

SAMSUNG

SAMSUNG ELECTRONICS Co., Ltd.

2022 Interim Business Report

For the quarter ended March 31, 2022

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

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

Table of Contents

Certification.....	3
I. Corporate Overview	4
II. Businesses Overview	5
III. Financial Affairs.....	33
IV. Management Discussion and Analysis.....	159
V. Auditor’s Report	160
VI. Corporate Governance.....	164
VII. Information on Shareholders.....	165
VIII. Executives and Employees.....	170
IX. Affiliates and Subsidiaries	173
X. Transactions with affiliates and subsidiaries	174
XI. Other Information.....	176
XII. Appendix	178

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 three-month period ended March 31, 2022.

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

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

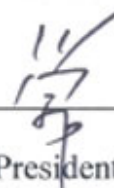
Date: May 16, 2022

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 (FSS) of South Korea, the Overview section reported in the half-year and full-year business reports, is not included in the 1Q and 3Q reports.

2. Company history

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

3. Changes in paid-in capital

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

4. Stock information

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

5. Changes to Articles of Incorporation

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

II. Businesses Overview

Note on forward-looking statements

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

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

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

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

(Responsibility statement)

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

1. Overview

In addition to our headquarters in Korea, Samsung Electronics consists of 231 subsidiaries across the world responsible for sales and production. There are 9 regional headquarters for 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 are organized in a two-pronged framework consisting of finished products and component businesses. The finished product business consists of the DX Division, which is responsible for the production and sales of TVs, monitors, refrigerators, washing machines, air conditioners, HHPs, which includes smartphones, as well as network systems, and computers. The component business consists of the DS Division, which manufactures and sells DRAM, NAND flash, and mobile APs, and SDC, which manufactures and sells display panels (DPs), including mobile OLED panels and LCD panels for TVs and monitors. Harman (acquired in 2017) manufactures and sells products such as Digital cockpits, telematics, and speakers.

In December 2021, the Company merged the CE Division and the IM Division to form the DX Division and changed the Mobile Communications Business to the Mobile eXperience (MX) Division.

Also, SDC and the DS Division have been separated to align with the corporate organizational structure.

☞ 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—as well as 31 consolidated subsidiaries are located in Korea.

The Company's corporate 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 200 unlisted overseas subsidiaries for product manufacturing, sales, and R&D, with locations in the US, Europe/CIS, Middle East/Africa, and Asia, etc.

We have 46 subsidiaries in North America, including SEA (New Jersey; responsible for the sales of finished products including TV and HHPs), 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 the US.

In Europe and CIS, we operate 74 subsidiaries. These include SEUK (UK), SEG (Germany), SEF (France), SEI (Italy), SERC (Russia) for sales of finished products; SEH (Hungary) and SERK (Russia) for manufacturing TVs, and SEPM (Poland) for manufacturing home appliances.

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

We have 30 subsidiaries in Asia (ex China), including SESP (Singapore), SEAU (Australia), SEPCO (Philippines), and SME (Malaysia), which are responsible for regional sales. In addition, we operate numerous production sites including SEV and SEVT (Vietnam) for HHPs, SEHC (Vietnam) for TVs, SDV (Vietnam) for DPs, and SIEL (India) for multiple products.

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

In 1Q22, the Company recorded total revenue of KRW 77,781.5 billion, an increase of 19.0% year-on-year. Major customers (listed in alphabetical order) included Apple, Best Buy, Deutsche Telekom, Qualcomm and Supreme Electronics.

2. Key products and services

A. Revenue

SEC is involved in the production and sales of finished products, including TVs, refrigerators, washers, air conditioners, HHPs and components such as semiconductors (DRAM, NAND Flash, mobile APs) and display panels. Through Harman, the Company also produces and sells products such as digital cockpits and telematics.

In 1Q22, DX reported revenue of KRW 48,068.7 billion (61.8% of total net sales) and DS contributed approximately 34.5% of revenue, reporting KRW 26,867.4 billion and SDC reported revenue of KRW 7,970.5 billion (10.2%). Harman reported net sales of KRW 2,666.3 billion (3.4%).

(KRW 100 mil)

Organization	Major products	Revenue	Portion
DX Division	TVs, monitors, refrigerators, washing machines, air conditioners, HHPs, network systems, computers, etc.	480,687	61.8%
DS Division	DRAM, NAND flash, mobile APs, etc.	268,674	34.5%
SDC	OLED smartphone panels, LCD TV panels, LCD monitor panels, etc.	79,705	10.2%
Harman	Digital cockpit, telematics, speakers, etc.	26,663	3.4%
Others	Overlapping internal transactions between Divisions	-77,914	-9.9%
Total		777,815	100.0%

Includes inter-divisional transactions.

☞ See 「4. Sales and long-term contracts」 for sales by each product.

B. Average selling price changes

In 1Q22, the ASP of TVs decreased approximately 5% and that of HHPs increased approximately 8% year-on-year. The ASP of memory products fell by approximately 4% year-on-year, and display panel (OLED panels for smartphones) ASP increased approximately 11%. The ASP of digital cockpits declined approximately 2% year-on-year.

3. Production materials and production facilities

A. Key production materials

For the DX Division, key materials include display panels for TVs and monitors, which are supplied by CSOT and other companies, and camera modules and mobile AP, which are supplied by Semco, Qualcomm and others. For the DS Division, key materials include wafers and chemicals from SK Siltron and Soulbrain; and for SDC, FPCAs and windows with suppliers including BH, Apple, etc. For Harman, key materials include SoC (system-on-chip) products and memory products for in-vehicle solutions, which are supplied by Nvidia, Avnet, etc.

(KRW 100 mil)

Organization	Type of purchase	Item	Specific usage	Purchase price	Portion ¹⁾	Main supplier(s)
DX Division	Production materials	Display panel	Color picture signaler for TV, monitor	24,888	11.5%	CSOT, AUO, BOE, etc.
	Production materials	Camera module	Camera for HHP	18,765	8.7%	Semco, Partron, etc.
	Production materials	Mobile AP	CPU	23,682	10.9%	Qualcomm, MediaTek, etc.
	Production materials	Others	-	148,964	68.9%	
	Division total			216,299	100.0%	
DS Division	Production materials	Wafer	Semiconductor disk	7,123	16.0%	SK Siltron, Sumco etc.
	Production materials	Chemical	Disk processing	5,366	12.0%	Soulbrain, DongWoo Fine-Chem, etc.
	Production materials	Others	-	32,146	72.0%	
	Division total			44,635	100.0%	
SDC	Production materials	FPCA	Circuit	7,106	23.2%	BH, Apple, etc.
	Production materials	Window	Tempered glass	4,435	14.5%	Apple, Biel, etc.
	Production materials	Others	-	19,068	62.3%	
	Business total			30,609	100.0%	
Harman	Production materials	SoC	Chips for vehicles	1,681	9.8%	Nvidia, Renesas, etc.
	Production materials	Automotive memory chip	Chips for vehicles	1,327	7.8%	Avnet, Microchip, etc.
	Production materials	Others	-	14,081	82.4%	
	Business total			17,089	100.0%	
Others	Production materials	-	-	93	-	
Total				308,725	-	

Purchase price does not include sales between Divisions.

Semco is a subsidiary.

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

B. Production material price trends

The price of TV and monitor display panels, which are the major production materials for the DX Division, decreased approximately 42% year-on-year. Compared to last year, the price of camera modules and mobile AP increased approximately 8% and 41% respectively. The price of wafers for semiconductor disks, which are the major production materials for the DS Division, and FPCAs for SDC increased approximately 4% and 19% year-on-year respectively. Prices of tempered glass windows increased approximately 2% year-on-year. For Harman, the prices of SoCs decreased approximately 1% and memory for vehicles increased 4%.

C. Production capacity, output, utilization rate

(Capacity)

(1,000 units)

Organization	Item	Capacity		
		1Q22	2021	2020
DX Division	Image devices	14,547	54,235	51,538
	HHP	78,150	319,550	321,600
DS Division	Memory	462,503,956	1,756,009,941	1,230,287,321
SDC	Display panel	849	3,604	7,274
Harman	Digital cockpit	2,863	9,066	9,362

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 (x) the average output per hour (x) the average operation hours per day (x) 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 (2200x2500mm)

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

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

(Output)

In 1Q22, the DX Division's output of image devices was 12,261 thousand units (major production sites: Mexico, Vietnam, Brazil, and Hungary), and HHP output was 63,295 thousand units (major production sites: Korea [Gumi], Vietnam, India, and Brazil). The DS Division's memory output (1Gb equivalent) was 462,504 million (major production sites: Korea [Hwaseong, Pyeongtaek, etc.] and China). SDC's output of display panels was 744 thousand units (major production sites: Korea [Cheonan, Asan]). Harman's Digital cockpit output was 1,969 thousand units.

(1,000 units)

Organization	Item	Output		
		1Q22	2021	2020
DX Division	Image devices	12,261	44,133	48,244
	HHP	63,295	260,501	249,218
DS Division	Memory	462,503,956	1,756,009,941	1,230,287,321
SDC	Display panel	744	2,849	5,977
Harman	Digital cockpit	1,969	6,928	6,116

Output for major product categories on a consolidated basis.

(Utilization rate)

In 1Q22, DX utilization rates were calculated as actual output relative to production capacity. The utilization rates were 84.3% for Image devices and 81.0% for HHPs.

(1,000 units)

Organization	Item	1Q22		
		Production capacity	Output	Utilization rate
DX Division	Image devices	14,547	12,261	84.3%
	HHP	78,150	63,295	81.0%

The DS Division operates memory and SDC operates display panel production in three shifts (24 hours a day). Cumulative operating days including holidays were 90 days in 1Q22. The utilization rate was calculated as the actual production time relative to the potential production capacity [operating days (x) number of production lines (x) 24 hours].

(Hours)

Organization	Item	1Q22		
		Potential production time	Actual production time	Utilization rate
DS Division	Memory	19,440	19,440	100.0%
SDC	Display panel	12,960	12,960	100.0%

In 1Q22, Harman's utilization rate was 68.8% and was calculated as actual output relative to production capacity.

(1,000 units)

Organization	Item	1Q22		
		Production capacity	Output	Utilization rate
Harman	Digital cockpit	2,863	1,969	68.8%

D. Production facilities and investment

(Key facilities for production and operation)

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

[Operations]

Region	Operations	Location
Korea (DX Division, DS Division, SDC – 12 work sites)	Suwon	Suwon
	Seocho	Seoul
	Woomyeon	Seoul
	Giheung	Yongin
	Hwaseong	Hwaseong
	Pyeongtaek	Pyeongtaek
	Cheonan	Cheonan
	Onyang	Onyang
	Asan	Asan
	Gumi1	Gumi
	Gumi2	Gumi
	Gwangju	Gwangju
Overseas (DX Division - 9 regional headquarters)	North America	New Jersey, US
	Europe	Surrey, UK
	China	Beijing, China
	Southeast Asia	Singapore, Singapore
	Southwest Asia	Haryana, India
	CIS	Moscow, Russia
	Middle East	Dubai, UAE
	Africa	Johannesburg, South Africa
	Latin America	Sao Paulo, Brazil
Overseas (DS Division - 5 regional headquarters)	Americas	San Jose, US
	Europe	Eschborn, Germany
	China	Shanghai, China
	Southeast Asia	Singapore, Singapore
	Japan	Tokyo, Japan
Harman	North America HQ	Connecticut, US

Harman's automotive business is mainly based in the US (Novi, MI) and in Germany (Garching), and its Lifestyle business is located in the US (Northridge, CA)

The Company's property, plant and equipment include land, buildings and structures, machinery and equipment, and construction in progress. As of March 31, 2022, the total book value was KRW 149,618.0 billion, which is a decrease of KRW 310.5 billion from year-end 2021.

(KRW 100 mil)

Classification		Land	Buildings and structures	Machinery and equipment	Under construction	Other tangible assets	Total
Dec 31, 2021	Book value	98,302	388,694	795,263	180,093	36,933	1,499,285
	- Acquisition cost	99,436	626,515	2,749,096	180,093	119,580	3,774,720
	- Accumulated depreciation (including impairment loss)	-1,134	-237,821	-1,953,833	-	-82,647	-2,275,435
Change	General acquisition and capital expenditure	146	3,703	77,668	-3,728	3,200	80,989
	Depreciation ¹⁾	-125	-8,602	-77,385	-	-3,978	-90,090
	Disposal/discard/impairment	-93	-449	-177	-	-106	-825
	Others ²⁾	100	2,171	-18,897	23,089	358	6,821
Mar 31, 2022	Book value	98,330	385,517	776,472	199,454	36,407	1,496,180
	- Acquisition cost	99,526	632,271	2,812,708	199,454	122,868	3,866,827
	- Accumulated depreciation (including impairment loss)	-1,196	-246,754	-2,036,236	-	-86,461	-2,370,647

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

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

2) Includes effects of FX rates and government subsidies.

(Capex)

The Company's capex in 1Q22 was KRW 7.9 trillion, with investments concentrating on capacity expansions and migration of advanced nodes as well as on infrastructure for the DS Division and SDC. In 2022, the Company will continue to execute capex considering its efficiency to secure stable growth and to respond flexibly to changes in market conditions, aiming enhance competitiveness of our major businesses and address growing future demand.

[Capex, by organization]

(KRW 100 mil)

Organization	Purpose	Period	Assets	Investment
DS division	Establishment, addition, upgrade	January–March 2022	Buildings, facilities, etc.	66,599
SDC	Establishment, addition, upgrade	January– March 2022	Buildings, facilities, etc.	7,074
Other	Establishment, addition, upgrade	January– March 2022	Buildings, facilities, etc.	5,554
Total				79,227

4. Sales and long-term contracts

A. Sales

In 1Q22, the Company recorded total revenue of KRW 77,781.5 billion, an increase of 19.0% year-on-year. By organization, when compared to the same period last year, revenue of the DX Division, DS Division, SDC, and Harman increased by 13.2%, 39.1%, 15.1% and 12.6%, respectively.

(KRW 100 mil)

Organization	Sales types	Product categories	1Q22	2021	2020
DX Division	Goods, products, services, other	TVs, monitors, refrigerators, washing machines, air conditioners, HHPs, Network systems, computers, etc.	480,687	1,662,594	1,489,135
DS Division	Goods, products, services, other	DRAM, NAND flash, mobile APs, etc.	268,674	953,872	740,540
SDC	Goods, products, services, other	OLED panels for smartphones, LCD panels for TVs and monitors	79,705	317,125	305,857
Harman	Goods, products, services, other	Digital cockpit, telematics, speakers, etc.	26,663	100,399	91,837
Others	Overlapping internal transactions between Divisions		-77,914	-237,942	-259,299
Total			777,815	2,796,048	2,368,070

Includes inter-divisional transactions.

Figures for 2020 and 2021 were adjusted to align with those of 2022, reflecting the organizational changes in December 2021.

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

(KRW 100 mil)

Classification	1Q22	2021	2020
Image devices	87,180	314,974	277,118
Mobile devices	312,278	1,046,806	960,217
Memory	200,915	726,022	555,442
Display panels	79,705	317,125	305,857

Includes inter-divisional transactions.

(2) Sales, by type

(KRW 100 mil)

Classification	1Q22	2021	2020
Products	740,047	2,658,785	2,235,963
Services and other sales	37,768	137,263	132,107
Total	777,815	2,796,048	2,368,070

Other sales consists of royalty income, etc.

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

(KRW 100 mil)

Classification	1Q22	2021	2020
Domestic	63,797	221,497	198,331
Export	Americas	166,852	583,805
	Europe	73,163	258,227
	Asia and Africa	114,824	336,671
	China	148,607	597,247
Total	567,243	1,997,447	1,663,112

Domestic consumption and exports on a separate basis.

B. Sales channels

(1) Domestic

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

(2) Overseas

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

(3) Sales ratio (global), by Channel

Channel	Wholesale	Retail	Special/direct sales	Others
Ratio	20%	26%	50%	4%

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 1Q22, major customers (listed alphabetically) included Apple, Best Buy, Deutsche Telekom, Qualcomm and Supreme Electronics. Sales to the five major customers accounted for approximately 14% of total sales.

F. Long-term contracts

As of March 31, 2022, 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's financial risk management focuses on minimizing market risk, credit risk, and liquidity risk arising from operating activities. To mitigate these risks, the Company closely monitors each risk factor and operates corresponding financial risk management policies and program. The Company's use of derivative instruments for hedging risks are included in this program.

The finance team mainly carries out the Company's financial risk management. After implementing the global financial risk management policies, the finance team periodically measures, evaluates, and hedges financial risks.

Meanwhile, the Company manages exchange rate risk via monitoring exchange rates and conducting 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, INR, and others.

The Company focuses on minimizing the impact of foreign exchange fluctuation by maintaining the equal amount of assets and liabilities denominated in each foreign currency, irrespective of foreign exchange fluctuation considerations. To prevent 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 for the cash-in currency to be matched up with the cash-out currency.

In order to effectively manage foreign exchange risk, the Company periodically monitors and evaluates exchange rate risk and strictly prohibits speculative foreign exchange transactions.

(Interest rate risk)

Risk of changes in interest rates for floating interest rate financial instruments is defined as the risk that the fair value of components of the consolidated statement of financial position, and future cash flows of interest income (expenses) of a financial instrument, will fluctuate because of changes in market interest rates. The Company's position with regard to interest rate risk exposure is mainly driven by its floating interest rate debt obligations and interest-bearing deposits. The Company implemented policies and operates to minimize uncertainty arising from changes in interest rates and financial expenses.

(Price risk)

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

As of March 31, 2022, a price fluctuation of marketable equity securities (listed stocks) of 1% changes 'other comprehensive income' (before income tax) by KRW 107,834 million and 'profit before tax' by KRW 3,750 million. The figures as of the same date in 2021 were KRW 65,800 million and KRW 3,333 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 which have strong international credit rating (S&P A and above), and all new transactions with financial institutions with no prior transaction history are approved, managed and monitored by the Company's finance team and the local finance center. The Company generally enters into a financial agreement with no restrictions, such as debt ratio covenants, provision of collateral, and loans or borrowings repayment. The Company requires separate approval for contracts with restrictions.

The Company estimates that its maximum exposure to credit risk is the carrying amount of its financial assets, net of impairment losses.

(3) Liquidity risk

Due to the nature of the Company's business that requires making large investments, maintaining adequate level of liquidity risk is crucial. The Company maintains and manages adequate level of liquidity by periodically forecasting its capital balances, estimating required cash, managing income and expenses, and others.

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 strengthening the Company's competitive position by 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 a potential large-scale liquidity need.

(4) Capital risk

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

As of March 31, 2022, the Company has an AA- and Aa3 credit rating from S&P and Moody's, respectively, and the figures for total liabilities and total equity are as follows:

(KRW mil)

	Mar 31, 2022	Dec 31, 2021
Total liabilities	124,036,040	121,721,227
Total equity	315,290,919	304,899,931
Total liabilities to equity ratio	39.3%	39.9%

C. Derivative instruments and put options

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

As of March 31, 2022, the Company had 2,550 currency forward contracts involving 35 foreign currencies including USD/EUR/JPY, and the book value of assets and liabilities as well as valuation gain and loss were as follows:

(KRW mil)

	Assets	Liabilities	Valuation gain	Valuation loss
Currency forwards	132,986	193,147	268,405	425,273

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

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

Fair value of the above put option as of March 31, 2022 was evaluated by Earnest & Young Global Limited.

6. Major contracts and research and development activities

A. Major contracts

Account	Contract information	Contents
Cisco	Type	Patent cross-license agreement
	Date	Jan 23, 2014
	Purpose and contents	Eliminate risk of patent disputes and lawsuits through mutual patent licensing
Google	Type	Patent cross-license agreement
	Date	Jan 25, 2014 / indefinite term
	Purpose and contents	Eliminate risk of patent disputes and lawsuits 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
InterDigital	Type	Patent license agreement
	Date	Jun 3, 2014
	Purpose and contents	Eliminate risk of patent disputes and lawsuits through patent licensing
Qualcomm	Type	Patent cross-license agreement
	Date	Jan 1, 2018–Dec 31, 2023
	Purpose and contents	Eliminate risk of patent disputes and lawsuits through mutual patent licensing and signing of covenant not to sue
Apple	Type	Withdrawal of lawsuit agreement
	Date	Jun 26, 2018
	Purpose and contents	Withdraw from all lawsuits in the United States
Nokia	Type	Patent license agreement
	Date	Oct 19, 2018
	Purpose and contents	Eliminate risk of patent disputes and lawsuits through patent licensing
Microsoft	Type	Patent cross-license agreement
	Date	Feb 11, 2019
	Purpose and contents	Eliminate risk of patent disputes and lawsuits through mutual patent licensing
Google	Type	EMADA

Account	Contract information	Contents
	Date	Feb 27, 2019–Dec 31, 2022 (extended)
	Purpose and contents	Licensing agreement for using Google apps (Play Store, YouTube, etc.) in 31 European countries (EEA)
Huawei	Type	Patent cross-license agreement
	Date	Feb 28, 2019
	Purpose and contents	Eliminate risk of patent disputes and lawsuits through mutual patent licensing
AMD	Type	Technology licensing agreement
	Date	May 30, 2019
	Purpose and contents	Secure mobile graphics design for mobile products and other applications
Sharp	Type	Patent cross-license agreement
	Date	July 30, 2019
	Purpose and contents	Eliminate risk of patent disputes and lawsuits through mutual patent licensing
Ericsson	Type	Patent cross-license agreement
	Date	May 7, 2021
	Purpose and contents	Eliminate risk of patent disputes and lawsuits through mutual patent licensing

Information that may be referenced or used in other IP disputes, including contract amount, is excluded.

B. Summary of R&D activities and expenditures

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

As of March 31, 2022, the Company's R&D expenses were KRW 5,922.7 billion year-to-date. Among this, KRW 5,922.2 billion was recognized as expenditures, excluding government subsidies and capitalized expenses.

(R&D expenses)

		(KRW mil)		
		1Q22	2021	2020
Total R&D expenditures		5,922,677	22,596,487	21,229,200
(Government subsidies)		-445	-1,053	-8,228
R&D expenditures		5,922,232	22,595,434	21,220,972
Accounting	Capitalization of development expenses (intangible asset)	-	-193,708	-109,482
	R&D costs (expenses)	5,922,232	22,401,726	21,111,490
R&D expenses/sales ratio ¹⁾		7.6%	8.1%	9.0%

On a consolidated basis.

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

C. R&D organization and operations

(Domestic)

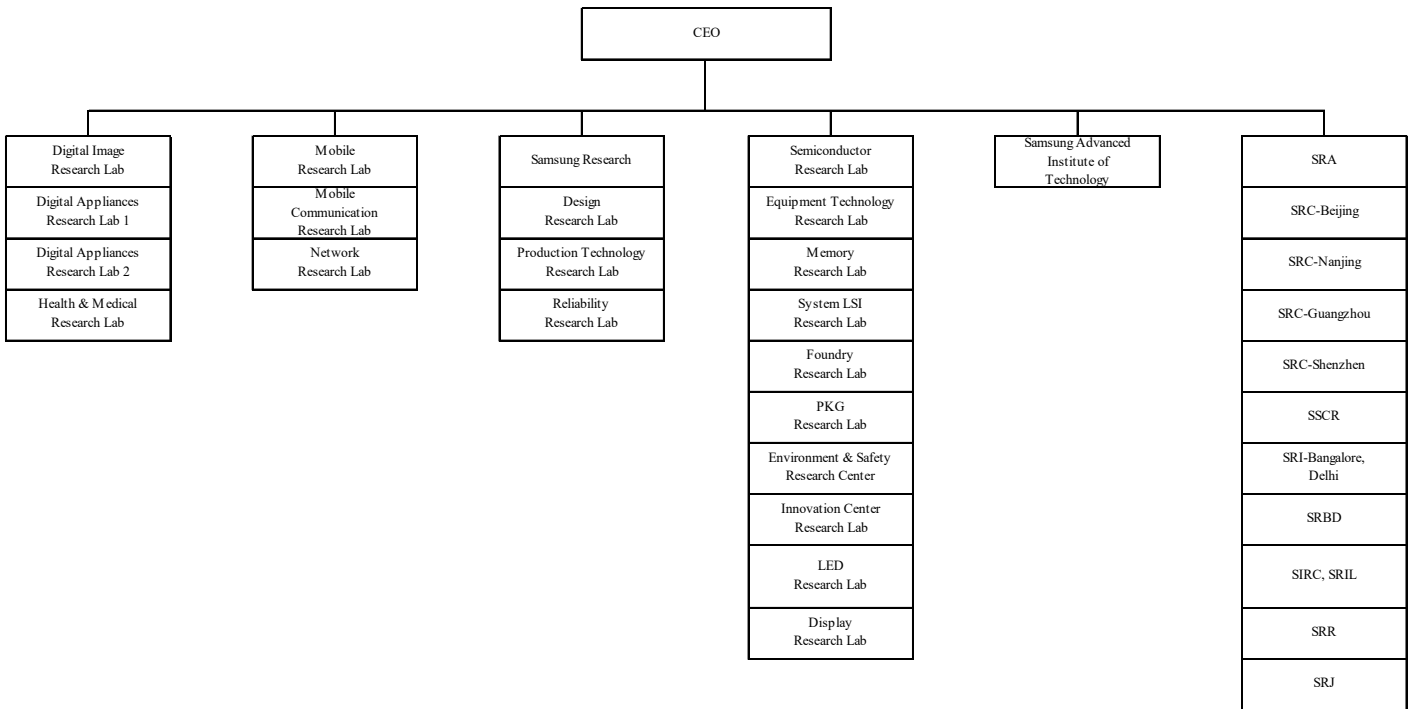
The Company operates three levels of R&D organizations: R&D teams of business units under each Division that develop market-ready technologies with a 1–2 year outlook; research institutes of each Division that develop mid- to long-term technology with a 3–5 year outlook; and the Samsung Advanced Institute of Technology, which develops core technology as seeds for future growth engines.

Samsung Advanced Institute of Technology is the central research institute of Samsung Electronics that has been established to lead the Company into the future and serve as an incubator of cutting-edge technology. It has a creative R&D system and provides R&D direction for promising growth sectors at the Company level, exploring future growth engines and strengthening technological competitiveness of core businesses.

(Overseas)

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

The Company has established AI centers in Cambridge (United Kingdom), Moscow (Russia), Toronto (Canada), Montreal (Canada), and New York (United States), so our global team of researchers can collaborate with international experts to strengthen capabilities in AI technology.



As of March 31, 2022.

D. R&D results

The Company's key R&D results by organization in 1Q22 are as follows:

DX Division	
Research project	Details
Neo QLED 8K	• Release of ultra-high-definition, slim 8K TV based on mini LED
Neo QLED 4K	• Rollout of three series and seven sizes based on mini LED
Grande AI Washer	• Release of 24kg Grande AI Washer that features a pet-care cycle / 20kg Grande AI Dryer
Galaxy S22	• Rollout of Galaxy S22 · S22+ · S22 Ultra
Galaxy Tab	• Release of Galaxy Tab S8 · S8+ · S8 Ultra
Galaxy A	• Rollout of Galaxy A23 LTE • Launch of Galaxy A13 LTE · 5G
DS Division	
Research project	Details
DRAM for mobile	• Development of industry's first LPDDR5X DRAM
Exynos	• Release of Exynos 2200, a premium mobile AP
LSI	• Release of single-chip fingerprint security IC (S3B512C) for biometric payment cards
SDC	
Research project	Details
QD-Display	• QD-Display (55" UHD, 65" UHD) for TV • QD-Display (34" QHD) for monitor

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 215,228 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 Mar 31, 2022]

(Unit: No. of patents)

	Korea	US	Europe	China	Japan	Others	Total
Number	47,717	84,668	40,489	19,695	9,002	13,657	215,228

In 1Q22, the Company invested KRW 5.9 trillion in R&D and registered 2,252 domestic and 1,996 US patents.

(Number of patent registrations per year)

(Unit: No. of patents)

	1Q22	2021	2020
Korea	2,252	8,437	6,648
US	1,996	8,565	8,520

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 signed licensing agreements with Cisco (signed in January 2014), Google (January 2014), Qualcomm (January 2018), Nokia (October 2018), Microsoft (February 2019), Sharp (July 2019), and Ericsson (May 2021) 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 1Q22, the Company acquired 72 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 (eg, EU WEEE Directive)
2. limit on the use of harmful substances (eg, EU RoHS Directive, REACH Regulation)
3. regulation on energy efficiency (eg, 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 Low Carbon, Green Growth
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)

The Company is a “controlled entity” according to Article 42 (Coping with Climate Change and Management of Targets for Energy) Paragraph 6 of Korea’s “Framework Act on Low Carbon, Green Growth”. Thus, the Company has been reporting the amount of greenhouse gas emission and energy consumption, verified by a third-party, to the authorities and disclosing it to stakeholders according to Article 44 (Reporting on Quantity of Greenhouse Gases Emitted and Quantity of Energy Consumed) of the same Act since May 2011.

The reported amount of greenhouse gas emission and energy use are provided below:

(Unit: tCO₂-eq, TJ)

	2021	2020	2019
Greenhouse gas (tCO ₂ -eq)	19,268,916	17,234,522	15,998,397
Energy (TJ)	274,298	255,990	242,345

On a consolidated basis.

Domestic manufacturing facilities, office buildings, buildings owned by the Company, leased buildings, etc.

Reported Greenhouse gas emission excludes ozone depletion substances (ODS).

Amounts may differ based on results of governmental evaluations on emissions.

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

C. Current status of each division

[DX Division]

□ Industry overview

TVs are key products of the DX Division, and the TV industry went through continual technological developments. The black-and-white TV was first developed in 1926, and in 1954, RCA started mass production and sales of 21" color TVs. Such developments have led to the creation of products such as the Trinitron CRT (1967) and flat CRT (1996). As the penetration rate in major countries reached over 90%, the growth of the CRT TV industry stagnated. The industry regained strong growth momentum following the launch of flat panel TVs (“FPTVs”) like LCDs and PDPs, especially with the expansion of digital broadcasting. FPTVs replaced CRT sets on the back of their enhanced design, picture quality, etc., combined with a sharp decline in prices.

The year 2010 saw the launch of 3D TVs, and the rise of internet video services along with increased consumer interest in smart devices from 2011 to 2012 led to the birth of the smart TV market. The evolution continued with the launches of Quantum Dot QLED TVs in 2017, boasting significantly enhanced resolution and picture quality, and with commercialization of 8K and Micro LED TVs.

Mobile phones are another key product of the DX Division, and 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 ones, using 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 becoming commonplace and was used in 75% of phones sold in 2021 (*Strategy Analytics*, March 2022).

Fifth generation mobile communication services, which will lead innovation alongside the fourth industrial revolution, was successfully launched in Korea and the US, and is now commercialized globally. As a result, 5G smartphones are accelerating the development of an ecosystem of mashup services and related industries, with the sales increasing sharply to 610 million units in 2021 from 270 million units in 2020 (*Strategy Analytics*, February 2022).

The smartphone industry has grown significantly since 2007. In 2021, the smartphone portion of total HHP sales volume was approximately 77%, and the feature phone portion of the total was approximately 23%, with the latter related to demand in developing nations (*Strategy Analytics*, February 2022). For 2022, the penetration rate of smartphones is forecasted to reach 53%, rising slightly from 52% in 2021 (*Strategy Analytics*, December 2021).

Also, as the smartphone market shows high saturation, the importance of competitive software—such as applications, UX, games, media, advertisements, mobile payments, AI, and AR—is rising alongside that of competitive hardware, which includes high-performance APs, large screen AMOLED displays, foldable form factors, multiple cameras, sensors, waterproof & dustproof features, biometric recognition, and more.

□ Market condition

In 2021, market players continued to strive for innovations in picture quality, sound, and form factor to create demand for premium TVs, but TV demand decreased year-on-year in 2021 to approximately 213.54 million units due to the impacts of disruptions in global supply chains and logistics. In 2022, TV demand is projected to continue to decline, falling to 211.64 million units due to aggravated inflation triggered by increased supply instability of raw materials (*Omdia*; projections in 4Q21).

< Market share of TV >

Product	1Q22	2021	2020
TV	29.9%	29.5%	31.9%

Global market share in revenue; data for 1Q22 is estimates from the Company.

Moreover, the smartphone market is projected to grow from 1.36 billion units in 2021 to 1.38 billion units in 2022 (*Strategy Analytics*; March 2022). Meanwhile, the tablet market, which contracted due to weak replacement demand, is projected to remain at a similar level from 180 million units in 2021 to 170 million in 2022 due to a continuation of contactless demand triggered by COVID-19 (*Strategy Analytics*; March 2022).

< Market share of Smartphone >

Product	1Q22	2021	2020
Smartphone	23.7%	20.0%	19.6%

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

□ Business condition

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

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

In 2020, we enhanced our leadership and dominance in the market with 4K and 8K QLED TVs and new Lifestyle TVs such as The Terrace, The Premiere and The Sero despite a global economic crisis due to COVID-19.

In 2021, we expanded our premium product lineup by launching Neo QLED TVs featuring significantly upgraded contrast and picture quality. Moreover, the sales portion of Lifestyle products and sound bars is increasing, and a rising number of companies are participating in various smart ecosystems, including TV plus, home training, and games. Since 2021, we have been particularly strengthening our efforts toward becoming a more eco-friendly business, from raw materials to packaging, and we are enhancing accessibility to help the visually impaired and hard of hearing to conveniently use our products.

In 2022, we expect to increase our market share in the premium, ultra-large, over 75” TV market centering on innovative Neo QLED 8K technologies and further reinforce our Lifestyle TV lineups by introducing The Freestyle. We will actively adopt eco-friendly technology and apply materials recycled from plastic recovered from the ocean in some of our products, and we are aiming to adopt an eco-friendly remote control to all models of new products.

Furthermore, SEC has always been at forefront of the HHP market, and for smartphones in particular, we have maintained leadership in the global market for eleven consecutive years.

To solidify our status in the overall mobile market, we are striving to improve our current products—including tablets, wearables, and accessories—while growing businesses in areas with high potential, such as the service, online, and B2B sectors.

For smartphones, we are establishing optimal portfolios for each region, accounting for varying market conditions and the competitive environment, offering a wide smartphone lineup ranging from mass-market to premium devices. We have been providing premium smartphones and delivering differentiated user experiences that can meet customer needs via our cutting-edge technology, which includes Dynamic AMOLED 2X (120Hz) displays and innovative Contour Cut designs as well as large-screen Infinity Displays, digital key and content sharing using UWB (ultra wideband), water- and dust-proofing, high-speed cable and wireless charging, ultrasonic fingerprint-on-display (FoD), high-resolution and optical zoom camera with AI technology, 8k video recording, among others. In 2019, we secured early leadership in the 5G market with the release of the world's first 5G smartphone while also creating a new market with Galaxy Fold, enabled by foldable displays. In 2020, we continued to lead the mainstreaming of foldable phones with the launch of Galaxy Z Flip, a new form factor that folds from top down, and a further evolved edition Galaxy Z Fold 2.

In 2021, we released the third generation Galaxy Z Series with significantly enhanced durability based on unrivaled craftsmanship. Galaxy Z Fold 3 and Galaxy Z Flip 3 provide the ultimate user experience by offering increased convenience and more innovative technologies, including IPX8 water resistance—a first for a foldable smartphone—enhanced display durability of up to 80% compared to the previous generation, verified folding durability to withstand folding 200,000 times, an under display camera, multitasking, Multi Active Window, auto framing, and Dual Preview.

To respond to an ever-changing market as well as customer needs, we are strengthening product competitiveness by introducing innovative features such as 5G, quad cameras, large infinity displays, and high-capacity batteries even to mid-range-and-below products.

We provide our smartphone users with a wider and more convenient experience via our other products, which include premium tablets that feature multitasking of large-screen display, wearable devices, including smart watches equipped with numerous innovative fitness and wellness functions, wireless earphones that provide rich and quality sound, and other various Galaxy Eco products, including wireless quick charging stands.

Not content to dwell on our achievements in hardware, we have been focusing on delivering new and helpful services like Samsung Pay, Samsung Health, and SmartThings. To deliver a consistent and high-quality Multi-Device Experience, we are adding Bixby features to a suite of products in addition to smartphones, including TVs, refrigerators, air conditioners, etc.

Moreover, we are strengthening strategic partnerships to expand our ecosystem. As always, we will continue to invest in any field that has growth potential, with current targets including but not limited to 5G, AI, IoT, cloud, AR, digital wallet, and mobile B2B, while also leveraging our superior R&D capabilities to keep delivering new value to customers.

[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 the 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 SoCs for smartphones and tablets, image sensors, and DDIs (display driver ICs) for OLED.

The Foundry Business makes customized semiconductors for other 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. Due to increasing difficulty in semiconductor process and growing investment cost, the number of fabless semiconductor companies is growing, and the Foundry Business is in charge of consignment semiconductor production for such fabless companies.

□ Market condition

The memory market is showing solid demand across overall applications thanks to growth in all aspects of contactless industry—including production, distribution, and consumption—amid an accelerated digital transformation; and also to increased use of IT devices and data in an era of a “new normal.”

While server demand is strong, backed by increased investments mainly by datacenters, and memory content-per-box is growing following the release of new CPUs, PC demand has been solid mainly for advanced products and mobile shipments are recovering thanks to rising penetration of 5G in emerging markets, such as India and Africa, thus driving demand growth. However, market conditions are marked by persisting uncertainties due to possible volatility in IT demand triggered by concerns over aggravated macro risks, such as the Russia-Ukraine war and worsening inflation, a limited supply of key IC (integrated circuit) components combined with effects of global supply chain disruptions.

The Company is endeavoring to bolster market competitiveness by leveraging its dominant position in product competitiveness via releases of differentiated, high-capacity products; and it is addressing customer demand in a timely manner by preemptively identifying various issues, including supply chain disruptions that may affect customer demand, to respond to uncertain market conditions.

< Market share of DRAM >

Product	1Q22	2021	2020
DRAM	43.5%	43.0%	42.7%

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

□ Business condition

In the memory business, we continue to maintain cost competitiveness via our leadership in technology, operate a product portfolio centered on high-value/high-capacity products, and strengthen product competitiveness and our capabilities to supply products that customers want in a timely manner.

We will solidify our leadership position in next-generation growth sectors, such as 5G and AI, by preemptively establishing the mass-production system for next-generation DRAM featuring the world’s first full-fledged application of multi-step EUV; and by strengthening product and cost competitiveness by establishing a lineup of advanced products, including SSDs with 7th-generation V-NAND.

Moreover, even amid uncertain market conditions, we will expand offerings of differentiated products with our advanced nodes and respond optimally for each application by utilizing various product lineups, thereby continuing to spearhead the market as a top memory company.

System LSI currently has limited foundry supply compared to component demand from customers due to the aggravated global shortage of semiconductors. Under these conditions, the Company is growing revenue by increasing ASP, and it is addressing rising demand by expanding supply via strengthening the supply chain and diversifying suppliers. Furthermore, Samsung is identifying new business opportunities by expanding customer base via bolstering our lineup of flagship products, securing the production capabilities and diversity of our fabs, and developing and converging new technologies with existing technologies to enhance product competitiveness.

In the Foundry business, there are signs of a contraction in mobile/PC demand centered on China due to the spread of Omicron variant of COVID-19 and a global economic slowdown, but a supply shortage is continuing on the back of increased penetration of mobile 5G, and strong HPC demand, and the Company is focusing on securing supply continuity. For our advanced nodes, we are mass-producing 5-nano/4-nano products, and we are preparing to diversify our application portfolio by securing technology completion in advance and by developing derivative processes. For legacy processes, we are focusing on securing process competitiveness by improving technology and cost efficiency. Through this, we will actively pursue expanding the market and customers, while enhancing profitability via pricing policies that consider supply and demand.

[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) panels 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 adopted in other applications such as foldable, rollable, and automotive. Growth of the OLED market is widely expected to keep accelerating.

A TFT-LCD panel is a liquid crystal based display that features a thinner and lighter profile while offering high resolution. It has a wide range of potential applications in devices of all sizes and functionality, from portable mobile devices to large-size TVs featuring bright, high-resolution images. The market for large-panel TFT-LCD grew rapidly as their use moved from laptops initially to monitors and then to TVs. Recently however, high saturation has caused growth to slow.

□ Market condition

In 2021, the smartphone display-panel market is projected to decrease from 1.74 billion units in 2021 to 1.62 billion units in 2022. However, the market for smartphone-use OLED panels is expected to increase from 0.61 billion units in 2021 to 0.68 billion units in 2022, and the OLED portion of smartphone panels is expected to increase from 35% in 2021 to 42% in 2022 (*Omdia*, January 2022).

The large display panel market is anticipated to increase from 0.98 billion units in 2021 to 1.02 billion units in 2022. Demand growth for monitors and laptops is expected to continue in 2022 as expanded contactless activities spurred by Covid-19 continue to expand.

< Market share of smartphone panel >

Product	1Q22	2021	2020
Smartphone panels	50.1%	51.4%	44.8%

Global market share in revenue; data for 1Q22 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 OLED IT products with differentiated technologies and designs.

In 2022, growth of smartphone market is projected to be limited amid changes in the macro environment. We will expand the application of new technologies, such as UPC (under panel camera), high refresh rate, and tech related to energy efficiency and performance, in line with the needs of our customers while also enhancing cost competitiveness to continue to increase adoption of OLED panels. In addition, we will diversify our mobile panel business, which is currently concentrated on smartphones, by expanding our product portfolio to include IT, gaming, and automotive products, and fortify our business leadership.

In the large panel business, we will begin full-fledged mass production of QD display with differentiated technology and secure a strong foothold in the premium product group.

[Harman]

□ Industry overview

Harman competes in the automotive and lifestyle audio industries.

As consumers want cutting-edge technologies for automotive components (digital cockpit, telematics, car audio, etc.), car makers demand latest technologies in areas such as car sharing and autonomous driving. As a result, competition is particularly fierce in the connectivity and entertainment solution markets between dominant players (eg, Alpine, Aptiv, Continental, Mitsubishi, and Panasonic).

The car audio business provides not only system solutions but also audio components (including speakers and amplifiers), and it is another segment where fierce competition between several major players (eg, Bose, Pioneer, and Panasonic) is expected to drive technological advances as each firm introduces unique sound-management solutions. Competition is expected to remain intense.

Lifestyle audio business has two segments: consumer audio and professional audio solutions. Consumer audio (portable speakers, headphones, connected audio solutions, etc.) is fragmented and a handful of companies (Amazon, Beats, Bose, Ultimate Ears, etc.) are showing early signs of dominance. We expect competition to remain intense as new players try to make inroads, given the saturated market for connected homes and smart speakers. In particular, for True Wireless headphones, for which smartphone manufacturers dominate market share, is expected to grow explosively.

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

□ Market condition

In 2021, global automobile production, which directly influences the automotive component business, increased by 3% compared to 2020.

In the automotive component market, short supply of semiconductors disrupted automobile production in 2021, which negatively affected Harman as well, but demand for lifestyle audio products partially recovered as the Covid-19 situation improved.

Global automobile production in 2022 is forecast to increase by 7% year-on-year (*2022 IHS Global Light Vehicle Production Forecast*).

