

SAMSUNG

SAMSUNG ELECTRONICS Co., Ltd.

2023 Business Report

For the year ended December 31, 2023

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

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

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Letter of Certification

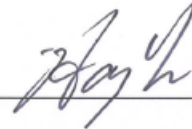
We, Jong-hee Han and Hark-kyu Park, as a CEO and the executive in charge of reporting, respectively, certify that we have thoroughly reviewed the annual business report of Samsung Electronics Co., Ltd. for the year ended December 31, 2023.

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.

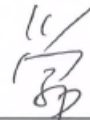
Date: March 12, 2024

Jong-hee Han



Vice Chairman and CEO
Samsung Electronics Co., Ltd.

Executive responsible for reporting: Hark-kyu Park



President and CFO
Samsung Electronics Co., Ltd.

I. Corporate Overview

1. Overview

A. Legal, Commercial name:

- Samsung Electronics Co., Ltd.

B. Date of establishment:

- Samsung Electronics Co., Ltd. (“SEC” or “the Company”) was established as Samsung Electronics Industry Co., Ltd. on January 13, 1969, and held an initial public offering on June 11, 1975.
- SEC changed its name from Samsung Electronics Industry Co., Ltd. to Samsung Electronics Co., Ltd. following a resolution passed at the Annual General Meeting (AGM) of shareholders on February 28, 1984.

C. Address, phone number, and English language website of the corporate headquarters

- Address: 129, Samsung-ro, Yeongtong-gu, Suwon, Gyeonggi-do, Korea
- Phone Number: +82-31-200-1114
- Website: <https://www.samsung.com/>

D. Core businesses

- The Company (defined below) consists of the Device eXperience (DX) Division and Device Solutions (DS) Division, Samsung Display (SDC) and its subsidiaries, and Harman International Industries, Inc. (Harman) and its subsidiaries. SDC runs the display panel business, and Harman operates businesses related to automotive electronics components, etc.

SEC is a global electronics firm consisting of its headquarters in Korea and 232 subsidiaries (collectively, “Samsung Electronics”, the “Company”, or “we”) across the world, including 9 regional headquarters for the DX Division, 5 regional headquarters for the DS Division, production and sales subsidiaries, and SDC and Harman.

Key products by each organization are set forth below:

Organization	Key products
DX Division	TVs, monitors, refrigerators, washing machines, air conditioners, smartphones, telecommunications network systems, computers, etc.
DS Division	DRAM, NAND flash, mobile APs, etc.
SDC	OLED panels for smartphones, etc.
Harman	Digital cockpits, car audio, portable speakers, etc.

In December 2021, the Company merged the CE and IM Divisions to create the DX Division; and it separated SDC and the DS Division to align with the corporate organizational structure.

[DX Division]

The DX Division manufactures TVs, monitors, refrigerators, washing machines, air conditioners, smartphones, tablets, and wearables, and it is spearheading the global market with its differentiated technology, designs, and products: premium TVs based on leading technologies such as Neo QLED TV; Lifestyle TVs that reflect our deep understanding of changing lifestyles; and Bespoke products, which are customizable to satisfy the various needs of our customers, to name a few. In the TV market, we have maintained a leading position for 18 straight years; and in smartphones, a core DX product, we optimize our product portfolio for various market conditions via diverse and competitive lineups that range from entry-level through to models in our premium Galaxy series. Samsung will continually offer innovations in the premium and Lifestyle TV markets; lead a paradigm shift by strengthening Bespoke with AI functionalities and energy reduction technologies; and remain committed to R&D to produce new digital appliances with new form factors. In our hyper-connected society, we aim to offer on-device AI and multi-device user environments based on enhanced security to ensure the digital safety of our customers. We will continually provide new value through our technological innovations and preparations for the future based on our unrivaled R&D capabilities.

[DS Division]

The Memory Business, System LSI Business, and Foundry Business make up the DS Division. The Memory Business manufactures and sells DRAM and NAND products; the System LSI Business designs and sells mobile application processors (“mobile APs” or “APs”) and camera image sensors; and the Foundry Business is in charge of consignment production of semiconductors.

The Memory Business has maintained its position at the top of the global memory market by focusing on qualitative growth by applying advanced process technology in DRAM and NAND flash products; differentiating our products via a portfolio centered on high-value solutions; and enhancing cost competitiveness, to name a few.

The System LSI Business has not been complacent, having extended its focus from mobile to include automotive chips, and is expanding its market power by enhancing collaborations with customers to offer differentiated products featuring on-device AI, high-performance IP, etc. At the same time, we continue diversify applications and develop next-generation technologies.

Amid a prolonged market downturn caused by delays in a global demand recovery, the Foundry Business is focused on demand in the medium to long term by continuing to fortify technological competitiveness in advanced nodes. For mature nodes, we provide customer-centric design infrastructure and are expanding high-value-added applications.

[SDC]

In SDC, the mobile panel business’s differentiated technology is a key factor behind the increased adoption of OLED panels, and we have expanded the overall market with the release of products in a variety of applications, such as foldable devices, IT devices (tablet/notebook PCs), and automotives. Meanwhile, the large panel business is focusing on premium products—such as high-definition, ultra-large, Quantum Dot TVs—and is enhancing its competitiveness by continually improving its technology and productivity.

[Harman]

Harman consists of the automotive component business, which designs and develops connected products and solutions for automakers; and the lifestyle audio business, which provides consumer audio products and professional audio solutions. Harman, a leader in the automotive component market, supplies car manufacturers with products that apply innovative technologies. In the audio market, Harman has firmly established the reputation of its brands among consumers and

audiophiles alike. Harman has established internationally renowned brands, and it offers diverse product lines and differentiated customer experiences via collaborations with Samsung Electronics thanks to internal development and strategic acquisitions to strengthen competitiveness in each business area.

☞ See 『II. Businesses Overview』 for more details about each Division.

E. Subsidiaries subject to consolidated accounting (summary)

As of December 31, 2023, and in accordance with Korean International Financial Reporting Standards (K-IFRS) 1110, *Consolidated Financial Statements*, Samsung Electronics, the controlling company, had 232 consolidated subsidiaries, with the addition of 6 subsidiaries and reduction of 6 subsidiary when compared to totals as of December 31, 2022.

