life - 9 sizes (size 5–13) - Size: Ring 7.0 mm (W) x 2.6 mm (D); 2.3g (size 5) ~ 3.0g (size 13) (Cradle) 48.9 (W) x 48.9 (H) x 24.5 mm (D); 61.3g - Platform (H/W, S/W): nRF5340; Zephyr RTOS - Design and battery usage time suitable for 24/7 wearability <ul style="list-style-type: none"> • Slim and lightweight design for comfort - Up to 7 days of continuous health information measurement on a single charge <ul style="list-style-type: none"> * Size 5 18mAh–Size 13 23.5mAh - Enhanced durability with titanium material and 10 ATM, IP68 waterproofing - Offers personalized health management functions <ul style="list-style-type: none"> • Provides indicators and personalized insights for users' personal condition management • Supports advanced sleep analysis and coaching functions • Monitors daily life, such as high/low hear rate notifications, automatic exercise detection, etc. - Features differentiated experience for Galaxy users <ul style="list-style-type: none"> • Supports easy pairing, gesture control, ring location search linked to terminal • Offers optimized usability—improved usage time when worn simultaneously with watch
Network	
RAN S/W Package ~June 2024	<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 - 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 □ 5G vRAN SW PKG (June 2024) <ul style="list-style-type: none"> - Completed RedCap Energy-saving function test (testing for reducing power consumption in 5G IoT devices) <ul style="list-style-type: none"> • Completed testing for vRAN-based 5G RedCap* Energy-saving technology for the first time in the industry • The Company has been validating vRAN RedCap technology (including commercial vRAN network in the US) and commercial functionality for both tRAN and vRAN will be provided in the future * RedCap (Reduced Capability): 5G low-power IoT technology
Base stations ~August 2024	<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), a company first <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 * 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 commercial Strand Small Cell (small cell solution designed to be installed on cables), a company first - 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 for North America (May 2023) <ul style="list-style-type: none"> - More compact and lightweight 64T64R MMU allows higher output with low-power mode compared to the 1st generation □ n77 (3.4~3.8GHz) NR 64T64R new MMU for Canada (August 2024) <ul style="list-style-type: none"> - Developed high-output new MMU platform product applied with new PAM (power amplifier module), which has new structure <ul style="list-style-type: none"> - Compared to existing products, wideband support (high efficiency) enables entry into global markets that require high output and low power consumption, contributing to the expansion of the 5G market * Wideband support: Allows the simultaneous transmission of large amounts of data using a wide frequency band, resulting in faster transmission speed.

DS Division

Research project	Details
Memory	
DRAM for mobile September 2023~July 2024	<ul style="list-style-type: none"> □ Development of industry's first LPCAMM (September 2023) <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. □ Successfully verified industry's fastest LPDDR5X operation with MediaTek (July 2024) <ul style="list-style-type: none"> - Completed verification on MediaTek's latest flagship mobile AP Dimensity, leading commercialization of high-performance products - The role of low-power and high-performance LPDDR DRAM is rising in the era of on-device AI - Expects expansion of applications beyond mobile to AI accelerators, servers, HPCs, and automotive
DRAM for server December 2022~September 2023	<ul style="list-style-type: none"> □ Development of industry's most advanced 12nm-class DRAM (December 2022) <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 (May 2023) <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 (September 2023) <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 2023 to be supplied to various applications such as AI and next-generation computing
Graphic DRAM July 2022~July 2023	<ul style="list-style-type: none"> □ Development of GDDR6 DRAM, industry's one of the fastest graphic DRAMs (July 2022) <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 (November 2022) <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 (July 2023) <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

DS Division	
Research project	Details
HBM DRAM October 2022~February 2024	<ul style="list-style-type: none"> □ Developed AI-accelerator equipped with HBM-PIM and GPU (October 2022) <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 (October 2023) <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 (February 2024) <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 1H
NAND November 2022~September 2024	<ul style="list-style-type: none"> □ Mass production of 8th generation V-NAND (November 2022) <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 □ Mass production of 9th generation V-NAND, an industry first (April 2024) <ul style="list-style-type: none"> - Industry's first mass production of 1Tb TLC 9th generation V-NAND - Highest-layer V-NAND possible with Double Stack structure - Equipped with next-generation interface with the industry's smallest cell size and thinnest mold, demonstrating our technological leadership - The advanced technology reduces cell area and interference, boosting bit density by 1.5 times compared to its Gen 8 V-NAND □ Mass production of 9th generation QLC V-NAND, an industry first (September 2024) <ul style="list-style-type: none"> - With industry's first release of both 9th generation QLC and TLC V-NAND, we enhanced competitiveness in the next-generation NAND flash market through our high-density QLC and high-performance TLC - Achieved industry's highest layered chip by implementing innovative technologies such as a double stack structure using channel hole etching technology. - Expand applications to mobile UFS, PC/server SSDs, etc. starting from brand products
eStorage May 2022	<ul style="list-style-type: none"> □ Development of highly advanced UFS 4.0 (May 2022) <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 (July 2022) <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 (January 2023) <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