< Market share of digital cockpit >

Product	1Q22	2021	2020
Digital cockpits	24.7%	25.3%	27.5%

Digital cockpits refer to the digital automotive component which enables safe driving environment via infotainment system, etc.
Company estimates based on I.H.S and LMC data (by unit).

□ Business condition

Harman is positioned to stay atop the automotive market and plans to continue to leverage its wide variety of brands to outfit vehicles ranging from mass-market thorough to luxury models, while also maintaining the quality that is synonymous with Harman brands. Additionally, Harman’s relentless pursuit of innovation in the audio and connectivity spaces will help ensure the development of thriving relationships with automakers.

Additionally, Harman has continued to develop its Connected Services business with industry leading OTA (Over the Air) and software servicing products.

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

In 2020, the COVID-19 pandemic created a challenging business environment, marked by halt in automobile production, a decline in daily travel and thus potential consumers, the closing of retailers, etc. The professional audio solution business, in particular, had adverse impacts of a reduction in the number of large-scale gatherings and events. We have adopted various ways to reduce costs from the onset of the COVID-19 pandemic, and we will redirect savings to other investments to compete more effectively in the market.

D. Financial summary, by organization

In 1Q22 by organization, DX reported net sales of KRW 48,068.7 billion (61.8%). DS contributed approximately 34.5% of net sales KRW 26,867.4 billion and SDC reported net sales of KRW 7,970.5 billion (10.2%). Harman reported net sales of KRW 2,666.3 billion (3.4%).

In 1Q22, the DX Division accounted for 32.3% of total operating profit with an operating profit of KRW 4,555.5 billion; the DS Division accounted for 59.8% with KRW 8,450.1 billion; and SDC reported total operating profit of KRW 1,092.9 billion (7.7%). Harman posted an operating profit of KRW 101.6 billion (0.7%).

(KRW 100 mil)

Organization	Classification	1Q22		2021		2020	
		Amount	Portion of corresponding total	Amount	Portion of corresponding total	Amount	Portion of corresponding total
DX Division	Sales	480,687	61.8%	1,662,594	59.5%	1,489,135	62.9%
	Operating profit	45,555	32.3%	173,866	33.7%	151,520	42.1%
	Total asset	2,617,596	43.2%	2,479,832	42.0%	2,303,623	43.6%
DS Division	Sales	268,674	34.5%	953,872	34.1%	740,540	31.3%
	Operating profit	84,501	59.8%	291,920	56.5%	188,062	52.2%
	Total asset	2,301,502	38.0%	2,258,223	38.3%	1,885,692	35.7%
SDC	Sales	79,705	10.2%	317,125	11.3%	305,857	12.9%
	Operating profit	10,929	7.7%	44,574	8.6%	22,369	6.2%
	Total asset	649,992	10.7%	668,836	11.3%	661,929	12.5%
Harman	Sales	26,663	3.4%	100,399	3.6%	91,837	3.9%
	Operating profit	1,016	0.7%	5,991	1.2%	555	0.2%
	Total asset	156,327	2.6%	158,874	2.7%	147,020	2.8%

Includes inter-divisional transactions.

Figures for 2020 and 2021 were adjusted to align with those of 2022, reflecting the organizational changes in December 2021.

□ 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-sales 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-sales ratio, pre-tax profit, etc.).

III. Financial Affairs

1. Financial statements

A. Consolidated financial statements

Classification	(KRW mil)		
	First quarter of 54th March 31, 2022	53rd December 31, 2021	52nd December 31, 2020
Current assets	232,369,082	218,163,185	198,215,579
- Cash and cash equivalents	48,944,982	39,031,415	29,382,578
- Short-term financial instruments	75,121,426	81,708,986	92,441,703
- Other current financial assets	1,808,281	3,409,791	2,828,562
- Trade receivables	44,464,968	40,713,415	30,965,058
- Inventories	47,590,731	41,384,404	32,043,145
- Others	14,438,694	11,915,174	10,554,533
Non-current assets	206,957,877	208,457,973	180,020,139
- Other non-current financial assets	14,697,680	15,491,183	13,778,185
- Investment in associates and joint ventures	8,841,605	8,932,251	8,076,779
- Property, plant, and equipment	149,618,019	149,928,539	128,952,892
- Intangible assets	20,010,694	20,236,244	18,468,502
- Others	13,789,879	13,869,756	10,743,781
Total assets	439,326,959	426,621,158	378,235,718
Current liabilities	90,463,701	88,117,133	75,604,351
Non-current liabilities	33,572,339	33,604,094	26,683,351
Total liabilities	124,036,040	121,721,227	102,287,702
Equity attributable to owners of the parent company	306,391,870	296,237,697	267,670,331
- Capital stock	897,514	897,514	897,514
- Share premium	4,403,893	4,403,893	4,403,893
- Retained earnings	301,743,152	293,064,763	271,068,211
- Others	-652,689	-2,128,473	-8,699,287
Non-controlling interests	8,899,049	8,662,234	8,277,685
Total Equity	315,290,919	304,899,931	275,948,016
	Jan-Mar 2022	Jan-Dec 2021	Jan-Dec 2020
Revenue	77,781,498	279,604,799	236,806,988
Operating profit	14,121,409	51,633,856	35,993,876
Profit for the period	11,324,628	39,907,450	26,407,832
- Owners of the parent company	11,129,094	39,243,791	26,090,846
- Non-controlling interests	195,534	663,659	316,986
Basic earnings per share (KRW)	1,638	5,777	3,841
Diluted earnings per share (KRW)	1,638	5,777	3,841
Number of companies subject to consolidation accounting	232	229	242

Data shown in conformity with K-IFRS.

Please refer to the footnotes of the 51st-53rd Consolidated Audit Report for the calculation of basic earnings per share (ordinary shares).

B. Separate financial statements

(KRW mil)

Classification	First quarter of 54th	53rd	52nd
	March 31, 2022	December 31, 2021	December 31, 2020
Current assets	81,466,028	73,553,416	73,798,549
- Cash and cash equivalents	9,129,795	3,918,872	989,045
- Short-term financial instruments	12,802,352	15,000,576	29,101,284
- Trade receivables	34,711,648	33,088,247	24,736,740
- Inventories	18,708,199	15,973,053	13,831,372
- Others	6,114,034	5,572,668	5,140,108
Non-current assets	177,887,983	177,558,768	155,865,878
- Other non-current financial assets	1,590,164	1,664,667	1,542,766
- Subsidiary, associate, and joint venture investments	56,196,646	56,225,599	56,587,548
- Property, plant and equipment	104,032,562	103,667,025	86,166,924
- Intangible assets	8,333,496	8,657,456	7,002,648
- Others	7,735,115	7,344,021	4,565,992
Total assets	259,354,011	251,112,184	229,664,427
Current liabilities	56,799,776	53,067,303	44,412,904
Non-current liabilities	4,278,465	4,851,149	1,934,799
Total liabilities	61,078,241	57,918,452	46,347,703
- Capital stock	897,514	897,514	897,514
- Share premium	4,403,893	4,403,893	4,403,893
- Retained earnings	193,973,301	188,774,335	178,284,102
- Others	-998,938	-882,010	-268,785
Total Equity	198,275,770	193,193,732	183,316,724
Evaluation method of subsidiary, associate, and joint venture investment securities	Cost methods	Cost methods	Cost methods
	Jan-Mar 2022	Jan-Dec 2021	Jan-Dec 2020
Revenue	56,724,258	199,744,705	166,311,191
Operating profit	9,151,831	31,993,162	20,518,974
Profit for the period	7,651,943	30,970,954	15,615,018
Basic earnings per share (KRW)	1,127	4,559	2,299
Diluted earnings per share (KRW)	1,127	4,559	2,299

Data shown in conformity with K-IFRS.

Please refer to the footnotes of the 51st-53rd Consolidated Audit Report for the calculation of basic earnings per share (ordinary shares).

2. Consolidated financial statements

Samsung Electronics Co., Ltd. and its subsidiaries

INTERIM CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

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

	Notes	March 31, 2022 KRW	December 31, 2021 KRW	March 31, 2022 USD	December 31, 2021 USD
Assets					
Current assets					
Cash and cash equivalents	3, 25	48,944,982	39,031,415	40,637,090	32,406,246
Short-term financial instruments	3, 25	75,121,426	81,708,986	62,370,360	67,839,752
Short-term financial assets at amortized cost	3, 25	1,755,225	3,369,034	1,457,294	2,797,176
Short-term financial assets at fair value through profit or loss	3, 4, 25	53,056	40,757	44,050	33,839
Trade receivables	3, 25	44,464,968	40,713,415	36,917,511	33,802,744
Non-trade receivables	3, 25	5,652,435	4,497,257	4,692,994	3,733,895
Prepaid expenses		3,042,846	2,336,252	2,526,355	1,939,698
Inventories	5	47,590,731	41,384,404	39,512,709	34,359,840
Other current assets	3, 25	5,743,413	5,081,665	4,768,531	4,219,107
		232,369,082	218,163,185	192,926,894	181,132,297
Non-current assets					
Financial assets at fair value through other comprehensive income	3, 4, 25	13,201,558	13,965,839	10,960,733	11,595,286
Financial assets at fair value through profit or loss	3, 4, 25	1,496,122	1,525,344	1,242,171	1,266,433
Investment in associates and joint ventures	6	8,841,605	8,932,251	7,340,836	7,416,096
Property, plant and equipment	7	149,618,019	149,928,539	124,221,946	124,479,759
Intangible assets	8	20,010,694	20,236,244	16,614,091	16,801,356
Net defined benefit assets	11	2,430,319	2,809,590	2,017,798	2,332,692
Deferred income tax assets		4,178,984	4,261,214	3,469,646	3,537,918
Other non-current assets	3, 25	7,180,576	6,798,952	5,961,749	5,644,903
		206,957,877	208,457,973	171,828,970	173,074,443
Total assets		439,326,959	426,621,158	364,755,864	354,206,740

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, in thousands of US dollars (Note 2.3))

	Notes	March 31, 2022 KRW	December 31, 2021 KRW	March 31, 2022 USD	December 31, 2021 USD
Liabilities and Equity					
Current liabilities					
Trade payables	3, 25	15,133,906	13,453,351	12,565,086	11,169,787
Short-term borrowings	3, 9, 25	13,885,889	13,687,793	11,528,907	11,364,435
Other payables	3, 25	18,301,154	15,584,866	15,194,727	12,939,500
Advances received	14	1,458,905	1,224,812	1,211,271	1,016,913
Withholdings	3, 25	934,237	1,294,052	775,660	1,074,400
Accrued expenses	3, 14, 25	25,100,718	27,928,031	20,840,137	23,187,544
Current income tax liabilities		7,193,754	6,749,149	5,972,691	5,603,553
Current portion of long-term liabilities	3, 9, 10, 25	864,905	1,329,968	718,097	1,104,220
Provisions	12	5,910,808	5,372,872	4,907,511	4,460,884
Other current liabilities	3, 14, 25	1,679,425	1,492,239	1,394,360	1,238,948
		90,463,701	88,117,133	75,108,447	73,160,184
Non-current liabilities					
Debentures	3, 10, 25	518,856	508,232	430,786	421,965
Long-term borrowings	3, 9, 25	2,780,707	2,866,156	2,308,711	2,379,656
Long-term other payables	3, 25	2,566,573	2,991,440	2,130,924	2,483,675
Net defined benefit liabilities	11	476,903	465,884	395,954	386,805
Deferred income tax liabilities		23,705,374	23,198,205	19,681,638	19,260,556
Long-term provisions	12	2,249,619	2,306,994	1,867,770	1,915,406
Other non-current liabilities	3, 14, 25	1,274,307	1,267,183	1,058,006	1,052,093
		33,572,339	33,604,094	27,873,789	27,900,156
Total liabilities		124,036,040	121,721,227	102,982,236	101,060,340

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, in thousands of US dollars (Note 2.3))

	Notes	March 31, 2022 KRW	December 31, 2021 KRW	March 31, 2022 USD	December 31, 2021 USD
Equity attributable to owners of the Company					
Preference shares	15	119,467	119,467	99,189	99,189
Ordinary shares	15	778,047	778,047	645,982	645,982
Share premium		4,403,893	4,403,893	3,656,379	3,656,379
Retained earnings	16	301,743,152	293,064,763	250,525,451	243,320,126
Other components of equity	17	(652,689)	(2,128,473)	(541,903)	(1,767,188)
		306,391,870	296,237,697	254,385,098	245,954,488
Non-controlling interests		8,899,049	8,662,234	7,388,530	7,191,912
Total equity		315,290,919	304,899,931	261,773,628	253,146,400
Total liabilities and equity		439,326,959	426,621,158	364,755,864	354,206,740

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, in thousands of US dollars (Note 2.3))

	Notes	For the three-month periods ended March 31,			
		2022	2021	2022	2021
		KRW	KRW	USD	USD
Revenue	26	77,781,498	65,388,503	64,578,913	54,289,498
Cost of sales	18	47,072,057	41,499,985	39,082,074	34,455,803
Gross profit		30,709,441	23,888,518	25,496,839	19,833,695
Selling and administrative expenses	18, 19	16,588,032	14,505,650	13,772,389	12,043,469
Operating profit	26	14,121,409	9,382,868	11,724,450	7,790,226
Other non-operating income	20	700,193	299,742	581,343	248,864
Other non-operating expense	20	453,110	324,240	376,199	269,204
Share of net profit of associates and joint ventures	6	232,477	147,519	193,016	122,479
Financial income	21	3,502,189	2,238,638	2,907,730	1,858,653
Financial expense	21	3,033,318	1,993,882	2,518,445	1,655,442
Profit before income tax		15,069,840	9,750,645	12,511,895	8,095,576
Income tax expense	22	3,745,212	2,608,960	3,109,503	2,166,116
Profit for the period		11,324,628	7,141,685	9,402,392	5,929,460
Profit attributable to					
Owners of the Company		11,129,094	7,092,786	9,240,048	5,888,861
Non-controlling interests		195,534	48,899	162,344	40,599
Earnings per share (in Korean won, in US dollars)	23				
- Basic		1,638	1,044	1.36	0.87
- Diluted		1,638	1,044	1.36	0.87

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, in thousands of US dollars (Note 2.3))

	Notes	For the three-month periods ended March 31,			
		2022	2021	2022	2021
		KRW	KRW	USD	USD
Profit for the period		11,324,628	7,141,685	9,402,392	5,929,460
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	(604,180)	1,885,011	(501,627)	1,565,050
Share of other comprehensive income of associates and joint ventures, net of tax	17	3,752	14,425	3,115	11,977
Remeasurement of net defined benefit liabilities (assets), net of tax	17	(62,888)	(32,739)	(52,213)	(27,182)
Items that may be reclassified subsequently to profit or loss:					
Share of other comprehensive loss of associates and joint ventures, net of tax	17	(260,583)	(53,921)	(216,352)	(44,768)
Gain on overseas business translation, net of tax	17	2,437,033	2,457,265	2,023,372	2,040,170
Gain on valuation of cash flow hedge derivatives	17	6,342	29,085	5,267	24,148
Other comprehensive income for the period, net of tax		1,519,476	4,299,126	1,261,562	3,569,395
Total comprehensive income for the period		12,844,104	11,440,811	10,663,954	9,498,855
Comprehensive income attributable to:					
Owners of the Company		12,607,150	11,221,179	10,467,220	9,316,503
Non-controlling interests		236,954	219,632	196,734	182,352

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)

2021 KRW	Notes	Preference shares	Ordinary shares	Share premium	Retained earnings	Other components of equity	Accumulated other comprehensive income attributable to assets held-for-sale	Equity attributable to owners of the parent company	Non-controlling interests	Total
Balance as of January 1, 2021		119,467	778,047	4,403,893	271,068,211	(8,687,155)	(12,132)	267,670,331	8,277,685	275,948,016
Profit for the period		-	-	-	7,092,786	-	-	7,092,786	48,899	7,141,685
Gain on valuation of financial assets at fair value through other comprehensive income, net of tax		-	-	-	1,029,405	727,402	-	1,756,807	128,204	1,885,011
Share of other comprehensive loss of associates and joint ventures, net of tax		-	-	-	-	(25,556)	-	(25,556)	(13,940)	(39,496)
Gain on overseas business translation, net of tax		-	-	-	-	2,400,810	-	2,400,810	56,455	2,457,265
Remeasurement of net defined benefit liabilities (assets), net of tax		-	-	-	-	(32,753)	-	(32,753)	14	(32,739)
Gain on valuation of cash flow hedge derivatives		-	-	-	-	29,085	-	29,085	-	29,085
Reclassification to assets held-for-sale		-	-	-	-	(28,187)	28,187	-	-	-
Total comprehensive income for the period		-	-	-	8,122,191	3,070,801	28,187	11,221,179	219,632	11,440,811
Dividends declared		-	-	-	(13,124,260)	-	-	(13,124,260)	(310)	(13,124,570)
Capital transactions under common control		-	-	-	-	-	-	-	(288)	(288)
Others		-	-	-	-	4	-	4	4,618	4,622
Total transactions with owners		-	-	-	(13,124,260)	4	-	(13,124,256)	4,020	(13,120,236)
Balance as of March 31, 2021		119,467	778,047	4,403,893	266,066,142	(5,616,350)	16,055	265,767,254	8,501,337	274,268,591

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))

2021 USD	Notes	Preference shares	Ordinary shares	Share premium	Retained earnings	Other components of equity	Accumulated other comprehensive income attributable to assets held-for-sale	Equity attributable to owners of the parent company	Non-controlling interests	Total
Balance as of January 1, 2021		99,189	645,982	3,656,379	225,057,256	(7,212,603)	(10,073)	222,236,130	6,872,636	229,108,766
Profit for the period		-	-	-	5,888,861	-	-	5,888,861	40,599	5,929,460
Gain on valuation of financial assets at fair value through other comprehensive income, net of tax		-	-	-	854,674	603,933	-	1,458,607	106,443	1,565,050
Share of other comprehensive loss of associates and joint ventures, net of tax		-	-	-	-	(21,217)	-	(21,217)	(11,574)	(32,791)
Gain on overseas business translation, net of tax		-	-	-	-	1,993,298	-	1,993,298	46,872	2,040,170
Remeasurement of net defined benefit liabilities (assets), net of tax		-	-	-	-	(27,194)	-	(27,194)	12	(27,182)
Gain on valuation of cash flow hedge derivatives		-	-	-	-	24,148	-	24,148	-	24,148
Reclassification to assets held-for-sale		-	-	-	-	(23,403)	23,403	-	-	-
Total comprehensive income for the period		-	-	-	6,743,535	2,549,565	23,403	9,316,503	182,352	9,498,855
Dividends declared		-	-	-	(10,896,556)	-	-	(10,896,556)	(257)	(10,896,813)
Capital transactions under common control		-	-	-	-	-	-	-	(239)	(239)
Others		-	-	-	-	3	-	3	3,833	3,836
Total transactions with owners		-	-	-	(10,896,556)	3	-	(10,896,553)	3,337	(10,893,216)
Balance as of March 31, 2021		99,189	645,982	3,656,379	220,904,235	(4,663,035)	13,330	220,656,080	7,058,325	227,714,405

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)

2022 KRW	Notes	Preference shares	Ordinary shares	Share premium	Retained earnings	Other components of equity	Accumulated other comprehensive income attributable to assets held-for-sale	Equity attributable to owners of the parent company	Non-controlling interests	Total
Balance as of January 1, 2022		119,467	778,047	4,403,893	293,064,763	(2,128,473)	-	296,237,697	8,662,234	304,899,931
Profit for the period		-	-	-	11,129,094	-	-	11,129,094	195,534	11,324,628
Gain (loss) on valuation of financial assets at fair value through other comprehensive income, net of tax	17	-	-	-	2,272	(615,197)	-	(612,925)	8,745	(604,180)
Share of other comprehensive income (loss) of associates and joint ventures, net of tax	17	-	-	-	-	(257,360)	-	(257,360)	529	(256,831)
Gain on overseas business translation, net of tax	17	-	-	-	-	2,404,883	-	2,404,883	32,150	2,437,033
Remeasurement of net defined benefit liabilities (assets), net of tax	17	-	-	-	-	(62,884)	-	(62,884)	(4)	(62,888)
Gain on valuation of cash flow hedge derivatives	17	-	-	-	-	6,342	-	6,342	-	6,342
Total comprehensive income for the period		-	-	-	11,131,366	1,475,784	-	12,607,150	236,954	12,844,104
Dividends declared		-	-	-	(2,452,977)	-	-	(2,452,977)	(527)	(2,453,504)
Capital transactions under common control		-	-	-	-	-	-	-	(228)	(228)
Others		-	-	-	-	-	-	-	616	616
Total transactions with owners		-	-	-	(2,452,977)	-	-	(2,452,977)	(139)	(2,453,116)
Balance as of March 31, 2022		119,467	778,047	4,403,893	301,743,152	(652,689)	-	306,391,870	8,899,049	315,290,919

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))

2022 USD	Notes	Preference shares	Ordinary shares	Share premium	Retained earnings	Other components of equity	Accumulated other comprehensive income attributable to assets held-for-sale	Equity attributable to owners of the parent company	Non-controlling interests	Total
Balance as of January 1, 2022		99,189	645,982	3,656,379	243,320,126	(1,767,188)	-	245,954,488	7,191,912	253,146,400
Profit for the period		-	-	-	9,240,048	-	-	9,240,048	162,344	9,402,392
Gain (Loss) on valuation of financial assets at fair value through other comprehensive income, net of tax	17	-	-	-	1,887	(510,775)	-	(508,888)	7,261	(501,627)
Share of other comprehensive income (loss) of associates and joint ventures, net of tax	17	-	-	-	-	(213,676)	-	(213,676)	439	(213,237)
Gain on overseas business translation, net of tax	17	-	-	-	-	1,996,679	-	1,996,679	26,693	2,023,372
Remeasurement of net defined benefit liabilities (assets), net of tax	17	-	-	-	-	(52,210)	-	(52,210)	(3)	(52,213)
Gain on valuation of cash flow hedge derivatives	17	-	-	-	-	5,267	-	5,267	-	5,267
Total comprehensive income for the period		-	-	-	9,241,935	1,225,285	-	10,467,220	196,734	10,663,954
Dividends declared		-	-	-	(2,036,610)	-	-	(2,036,610)	(438)	(2,037,048)
Capital transactions under common control		-	-	-	-	-	-	-	(189)	(189)
Others		-	-	-	-	-	-	-	511	511
Total transactions with owners		-	-	-	(2,036,610)	-	-	(2,036,610)	(116)	(2,036,726)
Balance as of March 31, 2022		99,189	645,982	3,656,379	250,525,451	(541,903)	-	254,385,098	7,388,530	261,773,628

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, in thousands of US dollars (Note 2.3))

	Notes	For the three-month periods ended March 31,			
		2022 KRW	2021 KRW	2022 USD	2021 USD
Operating activities					
Profit for the period		11,324,628	7,141,685	9,402,392	5,929,460
Adjustments	24	13,905,730	10,883,856	11,545,380	9,036,437
Changes in assets and liabilities arising from operating activities	24	(14,233,315)	(3,334,668)	(11,817,361)	(2,768,644)
Cash generated from operations		10,997,043	14,690,873	9,130,411	12,197,253
Interest received		334,026	326,714	277,329	271,258
Interest paid		(159,077)	(77,591)	(132,075)	(64,421)
Dividends received		50,084	54,930	41,583	45,606
Income tax paid		(769,007)	(1,191,848)	(638,477)	(989,544)
Net cash from operating activities		10,453,069	13,803,078	8,678,771	11,460,152
Investing activities					
Net decrease in short-term financial instruments		6,191,962	7,511,917	5,140,942	6,236,849
Net decrease (increase) in short-term financial assets at amortized cost		1,673,885	(695,948)	1,389,761	(577,818)
Net decrease (increase) in short-term financial assets at fair value through profit or loss		(12,299)	11,956	(10,211)	9,927
Disposal of long-term financial instruments		4,035,852	2,940,505	3,350,809	2,441,385
Acquisition of long-term financial instruments		(2,843,388)	(3,260,672)	(2,360,753)	(2,707,207)
Disposal of financial assets at fair value through other comprehensive income		30	1,906,245	25	1,582,680
Acquisition of financial assets at fair value through other comprehensive income		(5,594)	(56,131)	(4,644)	(46,603)
Disposal of financial assets at fair value through profit or loss		20,629	13,053	17,127	10,837
Acquisition of financial assets at fair value through profit or loss		(54,931)	(8,153)	(45,607)	(6,769)
Disposal of investment in associates and joint ventures		5,300	-	4,400	-
Acquisition of investment in associates and joint ventures		(6,100)	(14,500)	(5,065)	(12,039)
Disposal of property, plant and equipment		68,730	99,129	57,064	82,303
Acquisition of property, plant and equipment		(8,706,839)	(9,997,540)	(7,228,945)	(8,300,564)
Disposal of intangible assets		126	15	105	12
Acquisition of intangible assets		(853,443)	(671,020)	(708,580)	(557,121)
Cash outflow from business combinations		(23,237)	(5,926)	(19,293)	(4,920)
Cash inflow (outflow) from other investing activities		(127,194)	649,461	(105,604)	539,222
Net cash used in investing activities		(636,511)	(1,577,609)	(528,469)	(1,309,826)

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, in thousands of US dollars (Note 2.3))

	Notes	For the three-month periods ended March 31,			
		2022	2021	2022	2021
		KRW	KRW	USD	USD
Financing activities					
Net increase (decrease) in short-term borrowings		213,034	(400,336)	176,874	(332,383)
Increase in long-term borrowings		1,000	-	830	-
Repayment of debentures and long-term borrowings		(708,717)	(193,240)	(588,420)	(160,440)
Dividends paid		(461)	(458)	(383)	(380)
Net decrease in non-controlling interests		(202)	(289)	(168)	(240)
Net cash used in financing activities		(495,346)	(594,323)	(411,267)	(493,443)
Reclassification to assets held-for-sale	28	-	(551,129)	-	(457,581)
Effect of foreign exchange rate changes		592,355	576,996	491,809	479,056
Net increase in cash and cash equivalents		9,913,567	11,657,013	8,230,844	9,678,358
Cash and cash equivalents					
Beginning of the year		39,031,415	29,382,578	32,406,246	24,395,197
End of the period		48,944,982	41,039,591	40,637,090	34,073,555

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 includes digital TVs, refrigerators, mobile phones and communication systems. DS (Device Solutions) division includes memory, foundry, and system LSI. SDC includes display panels products. Harman division includes connected car systems, audio and visual products, enterprise automation solutions and connected services. The Company 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 231 subsidiaries, including Samsung Display and Samsung Electronics America. The Company also applies the equity method of accounting for its 41 associates and joint ventures, including Samsung Electro-Mechanics Co., Ltd.

1.2 Consolidated Subsidiaries

The consolidated subsidiaries as of March 31, 2022 are as follows:

Area	Subsidiaries	Industry	Percentage of ownership (%) ¹
	Samsung Electronics America, Inc. (SEA)	Sale of electronic devices	100.0
	Samsung International, Inc. (SII)	Manufacture of electronic devices	100.0
	Samsung Mexicana S.A. de C.V (SAMEX)	Manufacture of electronic devices	100.0
	Samsung Electronics Home Appliances America, LLC (SEHA)	Manufacture of home appliances	100.0
	Samsung Research America, Inc. (SRA)	R&D	100.0
	Samsung Next LLC (SNX)	Management of overseas subsidiaries	100.0
	Samsung Next Fund LLC (SNXF)	Technology business, venture capital investments	100.0
America	NeuroLogica Corp.	Manufacture and sale of medical equipment	100.0
	Samsung HVAC America, LLC	Sale of air conditioning products	100.0
	Joyent, Inc.	Cloud services	100.0
	Dacor Holdings, Inc.	Management of overseas subsidiaries	100.0
	Dacor, Inc.	Manufacture and sale of home appliances	100.0
	Dacor Canada Co.	Sale of home appliances	100.0
	SmartThings, Inc.	Sale of smart home electronics	100.0
	TeleWorld Solutions, Inc. (TWS)	Installation & optimization of network devices	100.0

¹ Ownership represents the Company’s ownership of the voting rights in each entity, including subsidiaries’ ownerships.

Area	Subsidiaries	Industry	Percentage of ownership (%) ¹
	Samsung Semiconductor, Inc. (SSI)	Sale of semiconductor and display panels	100.0
	Samsung Austin Semiconductor LLC (SAS)	Manufacture of semiconductors	100.0
	Samsung Oak Holdings, Inc. (SHI)	Management of overseas subsidiaries	100.0
	SEMES America, Inc.	Semiconductor equipment services	100.0
	Samsung Electronics Canada, Inc. (SECA)	Sale of electronic devices	100.0
	AdGear Technologies Inc.	Digital advertising platforms	100.0
	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, S.A. de C.V. (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
America	Samsung Electronics Venezuela, C.A. (SEVEN)	Marketing and services	100.0
	Samsung Electronics Panama. S.A. (SEPA)	Consulting	100.0
	Harman International Industries, Inc.	Holding company	100.0
	Harman Becker Automotive Systems, Inc.	Manufacture and sale of audio products, 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, R&D	100.0
	Harman Financial Group LLC	Management company	100.0
	Harman International Industries Canada Ltd.	Sale of audio products	100.0
	Harman International Mexico, S. de R.L. de C.V.	Sale of audio products	100.0
	Harman KG Holding, LLC	Management of overseas subsidiaries	100.0
	Harman Professional, Inc.	Sale of audio products, R&D	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

¹ Ownership represents the Company's ownership of the voting rights in each entity, including subsidiaries' ownerships.

Area	Subsidiaries	Industry	Percentage of ownership (%) ¹
	Samsung Electronics (UK) Ltd. (SEUK)	Sale of electronic devices	100.0
	Samsung Electronics Ltd. (SEL)	Management of overseas subsidiaries	100.0
	Samsung Semiconductor Europe Limited (SSEL)	Sale of semiconductor and display panels	100.0
	Samsung Electronics GmbH (SEG)	Sale of electronic devices	100.0
	Samsung Electronics Holding GmbH (SEHG)	Management of overseas subsidiaries	100.0
	Samsung Semiconductor Europe GmbH (SSEG)	Sale of semiconductor and display panels	100.0
	Samsung Electronics France S.A.S (SEF)	Sale of electronic devices	100.0
	Samsung Electronics Italia S.P.A. (SEI)	Sale of electronic devices	100.0
	Samsung Electronics Iberia, S.A. (SESA)	Sale of electronic devices	100.0
	Samsung Electronics Portuguesa, Unipessoal, Lda. (SEP)	Sale of electronic devices	100.0
	Samsung Electronics Hungarian Private Co., Ltd. (SEH)	Manufacture and sale of electronic devices	100.0
	Samsung Electronics Europe Logistics B.V. (SELS)	Logistics	100.0
	Samsung Electronics Benelux B.V. (SEBN)	Sale of electronic devices	100.0
	Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	Management of overseas subsidiaries	100.0
	Samsung Electronics Nordic Aktiebolag (SENA)	Sale of electronic devices	100.0
	Samsung Electronics Slovakia s.r.o. (SESK)	Manufacture of TV and monitors	100.0
	Samsung Display Slovakia s.r.o. (SDSK)	Toll processing of display panels	100.0
	Samsung Electronics Polska, SP.Zo.o (SEPOL)	Sale of electronic devices	100.0
	Samsung Electronics Poland Manufacturing SP.Zo.o (SEPM)	Manufacture of home appliances	100.0
Europe/CIS	Samsung Electronics Romania LLC (SEROM)	Sale of electronic devices	100.0
	Samsung Electronics Austria GmbH (SEAG)	Sale of electronic devices	100.0
	Samsung Electronics Switzerland GmbH (SESG)	Sale of electronic devices	100.0
	Samsung Electronics Czech and Slovak s.r.o. (SECZ)	Sale of electronic devices	100.0
	Samsung Electronics Baltics SIA (SEB)	Sale of electronic devices	100.0
	Samsung Electronics Greece S.M.S.A (SEGR)	Sale of electronic devices	100.0
	Samsung Electronics Air Conditioner Europe B.V. (SEACE)	Sale of air conditioning products	100.0
	Samsung Nanoradio Design Center (SNDC)	R&D	100.0
	Samsung Denmark Research Center ApS (SDRC)	R&D	100.0
	Samsung Cambridge Solution Centre Limited (SCSC)	R&D	100.0
	Zhilabs, S.L.	Development and sale of network solutions	100.0
	Foodient Ltd.	R&D	100.0
	Samsung Electronics Rus Company LLC (SERC)	Sale of electronic devices	100.0
	Samsung Electronics Rus Kaluga LLC (SERK)	Manufacture of TV	100.0
	Samsung Electronics Ukraine Company LLC (SEUC)	Sale of electronic devices	100.0
	Samsung R&D Institute Ukraine (SRUKR)	R&D	100.0
	Samsung Electronics Central Eurasia LLP (SECE)	Sale of electronic devices	100.0
	Samsung Electronics Overseas B.V. (SEO)	Sale of electronic devices	100.0
	Samsung R&D Institute Rus LLC (SRR)	R&D	100.0
	Samsung Electronics Caucasus Co., Ltd. (SECC)	Marketing	100.0

¹ Ownership represents the Company's ownership of the voting rights in each entity, including subsidiaries' ownerships.

Area	Subsidiaries	Industry	Percentage of ownership (%) ¹
	AKG Acoustics GmbH	Manufacture and sale of audio products	100.0
	AMX UK Limited	Sale of audio products	100.0
	Apostera GmbH	Connected Service Provider	100.0
	Apostera UA, LLC	Connected Service Provider	100.0
	Harman Audio Iberia Espana Sociedad Limitada	Sale of audio products	100.0
	Harman Automotive UK Limited	Manufacture of audio products	100.0
	Harman Becker Automotive Systems GmbH	Manufacture and sale of audio products, 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, 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.Zo.o	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
Europe/CIS	Harman Finance International GP S.a.r.l	Management of overseas subsidiaries	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, R&D	100.0
	Harman International Romania SRL	R&D	100.0
	Harman Finance International, SCA	Financing company	100.0
	Harman International s.r.o.	Manufacture of audio products	100.0
	Harman Management GmbH	Management of overseas subsidiaries	100.0
	Harman Professional Kft	Manufacture of audio products, R&D	100.0
	Harman Professional Denmark ApS	Sale of audio products, R&D	100.0
	Red Bend Software Ltd.	Software design	100.0
	Red Bend Software S.A.S	Software design	100.0
	Studer Professional Audio GmbH	Sale of audio products, R&D	100.0
	Harman Connected Services OOO	Connected service provider	100.0
	Harman RUS CIS LLC	Sale of audio products	100.0

¹ Ownership represents the Company's ownership of the voting rights in each entity, including subsidiaries' ownerships.

Area	Subsidiaries	Industry	Percentage of ownership (%) ¹
Middle East & Africa	Samsung Gulf Electronics Co., Ltd. (SGE)	Sale of electronic devices	100.0
	Samsung Electronics Turkey (SETK)	Sale of electronic devices	100.0
	Samsung Electronics Industry and Commerce Ltd. (SETK-P)	Manufacture of electronic devices	100.0
	Samsung Electronics Levant Co.,Ltd. (SELV)	Sale of electronic devices	100.0
	Samsung Electronics Maghreb Arab (SEMAG)	Sale of electronic devices	100.0
	Samsung Electronics Egypt S.A.E (SEEG)	Manufacture and sale of electronic devices	100.0
	Samsung Electronics Israel Ltd. (SEIL)	Marketing	100.0
	Samsung Electronics Tunisia S.A.R.L (SETN)	Marketing	100.0
	Samsung Electronics Pakistan (Private) Ltd. (SEPAK)	Marketing	100.0
	Samsung Electronics Saudi Arabia Ltd. (SESAR)	Sale of electronic devices	100.0
	Samsung Semiconductor Israel R&D Center, Ltd. (SIRC)	R&D	100.0
	Corephotonics Ltd.	R&D	100.0
	Samsung Electronics South Africa (Pty) Ltd. (SSA)	Sale of electronic devices	100.0
	Samsung Electronics South Africa Production (Pty) Ltd. (SSAP)	Manufacture of TV and monitors	100.0
	Samsung Electronics West Africa Ltd. (SEWA)	Marketing	100.0
	Samsung Electronics East Africa Ltd. (SEEA)	Marketing	100.0
	Global Symphony Technology Group Private Ltd.	Management of overseas subsidiaries	100.0
	Harman Connected Services Morocco	Connected service provider	100.0
	Harman Industries Holdings Mauritius Ltd.	Management of overseas subsidiaries	100.0
	Red Bend Ltd.	Manufacture of audio products	100.0
Asia (Excluding China)	Samsung Asia Pte. Ltd. (SAPL)	Management of overseas subsidiaries	100.0
	Samsung Electronics Singapore Pte. Ltd. (SESP)	Sale of electronic devices	100.0
	Samsung Malaysia Electronics (SME) Sdn. Bhd. (SME)	Sale of electronic devices	100.0
	Samsung Electronics Display (M) Sdn. Bhd. (SDMA)	Manufacture of electronic devices	100.0
	Samsung Electronics (M) Sdn. Bhd. (SEMA)	Manufacture of home appliances	100.0
	Samsung Vina Electronics Co., Ltd. (SAVINA)	Sale of electronic devices	100.0
	Samsung Electronics Vietnam Co., Ltd. (SEV)	Manufacture of electronic devices	100.0
	Samsung Electronics Vietnam THAINGUYEN Co., Ltd. (SEVT)	Manufacture of communication equipment	100.0
	Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	Manufacture and sale of electronic devices	100.0
	Samsung Display Vietnam Co., Ltd. (SDV)	Manufacture of display panels	100.0
	PT Samsung Electronics Indonesia (SEIN)	Manufacture and sale of electronic devices	100.0
	PT Samsung Telecommunications Indonesia (STIN)	Sale of electronic devices and services	100.0
	Thai Samsung Electronics Co., Ltd. (TSE)	Manufacture and sale of electronic devices	91.8
	Laos Samsung Electronics Sole Co., Ltd. (LSE)	Marketing	100.0
	Samsung Electronics Philippines Corporation (SEPCO)	Sale of electronic devices	100.0
	Samsung Electronics Australia Pty. Ltd. (SEAU)	Sale of electronic devices	100.0
	Samsung Electronics New Zealand Limited (SENZ)	Sale of electronic devices	100.0
	Samsung India Electronics Private Ltd. (SIEL)	Manufacture and sale of electronic devices	100.0
	Samsung Display Noida Private Limited (SDN)	Manufacture of display panels	100.0
	Samsung R&D Institute India-Bangalore Private Limited (SRI-B)	R&D	100.0
	Samsung R&D Institute BanglaDesh Limited (SRBD)	R&D	100.0
	Samsung Nepal Services Pvt. Ltd. (SNSL)	Service	100.0
	Samsung Japan Corporation (SJC)	Sale of semiconductor and display panels	100.0
	Samsung R&D Institute Japan Co., Ltd. (SRJ)	R&D	100.0
	Samsung Electronics Japan Co., Ltd. (SEJ)	Sale of electronic devices	100.0

¹ Ownership represents the Company's ownership of the voting rights in each entity, including subsidiaries' ownerships.

Area	Subsidiaries	Industry	Percentage of ownership (%) ¹
Asia (Excluding China)	Harman Connected Services Corp. India Pvt. Ltd.	Connected service provider	100.0
	Harman International (India) Private Limited	Sale of audio products, R&D	100.0
	Harman International Industries Pty Ltd.	Management of overseas subsidiaries	100.0
	Harman International Japan Co., Ltd.	Sale of audio products, R&D	100.0
	Harman Singapore Pte. Ltd.	Sale of audio products	100.0
China	Samsung (CHINA) Investment Co., Ltd. (SCIC)	Sale of electronic devices	100.0
	Samsung Electronics Hong Kong Co., Ltd. (SEHK)	Sale of electronic devices	100.0
	Samsung Electronics Taiwan Co., Ltd. (SET)	Sale of electronic devices	100.0
	Tianjin Samsung Electronics Co., Ltd. (TSEC)	Manufacture of TV and monitors	91.2
	Suzhou Samsung Electronics Co., Ltd. (SSEC)	Manufacture of home appliances	88.3
	Samsung Suzhou Electronics Export Co., Ltd. (SSEC-E)	Manufacture of home appliances	100.0
	Samsung Electronics Suzhou Computer Co., Ltd. (SESC)	Manufacture of electronic devices, 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 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, 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, R&D	100.0
	Harman Technology (Shenzhen) Co., Ltd.	Sale of audio products, R&D	100.0

¹ Ownership represents the Company's ownership of the voting rights in each entity, including subsidiaries' ownerships.