Classification	Number of subsidiaries subject to consolidated accounting				Number of major subsidiaries
	As of January 1, 2023	Added	Removed	As of December 31, 2023	
Listed	-	-	-	-	-
Unlisted	232	6	6	232	146
Total	232	6	6	232	146

See 『Appendix-1. Subsidiaries subject to consolidated accounting (detailed)』 for details.

[Changes in subsidiaries subject to consolidated accounting]

Classification	Subsidiary	Reason
Newly consolidated	SVIC #62 Venture Capital Union	Establishment
	General Private Equity Fund for Semiconductor Ecosystem	Establishment
	Samsung Federal Inc. (SFI)	Establishment
	Samsung Display America Holdings, Inc. (SDAH)	Establishment
	eMagin Corporation	Acquisition of shares
	Roon Labs, LLC.	Acquisition of shares
No longer consolidated	Dacor Holdings, Inc.	Merger
	Dacor, Inc.	Merger
	Red Bend Software Ltd.	Liquidation
	Harman Finance International GP S.a.r.l	Liquidation
	Harman Finance International, SCA	Liquidation
	Harman Automotive UK Limited	Liquidation

F. Whether the Company is an SME

The Company is not subject to Article 2 of the Framework Act on Small and Medium Enterprises.

Small and medium enterprise	No
Venture company	No
Medium-sized enterprise	No

G. Credit rating

SEC's credit rating is assessed by two external credit ratings agencies. As of December 31, 2023, SEC's credit ratings were Aa2 with a stable investment outlook as rated by Moody's (US); and AA- with a stable investment outlook as rated by S&P (US).

Securities	Date	Rating	Credit rating agency	Note
Corporate bond (USD denominated; issued in 1997 and expire in 2027)	Jul 2021	AA-	S&P	Regular review
	Aug 2021	Aa3	Moody's	
	Aug 2022	AA-	S&P	
	Sep 2022	Aa2	Moody's	
	Jul 2023	AA-	S&P	
	Aug 2023	Aa2	Moody's	

[Credit ratings definitions]

	Moody's		S&P	
	Rating	Definition	Rating	Definition
Investment grade	Aaa	Superior ability to repay debt obligations; lowest level of credit risk	AAA	Extremely strong ability to meet financial commitments; highest rating
	Aa1/Aa2/Aa3	High ability to repay debt obligations; very low credit risk	AA+/AA/AA-	Very strong capacity to meet financial commitments
	A1/A2/A3	Upper-medium ability to repay debt obligations; low credit risk	A+/A/A-	Strong capacity to meet financial commitments; susceptible to adverse effects of changes in economic conditions
	Baa1/Baa2/Baa3	Medium ability to repay debt obligations; moderate credit risk, speculative factors	BBB+/BBB/BBB-	Adequate capacity to meet financial commitments; relatively more susceptible to adverse economic conditions
Speculative grade	Ba1/Ba2/Ba3	Speculative; substantial credit risk	BB+/BB/BB-	Major ongoing uncertainties; exposure to adverse business, financial, or economic conditions can impair ability to meet financial commitments
	B1/B2/B3	Speculative; high credit risk	B+/B/B-	More vulnerable to nonpayment than those rated BB; has capacity to meet financial commitments but adverse financial or economic conditions are likely to impair ability to continue doing so
	Caa	Speculative; very high credit risk	CCC	Vulnerable to nonpayment; dependent upon favorable business, financial, and economic conditions
	Ca	Highly speculative; likelihood of being in or near default; some prospect for recovery of principal and interest	CC	Highly vulnerable to nonpayment; default has not yet occurred but expected to be a virtual certainty
	C	Typically in default; little prospect for recovery of principal or interest	C	Highly vulnerable to nonpayment; obligation is expected to have lower ultimate recovery vis-à-vis higher rated obligations
			D	In default or in breach of imputed promises, upon the filing of a bankruptcy petition or the taking of a similar action

Please refer to 『III. Financial Affairs-7. Matters about financing through the issuance of securities』 for credit ratings on corporate bonds and commercial paper issued by the Company's subsidiaries.

H. Whether the Company is listed (or registered or designated) and matters related to special listed companies

The Company listed on the Korea Stock Exchange on June 11, 1975.

Listed (or registered or designated)	Date listed (or registered or designated)	Special listed company
Stock market (KOSPI)	June 11, 1975	No

2. Company history

A. Company location and changes

The Company's head office is located at 129, Samsung-ro, Yeongtong-gu, Suwon, Gyeonggi-do. There were no changes in the Company's head office location during the reporting period.

B. Important changes in management executives

The Company's Board of Directors is composed of Directors who are appointed at the AGM, and the Board decides on important matters of the Company's businesses. As of December 31, 2023, SEC's Board consisted of five Executive Directors (Jong-hee Han, Kye-hyun Kyung, Tae-moon Roh, Hark-kyu Park and Jung-bae Lee) and six Independent Directors (Han-jo Kim, Sun-uk Kim, Jeong Kim and Jun-sung Kim, Eun-nyeong Heo, Myung-hee Yoo). Samsung's CEOs are appointed by the Board of Directors to lead a Division of the Company. As of the end 2023, the CEOs are Jong-hee Han, who was appointed in February 2022 and reappointed in March 2023, and Kye-hyun Kyung, who was appointed in March 2022.