DS Division

Research project	Details
<p>Brand SSD April 2022~September 2024</p>	<ul style="list-style-type: none"> □ Released portable SSD 'T7 Shield' for experts that offers both performance and durability (April 2022) <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 (August 2022) <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 (September 2023) <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' (October 2023) <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 (November 2023) <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 (January 2024) <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 □ Launched PCIe 4.0-based customer SSD '990 EVO Plus' (September 2024) <ul style="list-style-type: none"> - Improved reading/writing speeds by 45% and 50% respectively, and power efficiency by more than 70% compared to its predecessor with the 8th generation V-NAND and 5nm controller - Expands consumer options by offering three capacities including high-density 4TB product - Offers easy upgrade of performance and capacity through installation on laptop or PC mainboards - Prevents overheating with nickel-coated controller and heat dissipation labels, enhancing product stability
<p>CXL May 2022~June 2024</p>	<ul style="list-style-type: none"> □ Development of industry's first high-capacity 512GB CXL DRAM (May 2022) <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 (October 2022) <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 (May 2023) <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 □ Established industry's first Red Hat certified CXL infrastructure (June 2024) <ul style="list-style-type: none"> - Established Red Hat certified CXL infrastructure in the SMRC, Samsung Electronics' internal research facility, allowing for in-house verification of all server components, from products to software - Conducted rapid product development, including the industry's first CMM-D Red Hat certification, providing customized solutions for clients - Demonstrated technology for CXL-based server performance enhancement at the Red Hat Summit 2024 in the US

DS Division

Research project	Details
Brand Card May 2022~August 2024	<ul style="list-style-type: none"> □ Released memory card 'PRO Endurance' with enhanced performance and durability (May 2022) <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 (August 2023) <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 (February 2024) <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 (February 2024) <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) □ Released two types of high-density 1TB micro SD cards (August 2024) <ul style="list-style-type: none"> - Achieved terabyte-level high-density product by applying 1Tb TLC 8th generation V-NAND, an industry's high for capacity - Meets the demand for high performance and high capacity solutions with a maximum capacity of 1TB - Improves power efficiency and reduces battery consumption with 28nm controller
Automotive July 2023~September 2024	<ul style="list-style-type: none"> □ Mass production of ultra-low-power UFS 3.1 for vehicles (July 2023) <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 (October 2023) <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 □ Supplied LPDDR4X for Qualcomm vehicles solutions (August 2024) <ul style="list-style-type: none"> - Initiated the first collaboration with Qualcomm in automotive semiconductor sector, supplying chips for Snapdragon Digital Chassis and supporting premium vehicle infotainment - Ensures stable performance even in extreme environments ranging from -40°C to +105°C - Plans for long-term supply to global automakers and auto parts makers □ Developed 8th-generation V-NAND based vehicle SSD, an industry's first (September 2024) <ul style="list-style-type: none"> - Provides 256GB SSD samples to customers and optimizes support for in-vehicle AI functions - Achieved industry's fastest speed with 8th-generation V-NAND and 5nm-based controller - Supports high-performance SLC mode, enabling fast access to large files, - Responds to customer demand for high-density SSDs for vehicles with a 2TB product to be released early next year

DS Division

Research project	Details
System LSI	
Image Sensor January 2022~June 2024	<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. □ Unveiled industry's first 200-megapixel mobile image sensor for telephoto camera (HP9, 0.56um/200Mp) <ul style="list-style-type: none"> - Significantly improved low-light sensitivity with micro-lens using newly developed proprietary materials - Clear image quality up to 12X zoom when mounted on 3X telephoto module □ Launched Dual Pixel ISOCELL GNJ, the quintessence of new pixel technology (GNJ, 1.0um/50Mp) <ul style="list-style-type: none"> - Delivers sharp resolution as sensor itself is equipped with a built-in zoom function, eliminating moiré effects - Improves light transmission rate by minimizing pixel interference by changing isolation layer materials between pixels □ Launched ISOCELL JN5 to offer consistent camera experience across all view angles (JN5, 0.64um/50Mp) <ul style="list-style-type: none"> - Thin optical format allows use in wide-angle, ultra-wide-angle, front-facing and telephoto lenses

DS Division	
Research project	Details
Exynos January 2022~July 2024	<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 <ul style="list-style-type: none"> - 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 <ul style="list-style-type: none"> - 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 □ Unveiled latest technology applied wearable SoC Exynos W1000 <ul style="list-style-type: none"> - First wearable chip to be manufactured using 3nm technology and features large core - Offers performance enhancement compared to its predecessor, Exynos W930, by 3.4 times for single core and 3.7 times for multi core <ul style="list-style-type: none"> - Maximizes mounting space for the chip system by using advanced packaging technologies (FO-PLP:Fan-Out Panel Level Packaging, SiP: System in Packaging, ePoP: embedded Package on Package)
LSI January 2022	<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.
Foundry	
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.

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 January 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 January 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
BMW Mini 13.4" 185ppi June 2024	<ul style="list-style-type: none"> □ 13.4" Round OLED Display for vehicle Center Information Display (1,752 x 1,660) <ul style="list-style-type: none"> - Applies round automotive displays for the first time - Ensures uniform characteristics across areas on atypical displays with newly developed compensation circuit and panel structure - Developed large-area atypical OCTA technology
Surface Pro 10 May 2024	<ul style="list-style-type: none"> □ 13" WQ+ (2,880x1,920, 3:2) <ul style="list-style-type: none"> - 30Hz low-frequency drive technology for notebook OLED for the first time, achieving low power consumption (variable refresh rate from 30 to 120Hz)
Foldable OLED for Galaxy Z Fold6 (July 2024)	<ul style="list-style-type: none"> □ 7.61" (2,160x1,856) Display for foldables <ul style="list-style-type: none"> - Improves luminance efficiency and visibility with new panel structure/materials, achieving low power consumption and enhancing picture quality - Applies structures/materials with enhanced foldable durability
OLED for Google Pixel 9proXL (September 2024)	<ul style="list-style-type: none"> □ 7.65" high resolution/low power smartphone Display • 1,344 x 2,992, Peak brightness 3,000nit <ul style="list-style-type: none"> - Improves brightness, lifespan, and picture quality and reduces power consumption by 10% by applying low-power panel structure and high-efficiency new organic materials