Area	Subsidiaries	Industry	Percentage of ownership (%) ¹
Domestic	Samsung Display Co., Ltd.	Manufacture and sale of display panels	84.8
	SU Materials	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 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
	Mirero System Co., Ltd.	Development and supply of semiconductor process defect and quality control software	99.9
	Dowooinsys Co., Ltd.	Manufacture of display components	69.0
	Gf-System Co., Ltd.	Manufacture of display components	100.0
	Harman International Korea	Software development and supply, etc.	100.0
	Samsung Venture Capital Union #21	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #22	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #26	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #28	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #29	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #32	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #33	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #37	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #40	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #42	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #43	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #45	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #48	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #52	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #55	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #56	Technology business, Venture capital investments	99.0
	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

¹ 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) 2022

<i>(In millions of Korean won)</i>	As of March 31, 2022		For the three months period ended March 31, 2022	
	Assets	Liabilities	Sales	Profit (loss) for the period
Major subsidiaries¹				
Samsung Display	53,952,375	6,982,867	7,100,976	1,026,633
Samsung Electronics America, Inc. (SEA)	43,135,977	18,941,425	11,340,468	(45,635)
Samsung Electronics Vietnam THAINGUYEN Co., Ltd. (SEVT)	19,646,397	4,285,217	10,569,433	962,926
Samsung (China) Semiconductor Co., Ltd. (SCS)	18,982,283	4,664,987	2,415,594	156,539
Harman and its subsidiaries ²	15,632,712	5,606,047	2,662,741	89,844
Samsung Asia Pte. Ltd. (SAPL)	15,003,893	54,750	-	11,563
Samsung Electronics Vietnam Co., Ltd. (SEV)	14,347,580	2,745,930	5,820,671	429,100
Samsung Semiconductor, Inc. (SSI)	14,136,676	8,181,251	10,911,004	42,241
Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	14,060,562	8,925,616	-	6,965
Samsung (CHINA) Investment Co., Ltd. (SCIC)	13,401,189	9,301,910	833,148	106,882
Samsung India Electronics Private Ltd. (SIEL)	9,007,492	4,264,962	4,200,020	202,283
Samsung Austin Semiconductor LLC. (SAS)	8,806,779	897,254	788,621	(2,422)
Shanghai Samsung Semiconductor Co., Ltd. (SSS)	7,073,958	5,006,179	6,550,636	75,728
Samsung Display Vietnam Co., Ltd. (SDV)	6,624,391	2,065,988	5,672,054	131,506
Samsung Electronica da Amazonia Ltda. (SEDA)	5,320,759	1,719,975	1,919,630	114,528
Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	3,391,235	931,521	1,952,034	202,206
Samsung Electronics (UK) Ltd. (SEUK)	3,335,374	2,388,001	1,531,914	19,063
Thai Samsung Electronics Co., Ltd. (TSE)	3,284,369	701,891	1,414,046	(16,599)
Samsung Electronics Europe Logistics B.V. (SELS)	3,016,166	2,614,798	4,598,861	240,087
Samsung Electronics Hungarian Private Co. Ltd. (SEH)	2,645,265	682,573	1,324,347	80,930
Samsung Electronics Benelux B.V. (SEBN)	2,556,682	740,314	807,471	6,902
Samsung International, Inc. (SII)	2,519,058	1,088,013	2,290,300	321,270
Samsung Electronics Taiwan Co., Ltd. (SET)	2,330,093	1,719,189	1,688,546	41,677
Samsung Electronics GmbH (SEG)	2,290,873	2,287,119	1,701,102	(57,461)
Samsung Display Dongguan Co., Ltd. (SDD)	2,195,882	299,793	807,150	49,629

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

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

(2) 2021

(In millions of Korean won)

Major subsidiaries ¹	As of December 31, 2021		For the three months period ended March 31, 2021	
	Assets	Liabilities	Sales	Profit (loss) for the period
Samsung Display	54,967,156	9,081,737	6,058,152	11,822
Samsung Electronics America, Inc. (SEA)	42,982,054	19,246,751	9,596,228	203,584
Samsung (China) Semiconductor Co., Ltd. (SCS)	19,049,536	5,168,738	1,485,543	382,193
Samsung Electronics Vietnam THAINGUYEN Co., Ltd. (SEVT)	17,521,446	3,425,127	8,110,735	663,922
Harman and its subsidiaries ²	15,887,380	6,104,012	2,358,724	62,282
Samsung Asia Pte. Ltd. (SAPL)	14,683,789	58,381	-	16,819
Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	14,651,496	8,998,502	-	913
Samsung Semiconductor, Inc. (SSI)	13,744,799	7,955,060	5,833,416	23,442
Samsung (CHINA) Investment Co., Ltd. (SCIC)	13,599,093	9,685,278	733,700	114,462
Samsung Electronics Vietnam Co., Ltd. (SEV)	13,023,272	2,085,411	5,356,282	492,386
Samsung Austin Semiconductor LLC. (SAS)	8,705,085	958,537	922,961	267,988
Shanghai Samsung Semiconductor Co., Ltd. (SSS)	7,765,126	5,799,690	7,014,404	74,237
Samsung India Electronics Private Ltd. (SIEL)	7,765,019	3,236,745	3,459,334	192,905
Samsung Display Vietnam Co., Ltd. (SDV)	6,821,066	2,486,703	4,436,301	190,755
Samsung Electronica da Amazonia Ltda. (SEDA)	4,589,505	1,671,097	1,531,207	141,928
Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	3,129,104	919,721	1,768,061	79,336
Thai Samsung Electronics Co., Ltd. (TSE)	3,018,358	474,223	1,079,687	(7,362)
Samsung Electronics (UK) Ltd. (SEUK)	2,925,062	1,992,367	1,497,466	(16,323)
Samsung Electronics Benelux B.V. (SEBN)	2,612,357	766,034	729,325	5,251
Samsung Electronics Hungarian Private Co. Ltd. (SEH)	2,504,075	641,004	1,010,623	(24,549)
Samsung Electronics Europe Logistics B.V. (SELS)	2,305,275	2,144,805	4,091,964	498,192
Samsung Electronics GmbH (SEG)	2,289,391	2,228,650	1,774,465	(59,360)
Samsung Display Dongguan Co., Ltd. (SDD)	2,149,277	339,425	943,609	47,368
Samsung International, Inc. (SII)	2,125,719	1,041,168	1,268,081	50,622
Samsung Electronics Taiwan Co., Ltd. (SET)	2,033,992	1,459,353	1,223,980	4,999

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

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

1.4 Changes in Consolidation Scope

Changes in consolidation scope during the three month period ended March 31, 2022 are as follows:

Change	Area	Subsidiary	Description
Included	Europe/CIS	Samsung R&D Institute Ukraine (SRUKR)	Establishment
		Apostera GmbH	Acquisition
		Apostera UA, LLC	

2. Significant Accounting Policies

2.1 Basis of Presentation

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

The interim consolidated financial statements for the three-month period ended March 31, 2022, have been prepared in accordance with *Korean IFRS 1034, Interim Financial Reporting*. These interim consolidated financial statements have been prepared in accordance with the Korean IFRS which is effective as of March 31, 2022.

(A) New and amended standards adopted by the Company

The Company applied the following amended and enacted standards for the first time for their annual reporting period commencing January 1, 2022:

Amendments to Korean IFRS 1116, Lease

The amendments to Korean IFRS 1116 introduced a practical expedient that provided practical relief to lessees in accounting for rent concessions occurring as a direct consequence of COVID-19. The amendments extend the practical expedient to apply to reduction in lease payments originally due on or before June 30, 2022. The application of amendments does not have a significant impact on the Company’s interim consolidated financial statements.

Amendments to Korean IFRS 1103, Business Combinations

The amendments update Korean IFRS 1103 so that it refers to the amended conceptual framework for financial reporting for assets and liabilities recognized upon business combination, along with a adding requirement that for transactions and other events within the scope of IAS 37 or IFRIC 21, an acquirer applies IAS 37 or IFRIC 21 to identify the liabilities it has assumed in a business combination. The amendments also add an explicit statement that an acquirer does not recognise contingent assets acquired in a business combination. The application of amendments does not have a significant impact on the Company’s interim consolidated financial statements.

Amendments to Korean IFRS 1016, Property, Plant and Equipment

The amendments prohibit deducting from the cost of an item of property, plant and equipment any proceeds from selling items produced while bringing that asset to the location and condition necessary for it to be capable of operating in the manner intended by management. Instead, an entity recognizes the proceeds from selling such items, and the cost of producing those items, in profit or loss. The application of amendments does not have a significant impact on the Company’s interim consolidated financial statements.

Amendments to Korean IFRS 1037, Provisions, Contingent Liabilities and Contingent Assets

The amendments specify that the cost of fulfilling a contract comprises the costs that relate directly to the contract, and that costs that relate directly to a contract consist of both the incremental costs of fulfilling that contract and an allocation of other costs that relate directly to fulfilling contracts. The application of the 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 mandatory for the annual reporting period commencing January 1, 2022 and has not been early adopted by the Company is as follows:

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

The amendments to K-IFRS 1001 clarify that the classification of liabilities as current or non-current should be based on rights that are in existence at the end of the reporting period, and that the classification is unaffected by expectations of management or 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 can refer to the transfer to the counterparty of the entity's own equity instruments, unless the entity classifies the option as an equity instrument, recognising it separately from the liability as an equity component of a compound financial instrument. The amendments are applied retrospectively for annual periods beginning on or after January, 1 2023, with early application permitted.

Amendments to Korean IFRS 1001 Presentation of Financial Statements, Disclosure of Accounting Policies

The amendments require companies to define and disclose their 'material' accounting policy information instead of its 'significant' accounting policies. The amendments explain how an entity can identify material accounting policy information. The amendments to K-IFRS 1001 are effective for annual periods beginning on or after January, 12023, with earlier application permitted and are applied prospectively.

Amendments to Korean IFRS 1008 Accounting Policies, Changes in Accounting Estimates and Errors - Definition of Accounting Estimates

The amendments clarify the definition of a change in accounting estimates, and specify how to distinguish from a change in accounting policies. The amendments are effective for annual periods beginning on or after January, 1 2023 to changes in accounting policies and changes in accounting estimates that occur on or after the beginning of that period, with earlier application permitted.

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

The amendments add to the initial recognition exemption that the initial recognition exemption does not apply to transactions in which equal amounts of deductible and taxable temporary differences arise on initial recognition. The amendments are effective for annual reporting periods beginning on or after January 1, 2023, with earlier application permitted.

2.2 Accounting Policies

Significant accounting policies and method of computation used in the preparation of the interim consolidated financial statements are consistent with those of the annual financial statements for the year ended December 31, 2021, except for the changes due to the application of amendments and enactments of standards described in Note 2.1 and as described below.

(A) Income tax expense

Income tax expense for the interim period is recognized based on management's best estimate of the weighted average annual income tax rate expected for the full financial year. The estimated average annual 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 Company operates primarily in Korean won and its official accounting records are maintained in Korean won. 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 ₩ 1,204.4 to \$1, the average exchange rate for the three-month periods ended March 31, 2022. 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 Critical 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. The spread of COVID-19 may result in changes to the Company's assumptions and estimates, but its potential financial impact cannot be reasonably estimated as of the reporting date.

Critical 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, 2021, except for the estimates used to determine the income tax expense.

3. Financial Instruments by Category

(A) Categorizations of financial assets and liabilities as of March 31, 2022 and December 31, 2021 are as follows:

(1) As of March 31, 2022

<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 assets¹	Total
Financial assets					
Cash and cash equivalents	48,944,982	-	-	-	48,944,982
Short-term financial instruments	75,121,426	-	-	-	75,121,426
Short-term financial assets at amortized cost	1,755,225	-	-	-	1,755,225
Short-term financial assets at fair value through profit or loss	-	-	53,056	-	53,056
Trade receivables	44,464,968	-	-	-	44,464,968
Financial assets at fair value through other comprehensive income	-	13,201,558	-	-	13,201,558
Financial assets at fair value through profit or loss	-	-	1,496,122	-	1,496,122
Other	10,142,354	-	566,822	61,731	10,770,907
Total	180,428,955	13,201,558	2,116,000	61,731	195,808,244

¹Other 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 liabilities¹	Total
Financial liabilities				
Trade payables	15,133,906	-	-	15,133,906
Short-term borrowings	2,452,530	-	11,433,359	13,885,889
Other payables	16,607,339	-	-	16,607,339
Current portion of long-term liabilities	43,098	-	821,807	864,905
Debentures	518,856	-	-	518,856
Long-term borrowings	2,500	-	2,778,207	2,780,707
Long-term other payables	2,121,276	-	-	2,121,276
Other	10,797,860	393,743	10,418	11,202,121
Total	47,677,365	393,743	15,043,791	63,114,899

¹Other financial liabilities include collateralized borrowings, lease liabilities and derivatives designated as hedging instruments, which are not subject to categorizations.

(2) As of December 31, 2021

<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 assets¹	Total
Financial assets					
Cash and cash equivalents	39,031,415	-	-	-	39,031,415
Short-term financial instruments	81,708,986	-	-	-	81,708,986
Short-term financial assets at amortized cost	3,369,034	-	-	-	3,369,034
Short-term financial assets at fair value through profit or loss	-	-	40,757	-	40,757
Trade receivables	40,713,415	-	-	-	40,713,415
Financial assets at fair value through other comprehensive income	-	13,965,839	-	-	13,965,839
Financial assets at fair value through profit or loss	-	-	1,525,344	-	1,525,344
Other	8,711,973	-	279,127	49,089	9,040,189
Total	173,534,823	13,965,839	1,845,228	49,089	189,394,979

¹Other 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 liabilities¹	Total
Financial liabilities				
Trade payables	13,453,351	-	-	13,453,351
Short-term borrowings	2,131,692	-	11,556,101	13,687,793
Other payables	14,126,970	-	-	14,126,970
Current portion of long-term liabilities	518,065	-	811,903	1,329,968
Debentures	508,232	-	-	508,232
Long-term borrowings	1,500	-	2,864,656	2,866,156
Long-term other payables	2,562,158	-	-	2,562,158
Other	10,444,290	323,526	13,868	10,781,684
Total	43,746,258	323,526	15,246,528	59,316,312

¹Other financial liabilities include collateralized borrowings, lease liabilities and derivatives designated as hedging instruments, which are not subject to categorizations.

4. Financial Assets at Fair Value

(A) Details of financial assets at fair value as of March 31, 2022 and December 31, 2021 are as follows:

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

<i>(In millions of Korean won)</i>	March 31, 2022	December 31, 2021
Non-current portion		
Equity instruments	13,201,558	13,965,839

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

<i>(In millions of Korean won)</i>	March 31, 2022	December 31, 2021
Current portion		
Debt instruments	53,056	40,757
Non-current portion		
Equity instruments	852,208	905,094
Debt instruments	643,914	620,250
Subtotal	1,496,122	1,525,344
Total	1,549,178	1,566,101

(B) Details of listed equity securities of financial assets at fair value as of March 31, 2022 and December 31, 2021 are as follows:

<i>(In millions of Korean won, number of shares and percentage)</i>	March 31, 2022			December 31, 2021	
	Number of shares owned	Percentage of ownership ¹ (%)	Acquisition cost	Carrying amount (Market value)	Carrying amount (Market value)
Samsung Heavy Industries	134,027,281	15.2	932,158	761,275	759,935
Hotel Shilla	2,004,717	5.1	13,957	162,783	156,368
iMarket Korea	647,320	1.9	324	7,023	6,926
SFA	3,644,000	10.2	38,262	149,586	131,366
Wonik Holdings	3,518,342	4.6	30,821	16,906	17,521
Wonik IPS	3,701,872	7.5	32,428	141,041	156,589
ASML Holding N.V	6,297,787	1.5	363,012	5,190,569	5,974,280
Wacom Co., Ltd.	8,398,400	5.0	62,013	78,622	79,256
BYD Company Limited	2,380,100	0.1	79,049	103,931	118,862
Corning Incorporated	80,000,000	9.5	3,980,636	3,575,250	3,530,893
Other			559,450	971,345	1,155,113
Total			6,092,110	11,158,331	12,087,109

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

5. Inventories

Inventories as of March 31, 2022 and December 31, 2021 are as follows:

<i>(In millions of Korean won)</i>	March 31, 2022			December 31, 2021		
	Gross amount	Valuation allowance	Carrying amount	Gross amount	Valuation allowance	Carrying amount
Finished goods	14,692,913	(793,386)	13,899,527	13,000,200	(719,621)	12,280,579
Work in process	15,060,273	(646,600)	14,413,673	13,967,331	(493,713)	13,473,618
Raw materials and supplies	18,282,421	(817,017)	17,465,404	14,864,486	(679,645)	14,184,841
Materials in transit	1,812,127	-	1,812,127	1,445,366	-	1,445,366
Total	49,847,734	(2,257,003)	47,590,731	43,277,383	(1,892,979)	41,384,404

6. Investments in Associates and Joint Ventures

(A) Changes in investments in associates and joint ventures for the three-month periods ended March 31, 2022 and 2021 are as follows:

<i>(In millions of Korean won)</i>	2022	2021
Balance as of January 1	8,932,251	8,076,779
Acquisition	6,100	14,500
Disposal	(5,153)	(661)
Share of profit	232,477	147,519
Other ¹	(324,070)	(141,416)
Balance as of March 31	8,841,605	8,096,721

¹ Other consists of dividends, impairment, and reclassification.

(B) Major investments in associates and joint ventures as of March 31, 2022 are as follows:

(1) Investments in associates

Investee	Nature of relationship with associate	Percentage of ownership (%) ¹	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 IT services including computer programming, system integration and management and logistical services	22.6	Korea	December
Samsung Biologics Co., Ltd.	Business investment	31.5	Korea	December
Samsung SDI Co., Ltd. ²	Manufacture and supply electronic components including secondary cell batteries	19.6	Korea	December
Cheil Worldwide, Inc.	Advertising agency	25.2	Korea	December

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

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

(2) Investments in joint ventures

Investee	Nature of relationship with joint venture	Percentage of ownership (%) ¹	Principal business location	Fiscal period-end
Samsung Corning Advanced Glass LLC	Manufacture and supply industrial glass devices	50.0	Korea	December

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

(C) Details of investments in associates and joint ventures as of March 31, 2022 and December 31, 2021 are as follows:

(1) Investments in associates

(In millions of Korean won)

Investee	Acquisition cost	March 31, 2022	
		Net asset value of equity shares ¹	Carrying amount
Samsung Electro-Mechanics	359,237	1,622,616	1,608,018
Samsung SDS	147,963	1,645,383	1,663,194
Samsung Biologics	443,193	1,361,033	1,367,422
Samsung SDI	1,242,605	3,052,283	2,584,083
Cheil Worldwide	506,162	307,300	607,953
Other	645,849	597,349	809,764
Total	3,345,009	8,585,964	8,640,434

¹ The Company's portion of net asset value of associates is based on the Company's percentage of ownership.

(In millions of Korean won)

Investee	Acquisition cost	December 31, 2021	
		Net asset value of equity shares ¹	Carrying amount
Samsung Electro-Mechanics	359,237	1,573,570	1,556,386
Samsung SDS	147,963	1,632,847	1,652,155
Samsung Biologics	443,193	1,571,809	1,577,664
Samsung SDI	1,242,605	2,960,235	2,529,650
Cheil Worldwide	506,162	320,301	621,292
Other	644,903	578,547	793,748
Total	3,344,063	8,637,309	8,730,895

¹ The Company's portion of net asset value of associates is based on the Company's percentage of ownership.

(2) Investments in joint ventures

*(In millions of Korean won)***March 31, 2022**

Investee	Acquisition cost	Net asset value of equity shares¹	Carrying amount
Samsung Corning Advanced Glass	215,000	137,432	137,428
Other	259,994	66,147	63,743
Total	474,994	203,579	201,171

¹ 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, 2021**

Investee	Acquisition cost	Net asset value of equity shares¹	Carrying amount
Samsung Corning Advanced Glass	215,000	135,584	135,580
Other	259,994	67,517	65,776
Total	474,994	203,101	201,356

¹ The Company's portion of net asset value of joint ventures is based on the Company's percentage of ownership.

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

(1) For the three-month period ended March 31, 2022

<i>(In millions of Korean won)</i>	Balance as of January 1	Share of profit (loss)	Share of other comprehensive income (loss)	Other¹	Balance as of March 31
Samsung Electro-Mechanics	1,556,386	75,698	13,090	(37,156)	1,608,018
Samsung SDS	1,652,155	43,126	9,846	(41,933)	1,663,194
Samsung Biologics	1,577,664	46,810	(257,052)	-	1,367,422
Samsung SDI	2,529,650	39,702	28,193	(13,462)	2,584,083
Cheil Worldwide	621,292	12,850	2,559	(28,748)	607,953
Samsung Corning Advanced Glass	135,580	1,848	-	-	137,428
Other	859,524	12,443	(53,467)	55,007	873,507
Total	8,932,251	232,477	(256,831)	(66,292)	8,841,605

¹ Other consists of acquisitions, disposals, dividends, impairment and reclassification.

(2) For the three-month period ended March 31, 2021

<i>(In millions of Korean won)</i>	Balance as of January 1	Share of profit (loss)	Share of other comprehensive income (loss)	Other¹	Balance as of March 31
Samsung Electro-Mechanics	1,333,819	57,019	27,114	(24,770)	1,393,182
Samsung SDS	1,525,857	35,196	10,911	(41,933)	1,530,031
Samsung Biologics	1,453,012	20,766	105	-	1,473,883
Samsung SDI	2,326,037	16,804	9,100	(13,463)	2,338,478
Cheil Worldwide	586,057	9,350	4,596	(24,392)	575,611

Samsung Corning Advanced Glass	123,356	3,565	-	-	126,921
Other	728,641	4,819	(91,322)	16,477	658,615
Total	8,076,779	147,519	(39,496)	(88,081)	8,096,721

¹ Other consists of acquisitions, disposals, dividends, impairment, and reclassification.

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

- (1) Summary of financial information of major associates and dividends received from associates as of March 31, 2022 and December 31, 2021, and for the three-month periods ended March 31, 2022 and 2021 are as follows:

<i>(In millions of Korean won)</i>	2022				
	Samsung Electro- Mechanics	Samsung SDS	Samsung Biologics	Samsung SDI	Cheil Worldwide
1. Condensed financial information					
Condensed statements of financial position :					
Current assets	4,658,485	7,921,459	2,661,259	8,063,272	2,077,506
Non-current assets	5,407,198	2,913,698	5,336,949	18,941,726	523,085
Current liabilities	2,093,674	2,632,966	1,748,077	6,717,646	1,326,335
Non-current liabilities	882,821	701,392	1,928,325	4,627,094	191,617
Non-controlling interests	160,822	216,578	-	498,766	10,840
Condensed statements of comprehensive income:					
Revenue	2,625,404	4,191,498	511,304	4,049,427	946,569
Profit from continuing operations, net of tax ¹	321,852	197,554	146,942	356,587	44,890
Profit (loss) from discontinued operation, net of tax ¹	-	-	-	-	-
Other comprehensive income (loss) ¹	106,951	43,587	(377)	167,584	10,032
Total comprehensive income ¹	428,803	241,141	146,565	524,171	54,922
2. Dividends from associates					
Dividends	37,155	41,933	-	13,463	28,748

¹ Profit (loss) attributable to owners of the investee

<i>(In millions of Korean won)</i>	2021				
	Samsung Electro- Mechanics	Samsung SDS	Samsung Biologics	Samsung SDI	Cheil Worldwide
1. Condensed financial information					
Condensed statements of financial position:					
Current assets	4,598,269	7,575,968	2,823,175	7,444,907	2,018,598
Non-current assets	5,343,105	2,941,464	5,146,835	18,388,286	523,513
Current liabilities	2,234,657	2,370,290	1,107,295	6,461,286	1,224,222
Non-current liabilities	835,592	703,442	1,871,614	4,175,208	190,622
Non-controlling interests	152,177	214,980	-	492,435	10,125
Condensed statements of comprehensive income:					
Revenue	2,371,949	3,061,308	260,797	2,963,211	696,744
Profit from continuing operations, net of tax ¹	235,291	156,029	60,976	134,207	32,522
Loss from discontinued operation, net of tax ¹	(2,075)	-	-	-	-
Other comprehensive income ¹	104,468	48,453	102	206,119	11,172
Total comprehensive income ¹	337,684	204,482	61,078	340,326	43,694
2. Dividends from associates					
Dividends	24,770	41,933	-	13,463	24,392

¹ 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 March 31, 2022 and December 31, 2021, and for the three-month periods ended March 31, 2022 and 2021 are as follows:

<i>(In millions of Korean won)</i>	Samsung Corning Advanced Glass	
	2022	2021
Condensed financial information		
Condensed statements of financial position:		
Current assets	163,734	163,083
Non-current assets	136,707	141,411
Current liabilities	24,163	31,779
Non-current liabilities	1,414	1,547
Condensed statements of comprehensive income¹:		
Revenue	42,485	46,067
Profit from continuing operations, net of tax	3,696	7,130
Profit (loss) from discontinued operations, net of tax	-	-
Other comprehensive income (loss)	-	-
Total comprehensive income	3,696	7,130
Dividends from joint ventures		
Dividends	-	-

¹ Profit (loss) for the three-month periods ended March 31, 2022 and 2021.

- (3) Profit (loss) attributable to owners of the parent company from associates and joint ventures which are not individually material for the three-month periods ended March 31, 2022 and 2021 are as follows:

<i>(In millions of Korean won)</i>	2022		2021	
	Associates	Joint ventures	Associates	Joint ventures
Profit (loss) from continuing operations	13,042	(599)	4,385	435
Other comprehensive income (loss)	(52,025)	(1,442)	2,093	(1,507)
Total comprehensive income (loss)	(38,983)	(2,041)	6,478	(1,072)

(F) Details of marketable investments in associates as of March 31, 2022 and December 31, 2021 are as follows:

<i>(In millions of Korean won and number of shares)</i>	March 31, 2022		December 31, 2021
	Number of shares held	Market value	Market value
Samsung Electro-Mechanics	17,693,084	2,919,359	3,494,384
Samsung SDS	17,472,110	2,419,887	2,734,385
Samsung Biologics	20,836,832	17,232,060	18,815,659
Samsung SDI	13,462,673	8,023,753	8,818,051
Cheil Worldwide	29,038,075	683,847	663,520

(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 the appeal. On October 16, 2020, the Korea Securities and Futures Commission appealed 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 measure, respectively, until the final rulings. The Korea Securities and Futures Commission immediately appealed against the decisions but the appeals were dismissed by the Seoul High Court on May 13, 2019 and May 24, 2019, in relation to the second and first measures, respectively. On May 23, 2019 and June 10, 2019, the Korea Securities and Futures Commission re-appealed against the dismissals relating to the second and first measures, respectively. On September 6, 2019 and October 11, 2019, the Supreme Court of Korea dismissed the Korea Securities and Futures Commission's re-appeal relating to the second and first measures, respectively, and confirmed the decision to suspend the execution of these measures.

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

7. Property, Plant and Equipment

(A) Changes in property, plant and equipment for the three-month periods ended March 31, 2022 and 2021 are as follows:

<i>(In millions of Korean won)</i>	2022	2021
Balance as of January 1	149,928,539	128,952,892
Acquisition and capital expenditures	8,098,867	10,176,110
Depreciation	(9,009,031)	(7,147,736)
Disposals/scrap/impairment	(82,485)	(133,013)
Other ¹	682,129	899,459
Balance as of March 31	149,618,019	132,747,712

¹ Other includes effects of changes in foreign currency exchange rates and effects of the offset of government grants.

(B) Details of depreciation of property, plant and equipment for the three-month periods ended March 31, 2022 and 2021 are as follows:

<i>(In millions of Korean won)</i>	2022	2021
Cost of sales	8,122,027	6,302,755
Selling and administrative expenses, and etc.	887,004	844,981
Total	9,009,031	7,147,736

(C) Right-of-use assets as of March 31, 2022 amount to ₩ 3,871,020 million (December 31, 2021: ₩ 3,950,567 million). During the three-month periods ended March 31, 2022 and 2021, newly recognized right-of-use assets amount to ₩ 176,168 million and ₩ 453,516 million, respectively, with relevant depreciation of ₩ 253,084 million and ₩ 225,514 million, respectively.

8. Intangible Assets

(A) Changes in intangible assets for the three-month periods ended March 31, 2022 and 2021 are as follows:

<i>(In millions of Korean won)</i>	2022	2021
Balance as of January 1	20,236,244	18,468,502
External acquisitions	334,725	319,391
Internally generated / developed	-	101,577
Amortization	(770,477)	(695,542)
Disposals/scrap/impairment	(3,408)	(9,822)
Other ¹	213,610	202,577
Balance as of March 31	20,010,694	18,386,683

¹ Other includes the cumulative effect of changes in foreign currency exchange rates and business combinations.

(B) Details of amortization of intangible assets for the three-month periods ended March 31, 2022 and 2021 are as follows:

<i>(In millions of Korean won)</i>	2022	2021
Cost of sales	531,875	488,175
Selling and administrative expenses and other	238,602	207,367
Total	770,477	695,542

9. Borrowings

Details of the carrying amounts of borrowings as of March 31, 2022 and December 31, 2021 are as follows:

<i>(In millions of Korean won)</i>	Financial institutions	Interest rates (%)		
		as of March 31, 2022	March 31, 2022	December 31, 2021
Short-term borrowings				
Collateralized borrowings ¹	Woori Bank and others	0.0~13.0	11,433,359	11,556,101
Non-collateralized borrowings	Citibank and others	0.0~28.2	2,452,530	2,131,692
Total			13,885,889	13,687,793
Current portion of long-term borrowings				
Bank borrowings	BNP Paribas	18.3~19.6	37,157	40,415
Lease liabilities ²	CSSD and others	3.3	821,807	811,902
Total			858,964	852,317
Long-term borrowings				
Bank borrowings	Industrial Bank of Korea	1.5~1.7	2,500	1,500
Lease liabilities ²	CSSD and others	3.3	2,778,207	2,864,656
Total			2,780,707	2,866,156

¹ Collateralized borrowings are secured by trade receivables.

² Interest expenses arising from the lease liabilities for the three-month periods ended March 31, 2022 and 2021 amounted to ₩ 30,012 million and ₩ 25,835 million, respectively, which were determined using the weighted average incremental borrowing rate. The right-of-use assets are pledged as collateral to the lessor in the event of default.

10. Debentures

Details of the carrying amounts of debentures as of March 31, 2022 and December 31, 2021 are as follows:

<i>(In millions of Korean won)</i>	Issue date	Due date	Interest rates (%)		
			as of Mar 31, 2022	March 31, 2022	December 31, 2021
US dollar denominated straight bonds ¹	1997.10.2	2027.10.1	7.7	36,324 (US \$ 30 million)	35,565 (US \$ 30 million)
US dollar denominated debenture bonds ²	2015.5.11	2025.5.15	4.2	484,320 (US \$ 400 million)	474,200 (US \$ 400 million)
EURO denominated debenture bonds ³	2015.5.27	2022.5.27	2.0	-	469,819 (EUR € 350 million)
Less: Discounts				(673)	(708)
Add: Premium				4,826	7,007
Less: Current portion				(5,941)	(477,651)
Total				518,856	508,232

¹ 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.

² Harman International Industries, Inc. issued US dollar denominated debenture bonds. These debentures are repaid on the date of 10 years maturity and interest is paid semi-annually.

³ Harman Finance International, SCA issued Euro denominated debenture bonds. These debentures are repaid on the date of 7 years maturity and interest is paid annually. These debentures were fully repaid early on March 1, 2022.

11. Net Defined Benefit Liabilities (Assets)

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

<i>(In millions of Korean won)</i>	March 31, 2022	December 31, 2021
Present value of funded defined benefit obligations	14,744,784	14,391,209
Present value of unfunded defined benefit obligations	271,863	266,976
Subtotal	15,016,647	14,658,185
Fair value of plan assets	(16,970,063)	(17,001,891)
Total	(1,953,416)	(2,343,706)

- (B) The components of defined benefit costs recognized in profit or loss for the three-month periods ended March 31, 2022 and 2021 relating to defined benefit plans are as follows:

<i>(In millions of Korean won)</i>	2022	2021
Current service cost	347,661	312,360
Net interest income	(24,885)	(10,003)
Past service cost	(77)	(15)
Other	1,573	3,443
Total	324,272	305,785

- (C) The expenses related to defined benefit plans recognized in the statements of profit or loss for the three month periods ended March 31, 2022 and 2021 are as follows:

<i>(In millions of Korean won)</i>	2022	2021
Cost of sales	139,754	128,189
Selling and administrative expenses and other	184,518	177,596
Total	324,272	305,785

12. Provisions

Changes in the provisions for the three-month period ended March 31, 2022 are as follows:

<i>(In millions of Korean won)</i>	Warranty (A)	Royalty expenses (B)	Long-term incentives (C)	Other (D, E)	Total
Balance as of January 1	1,978,294	1,561,809	734,283	3,405,480	7,679,866
Charged to profit or loss	471,844	342,303	49,645	1,835,064	2,698,856
Payment	(399,867)	(48,417)	(229,309)	(1,614,285)	(2,291,878)
Other ¹	27,232	30,643	2,050	13,658	73,583
Balance as of March 31	2,077,503	1,886,338	556,669	3,639,917	8,160,427

¹ Other includes effects of changes in foreign currency exchange rates.

- (A) The Company accrues warranty reserves 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 negotiation.
- (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 for the accrued period.
- (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 carrying amounts of emission rights held by the Company and the emission in excess of the emission rights for the applicable years. Details of emission rights and liabilities as of March 31, 2022 are as follows:
- (1) The amount of emission rights allocated free of charge in the current commitment period and the estimated amount of emission as of March 31, 2022 are as follows:

<i>(In ten thousand metric tons)</i>	March 31, 2022
Emission rights allocated free of charge	1,687
Estimated volume of emission	1,997

- (2) Changes in the emission rights for the three-month period ended March 31, 2022 are as follows:

<i>(In millions of Korean won)</i>	2022
Balance as of January 1	46,074
Increase	-
Balance as of March 31	46,074

- (3) Changes in emissions liabilities for the three-month period ended March 31, 2022 are as follows:

<i>(In millions of Korean won)</i>	2022
Balance as of January 1	45,049
Charged to profit or loss	12,462
Submission	-
Balance as of March 31	57,511

13. Commitments and Contingencies

(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.

14. Contract Liabilities

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

<i>(In millions of Korean won)</i>	March 31, 2022	December 31, 2021
Contract liabilities ¹	13,386,909	13,235,108

¹ Contract liabilities include advances received, accrued expenses, other current liabilities and others.

15. Share Capital

As of March 31, 2022, the Company's total number of authorized shares is 25,000,000,000 shares (₩ 100 per share). The Company has issued 5,969,782,550 shares of ordinary shares and 822,886,700 shares of preference shares as of March 31, 2022, excluding retired shares. As of the March 31, 2022, the number of shares outstanding is the same as the number of shares issued above, and no changes were made to the number of shares outstanding during the three-month periods ended March 31, 2022 and 2021. Due to the retirement of shares, the total par value of the shares issued is ₩ 679,267 million (ordinary shares of ₩ 596,978 million and preference shares of ₩ 82,289 million), which does not agree with paid-in capital of ₩ 897,514 million.

16. Retained Earnings

(A) Retained earnings as of March 31, 2022 and December 31, 2021 consist of the following:

<i>(In millions of Korean won)</i>	March 31, 2022	December 31, 2021
Discretionary reserve, etc.	191,988,157	170,814,107
Unappropriated retained earnings	109,754,995	122,250,656
Total	301,743,152	293,064,763

(B) Details of interim dividends are as follows:

(1) Interim dividends (Record date: March 31, 2022 and 2021)

<i>(In millions of Korean won and number of shares)</i>		2022	2021
	Number of shares eligible for dividends	5,969,782,550	5,969,782,550
		822,886,700	822,886,700
1 st Quarter	Dividend rate (based on par value)	361%	361%
	Dividend amount	2,155,092	2,155,092
		297,062	297,062

Total	2,452,154	2,452,154
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17. Other Components of Equity

Other components of equity as of March 31, 2022 and December 31, 2021 are as follows:

<i>(In millions of Korean won)</i>	March 31, 2022	December 31, 2021
Gain on valuation of financial assets at fair value through other comprehensive income	4,001,442	4,616,639
Share of other comprehensive gain (loss) of associates and joint ventures	(90,525)	166,835
Loss on overseas business translation	(1,419,850)	(3,824,733)
Remeasurement of net defined benefit liabilities (assets)	(3,236,861)	(3,173,977)
Other	93,105	86,763
Total	(652,689)	(2,128,473)

18. Expenses by Nature

Expenses by nature for the three-month periods ended March 31, 2022 and 2021 consist of the following:

<i>(In millions of Korean won)</i>	2022	2021
Changes in finished goods, work in process, and other	(2,559,003)	1,739,852
Raw materials used, merchandise purchased, and other	28,066,242	22,584,423
Wages and salaries	7,732,949	6,702,731
Post-employment benefit	350,896	339,184
Depreciation	9,009,031	7,147,736
Amortization	770,477	695,542
Welfare	1,401,936	1,202,577
Utilities	1,398,568	1,200,411
Outsourcing	1,482,533	1,406,449
Advertising	1,467,701	1,110,369
Sales promotion expenses	1,823,398	1,624,527
Other	12,715,361	10,251,834
Total¹	63,660,089	56,005,635

¹ Equal to the sum of cost of sales and selling and administrative expenses in the consolidated statements of profit or loss.

19. Selling and Administrative Expenses

Selling and administrative expenses for the three-month periods ended March 31, 2022 and 2021 are as follows:

<i>(In millions of Korean won)</i>	2022	2021
Selling and administrative expenses		
Wages and salaries	1,995,353	1,796,634
Post-employment benefit	77,294	77,734
Commissions	1,730,391	1,460,993
Depreciation	378,741	382,074
Amortization	168,494	135,583
Advertising	1,467,701	1,110,369
Sales promotion expenses	1,823,398	1,624,527
Transportation	857,633	608,762
Service charges	893,544	820,657
Other	1,273,251	1,047,773
Subtotal	10,665,800	9,065,106
Research and development expenses		
Total expenses	5,922,232	5,542,121
Capitalized expenses	-	(101,577)
Subtotal	5,922,232	5,440,544
Total	16,588,032	14,505,650

20. Other Non-Operating Income and Expenses

Details of other non-operating income and expenses for the three-month periods ended March 31, 2022 and 2021 are as follows:

<i>(In millions of Korean won)</i>	2022	2021
Other non-operating income		
Dividend income	268,509	8,734
Rental income	34,584	33,818
Gain on disposal of property, plant and equipment	50,420	75,471
Other	346,680	181,719
Total	700,193	299,742

<i>(In millions of Korean won)</i>	2022	2021
Other non-operating expenses		
Loss on disposal of property, plant and equipment	4,196	9,842
Donations	89,560	39,207
Other	359,354	275,191
Total	453,110	324,240

21. Financial Income and Expenses

Details of financial income and expenses for the three-month periods ended March 31, 2022 and 2021 are as follows:

<i>(In millions of Korean won)</i>	2022	2021
Financial income		
Interest income	369,032	332,548
Interest income from financial assets measured at amortized cost	368,967	332,473
Interest income from financial assets measured at fair value through profit or loss	65	75
Foreign exchange differences	2,608,603	1,708,037
Gains from derivatives	524,554	198,053
Total	3,502,189	2,238,638
<i>(In millions of Korean won)</i>	2022	2021
Financial expenses		
Interest expenses	149,231	96,442
Interest expenses from financial liabilities measured at amortized cost	74,663	43,267
Other financial liabilities	74,568	53,175
Foreign exchange differences	2,460,682	1,734,852
Losses from derivatives	423,405	162,588
Total	3,033,318	1,993,882

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. The average annual tax rate expected as of December 31, 2022 to be effective for the year ended December 31, 2022 is 24.9%.

23. Earnings per Share

(A) Basic earnings per share

Basic earnings per share for the three-month periods ended March 31, 2022 and 2021 are calculated as follows:

(1) Ordinary shares

<i>(In millions of Korean won, thousands of number of shares)</i>	2022	2021
Profit for the period attributable to owners of the parent company	11,129,094	7,092,786
Profit for the period available for ordinary shares	9,780,878	6,233,542
Weighted-average number of ordinary shares outstanding	5,969,783	5,969,783
Basic earnings per ordinary share (in Korean won)	1,638	1,044

(2) Preference shares

<i>(In millions of Korean won, thousands of number of shares)</i>	2022	2021
Profit for the period attributable to owners of the parent company	11,129,094	7,092,786
Profit for the period available for preference shares	1,348,216	859,244
Weighted-average number of preference shares outstanding	822,887	822,887
Basic earnings per preference share (in Korean won)	1,638	1,044

(B) Diluted earnings per share

The Company does not have dilutive potential ordinary shares and as a result, basic earnings per share and diluted earnings per share are the same for the three-month periods ended March 31, 2022 and 2021.

24. Statements of Cash Flows

The Company used the indirect method to present cash flows from operating activities. Adjustments and changes in assets and liabilities arising from operating activities for the three-month periods ended March 31, 2022 and 2021 are as follows:

- Adjustments

<i>(In millions of Korean won)</i>	2022	2021
Adjustments:		
Income tax expense	3,745,212	2,608,960
Financial income	(1,745,834)	(1,218,970)
Financial expenses	1,462,863	866,497
Post-employment benefits	350,896	339,184
Depreciation	9,009,031	7,147,736
Amortization	770,477	695,542
Bad debt expenses (reversal)	11,425	(3,356)
Dividend income	(268,509)	(8,734)
Share of profit of associates and joint ventures	(232,477)	(147,519)
Gain on disposal of property, plant and equipment	(50,420)	(75,471)
Loss on disposal of property, plant and equipment	4,196	9,842
Loss on valuation of inventories	772,044	578,786
Others	76,826	91,359
Total	13,905,730	10,883,856

- Changes in assets and liabilities arising from operating activities

<i>(In millions of Korean won)</i>	2022	2021
Changes in assets and liabilities :		
Increase in trade receivables	(2,369,191)	(2,105,232)
Increase in non-trade receivables	(566,904)	(36,668)
Increase in prepaid expenses	(520,881)	(367,337)
Increase (decrease) in inventories	(6,407,793)	1,205,901
Increase in trade payables	616,577	254,272
Increase (decrease) in other payables	(1,164,358)	473,480
Increase (decrease) in advances received	223,193	(11,851)
Increase (decrease) in withholdings	(385,713)	20,122
Decrease in accrued expenses	(3,120,255)	(2,200,255)
Increase in provisions	406,978	72,707
Payment of post-employment benefits	(142,330)	(118,436)
Other	(802,638)	(521,371)
Total	(14,233,315)	(3,334,668)

For the three-month periods ended March 31, 2022 and 2021, cash outflows from principal repayment (financial activities) amount to ₩ 238,374 million and ₩ 193,240 million, respectively, and cash outflows due to interest expenses (operating activities) in relation to the lease liabilities amount to ₩ 30,012 million and ₩ 25,835 million, respectively.

25. Financial Risk Management

The Company's financial risk management focuses on minimizing market risk, credit risk, and liquidity risk arising from operating activities. To mitigate these risks, the Company implements and operates a financial risk policy and program that closely monitors and manages such risks. In addition, the Company uses derivatives to hedge certain risk exposure.

The finance team mainly carries out the Company's financial risk management. After implementing the global financial risk management policies, the finance team periodically measures, evaluates, and hedges financial risk and also establishes and implements the global financial risk management policy.

The Company also manages foreign exchange risk by monitoring foreign exchange rate fluctuations at local finance centers across major regions (United States, United Kingdom, Singapore, China, Brazil, and Russia) and acting as an agent of foreign exchange transactions. In addition, the Company manages liquidity risk by utilizing a globally integrated finance structure.

The Company's financial assets that are under financial risk management are comprised of cash and cash equivalents, short-term financial instruments, financial assets at amortized cost, trade receivables and others. The Company's financial liabilities under financial risk management are comprised 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 performed in currencies other than its functional currency. The major currencies that are exposed to foreign exchange risk are the US dollar, Euro, and Indian Rupee.

The Company focuses on minimizing the impact of foreign exchange fluctuation by maintaining the equal amount of assets and liabilities denominated in each foreign currency, irrespective of foreign exchange fluctuation considerations. To prevent 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 for the cash-in currency to be matched up with the cash-out currency. 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

Risk of changes in interest rates for floating interest rate financial instruments is defined as the risk that the fair value of components of the statements of financial position, and future cash flows of interest income (expenses) of a financial instrument, will fluctuate because of changes in market interest rates. The Company's position with regard to interest rate risk exposure is mainly driven by its floating interest rate debt obligations and interest-bearing deposits. The Company implemented policies and operates to minimize uncertainty arising from changes in interest rates and financial expenses.

(3) Price risk

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

As of March 31, 2022 and 2021, price fluctuation of marketable equity securities (listed stocks) by 1% would result in changes in other comprehensive income (before income tax) of ₩ 107,834 million and ₩ 65,800 million, respectively, and changes in profit before tax of ₩ 3,750 million and ₩ 3,333 million, respectively.

(B) 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 monitors and sets the client's and counterparty's credit limit 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, deposits, and derivative instruments. To minimize such risk, the Company transacts only with banks which have a strong international credit rating (S&P A and above), and all new transactions with financial institutions with no prior transaction history are approved, managed and monitored by the Company's finance team and the local finance center. The Company generally enters into a financial agreement with no restrictions, such as debt ratio covenants, provision of collateral and/or repayment of loans/borrowings. The Company requires separate approvals for contracts with restrictions.

As of the reporting date, the Company estimates that its maximum exposure to credit risk is the carrying amount of its financial assets, net of impairment losses.