Date of change	Type of shareholder meeting	Appointed		Terms expired or dismissed
		Newly appointed	Reappointed	
Mar 20, 2019	AGM	Independent Director Han-jo Kim Independent Director Curie Ahn	Independent Director Jae-wan Bahk	Independent Director In-ho Lee Independent Director Kwang-soo Song
Oct 26, 2019	-	-	-	Executive Director Jae-yong Lee
Mar 18, 2020	AGM	Executive Director Jong-hee Han Executive Director Yoon-ho Choi	-	-
Mar 17, 2021	AGM	-	Executive Director Ki-nam Kim Executive Director Hyun-suk Kim Executive Director Dong-jin Koh Independent Director Byung-gook Park Independent Director Jeong Kim Independent Director Sun-uk Kim for Audit Committee Member	-
Mar 17, 2021	-	-	CEO Ki-nam Kim CEO Hyun-suk Kim CEO Dong-jin Koh	-
Feb 15, 2022	-	CEO Jong-hee Han	-	CEO Ki-nam Kim (resigned) CEO Hyun-suk Kim (resigned)

Date of change	Type of shareholder meeting	Appointed		Terms expired or dismissed
		Newly appointed	Reappointed	
				CEO Dong-jin Koh (resigned)
Mar 16, 2022	AGM	Executive Director Kye-hyun Kyung Executive Director Tae-moon Roh Executive Director Hark-kyu Park Executive Director Jung-bae Lee Independent Director Wha-jin Han Independent Director Jun-sung Kim	Independent Director Han-jo Kim	-
Mar 16, 2022	-	CEO Kye-hyun Kyung	-	-
Nov 3, 2022	EGM	Independent Director Eun-nyeong Heo Independent Director Myung-Hee Yoo	-	-
Mar 15, 2023	AGM	-	Executive Director Jong-hee Han	-
Mar 15, 2023	-	-	CEO Jong-hee Han	-

Feb 15, 2022: Executive Directors Ki-nam Kim, Hyun-suk Kim, and Dong-jin Koh resigned from their positions as CEO (and their positions as Executive Directors on March 16, 2022); and Executive Director Jong-hee Han was appointed as CEO at the Board meeting held on the same date.

Mar 16, 2022: Kye-hyun Kyung was newly appointed as Executive Director at the AGM and appointed as CEO at the Board meeting held on the same date.

Independent Director Wha-jin Han resigned and Independent Director Byung-gook Park vacated his position in 1H22; Eun-Nyeong Heo and Myung-Hee Yoo were newly appointed as Independent Directors at the Extraordinary General Meeting held on November 3, 2022.

Mar 15, 2023: Director Jong-hee Han was reappointed at the AGM and reappointed as CEO at the Board meeting held on the same date.

C. Changes in the major shareholder

The major shareholder changed to Samsung Life Insurance as the shares of the previous major shareholder were inherited by beneficiaries on April 29, 2021.

[As of December 31, 2023]

Date of Change	Name of major shareholder	Number of shares owned	Share ratio	Reason for change	Note
Apr 29, 2021	Samsung Life Insurance	1,263,050,053	21.16%	Shares of the previous major shareholder were inherited by beneficiaries	-

Number of shares owned and share ratio are the sum of those of major shareholder and its related parties, and the number of shares is based on shares with voting rights (including those with limited voting rights in accordance with relevant laws).

☞ Please refer to 『VII. Information on Shareholders』 for details on the major shareholder.

D. Company name changes

In 2019, Samsung Electronics Greece S.A. (SEGR) changed its name to Samsung Electronics Greece S.M.S.A. (SEGR).

In 2021, Samsung Electronics Portuguesa S.A. (SEP) changed its name to Samsung Electronics Portuguesa, Unipessoal, Lda. (SEP).

In 2023, Emerald Intermediate, Inc. changed its name to Samsung Display America Holdings, Inc. (SDAH).

☞ Details are for SEC and major subsidiaries of SEC. See 『1. Subsidiaries subject to consolidated accounting (detailed)』 in 『XII. Appendix』 for details.

E. Mergers and acquisitions

In 2019, Samsung Electronics Benelux B.V. (SEBN) acquired shares of Corephotonics Ltd. In the same year, SEC acquired a PLP business from affiliate Samsung Electro-Mechanics. In addition, Harman Becker Automotive Systems Manufacturing Kft merged with Duran Audio B.V.; and Samsung (China) Investment Co., Ltd. (SCIC) merged with Samsung Electronics (Beijing) Service Company Limited (SBSC).

In 2021, Samsung Research America, Inc. (SRA) merged with Viv Labs, Inc. Furthermore, Samsung Electronics America, Inc. (SEA) merged with Prismview, LLC. In 2023, Samsung Display America Holdings, Inc. (SDAH) acquired shares of eMagin Corporation.

☞ Details are for SEC and major subsidiaries of SEC. See 『1. Subsidiaries subject to consolidated accounting (detailed)』 in 『XII. Appendix』 for details.

F. Important changes in the Company's business

There were no changes during the reporting period.

G. Other important matters related to the Company's business

(1) Important matters related to the Company's business

Year	Products
2019	Launched Galaxy S10 5G, a 5G smartphone
	Launched Bespoke, a refrigerator that is customizable to customers' lifestyle
	Unveiled Exynos 980 5G mobile processor
	Unveiled Galaxy Fold, a new form factor via a foldable phone
2020	Launched Grande AI, an AI-based washer and dryer
	Launched ultrahigh speed DRAM for AI and next-generation super computers
	Unveiled Galaxy Z Flip, a foldable phone
	Started operation of Pyeongtaek Line 2, the world's largest semiconductor line
2021	Unveiled Neo QLED TV
	Received certification for reducing carbon emissions, water use, and waste discharge for all of our semiconductor worksites, a first in the global semiconductor industry
	Started mass producing the industry's most advanced 14-nano EUV DDR5 DRAM
	Announced investment in a new foundry production site in Taylor, Texas, USA
2022	Unveiled Bespoke Infinite Line
	Mass produced 3nm GAA foundry, a world's first
	Held a groundbreaking ceremony for the next-generation semiconductor R&D complex
	Mass produced 1Tb 8th-generation V-NAND

Year	Products
2023	Released ISOCELL HP2, a 200-megapixel image sensor concentrated with ultra-fine pixel technology
	Unveiled the Galaxy S23 series
	Developed CXL 2.0 DRAM for high-density memory processor, an industry first
	Started mass producing the industry's most advanced 12-nano class DRAM
	Opened Samsung Gangnam, an immersive flagship store
	Developed high-performance GDDR7 DRAM for graphics, an industry first
	Unveiled the Galaxy Z Fold5 and Galaxy Z Flip5
	Developed 32Gb DDR5 DRAM, the largest capacity currently available
	Developed industry's first LPCAMM, a next-generation DRAM
	Unveiled Samsung Gauss, a generative AI model