(C) Liquidity risk

Due to large investments made by the Company, maintaining adequate levels of liquidity risk is critical. The Company strives to achieve this goal by periodically forecasting its capital balance, estimating required cash levels, and managing income and expenses.

The Company manages its liquidity risk by periodically forecasting projected cash flows. If abnormal signs are identified, the Company works with the local finance center and provides liquidity support by utilizing a globally integrated finance structure, such as Cash Pooling. In addition, the Company maintains a liquidity management process which provides additional financial support from the local finance center and the Company. The Cash Pooling program allows the sharing of surplus funds among entities and contributes to minimizing liquidity risk and strengthening the Company's competitive position by reducing capital operation expenses and financial expenses.

For the need of large scale of liquidity, the Company secures credit limit for the overseas subsidiaries through payment guarantees.

(D) Capital risk management

The purpose of capital management is to maintain a sound capital structure. The Company monitors capital on the basis of credit ratings and debt ratio. Debt ratio is calculated by dividing total liabilities by total equity in the financial statements.

The Company has maintained an AA- and Aa3 credit rating from S&P and Moody's, respectively.

The total liabilities to equity ratios as of March 31, 2022 and December 31, 2021 are as follows:

<i>(In millions of Korean won)</i>	March 31, 2022	December 31, 2021
Total liabilities	124,036,040	121,721,227
Total equity	315,290,919	304,899,931
Debt ratio	39.3%	39.9%

(E) Fair value estimation

(1) Carrying amounts and fair values of financial instruments by category as of March 31, 2022 and December 31, 2021 are as follows:

(In millions of Korean won)	March 31, 2022		December 31, 2021	
	Carrying amount	Fair value	Carrying amount	Fair value
Financial assets				
Cash and cash equivalents	48,944,982	(*)	39,031,415	(*)
Short-term financial instruments	75,121,426	(*)	81,708,986	(*)
Short-term financial assets at amortized cost	1,755,225	(*)	3,369,034	(*)
Short-term financial assets at fair value through profit or loss	53,056	53,056	40,757	40,757
Trade receivables	44,464,968	(*)	40,713,415	(*)
Financial assets at fair value through other comprehensive income	13,201,558	13,201,558	13,965,839	13,965,839
Financial assets at fair value through profit or loss	1,496,122	1,496,122	1,525,344	1,525,344
Other ^(*)	10,770,907	628,553	9,040,189	328,216
Total financial assets	195,808,244		189,394,979	
Financial liabilities				
Trade payables	15,133,906	(*)	13,453,351	(*)
Short-term borrowings	13,885,889	(*)	13,687,793	(*)
Other payables	16,607,339	(*)	14,126,970	(*)
Current portion of long-term liabilities	864,905	6,417	1,329,968	554,106
- Current portion of long-term borrowing	858,964	(*)(*)	852,317	(*)(*)
- Current portion of debentures	5,941	6,417	477,651	554,106
Debentures	518,856	533,885	508,232	546,339
Long-term borrowings	2,780,707	(*)(*)	2,866,156	(*)(*)
Long-term other payables	2,121,276	(*)	2,562,158	(*)
Other ^(*)	11,202,021	404,161	10,781,684	337,394
Total financial liabilities	63,114,899		59,316,312	

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

(*) Assets measured at the cost of ₩ 10,142,354 million (December 31, 2021: ₩ 8,711,973 million) and liabilities measured at the cost of ₩ 10,797,860 million (December 31, 2021: ₩ 10,444,290 million) are excluded as the carrying amount is a reasonable estimation of fair value.

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

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

March 31, 2022				
<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	-	31,642	21,414	53,056
Financial assets at fair value through other comprehensive income	10,783,382	-	2,418,176	13,201,558
Financial assets at fair value through profit or loss	374,950	-	1,121,172	1,496,122
Other	-	606,248	22,305	628,553
2) Liabilities				
Current Debentures	-	6,417	-	6,417
Debentures	-	533,885	-	533,885
Other	-	398,723	5,438	404,161

December 31, 2021				
<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	-	35,620	5,137	40,757
Financial assets at fair value through other comprehensive income	11,608,708	-	2,357,131	13,965,839
Financial assets at fair value through profit or loss	478,401	-	1,046,943	1,525,344
Other	-	307,213	21,003	328,216
2) Liabilities				
Current Debentures	-	554,106	-	554,106
Debentures	-	546,339	-	546,339
Other	-	331,956	5,438	337,394

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 statements of financial position 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. The quoted market price used for financial assets held by the Company is the current bid price. 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 (for example, over-the-counter derivatives) is determined by using valuation techniques. These valuation techniques maximize the use of observable market data where it is available and rely as little as possible on entity-specific estimates. If all significant inputs required to fair value 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 at least once every quarter in line with the Company's quarterly reporting dates. 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 is determined using forward exchange rates at the statements of financial position date, with the resulting value discounted back to present value

Other techniques, such as discounted cash flow analysis, 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 a proper interest rate for corporate bonds, government and public bonds, and bank debentures that are classified as Level 2 in the fair value hierarchy.

The following table presents the valuation technique and the inputs used for major financial instruments classified as Level 3 as of March 31, 2022.

(In millions of Korean won and percentage)

Classification	Fair value	Valuation technique	Level 3 inputs	Input range (Weighted average)
Financial assets at fair value through other comprehensive income				
Samsung Venture Investment	27,331	Discounted cash flow	Permanent growth rate	-1.0%~1.0%(0.0%)
			Weighted average cost of capital	19.3%~21.3%(20.3%)
MiCo Ceramics Co., Ltd.	25,666	Discounted cash flow	Permanent growth rate	-1.0%~1.0%(0.0%)
			Weighted average cost of capital	13.2%~15.2%(14.2%)
TCL China Star Optoelectronics Technology Co., Ltd. (CSOT)	1,349,356	Discounted cash flow	Permanent growth rate	-1.0%~1.0%(0.0%)
			Weighted average cost of capital	11.1%~13.1%(12.1%)
China Star Optoelectronics Semiconductor Display Technology Ltd. (CSOSDT)	402,939	Discounted cash flow	Permanent growth rate	-1.0%~1.0%(0.0%)
			Weighted average cost of capital	11.1%~13.1%(12.1%)
Others				
Put option on equity instruments	22,305	Binomial model	Risk-free discount rate	2.4%~2.5%, 2.5%
			Price volatility	19.2%~29.2%(24.2%) 24.3%~34.3%(29.3%)

(4) Changes in Level 3 instruments for the three-month periods ended March 31, 2022 and 2021 are as follows:

<i>(In millions of Korean won)</i>	2022	2021
Financial assets		
Balance as of January 1	3,430,214	6,449,139
Acquisitions	76,803	21,581
Disposals	(20,629)	(36,180)
Amount recognized in profit or loss	59,233	19,770
Amount recognized in other comprehensive income	51,749	1,145,421
Other	(14,303)	20,298
Balance as of March 31	3,583,067	7,620,029

<i>(In millions of Korean won)</i>	2022	2021
Financial liabilities		
Balance as of January 1	5,438	9,248
Amount recognized in profit or loss	-	-
Other	-	(2,176)
Balance as of March 31	5,438	7,072

(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 profit or loss (before tax amount for other comprehensive income or loss) 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 ¹	-	164,689	-	(121,231)
Others ²	3,683	-	(4,378)	-

¹ For equity securities, changes in fair value are calculated with the correlation between the growth rate (-1%~1%) and the discount rate, which are significant unobservable inputs.

² Changes were calculated based on the correlation between the fair value and price volatility (-5%~5%), which is a significant unobservable input.

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 units reported to the Management Committee. The Management Committee reviews the operating profits of each operating segment in order to assess performance and to make strategic decisions regarding the allocation of resources to the segment.

Sales 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 for each reporting period is prepared after allocating intercompany reconciliations to depreciation, amortization of intangible assets and operating profits. Total assets and liabilities of each operating segment are excluded from the disclosure as these have not been provided regularly to the Management Committee.

(1) For the three-month period ended March 31, 2022

<i>(In millions of Korean won)</i>	DX	DS	SDC	Harman	Total¹
Net revenue	48,068,667	26,867,414	7,970,491	2,666,346	77,781,498
Depreciation	604,849	6,884,322	1,399,564	78,371	9,009,031
Amortization	393,762	207,287	59,388	57,526	770,477
Operating profit	4,555,461	8,450,131	1,092,864	101,560	14,121,409

¹ Other operating segments are not separately disclosed.

Net revenue by major product for the three-month period ended March 31, 2022 are as follows:

<i>(In millions of Korean won)</i>	Image devices	Mobile devices	Memory	Display panels	Total¹
Net revenue	8,718,021	31,227,757	20,091,464	7,970,491	77,781,498

¹ Other operating segments are not separately disclosed.

(2) For the three-month period ended March 31, 2021

<i>(In millions of Korean won)</i>	DX	DS	SDC	Harman	Total¹
Net revenue	42,476,924	19,316,501	6,923,047	2,367,267	65,388,503
Depreciation	580,992	5,002,523	1,446,138	76,462	7,147,736
Amortization	293,867	257,555	59,463	56,022	695,542
Operating profit	5,509,503	3,360,769	364,428	113,125	9,382,868

¹ Other operating segments are not separately disclosed.

Net revenue by major product for the three-month period ended March 31, 2021 are as follows:

<i>(In millions of Korean won)</i>	Image devices	Mobile devices	Memory	Display panels	Total¹
Net revenue	7,220,396	28,203,084	14,434,878	6,923,047	65,388,503

¹ Other operating segments are not separately disclosed.

(B) Regional information

The regional segment information provided to the Management Committee for the reportable segments as of and for the three-month periods ended March 31, 2022 and 2021 are as follows:

(1) As of and for the period ended March 31, 2022

<i>(In millions of Korean won)</i>	Korea	America	Europe	Asia and Africa	China	Intercompany elimination	Total
Net segment revenue	12,073,694	29,093,973	13,243,901	12,903,394	10,466,536	-	77,781,498
Non-current assets ¹	126,618,363	11,036,417	5,863,349	9,047,693	17,930,153	(867,262)	169,628,713

¹ Financial instruments, deferred tax assets, and investments in associates and joint ventures are excluded from non-current assets.

(2) As of and for the period ended March 31, 2021

<i>(In millions of Korean won)</i>	Korea	America	Europe	Asia and Africa	China	Intercompany elimination	Total
Net segment revenue	10,033,479	20,686,422	13,209,383	10,827,379	10,631,840	-	65,388,503
Non-current assets ¹	111,855,418	9,605,662	5,943,771	9,429,817	15,208,886	(909,159)	151,134,395

¹ Financial instruments, deferred tax assets, and investments in associates and joint ventures are excluded from non-current assets.

27. Related Party Transactions

(A) Sale and purchase transactions

Sale and purchase transactions with related parties for the three-month periods ended March 31, 2022 and 2021 are as follows:

		2022			
(In millions of Korean won)	Name of company ¹	Sales	Disposal of non-current assets	Purchases	Purchase of non-current assets
Associates and joint ventures	Samsung SDS	70,007	-	437,991	95,006
	Samsung Electro-Mechanics	43,421	-	390,747	-
	Samsung SDI	28,489	-	193,174	546
	Cheil Worldwide	29,498	-	217,332	-
	Other	313,103	-	3,731,873	28,342
	Total		484,518	-	4,971,117
Other related parties	Samsung C&T	12,416	-	128,300	1,187,351
	Other	118,703	-	380,595	46,274
	Total	131,119	-	508,895	1,233,625
Other ²	Samsung Engineering	138	-	1,353	277,553
	S-1	2,558	-	122,482	7,729
	Other	48,115	-	65,256	74,363
	Total	50,811	-	189,091	359,645

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

² 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.

		2021			
(In millions of Korean won)	Name of company ¹	Sales	Disposal of non-current assets	Purchases	Purchase of non-current assets
Associates and joint ventures	Samsung SDS	70,200	-	403,699	83,691
	Samsung Electro-Mechanics	29,507	-	385,710	-
	Samsung SDI	23,878	154	138,819	7,247
	Cheil Worldwide	25,126	-	157,185	-
	Other	293,248	68	2,833,972	28,475
	Total		441,959	222	3,919,385
Other related parties	Samsung C&T	28,303	-	63,226	900,762
	Other	104,634	-	543,452	217,726
	Total	132,937	-	606,678	1,118,488
Other ²	Samsung Engineering	81	-	3,835	89,484
	S-1	1,902	-	113,250	11,084
	Other	31,433	-	51,848	43,226
	Total	33,416	-	168,933	143,794

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

² 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 March 31, 2022 and December 31, 2021 are as follows:

(In millions of Korean won)	Name of company ¹	March 31, 2022	
		Receivables	Payables ²
Associates and joint ventures	Samsung SDS	66,637	513,124
	Samsung Electro-Mechanics	38,708	160,936
	Samsung SDI	144,112	74,886
	Cheil Worldwide	28,897	371,176
	Other	349,961	1,290,726
	Total	628,314	2,410,847
Other related parties	Samsung C&T	216,322	767,759
	Other	57,437	231,479
	Total	273,759	999,238
Other ³	Samsung Engineering	130	295,189
	S-1	1,991	37,023
	Other	11,037	81,168
	Total	13,158	413,380

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

² Payables and others include lease liabilities.

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

(In millions of Korean won)	Name of company ¹	December 31, 2021	
		Receivables	Payables ²
Associates and joint ventures	Samsung SDS	64,521	616,949
	Samsung Electro-Mechanics	3,659	176,549
	Samsung SDI	130,638	100,835
	Cheil Worldwide	206	428,090
	Other	397,709	1,361,554
	Total	596,733	2,683,977
Other related parties	Samsung C&T	220,550	1,739,997
	Other	20,306	251,766
	Total	240,856	1,991,763
Other ³	Samsung Engineering	338	1,151,536
	S-1	2,423	40,558
	Other	48,703	185,256
	Total	51,464	1,377,350

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

² Payables and others include lease liabilities.

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

- (C) For the three-month periods ended March 31, 2022 and 2021, the Company invested ₩ 6,100 million and ₩ 14,500 million, respectively, in associates and joint ventures. In addition, the Company recovered ₩ 5,153 million of investments in associates and joint ventures for the three-month periods ended March 31, 2022, and there was no return of investments in associates and joint ventures for the three-month periods ended March 31, 2021. The Group participated in the paid-in capital increase of the associate, Samsung Biologics Co., Ltd., and acquired 1,380,477 shares of ordinary shares, issued for ₩ 639,000, in April 2022.
- (D) For the three-month periods ended March 31, 2022 and 2021, the Company declared dividend of ₩ 421,609 million and ₩ 2,261,462 million, respectively, to related parties. As of March 31, 2022, the dividend payable to related parties amounted to ₩ 421,609 million. In addition, for the three-month periods ended March 31, 2022 and 2021, the Company declared dividends of ₩ 32,058 million and ₩ 171,566 million, respectively, to the entities that are not related parties of the Company in accordance with Korean IFRS 1024, but belong to the same conglomerate according to the Monopoly Regulation and Fair Trade Act. As of March 31, 2022, dividend payables to the entities that are not in scope of Korean IFRS 1024 amounted to ₩ 32,058.
- (E) For the three-month periods ended March 31, 2022 and 2021, the Company has not entered into any lease agreement with its related parties, and the lease payments made to the related parties amounted to ₩ 6,180 million and ₩ 8,369 million, respectively.
- (F) Key management compensation

The compensation paid or payable to key management (executive directors) for their services for the three-month periods ended March 31, 2022 and 2021 consists of:

<i>(In millions of Korean won)</i>	2022	2021
Short-term employee benefits	3,415	2,868
Post-employment benefits	127	222
Other long-term employee benefits	2,072	1,625

28. Subsequent Event

The Group participated in the paid-in capital increase of the associate, Samsung Biologics Co., Ltd., and acquired 1,380,477 shares of ordinary shares, issued for ₩ 639,000, in April 2022.

4. Non-consolidated financial statements

Samsung Electronics Co., Ltd.

INTERIM SEPARATE STATEMENTS OF FINANCIAL POSITION

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

	Notes	March 31, 2022 KRW	December 31, 2021 KRW	March 31, 2022 USD	December 31, 2021 USD
Assets					
Current assets					
Cash and cash equivalents	3, 25	9,129,795	3,918,872	7,580,109	3,253,685
Short-term financial instruments	3, 25	12,802,352	15,000,576	10,629,288	12,454,387
Trade receivables	3, 25	34,711,648	33,088,247	28,819,714	27,471,868
Non-trade receivables	3, 25	1,563,894	1,832,488	1,298,440	1,521,443
Prepaid expenses		1,131,164	817,689	939,161	678,895
Inventories	5	18,708,199	15,973,053	15,532,681	13,261,797
Other current assets	3, 25	3,418,976	2,922,491	2,838,641	2,426,429
		81,466,028	73,553,416	67,638,034	61,068,504
Non-current assets					
Financial assets at fair value through other comprehensive income	3, 4, 25	1,588,288	1,662,532	1,318,693	1,380,335
Financial assets at fair value through profit or loss	3, 4, 25	1,876	2,135	1,558	1,773
Investments in subsidiaries, associates and joint ventures	6	56,196,646	56,225,599	46,657,861	46,681,900
Property, plant and equipment	7	104,032,562	103,667,025	86,374,137	86,070,646
Intangible assets	8	8,333,496	8,657,456	6,918,973	7,187,945
Net defined benefit assets	11	2,008,270	2,324,291	1,667,387	1,929,767
Deferred income tax assets		1,765,503	1,211,100	1,465,828	1,005,529
Other non-current assets	3, 25	3,961,342	3,808,630	3,288,946	3,162,155
		177,887,983	177,558,768	147,693,383	147,420,050
Total assets		259,354,011	251,112,184	215,331,417	208,488,554

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, in thousands of US dollars (Note 2.3))

	Notes	March 31, 2022 KRW	December 31, 2021 KRW	March 31, 2022 USD	December 31, 2021 USD
Liabilities and Equity					
Current liabilities					
Trade payables	3, 25	13,406,261	11,557,441	11,130,690	9,595,688
Short-term borrowings	3, 9, 25	10,237,826	9,204,268	8,500,064	7,641,941
Other payables	3, 25	15,591,366	13,206,753	12,944,897	10,965,047
Advances received	14	375,259	474,731	311,563	394,150
Withholdings	3, 25	400,119	624,585	332,203	518,568
Accrued expenses	3, 14, 25	6,020,792	8,275,410	4,998,826	6,870,747
Current income tax liabilities		5,942,191	5,599,896	4,933,567	4,649,373
Current portion of long-term liabilities	3, 9, 10, 25	138,751	139,328	115,199	115,679
Provisions	12	4,278,452	3,643,853	3,552,230	3,025,348
Other current liabilities	14	408,759	341,038	339,376	283,150
		56,799,776	53,067,303	47,158,615	44,059,691
Non-current liabilities					
Debentures	3, 10, 25	29,710	29,048	24,667	24,117
Long-term borrowings	3, 9, 25	419,079	431,915	347,945	358,602
Long-term other payables	3, 25	2,217,177	2,653,715	1,840,835	2,203,275
Long-term provisions	12	1,544,849	1,659,774	1,282,627	1,378,045
Other non-current liabilities		67,650	76,697	56,167	63,678
		4,278,465	4,851,149	3,552,241	4,027,717
Total liabilities		61,078,241	57,918,452	50,710,856	48,087,408

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, in thousands of US dollars (Note 2.3))

	Notes	March 31, 2022 KRW	December 31, 2021 KRW	March 31, 2022 USD	December 31, 2021 USD
Equity					
Preference shares	15	119,467	119,467	99,189	99,189
Ordinary shares	15	778,047	778,047	645,982	645,982
Share premium		4,403,893	4,403,893	3,656,379	3,656,379
Retained earnings	16	193,973,301	188,774,335	161,048,389	156,731,893
Other components of equity	17	(998,938)	(882,010)	(829,378)	(732,297)
Total equity		198,275,770	193,193,732	164,620,561	160,401,146
Total liabilities and equity		259,354,011	251,112,184	215,331,417	208,488,554

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, in thousands of US dollars (Note 2.3))

	Notes	For the three-month periods ended March 31,			
		2022	2021	2022	2021
		KRW	KRW	USD	USD
Revenue	26	56,724,258	45,042,390	47,095,917	37,396,922
Cost of sales	18	39,184,912	33,137,562	32,533,689	27,512,812
Gross profit		17,539,346	11,904,828	14,562,228	9,884,110
Selling and administrative expenses	18, 19	8,387,515	7,459,352	6,963,823	6,193,206
Operating profit	26	9,151,831	4,445,476	7,598,405	3,690,904
Other non-operating income	20	283,271	1,357,247	235,189	1,126,869
Other non-operating expense	20	54,609	48,980	45,340	40,666
Financial income	21	1,739,895	920,764	1,444,566	764,474
Financial expense	21	1,442,368	857,151	1,197,541	711,660
Profit before income tax		9,678,020	5,817,356	8,035,279	4,829,921
Income tax expense	22	2,026,077	1,269,752	1,682,172	1,054,225
Profit for the period		7,651,943	4,547,604	6,353,107	3,775,696
Earnings per share	23				
(in Korean won, in US dollars)					
- Basic		1,127	669	0.94	0.56
- Diluted		1,127	669	0.94	0.56

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, in thousands of US dollars (Note 2.3))

	Notes	For the three-month periods ended March 31,			
		2022	2021	2022	2021
		KRW	KRW	USD	USD
Profit for the period		7,651,943	4,547,604	6,353,107	3,775,696
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	(53,901)	53,976	(44,752)	44,814
Remeasurement of net defined benefit assets, net of tax	17	(63,027)	(37,970)	(52,329)	(31,524)
Items that may be reclassified subsequently to profit or loss		-	-	-	-
Other comprehensive income (loss) for the period, net of tax		(116,928)	16,006	(97,081)	13,290
Total comprehensive income for the period		7,535,015	4,563,610	6,256,026	3,788,986

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)

2021 KRW	Notes	Preference shares	Ordinary shares	Share premium	Retained earnings	Other components of equity	Total
Balance as of January 1, 2021		119,467	778,047	4,403,893	178,284,102	(268,785)	183,316,724
Profit for the period		-	-	-	4,547,604	-	4,547,604
Gain on valuation of financial assets at fair value through other comprehensive income, net of tax		-	-	-	-	53,976	53,976
Remeasurement of net defined benefit liabilities (assets), net of tax		-	-	-	-	(37,970)	(37,970)
Total comprehensive income for the period		-	-	-	4,547,604	16,006	4,563,610
Dividends declared		-	-	-	(13,124,260)	-	(13,124,260)
Total transactions with owners		-	-	-	(13,124,260)	-	(13,124,260)
Balance as of March 31, 2021		119,467	778,047	4,403,893	169,707,446	(252,779)	174,756,074

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))

2021 USD	Notes	Preference shares	Ordinary shares	Share premium	Retained earnings	Other components of equity	Total
Balance as of January 1, 2021		99,189	645,982	3,656,379	148,022,266	(223,162)	152,200,654
Profit for the period		-	-	-	3,775,696	-	3,775,696
Gain on valuation of financial assets at fair value through other comprehensive income, net of tax		-	-	-	-	44,814	44,814
Remeasurement of net defined benefit liabilities (assets), net of tax		-	-	-	-	(31,524)	(31,524)
Total comprehensive income for the period		-	-	-	3,775,696	13,290	3,788,986
Dividends declared		-	-	-	(10,896,556)	-	(10,896,556)
Total transactions with owners		-	-	-	(10,896,556)	-	(10,896,556)
Balance as of March 31, 2021		99,189	645,982	3,656,379	140,901,406	(209,872)	145,093,084

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)

2022 KRW	Notes	Preference shares	Ordinary shares	Share premium	Retained earnings	Other components of equity	Total
Balance as of January 1, 2022		119,467	778,047	4,403,893	188,774,335	(882,010)	193,193,732
Profit for the period		-	-	-	7,651,943	-	7,651,943
Loss on valuation of financial assets at fair value through other comprehensive income, net of tax	17	-	-	-	-	(53,901)	(53,901)
Remeasurement of net defined benefit liabilities (assets), net of tax	17	-	-	-	-	(63,027)	(63,027)
Total comprehensive income (loss) for the period		-	-	-	7,651,943	(116,928)	7,535,015
Dividends declared		-	-	-	(2,452,977)	-	(2,452,977)
Total transactions with owners		-	-	-	(2,452,977)	-	(2,452,977)
Balance as of March 31, 2022		119,467	778,047	4,403,893	193,973,301	(998,938)	198,275,770

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))

2022 USD	Notes	Preference shares	Ordinary shares	Share premium	Retained earnings	Other components of equity	Total
Balance as of January 1, 2022		99,189	645,982	3,656,379	156,731,893	(732,297)	160,401,146
Profit for the period		-	-	-	6,353,107	-	6,353,107
Loss on valuation of financial assets at fair value through other comprehensive income, net of tax	17	-	-	-	-	(44,752)	(44,752)
Remeasurement of net defined benefit liabilities (assets), net of tax	17	-	-	-	-	(52,329)	(52,329)
Total comprehensive income (loss) for the period		-	-	-	6,353,107	(97,081)	6,256,026
Dividends declared		-	-	-	(2,036,611)	-	(2,036,611)
Total transactions with owners		-	-	-	(2,036,611)	-	(2,036,611)
Balance as of March 31, 2022		99,189	645,982	3,656,379	161,048,389	(829,378)	164,620,561

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, in thousands of US dollars (Note 2.3))

	Notes	For the three-month periods ended March 31,			
		2022	2021	2022	2021
		KRW	KRW	USD	USD
Operating activities					
Profit for the period		7,651,943	4,547,604	6,353,107	3,775,696
Adjustments	24	8,705,638	5,241,834	7,227,948	4,352,088
Changes in assets and liabilities arising from operating activities	24	(6,561,441)	(1,311,341)	(5,447,706)	(1,088,754)
Cash generated from operations		9,796,140	8,478,097	8,133,349	7,039,030
Interest received		57,351	68,537	47,616	56,904
Interest paid		(50,096)	(23,076)	(41,593)	(19,159)
Dividends received		676	1,027,775	561	853,321
Income tax paid		(67,223)	(589,418)	(55,813)	(489,371)
Net cash from operating activities		9,736,848	8,961,915	8,084,120	7,440,725
Investing activities					
Net decrease in short-term financial instruments		2,198,224	6,298,328	1,825,099	5,229,254
Acquisition of financial assets at fair value through other comprehensive income		-	(43,009)	-	(35,709)
Disposal of financial assets at fair value through profit or loss		150	90	125	75
Disposal of investments in subsidiaries, associates and joint ventures		75,028	31,766	62,293	26,374
Acquisition of investments in subsidiaries, associates and joint ventures		(45,495)	(1,992)	(37,773)	(1,654)
Disposal of property, plant and equipment		55,545	190,300	46,117	157,999
Acquisition of property, plant and equipment		(6,939,519)	(7,449,044)	(5,761,609)	(6,184,648)
Disposal of intangible assets		197	-	164	-
Acquisition of intangible assets		(863,935)	(644,893)	(717,291)	(535,429)
Cash outflow from other investing activities		(14,552)	(9,945)	(12,082)	(8,257)
Net cash used in investing activities		(5,534,357)	(1,628,399)	(4,594,957)	(1,351,995)

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, in thousands of US dollars (Note 2.3))

Notes	For the three-month periods ended March 31,			
	2022	2021	2022	2021
	KRW	KRW	USD	USD
Financing activities				
Net increase (decrease) in short-term borrowings	1,043,408	(1,785)	866,301	(1,482)
Repayment of debentures and long-term borrowings	(34,731)	(29,551)	(28,836)	(24,535)
Dividends paid	(245)	(243)	(204)	(202)
Net cash provided by (used in) financing activities	1,008,432	(31,579)	837,261	(26,219)
Effect of foreign exchange rate changes	-	18	-	15
Net increase in cash and cash equivalents	5,210,923	7,301,955	4,326,424	6,062,526
Cash and cash equivalents				
Beginning of the year	3,918,872	989,045	3,253,685	821,165
End of the period	9,129,795	8,291,000	7,580,109	6,883,691

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

5. Notes to non-consolidated financial statements

1. General Information

Samsung Electronics Co., Ltd. (the “Company”) was incorporated under the laws of the Republic of Korea in 1969 and listed its shares on the Korea Stock Exchange in 1975. The Company operates three business divisions: Device eXperience (“DX”) and Device Solutions (“DS”). DX division includes digital TVs, refrigerators, mobile phones, and communication systems. DS division includes semiconductor products such as memory, foundry and system 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 IFRS 1027, Separate Financial Statements*.

2. Significant Accounting Policies

2.1 Basis of Presentation

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

The interim financial statements for the three-month period ended March 31, 2022, have been prepared in accordance with *Korean IFRS 1034, Interim Financial Reporting*. These interim financial statements have been prepared in accordance with the Korean IFRS which is effective as of March 31, 2022.

(A) New and amended standards adopted by the Company

The Company applied the following amended and enacted standards for the first time for their annual reporting period commencing January 1, 2022:

Amendments to Korean IFRS 1116, Lease

The amendments to Korean IFRS 1116 introduced a practical expedient that provided practical relief to lessees in accounting for rent concessions occurring as a direct consequence of COVID-19. The amendments extend the practical expedient to apply to reduction in lease payments originally due on or before June 30, 2022. The application of the amendments does not have a significant impact on the Company’s interim separate financial statements.

Amendments to Korean IFRS 1103, Business Combinations

The amendments update Korean IFRS so that it refers to the amended conceptual framework for financial reporting for assets and liabilities recognized upon business combination, along with a adding requirement that for transactions and other events within the scope of IAS 37 or IFRIC 21, an acquirer applies IAS 37 or IFRIC 21 to identify the liabilities it has assumed in a business combination. The amendments also add an explicit statement that an acquirer does not recognise contingent assets acquired in a business combination. The application of the amendments does not have a significant impact on the Company’s interim separate financial statements.

Amendments to Korean IFRS 1016, Property, Plant and Equipment

The amendments prohibit deducting from the cost of an item of property, plant and equipment any proceeds from selling items produced while bringing that asset to the location and condition necessary for it to be capable of operating in the manner intended by management. Instead, an entity recognizes the proceeds from selling such items, and the cost of producing those items, in profit or loss. The application of the amendments does not have a significant impact on the Company's interim separate financial statements.

Amendments to Korean IFRS 1037, Provisions, Contingent Liabilities and Contingent Assets

The amendments specify that the cost of fulfilling a contract comprises the costs that relate directly to the contract, and that costs that relate directly to a contract consist of both the incremental costs of fulfilling that contract and an allocation of other costs that relate directly to fulfilling contracts. The application of the 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 mandatory for the annual reporting period commencing January 1, 2022 and has not been early adopted by the Company is as follows:

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

The amendments to K-IFRS 1001 clarify that the presentation 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 expectations of management or 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 can refer to the transfer to the counterparty of the entity's own equity instruments, unless the entity classifies the option as an equity instrument, recognising it separately from the liability as an equity component of a compound financial instrument. The amendments are applied retrospectively for annual periods beginning on or after January 1, 2023, with early application permitted.

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

The amendments require companies to define and disclose their 'material' accounting policy information instead of its 'significant' accounting policies. The amendments explain how an entity can identify material accounting policy information. The amendments to K-IFRS 1001 are effective for annual periods beginning on or after January 1, 2023, with earlier application permitted and are applied prospectively.

Amendments to Korean IFRS 1008 Accounting Policies, Changes in Accounting Estimates and Errors - Definition of Accounting Estimates

The amendments clarify the definition of a change in accounting estimates, and specify how to distinguish from a change in accounting policies. The amendments are effective for annual periods beginning on or after January 1, 2023 to changes in accounting policies and changes in accounting estimates that occur on or after the beginning of that period, with earlier application permitted.

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

The amendments add to the initial recognition exemption that the initial recognition exemption does not apply to transactions in which equal amounts of deductible and taxable temporary differences arise on initial recognition. The amendments are effective for annual reporting periods beginning on or after January 1, 2023, with earlier application permitted.

2.2 Accounting Policies

Significant accounting policies and method of computation used in the preparation of the interim financial statements are consistent with those of the annual financial statements for the year ended December 31, 2021, except for the changes due to the application of amendments and enactments of standards described in Note 2.1 and as described below.

(A) Income tax expense

Income tax expense for the interim period is recognized based on management's best estimate of the weighted average annual income tax rate expected for the full financial year. The estimated average annual 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 Company operates primarily in Korean won and its official accounting records are maintained in Korean won. 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 ₩ 1,204.44 to \$1, the average exchange rate for the three-month periods ended March 31, 2022. 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 Critical Accounting Estimates and Assumptions

In preparing the interim 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. The spread of COVID-19 may result in changes to the Company's assumptions and estimates, but its potential financial impact cannot be reasonably estimated as of the reporting date.

Critical accounting estimates and assumptions made in the preparation of the interim financial statements are consistent with those applied in the preparation of the annual financial statements for the year ended December 31, 2021, except for the estimates used to determine the income tax expense.

3. Financial Instruments by Category

(A) Categorizations of financial assets and liabilities as of March 31, 2022 and December 31, 2021 are as follows:

(1) As of March 31, 2022

<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	9,129,795	-	-	9,129,795
Short-term financial instruments	12,802,352	-	-	12,802,352
Trade receivables	34,711,648	-	-	34,711,648
Financial assets at fair value through other comprehensive income	-	1,588,288	-	1,588,288
Financial assets at fair value through profit or loss	-	-	1,876	1,876
Other	5,323,358	-	259,530	5,582,888
Total	61,967,153	1,588,288	261,406	63,816,847

<i>(In millions of Korean won)</i>	Financial liabilities measured at amortized cost	Other financial liabilities¹	Total
Financial liabilities			
Trade payables	13,406,261	-	13,406,261
Short-term borrowings	-	10,237,826	10,237,826
Other payables	15,294,921	-	15,294,921
Current portion of long-term liabilities	5,941	132,810	138,751
Debentures	29,710	-	29,710
Long-term borrowings	-	419,079	419,079
Long-term other payables	1,883,559	-	1,883,559
Other	3,399,266	-	3,399,266
Total	34,019,658	10,789,715	44,809,373

¹ Other financial liabilities include collateralized borrowings and lease liabilities which are not subject to categorizations.

(2) As of December 31, 2021

<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	3,918,872	-	-	3,918,872
Short-term financial instruments	15,000,576	-	-	15,000,576
Trade receivables	33,088,247	-	-	33,088,247
Financial assets at fair value through other comprehensive income	-	1,662,532	-	1,662,532
Financial assets at fair value through profit or loss	-	-	2,135	2,135
Other	5,076,418	-	-	5,076,418
Total	57,084,113	1,662,532	2,135	58,748,780

<i>(In millions of Korean won)</i>	Financial liabilities measured at amortized cost	Other financial liabilities¹	Total
Financial liabilities			
Trade payables	11,557,441	-	11,557,441
Short-term borrowings	-	9,204,268	9,204,268
Other payables	12,948,960	-	12,948,960
Current portion of long-term liabilities	5,810	133,518	139,328
Debentures	29,048	-	29,048
Long-term borrowings	-	431,915	431,915
Long-term other payables	2,335,218	-	2,335,218
Others	3,056,156	-	3,056,156
Total	29,932,633	9,769,701	39,702,334

¹ Other financial liabilities include collateralized borrowings and lease liabilities which are not subject to categorizations.

4. Financial Assets at Fair Value

(A) Details of financial assets at fair value as of March 31, 2022 and December 31, 2021 are as follows:

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

<i>(In millions of Korean won)</i>	March 31, 2022	December 31, 2021
Equity instruments	1,588,288	1,662,532

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

<i>(In millions of Korean won)</i>	March 31, 2022	December 31, 2021
Debt instruments	1,876	2,135

(B) Details of listed equity securities of financial assets at fair value as of March 31, 2022 and December 31, 2021 are as follows:

<i>(In millions of Korean won, number of shares and percentage)</i>	March 31, 2022			December 31, 2021	
	Number of shares owned	Percentage of ownership¹ (%)	Acquisition cost	Carrying amount (Market value)	Carrying amount (Market value)
Samsung Heavy Industries	134,027,281	15.2	932,158	761,275	759,935
Hotel Shilla	2,004,717	5.1	13,957	162,783	156,368
iMarket Korea	647,320	1.9	324	7,023	6,926
Skylife	240,000	0.5	3,344	2,134	2,194
Yongpyong Resort	400,000	0.8	1,869	2,164	1,958
A-Tech Solution	1,592,000	15.9	26,348	22,049	26,188
Wonik Holdings	1,759,171	2.3	15,410	8,453	8,761
Wonik IPS	1,850,936	3.8	16,214	70,521	78,295
Dongjin Semichem	2,467,894	4.8	48,277	96,988	125,863
Soulbrain Holdings	461,741	2.2	30,752	13,875	15,976
Soulbrain	373,368	4.8	24,866	91,400	103,983
S&S Tech	1,716,116	8.0	65,933	52,685	63,153
YIK Corp	9,601,617	11.7	47,336	52,809	59,530
Kctech	1,022,216	4.9	20,720	22,284	24,584
Lotvacuum	1,267,668	7.1	18,990	19,079	21,805
Newpower	2,140,939	4.9	12,739	11,711	13,723
Fine Semitech	1,522,975	7.0	43,009	34,876	38,607
DNF	810,030	7.0	20,964	16,768	18,509
Marvell	173,187	0.0	11,705	15,037	17,962
Total			1,354,915	1,463,914	1,544,320

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

5. Inventories

Inventories as of March 31, 2022 and December 31, 2021 are as follows:

<i>(In millions of Korean won)</i>	March 31, 2022			December 31, 2021		
	Gross amount	Valuation allowance	Carrying amount	Gross amount	Valuation allowance	Carrying amount
Finished goods	4,657,124	(378,705)	4,278,419	3,884,713	(366,987)	3,517,726
Work in process	10,851,334	(360,444)	10,490,890	9,384,285	(222,291)	9,161,994
Raw materials and supplies	3,852,431	(316,649)	3,535,782	3,211,380	(258,464)	2,952,916
Materials in transit	403,108	-	403,108	340,417	-	340,417
Total	19,763,997	(1,055,798)	18,708,199	16,820,795	(847,742)	15,973,053

6. Investments in Subsidiaries, Associates and Joint Ventures

(A) Changes in investments in subsidiaries, associates and joint ventures for the three-month periods ended March 31, 2022 and 2021 are as follows:

<i>(In millions of Korean won)</i>	2022	2021
Balance as of January 1	56,225,599	56,587,548
Acquisition	45,495	1,992
Disposal	(74,448)	(31,766)
Balance as of March 31	56,196,646	56,557,774

(B) Major investments in associates as of March 31, 2022 are as follows (refer to Note 27 for the list of subsidiaries):

Investee	Nature of relationship with associate	Percentage of ownership (%) ¹	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 IT services including computer programming, system integration and management, and logistical services	22.6	Korea	December
Samsung Biologics Co., Ltd.	Business investment	31.5	Korea	December
Samsung SDI Co., Ltd. ²	Manufacture and supply electronic components including secondary cell batteries	19.6	Korea	December
Cheil Worldwide, Inc.	Advertising agency	25.2	Korea	December

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

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

(C) Fair value of marketable investments in associates as of March 31, 2022 and December 31, 2021 as follows:

<i>(In millions of Korean won and number of shares)</i>	March 31, 2022		December 31, 2021		
	Number of shares held	Market value	Carrying amount	Market value	Carrying amount
Samsung Electro-Mechanics	17,693,084	2,919,359	445,244	3,494,384	445,244
Samsung SDS	17,472,110	2,419,887	560,827	2,734,385	560,827
Samsung Biologics	20,836,832	17,232,060	443,193	18,815,659	443,193
Samsung SDI	13,462,673	8,023,753	1,242,605	8,818,051	1,242,605
Cheil Worldwide	29,038,075	683,847	491,599	663,520	491,599

7. Property, Plant and Equipment

(A) Changes in property, plant and equipment for the three-month periods ended March 31, 2022 and 2021 are as follows:

<i>(In millions of Korean won)</i>	2022	2021
Balance as of January 1	103,667,025	86,166,924
Acquisition and capital expenditures	6,311,543	7,013,954
Depreciation	(5,927,470)	(4,546,844)
Disposals/scrap/impairment	(27,029)	(77,466)
Other	8,493	(1,571)
Balance as of March 31	104,032,562	88,554,997

(B) Details of depreciation of property, plant and equipment for the three-month periods ended March 31, 2022 and 2021 are as follows:

<i>(In millions of Korean won)</i>	2022	2021
Cost of sales	5,488,037	4,126,460
Selling and administrative expenses and other	439,433	420,384
Total	5,927,470	4,546,844

(C) Right-of-use assets as of March 31, 2022 amount to ₩ 713,070 million (December 31, 2021: ₩ 730,325 million). During the three-month periods ended March 31, 2022 and 2021, newly recognized right-of-use assets amount to ₩ 22,317 million and ₩ 75,321 million, respectively, with relevant depreciation of ₩ 39,202 million and ₩ 31,588 million, respectively.

8. Intangible Assets

(A) Changes in intangible assets for the three-month periods ended March 31, 2022 and 2021 are as follows:

<i>(In millions of Korean won)</i>	2022	2021
Balance as of January 1	8,657,456	7,002,648
Internally generated /developed	-	101,577
External acquisitions	303,200	323,214
Amortization	(628,517)	(553,854)
Disposals/scrap/impairment	(3,150)	(9,758)
Other	4,507	14,866
Balance as of March 31	8,333,496	6,878,693

(B) Details of amortization of intangible assets for the three-month periods ended March 31, 2022 and 2021 are as follows:

<i>(In millions of Korean won)</i>	2022	2021
Cost of sales	480,529	437,705
Selling and administrative expenses and other	147,988	116,149
Total	628,517	553,854

9. Borrowings

Details of the carrying amounts of borrowings as of March 31, 2022 and December 31, 2021 are as follows:

<i>(In millions of Korean won)</i>	Financial institutions	Interest rate (%) as of Mar 31, 2022	March 31, 2022	December 31, 2021
Short-term borrowings				
Collateralized borrowings ¹	Woori Bank and other	0.0~12.8	10,237,826	9,204,268
Current portion of long-term borrowings				
Lease liabilities ²	-	1.7	132,810	133,518
Long-term borrowings				
Lease liabilities ²	-	1.7	419,079	431,915

¹ Collateralized borrowings are secured by trade receivables.

² Interest expenses arising from the lease liabilities for the three-month periods ended March 31, 2022 and 2021 amounted to ₩ 2,310 million and ₩ 1,155 million, respectively, which were determined using the weighted average incremental borrowing rate. The right-of-use assets are pledged as collateral to lessors in the event of default.

10. Debentures

Details of the carrying amounts of debentures as of March 31, 2022 and December 31, 2021 are as follows:

<i>(In millions of Korean won)</i>	Issue date	Due date	Interest rate (%) as of Mar 31, 2022	March 31, 2022	December 31, 2021
US dollar denominated straight bonds ¹	Oct 2, 1997	Oct 1, 2027	7.7	36,324 (USD 30 million)	35,565 (USD 30 million)
Less: Discounts				(673)	(707)
Less: Current Portion				(5,941)	(5,810)
Total				29,710	29,048

¹ 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.