(2) Organizational changes

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

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

[As of December 2021]

	Before	After
Business organization	CE Division (Visual Display, Digital Appliances, Medical Devices)	DX Division (Visual Display, Digital Appliances, Medical Devices, MX Business, Networks)
	IM Division (Mobile, Networks)	
	DS Division (Memory, System LSI, Foundry, DP)	DS Division (Memory, System LSI, Foundry)
		SDC (DP)
	Harman Division	Harman
Regional headquarters	Korea, North America, Latin America, Europe, CIS, Southwest Asia, Southeast Asia, China, Middle East, Africa	Korea, North America, Latin America, Europe, CIS, Southwest Asia, Southeast Asia, China, Middle East, Africa
	Americas (DS), Europe (DS), China (DS), Southeast Asia (DS), Japan (DS)	Americas (DS), Europe (DS), China (DS), Southeast Asia (DS), Japan (DS)

3. Changes in paid-in capital

There were no changes in paid-in capital during the reporting period.

Due to the retirement of shares, the total par value of the shares issued is KRW 679,267 million (KRW 596,978 million in common stock and KRW 82,289 million in preferred stock), which is not equivalent to paid-in capital of KRW 897,514 million.

(KRW, shares)

Type of stock	Classification	December 31, 2023
Common	Number of issued shares	5,969,782,550
	Par value	100
	Paid-in capital	596,978,255,000
Preferred	Number of issued shares	822,886,700
	Par value	100
	Paid-in capital	82,288,670,000
Total	Paid-in capital	679,266,925,000

4. Stock information

A. Total number of shares

As of December 31, 2023, SEC's issued shares on a cumulative basis totaled 7,780,466,850 registered common shares and 1,194,671,350 registered, non-voting preferred shares; and the Company had canceled 1,810,684,300 common shares and 371,784,650 preferred shares in accordance with resolutions of the Board of Directors (the Board). As of the same date, issued shares and shares outstanding totaled 5,969,782,550 for common shares and 822,886,700 for preferred shares.

[As of December 31, 2023]

(Shares)

Classification	Type of stocks			Note
	Common	Preferred	Total	
I. Authorized shares	20,000,000,000	5,000,000,000	25,000,000,000	-
II. Issued shares (cumulative)	7,780,466,850	1,194,671,350	8,975,138,200	-
III. Decrease in number of shares (cumulative)	1,810,684,300	371,784,650	2,182,468,950	-
1. Capital reduction	-	-	-	-
2. Cancellation	1,810,684,300	371,784,650	2,182,468,950	Treasury shares
3. Redemption	-	-	-	-
4. Other	-	-	-	-
IV. Issued shares (II-III)	5,969,782,550	822,886,700	6,792,669,250	-
V. Treasury shares	-	-	-	-
VI. Outstanding shares	5,969,782,550	822,886,700	6,792,669,250	-

B. Treasury shares

In 2018, SEC completed the cancellation of all shares held in treasury as a part of its shareholder return policy, and no acquisition/disposal transaction of treasury shares was made during the reporting period.

[As of Dec 31, 2023]

(Shares)

Acquisition method	Share type	Period-start	Change			Period-end
			Acquisition (+)	Disposal (-)	Cancellation (-)	
Intra-market direct acquisition (within dividend related capital gains limit)	Common	-	-	-	-	-
	Preferred	-	-	-	-	-
Acquisition from a trust agreement (within dividend related capital gains limit)	Common	-	-	-	-	-
	Preferred	-	-	-	-	-
Total	Common	-	-	-	-	-
	Preferred	-	-	-	-	-

C. Types of registered stock

SEC has two types of registered equity securities: 1) common stock; 2) non-voting and non-cumulative preferred stock.

The shareholders of preferred stock are entitled to dividend payments of an additional 1% of par value compared to shareholders of common stock.

As of December 31, 2023, the number of issued non-cumulative and non-voting preferred stock totaled 822,886,700.

[Current status of issued preferred stock]

(KRW, Shares)

Classification		Contents	
Issued date		Aug 25, 1989 (first issued date)	
Par value per share		100	
Total amount issued (based on par value) / total number of shares issued to date		119,467,000,000	1,194,671,350
Amount to date / number of shares to date		82,289,000,000	822,886,700
Details on stock	Matters on dividend		Entitled to dividend payments of an additional 1% of par value compared to common shares
	Matters on residuary distribution		-
	Matters on redemption	Redemption conditions	-
		Redemption method	-

Classification		Contents	
		Redemption period	-
		Redemption value per share	-
		Redemption expected within a year	-
	Matters on conversion	Conversion conditions (including changes in conversion ratio)	-
		Conversion period	-
		Types of shares to be issued with the conversion	-
		Number of shares to be issued after the conversion	-
	Matters on voting rights		No voting rights
Other factors to consider when making investment decisions (matters on shareholders' agreement and financial covenants, etc.)		-	

Due to the cancellation of shares, the total par value of issued stocks is KRW 82,289 million and is thus different from the paid-in capital (KRW 119,467 million).

The total number of shares issued to date and the number of shares to date above reflect the changes in the number of shares due to the stock split in 2018.

[Preferred stock, by issued date]

(KRW, shares)

Date	Change	Details of increase/decrease					
		Type	Number of shares	Par value per share	Total par value	Issue price per share	Total issue price
Aug 25, 1989	Rights issue	Preferred	3,400,000	5,000	17,000,000,000	28,800	97,920,000,000
Aug 25, 1989	Bonus issue	Preferred	340,000	5,000	1,700,000,000	5,000	1,700,000,000
Oct 29, 1990	Exercise of conversion rights	Preferred	371,620	5,000	1,858,100,000	29,600	10,999,952,000
Mar 19, 1991	Exercise of conversion rights	Preferred	40,898	5,000	204,490,000	29,341	1,199,988,218
Mar 30, 1991	Exercise of conversion rights	Preferred	5,112	5,000	25,560,000	29,341	149,991,192
Apr 8, 1991	Exercise of conversion rights	Preferred	1,704	5,000	8,520,000	29,341	49,997,064
May 17, 1991	DR issuance	Preferred	1,907,671	5,000	9,538,355,000	37,973	72,439,990,883
Jul 24, 1991	Exercise of conversion rights	Preferred	34,081	5,000	170,405,000	29,341	999,970,621
Jul 30, 1991	Exercise of conversion rights	Preferred	20,449	5,000	102,245,000	29,341	599,994,109