11. Net Defined Benefit Liabilities (Assets)

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

<i>(In millions of Korean won)</i>	March 31, 2022	December 31, 2021
Present value of funded defined benefit obligations	11,428,018	11,155,187
Present value of unfunded defined benefit obligations	18,900	18,449
Subtotal	11,446,918	11,173,636
Fair value of plan assets	(13,455,188)	(13,497,927)
Total	(2,008,270)	(2,324,291)

- (B) The components of defined benefit costs recognized in profit or loss for the three-month periods ended March 31, 2022 and 2021 are as follows:

<i>(In millions of Korean won)</i>	2022	2021
Current service cost	257,508	226,862
Net interest income	(22,976)	(10,026)
Total	234,532	216,836

- (C) The expenses related to defined benefit plans recognized in the statements of profit or loss for the three-month periods ended March 31, 2022 and 2021 are as follows:

<i>(In millions of Korean won)</i>	2022	2021
Cost of sales	93,630	84,710
Selling and administrative expenses and other	140,902	132,126
Total	234,532	216,836

12. Provisions

Changes in the provisions for the three-month periods ended March 31, 2022 are as follows:

<i>(In millions of Korean won)</i>	Warranty (A)	Royalty expenses (B)	Long-term incentives (C)	Other (D, E)	Total
Balance as of January 1	386,713	1,496,525	558,982	2,861,407	5,303,627
Charged to profit or loss	141,893	387,867	44,778	1,870,078	2,444,616
Payment	(117,058)	(48,417)	(194,281)	(1,608,584)	(1,968,340)
Other	-	30,643	-	12,755	43,398
Balance as of March 31	411,548	1,866,618	409,479	3,135,656	5,823,301

- (A) The Company accrues warranty reserves 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 negotiation.
- (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 for the accrued period.
- (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 carrying amounts of emission rights held by the Company and the emission in excess of the emission rights for the applicable years. Details of emission rights and liabilities as of March 31, 2022 are as follows:
- (1) The amount of emission rights allocated free of charge in the current commitment period and estimated volume of emission as of March 31, 2022 are as follows:

<i>(In ten thousand metric tons)</i>	March 31, 2022
Emission rights allocated free of charge	1,123
Estimated volume of emission	1,523

- (2) Changes in the emission rights for the three-month periods ended March 31, 2022 are as follows:

<i>(In millions of Korean won)</i>	2022
Balance as of January 1	46,073
Acquisition	-
Balance as of March 31	46,073

- (3) Changes in the emission liabilities for the three-month periods ended March 31, 2022 are as follows:

<i>(In millions of Korean won)</i>	2022
Balance as of January 1	45,049
Charged to profit or loss	12,454
Balance as of March 31	57,503

13. Commitments and Contingencies

(A) Guarantees

- (1) Debt guarantees provided by the Company for overseas subsidiaries as of March 31, 2022 are as follows:

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

Debtor	Creditor	Period	Actual indebtedness	Guaranteed amount
SETK	BNP Paribas and others	Dec 16, 2022	155,298	977,116
SETK-P	BNP Paribas and others	Dec 16, 2022	68,178	157,404
SEIL	Citibank	Dec 16, 2022	12,945	18,888
Other	Others	-	-	8,830,286
Total			236,421	9,983,694
			USD 195,265	USD 8,245,535

- (2) The ceiling amount of guarantees provided by the Company for the execution of contracts by overseas subsidiaries is ₩ 423,687 million as of March 31, 2022.
- (3) The Company has not been provided any collateral or guarantees from its related parties as of March 31, 2022.

(B) Litigation

As of March 31, 2022, 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.

14. Contract Liabilities

The Company has recognized the following contract liabilities related to revenue from contracts with customers:

<i>(In millions of Korean won)</i>	March 31, 2022	December 31, 2021
Contract liabilities ¹	1,244,607	1,104,756

¹ Contract liabilities include advances received, accrued expenses, other current liabilities and others.

15. Share Capital

As of March 31, 2022, the Company's total number of authorized shares is 25,000,000,000 shares (₩ 100 per share). The Company has issued 5,969,782,550 shares of ordinary shares and 822,886,700 shares of preference shares as of March 31, 2022, excluding retired shares. As of the March 31, 2022, the number of shares outstanding is the same as the number of shares issued above, and no changes were made to the number of shares outstanding during the three-month periods ended March 31, 2022 and 2021. Due to the retirement of shares, the total par value of the shares issued is ₩ 679,267 million (ordinary shares of ₩ 596,978 million and preference shares of ₩ 82,289 million), which does not agree with paid-in capital of ₩ 897,514 million.

16. Retained Earnings

(A) Retained earnings as of March 31, 2022 and December 31, 2021 consist of the following:

<i>(In millions of Korean won)</i>	March 31, 2022	December 31, 2021
Legal reserves	450,789	450,789
Discretionary reserves, etc.	193,522,512	188,323,546
Total	193,973,301	188,774,335

(B) Details of interim dividends are as follows (Record date: March 31, 2022 and 2021)

<i>(In millions of Korean won and number of shares)</i>		2022	2021	
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)	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 March 31, 2022 and December 31, 2021 consist of the following:

<i>(In millions of Korean won)</i>	March 31, 2022	December 31, 2021
Gain on valuation of financial assets at fair value through other comprehensive income	36,678	90,579
Remeasurement of net defined benefit assets	(2,796,024)	(2,732,997)
Others	1,760,408	1,760,408
Total	(998,938)	(882,010)

18. Expenses by Nature

Expenses by nature for the three-month periods ended March 31, 2022 and 2021 are as follows:

<i>(In millions of Korean won)</i>	2022	2021
Changes in finished goods, work in process, and other	(2,089,589)	1,145,108
Raw materials used, merchandise purchased, and other	27,637,597	21,429,120
Wages and salaries	4,240,048	3,563,516
Post-employment benefit	236,336	219,230
Depreciation	5,927,470	4,546,844
Amortization	628,517	553,854
Welfare	680,291	610,807
Utilities	832,675	686,350
Outsourcing	803,742	814,449
Advertising	353,048	249,023
Sales promotion expenses	405,396	300,650
Other	7,916,896	6,477,963
Total¹	47,572,427	40,596,914

¹ Equal to sum of cost of sales and selling and administrative expenses in the separate statements of profit or loss.

19. Selling and Administrative Expenses

Selling and administrative expenses for the three-month periods ended March 31, 2022 and 2021 are as follows:

<i>(In millions of Korean won)</i>	2022	2021
Selling and administrative expenses		
Wages and salaries	728,659	648,173
Post-employment benefit	41,455	41,089
Commissions	660,812	579,165
Depreciation	98,783	100,529
Amortization	88,795	54,037
Advertising	353,048	248,988
Sales promotion expenses	405,396	300,650
Transportation	261,485	196,800
Service charges	275,303	280,293
Other	439,996	392,582
Subtotal	3,353,732	2,842,306
Research and development expenses		
Total expenses	5,033,783	4,718,623
Capitalized expenses	-	(101,577)
Subtotal	5,033,783	4,617,046
Total	8,387,515	7,459,352

20. Other Non-Operating Income and Expenses

Details of other non-operating income and expenses for the three-month periods ended March 31, 2022 and 2021 are as follows:

<i>(In millions of Korean won)</i>	2022	2021
Other non-operating income		
Dividend income	127,508	1,135,000
Rental income	43,238	41,189
Gain on disposal of property, plant and equipment	48,098	132,884
Other	64,427	48,174
Total	283,271	1,357,247

<i>(In millions of Korean won)</i>	2022	2021
Other non-operating expenses		
Loss on disposal of property, plant and equipment	934	3,204
Donations	52,457	27,596
Other	1,218	18,180
Total	54,609	48,980

21. Financial Income and Expenses

Details of financial income and expenses for the three-month periods ended March 31, 2022 and 2021 are as follows:

<i>(In millions of Korean won)</i>	2022	2021
Financial income		
Interest income	83,458	82,289
Interest income from financial assets measured at amortized cost	83,458	82,289
Foreign exchange differences	1,396,907	838,475
Gain from derivatives	259,530	-
Total	1,739,895	920,764

<i>(In millions of Korean won)</i>	2022	2021
Financial expenses		
Interest expenses	53,921	32,114
Interest expenses from financial liabilities measured at amortized cost	11,817	9,038
Other financial liabilities	42,104	23,076
Foreign exchange differences	1,388,447	825,037
Total	1,442,368	857,151

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. The average annual tax rate expected as of March 31, 2022 to be effective for the year ended December 31, 2022 is 20.9%.

23. Earnings per Share

(A) Basic earnings per share

Basic earnings per share for the three-month periods ended March 31, 2022 and 2021 are calculated as follows:

(1) Ordinary shares

<i>(In millions of Korean won, thousands of number of shares)</i>	2022	2021
Profit for the period	7,651,943	4,547,604
Profit for the period available for ordinary shares	6,724,961	3,996,692
Weighted-average number of ordinary shares outstanding	5,969,783	5,969,783
Basic earnings per ordinary share (in Korean won)	1,127	669

(2) Preference shares

<i>(In millions of Korean won, thousands of number of shares)</i>	2022	2021
Profit for the period	7,651,943	4,547,604
Profit for the period available for preference shares	926,982	550,912
Weighted-average number of preference shares outstanding	822,887	822,887
Basic earnings per preference share (in Korean won)	1,127	669

(B) Diluted earnings per share

The Company does not have dilutive potential ordinary shares and as a result, basic earnings per share and diluted earnings per share are the same for the three-month periods ended March 31, 2022 and 2021.

24. Statements of Cash Flows

(A) The Company used the indirect method to present cash flows from operating activities. Adjustments and changes in assets and liabilities arising from operating activities for the three-month periods ended March 31, 2022 and 2021 are as follows:

- Adjustments

<i>(In millions of Korean won)</i>	2022	2021
Adjustments :		
Income tax expense	2,026,077	1,269,752
Financial income	(787,805)	(527,907)
Financial expenses	566,791	334,183
Post-employment benefits	236,336	219,230
Depreciation	5,927,470	4,546,844
Amortization	628,517	553,854
Bad debt expenses	4,586	10,651
Dividends income	(127,508)	(1,135,000)
Gain on disposal of property, plant and equipment	(48,098)	(132,884)
Loss on disposal of property, plant and equipment	934	3,204
Loss on valuation of inventories	275,743	96,196
Others	2,595	3,711
Total	8,705,638	5,241,834

- Changes in assets and liabilities arising from operating activities

<i>(In millions of Korean won)</i>	2022	2021
Changes in assets and liabilities :		
Increase in trade receivables	(1,568,826)	(4,229,735)
Decrease in non-trade receivables	410,934	651,833
Increase in prepaid expenses	(313,005)	(269,865)
Decrease (increase) in inventories	(2,968,903)	885,829
Increase in trade payables	1,903,747	3,230,220
Decrease in other payables	(1,499,235)	(67,580)
Decrease in advances received	(99,472)	(10,238)
Decrease in withholdings	(224,466)	(27,301)
Decrease in accrued expenses	(2,286,705)	(1,243,732)
Increase in provisions	476,276	146,199
Payment of post-employment benefits	(90,289)	(46,829)
Other	(301,497)	(330,142)
Total	(6,561,441)	(1,311,341)

(B) For the three-month periods ended March 31, 2022 and 2021, cash outflows from repayment of the principal (financial activities) were ₩ 34,731 million and ₩ 29,551 million, respectively, while cash outflows due to interest expenses (operating activities) in relation to the lease liabilities amount to ₩ 2,310 million and ₩ 1,155 million, respectively.

25. Financial Risk Management

The Company's financial risk management focuses on minimizing market risk, credit risk, and liquidity risk arising from operating activities. To mitigate these risks, the Company implements and operates a financial risk policy and program that closely monitors and manages such risks. In addition, the Company uses derivatives to hedge certain risk exposure.

The finance team mainly carries out the Company's financial risk management. After implementing the global financial risk management policies, the finance team periodically measures, evaluates, and hedges financial risk and also establishes and implements the global financial risk management policy.

The Company also manages foreign exchange risk by monitoring foreign exchange rate fluctuations at local finance centers across major regions (United States, United Kingdom, Singapore, China, Brazil, and Russia) and acting as an agent of foreign exchange transactions. In addition, the Company manages liquidity risk by utilizing a globally integrated finance structure.

The Company's financial assets that are under financial risk management are comprised of cash and cash equivalents, short-term financial instruments, trade receivables and others. The Company's financial liabilities under financial risk management are comprised 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 performed in currencies other than its functional currency. The major currencies that are exposed to foreign exchange risk are the US dollar, Euro, and Indian Rupee.

The Company focuses on minimizing the impact of foreign exchange fluctuation by maintaining the equal amount of assets and liabilities denominated in each foreign currency, irrespective of foreign exchange fluctuation considerations. To prevent 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 for the cash-in currency to be matched up with the cash-out currency. 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

Risk of changes in interest rates for floating interest rate financial instruments is defined as the risk that the fair value of components of the statements of financial position, and future cash flows of interest income (expenses) of a financial instrument, will fluctuate because of changes in market interest rates. The Company's position with regard to interest rate risk exposure is mainly driven by its floating interest rate debt obligations and interest-bearing deposits. The Company implemented policies and operates to minimize uncertainty arising from changes in interest rates and finance expenses.

(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, which is in line with the Company's strategy.

As of March 31, 2022 and 2021, price fluctuation of marketable equity securities (listed stocks) by 1% would result in changes in other comprehensive income (before income tax) of ₩ 14,639 million and ₩ 15,300 million, respectively.

(B) 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 monitors and sets the client's and counterparty's credit limit 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, deposits, and derivative instruments. To minimize such risk, the Company transacts only with banks which have a strong international credit rating (S&P A and above), and all new transactions with financial institutions with no prior transaction history are approved, managed and monitored by the Company's finance team. The Company generally enters into a financial agreement with no restrictions, such as debt ratio covenants, provision of collateral and/or repayment of loans/ borrowings. The Company requires separate approvals for contracts with restrictions.

As of the reporting date, the Company estimates that its maximum exposure to credit risk is the carrying amount of its financial assets, net of impairment losses.

(C) Liquidity risk

Due to large investments made by the Company, maintaining adequate levels of liquidity risk is critical. The Company strives to achieve this goal by periodically forecasting its capital balance, estimating required cash levels, and managing income and expenses.

The Company manages its liquidity risk by periodically forecasting projected cash flows. If abnormal signs are identified, the Company works with the local finance center and provides liquidity support by utilizing a globally integrated finance structure, such as Cash Pooling. In addition, the Company maintains a liquidity management process which provides additional financial support from the local finance center and the Company. The Cash Pooling program allows the sharing of surplus funds among entities and contributes to minimizing liquidity risk and strengthening the Company's competitive position by reducing capital operation expenses and financial expenses.

For the need of large scale of liquidity, the Company secures credit limit for the overseas subsidiaries through payment guarantees.

(D) Capital risk management

The purpose of capital management is to maintain a sound capital structure. The Company monitors capital on the basis of credit ratings and debt ratio. Debt ratio is calculated by dividing total liabilities by total equity in the financial statements.

The Company has maintained an AA- and Aa3 credit rating from S&P and Moody's, respectively.

The debt ratio as of March 31, 2022 and December 31, 2021 are as follows:

<i>(In millions of Korean won)</i>	March 31, 2022	December 31, 2021
Total liabilities	61,078,241	57,918,452
Total equity	198,275,770	193,193,732
Debt ratio	30.8%	30.0%

(E) Fair value estimation

- (1) Carrying amounts and fair value of financial instruments by category as of March 31, 2022 and December 31, 2021 are as follows:

<i>(In millions of Korean won)</i>	March 31, 2022		December 31, 2021	
	Carrying amount	Fair value	Carrying amount	Fair value
Financial assets				
Cash and cash equivalents	9,129,795	(*)	3,918,872	(*)
Short-term financial instruments	12,802,352	(*)	15,000,576	(*)
Trade receivables	34,711,648	(*)	33,088,247	(*)
Financial assets at fair value through other comprehensive income	1,588,288	1,588,288	1,662,532	1,662,532
Financial assets at fair value through profit or loss	1,876	1,876	2,135	2,135
Other	5,582,888	(*)	5,076,418	(*)
Total financial assets	63,816,847		58,748,780	
Financial liabilities				
Trade payables	13,406,261	(*)	11,557,441	(*)
Short-term borrowings	10,237,826	(*)	9,204,268	(*)
Other payables	15,294,921	(*)	12,948,960	(*)
Current portion of long-term liabilities	138,751	6,417	139,328	6,276
- Current portion of long-term borrowing	132,810	(*)	133,518	(*)
- Current portion of debentures	5,941	6,417	5,810	6,276
Debentures	29,710	35,810	29,048	35,863
Long-term borrowings	419,079	(*)	431,915	(*)
Long-term other payables	1,883,559	(*)	2,335,218	(*)
Other	3,399,266	(*)	3,056,156	(*)
Total financial liabilities	44,809,373		39,702,334	

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

(*) 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 at fair value or its fair value disclosed as of March 31, 2022 and December 31, 2021 are as follows:

March 31, 2022				
<i>(In millions of Korean won)</i>	Level 1	Level 2	Level 3	Total balance
1) Assets				
Financial assets at fair value through other comprehensive income	1,463,914	-	124,374	1,588,288
Financial assets at fair value through profit or loss	-	-	1,876	1,876
2) Liabilities				
Current portion of debentures	-	6,417	-	6,417
Debentures	-	35,810	-	35,810

December 31, 2021				
<i>(In millions of Korean won)</i>	Level 1	Level 2	Level 3	Total balance
1) Assets				
Financial assets at fair value through other comprehensive income	1,544,320	-	118,212	1,662,532
Financial assets at fair value through profit or loss	-	-	2,135	2,135
2) Liabilities				
Current portion of debentures	-	6,276	-	6,276
Debentures	-	35,863	-	35,863

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 statements of financial position 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. The quoted market price used for financial assets held by the Company is the current bid price. 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 (for example, over-the-counter derivatives) is determined by using valuation techniques. These valuation techniques maximize the use of observable market data where it is available and rely as little as possible on entity-specific estimates. If all significant inputs required to fair value 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 at least once every quarter in line with the Company's quarterly reporting dates. 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 is determined using forward exchange rates at the statements of financial position date, with the resulting value discounted back to present value

Other techniques, such as discounted cash flow analysis, 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 a proper interest rate for corporate bonds, government and public bonds, and bank debentures that are classified as Level 2 in the fair value hierarchy.

The following table presents the valuation technique and the inputs used for major financial instruments classified as Level 3 as of March 31, 2022.

(In millions of Korean won, and percentage)

Classification	Fair value	Valuation technique	Level 3 inputs	Input range (Weighted average)
Financial assets at fair value through other comprehensive income				
Samsung Venture Investment	27,331	Discounted cash flow	Permanent growth rate	-1.0%~1.0%(0.0%)
			Weighted average cost of capital	19.3%~21.3%(20.3%)
MiCo Ceramics Co., Ltd.	25,666	Discounted cash flow, and etc.	Permanent growth rate	-1.0%~1.0%(0.0%)
			Weighted average cost of capital	13.2%~15.2%(14.2%)

(4) Changes in Level 3 instruments:

(In millions of Korean won)

	2022	2021
Financial assets		
Balance as of January 1	120,347	130,242
Disposals	(150)	(90)
Amount recognized in other comprehensive income	6,163	(22)
Other	(110)	(14)
Balance as of March 31	126,250	130,116

(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 other comprehensive income or loss (before tax amount for other comprehensive income or loss) 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 ¹	-	1,773	-	(1,397)

¹ For equity securities, changes in fair value are calculated with the correlation between the discount rate and growth rate (-1% ~1%), 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 units reported to the Management Committee. The Management Committee reviews the operating profits of each operating segment in order to assess performance and to make strategic decisions regarding the allocation of resources to the segment.

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

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

(1) For the three-month period ended March 31, 2022

<i>(In millions of Korean won)</i>	DX	DS	Total¹
Sales	31,116,363	26,376,300	56,724,258
Depreciation	136,120	5,749,389	5,927,470
Amortization	382,201	193,802	628,517
Operating profit	1,195,200	7,952,821	9,151,831

¹ Other operating segments are not separately disclosed.

(2) For the three-month period ended March 31, 2021

<i>(In millions of Korean won)</i>	DX	DS	Total¹
Sales	26,641,063	19,021,916	45,042,390
Depreciation	134,196	4,371,027	4,546,844
Amortization	278,376	246,843	553,854
Operating profit	2,094,631	2,345,721	4,445,476

¹ Other operating segments are not separately disclosed.

27. Related Party Transactions

(A) Subsidiaries

List of subsidiaries as of March 31, 2022 are as follows:

Area	Subsidiaries	Industry	Percentage of ownership (%) ¹
	Samsung Electronics America, Inc. (SEA)	Sale of electronic devices	100.0
	Samsung International, Inc. (SII)	Manufacture of TV and monitors	100.0
	Samsung Mexicana S.A. de C.V. (SAMEX)	Manufacture of electronic devices	100.0
	Samsung Electronics Home Appliances America, LLC (SEHA)	Manufacture of home appliances	100.0
	Samsung Research America, Inc (SRA)	R&D	100.0
	Samsung Next LLC (SNX)	Management of overseas subsidiaries	100.0
	Samsung Next Fund LLC (SNXF)	Technology business, venture capital investments	100.0
	NeuroLogica Corp.	Manufacture and sale of medical equipment	100.0
	Samsung HVAC America, LLC	Sale of air conditioning products	100.0
	Joyent, Inc.	Cloud services	100.0
	Dacor Holdings, Inc.	Management of overseas subsidiaries	100.0
	Dacor, Inc.	Manufacture and sale of home appliances	100.0
	Dacor Canada Co.	Sale of home appliances	100.0
	SmartThings, Inc.	Sale of smart home electronics	100.0
	TeleWorld Solutions, Inc. (TWS)	Installation of network devices	100.0
	Samsung Semiconductor, Inc. (SSI)	Sale of semiconductor and display panels	100.0
	Samsung Austin Semiconductor LLC (SAS)	Manufacture of semiconductors	100.0
	Samsung Oak Holdings, Inc. (SHI)	Management of overseas subsidiaries	100.0
	SEMES America, Inc.	Semiconductor equipment	100.0
	Samsung Electronics Canada, Inc. (SECA)	Sale of electronic devices	100.0
	AdGear Technologies Inc.	Digital advertising platforms	100.0
America	Samsung Eletronica da Amazonia Ltda. (SEDA)	Manufacture and sale of electronic devices	100.0
	Samsung Electronics Mexico S.A. de C.V. (SEM)	Sale of electronic devices	100.0
	Samsung Electronics Digital Appliance Mexico, S.A. de C.V. (SEDAM)	Manufacture of home appliances	100.0
	Samsung Electronics Latinoamerica (Zona Libre), S. A. (SELA)	Sale of electronic devices	100.0
	Samsung Electronics Latinoamerica Miami, Inc. (SEMI)	Sale of electronic devices	100.0
	Samsung Electronica Colombia S.A. (SAMCOL)	Sale of electronic devices	100.0
	Samsung Electronics Argentina S.A. (SEASA)	Marketing and services	100.0
	Samsung Electronics Chile Limitada (SECH)	Sale of electronic devices	100.0
	Samsung Electronics Peru S.A.C. (SEPR)	Sale of electronic devices	100.0
	Samsung Electronics Venezuela, C.A. (SEVEN)	Marketing and services	100.0
	Samsung Electronics Panama. S.A. (SEPA)	Consulting	100.0
	Harman International Industries, Inc.	Management of overseas subsidiaries	100.0
	Harman Becker Automotive Systems, Inc.	Manufacture and sale of audio products, 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, R&D	100.0
	Harman Financial Group LLC	Management company	100.0
	Harman International Industries Canada Ltd.	Sale of audio products	100.0
	Harman International Mexico, S. de R.L. de C.V.	Sale of audio products	100.0
	Harman KG Holding, LLC	Management of overseas subsidiaries	100.0
	Harman Professional, Inc.	Sale of audio products, R&D	100.0

¹ Ownership represents the Company's ownership of the voting rights in each entity, including subsidiaries' ownerships.

Area	Subsidiaries	Industry	Percentage of ownership (%) ¹
America	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
Europe & CIS	Samsung Electronics (UK) Ltd. (SEUK)	Sale of electronic devices	100.0
	Samsung Electronics Ltd. (SEL)	Management of overseas subsidiaries	100.0
	Samsung Semiconductor Europe Limited (SSEL)	Sale of semiconductor and display panels	100.0
	Samsung Electronics GmbH (SEG)	Sale of electronic devices	100.0
	Samsung Electronics Holding GmbH (SEHG)	Management of overseas subsidiaries	100.0
	Samsung Semiconductor Europe GmbH (SSEG)	Sale of semiconductor and display panels	100.0
	Samsung Electronics France S.A.S (SEF)	Sale of electronic devices	100.0
	Samsung Electronics Italia S.P.A. (SEI)	Sale of electronic devices	100.0
	Samsung Electronics Iberia, S.A. (SESA)	Sale of electronic devices	100.0
	Samsung Electronics Portuguesa, Unipessoal, Lda. (SEP)	Sale of electronic devices	100.0
	Samsung Electronics Hungarian Private Co., Ltd. (SEH)	Manufacture and sale of electronic devices	100.0
	Samsung Electronics Europe Logistics B.V. (SELS)	Logistics	100.0
	Samsung Electronics Benelux B.V. (SEBN)	Sale of electronic devices	100.0
	Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	Management of overseas subsidiaries	100.0
	Samsung Electronics Nordic Aktiebolag (SENA)	Sale of electronic devices	100.0
	Samsung Electronics Slovakia s.r.o. (SESK)	Manufacture of TV and monitors	100.0
	Samsung Display Slovakia s.r.o. (SDSK)	Toll processing of display panels	100.0
	Samsung Electronics Polska, SP.Zo.o (SEPOL)	Sale of electronic devices	100.0
	Samsung Electronics Poland Manufacturing SP.Zo.o (SEPM)	Manufacture of home appliances	100.0
	Samsung Electronics Romania LLC (SEROM)	Sale of electronic devices	100.0
	Samsung Electronics Austria GmbH (SEAG)	Sale of electronic devices	100.0
	Samsung Electronics Switzerland GmbH (SESG)	Sale of electronic devices	100.0
	Samsung Electronics Czech and Slovak s.r.o. (SECZ)	Sale of electronic devices	100.0
	Samsung Electronics Baltics SIA (SEB)	Sale of electronic devices	100.0
	Samsung Electronics Greece S.M.S.A (SEGR)	Sale of electronic devices	100.0
	Samsung Electronics Air Conditioner Europe B.V. (SEACE)	Sale of air conditioning products	100.0
	Samsung Nanoradio Design Center (SNDC)	R&D	100.0
	Samsung Denmark Research Center ApS (SDRC)	R&D	100.0
	Samsung Cambridge Solution Centre Limited (SCSC)	R&D	100.0
	Zhilabs, S.L.	Development and sale of network solutions	100.0
	Foodient Ltd.	R&D	100.0
	Samsung Electronics Rus Company LLC (SERC)	Sale of electronic devices	100.0
Samsung Electronics Rus Kaluga LLC (SERK)	Manufacture of TV	100.0	
Samsung Electronics Ukraine Company LLC (SEUC)	Sale of electronic devices	100.0	
Samsung R&D Institute Ukraine (SRUKR)	R&D	100.0	
Samsung Electronics Central Eurasia LLP (SECE)	Sale of electronic devices	100.0	
Samsung Electronics Overseas B.V. (SEO)	Sale of electronic devices	100.0	
Samsung R&D Institute Rus LLC (SRR)	R&D	100.0	
Samsung Electronics Caucasus Co., Ltd (SECC)	Marketing	100.0	

¹ Ownership represents the Company's ownership of the voting rights in each entity, including subsidiaries' ownerships.

Area	Subsidiaries	Industry	Percentage of ownership (%) ¹
Europe & CIS	AKG Acoustics GmbH	Manufacture and sale of audio products	100.0
	AMX UK Limited	Sale of audio products	100.0
	Apostera GmbH	Connected Service Provider	100.0
	Apostera UA, LLC	Connected Service Provider	100.0
	Harman Audio Iberia Espana Sociedad Limitada	Sale of audio products	100.0
	Harman Automotive UK Limited	Manufacture of audio products	100.0
	Harman Becker Automotive Systems GmbH	Manufacture and sale of audio products, 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, 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.Zo.o	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 Finance International GP S.a.r.l	Management of overseas subsidiaries	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, R&D	100.0
	Harman International Romania SRL	R&D	100.0
	Harman Finance International, SCA	Financing company	100.0
	Harman International s.r.o	Manufacture of audio products	100.0
	Harman Management GmbH	Management of overseas subsidiaries	100.0
	Harman Professional Kft	Manufacture of audio products, R&D	100.0
	Harman Professional Denmark ApS	Sale of audio products, R&D	100.0
	Red Bend Software Ltd.	Software design	100.0
	Red Bend Software S.A.S	Software design	100.0
Studer Professional Audio GmbH	Sale of audio products, R&D	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 Turkey (SETK)	Sale of electronic devices	100.0
	Samsung Electronics Industry and Commerce Ltd. (SETK-P)	Manufacture of electronic devices	100.0
	Samsung Electronics Levant Co., Ltd. (SELV)	Sale of electronic devices	100.0
	Samsung Electronics Maghreb Arab (SEMAG)	Sale of electronic devices	100.0
	Samsung Electronics Egypt S.A.E (SEEG)	Manufacture and sale of electronic devices	100.0
	Samsung Electronics Israel Ltd. (SEIL)	Marketing	100.0
	Samsung Electronics Tunisia S.A.R.L (SETN)	Marketing	100.0
	Samsung Electronics Pakistan (Private) Ltd. (SEPAK)	Marketing	100.0
Samsung Electronics Saudi Arabia Ltd. (SESAR)	Sale of electronic devices	100.0	

¹ Ownership represents the Company's ownership of the voting rights in each entity, including subsidiaries' ownerships.

Area	Subsidiaries	Industry	Percentage of ownership (%) ¹
Middle East & Africa	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
	Samsung Display Noida Private Limited (SDN)	Manufacture of display panels	100.0
	Samsung R&D Institute India-Bangalore Private Limited (SRI-Bangalore)	R&D	100.0
	Samsung R&D Institute BanglaDesh Limited (SRBD)	R&D	100.0
	Samsung Nepal Services Pvt, Ltd. (SNSL)	Service	100.0
	Samsung Japan Corporation (SJC)	Sale of semiconductor and display panels	100.0
	Samsung R&D Institute Japan Co., Ltd. (SRJ)	R&D	100.0
	Samsung Electronics Japan Co., Ltd. (SEJ)	Sale of electronic devices	100.0
	Harman Connected Services Corp. India Pvt. Ltd.	Connected service provider	100.0
	Harman International (India) Private Limited	Sale of audio products, R&D	100.0
	Harman International Industries PTY Ltd.	Management of overseas subsidiaries	100.0
Harman International Japan Co., Ltd.	Sale of audio products, R&D	100.0	
Harman Singapore Pte. Ltd.	Sale of audio products	100.0	

¹ Ownership represents the Company's ownership of the voting rights in each entity, including subsidiaries' ownerships.

Area	Subsidiaries	Industry	Percentage of ownership (%) ¹
China	Samsung (CHINA) Investment Co., Ltd. (SCIC)	Sale of electronic devices	100.0
	Samsung Electronics Hong Kong Co., Ltd. (SEHK)	Sale of electronic devices	100.0
	Samsung Electronics Taiwan Co., Ltd. (SET)	Sale of electronic devices	100.0
	Tianjin Samsung Electronics Co., Ltd. (TSEC)	Manufacture of TV and monitors	91.2
	Suzhou Samsung Electronics Co., Ltd. (SSEC)	Manufacture of home appliances	88.3
	Samsung Suzhou Electronics Export Co., Ltd. (SSEC-E)	Manufacture of home appliances	100.0
	Samsung Electronics Suzhou Computer Co., Ltd. (SESC)	Manufacture of electronic devices, 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 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, 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, R&D	100.0
	Harman Technology (Shenzhen) Co., Ltd.	Sale of audio products, R&D	100.0

¹ Ownership represents the Company's ownership of the voting rights in each entity, including subsidiaries' ownerships.

Area	Subsidiaries	Industry	Percentage of ownership (%) ¹
Domestic	Samsung Display Co., Ltd.	Manufacture and sale of display panels	84.8
	SU Materials	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 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
	Mirero System Co., Ltd.	Development and supply of semiconductor process defect and quality control software	99.9
	Dowooinsys Co., Ltd.	Manufacture of display components	69.0
	Gf-System Co., Ltd.	Manufacture of display components	100.0
	Harman International Korea	Software development and supply, etc.	100.0
	Samsung Venture Capital Union #21	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #22	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #26	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #28	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #29	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #32	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #33	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #37	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #40	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #42	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #43	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #45	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #48	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #52	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #55	Technology business, Venture capital investments	99.0
	Samsung Venture Capital Union #56	Technology business, Venture capital investments	99.0
	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	

¹ Ownership represents the Company's ownership of the voting rights in each entity, including subsidiaries' ownerships.

(B) Sale and purchase transactions

Sale and purchase transactions with related parties for the three-month periods ended March 31, 2022 and 2021 are as follows:

(In millions of Korean won)	Name of company ¹	2022			
		Sales and other	Disposal of non-current assets	Purchases and other	Purchase of non-current assets
	Samsung Display Co., Ltd.	68,306	-	218,362	-
	Samsung Electronics America, Inc. (SEA)	8,790,030	-	47,925	-
	Samsung Electronics Vietnam THAINGUYEN Co., Ltd. (SEVT)	1,928,760	-	7,439,252	12
	Samsung (China) Semiconductor Co., Ltd. (SCS)	65,823	1,970	2,415,594	1,326
	Harman and its subsidiaries ²	-	-	20,459	-
	Samsung Asia Pte. Ltd. (SAPL)	8	-	7,589	-
	Samsung Electronics Vietnam Co., Ltd. (SEV)	1,013,161	-	3,998,238	-
	Samsung Semiconductor, Inc. (SSI)	10,414,888	-	116,713	-
	Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	-	-	-	-
	Samsung (CHINA) Investment Co., Ltd. (SCIC)	526,535	-	1,917	-
	Samsung India Electronics Private Ltd. (SIEL)	1,548,535	-	1,413,072	-
	Samsung Austin Semiconductor LLC. (SAS)	7	-	788,621	1,430
	Shanghai Samsung Semiconductor Co., Ltd. (SSS)	5,111,265	-	47	-
Subsidiaries	Samsung Display Vietnam Co., Ltd. (SDV)	404,843	-	-	-
	Samsung Eletronica da Amazonia Ltda. (SEDA)	321,289	-	8,070	-
	Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	198,892	2,774	1,553,285	355
	Samsung Electronics (UK) Ltd. (SEUK)	403,602	-	23,931	-
	Thai Samsung Electronics Co., Ltd. (TSE)	510,329	-	757,380	-
	Samsung Electronics Europe Logistics B.V. (SELS)	1,268,572	-	317	-
	Samsung Electronics Hungarian Private Co. Ltd. (SEH)	139,262	-	644	-
	Samsung Electronics Benelux B.V. (SEBN)	187,508	-	651	-
	Samsung International, Inc. (SII)	96,852	211	2,239,227	-
	Samsung Electronics Taiwan Co., Ltd. (SET)	1,455,427	-	290	-
	Samsung Electronics GmbH (SEG)	969,533	-	2,015	-
	Samsung Display Dongguan Co., Ltd. (SDD)	82,045	-	-	-
	Other	13,756,062	1,296	3,935,276	1,621
	Total	49,261,534	6,251	24,988,875	4,744
	Samsung SDS Co., Ltd.	69,649	-	390,598	90,780
	Samsung Electro-Mechanics Co., Ltd.	43,051	-	263,361	-
Associates and joint ventures	Samsung SDI Co., Ltd.	24,265	-	98,263	546
	Cheil Worldwide Inc.	29,336	-	213,423	-
	Other	114,486	-	176,608	-
	Total	280,787	-	1,142,253	91,326
	Samsung C&T Corporation	10,250	-	14,653	1,045,938
Other related parties	Other	103,636	-	162,697	11,123
	Total	113,886	-	177,350	1,057,061
	Samsung Engineering Co., Ltd.	90	-	624	243,864
Other ³	S-1 Corporation	1,274	-	102,865	5,668
	Other	40,280	-	37,565	23,034
	Total	41,644	-	141,054	272,566

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

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

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

		2021				
(In millions of Korean won)	Name of company ¹	Sales and other	Disposal of non-current assets	Purchases and other	Purchase of non-current assets	
	Samsung Display Co., Ltd.	42,535	-	176,595	-	
	Samsung Electronics America, Inc. (SEA)	7,065,554	-	38,696	-	
	Samsung Electronics Vietnam THAINGUYEN Co., Ltd. (SEVT)	1,426,615	182	5,256,804	68	
	Samsung (CHINA) Investment Co., Ltd. (SCIC)	477,733	-	1,940	-	
	Samsung (China) Semiconductor Co., Ltd. (SCS)	29,489	96,756	1,485,543	1,530	
	Harman and its subsidiaries ²	-	-	13,208	-	
	Samsung Electronics Vietnam Co., Ltd. (SEV)	948,627	202	3,628,169	264	
	Samsung Semiconductor, Inc. (SSI)	5,343,196	-	101,874	-	
	Shanghai Samsung Semiconductor Co., Ltd. (SSS)	4,963,669	-	370	-	
	Samsung Austin Semiconductor LLC. (SAS)	5	1,183	922,961	-	
	Samsung India Electronics Private Ltd. (SIEL)	1,115,060	2,543	1,042,385	-	
	Samsung Eletronica da Amazonia Ltda. (SEDA)	248,504	13	3,155	-	
Subsidiaries	Samsung Display Vietnam Co., Ltd. (SDV)	238,010	-	-	-	
	Samsung Electronics (UK) Ltd. (SEUK)	392,934	-	24,107	-	
	Thai Samsung Electronics Co., Ltd. (TSE)	409,497	-	546,893	-	
	Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	199,542	2,006	1,444,339	-	
	Samsung Electronics Europe Logistics B.V. (SELS)	981,086	-	2,191	-	
	Samsung Electronics GmbH (SEG)	935,301	-	2,221	-	
	Samsung Electronics Hungarian Private Co. Ltd. (SEH)	178,266	-	95	-	
	SEMES Co., Ltd.	1,052	-	628,192	-	
	Samsung Electronics Benelux B.V. (SEBN)	135,745	-	664	-	
	Samsung Electronics Taiwan Co., Ltd. (SET)	1,088,959	-	131	-	
	Samsung Display Dongguan Co., Ltd. (SDD)	67,376	-	-	-	
	Samsung Electronics Hong Kong Co., Ltd. (SEHK)	168,678	-	768	-	
	Other	13,183,761	4	3,990,791	3,785	
		Total	39,641,194	102,889	19,312,092	5,647
	Associates and joint ventures	Samsung SDS Co., Ltd.	69,831	-	357,058	80,187
		Samsung Electro-Mechanics Co., Ltd.	28,989	-	251,268	-
Samsung SDI Co., Ltd.		23,054	154	75,166	7,247	
Cheil Worldwide Inc.		24,967	-	152,175	-	
Other		109,766	68	100,797	2,624	
	Total	256,607	222	936,464	90,058	
Other related parties	Samsung C&T Corporation	25,373	-	10,244	899,106	
	Other	91,883	-	150,241	14,967	
	Total	117,256	-	160,485	914,073	
Other ³	Samsung Engineering Co., Ltd.	29	-	3,152	75,584	
	S-I Corporation	588	-	97,152	5,513	
	Other	26,530	-	27,819	1,879	
	Total	27,147	-	128,123	82,976	

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

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

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

(C) Balances of receivables and payables

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

(In millions of Korean won)	Name of company ¹	March 31, 2022	
		Receivables and other ²	Payables and other ³
	Samsung Display Co., Ltd.	11,418	106,693
	Samsung Electronics America, Inc. (SEA)	4,420,016	185,941
	Samsung Electronics Vietnam THAINGUYEN Co., Ltd. (SEVT)	980,041	4,795,160
	Samsung (China) Semiconductor Co., Ltd. (SCS)	65,056	880,273
	Harman and its subsidiaries ⁴	-	11,437
	Samsung Asia Pte. Ltd. (SAPL)	1,118	2,115
	Samsung Electronics Vietnam Co., Ltd. (SEV)	638,751	2,455,110
	Samsung Semiconductor, Inc. (SSI)	7,462,298	177,725
	Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	-	-
	Samsung (CHINA) Investment Co., Ltd. (SCIC)	233,647	961
	Samsung India Electronics Private Ltd. (SIEL)	1,518,787	619,958
	Samsung Austin Semiconductor LLC. (SAS)	1,422	327,866
	Shanghai Samsung Semiconductor Co., Ltd. (SSS)	3,851,319	42
Subsidiaries	Samsung Display Vietnam Co., Ltd. (SDV)	132,896	-
	Samsung Eletronica da Amazonia Ltda. (SEDA)	271,859	5,298
	Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	147,810	565,868
	Samsung Electronics (UK) Ltd. (SEUK)	341,027	30,783
	Thai Samsung Electronics Co., Ltd. (TSE)	243,780	267,175
	Samsung Electronics Europe Logistics B.V. (SELS)	570,808	277
	Samsung Electronics Hungarian Private Co. Ltd. (SEH)	54,968	2,088
	Samsung Electronics Benelux B.V. (SEBN)	84,314	7,043
	Samsung International, Inc. (SII)	68,614	462,905
	Samsung Electronics Taiwan Co., Ltd. (SET)	559,094	33,676
	Samsung Electronics GmbH (SEG)	324,931	2,482
	Samsung Display Dongguan Co., Ltd. (SDD)	34,367	-
	Other	9,307,770	2,390,212
	Total	31,326,111	13,331,088
	Samsung SDS Co., Ltd.	66,355	483,692
	Samsung Electro-Mechanics Co., Ltd.	38,708	109,974
Associates and joint ventures	Samsung SDI Co., Ltd.	127,385	38,841
	Cheil Worldwide Inc.	28,761	367,506
	Other	132,648	148,205
	Total	393,857	1,148,218
Other related parties	Samsung C&T Corporation	193,237	569,204
	Other	52,137	121,409
	Total	245,374	690,613
Other ⁵	Samsung Engineering Co., Ltd.	78	256,255
	S-1 Corporation	1,314	26,931
	Other	2,496	62,421
	Total	3,888	345,607

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

² The Company has not recognized bad debt allowance in relation to the receivables due from subsidiaries as of March 31, 2022.

³ Payables and others include lease liabilities.