Date	Change	Details of increase/decrease					
		Type	Number of shares	Par value per share	Total par value	Issue price per share	Total issue price
Jul 31, 1991	Exercise of conversion rights	Preferred	64,754	5,000	323,770,000	29,341	1,899,947,114
Aug 30, 1991	Exercise of conversion rights	Preferred	214,716	5,000	1,073,580,000	29,341	6,299,982,156
Sep 30, 1991	Exercise of conversion rights	Preferred	20,448	5,000	102,240,000	29,341	599,964,768
Jun 17, 1993	DR issuance	Preferred	2,542,372	5,000	12,711,860,000	47,312	120,284,704,064
Oct 29, 1993	Exercise of conversion rights	Preferred	105,999	5,000	529,995,000	28,302	2,999,983,698
Nov 12, 1993	DR issuance	Preferred	2,158,273	5,000	10,791,365,000	55,975	120,809,331,175
Nov 29, 1993	Exercise of conversion rights	Preferred	58,295	5,000	291,475,000	28,302	1,649,865,090
Nov 30, 1993	Exercise of conversion rights	Preferred	19,079	5,000	95,395,000	28,302	539,973,858
Apr 6, 1994	DR issuance	Preferred	1,086,956	5,000	5,434,780,000	74,502	80,980,395,912

Date	Change	Details of increase/decrease					
		Type	Number of shares	Par value per share	Total par value	Issue price per share	Total issue price
Jun 3, 1994	Exercise of conversion rights	Preferred	16,027	5,000	80,135,000	25,809	413,640,843
Jun 6, 1994	Exercise of conversion rights	Preferred	9,072	5,000	45,360,000	25,809	234,139,248
Jun 13, 1994	Exercise of conversion rights	Preferred	17,236	5,000	86,180,000	25,809	444,843,924
Jun 22, 1994	Exercise of conversion rights	Preferred	1,209	5,000	6,045,000	25,809	31,203,081
Jun 27, 1994	Exercise of conversion rights	Preferred	16,632	5,000	83,160,000	25,809	429,255,288
Jun 28, 1994	Exercise of conversion rights	Preferred	54,131	5,000	270,655,000	25,809	1,397,066,979
Jun 29, 1994	Exercise of conversion rights	Preferred	292,127	5,000	1,460,635,000	25,809	7,539,505,743
Jun 30, 1994	Exercise of conversion rights	Preferred	52,922	5,000	264,610,000	25,809	1,365,863,898

Date	Change	Details of increase/decrease					
		Type	Number of shares	Par value per share	Total par value	Issue price per share	Total issue price
Jul 1, 1994	Exercise of conversion rights	Preferred	232,854	5,000	1,164,270,000	25,809	6,009,728,886
Jul 4, 1994	Exercise of conversion rights	Preferred	116,426	5,000	582,130,000	25,809	3,004,838,634
Jul 5, 1994	Exercise of conversion rights	Preferred	188,401	5,000	942,005,000	25,809	4,862,441,409
Jul 6, 1994	Exercise of conversion rights	Preferred	686,164	5,000	3,430,820,000	25,809	17,709,206,676
Jul 7, 1994	Exercise of conversion rights	Preferred	270,349	5,000	1,351,745,000	25,809	6,977,437,341
Jul 8, 1994	Exercise of conversion rights	Preferred	977,068	5,000	4,885,340,000	25,809	25,217,148,012
Jul 12, 1994	Exercise of conversion rights	Preferred	6,048	5,000	30,240,000	25,809	156,092,832
Jul 19, 1994	Exercise of conversion rights	Preferred	68,040	5,000	340,200,000	25,809	1,756,044,360

Date	Change	Details of increase/decrease					
		Type	Number of shares	Par value per share	Total par value	Issue price per share	Total issue price
Jul 20, 1994	Exercise of conversion rights	Preferred	4,232	5,000	21,160,000	25,809	109,223,688
Aug 12, 1994	Exercise of conversion rights	Preferred	944	5,000	4,720,000	25,502	24,073,888
Mar 13, 1995	Bonus issue	Preferred	3,028,525	5,000	15,142,625,000	5,000	15,142,625,000
Mar 13, 1996	Bonus issue	Preferred	5,462,593	5,000	27,312,965,000	5,000	27,312,965,000
Apr 14, 2003	Share cancellation	Preferred	-470,000	5,000	-2,350,000,000	-	-
Jan 15, 2004	Share cancellation	Preferred	-330,000	5,000	-1,650,000,000	-	-
May 4, 2004	Share cancellation	Preferred	-260,000	5,000	-1,300,000,000	-	-
Jan 15, 2016	Share cancellation	Preferred	-1,240,000	5,000	-6,200,000,000	-	-
Apr 20, 2016	Share cancellation	Preferred	-530,000	5,000	-2,650,000,000	-	-
Jul 19, 2016	Share cancellation	Preferred	-320,000	5,000	-1,600,000,000	-	-
Sep 28, 2016	Share cancellation	Preferred	-230,000	5,000	-1,150,000,000	-	-
Apr 12, 2017	Share cancellation	Preferred	-255,000	5,000	-1,275,000,000	-	-
May 2, 2017	Share cancellation	Preferred	-1,614,847	5,000	-8,074,235,000	-	-

Date	Change	Details of increase/decrease					
		Type	Number of shares	Par value per share	Total par value	Issue price per share	Total issue price
Jul 24, 2017	Share cancellation	Preferred	-225,000	5,000	-1,125,000,000	-	-
Oct 25, 2017	Share cancellation	Preferred	-168,000	5,000	-840,000,000	-	-
Jan 30, 2018	Share cancellation	Preferred	-178,000	5,000	-890,000,000	-	-
May 3, 2018	Stock split	Preferred	885,556,420	100	-	-	-
Dec 4, 2018	Share cancellation	Preferred	-80,742,300	100	-8,074,230,000	-	-
Preferred stock total			822,886,700		82,288,670,000		642,261,376,652

5. Changes to Articles of Incorporation

A. History of Articles of Incorporation

The most recent changes to the Articles of Incorporation took place on March 23, 2018. There were no other changes in the Articles of Incorporation in the past three fiscal years or in 2023 as of the disclosure date of the Korean version of this report. Amendments to the Articles of Incorporation are included in the Agenda for the 55th AGM, which will occur after the submission date of the 2023 Business Report.