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

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

(In millions of Korean won)	Name of Company ¹	December 31, 2021	
		Receivables and other ²	Payables and other ³
	Samsung Display Co., Ltd.	23,791	119,401
	Samsung Electronics America, Inc. (SEA)	4,708,011	143,310
	Samsung (China) Semiconductor Co., Ltd. (SCS)	59,110	726,945
	Samsung Electronics Vietnam THAINGUYEN Co., Ltd. (SEVT)	734,283	4,049,400
	Harman and its subsidiaries ⁴	-	7,541
	Samsung Electronics Vietnam Co., Ltd. (SEV)	414,781	2,301,949
	Samsung (CHINA) Investment Co., Ltd. (SCIC)	138,307	77,540
	Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	316	-
	Samsung Semiconductor, Inc. (SSI)	7,320,890	123,555
	Samsung Asia Pte. Ltd. (SAPL)	1,736	2,164
	Samsung Austin Semiconductor LLC (SAS)	4,645	277,682
	Samsung India Electronics Private Ltd. (SIEL)	1,099,927	463,652
	Shanghai Samsung Semiconductor Co., Ltd. (SSS)	4,337,520	217
Subsidiaries	Samsung Display Vietnam Co., Ltd. (SDV)	161,441	-
	Samsung Eletronica da Amazonia Ltda. (SEDA)	258,490	1,040
	Samsung Electronics (UK) Ltd. (SEUK)	201,717	19,595
	Samsung International, Inc. (SII)	32,564	259,847
	Thai Samsung Electronics Co., Ltd. (TSE)	132,508	334,943
	Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	167,225	430,960
	Samsung Electronics Taiwan Co., Ltd. (SET)	372,716	32,145
	Samsung Electronics Hungarian Private Co., Ltd. (SEH)	58,694	99
	Samsung Electronics Europe Logistics B.V. (SELS)	629,882	1,715
	Samsung Electronics Benelux B.V. (SEBN)	45,171	3,351
	Samsung Electronics GmbH (SEG)	223,603	2,272
	Samsung Display Dongguan Co., Ltd. (SDD)	18,025	-
	Other	9,220,424	2,284,643
	Total	30,365,777	11,663,966
	Samsung SDS Co., Ltd.	64,364	574,443
	Samsung Electro-Mechanics Co., Ltd.	2,415	108,103
Associates and joint ventures	Samsung SDI Co., Ltd.	113,845	54,076
	Cheil Worldwide Inc.	59	421,901
	Other	192,550	166,311
	Total	373,233	1,324,834
	Samsung C&T Corporation	195,355	1,640,615
Other related parties	Other	15,839	125,470
	Total	211,194	1,766,085
	Samsung Engineering Co., Ltd.	289	1,099,881
Other ⁵	S-1 Corporation	2,058	29,620
	Other	4,286	56,476
	Total	6,633	1,185,977

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

² The Company has not recognized any bad debt allowance in relation to the receivables due from subsidiaries as of December 31, 2021.

³ Payables and others include lease liabilities.

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

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

- (D) For the three-month periods ended March 31, 2022 and 2021, the Company invested ₩ 45,495 million and ₩ 1,992 million, respectively, in subsidiaries, and received ₩ 74,448 million and ₩ 31,766 million in return of investments for the three-month periods ended March 31, 2022 and 2021, respectively. In addition, there were no additional investments in associates and joint ventures or return of those investments for the three-month periods ended March 31, 2022 and 2021, respectively. The Company participated in the paid-in capital increase of the associate, Samsung Biologics Co., Ltd., and acquired 1,380,477 shares of ordinary shares, issued for ₩639,000, in April 2022.
- (E) For the three-month periods ended March 31, 2022 and 2021, the Company declared dividend of ₩ 421,609 million and ₩ 2,261,462 million, respectively, to related parties. As of March 31, 2022, the dividend payable to related parties amounted to ₩ 421,609 million. In addition, for the three-month periods ended March 31, 2022 and 2021, the Company declared dividends of ₩ 32,058 million and ₩ 171,566 million, respectively, to the entities that are not related parties of the Company in accordance with *Korean IFRS 1024*, but belong to the same conglomerate according to the Monopoly Regulation and Fair Trade Act. As of March 31, 2022, dividend payables to the entities that are not in scope of Korean IFRS 1024 amounted to ₩ 32,058 million.
- (F) For the three month periods ended March 31, 2022 and 2021, assets leased from related parties amounted to ₩ 20 million and ₩ 63,887 million, respectively, and lease payments made to the related parties amounted to ₩ 11,817 million and ₩ 14,417 million, respectively.
- (G) As of March 31, 2022, the Company provides guarantees in relation to borrowings of the related parties (refer to Note 13).
- (H) Key management compensation

The compensation paid or payable to key management (executive directors) for their services for the three-month periods ended March 31, 2022 and 2021 consists of:

<i>(In millions of Korean won)</i>	2022	2021
Short-term employee benefits	3,415	2,868
Post-employment benefits	127	222
Other long-term employee benefits	2,072	1,625

28. Subsequent Event:

The Company participated in the paid-in capital increase of the associate, Samsung Biologics Co., Ltd., and acquired 1,380,477 shares of ordinary shares, issued for ₩ 639,000, in April 2022.

6. Dividends

We continue to work to enhance shareholder value alongside our efforts to strengthen competitiveness of our products and businesses. We utilized 50% of the free cash flow as the shareholder return pool for 2018 to 2020 as part of our shareholder return policy for 2018 to 2020 and paid annual, regular dividends of KRW 9.6 trillion. A special cash dividend of KRW 10.7 trillion was paid out at the same time as the 2020 end-year, regular dividend. The shareholder return policy for 2021 to 2023 was announced in January 2021. For this term, we kept the shareholder return pool at 50% of the free cash flow, but increased the annual, regular dividend to KRW 9.8 trillion. Any remaining portion of the 50% of the free cash flow will be paid out to shareholders.

Dividends paid in the three most recent fiscal years are as follows:

[Key dividend indices]

Classification		1Q22	2021	2020
Par value per share (KRW)		100	100	100
Consolidated net profit ¹⁾ (KRW mil)		11,129,094	39,243,791	26,090,846
Separate net profit (KRW mil)		7,651,943	30,970,954	15,615,018
EPS ²⁾ (KRW)		1,638	5,777	3,841
Total cash dividend (KRW mil)		2,452,154	9,809,438	20,338,075
Total stock dividend (KRW mil)		-	-	-
Dividend payout ratio (%)		22.0	25.0	78.0
Cash dividend yield (%)	Common	0.5	1.8	4.0
	Preferred	0.6	2.0	4.2
Stock dividend yield (%)	Common	-	-	-
	Preferred	-	-	-
Cash dividend per share (KRW)	Common	361	1,444	2,994
	Preferred	361	1,445	2,995
Stock dividend per share (share)	Common	-	-	-
	Preferred	-	-	-

Dividends were KRW 2,452,154 million or KRW 361 per share in the first quarter of 2022 and the first three quarters of 2021, and KRW 2,404,605 million or KRW 354 per share in each of the first three quarters of 2020. For further information relating to total cash dividend, see retained earnings in 『3. Note to Consolidated Financial Statements』 in 『III. Financial Affairs』 .

1) Equity attributable to owners of the parent.

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

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
34	41	2.8%	2.7%

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 3.1% and 3.2% respectively. The “past 3 years” refers to the period from 2019 to 2021, and the “past 5 years” refers to the period from 2017 to 2021. For the dividend yield of 1Q22, please refer to the table of key dividends above (common shares at 0.5%, preferred shares at 0.6%).

7. Matters about financing through the issuance of securities

7-1 Financing through the issuance of securities

[Issuance of equity securities]

N/A

[Issuance of debt securities]

A. List of issued debt securities

(As of March 31, 2022)

(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	121,080	7.7	Aa3(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	484,320	4.2	Baa1 (Moody's), A- (S&P)	May 15, 2025	Unredeemed	J.P.Morgan et al.
Harman Finance International, SCA (*1)	Corporate bonds	Public offering	May 27, 2015	469,732	2.0	Baa1 (Moody's), A- (S&P)	May 27, 2022	Redeemed	HSBC et al.
Dowinsys Co., Ltd	Corporate bonds	Private placement	Feb 28, 2020	23,000	0.5	-	Feb 28, 2025	Unredeemed	-
Total	-	-	-	1,098,132	-	-	-	-	-

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

(*1) The corporate bonds were redeemed on March 1st, 2022, prior to the original maturity date.

B. Commercial Paper Unredeemed Balance

Not Applicable

(Reporting Date: March 31, 2022)

(KRW mil)

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

C. Short-term Bond Unredeemed Balance

Not Applicable

(Reporting Date: March 31, 2022)

(KRW mil)

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

D. Corporate Bond Unredeemed Balance

(Reporting Date: March 31, 2022)

(KRW mil)

Maturity		Under 1 year	Above 1 year / under 2 years	Above 2 years / under 3 years	Above 3 years / under 4 years	Above 4 years / under 5 years	Above 5 years / under 10 years	Above 10 years	Total
Unredeemed balance	Public	6,054	6,054	6,054	490,374	6,054	6,054	-	520,644
	Private	-	-	23,000	-	-	-	-	23,000
	Total	6,054	6,054	29,054	490,374	6,054	6,054	-	543,644

※ Based on consolidated financial statements

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

※ Unredeemed balance of corporate bonds of Dowinsys are intercompany balances eliminated in consolidated financial statements

- Corporate Bond Unredeemed Balance (Samsung Electronics)

(Reporting Date: March 31, 2022)

(KRW mil)

Maturity		Under 1 year	Above 1 year / under 2 years	Above 2 years / under 3 years	Above 3 years / under 4 years	Above 4 years / under 5 years	Above 5 years / under 10 years	Above 10 years	Total
Unredeemed balance	Public	6,054	6,054	6,054	6,054	6,054	6,054	-	36,324
	Total	6,054	6,054	6,054	6,054	6,054	6,054	-	36,324

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

- Corporate Bond Unredeemed Balance (Harman)

(Reporting Date: March 31, 2022)

(KRW mil)

Maturity		Under 1 year	Above 1 year / under 2 years	Above 2 years / under 3 years	Above 3 years / under 4 years	Above 4 years / under 5 years	Above 5 years / under 10 years	Above 10 years	Total
Unredeemed balance	Public	-	-	-	484,320	-	-	-	484,320
	Total	-	-	-	484,320	-	-	-	484,320

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

- Corporate Bond Unredeemed Balance (Dowinsys)

(Reporting Date: March 31, 2022)

(KRW mil)

Maturity		Under 1 year	Above 1 year / under 2 years	Above 2 years / under 3 years	Above 3 years / under 4 years	Above 4 years / under 5 years	Above 5 years / under 10 years	Above 10 years	Total
Unredeemed balance	Private	-	-	23,000	-	-	-	-	23,000
	Total	-	-	23,000	-	-	-	-	23,000

※ Unredeemed balance of corporate bonds of Dowinsys are intercompany balances eliminated in consolidated financial statements

E. Hybrid Bond Unredeemed Balance

Not Applicable

(Reporting Date: March 31, 2022)

(KRW mil)

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

F. Contingent Convertible Bond Unredeemed Balance

Not Applicable

(Reporting Date: March 31, 2022)

(KRW mil)

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

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

(Reporting Date: March 31, 2022)

(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	121,080	Oct 2, 1997	The Bank of New York Mellon Trust Company, N.A.

(Reporting Date: March 31, 2022)

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 0.04% of the total assets during 2022 1Q)
Constraint on governance	Contract Details	Not applicable
	Implementation status	Not applicable
Submission of implementation report	Implementation status	Not applicable

- ※ The exchange rate as of the base date has been applied.
- ※ The date of the bond management contract was signed on the same day as the Fiscal Agency Agreement; accordingly, the Bank of New York Mellon Trust Company, N.A. is under the authority of the Fiscal Agent.
- ※ The net tangible assets subjected to the limitation of collaterals are production facilities and stocks owned by the Company.
- ※ The reporting date is the date when most recent financial statements were prepared, which are used to determine the status of implementation.
- ※ 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

The major acquisition, divestment and transfer of business during past three years are as follows.

[Sale of SSL, SSM]

On August 28, 2020, Samsung Display Co., Ltd., the Company's subsidiary, decided to sell its 100% ownership in Samsung Suzhou Module Co., Ltd. ("SSM") and 60% ownership in Samsung Suzhou LCD Co., Ltd. ("SSL") to TCL China Star Optoelectronics Technologies Co. Ltd. ("CSOT"). The sales were completed on April 1, 2021.

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

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

- Not applicable

Litigation

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

Debt guarantee

- Domestic: Not applicable

- Overseas:

(USD thousand)

Company	Relationship	Creditor	Guarantee	Transactions				Limit of guarantee
			Expiry date	Beginning of period	Increase	Decrease	End of period	
SEA	Subsidiary	BOA etc.	Dec 16, 2022	-	-	-	-	1,328,000
SEM	Subsidiary	BBVA etc.	Mar 27, 2023	-	-	-	-	906,000
SAMCOL	Subsidiary	Citibank etc.	Dec 16, 2022	-	-	-	-	310,000
SEDA	Subsidiary	BRADESCO etc.	Dec 16, 2022	-	-	-	-	409,000
SECH	Subsidiary	Citibank etc.	Dec 16, 2022	-	-	-	-	62,000
SEPR	Subsidiary	BBVA etc.	Dec 16, 2022	-	-	-	-	150,000
SSA	Subsidiary	SCB etc.	Dec 16, 2022	-	-	-	-	318,000
SEMAG	Subsidiary	SocGen etc.	Dec 16, 2022	-	-	-	-	110,000
SETK	Subsidiary	BNP etc.	Dec 16, 2022	102,275	25,989	-	128,264	807,000
SETK-P	Subsidiary	BNP etc.	Dec 16, 2022	33,334	22,976	-	56,310	130,000
SECE	Subsidiary	Citibank etc.	Dec 16, 2022	-	-	-	-	72,871
SEEG	Subsidiary	HSBC	Jun 13, 2022	-	-	-	-	85,000
SEIN	Subsidiary	BNP etc.	Nov 08, 2022	-	-	-	-	70,000
SJC	Subsidiary	Mizuho Bank etc.	Dec 16, 2022	-	-	-	-	858,664
SEUC	Subsidiary	Credit Agricole etc.	Dec 16, 2022	-	-	-	-	150,000
SEDAM	Subsidiary	Citibank etc.	Dec 16, 2022	-	-	-	-	141,000
SECA	Subsidiary	BoA	Nov 08, 2022	-	-	-	-	70,000
SELA	Subsidiary	Citibank	Dec 16, 2022	-	-	-	-	120,000
SEEH	Subsidiary	HSBC etc.	Dec 16, 2022	-	-	-	-	712,400
SERK	Subsidiary	SocGen etc.	Dec 16, 2022	-	-	-	-	290,000
SELV	Subsidiary	Citibank	Dec 16, 2022	-	-	-	-	10,000
SEIL	Subsidiary	Citibank	Dec 16, 2022	10,947	-	-256	10,691	15,600
SAPL	Subsidiary	BOA etc.	Dec 16, 2022	-	-	-	-	345,000
SAVINA	Subsidiary	HSBC	Jun 13, 2022	-	-	-	-	51,000
SCIC	Subsidiary	HSBC etc.	Dec 16, 2022	-	-	-	-	300,000
SME	Subsidiary	SCB	Nov 08, 2022	-	-	-	-	110,000
SAMEX	Subsidiary	Citibank	Dec 16, 2022	-	-	-	-	5,000
SEASA	Subsidiary	Citibank	Dec 16, 2022	-	-	-	-	2,000
SSAP	Subsidiary	SCB	Nov 08, 2022	-	-	-	-	35,000
SEPM	Subsidiary	HSBC	Jun 13, 2022	-	-	-	-	35,000
SESAR	Subsidiary	HSBC	Jun 13, 2022	-	-	-	-	50,000
AdGear Technologies Inc.	Subsidiary	BOA	Nov 08, 2022	-	-	-	-	2,000
Harman International Industries, Inc.	Subsidiary	JP Morgan	Jun 13, 2022	-	-	-	-	100,000
Harman International Japan Co., Ltd.	Subsidiary	MUFG	Nov 08, 2022	-	-	-	-	25,000
Harman RUS CIS LLC	Subsidiary	SocGen	Nov 08, 2022	-	-	-	-	15,000
Harman Holding Limited	Subsidiary	HSBC	Jun 13, 2022	-	-	-	-	30,000
Harman do Brasil Industria Eletronica e Participacoes Ltda.	Subsidiary	SocGen	Nov 08, 2022	-	-	-	-	15,000
Harman da Amazonia Industria Eletronica e Participacoes Ltda.								
Harman Finance International, SCA	Subsidiary	JP Morgan etc.	Mar 01, 2022	396,304	-	-396,304	-	-
SDN	Subsidiary	SIEL	Nov 22, 2024	571,121	-	-10,605	560,516	659,431
Total				1,113,981	48,965	-407,165	755,781	8,904,966

※ Information above are prepared in consolidated basis. Debt guarantees for Harman Finance International, SCA, and SDN are provided by Harman International Industries, Inc. and Samsung Display Co., Ltd., 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 2021, the Company claimed approximately USD 266,000 in guarantee fees and, as of the reporting date, has collected the amount.
 In 2021, Samsung Display Co., Ltd. claimed approximately USD 2,529,000 in guarantee fees to SDN and, as of the reporting date, has collected the amount.

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

(Emphasis of matter and key audit matter in Independent auditor's report)

Period	Emphasis of matter	Key audit matter
2022 1Q	Not applicable	Not applicable
2021	Not applicable	(Consolidated financial statement) 1. Sales deduction related to the Sales promotion activities of products (Separate financial statement) 1. Sales deduction related to the Sales promotion activities of products
2020	Not applicable	(Consolidated financial statement) 1. Sales deduction related to the Sales promotion activities of products 2. Impairment of goodwill and intangible assets with indefinite useful lives (Separate financial statement) 1. Sales deduction related to the 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
2022 1Q	Trade receivables	44,794,471	329,503	0.7%
	Short-term loans	16,492	158	1.0%
	Other receivables	5,728,495	76,060	1.3%
	Advances	1,128,529	3,857	0.3%
	Trade receivables (long-term)	562,622	-	0.0%
	Other receivables (long-term)	1,017,733	294	0.0%
	Advances (long-term)	1,791,568	8,519	0.5%
	Long-term loans	205,751	981	0.5%
	Total	55,245,661	419,372	0.8%
2021	Trade receivables	41,024,295	310,880	0.8%
	Short-term loans	17,895	73	0.4%
	Other receivables	4,569,772	72,515	1.6%
	Advances	1,122,660	3,847	0.3%
	Trade receivables (long-term)	225,739	-	0.0%
	Other receivables (long-term)	1,002,404	290	0.0%
	Advances (long-term)	1,770,999	9,003	0.5%
	Long-term loans	199,577	917	0.5%
	Total	49,933,341	397,525	0.8%
2020	Trade receivables	31,283,789	318,731	1.0%
	Short-term loans	7,813	73	0.9%
	Other receivables	3,663,822	59,283	1.6%
	Advances	890,413	3,371	0.4%
	Trade receivables (long-term)	85,575	-	0.0%
	Other receivables (long-term)	401,582	204	0.1%
	Advances (long-term)	1,397,698	5,972	0.4%
	Long-term loans	113,944	1,309	1.1%
	Total	37,844,636	388,943	1.0%

※ Based on consolidated financial statements

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

Allowance for bad debt by year

(KRW mil)

	2022 1Q	2021	2020
1. Allowance for bad debt (beginning balance)	397,525	388,943	411,310
2. Net bad debt expense (① - ②+③)	-7,933	25,926	65,575
① Bad debt expense, etc (Write-off)	664	22,400	40,487
② Bad debt recovered	-	-	745
③ Others	-8,597	3,526	25,833
3. Bad debts expense	13,914	34,508	43,208
4. Allowance for bad debts (Ending balance)	419,372	397,525	388,943

※ Based on consolidated financial statements.

The guideline for bad debt allowances for trade receivables

(1) Calculation of bad debt allowance

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

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

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

[Bad debt allowance by circumstance]

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

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

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

The outstanding period of trade receivables

(Reporting Date: March 31, 2022)

(KRW mil, %)

	Less than 6 months	6 months ~ 1 year	1 year ~ 3 years	More than 3 years	Total
Amount	45,167,274	13,565	97,226	79,028	45,357,093
Ratio	99.6%	0.0%	0.2%	0.2%	100.0%

- ※ Base on consolidated financial statements
- ※ Receivables amount in net present value

C. Inventory

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

(KRW mil, %)

Division	Category	2022 1Q	2021	2020	Note
DX	Finished goods	9,198,172	8,894,766	7,088,063	
	Work in process	876,104	799,218	592,903	
	Raw material	14,100,895	11,384,887	7,862,310	
	Material in transit	1,654,564	1,299,624	876,270	
	Total	25,829,735	22,378,495	16,419,546	
DS	Finished goods	3,562,939	2,490,097	1,719,095	
	Work in process	12,809,016	11,809,911	10,639,866	
	Raw material	2,379,005	2,118,424	1,674,081	
	Material in transit	44,323	36,685	46,587	
	Total	18,795,283	16,455,117	14,079,629	
SDC	Finished goods	479,241	294,777	134,963	
	Work in process	690,256	874,229	650,762	
	Raw material	1,021,666	810,325	603,779	
	Material in transit	63,720	48,253	33,271	
	Total	2,254,883	2,027,584	1,422,775	
Harman	Finished goods	598,305	533,008	502,117	
	Work in process	128,661	105,271	80,237	
	Raw material	883,943	736,109	337,386	
	Material in transit	378,748	321,128	224,961	
	Total	1,989,657	1,695,516	1,144,701	
Total	Finished goods	13,899,527	12,280,579	9,387,886	
	Work in process	14,413,673	13,473,618	11,818,090	
	Raw material	17,465,404	14,184,841	9,790,766	
	Material in transit	1,812,127	1,445,366	1,046,403	
	Total	47,590,731	41,384,404	32,043,145	
Inventory ratio (%) [Inventory ÷ Total Assets] × 100		10.8%	9.7%	8.5%	
Inventory turnover (x) [Yearly COGS ÷ {(Beginning of inventory + End of inventory)÷2}]		4.2	4.5	4.9	

※ Based on consolidated financial statements

Inventory counts

(1) Inspection date

- End of May and November (twice a year)
- For the difference in inventories between the inspection date and at the end of the year, the Company checks all the warehouse record during the period in order to confirm the existence of the inventories as of the date of the financial statements.

(2) Inspection method

- Internal warehouse: Closed & entire quantity inspection
- ※ Sample inspection for semi-conductor and DP work-in-progress inventories, SVC materials
- Outside warehouse
Perform check for the possession confirmation documents and sample tests at the third party warehouse and inventory-in-transit.
- External auditors join and observe the inspection and carry out sample tests to check the existence and completeness.
- ※ For the HQ, the most recent inventory inspection was conducted from Nov 28 to Dec 1, 2021. The subsidiaries flexibly conducted the inventory inspection during the same period as HQ, considering restrictions in movements by local governments due to spread of COVID-19.

Inventory aging and valuation

Inventories are stated at the lower of cost or net realizable value. Inventory as of March 31, 2022 are as follows:

(KRW mil)

Category	Acquisition cost	Inventory valuation reserve	Balance	Note
Finished goods	14,692,913	-793,386	13,899,527	
Work in process	15,060,273	-646,600	14,413,673	
Raw material	18,282,421	-817,017	17,465,404	
Material in transit	1,812,127	-	1,812,127	
Total	49,847,734	-2,257,003	47,590,731	

- ※ 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 of South Korea, 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

Deloitte Anjin conducted a review and audit on the consolidated/separate financial statements of financial position of the Company as of March 31, 2022, December 31, 2021, and December 31, 2020, and the related consolidated/separate statements of profit or loss, comprehensive income, changes in equity and cash flows for the periods then ended. Deloitte Anjin expressed unqualified opinion on the financial statements for the year ended December 31, 2021, and December 31, 2020, and the consolidated/separate financial statements for the period ended March 31, 2022, are presented fairly, in all material respects, in accordance with Korean IFRS 1034 Interim Financial Reporting.

All of the Company's subsidiaries received unqualified opinion for the periods ended December 31, 2021, and December 31, 2020.

Period end	Company Auditor	Audit Opinion	Emphasis of Matter	Key Audit Matter(s)
Mar 31, 2022	Deloitte Anjin	Not applicable	Not applicable	Not applicable
Dec 31, 2021	Deloitte Anjin	Unqualified	Not applicable	(Consolidated) 1. Sales deduction related to the sales promotion activities of products (Separate) 1. Sales deduction related to the sales promotion activities of products
Dec 31, 2020	Deloitte Anjin	Unqualified	Not applicable	(Consolidated) 1. Sales deduction related to the sales promotion activities of products 2. Impairment of goodwill and intangible assets with indefinite useful lives (Separate) 1. 1. Sales deduction related to the sales promotion activities of products

※ Audit opinion on both separate and consolidated financial statements.

< Review plan for the period ended March 31, 2022 >

Review period		Planned dates
2022 1Q	Pre-review	Mar 7, 2022 ~ Mar 25, 2022
	Review	Apr 5, 2022 ~ May 13, 2022

※ Above schedule is for the review of separate and consolidated financial statements

[Audit Contract Description]

(KRW mil)

Fiscal period	Auditor	Description	Contract		Actual	
			Audit fee	Total hours	Fee claimed	Hours spent
Quarter ended Mar 31, 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	1,382	12,800
Year ended Dec 31, 2021	Deloitte Anjin	- Review of the interim separate/consolidated financial statements - Audit of separate/consolidated financial statements - Audit of Internal Control over Financial Reporting (ICFR)	7,900	76,741	7,900	76,999
Year ended Dec 31, 2020	Deloitte Anjin	- Review of the interim separate/consolidated financial statements - Audit of separate/consolidated financial statements - Audit of Internal Control over Financial Reporting (ICFR)	8,400	85,721	8,400	86,128

[Non-Audit Service Contract Description]

(KRW mil)

Fiscal Period	Contract Date	Non-audit Service Description	Period for Service	Compensation	Note
Quarter ended Mar 31, 2022	Not Applicable	-	-	-	-
Year ended Dec 31, 2021	Jun 2017	E-discovery advisory services	Jan – Dec 2021	394	Deloitte Anjin
Year ended Dec 31, 2020	Jun 2017	E-discovery advisory services	Jan – Dec 2020	59	Deloitte Anjin

[Details of internal audit committee's discussion with Auditors]

No.	Date	Participants	Method	Details of discussion
1	Jan 25, 2022	Audit Committee: 3 members Company: Head of Audit Team Auditor: Signing partner and 1 other	Face-to-face meeting	- Key Audit Matters and others audit focus areas - Progress of audit of Internal Control over Financial Reporting - Other required communications at the completion stage of the audit
2	Apr 26, 2022	Audit Committee: 3 members Company: Head of Audit Team Auditor: Signing partner and 4 others	Face-to-face meeting	- Yearly plan for communication with those charged with governance - Audit plan for the year ending December 31, 2022 - Reporting on progress of quarterly review

2. Change of Independent Auditor

There are 231 subsidiaries as of March 31, 2022, and there was no new appointment or change of the external auditors during the quarter ended March 31, 2022.

There are 228 subsidiaries as of December 31, 2021. Samsung Electronics Singapore Pte. Ltd. (SESP) and Samsung Electronics Industry and Commerce Ltd (SETK-P) newly appointed Deloitte, and Gf-System Co., Ltd. newly appointed Anjin as the external auditor. And Samsung Electronics Benelux B.V. (SEBN) have changed the external auditor to E&Y from Deloitte, and Dowinsys Co., Ltd to Anjin from Samduk, respectively. Appointment of auditor was decided at the entities' own discretion.

Upon termination of the contract with previous auditor, Samil PwC, Deloitte Anjin has been designated as the Company's external auditor for three years ending December 31, 2022, in accordance with periodic designation regulation of Article 11 (1) and (2) of the "Act on External Audit of Stock Companies, Etc.", Article 17 of the "Enforcement Decree of the Act on External Audit of Stock Companies, Etc.", and Article 10 and Article 15 (1) of "Regulations on External Audit and Accounting".

There are 241 subsidiaries as at December 31, 2020. For the year ending December 31, 2020, 6 domestic subsidiaries, including Samsung Display Co., Ltd., changed external auditor from Samil PwC to Deloitte Anjin, 24 overseas subsidiaries, including Samsung Electronics America, Inc. (SEA), changed PwC to Deloitte, and 2 overseas subsidiaries, Samsung Electronica da Amazonia Ltda. (SEDA) and Samsung Gulf Electronics Co., Ltd. (SGE), changed KPMG to Deloitte. These changes in external auditors were to improve efficiency in audit of consolidated financial statements due to designation of the Company's external auditor.

Details of change in subsidiaries' external auditors are as follows:

Subsidiaries	Previous auditor	Current Auditor
Samsung Display Co., Ltd.	Samil PwC	Deloitte Anjin
Samsung Electronics Service Co., Ltd.	Samil PwC	Deloitte Anjin
Samsung Electronics Service CS Co., Ltd.	Samil PwC	Deloitte Anjin
Samsung Electronics Sales Co., Ltd.	Samil PwC	Deloitte Anjin
Samsung Electronics Logitech Co., Ltd.	Samil PwC	Deloitte Anjin
Mirero System Co., Ltd.	Samil PwC	Deloitte Anjin
Samsung Electronics America, Inc. (SEA)	PwC	Deloitte
Samsung Semiconductor, Inc. (SSI)	PwC	Deloitte
Samsung Mexicana S.A. de C.V (SAMEX)	PwC	Deloitte
Samsung International, Inc. (SII)	PwC	Deloitte
Samsung Austin Semiconductor LLC. (SAS)	PwC	Deloitte
Samsung Electronics Mexico S.A. De C.V. (SEM)	PwC	Deloitte
Samsung Electronics (UK) Ltd. (SEUK)	PwC	Deloitte
Samsung Electronics Holding GmbH (SEHG)	PwC	Deloitte
Samsung Semiconductor Europe GmbH (SSEG)	PwC	Deloitte
Samsung Electronics GmbH (SEG)	PwC	Deloitte
Samsung Electronics Benelux B.V. (SEBN)	PwC	Deloitte
Samsung Vina Electronics Co., Ltd. (SAVINA)	PwC	Deloitte
Samsung Asia Private Ltd. (SAPL)	PwC	Deloitte
Samsung Electronics Australia Pty. Ltd. (SEAU)	PwC	Deloitte
Thai Samsung Electronics Co., Ltd. (TSE)	PwC	Deloitte
Samsung Display Vietnam Co., Ltd. (SDV)	PwC	Deloitte
Samsung Electronics Vietnam Co., Ltd. (SEV)	PwC	Deloitte
Samsung Electronics Vietnam THANGUYEN Co., Ltd. (SEVT)	PwC	Deloitte
Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	PwC	Deloitte
Samsung (CHINA) Investment Co., Ltd. (SCIC)	PwC	Deloitte

Shanghai Samsung Semiconductor Co., Ltd. (SSS)	PwC	Deloitte
Samsung Electronics Saudi Arabia Ltd. (SESAR)	PwC	Deloitte
Samsung Electronics Turkey (SETK)	PwC	Deloitte
Samsung Electronics Rus Company LLC (SERC)	PwC	Deloitte
Samsung Eletronica da Amazonia Ltda. (SEDA)	KPMG	Deloitte
Samsung Gulf Electronics Co., Ltd. (SGE)	KPMG	Deloitte

The newly acquired subsidiary, TeleWorld Solutions, Inc.(TWS), appointed PwC as their external auditor. Appointment of auditor was decided at the entities' own discretion.

3. Regarding Internal Control

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

VI. Corporate Governance

1. Board of Directors

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

3. General meeting of shareholders

Pursuant to the reporting guidelines set forth by the FSS of South Korea, 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 March 31, 2022]

Name	Relationship ¹⁾	Type of share	Ownership				Notes
			Period start		Period end		
			Shares	Stake (%)	Shares	Stake (%)	
Samsung Life Insurance	Major shareholder	Common	508,157,148	8.51	508,157,148	8.51	-
		Preferred	43,950	0.01	43,950	0.01	-
Samsung Life Insurance (special accounts)	Major shareholder	Common	13,860,804	0.23	13,630,979	0.23	Open market transactions
		Preferred	548,463	0.07	536,719	0.07	Open market transactions
Samsung C&T	Affiliate	Common	298,818,100	5.01	298,818,100	5.01	-
Samsung Fire & Marine Insurance	Affiliate	Common	88,802,052	1.49	88,802,052	1.49	-
Samsung Welfare Foundation	Funded foundation	Common	4,484,150	0.08	4,484,150	0.08	-
Samsung Foundation Of Culture	Funded foundation	Common	1,880,750	0.03	1,880,750	0.03	-
Ra-hee Hong	Related party of the major shareholder	Common	137,244,666	2.30	117,302,806	1.96	Extended-hours transactions
		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	55,394,044	0.93	-
		Preferred	137,755	0.02	137,755	0.02	-
Seo-hyun Lee	Related party of the major shareholder	Common	55,394,044	0.93	55,394,044	0.93	-
		Preferred	137,755	0.02	137,755	0.02	-
Jong-hee Han	Executive member of affiliate	Common	5,000	0.00	15,000	0.00	Open market transactions
Kye-Hyun Kyung	Executive member of affiliate	Common	0	0.00	10,050	0.00	Newly appointed
Tae-Moon Roh	Executive member of affiliate	Common	0	0.00	13,000	0.00	Newly appointed
Hark-Kyu Park	Executive member of affiliate	Common	0	0.00	18,000	0.00	Newly appointed
Jung-Bae Lee	Executive member of affiliate	Common	0	0.00	10,000	0.00	Newly appointed
Byung-gook Park	Executive member of affiliate	Common	1,000	0.00	1,500	0.00	Open market transactions
Han-jo Kim	Executive member of affiliate	Common	2,175	0.00	2,175	0.00	-

Name	Relationship ¹⁾	Type of share	Ownership				Notes
			Period start		Period end		
			Shares	Stake (%)	Shares	Stake (%)	
Ki-nam Kim	Executive member of affiliate	Common	210,000	0.00	0	0.00	Resigned from his position as registered director
Hyun-suk Kim	Executive member of affiliate	Common	99,750	0.00	0	0.00	Resigned from his position as registered director
Dong-jin Koh	Executive member of affiliate	Common	75,000	0.00	0	0.00	Resigned from his position as registered director
Curie Ahn	Executive member of affiliate	Common	3,800	0.00	0	0.00	Term expiration
Total		Common	1,261,846,679	21.14	1,241,347,994	20.79	-
		Preferred	1,212,313	0.15	1,200,569	0.15	-

Common shares carry full voting rights while preferred shares do not (owners of certain common shares have limited voting rights in accordance with relevant laws).

For changes after March 31, 2022, please refer to 'Ownership status of securities, etc. of executives and major shareholder' published in Korean in DART (<http://dart.fss.or.kr>).

1) In accordance with Article 3 Paragraph 1 of Enforcement Decree of the Act on Corporate Governance of Financial Companies.

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	121,283	Young-muk Jeon	0.00	Samsung C&T	19.34

Number of investors is based on common shares as of December 31, 2021, and the names and share ratios of the CEO and the major shareholder are as of March 31, 2022.

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 19, 2020	Sung-chul Hyun	0.00	-	-
Mar 19, 2020	Young-muk Jeon	-	-	-
Mar 23, 2020	Young-muk Jeon	0.00	-	-
Mar 24, 2020	Young-muk Jeon	0.00	-	-
Mar 16, 2021	Young-muk Jeon	0.00	-	-

Date of change	CEO		Major shareholder	
	Name	Share ratio (%)	Name	Share ratio (%)
Apr 29, 2021	-	-	Kun-hee Lee	-
Apr 29, 2021	-	-	Samsung C&T	19.34

Mar 19, 2020: Sung-chul Hyun resigned from his position as CEO, and Executive Director Young-muk Jeon was appointed as CEO.

Apr 29, 2021: The major shareholder changed to Samsung C&T as the shares of the previous major shareholder (who passed away on October 25, 2020) were inherited.

(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	328,059,020
Total liabilities	296,565,859
Total equity	31,493,161
Revenue	9,304,748
Operating profit	323,812
Net profit	302,174

The financial status is as of March 31, 2022, 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 (<http://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	197,235	Jung-suk Koh	0.00	Jae-yong Lee	18.13
		Se-chul Oh	0.00		
		Seung-hwan Han	0.00		

As of March 31, 2022 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 19, 2021	Young-ho Lee	-	-	-
Mar 19, 2021	Keum-yong Chung	-	-	-
Mar 19, 2021	Se-chul Oh	0.00	-	-
Mar 19, 2021	Seung-hwan Han	0.00	-	-
Mar 19, 2021	Jung-suk Koh	0.00	-	-
Apr 29, 2021	-	-	Jae-yong Lee	18.13

Mar 19, 2021: Young-ho Lee and Keum-yong Chung resigned from their positions as CEO, Executive Directors Se-chul Oh and Seung-hwan Han were appointed as CEOs, and Jung-suk Koh was reappointed as CEO.

Apr 29, 2021: The share ratio (common share) of the major shareholder was changed (17.48%→18.13%) as the shares were inherited (by Jae-yong Lee and three others).

(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	53,173,996
Total liabilities	22,499,583
Total equity	30,674,413
Revenue	10,439,689
Operating profit	541,607
Net profit	649,188

The financial status is as of March 31, 2022, 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 manufactures and sells clothing, and processes and sells wool products (fabric). 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 (<http://dart.fss.or.kr>) for more details of the major shareholder of the major shareholder.

VIII. Executives and Employees

1. Executives and employees

A. Registered Executives

[As of Mar 31, 2022]

(Shares)

Name	Gender	Date of birth	Position	Registered Executive	Full/part-time	Responsibility	Major career	Number of shares owned ¹⁾		Relationship with the major shareholder ²⁾	Length of service (months)	Term expiration
								Common	Preferred			
Jong-Hee Han	M	Mar 1962	Vice Chairman	Executive Director	Full	- CEO (head of the DX Division)	- Bachelor's degree in Electronic Engineering from Inha University - Head of DX Division	15,000	-	Executive Member of an Affiliate	25	Mar 17, 2023
Kye-Hyun Kyung	M	Mar 1963	President	Executive Director	Full	- CEO (head of the DS Division)	- Doctor's degree in Control and Measurement Engineering from Seoul National University - Head of DS Division	10,050	-	Executive Member of an Affiliate	1	Mar 15, 2025
Tae-Moon Roh	M	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	13,000	-	Executive member of an Affiliate	1	Mar 15, 2025
Hark-Kyu Park	M	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	18,000	-	Executive member of an Affiliate	1	Mar 15, 2025
Jung-Bae Lee	M	Feb 1967	President	Executive Director	Full	- Head of Memory Business	- Doctor's degree in Electronic Engineering from Seoul National University - Head of Memory Business	10,000	-	Executive member of an Affiliate	1	Mar 15, 2025
Han-jo Kim	M	Jul 1956	Director	Independent Director	Part	- Audit Committee Member - Related Party Transactions Committee Member - Compensation Committee Member - Sustainability Committee Member	- Bachelor's degree in French language and Literature from Yonsei University - Chairman of Hana Foundation	2,175	-	Executive member of an Affiliate	37	Mar 19, 2025
Sun-uk Kim	F	Dec 1952	Director	Independent Director	Part	- Audit Committee Member - Head of the Related Party Transactions Committee - Sustainability Committee Member	- Doctor's degree in Administrative Law from University of Konstanz - Professor Emeritus at Ewha Womans University	-	-	Executive member of an Affiliate	49	Mar 22, 2024
Byung-gook Park	M	Apr 1959	Director	Independent Director	Part	- Independent Director - Recommendation Committee Member - Head of Compensation Committee - Sustainability Committee Member	- Doctor's degree in Electrical Engineering from Stanford University - Professor of Electrical Engineering at Seoul National University	1,500	-	Executive member of an Affiliate	49	Mar 22, 2024

Jeong Kim	M	Aug 1960	Director	Independent Director	Part	- Audit Committee Member - Related Party Transactions Committee Member - Head of Independent Director Recommendation Committee - Sustainability Committee Member	- Doctor's degree in Reliability Engineering from the University of Maryland - President of Kiswe Mobile	-	-	Executive member of an Affiliate	49	Mar 22, 2024
Wha-jin Han	F	Dec 1959	Director	Independent Director	Part	- Independent Director Recommendation Committee Member - Sustainability Committee member	- Doctor's degree in Physical Chemistry from University of California, Los Angeles - Endowed professor of Korea Institute of Human Resources Development in Science and Technology	-	-	Executive member of an Affiliate	1	Mar 15, 2025
Jun-Sung Kim	M	Oct 1967	Director	Independent Director	Part	- Compensation Committee Member - Sustainability Committee Member	- 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	1	Mar 15, 2025

1) As of the reporting date; for changes after the reporting date, please refer to 'Ownership status of securities, etc. of executives and major shareholder' published in Korean in DART (<http://dart.fss.or.kr>).

2) In accordance with Article 3 Paragraph 1 of the Enforcement Decree of the Act on Corporate Governance of Financial Companies.

Feb 15, 2022: Executive Directors Ki-nam Kim, Hyun-suk Kim, and Dong-jin Koh resigned from their positions as CEO; and Executive Director Jong-hee Han was appointed as CEO at the Board meeting.

Mar 16, 2022: Kye-hyun Kyung, Tae-moon Roh, Hark-kyu Park, and Jung-bae Lee were newly appointed as Executive Directors; Wha-jin Han and Jun-sung Kim were newly appointed as Independent Directors; and Han-jo Kim was reappointed as Independent Director through the AGM.

Mar 16, 2022: Ki-nam Kim, Hyun-suk Kim, and Dong-jin Koh resigned from their positions as Executive Director.

Mar 16, 2022: Executive Director Kye-hyun Kyung was appointed as CEO through the Board meeting.

Mar 19, 2022: Terms of Jae-wan Bahk and Curie Ahn as Independent Director expired.

Apr 20, 2022: Wha-jin Han resigned from her position as Independent Director.

Apr 26, 2022: Independent Director Han-jo Kim was appointed as head of Audit Committee.

Apr 28, 2022: Independent Director Han-jo Kim was appointed as head of Sustainability Committee.

B. Registered Executives with concurrent positions

[As of Mar 31, 2022]

Concurrent office holder		Company		
Name	Position	Name of company	Position	Period
Jeong Kim	Independent Director	Kiswe Mobile	Chairman	2013–present

2. Remuneration for Directors

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

IX. Affiliates and Subsidiaries

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

X. Transactions with Affiliates and Subsidiaries

1. Credit offerings for affiliates and subsidiaries

As of March 31, 2022, SEC provides a debt guarantee for financing of subsidiaries, including Samsung Electronics America, Inc. (SEA) and other subsidiaries as listed below.