☞ For details of the agenda items for the 55th AGM, please refer to the “Announcement of Shareholders’ Meeting” disclosed on Financial Supervisory Service’s DART (<http://dart.fss.or.kr>) on February 20, 2024.

B. Purpose of Business

[Business purpose]

No.	Business Purpose	Status
1	Manufacture, sale, collection service, lease and maintenance service of electronic and electrical machines and appliances, other related equipments and their components	Operating
2	Manufacture, sale, collection service, lease and maintenance service of communication machines & appliance, other related equipments and their components	Operating
3	Manufacture and sale of medical equipments	Operating
4	Manufacture, sale and maintenance service of luminous disk, luminous source-applied machines and appliances and their components	Operating
5	Manufacture, sale, lease and maintenance service of optical fiber, cable and other related equipments	Operating
6	Manufacture, sale, collection service, lease and maintenance service of electronic computer system and other related products	Operating
7	Manufacture, sale and lease of copyright works and computer programs, etc.	Operating
8	Sale and lease of know-how and technology	Operating
9	Construction, operation and engineering service of information communication systems	Operating
10	Manufacture, sale, lease and maintenance service of automatic control systems and applied equipments	Operating
11	Manufacture, sale, lease and maintenance service of machine tools and their components	Operating
12	Manufacture and sale of semiconductors and other related products	Operating
13	Manufacture and sale of manufacturing facilities for semiconductors	Operating
14	Manufacture and sale of raw and accompanying materials for semiconductor manufacturing	Operating

No.	Business Purpose	Status
15	Manufacture and sale of other machines and appliances	Operating
16	Manufacture, processing and sale of synthetic resins	Operating
17	Refining, processing and sale of metals other than gold	Operating
18	Export, import and its agency business	Operating
19	Cultivation and sale of cash crop	Not operating
20	Real estate business	Operating
21	Offer business	Operating
22	Manufacture, sale and test of gauge and measuring instruments, etc.	Operating
23	Technology service for the above items, construction of information communication and construction of electric connection system	Operating
24	Lease and sale of residential lots	Operating
25	Sports, games and other related businesses	Operating
26	Manufacture of electric motor, power generator and electric converter apparatus	Operating
27	Manufacture of electricity supply and control devices	Operating
28	Educational service and other services related to business	Operating
29	Business and investment incidental to any of the foregoing	Operating

II. Businesses Overview

Note on forward-looking statements

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

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

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

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

(Responsibility statement)

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

1. Overview

In addition to our headquarters in Korea, Samsung Electronics Co., Ltd. (Samsung Electronics, SEC, or the Company) consists of 232 subsidiaries across the world responsible for sales and production, which include 9 regional headquarters for the Device eXperience (DX) Division, 5 regional headquarters for the Device Solutions (DS) Division, and subsidiaries of Samsung Display (SDC) and Harman.

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

In December 2021, the Company merged and restructured the CE and IM Divisions to form the DX Division and renamed the Mobile Communications Business to the MX Business. 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—and 35 consolidated subsidiaries are located in Korea. The headquarters is divided along Divisions and/or Businesses, which are located in Suwon, Gumi, Gwangju, Giheung, Hwaseong, Pyeongtaek, etc. The Company's unlisted domestic subsidiaries include Samsung Display for display panel production, Samsung Electronics Sales for domestic retail sales, Samsung Electronics Service for after-sales services, and Samsung Electronics Logitech for logistics.

We have 197 unlisted overseas subsidiaries for product manufacturing, sales, and R&D, with locations in the US, Europe/CIS, Middle East/Africa, and Asia, etc.

We have 47 subsidiaries in the Americas, including SEA (New Jersey; responsible for the sales of finished products including TV and smartphones), SII (California; manufacturing of TVs), SSI (California; sales of semiconductors and DPs), SAS (Texas; manufacturing of semiconductor products), SEDA (Brazil; manufacturing of multiple finished products) and Harman (Connecticut; automotive components).

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

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

There are 32 subsidiaries in Asia (ex China), including SESP (Singapore), SEAU (Australia), SEPCO (Philippines), and SME (Malaysia), which are responsible for regional sales. In addition, we operate numerous production sites including SEV and SEVT (Vietnam) for smartphones, SEHC (Vietnam) for TVs, SDV (Vietnam) for display panels, and SIEL (India) for multiple products.

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

The Company in 2023 recorded total revenue of KRW 258,935.5 billion, a decrease of 14.3% year-on-year. Major customers (listed in alphabetical order) included Apple, Best Buy, Deutsche Telekom, Qualcomm, and Verizon.

2. Key products and services

A. Revenue

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

In 2023, reported revenue was KRW 169,992.3 billion (65.7% of total net sales) for DX; KRW 66,594.5 billion (25.7%) for DS; KRW 30,975.4 billion (12.0%) for SDC; and KRW 14,388.5 billion (5.6%) for Harman.

(KRW 100 mil)

Organization	Major products	Revenue	Portion
DX Division	TVs, monitors, refrigerators, washing machines, air conditioners, smartphones, network systems, computers, etc.	1,699,923	65.7%
DS Division	DRAM, NAND flash, mobile APs, etc.	665,945	25.7%
SDC	OLED smartphone panels, etc.	309,754	12.0%
Harman	Digital cockpits, car audio products, portable speakers, etc.	143,885	5.6%
Others	Overlapping internal transactions between Divisions	-230,152	-9.0%
Total		2,589,355	100.0%

Includes inter-divisional transactions.