(USD thousand)

Company	Relationship	Creditor	Type	Purpose	Guarantee start date	Guarantee expiry date	Limit of guarantee		Transactions			Interest Rate (%)
							Beginning of period	End of period	Beginning of period	Increase/decrease	End of period	
SEA	Subsidiary	BOA etc.	Payment guarantee	Operating fund	Apr 20, 2021	Dec 16, 2022	1,328,000	1,328,000	-	-	-	
SEM	Subsidiary	BBVA etc.	Payment guarantee	Operating fund	Jun 14, 2021	Mar 27, 2023	906,000	906,000	-	-	-	
SAMCOL	Subsidiary	Citibank etc.	Payment guarantee	Operating fund	Jun 14, 2021	Dec 16, 2022	310,000	310,000	-	-	-	
SEDA	Subsidiary	BRADESCO etc.	Payment guarantee	Operating fund	Sep 30, 2021	Dec 16, 2022	409,000	409,000	-	-	-	
SECH	Subsidiary	Citibank etc.	Payment guarantee	Operating fund	Jun 14, 2021	Dec 16, 2022	62,000	62,000	-	-	-	
SEPR	Subsidiary	BBVA etc.	Payment guarantee	Operating fund	Jun 01, 2021	Dec 16, 2022	150,000	150,000	-	-	-	
SSA	Subsidiary	SCB etc.	Payment guarantee	Operating fund	Jun 14, 2021	Dec 16, 2022	318,000	318,000	-	-	-	
SEMAG	Subsidiary	SocGen etc.	Payment guarantee	Operating fund	Nov 09, 2021	Dec 16, 2022	110,000	110,000	-	-	-	
SETK	Subsidiary	BNP etc.	Payment guarantee	Operating fund	Jun 14, 2021	Dec 16, 2022	807,000	807,000	102,275	25,989	128,264	22.3%
SETK-P	Subsidiary	BNP etc.	Payment guarantee	Operating fund	Nov 09, 2021	Dec 16, 2022	130,000	130,000	33,334	22,976	56,310	22.6%
SECE	Subsidiary	Citibank etc.	Payment guarantee	Operating fund	Jul 19, 2021	Dec 16, 2022	73,722	72,871	-	-	-	
SEEG	Subsidiary	HSBC	Payment guarantee	Operating fund	Jun 14, 2021	Jun 13, 2022	85,000	85,000	-	-	-	
SEIN	Subsidiary	BNP etc.	Payment guarantee	Operating fund	Jun 14, 2021	Nov 08, 2022	70,000	70,000	-	-	-	
SJC	Subsidiary	Mizuho Bank etc.	Payment guarantee	Operating fund	Apr 30, 2021	Dec 16, 2022	877,579	858,664	-	-	-	
SEUC	Subsidiary	Credit Agricole etc.	Payment guarantee	Operating fund	Jun 14, 2021	Dec 16, 2022	150,000	150,000	-	-	-	
SEDAM	Subsidiary	Citibank etc.	Payment guarantee	Operating fund	Jun 14, 2021	Dec 16, 2022	141,000	141,000	-	-	-	
SECA	Subsidiary	BoA	Payment guarantee	Operating fund	Nov 09, 2021	Nov 08, 2022	70,000	70,000	-	-	-	
SELA	Subsidiary	Citibank	Payment guarantee	Operating fund	Dec 17, 2021	Dec 16, 2022	120,000	120,000	-	-	-	
SEEH	Subsidiary	HSBC etc.	Payment guarantee	Operating fund	Jun 14, 2021	Dec 16, 2022	712,400	712,400	-	-	-	
SERK	Subsidiary	SocGen etc.	Payment guarantee	Operating fund	Jun 14, 2021	Dec 16, 2022	290,000	290,000	-	-	-	
SELV	Subsidiary	Citibank	Payment guarantee	Operating fund	Dec 17, 2021	Dec 16, 2022	10,000	10,000	-	-	-	
SEIL	Subsidiary	Citibank	Payment guarantee	Operating fund	Dec 17, 2021	Dec 16, 2022	15,600	15,600	10,947	-256	10,691	1.4%
SAPL	Subsidiary	BOA etc.	Payment guarantee	Operating fund	Jun 14, 2021	Dec 16, 2022	345,000	345,000	-	-	-	
SAVINA	Subsidiary	HSBC	Payment guarantee	Operating fund	Jun 14, 2021	Jun 13, 2022	51,000	51,000	-	-	-	
SCIC	Subsidiary	HSBC etc.	Payment guarantee	Operating fund	Jun 14, 2021	Dec 16, 2022	300,000	300,000	-	-	-	
SME	Subsidiary	SCB	Payment guarantee	Operating fund	Nov 09, 2021	Nov 08, 2022	110,000	110,000	-	-	-	
SAMEX	Subsidiary	Citibank	Payment guarantee	Operating fund	Dec 17, 2021	Dec 16, 2022	5,000	5,000	-	-	-	
SEASA	Subsidiary	Citibank	Payment guarantee	Operating fund	Dec 17, 2021	Dec 16, 2022	2,000	2,000	-	-	-	
SSAP	Subsidiary	SCB	Payment guarantee	Operating fund	Nov 09, 2021	Nov 08, 2022	35,000	35,000	-	-	-	
SEPM	Subsidiary	HSBC	Payment guarantee	Operating fund	Jun 14, 2021	Jun 13, 2022	35,000	35,000	-	-	-	
SESAR	Subsidiary	HSBC	Payment guarantee	Operating fund	Jun 14, 2021	Jun 13, 2022	50,000	50,000	-	-	-	
AdGear Technologies Inc.	Subsidiary	BOA	Payment guarantee	Operating fund	Nov 09, 2021	Nov 08, 2022	2,000	2,000	-	-	-	
Harman International Industries, Inc.	Subsidiary	JP Morgan	Payment guarantee	Operating fund	Jun 14, 2021	Jun 13, 2022	100,000	100,000	-	-	-	

Harman International Japan Co., Ltd.	Subsidiary	MUFG	Payment guarantee	Operating fund	Nov 09, 2021	Nov 08, 2022	25,000	25,000	-	-	-	-
Harman RUS CIS LLC	Subsidiary	SocGen	Payment guarantee	Operating fund	Nov 09, 2021	Nov 08, 2022	15,000	15,000	-	-	-	-
Harman Holding Limited	Subsidiary	HSBC	Payment guarantee	Operating fund	Jun 14, 2021	Jun 13, 2022	30,000	30,000	-	-	-	-
Harman do Brasil Industria Eletronica e Participacoes Ltda.	Subsidiary	SocGen	Payment guarantee	Operating fund	Nov 09, 2021	Nov 08, 2022	15,000	15,000	-	-	-	-
Harman da Amazonia Industria Eletronica e Participacoes Ltda.												
Total							8,265,301	8,245,535	146,556	48,709	195,265	

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.

The Company claimed approximately USD 266 thousand in guarantee fees in 2021 and received it in 1Q22.

2. Acquisitions and disposals of assets with affiliates and subsidiaries

In 1Q22, the Company sold assets to affiliates, including Samsung China Semiconductor LLC. (SCS), to increase production capacity of such affiliates. Also, the Company acquired assets including facility equipment from affiliates to improve efficiency of domestic production.

(KRW mil)

Company	Relationship	Transaction type	Transaction date ¹⁾	Asset	Purpose of transaction	Amount ²⁾	Gain or loss on disposal
SCS	Affiliates	Asset sale/purchase	Mar 17, 2022	Machinery, etc.	Enhance capacity and production efficiency	3,296	1,970
SEHC	Affiliates	Asset sale/purchase	Mar 31, 2022	Machinery, etc.	Enhance capacity and production efficiency	3,129	255
SESS	Affiliates	Asset sale/purchase	Mar 16, 2022	Machinery, etc.	Enhance capacity and production efficiency	2,912	220
SAS	Affiliates	Asset purchase	Mar 13, 2022	Machinery, etc.	Enhance capacity and production efficiency	1,430	0
SII	Affiliates	Asset sale	Jan 13, 2022	Machinery, etc.	Enhance capacity and production efficiency	211	-15
SEVT	Affiliates	Asset purchase	Feb 15, 2022	Machinery, etc.	Enhance capacity and production efficiency	12	0
Samsung Medison	Affiliates	Asset sale	Mar 17, 2022	Machinery, etc.	Enhance capacity and production efficiency	5	5

Separate basis; acquisitions and disposals of assets listed above are not subject to a resolution of the Board.

1) Most recent transaction.

2) Properly calculated by an appropriate method based upon market value assessment. Transaction was made under normal conditions (eg, terms of cash payment within the 15th, 30th of the following month of transaction).

3. Business transactions with affiliates and subsidiaries

In 1Q22, the Company had transactions such as sales and purchases with affiliates, including Samsung Semiconductor, Inc. (SSI).

(KRW mil)

Company	Relationship	Type of transaction	Date	Details	Amount
SSI	Affiliates	Sales, purchases, etc.	Jan– Mar 2022	Semiconductors	10,531,601

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.

B. Guarantees

- Domestic: Not applicable

- Overseas:

(USD thousand)

Company	Relationship	Creditor	Guarantee	Transactions				Limit of guarantee
			Expiry date	Beginning of period	Increase	Decrease	End of period	
SEA	Subsidiary	BOA etc.	Dec 16, 2022	-	-	-	-	1,328,000
SEM	Subsidiary	BBVA etc.	Mar 27, 2023	-	-	-	-	906,000
SAMCOL	Subsidiary	Citibank etc.	Dec 16, 2022	-	-	-	-	310,000
SEDA	Subsidiary	BRADESCO etc.	Dec 16, 2022	-	-	-	-	409,000
SECH	Subsidiary	Citibank etc.	Dec 16, 2022	-	-	-	-	62,000
SEPR	Subsidiary	BBVA etc.	Dec 16, 2022	-	-	-	-	150,000
SSA	Subsidiary	SCB etc.	Dec 16, 2022	-	-	-	-	318,000
SEMAG	Subsidiary	SocGen etc.	Dec 16, 2022	-	-	-	-	110,000
SETK	Subsidiary	BNP etc.	Dec 16, 2022	102,275	25,989	-	128,264	807,000
SETK-P	Subsidiary	BNP etc.	Dec 16, 2022	33,334	22,976	-	56,310	130,000
SECE	Subsidiary	Citibank etc.	Dec 16, 2022	-	-	-	-	72,871
SEEG	Subsidiary	HSBC	Jun 13, 2022	-	-	-	-	85,000
SEIN	Subsidiary	BNP etc.	Nov 08, 2022	-	-	-	-	70,000
SJC	Subsidiary	Mizuho Bank etc.	Dec 16, 2022	-	-	-	-	858,664
SEUC	Subsidiary	Credit Agricole etc.	Dec 16, 2022	-	-	-	-	150,000
SEDAM	Subsidiary	Citibank etc.	Dec 16, 2022	-	-	-	-	141,000
SECA	Subsidiary	BoA	Nov 08, 2022	-	-	-	-	70,000
SELA	Subsidiary	Citibank	Dec 16, 2022	-	-	-	-	120,000
SEEH	Subsidiary	HSBC etc.	Dec 16, 2022	-	-	-	-	712,400
SERK	Subsidiary	SocGen etc.	Dec 16, 2022	-	-	-	-	290,000
SELV	Subsidiary	Citibank	Dec 16, 2022	-	-	-	-	10,000
SEIL	Subsidiary	Citibank	Dec 16, 2022	10,947	-	-256	10,691	15,600
SAPL	Subsidiary	BOA etc.	Dec 16, 2022	-	-	-	-	345,000
SAVINA	Subsidiary	HSBC	Jun 13, 2022	-	-	-	-	51,000
SCIC	Subsidiary	HSBC etc.	Dec 16, 2022	-	-	-	-	300,000
SME	Subsidiary	SCB	Nov 08, 2022	-	-	-	-	110,000
SAMEX	Subsidiary	Citibank	Dec 16, 2022	-	-	-	-	5,000
SEASA	Subsidiary	Citibank	Dec 16, 2022	-	-	-	-	2,000
SSAP	Subsidiary	SCB	Nov 08, 2022	-	-	-	-	35,000
SEPM	Subsidiary	HSBC	Jun 13, 2022	-	-	-	-	35,000
SESAR	Subsidiary	HSBC	Jun 13, 2022	-	-	-	-	50,000
AdGear Technologies Inc.	Subsidiary	BOA	Nov 08, 2022	-	-	-	-	2,000
Harman International Industries, Inc.	Subsidiary	JP Morgan	Jun 13, 2022	-	-	-	-	100,000
Harman International Japan Co., Ltd.	Subsidiary	MUFG	Nov 08, 2022	-	-	-	-	25,000

Harman RUS CIS LLC	Subsidiary	SocGen	Nov 08, 2022	-	-	-	-	15,000
Harman Holding Limited	Subsidiary	HSBC	Jun 13, 2022	-	-	-	-	30,000
Harman do Brasil Industria Eletronica e Participacoes Ltda.	Subsidiary	SocGen	Nov 08, 2022	-	-	-	-	15,000
Harman da Amazonia Industria Eletronica e Participacoes Ltda.								
Harman Finance International, SCA	Subsidiary	JP Morgan etc.	Mar 01, 2022	396,304	-	-396,304	-	-
SDN	Subsidiary	SIEL	Nov 22, 2024	571,121	-	-10,605	560,516	659,431
Total				1,113,981	48,965	-407,165	755,781	8,904,966

※ Information above are prepared in consolidated basis. Debt guarantees for Harman Finance International, SCA, and SDN are provided by Harman International Industries, Inc. and Samsung Display Co., Ltd., 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 2021, the Company claimed approximately USD 266,000 in guarantee fees and, as of the reporting date, has collected the amount.
 In 2021, Samsung Display Co., Ltd. claimed approximately USD 2,529,000 in guarantee fees to SDN and, as of the reporting date, has collected the amount.

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

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 reports.

4. Subsequent events and other matters

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

XII. Appendix

1. Subsidiaries subject to consolidated financial statements (detailed)

Pursuant to the reporting guidelines set forth by the FSS of South Korea, the Subsidiaries subject to consolidated financial statements (detailed) section, reported in the half-year and full-year business reports, is not included in the 1Q and 3Q reports.

2. Affiliates & subsidiaries (detailed)

Pursuant to the reporting guidelines set forth by the FSS of South Korea, the Affiliates & subsidiaries (detailed) section, reported in the half-year and full-year business reports, is not included in the 1Q and 3Q reports.

3. Equity investments in other corporations (detailed)

Pursuant to the reporting guidelines set forth by the FSS of South Korea, the Equity investments in other corporations (detailed), reported in the half-year and full-year business reports, is not included in the 1Q and 3Q reports.

4. R&D results (detailed)

DX Division	
Research project	Details
Visual Display	
QLED 8K TV February 2019–June 2020	<ul style="list-style-type: none"> □ Flat QLED 8K TV (65/75/85") <ul style="list-style-type: none"> - Blends well with walls: flat design and Infinity screen; no border between screen and bezel—a world's first. - Innovative form factor: metal stand which gives a floating impression - QLED 8K enables picture quality close to real life, high resolution via AI upscaling, True Reality picture quality in any given environment - Multi-sound channel and Object Tracking Sound+ synchronize video and sound, maximizing surround sound experience - Wide range of content, multimedia experiences, and entertainment-specific functions provide convenient and colorful experiences
Neo QLED 8K March 2021–March 2022	<ul style="list-style-type: none"> - □ Ultra high-resolution, slim 8K TV based on Mini LED technology (65 · 75 · 85") - QN900 (65 · 75 · 85") / QN800 (65 · 75 · 85") / QN700 (65 · 75") - QLED 8K resolution offers viewing experience as if looking at real-life objects, with enhanced contrast of sophisticated Mini LED - Added the feature of 'OTS Pro (Object Tracking Sound Pro)'
Neo QLED 4K March 2021–March 2022	<ul style="list-style-type: none"> □ Mini LED-based products come in 3 series and up to 7 sizes (43 · 50 · 55 · 65 · 75 · 85 · 98") □ Slim design by adopting Mini LED, premium look with bezel-less/metal design <ul style="list-style-type: none"> - New LED with Quantum Nano-Layer Multi-Cell structure, enabling slim design, high luminance efficiency, luminance profile control - Enhanced gradation by four times; expresses bright and dark areas more elaborately
QD-Display TV ~March 2022	<ul style="list-style-type: none"> □ Quantum-Dot-based self-emitting Display Flat 4K TV (55 · 65") □ QD-Display TV that provides true value of TV with full applications from Quantum-Dot-based high-definition self-emitting Display and sleek Blade Slim Design to OTS and True Ch. ATMOS
QLED 4K TV ~March 2022	<ul style="list-style-type: none"> □ Flat QLED 4K TV (43 · 50 · 55 · 60 · 65 · 70 · 75 · 82 · 85") □ Specs and features <ul style="list-style-type: none"> - Flagship QLED maximizes viewing experience with the highest picture quality within 4K (AI/brightness/viewing angle) and sound quality (OTS) - Maximizes immersive experience with the highest level of brightness contrast, free viewing angle, life-like color, and optimal brightness - Optimal viewing experience by identifying user context based on voice recognition and AI technologies - Supports Google Duo when connected with a webcam
UHD TV ~March 2022	<ul style="list-style-type: none"> □ Flat UHD TV (43 · 50 · 55 · 58 · 65 · 70 · 75 · 82 · 85") □ Specs and features <ul style="list-style-type: none"> - UHD Smart TV with slim, bezel-less design provides colors close to real-life - UHD picture quality expresses picture quality of original content through Dynamic Crystal Color and Dual LED - Provides a multi-media screen experience, rich content, and complete smart experience via smart home experience - Enhanced Smart experiences with the addition of Game Home, IoT Hub, and Watch/Chat together functions

DX Division	
Research project	Details
Lifestyle TV ~March 2022	<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 · 49 · 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 □ Outdoor TV (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 the best Smart UX/OTT experience in the industry - Complements any environment with blended design, can be placed directly in front of a wall and has an easily adjustable screen size. - Complete experience of our TV models including the differentiated picture quality and sound □ The Freestyle (30–100") <ul style="list-style-type: none"> - Movable Smart Screen that enables users to enjoy content anytime, anywhere - Easy to set up in various locations and provides an optimal viewing experience regardless of angle/distance (Auto Focus/Auto Keystone) - Added usability via the basic cradle, enabling easy placement in various locations; and the socket adapter expands usability.
Micro-LED TV ~January 2022	<ul style="list-style-type: none"> □ The Wall 2.0 (110") <ul style="list-style-type: none"> - Released completed version of Micro-LED to strengthen technology leadership and dominance of Micro-LED market - Ultra-large Home Screen that reproduces the real world on display - Micro-LED picture quality with a sense of space and depth that seems like the real thing without limitation on resolution
Sound Bar ~March 2022	<ul style="list-style-type: none"> □ Soundbar <ul style="list-style-type: none"> - Bar-shaped audio product well suited to TVs - Adopted AI solution enabling voice recognition - Adopted 3D surround system, creating enriching sounds close to first-hand experiences □ Sound Bar Q990B <ul style="list-style-type: none"> - Industry's first wireless ATMOS transmission from TV to soundbar - Provides the optimal Cinema True ATMOS just like in the cinema, utilizing all channels of TV and soundbar - Equipped with soundbar room-correction technology
Monitor January 2021–March 2022	<ul style="list-style-type: none"> □ Space monitor <ul style="list-style-type: none"> - Application of integrated arm stand that minimizes space needed for the monitor □ Neo QLED Gaming monitor (49") <ul style="list-style-type: none"> - Strengthened black gamut based on enhanced brightness contrast by applying Neo QLED - More immersive gaming experience with 1000R curvature—the world's highest □ High-resolution QHD monitor (34") <ul style="list-style-type: none"> - Offers picture solution comfortable to the eye with Intelligent Eye Care solution, etc. □ LCD Smart monitor <ul style="list-style-type: none"> - Enjoy VOD services without using a PC via Smart TV services (Netflix, YouTube, etc.) □ Smart monitor M80B (32") <ul style="list-style-type: none"> - Ultra-slim, flat back, lifestyle design that adopts Warm White color - Includes magnetic-mount webcam - Strengthened smart experiences (watching VOD/connecting mobile devices/PC-less function/IoT/communication/game)
Signage October 2019–June 2021	<ul style="list-style-type: none"> □ LCD-based B2B Smart Signage (LFD, Video Wall, etc.) (49 · 55 · 65 · 75 · 85 · 98") □ Indoor/outdoor signage using LED □ All-in-one Kiosk (24"), all additional equipment embedded <ul style="list-style-type: none"> - Payment platform for developing Tizen payment module and ordering app, antibacterial finishing □ Flip-edu (75 · 85") interactive feature for education

DX Division

Research project	Details
Home appliances	
Refrigerators ~February 2022	<ul style="list-style-type: none"> □ Chef Collection refrigerator <ul style="list-style-type: none"> - High-end, premium refrigerator - Premium Bespoke design and new CMF - Features water & ice solution: Auto fill pitcher, auto ice maker (dual mode: cocktail Ice, standard Ice) - FDSR energy efficiency grade 1 □ Cube refrigerator <ul style="list-style-type: none"> - Multi Cube refrigerator: customized design and storage (different temperatures for storing wine, beer, and cosmetic products) - Peltier System identifies and creates optimal temperature (between 5–18℃) - Double Glass System blocks UV and maintains the right temperature - Wi-Fi Control enables real-time monitoring and control - RM (Remote Management) Function: remote assessment and repair, provides information on expiration date of beverages in the fridge □ New TMF in North/Latin America <ul style="list-style-type: none"> - Strengthened competitiveness and offered differentiation with large capacity (440L/480L), specialized storage compartments, and new design - Flex Zone (fridge 1℃ / chilled -1℃ / soft freezing) & Quick Chill Smart Alarm - Strengthened competitiveness with flat door & Bespoke CMF, capacity (20L more), and optimal size - Dual voltage, auto ice maker, water dispenser, Big Box □ 1-Door Premium Kitchen Fit Refrigerator (freezer/fridge/kimchi/wine) <ul style="list-style-type: none"> - Adopted premium Bespoke design and new CMF - Automatic door opening technology - Applied Water & Ice Solution: Auto Fill Pitcher, Dual Auto Ice Maker (cocktail ice, standard ice)
Washer ~January 2022	<ul style="list-style-type: none"> □ Bespoke washer & dryer <ul style="list-style-type: none"> - Bespoke flat design that perfectly fits into your space - Korea's highest capacity all-in-one Control UX design - AI clothing care (AI tailored washing and drying) from washing to drying - Hygiene management solution from 99.9% sterilization to dehumidification of laundry room □ Agitator washer <ul style="list-style-type: none"> - Entrance to the North American market for Agitator (occupied 50% of the Top Loader market) - Implementation of ActiveWave™ Agitator which enables heavy washing along with the reduction of noise, vibration, and entanglement - Implementation of Active Water Jet which enables pretreating of soiled or heavily stained clothes □ Eco-friendly dryer with new refrigerant for Europe <ul style="list-style-type: none"> - Eco-friendly refrigerant: applied environmentally friendly R290 to reduce GHG emissions - Energy label of A+++ : achieved the highest energy rating in Europe - Sensor Dry: senses the degree of dryness during the drying process, capable of automatically adjusting from additional drying to ending the process - Simple UX: improved product usability (delivery of detailed information on drying and customized panel setting) - Hygiene Care: eliminates over 99% of three common types of harmful bacteria (Bacillus pyocyanus, Escherichia coli, and Staphylococcus aureus) □ 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 20kg dryer <ul style="list-style-type: none"> - Largest available and first 20kg dryer in Korean market, flat design - Features pet-care cycle (specialized in removing fur) - Applied auto door opening (door opens automatically after the drying cycle ends) - Added temperature/humidity sensor to provide dehumidification solutions that sense humidity in the laundry room

DX Division	
Research project	Details
Air conditioner April 2021	<ul style="list-style-type: none"> □ Wind-Free™ Gallery Floor-standing (56.9 · 62.6 · 75.5 · 81.8 · 92.5 m²) <ul style="list-style-type: none"> - Developed next-gen wind-free platform with the highest level of energy efficiency (56.9 m² single duct model achieved energy efficiency grade 2) - Equipped with wind-free panel 1.5 times larger than previous model and strong booster wind - Booster purification: Filter with 99.95% dust collection efficiency, Design resembling that of furniture, fits comfortably into the surroundings □ Wind-Free™ Gallery Wide air conditioner (24.4 · 29.3 · 39.6 · 49.5 m²) <ul style="list-style-type: none"> - Secured cost competitiveness by developing new integrated QMD-based platform, strengthened product competitiveness - 12% larger fans cools air faster - Wind-free ultra-energy-efficient technology saves up to 77% on electricity - PM1.0 wind-free filtration system removing particles as small as ultra-fine dust □ Bespoke Window Fit air conditioner (17m², green/blue/pink/beige/gray) <ul style="list-style-type: none"> - Convenient self-installation with the integrated indoor/outdoor unit - Strong rotational cooling with double wings which quickly circulate cold air - Twin inverter compressor that enables low noise and vibration level of 37dB, as quiet as a library - Up to 70% lower power consumption in silent mode
Vacuums May 2021	<ul style="list-style-type: none"> □ Bespoke Jet stick vacuum (up to 210W suction) <ul style="list-style-type: none"> - Embedded auto-empty dustbin, smart display of information via LCD Display - Wet Brush dispenses water, thinner cotton-flannel brush □ Jet Bot AI Robot Vacuum <ul style="list-style-type: none"> - Seamless navigation with the realization of world's best object recognition capability (up to 1 cm³) by developing Active 3D sensor and applying it—a world's first - AI autonomous navigation that recognizes house structure and types of objects - Strong suction with jet cyclone and digital inverter motor - Integrated Clean Station which automatically empties dustbin when the Jet Bot starts charging - More convenient cleaning with SmartThings (AI Smart Control) □ Bespoke slim stick vacuum <ul style="list-style-type: none"> - Up to 150W suction with a strong cyclone and digital inverter mode - Self-standing, convenient emptying of the dustbin without having to bend over (Pop & Shoot) - Easy cleaning without pressure on the wrist (ergonomic design)
Cooking appliances March 2021	<ul style="list-style-type: none"> □ Bespoke Qooker <ul style="list-style-type: none"> - Multi-cook function allows cooking multiple dishes with different heat sources, temperatures, and cooking times. - Cook more than one dish and finish at the same time with Multi-cook mode - Collaborated with eight food companies to apply Qooker-exclusive algorithm - Easy automatic cooking with just one scan using SmartThings - Oven interior material changed from enamel to STS for more heat-efficient, sophisticated design.
Water Purifier March 2021	<ul style="list-style-type: none"> □ Water Purifier for homes <ul style="list-style-type: none"> - Modularized water purifier upgradable and customizable to customer's lifestyle; includes auto-care feature - May be modularized to users' needs (ambient/cold/hot water) - Smart AI care, filter received highest number of NSF certification for tankless water purifier - Bespoke water purifier, customized to users' lifestyle and space
Clothing Care Machine February 2019–May 2021	<ul style="list-style-type: none"> □ Bespoke Air Dresser (18 · 24") <ul style="list-style-type: none"> - AI drying and washing cycle syncing - Long clothing care zone, holds 5 hangers, compared to 3 for 18" model - Real-care (inner-garment care, low noise level), real purification with ultra-fine dust filter, real odor elimination with odor decomposing filter, real-sanitization with jet steam, wrinkle care, real dehumidification dehumidifies the room even with the door closed □ Shoe Dresser <ul style="list-style-type: none"> - Powerful odor elimination with Air Wash and UV odor decomposing filter - Low temperature, delicate drying to make your everyday shoes a pleasure to wear. - 99.9% sterilization with the application of a Xenon UVC disinfection system—a first for home appliances in Korea - Tailored care and management of various types of shoes with Jet Shoe Tree
Air purifier December 2020	<ul style="list-style-type: none"> □ Bespoke Cube air purifier <ul style="list-style-type: none"> - Premium air purifier in Bespoke lineup - Use one of the three specialized filters as needed: sterilization, deodorization, pet - Customizable to the space, interior, and lifestyle - Mountable on walls to fit the interior without compromising dust-removing function with cubic filtration feature
Air-purification ventilation system September 2020	<ul style="list-style-type: none"> □ Air-purification ventilation system <ul style="list-style-type: none"> - Ventilation capacity 33 m², Airflow 40–50CMH - Ventilates and purifies air indoors by linking ventilation system with air-purification module - Individual air-purification for each separate space, circulation & wind-free purification - Sensors detecting CO₂, etc. enables automatic ventilation depending on air quality change

DX Division

Research project	Details
MX	
Galaxy Foldable September 2019– August 2021	<ul style="list-style-type: none"> □ Galaxy Fold (September 2019) <ul style="list-style-type: none"> - Creating a new market and securing market share by developing world's first in-foldable smart phone - 7.3" QXGA+(1,536×2,152) 1.5R in-foldable display - Secured standard technology by developing hinge for in-foldable phones—a world's first (released Feb 2019) - Offers new user experience tailored to foldable smart phones - Can use up to three apps with multi-active window function, offering unrivaled multitasking environment - When folding or unfolding the phone, provides app using experience with smooth changes between screens with minimal interruption □ Galaxy Z flip (February 2020) <ul style="list-style-type: none"> - Design: New style with innovative foldable display - Screen: Main 6.7" flexible ultra-thin glass (2,636 x 1080) - cover 1.1" super AMOLED (300 x 112) - Size (W x H x D): (unfolded) 73.6mm x 167.3mm x 6.9–7.2mm (folded) 73.6mm x 87.4mm x 15.4–17.3mm - Platform (H/W, S/W): SDM855+, Android 10.0 - Ultra-thin glass technology allows foldable glass display—a first among Galaxy models—and enhances durability - Easy to carry with a new form factor allowing compact size by flip fold - Free-stop feature enables users to freely control the angle of the flip, allowing Flex Mode experience - Screen ratio 21.9:9 enhances suitability of multi active window □ Galaxy Z Fold 2 (September 2020) <ul style="list-style-type: none"> - Screen: Main display 7.6", cover display 6.2" - Size (W x H x D): (folded) 68mm x 159.2mm x 13.8 (~16.8) mm - Platform (H/W, S/W): SDM 865 Plus, Android 10, One UI 2.5 - Supports ultra-high speed 5G and 12MP camera - Infinity Flex Display supports flex mode - Dynamic AMOLED 2X display with 120Hz flexible scan rate - Samsung Ultra Thin Glass - Supports wireless Samsung DeX and UWB - Evolved multi-active window enabling simultaneous use of three apps maximum - Provides app continuity from cover display to main display □ Galaxy Z Fold 3 5G (August 2021) <ul style="list-style-type: none"> - Screen: Main display 7.6", cover display 6.2" - Size (W x H x D): (folded) 158.2mm x 67.1mm x 14.4~16.0mm (unfolded) 158.2mm x 128.1mm x 6.4mm - Platform (H/W, S/W): 5nm 64-bit octa-core processor, Android 11, One UI 3.1.1 - Supports IPX8 rating (water resistance with a depth of up to 1.5m of freshwater for up to thirty minutes), which is a first for a foldable smartphone - Strengthened durability with the application of Armor Aluminum and tempered glass of Corning® Gorilla® Glass Victus™ - Equipped with 7.6" Infinity Flex Display and applied Under Display Camera - Display screen approximately 29% brighter with the new Eco² technology - Main/cover display all support 120Hz screen refresh rate - Applied S-pen for the first time for foldables - Supports both top and bottom half of the screen at any angle with Flex mode panel feature even for apps that are not optimized - Supports Multi Active Window, which splits the screen and allows using up to three apps at once □ Galaxy Z Flip 3 5G (August 2021) <ul style="list-style-type: none"> - Screen: Main display 6.7", cover display 1.9" - Size (W x H x D): (folded) 86.4mm x 72.2mm x 15.9~17.1mm (unfolded) 166mm x 72.2mm x 6.9mm - Platform (H/W, S/W): 5nm 64-bit octa-core processor, Android 11, One UI 3.1.1 - Supports IPX8 rating (water resistance with a depth of up to 1.5m of freshwater for up to thirty minutes), which is a first for a foldable smartphone - Strengthened durability with the application of Armor Aluminum and tempered glass of Corning® Gorilla® Glass Victus™ - Enhanced usability of cover display: allows to scroll through up to 8 lines of notification/message and supports weather, daily step count, and Samsung Pay - Enhanced Flex mode: supports Auto Framing, which automatically adjusts the frame according to the number of people within the frame, and Dual Preview - Main display supports 120Hz screen refresh rate

DX Division

Research project	Details
Galaxy S ~February 2022	<ul style="list-style-type: none"> □ Galaxy S10e · S10 · S10+ · S10 5G (5.8/6.1/6.4/6.7") (March 2019, 5G: April 2019) <ul style="list-style-type: none"> - Design: Full Front Punch Hole Infinity Display - Platform (H/W, S/W): Exynos9820, SDM855, Android 9 - World's first model using commercialized 5G technology - Combination of triple cameras delivers zoom, tele, ultra wide function: wide (12M)+tele (12M)+ultra wide (16M) - Supports HDR10+ video shooting on mobile for the first time in the world - Dynamic AMOLED display delivers near-original colors, supports HDR - On-screen fingerprint recognition sensor using ultrasound □ Galaxy S20 · S20+ · S20 Ultra 5G (March 2020) <ul style="list-style-type: none"> - Design: Best Fit in hand compact, yet large screen design - Screen: S20 6.2", S20+ 6.7", S20 U 6.9" - Size (W x H x D): S20 69.1mm x 151.7mm x 7.9mm; S20+ 73.7 x 161.9 x 7.8mm; S20 U 76.0 x 166.9 x 8.8mm - Platform (H/W, S/W): Exynos990 · SDM865, Android 10.0, One UI 2.1 - Smartphone that will change the future of mobile and pictures: significantly higher resolution and 8K video recording allows taking pictures and videos in unprecedented quality and easy and swift sharing with 5G - Pictures and videos with significantly higher resolution: S20 · S20+ 64MP, S20 U 108MP - 100x zoom, the highest space zoom yet in smartphones: S20 U 108MP - Take higher quality, clearer and brighter pictures and videos even at night with three times bigger sensor (using AI technology) - Take videos in 8K, the highest quality yet in smartphones - Super steady feature reduces blur from shaking but captures dynamic movements - Single take allows the best pictures and videos with a single shot □ Galaxy S20 FE (October 2020) <ul style="list-style-type: none"> - Makes S series experience available to more customers - Screen: 6.5" FHD+ sAMOLED Infinity-O (2,400 x 1,080) - Size (W x H x D): 74.5mm x 159.8mm x 8.4mm - Platform (H/W, S/W): Exynos990, SDM865, Android 10.0, One UI 2.5 - New entry-level flagship product equipped with premium features enhances market influence and provides experiences for various functions optimal to customers - Provides major S20 features: 120Hz display, same specs for camera and battery, same AP with flagship models, One UI 2.5 UX □ Galaxy S21 5G · S21+ 5G · S21 Ultra 5G (January 2021) <ul style="list-style-type: none"> - Design: Iconic and premium full metal camera housing, bezel-less design - Screen: S21 5G 6.2", S21+ 5G 6.7", S21 Ultra 5G 6.8" - Size (W x H x D): S21 5G 71.2mm x 151.7mm x 7.9mm, S21+ 5G 75.6mm x 161.5mm x 7.8 mm, S21 Ultra 5G 75.6mm x 165.1mm x 8.9 mm - Platform (H/W, S/W): Exynos2100 SDM888, Android 11.0, One UI 3.1 - Supports ultra-high speed 5G, Wi-Fi 6E, high-resolution camera <ul style="list-style-type: none"> · Camera: S21 Ultra 108MP, S21 · S21+ 64MP, Multi Camera Recording function · Dynamic AMOLED 2X Infinity-O display with maximum adaptive frequency of 120Hz · Easy registration and finding objects synced with SmartTag · Supports Digital Car Key service (S21+ 5G · S21 Ultra 5G only) · Supports S Pen (S21 Ultra 5G only) □ 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): SDM8450 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) → 1,800nit (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
Galaxy Note ~August 2020	<ul style="list-style-type: none"> □ Galaxy Note10 · 10+ (6.3/6.8") (August 2019) <ul style="list-style-type: none"> - Design: Full Front Punch Hole Infinity Display - Platform (H/W, S/W): Exynos9825, SDM855, Android 9.0 - Upgraded S Pen <ul style="list-style-type: none"> · Enhanced usability with higher battery capacity and improved BT latency · Camera controls (can take pictures, change mode, change zoom, etc.), change volume, run apps, operate stopwatch - Note 10+: Quad camera supports high-resolution and maximum viewing angle shooting under wide range of illuminance <ul style="list-style-type: none"> · Wide (12M) + tele (12M) + Ultra Wide (16M) + VGA ※ Note10 has three rear cameras □ Galaxy Note20 · 20 Ultra (6.7 · 6.9") (August 2020) <ul style="list-style-type: none"> - Size (W x H x D): Note20 75.2mm x 161.6mm x 8.3 mm, Note20 Ultra 77.2mm x 164.8mm x 8.1 mm - Platform (H/W, S/W): Exynos 990 · SDM 865 Plus, Android 10, One UI 2.5 - Supports high-speed 5G and Wi-Fi 6 - First in the Galaxy lineup to support Ultra Wide Band (Note 20 Ultra) - 108MP camera (Note 20 Ultra), 64MP camera (Note 20) - Maximum 120Hz scan rate display (Note 20 Ultra) - First to support wireless Samsung DeX - Supports S pen and Samsung Note; easy-to-use and perfectly resembling pen-writing experience; supports MS Xbox Game
Galaxy Tab ~February 2022	<ul style="list-style-type: none"> □ Galaxy Tab S7 · S7+ (August 2020) <ul style="list-style-type: none"> - Design: Premium Tablet (display, pen, performance) - Screen: 12.4" WQXGA AMOLED (16:10, 2800x1752/120Hz), 11" WQXGA LTPS TFT (16:10, 2,560x1,600/120Hz) - Size (W x H x D): 285.0mm x 185.0mm x 5.7mm (12.4"), 253.8 x 165.3 x 6.3mm (11") - Platform (H/W, S/W): SDM865+, Android 10, One UI 2.5 - Secured premium competitiveness by developing a thin large-display metal design - The first tablet that supports 5G (mmWave) for global carriers and the four major carriers in the US - Enhanced usability of Samsung Notes with 120Hz display and optimal pen latency (9ms) - N-generation AP maximizes performance (seamless multi-tasking & gaming experience) □ Galaxy Tab S7 FE (June 2021) <ul style="list-style-type: none"> - Screen: 12.4" WQXGA (2560x1600) - Size (W x H x D) & weight: 284.8mm x 185.0mm x 6.3mm, 608g (based on the LTE model) - Immersive display with 12.4" large-screen display and slim bezel - Long play time (10,090mAh, up to 13 hours of video play) - Rich sound with the application of Dolby Atmos - Enhanced usability of Samsung Note <ul style="list-style-type: none"> · Simple conversion of handwriting to text · Direct input with S Pen into the input box - Enhanced function of PENUP Drawing <ul style="list-style-type: none"> · Applies layer structure and provides coloring and live drawing - Lightweight keyboard cover (330g) - Delivery of clear voice with 50% reduction of background noise through 3 Mic - Stronger device connectivity <ul style="list-style-type: none"> · Second screen: using tablet as a supplementary monitor of PC · Hands off: sending and continuing what you were doing on your phone to your tablet (Internet, Samsung Notes) · Copy & paste: copy & paste of texts and images between Phone-Tablet · Auto switching: auto-buds switching between Phone-Tablet □ Galaxy Tab A8 (December 2021) <ul style="list-style-type: none"> - Screen: 10.5" WUXGA (1920 x 1200) - Size (W x H x D) & weight: 246.8mm x 161.9mm x 6.9mm, 508 g - Platform(H/W, S/W): UniSOC T618(12nm) processor, Android 11, One UI 3 - Memory : 3GB + 32GB / 4GB + 64GB / 4GB + 128GB, microSD up to 1TB Provides new options of RAM 4GB and ROM 128GB compared to previous model - Established and applied the Company's Tablet Design ID (Samsung Logo, shape and location of camera, symmetrical sides and front & back), same colors as the Tab S8 Flagship Family (Gray, Silver, Pink Gold) - Applies the Company's standard tablet display ratio of 16:10, provides immersive multimedia experience with 10.5" large-screen display and slim bezel - Supports Dolby Atmos and features Quad Speaker, free load of apps that specialize in contents such as Samsung TV Plus (offers free Live Streaming and VOD) - Supports 2 Split Windows and Pop-up view with Multi-Active Window, enhanced multi-tasking experience with the support of Drag & Split function—applied in Fold3—for the first time for tablets - Improved usability for online classes with the support of Screen Recorder for the first time among Tab A series - Wider support of One UI 3.1.1 Galaxy Experience (Copy&Paste, Auto Sync, Auto Switch)

DX Division	
Research project	Details
	<ul style="list-style-type: none"> □ Galaxy Tab S8 · S8+ · S8 Ultra (February 2022) <ul style="list-style-type: none"> - Screen: Tab S8 11" WQXGA+ (2560 x 1600) Tab S8+ 12.4" WQXGA+ (2800 x 1752) Tab S8 Ultra 14.6" WQXGA+ (2960 x 1848) - Size (W x H x D) & weight: Tab S8 253.8mm x 165.3mm x 6.3mm, 503g Tab S8+ 285.0mm x 185.0mm x 5.7mm, 567g Tab S8 Ultra 326.4mm x 208.6mm x 5.5mm, 726g - Platform (H/W, S/W): SM8450 processor, 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 A ~March 2022	<ul style="list-style-type: none"> □ Galaxy A52 LTE · 5G (March 2021) <ul style="list-style-type: none"> - Offers enhanced user experience and increased competitiveness via strengthened core features - Screen: 6.5" FHD+ sAMOLED HD (2,400 x 1,080) - Size (W x H x D): 75.1mm x 159.9mm x 8.4mm - Platform (H/W, S/W): SDM750G (5G)/SDM720G (LTE), Android 11, One UI 3.1 - Supreme smooth UX/Dynamic refresh rate and Brightest (6.5" sAMOLED with 120Hz (5G)/90Hz (LTE), 800nit) - High-resolution 64MP Quad Camera (64M OIS/12M UW/5M Depth/5M Macro) - Powerful AP with High Capacity Battery (4,500mAh)
	<ul style="list-style-type: none"> □ Galaxy A72 (March 2021) <ul style="list-style-type: none"> - Offers enhanced user experience and increase competitiveness via strengthened core features - Screen: 6.7" FHD+ sAMOLED HD (2,400 x 1,080) - Size (W x H x D): 77.4mm x 165.0mm x 8.4mm - Platform (H/W, S/W): SDM720G, Android 11, One UI 3.1 - High refresh Rate Brightest Display (6.7" FHD+ sAMOLED with 90Hz, 800nit) - Advanced High-res/Multi Camera, More detail with blur-less (64M OIS/12M UW/8M Tele/5M Macro) - Long-lasting Battery with bigger capacity (5,000mAh)
	<ul style="list-style-type: none"> □ Galaxy A32 LTE · 5G (LTE: March 2021; 5G: January 2021) <ul style="list-style-type: none"> - Offer enhanced user experience and increase competitiveness by strengthening core features - Screen: LTE 6.4" FHD+ sAMOLED (2,400 x 1,080)/5G 6.5" HD+ TFT (1,600 x 720) - Size (W x H x D): LTE 73.6mm x 158.9mm x 8.4mm/5G 76.1mm x 164.2mm x 9.1mm - Platform (H/W, S/W): LTE MT6769T/5G MT6853V, Android 11, One UI 3.1 - LTE <ul style="list-style-type: none"> · Brightest Display: 800nit Super AMOLED · High Resolution Camera: 64MP Quad (64M W/8M UW/5M Macro/5M Depth) · High Capacity Battery: 5,000mAh - 5G <ul style="list-style-type: none"> · Rich Camera Experience of 48MP Quad, Penta Mode Camera (48M W/8M UW/5M Macro/2M Depth) · High Capacity Battery: 5000mAh
	<ul style="list-style-type: none"> □ Galaxy Quantum2 A82 (April 2021) <ul style="list-style-type: none"> - Screen: 6.7" QHD+ (3,200 x 1,440) - Size (W x H x D) & Weight: 161.9mm x 73.8mm x 8.1mm, 176g - Platform (H/W, S/W): SDM855+, Android 11, One UI 3.1 - Applied QRNG security chip set - Supports expansive large-screen and smooth screen transition of 120Hz - Powerful camera that enables photographing on a professional level (ultra-wide 12MP, main 64MP, close-up 5MP)

DX Division	
Research project	Details
	<ul style="list-style-type: none"> <input type="checkbox"/> Galaxy A03-Core (December 2021) <ul style="list-style-type: none"> - Screen: 6.5" HD+(1480 x 720) TFT 60Hz - Size (W x H x D) & weight: 164.2mm x 75.9mm x 9.1mm, 211g - Platform(H/W, S/W): 28-nano octa-core processor, Android 11(Android GO) <ul style="list-style-type: none"> · Enhanced CPU performance compared to previous model A01-Core (28-nano quad-core processor) - Highly price efficient product that applies large-screen/high-capacity battery to address the entry market <ul style="list-style-type: none"> · Enhanced display (5.3"→6.5" HD+) and battery (3,000→5,000mAh) compared to previous model A01-Core
	<ul style="list-style-type: none"> <input type="checkbox"/> Galaxy A23 LTE (March 2022) <ul style="list-style-type: none"> - Screen: 6.6" FHD+ (2400 x 1080) 90Hz - Size (W x H x D) & weight : 76.9mm x 165.4mm x 8.4mm, 195g - Platform (H/W, S/W): 6-nano octa-core processor, Android 12, One UI 4.1 - 6.6" FHD+ display, supports 90Hz screen refresh rate (previous model: A22 6.4" HD+ 90Hz) - Vivid pictures in the dark without camera shake with the adoption of high-definition 50MP OIS camera - Adoption of high-capacity 5,000mAh battery and supports 25W ultra-fast charging
	<ul style="list-style-type: none"> <input type="checkbox"/> Galaxy A13 5G (January 2022) <ul style="list-style-type: none"> - Screen: 6.5" HD+ (1600 x 720) 90Hz - Size (W x H x D) & weight: 76.5mm x 164.5mm x 8.8mm, 195g - 6.5" HD+ display, supports 90Hz screen refresh rate (previous model: A12 6.5" HD+ 60Hz) - Super-low priced 5G model for LTE user migration and expansion of the 5G market - Strengthened AP (5G) AP (MT6765 → MT6833v) to address entry market - Higher definition of pictures compared to the previous model (A12 16MP) with the application of 50MP camera
	<ul style="list-style-type: none"> <input type="checkbox"/> Galaxy A13 LTE (March 2022) <ul style="list-style-type: none"> - Screen : 6.6" FHD+ (2400 x 1080) 60Hz - Size (W x H x D) & weight: 76.4mm x 165.1mm x 8.8mm, 195g - Platform (H/W, S/W): 8-nano octa-core processor, 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
Galaxy Book ~April 2021	<ul style="list-style-type: none"> <input type="checkbox"/> Galaxy Book Flex 2 (December 2020) <ul style="list-style-type: none"> - Design: 2-in-1 PC with S Pen, QLED display - Screen: 15.6" QLED FHD (16:9, 1920 x 1080), 13.3" QLED FHD (16:9, 1920 x 1080) - Size (W x H x D): (15.6") 355.0mm x 227.2mm x 14.9mm (13.3") 302.6mm x 202.9mm x 12.9mm - Platform, OS: Intel 11th generation CPU, Windows 10 - QLED: Color Volume 100%, Super Bright Outdoor Mode Max 600nit - S Pen: Samsung Notes, Clip Studio, Gesture - SSD: Powerful performance & Latest Gen4 SSD <input type="checkbox"/> Galaxy Book Flex2 5G (December 2020) <ul style="list-style-type: none"> - 13.3" QLED FHD Up to 600nit Brightness, Color Volume 100% - Size (W x H x D): 304.9mm x 202.3mm x 13.9–14.9mm - Platform, OS: 11th-generation Intel CPU, Intel Iris Xe Graphics, Windows 10 - Supports ultra-fast 5G (Sub-6) <ul style="list-style-type: none"> Connects to state-of-the art wireless LAN 802.11 ax (Wi-Fi6) - Double Camera <ul style="list-style-type: none"> · World-facing camera (13M AF) and front-facing camera (1M) Camera - Long battery life (20 hours battery life, based on MM14) - Comes with S-Pen, allowing quick expression of inspiration (Digitizer) - Stronger connection to Tablets, Phones <ul style="list-style-type: none"> · Link to Windows: Smartphone apps opens seamlessly on PCs · Samsung Notes: Syncs notes between Phone-Tablet-PC <input type="checkbox"/> Galaxy Book Go (April 2021) <ul style="list-style-type: none"> - 14" FHD (1920 x 1080) - Size (W x H x D) & Weight: 323.9mm x 224.8mm x 14.9mm, 1,380g - Platform: 2nd-generation Snapdragon 7C, Windows 10 - Supports LTE that enables the Internet anywhere anytime - Slim design optimized for portability (14.9mm thick) - Rich sound with the application of Dolby Atmos - Long play time (up to 18 hours of battery life) - Stronger connectivity between Tablet-Phone <ul style="list-style-type: none"> · Quick Share: easy share of files between phone and tablet · Second Screen: using tablet as a supplementary monitor of PC · Galaxy Book Smart Switch: simple sending of data from the previous notebook · SmartThings: syncing smart devices

DX Division

Research project	Details
Galaxy Watch August 2021	<ul style="list-style-type: none"> □ Galaxy Watch3 (August 2020) <ul style="list-style-type: none"> - Design: Premium smart watch resembling the design of a traditional watch - Display: 1.4" (45mm), 1.2" (41mm) OLED (360 x 360) - Size (W x H x D): 45.0 x 46.2 x 11.1 (45mm) 41.0 x 42.5 x 11.3 (41mm) - Platform (H/W, S/W): Exynos9110, Tizen 5.5 - Expanding portfolio to titanium models (high-end segment) - Identifying and have included differentiated health-related services <ul style="list-style-type: none"> · Blood pressure, ECG, fall detection features commercialized globally □ Galaxy Watch4 & Galaxy Watch4 Classic (August 2021) <ul style="list-style-type: none"> - Display: Watch4: (44mm) 1.4" (450 x 450), (40mm) 1.2" (396 x 396); Watch4 Classic: (46mm) 1.4" (450 x 450), (42mm) 1.2" (396 x 396) - Size (W x H x D): Watch4: (44mm) 44.4 x 43.3 x 9.8mm, (40mm) 40.4 x 39.3 x 9.8mm; Watch4 Classic: (46mm) 45.5 x 45.5 x 11.0mm, (42mm) 41.5 x 41.5 x 11.2mm - Platform (H/W, S/W): AP Exynos W920 (5nm 64-bit Dual-Core), Wear OS Powered By Samsung, One UI Watch of Wear OS 3.0 - Memory: improved performance and increased storage with 1.5GB RAM + 16GB ROM - Higher resolution 330 ppi display - Pursuing differentiation by featuring body composition measurement for the first time and enhancing usability - Advanced sleep tracking, including blood oxygen level measurement and snore detection - Wider app ecosystem and enhanced sync experience based on Wear OS <ul style="list-style-type: none"> · Provides key services of Google, including Play Store/Google Map/YT Music · Supports specialized fitness apps and other various service apps
Galaxy buds January 2020–August 2021	<ul style="list-style-type: none"> □ Galaxy Buds+ (January 2020) <ul style="list-style-type: none"> - Design: Canal-type TWS (True Wireless Stereo) - Platform (HW, SW): MCU (BCM43015), OS (RTOS), BT 5.0 - Battery: (Earbuds) 85mAh x 2, (cradle) 270mAh - Powerful mid to low keys and highest sound quality with application of 2-way speaker (woofer & tweeter) - 2 outer beamforming mic and 1 inner mic optimizes phone call sound - Improved errors in proximity sensor by adding grip sensor - Longest play time compared to products in the same class, with upgraded battery: 22 hours for streaming (earbuds 11H & cradle 11H) □ Galaxy Buds Live (August 2020) <ul style="list-style-type: none"> - Design: Open-type TWS with innovative design and high-quality sound - Size (W x H x D): (Earbuds) 16.5mm x 27.3mm x 14.9mm, (Cradle) 50.0mm x 50.2mm x 27.8mm - Platform (H/W, S/W): BCM43015, RTOS - Ergonomic design that fits ears perfectly, provides all-day comfort sitting softly inside the ear. - Open type Active Noise Cancellation reduces background noises but let you hear what you want to hear. - Large-size 12mm speakers and Bass Duct deliver rich, spacious live sound - Three built-in mics and a Voice Pickup Unit enables the best call quality □ Galaxy Buds Pro (January 2021) <ul style="list-style-type: none"> - Design: Premium TWS, in-ear type with Intelligent ANC feature - Size (W x H x D): (earbuds) 20.5 x 19.5 x 20.8mm, (cradle) 50 x 50.2 x 27.8mm - Platform (H/W, S/W): BCM43015, RTOS - 2Way (woofer + tweeter) 11mm speaker offers enhanced sound quality <ul style="list-style-type: none"> · High-quality phone call sound with 3 mics and accelerometer (voice pickup sensor) · In-ear type, Intelligent ANC and voice detect function instantly switches from ANC to Ambient sound when it hears your voice · 3D Audio provides a truly immersive experience resembling that of a movie theater · IPx7-level water resistant

DX Division	
Research project	Details
	<ul style="list-style-type: none"> □ Galaxy Buds 2 (August 2021) <ul style="list-style-type: none"> - Enhanced competitiveness of the Buds mass-market model by enhancing basic functions and adding ANC - Size (W x H x D): (earbuds) 17.0 x 20.9 x 21.1 mm, (cradle) 50.0 x 50.2 x 27.8 mm - BES2500 ZP-83 (BT + Codec + Flash) new low-power management solution* <ul style="list-style-type: none"> • Provides ANC • Play time of up to 29 hours (based on streaming, with ANC off) - Optimized RF frequency performance by applying integrated Touch + BT Antenna FPCB - Enhanced audio performance of canal-type wireless earbuds <ul style="list-style-type: none"> • Applied algorithm that maximizes noise cancelling performance by utilizing DNN (DNN + 3-Mic +VPU) <ul style="list-style-type: none"> * DNN: Deep Neural Network , VPU: Voice Pickup Unit • Improved latency of switching to Ambient Sound Mode (3.2ms→0.65ms) • Better low frequency sounds by applying new materials to the woofer cone • Better noise cancelling of the microphone with the adoption of flawless microphone • Enhanced ANC and sound quality by changing the density of the ventilation duct and improving the pipe conduit of feedback mic • Reduced wind noise by maximizing and optimizing the location of the chamber space of the microphone
Network	
RAN S/W Package April 2019–June 2021	<ul style="list-style-type: none"> □ SVR18.3 5G S/W package (April 2019) <ul style="list-style-type: none"> - S/W Package to commercialize domestic 5G NR for the first time in the world <ul style="list-style-type: none"> • Commercialized 5G NSA by using LTE network links in the Seoul and the capital area • Supports 5G base station (3.5GHz, 28GHz, 39GHz 5G Massive MIMO) □ SVR21B NR vDU SW PKG (June 2021) <ul style="list-style-type: none"> - TDD-based C-Band vDU <ul style="list-style-type: none"> • Flexible base station upgrade without H/W change and resource allocation * vDU (virtual DU): realizing the function of 5G base station by developing commercial server-based S/W
Core S/W Package March 2020	<ul style="list-style-type: none"> □ SVR19B 5G core S/W package (March 2020) <ul style="list-style-type: none"> - Developed containerized-based 5G Core Network Function <ul style="list-style-type: none"> • Efficient and quick service distribution and maintenance cost reduction possible by flexibly containerizing host OS resource
Base stations September 2019–February 2022	<ul style="list-style-type: none"> □ Developed NR DU (September 2019) <ul style="list-style-type: none"> - New dual CPU based main card and first 5G SoC modem using channel card - Single HW can accommodate a combination of LTE, NR above and NR below products, offering different channels at the same time - Supports high capacity, low power consumption (including power saving) and virtualization/non virtualization S/W structure □ Developed 26GHz NR RFIC Chip (February 2020) <ul style="list-style-type: none"> - 2nd generation RFIC Chip, following SEC's 1st generation products (28GHz/39GHz) <ul style="list-style-type: none"> • 2nd generation has improved evm function, power efficiency, and mass production □ Developed FSU10 (May 2020) <ul style="list-style-type: none"> - FSU (fronthaul switch unit) to support vRAN business - Makes spectrum sharing between LTE and NR (below 6GHz) possible <ul style="list-style-type: none"> • One RU fits both LTE DU and NR vRAN via spectrum sharing □ Developed NR Indoor AU (August 2020) <ul style="list-style-type: none"> - Our first 5G In-building Solution AU product - Small form-factor enables low-power consumption, indoor installation on walls, pillars, and ceilings □ Developed NR C-Band MMU (3.7G 64T64R 200W MMU) (December 2020) <ul style="list-style-type: none"> - First ever TDD-based MMU (Massive MIMO Unit) that operates in C-BAND in North America - Supports broadband IBW 280M, thus any carrier with C-Band across the country may use the product □ Developed MMU Beam Forming SoC (February 2021) <ul style="list-style-type: none"> - SoC performs functions that Beam Forming FPGA, within MMU board, performs <ul style="list-style-type: none"> • 30% more power efficient than previous model (Maximum power consumption: less than 40W) □ Developed 5 types of ORAN* RU for the US (September 2021) <ul style="list-style-type: none"> - Defined DU-RU standard interface, which allows to connect any vendor DU to any vendor RU - AWS/PCS, two types of 700/850 4T4R 40W, two types of 320W, C-Band 8T8R 320W □ AWS/PCS Dualband 16T16R FDD MMU for North America (October 2021) <ul style="list-style-type: none"> - The Company's first commercialized 16T16R FDD MMU product that applies our in-house-developed chip □ Domestic 3.5GHz NR 32T32R TDD MMU (February 2022) <ul style="list-style-type: none"> - Applied Mechanical PSA (phase shift antenna) for the first time <ul style="list-style-type: none"> * Automatically controls the antenna angle (tilt 0-12°) inside the MMU with a motor

DS Division

Research project	Details
Memory	
DRAM for mobile July 2019–March 2022	<ul style="list-style-type: none"> □ Mass production of 2nd generation 10-nano class (1y) 12Gb LPDDR5 DRAM for mobile, with highest speed and capacity in the world <ul style="list-style-type: none"> - Next-generation mobile solution with better speed, capacity, and power efficiency - Contributed to introducing 5G smartphones with 1.3 times the speed (5,500Mbps), and 30% lower power consumption - 12Gb LPDDR5-based line up (6GB, 12GB) provided for the first time □ World's first mass production of 16GB LPDDR5 mobile DRAM: highest speed and capacity in the world <ul style="list-style-type: none"> - Performance improved by 30%, capacity by 2 times, and 20% less power consumption vs 8GB LPDDR4X - Gaming performance (picture quality, haptic feedback) same or better than PCs possible with smartphones □ Development of LPDDR5X DRAM <ul style="list-style-type: none"> - Improved speed by over 30% and power efficiency by approximately 20% compared to previous model - Based on 14-nano; expansion of application areas that use high performance, low power consumption memory from mobile to server and automotive, with expansion to up to 64GB per memory package - Verified the industry's highest operating speed (7.5Gbps) by mounting the 8GB LPDDR5X DRAM package on Qualcomm's Snapdragon mobile platform
DRAM for server August 2019–March 2021	<ul style="list-style-type: none"> □ Mass Production of 1st generation 10-nano class (1x) 256GB 3DS DDR4 DRAM for servers, highest capacity in the world <ul style="list-style-type: none"> - World's first mass production of 256GB DRAM with ultra-high performance and capacity - 2 times the capacity and 30% increase in power efficiency compared to 128GB □ Development of 3rd generation 10-nano class (1z) 8Gb DDR4 DRAM—world's best <ul style="list-style-type: none"> - Secured ultra-fast, ultra-power-efficient solutions for mass production of DDR5 · LPDDR5 - Efficiency up by more than 20% compared to 2nd generation (1y-nano) DRAM - Expand portion of 1z-nano DRAM lineup in the next-generation products by mass production beginning in September in Pyeongtaek □ Development of high-capacity DDR5 memory applying HKMG process—an industry first <ul style="list-style-type: none"> - Realization of 512GB DDR5 module with the application of High-K Metal Gate and 8-stack TSV - Reduced power consumption by around 13% and more than double performance compared to the existing process - Planning to apply it in the next-generation computing, super computers, and high capacity data centers
HBM DRAM October 2019–August 2021	<ul style="list-style-type: none"> □ Development of 12-stack 3DS TSV PKG, with world's highest HBM DRAM capacity <ul style="list-style-type: none"> - Development of highest performance and capacity 12GB HBM DRAM for supercomputers—industry's first - 1.5 times the capacity and convenience of system design improved with 8GB package - Strengthened leadership in next-generation HPC DRAM by breakthrough in package technology - Plan to mass produce 24GB HBM, the industry's highest, to meet customer needs □ Rollout of ultra-fast DRAM for AI and next-generation super computer for the first time in the world (16GB HBM2E 'Flashbolt') <ul style="list-style-type: none"> - Stacked 8 10-nano (1y) 16Gb DRAM, enabling 16GB, the highest capacity - Able to send 82 Full HD movies (410GB) at 3.2Gb/sec - Continue to lead market expansion by supplying 2nd generation HBM2 and 3rd generation HBM2E at the same time □ Developed world's first AI HBM-PIM with an AI engine <ul style="list-style-type: none"> - More than two times the performance compared to previous HBM2, system energy reduced by approximately 70%. - Unveiled academic paper in Feb 2021 at conference held by ISSCC, which has the highest reputation in the semiconductor industry - Enables application without changing the system by using existing memory interface - Cooperate with data center and AI customers on standardization of PIM and establishing eco system. □ Expanded memory product lines that integrate an AI engine (performance evaluation of HBM-PIM and development of AXDIMM/LPDDR5-PIM) <ul style="list-style-type: none"> - Unveiled the case in which the HBM-PIM developed last February was incorporated in the system (integration with the Xilinx Alveo AI accelerator system boosts overall system performance by 2.5 times while reducing energy consumption by more than 60%) - AXDIMM, a DRAM module with an AI engine, offers twice the performance and a 40% decrease in energy usage - Unveiled LPDDR5-PIM that integrated mobile DRAM and PIM technology
eStorage February 2019–March 2020	<ul style="list-style-type: none"> □ Mass production of next-generation smartphone memory, eUFS 3.0—a world's first <ul style="list-style-type: none"> - Embedded 5th generation (9x-layers) cell stacked 512Gb 3 bit V-NAND for the first time in the industry - Reading and writing 2 times faster compared to eUFS 2.0 - Securing early foothold and high growth in next-generation ultra-high-resolution mobile market □ Industry's only mass production of 1TB eUFS 2.1, with a writing speed of 1200MB/s <ul style="list-style-type: none"> - 3 times the performance compared to 512GB eUFS 3.0 (continued writing speed of 410MB/s) - Smartphone memory storage (1200MB/s) is 2 times faster than PC (SSD 540MB/s)
SSD for PC July 2019	<ul style="list-style-type: none"> □ Mass production of 6th-generation (1xx) 256Gb V-NAND-based PC SSD—fastest in the world <ul style="list-style-type: none"> - Exclusive mass production of higher than 100 layers cell single process stacked V-NAND - 1.2 times the speed and productivity higher by more than 20% - Lead the storage market with competitive edge in ultra-fast, ultra-power-efficient products

DS Division	
Research project	Details
SSD for server August 2019–December 2021	<ul style="list-style-type: none"> □ Mass production of 5th generation (9x-layer) V-NAND-based 30.72TB NVMe SSD for servers— highest speed and capacity in the world <ul style="list-style-type: none"> - Secured next-generation SSD solution with improved speed, capacity, and efficiency - Introduced 8GB/s PCIe Gen4 SSD with 2.2 times the speed - Exclusively offers top 3 SW (Never Die SSD, FIP, ML) solution □ Mass production of high-performance OCP SSD specialized for data centers <ul style="list-style-type: none"> - Mass production of OCP SSD, the first in the industry for 6th-generation V-NAND - Satisfies performance, power efficiency, reliability, and security demanded by the data center industry - Contributes to cost reduction and carbon emission reduction with industry's most power efficient feature □ Mass production of industry's highest performing SAS 24Gbps SSD for server <ul style="list-style-type: none"> - Supports speed that is around two times faster than the previous generation SSD - Provides high capacity from 800GB to 30.72TB based on 6th generation V-NAND - Expected to reduce server operation cost and carbon emission via a 40% improvement in power efficiency □ Industry's first mass production of next-generation ZNS SSD for company server <ul style="list-style-type: none"> - Applies ZNS technology, which categorizes and saves data by zone depending on characteristics - Lifespan and maximum utilization of SSD capacity increased compared to existing SSDs - Contributes to enhancing the efficiency of next-generation servers—in areas such as AI, big data, and IoT—as well as storage systems, while expanding the foundation for ZNS SSD through various open source projects □ Development of PCIe 5.0-based high-performance SSD PM1743 <ul style="list-style-type: none"> - Improved reading/writing speed by approximately twofold and power efficiency by approximately 30% compared to PCIe 4.0-based SSD - Stability of server operation guaranteed with the support of dual-port and application of latest security technologies
Brand SSD January 2020–March 2021	<ul style="list-style-type: none"> □ Launched 'T7 Touch', premium portable SSD—highest performance in the industry <ul style="list-style-type: none"> - 5th generation 512Gb V-NAND with world's highest performance and NVMe controller with ultra-fast embedded interface - Supports reading and writing speed of 1,050MB/s and 1,000MB/s, respectively, up to 9.5 times faster than external HDD (110MB/s) and about 2 times faster than the previous model (SEC's portable SSD T5) □ Global launch of high-capacity 4-bit SSD '870 QVO' <ul style="list-style-type: none"> - Introduced 4 SATA SSD models including 1/2/4TB and 8TB model, the highest in the industry - Provides optimal solution to customers with need for high-performance/high-capacity computing environment, with quick data-process speed close to the maximum speed of SATA interface - Boasts high speed/capacity, reasonable price, launched in 40 countries in several phases □ Global launch of PCIe-Gen4-applied SSD '980 PRO', boasting highest performance in the industry <ul style="list-style-type: none"> - Provides ultra-high resolution via consumer SSD with the highest-speed in the industry - Continue to lead market for professional PC and workstation used for editing of 8K, 4K videos and games requiring high-specs - 5-year warranty (longest in the industry) □ Global launch of SATA SSD 870 EVO for consumers <ul style="list-style-type: none"> - Latest V-NAND and controller included, intelligent turbolight technology - Highest durability in the industry, run time enhanced by more than 30% - Five models in 250GB to 4TB range, introduced in steps in Korea, US, Germany, and China □ Launched NVMe SSD 980, which boasts high performance and is economical. <ul style="list-style-type: none"> - 6th-generation V-NAND, maximum 6 times the speed compared to SATA SSD - DRAM-less design to save cost, applied optimization technology for controllers and firmware - Heat-control feature, applied to high-end products - Power efficiency enhanced by 56%, compared to 970 EVO, allowing "good consumption" for consumers
EUV March 2020-October 2021	<ul style="list-style-type: none"> □ Supplied 1 million 1st generation 10-nano class (D1x) DRAM modules <ul style="list-style-type: none"> - Mass production of EUV DRAM—the only company in the industry with EUV DRAM mass production system - Secured 10-nano class advanced process and mass production, enabling next-generation DRAM in a timely manner. - EUV process applied to all 4th generation 10-nano class DRAM, and is now expanding to 5th generation and 6th generation products □ Mass production of 14-nano EUV DDR5 DRAM <ul style="list-style-type: none"> - Enhanced productivity by approximately 20% with multilayer EUV implementation and realization of industry's highest DRAM bit density - Enhanced speed by twofold compared to DDR4 and improved power consumption by approximately 20% compared to previous process
CXL May 2021-October 2021	<ul style="list-style-type: none"> □ Development of industry's first CXL-based DRAM memory <ul style="list-style-type: none"> - Next-generation memory solution to meet the needs of high capacity data centers; overcomes physical limitations of DRAM modules, revolutionary expansion of capacity bandwidth becomes possible - Supports interface converting, error management, etc. through CXL controller - Development of controller and software technology optimized for CXL DRAM memory by collaborating with data centers and server and chipset companies □ Development of industry's first open-source software solution for CXL memory <ul style="list-style-type: none"> - Enables expansion of system memory's performance/capacity by enabling the main memory and the CXL memory to work seamlessly

DS Division	
Research project	Details
Multi-chip June 2021	<ul style="list-style-type: none"> □ Mass production of industry's best performing uMCP5 (LPDDR5 + UFS3.1) multi-chip package <ul style="list-style-type: none"> - Speed upgrade by 1.5 times compared to the existing LPDDR4X, 2 times compared to UFS2.2 - Spearhead popularization of 5G by installing them into low- to mid-priced 5G smartphones
Brand Card September 2021	<ul style="list-style-type: none"> □ Released a new micro SD card product with enhanced performance and stability <ul style="list-style-type: none"> - 'PRO Plus' provides 1.6 times faster read speed and 1.3 times faster write speed than the previous generation - 'EVO Plus' provides 1.3 times faster read speed than the previous generation - With improved performance and a design that offers better protection against external shocks, not only general consumers but also creators who make high-quality contents, such as 4K UHD videos, are looking forward to it
Automotive December 2021	<ul style="list-style-type: none"> □ Mass production of memory total solutions for automotives <ul style="list-style-type: none"> - 256GB SSD and 2GB DDR4/GDDR6 for IVI; 2GB GDDR6 and 128GB UFS for AD - Supplies high performance SSDs and graphics DRAM delivering server-level performance and capacity; and secures high stability that is required in the automotive semiconductor market (operation is guaranteed in the -40℃-105℃ range)

DS Division

Research project	Details
System LSI Image Sensor January 2019–September 2021	<ul style="list-style-type: none"> □ ISOCELL Slim sensor with ultra-small pixel size (3T2, 0.8um/20Mp) <ul style="list-style-type: none"> - Highest resolution (20Mp) among 1/3.4" sensors, offers high-resolution optimized for bezel-less displays - Tetracell technology for front camera, allowing high performance under low lighting, high magnification for back camera reduces module size, improving picture quality □ Ultra-high resolution ISOCELL Bright sensor (GW1, 0.8um/64Mp) <ul style="list-style-type: none"> - DCG structure enhances dynamic range - Super PD technology maximizes auto-focus function and enables 480-frames-per-second, full-HD slow motion function - Rich colors by supporting real-time HDR □ High resolution ISOCELL Bright sensor (GM2, 0.8um/48Mp) <ul style="list-style-type: none"> - Super PD technology maximizes auto-focus function and enables 240-frames-per-second, full-HD slow motion function □ World's first 108Mp ISOCELL Bright sensor (HMX, 0.8um/108Mp) <ul style="list-style-type: none"> - AI-ISO-applied S/W controls the amount of light, enhancing color reproduction - Can shoot 30 frames per second in 6k - Improved sensitivity with ISOCELL plus and Tetracell technology □ ISOCELL Slim sensor with world's smallest pixel size (GH1, 0.7um/43.7Mp) <ul style="list-style-type: none"> - Enables easier application of full-screen display set thanks to smaller and thinner module - Supports high-resolution videos and minimizes loss of viewing angle - Improved sensitivity with ISOCELL plus and Tetracell technology □ Industry's first next-generation 108Mp ISOCELL Bright sensor with 2-times the sensitivity enabled by Nonacell technology <ul style="list-style-type: none"> - Enables preview function without compromising picture quality in 3x magnification, thanks to enhanced zoom feature - Features state-of-the-art technologies: smart ISO, real-time HDR, digital correction of shaking images □ Dual-pixel and Tetracell-technology-based sensors (GN1, 1.2um/50Mp) <ul style="list-style-type: none"> - Offers images in 100Mp with dual-pixel technology (2 photodiodes in a pixel) - Takes bright, sophisticated images with Tetracell technology (enables 4 times the sensitivity in the dark) □ Established industry's first lineup of 0.7um-pixel-based image sensors (HM2, GW3, GM5, JD1) <ul style="list-style-type: none"> - Leadership in ultra-small, high-resolution image sensor technology with state-of-the-art 'ISOCELL 2.0' technology and more - (HM2) first to offer 108Mp with 0.7um pixel - (GW3) takes 60-frames-per-second 4K 64Mp images - (GM5) takes 48 Mp images supporting ultra-wide angle and folded zoom - (JD1) ultra-small 32Mp product, optimal for bezel-less design □ Introduced ISOCELL HM3, 108MP premium image sensor (HM3, 0.8um/108Mp) <ul style="list-style-type: none"> - Concentrated 108 million 0.8 μm-size pixels in 1/1.33 inch - Minimizes afterimage with Smart ISO Pro, enabling bright, vivid images - Lens optimal for autofocus with Super PD Plus, enhanced phase detection ability by 50% - Optimal design saves approximately 6% of power under preview mode, compared to previous model □ Introduced image sensor ISOCELL GN2, operating similar to human eyes (GN2, 1.4um/50Mp) <ul style="list-style-type: none"> - Dual Pixel Pro splits pixels diagonally—a world's first - 1.4um pixel delivers brighter and more vivid images - Staggered HDR saves power by approximately 24% compared to previous model □ Introduced ISOCELL JN1 with the industry's first 0.64um pixel (JN1, 0.64um/50Mp) <ul style="list-style-type: none"> - Mass production of ultra-small pixel size, applies high-resolution mobile camera slim design - Applies the most advanced image sensor technology that enhances sensitivity in the dark - Cooperation with camera lens module manufacturers, establishes the ecosystem that is compatible with 1/2.8" products □ Released automotive image sensor ISOCELL Auto 4AC (4AC, 3.0um/1.2Mp) <ul style="list-style-type: none"> - Designed for surround view monitors or rear-view cameras - A safety solution that supports drivers even in tough conditions and minimizes blind spots □ Unveiled a new super-gap mobile image sensor technology (HP1, 0.64um/200Mp and GN5, 1.0um/50Mp) <ul style="list-style-type: none"> - industry's first "200 million pixels" ISOCELL HP1 - industry's smallest-sized dual pixel image cell ISOCELL GN5

DS Division

Research project	Details
<p>Exynos January 2019–March 2022</p>	<ul style="list-style-type: none"> □ World's first modem solution for 5G smartphones (Exynos modem 5100, Exynos RF 5500, Exynos SM 5800) <ul style="list-style-type: none"> - Data transmission 1.7 times faster compared to LTE - New RF · SM, improved power efficiency for transmission □ Best-in-class 7-nano 5G modem (Exynos 5123) <ul style="list-style-type: none"> - Maximum 2 times faster compared to previous model in sub-6GHz 5G network - Achieved maximum speed of 3.0Gbps in 4G network - Supports global Sub-6GHz/mmWave □ SoC for automobile infotainment (Exynos auto V9) <ul style="list-style-type: none"> - Octa-core CPU simultaneously controls 6 displays and 12 cameras - 3 GPU respectively supports dashboard · CID · HUD - NPU enables digital recognition of voice · face · movement - Enhanced stability by securely supporting ASIL-B function □ SoC exclusively for short-distance IoT with low power consumption and enhanced security (Exynos i T100) <ul style="list-style-type: none"> - Processor · memory · communications function in a package □ One-chip integrating 5G modem supporting sub-6GHz and AP (Exynos 980) <ul style="list-style-type: none"> - Supports latest communications feature including EN-DC, Wi-Fi 6 - Enhanced NPU function compared to previous generation and premium products □ Enhanced functions with 5th-generation CPU and premium GPU (Exynos 990) <ul style="list-style-type: none"> - AI processing higher than 10 TOPS enhanced image analyzing and face recognition function - Supports latest LPDDR5 DRAM and high-resolution camera of 50MP ↑ □ Launched Exynos 2100, 5G-integrated premium mobile AP <ul style="list-style-type: none"> - Applied state-of-the-art 5-nano EUV process and the latest CPU/GPU, enhancing performance significantly - Optimal design improves performance compared to previous model: more than 30% for CPU, more than 40% for GPU - Enhanced on-device AI function, performs 26 trillion operations per second - Saves power consumption by maximum 20%, features its own power management solution AMIGO - Supports ultrahigh-frequency 5G network, operates maximum 6 image sensors □ Released Exynos W920 built on EUV process for wearable devices <ul style="list-style-type: none"> - Improved performance and power-efficiency by applying advanced 5nm EUV process and design technology - Comes in the smallest package currently available for wearables by applying the most advanced packaging technologies - Boasts 20% more efficient CPU performance and 10 times better graphics performance than its predecessor (Exynos 9110) with the application of the newest ARM cores - Improved power consumption of the processor by 97% under AOD (Always On Display) mode by applying low-power cores for display □ Released Exynos Auto T5123, communications chip for automotives that provide 5G communications service <ul style="list-style-type: none"> - Supports download speed of 5.1Gb/sec, enables seamless access high-capacity, high-definition content even while driving - Equipped with the latest 5G-based multi-mode communication chip that supports both 5G single net and LTE combined net □ Released Exynos Auto V7, processor for automotive infotainment <ul style="list-style-type: none"> - Applies the latest automotive technologies, including Neural Processing Unit (NPU), technology that corrects bad pixel and lens distortion of camera sensors, and image compression technology - GPU supports four independent displays, including digital dashboard, Center Information Display (CID), and Head Up Display (HUD), and up to 12 camera sensors - Equipped with security processor which offers technology that safely stores and prevents physical replication of key information of the car □ 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

DS Division

Research project	Details
LSI January 2019–March 2022	<ul style="list-style-type: none"> □ PDIC for TA supporting USB-PD 3.0 standard and high-speed charge protocol (MM101) <ul style="list-style-type: none"> - Moisture detection, voltage protection function □ World's first one-chip integrating PDIC and SE (SE8A) <ul style="list-style-type: none"> - Blocks unauthorized products by supporting type-C authorization - Supports advanced security features such as saving security key · authorization certificate, supporting encryption · decryption □ Industry's first integrated power-managing chip for wireless earphones (MUA01, MUB01) <ul style="list-style-type: none"> - Integrates multiple chips, optimized for small-size batteries - Provides optimal solution for rapidly-growing wireless earphone market □ DDI enables optimized ultra-high resolution for 8K TVs and enhanced transmission efficiency (S6CT93P) <ul style="list-style-type: none"> - Enhanced signal quality and development efficiency by utilizing equalizer S/W □ Best integrated security solution for mobile (S3K250AF) <ul style="list-style-type: none"> - Independently developed S/W in H/W security chip, which received EAL 5+ in Common Criteria - Mobile security solution lays the foundation for new mobile services □ Received EAL 6+, the highest rank for mobile device, solution with independently-developed S/W (S3FV9RR) <ul style="list-style-type: none"> - Useable for various smart devices, as the solution operates independently for various processors - Various functions including H/W secure boot, device authentication offer stronger security □ Power management IC for DDR5 DRAM modules (S2FPD01, S2FPD02, S2FPC01) <ul style="list-style-type: none"> - Essential for the next-generation device performance improvement and power saving, three types of power management IC - Applies our own technology of reducing power consumption and overheating, improves operational efficiency up to 91% - Continued expansion of the lineup for power management IC for memory and strengthen technology leadership □ Power management IC for processor for automotive infotainment (S2VPS01) <ul style="list-style-type: none"> - Certified with ASIL-B, a safety standard for automotive systems, and strengthened functional safety - Strengthened stability of the system, including heat prevention and auto-diagnostic functions □ 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	
Ship eMRAM solution products (based on 28nm FD-SOI process) March 2019	<ul style="list-style-type: none"> □ Combined low-power process and next-generation embedded memory technology <ul style="list-style-type: none"> - Maximized power efficiency as the product uses low motion power and eliminates standby power and an erase cycle - Supports record speed about 1000 times faster than the previous eFlash □ Embedded to system semiconductor by using minimum layers <ul style="list-style-type: none"> - Reduced production costs thanks to a simpler design structure □ Optimal for MCU/IoT/AI thanks to low-power and small size
5nm EUV process April 2019	<ul style="list-style-type: none"> □ Developed 5nm EUV process with EUV lithography <ul style="list-style-type: none"> - 25% decrease in logic area efficiency with 20% lower power consumption or 10% higher performance compared to 7nm by optimizing cell architecture - Previous 7nm customers can utilize the same IP in the 5nm EUV process
3D IC packaging technology 'X-Cube' August 2020	<ul style="list-style-type: none"> □ Developed 3D IC packaging technology 'X-Cube' and the infrastructure for the design <ul style="list-style-type: none"> - Uses TSV technology to stack different chips individually made from different wafers to make them into one chip <ul style="list-style-type: none"> · Allows greater flexibility in design by reducing the chip size and using high-capacity memory solution · Significant leaps in data-processing speed and power efficiency of system semiconductors - Design method and tools to apply 'X-Cube' on 5-nano and 7-nano processes have been verified. <ul style="list-style-type: none"> · Produced industry's first test chip that stacks SRAM on top of EUV 7-nano logic die
2.5D packaging technology 'I-Cube4' May 2021	<ul style="list-style-type: none"> □ Realized logic chip and four HBM chips into one package to operate it like one semiconductor chip □ Supplied electricity stably and realized ultra-thin electrical wires applying silicon interposer <ul style="list-style-type: none"> - Applied semiconductor process/manufacturing knowhow that prevents the deformation of thin interposers 100µm thick □ Reduced production time and enhanced yield with our distinctive structure that has excellent thermal release performance
8-nano RF process June 2021	<ul style="list-style-type: none"> □ Radio Frequency (RF) process for 5G communication that even supports sub-6GHz and millimeter frequency <ul style="list-style-type: none"> - Provides small, low-power, high quality communication with one-chip solution that supports multi-channel and multi-antenna □ Improved performance of RF with the application of RF-exclusive semiconductor device 'RFeFET (RF extremeFET)' that we developed in house <ul style="list-style-type: none"> - Maximized electrons' movement characteristics by physically stimulating the neighboring areas of channels, which are electrons' moving path □ Power efficiency increased by 35%, analogue circuit area decreased by 35% compared to the previous generation 14-nano RF process <ul style="list-style-type: none"> - Total number of transistors of chips decreased with the drastic improvement of RFeFET performance

DS Division	
Research project	Details
2.5D packaging technology 'H-Cube' November 2021	<ul style="list-style-type: none"> □ 2.5D solution 'Hybrid Cube', which applies silicon interposer technology and hybrid-substrate structure <ul style="list-style-type: none"> - Logic chips and high-bandwidth memory (HBM) are placed on top of a silicon interposer, integrating up to 6HBMs - The hybrid substrate is a dual structure in which the high-end main substrate at the top connects logic/memory chips, and the subsidiary substrate at the bottom that is easy to implement in large-area connects the system board - Minimized the size of the substrate by decreasing the pitch of solder ball, which electrically connects two substrates - Applied chip analysis technology to stably supply power while minimizing signal distortion and loss - Specialized for semiconductors for data center, AI, and network products that require high-performance and large-area packaging technology

SDC	
Research project	Details
Display panel	
Hole in Display OLED for Galaxy S10 March 2019	<ul style="list-style-type: none"> □ Maximized screen size via world's first commercialization of Flexible Hole in Display <ul style="list-style-type: none"> - One S10 6.1" 3K QHD+(3,040×1,440) Hole, Two S10+ 6.4" Holes □ Offers a comfortable display by significantly decreasing blue light <ul style="list-style-type: none"> - Decreased blue light emission 42% from S9 (TUV Rheinland Eye Comfort Certification)
15.6" UHD OLED for NPC May 2019	<ul style="list-style-type: none"> □ Developed world's first 4K OLED display for NPC <ul style="list-style-type: none"> - 15.6" UHD (3,840 x 2,160), 16:9 - Blue light reduction, shorter response time, wide field of view allow vivid images
4K high-resolution OLED for smartphones June 2019	<ul style="list-style-type: none"> □ Developed world's first 4K mobile OLED display <ul style="list-style-type: none"> - 6.5" UHD (1,644×3,840), 643ppi, 16M Color - Offers original cinematic movie ratio of 21:9
Curved LCD for gaming monitors June 2019	<ul style="list-style-type: none"> □ Developed world's first 240Hz Curved LCD display <ul style="list-style-type: none"> - 27" FHD (1920×1080), 16:9 - High refresh rate of 240Hz, supports G-sync, allowing uninterrupted gaming environment - Curvature of 1500R, wide viewing angle allow highly-immersive gaming experience
Foldable OLED for Galaxy Fold September 2019	<ul style="list-style-type: none"> □ Display innovation by developing the world's first foldable display <ul style="list-style-type: none"> - In-foldable AMOLED (radius: 1.5R) - 7.3" QXGA+ (1,536×2,152), 4:3 - Decreased display thickness by approximately 50% (vs existing panels) by developing polymer composite material
Foldable OLED for Galaxy Z Flip February 2020	<ul style="list-style-type: none"> □ Mass production of world's first glass type window foldable display <ul style="list-style-type: none"> - 6.7" Full HD+(1,080x 2,640) - Improved durability and applied camera hole (first in foldable phones) by using UTG (ultra-thin glass)
WQ+ high-speed OLED for Galaxy S20 March 2020	<ul style="list-style-type: none"> □ Maximized touch feature with world's first WQ+ resolution, 120Hz, high speed <ul style="list-style-type: none"> - S20 6.23"/6.67"/6.87" QHD+(3,200×1,440) - Harmful blue light less than 6.5%, Eye Care Display certified (SGS, international certification institution)
Foldable OLED for Galaxy Z Fold2 September 2020	<ul style="list-style-type: none"> □ World's first mass production of foldable display with a 1.4R curvature <ul style="list-style-type: none"> - 7.6" (2,208 ×1,768) in – foldable - Achieved 1.4R curvature radius via structural design that minimizes folding stress - Improved power efficiency with adaptive frequency (adjusts scan rate from 10-120Hz to screen)
Power-efficient OLED for Galaxy S21 January 2021	<ul style="list-style-type: none"> □ Mass production of innovative power-efficient, high-luminance OLED displays <ul style="list-style-type: none"> - S21: 6.24"/6.67"/6.81" QHD+(3,200×1,440) - New organic material improves luminance efficiency: improved power efficiency by 16% compared to previous model - Enhanced luminance and contrast offers good visibility outdoors (Max/HBM 420/800 → 500/1100nit, Peak 1,785nit) → Sunlight Visibility certification by UL (global safety solutions company)
Foldable OLED for Galaxy Z Fold3 August 2021	<ul style="list-style-type: none"> □ Application of various new technologies to foldables for the first time <ul style="list-style-type: none"> - 7.6" QXGA+7.55" (2,208×1,768) - Removed screen blind spots with the Under Panel Camera technology - Reduced battery consumption compared to its predecessor with the Eco² technology
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