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

B. Changes in average selling price

In 2023, the average selling price (ASP) of TVs decreased by approximately 3% and the ASP of smartphones increased by around 6%. Memory-product ASP fell by approximately 45%, OLED panels for smartphones ASP increased by approximately 2%, and the ASP of digital cockpits increased by approximately 1%.

※ Data for price fluctuations of key products is provided only for smartphones from 2023 as smartphones are our key product line. (Previous reporting included other product lines.)

Price trends	2022	2021
Smartphones	Increased 4% Y-Y	Increased 3% Y-Y

3. Production materials and production facilities

A. Key production materials

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

(KRW 100 mil)

Organization	Item	Specific usage	Purchase price	Portion ¹⁾	Main supplier(s)
DX Division ²⁾	Mobile AP solutions	CPU	117,320	18.1%	Qualcomm, MediaTek, etc.
	Display panel	Color picture signaler for TV, monitor	58,624	9.0%	CSOT, AUO, etc.
	Camera module	Camera for smartphone	52,124	8.0%	Semco, Powerlogics, etc.
	Others	-	421,425	64.9%	
	Sub total			649,493	100.0%
DS Division	Chemical	Disk processing	25,700	15.7%	Soulbrain, DongWoo Fine-Chem, etc.
	Wafer	Semiconductor disk	22,393	13.7%	SK Siltron, SUMCO, etc.
	Others	-	115,283	70.6%	
	Sub total			163,376	100.0%
SDC	FPCA	Circuit	24,307	22.2%	BH, YP Electronics, etc.
	Cover glass	Tempered glass	16,856	15.4%	Apple, Biel, etc.
	Others	-	68,121	62.4%	
	Sub total			109,284	100.0%
Harman	SoC	CPU	7,678	9.9%	Nvidia, Intel, etc.
	Communication module	Vehicular communication	4,752	6.1%	WNC (Wistron NeWeb Corp.), etc.
	Others	-	65,503	84.0%	
	Sub total			77,933	100.0%
Others	-	-	462	-	
Total			1,000,548	-	

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.

2) From 2023 the price of Mobile AP Solutions (e.g., AP and AP-exclusive IC type materials) replaces the price of Mobile Aps, given the high correlation between APs and the surrounding components.

(KRW 100 mil)

Purchase Price	2022	2021
Mobile AP Solution	113,790	76,295

B. Production material price trends

On a year-on-year basis, the prices of mobile APs and camera modules, which are major production materials for the DX Division, increased by approximately 30% and 11%, respectively. The price of TV- and monitor-use display panels increased in the region of 9%. The price of raw wafers for semiconductors increased by about 1%, and the price of FPCAs for SDC increased by approximately 5%. The price of tempered glass cover glass decreased by approximately 4%. For Harman, the price of SoCs increased by about 10% and the price of communication modules decreased by approximately 7%.

※ Data include internal transactions between Divisions, etc.

From 2023 the price of Mobile AP Solutions (e.g., AP and AP-exclusive IC type materials) replaces the price of Mobile APs, given the high correlation between APs and the surrounding components.

Price trends	2022	2021
Mobile AP Solutions	Increased 46% Y-Y	Similar Y-Y

C. Production capacity, output, utilization rate

(Capacity)

(1,000 units)

Organization	Item	Capacity		
		2023	2022	2021
DX Division	TV, monitor, etc.	53,552	55,747	54,235
	Smartphone, etc.	284,700	332,170	319,550
DS Division	Memory	1,926,651,546	1,905,731,836	1,756,009,941
SDC	Display panel	2,320	2,700	3,604
Harman	Digital cockpit	10,912	11,257	9,066

Production capacity for major product categories on a consolidated basis.

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

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

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

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

SDC's production capacity is calculated as follows:

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

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

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

(Output)

In 2023, the DX Division's output of TVs, monitors, etc., was 40,085 thousand units (major production sites: Mexico, Vietnam, Brazil, and Hungary), and smartphone output was 189,991 thousand units (major production sites: Korea [Gumi], Vietnam, India, and Brazil). The DS Division's memory output in 1Gb equivalents was 1,926,652 million (major production sites: Korea [Hwaseong, Pyeongtaek, etc.] and China). SDC's output of display panels (in 8th generation glass equivalent) was 1,407,000 units (major production sites: Korea [Cheonan, Asan]). Harman's Digital cockpit output was 7.658 million units (major production sites: Mexico, Hungary, China).

(1,000 units)

Organization	Item	Output		
		2023	2022	2021
DX Division	TV, monitor, etc.	40,085	41,802	44,133
	Smartphone, etc.	189,991	229,180	260,501
DS Division	Memory	1,926,651,546	1,905,731,836	1,756,009,941
SDC	Display panel	1,407	2,008	2,849
Harman	Digital cockpit	7,658	8,334	6,928

Output for major product categories on a consolidated basis.

(Utilization rate)

DX utilization rates in 2023 were calculated as actual output relative to production capacity. The utilization rates were 74.9% for TVs, monitors, etc. and 66.7% for smartphones, etc.

(1,000 units)

Organization	Item	2023		
		Production capacity	Output	Utilization rate
DX Division	TV, monitor, etc.	53,552	40,085	74.9%
	Smartphone, etc.	284,700	189,991	66.7%

The DS Division and SDC respectively operate memory and display panel production in three shifts covering 24 hours a day. Cumulative operating days including holidays were 365 days in 2023. The utilization rate was calculated as the actual production time relative to the potential production capacity [operating days (×) number of production lines (×) 24 hours].

(Hours)

Organization	Item	2023		
		Potential production time	Actual production time	Utilization rate
DS Division	Memory	87,600	87,600	100%
SDC	Display panel	43,800	43,800	100%

In 2023, Harman's utilization rate was 70.2% and was calculated as actual output relative to production capacity.

(1,000 units)

Organization	Item	2023		
		Production capacity	Output	Utilization rate
Harman	Digital cockpit	10,912	7,658	70.2%

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

The Company's property, plant and equipment include land, buildings and structures, machinery and equipment, and construction in progress; and the total book value as of December 31, 2023, was KRW 187,256.3 billion, which is an increase of KRW 19,210.9 billion from year-end 2022.

(KRW 100 mil)

Classification		Land	Buildings and structures	Machinery and equipment	Under construction	Other tangible assets	Total
Dec 31, 2022	Book value	98,922	407,069	797,146	336,076	41,241	1,680,454
	- Acquisition cost	100,246	677,138	3,030,006	336,076	132,485	4,275,951
	- Accumulated depreciation (including impairment loss)	-1,324	-270,069	-2,232,860	-	-91,244	-2,595,497
Change	General acquisition and capital expenditure	1,723	64,986	336,417	131,418	14,620	549,164
	Acquired in a business combination	-	181	201	347	2	731
	Depreciation ¹⁾	-494	-38,843	-300,316	-	-15,671	-355,324
	Disposal/discard/impairment	-259	-2,126	-847	-3	-380	-3,615
	Assets held for sale	-66	-543	-371	-63	-141	-1,184
	Others ²⁾	168	1,657	862	-572	222	2,337
Dec 31, 2023	Book value	99,994	432,381	833,092	467,203	39,893	1,872,563
	- Acquisition cost	101,580	736,900	3,285,615	467,203	140,586	4,731,884
	- Accumulated depreciation (including impairment loss)	-1,586	-304,519	-2,452,523	-	-100,693	-2,859,321

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 2023 was approximately KRW 53.1 trillion, with investments concentrating on capacity expansions and migration to advanced nodes; and also on infrastructure for the DS Division and SDC. To prepare for improved global market conditions, the Company in 2024 will keep monitoring investments to strengthen competitiveness for next-generation technologies and prepare for medium- to long-term demand while also fortifying its fundamentals by enhancing investment efficiency.

[Capex, by organization]

(KRW 100 mil)

Organization	Purpose	Period	Assets	Investment
DS division	Establishment, addition, upgrade	January–December 2023	Buildings, facilities, etc.	483,723
SDC	Establishment, addition, upgrade	January–December 2023	Buildings, facilities, etc.	23,856
Other	Establishment, addition, upgrade	January–December 2023	Buildings, facilities, etc.	23,560
Total				531,139

4. Revenue and long-term contracts

A. Revenue

In 2023, the Company recorded total revenue of KRW 258,935.5 billion, a decrease of 14.3% year-on-year. By organization, when compared to the same period last year, revenue of the DX Division, DS Division, and SDC decreased by 6.8%, 32.4%, and 9.9%, respectively, and revenue of Harman increased 8.9%.

(KRW 100 mil)

Organization	Revenue types	Product categories	2023	2022	2021
DX Division	Goods, products, services, other	TVs, monitors, refrigerators, washing machines, air conditioners, smartphones, network systems, computers, etc.	1,699,923	1,824,897	1,662,594
DS Division	Goods, products, services, other	DRAM, NAND flash, mobile APs, etc.	665,945	984,553	953,872
SDC	Goods, products, services, other	OLED panels for smartphones, etc.	309,754	343,826	317,125
Harman	Goods, products, services, other	Digital cockpit, car-audios, portable-speakers, etc.	143,885	132,137	100,399
Others	Overlapping internal transactions between Divisions		-230,152	-263,099	-237,942
Total			2,589,355	3,022,314	2,796,048

Includes inter-divisional transactions.

Figures for 2021 were adjusted to reflect the organizational changes in December 2021.

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

(KRW 100 mil)

Classification	2023	2022	2021
TVs, monitors, etc.	303,752	332,795	314,974
Smartphones, etc.	1,086,325	1,154,254	1,046,806
Memory	441,254	685,349	726,022
Display panels	309,754	343,826	317,125

Includes inter-divisional transactions.

(2) Revenue, by type

(KRW 100 mil)

Classification	2023	2022	2021
Products	2,461,380	2,903,461	2,658,785
Services and other revenue	127,975	118,853	137,263
Total	2,589,355	3,022,314	2,796,048

Other revenue consists of royalty income, etc.

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

(KRW 100 mil)

Classification	2023	2022	2021
Domestic	205,196	221,799	221,497
Export	Americas	510,934	659,617
	Europe	239,342	265,147
	Asia and Africa	326,262	425,114
	China	422,007	546,998
Total	1,703,741	2,118,675	1,997,447

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	19%	30%	46%	5%

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 2023, major customers (listed alphabetically) included Apple, Best Buy, Deutsche Telekom, Qualcomm, and Verizon. Sales to the five major customers accounted for approximately 15% of total sales.

F. Long-term contracts

As of December 31, 2023, there were no long-term contracts that have a significant impact on the Company's financial statement.

5. Risk management and derivative trading

A. Financial risk management policy

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

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

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

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

B. Major financial risks

(1) Market risk

(Foreign exchange risk)

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

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

The impacts of a 5% change in currency rates on the profits or losses (before income tax) arising from financial assets and liabilities denominated in foreign currencies other than functional currency as of the reporting date are as follows:

(KRW mil)

Classification	December 31, 2023		December 31, 2022	
	Increase	Decrease	Increase	Decrease
USD	418,776	-418,776	258,655	-258,655
EUR	151,740	-151,740	92,546	-92,546

(Interest rate risk)

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

The impacts of a 1%pt change in interest rates on profit or loss (before income tax) arising from floating-rate financial assets and liabilities as of the reporting date are as follows:

(KRW mil)

Classification	December 31, 2023		December 31, 2022	
	Increase	Decrease	Increase	Increase
Financial assets	210,617	-210,617	72,750	-72,750
Financial liabilities	-6,197	6,197	-8,427	8,427
Net effect	204,420	-204,420	64,323	-64,323

(Stock price risk)

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

As of December 31, 2023, a price fluctuation of marketable equity securities (listed stocks) of 1% changes 'other comprehensive income' (before income tax) by KRW 52,510 million and 'profit before tax' by KRW 3,472 million. The figures as of the same date in 2022 were KRW 92,073 million and KRW 3,144 million, respectively.

(2) Credit risk

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

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

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

(3) Liquidity risk

Liquidity risk refers to the possibility of a company having difficulties in fulfilling its obligations related to financial liabilities. Our main sources of liquidity are cash generated by business operations and funds procured from capital market

and financial institutions. The main demands on our liquidity include investment for production and R&D, working capital, and dividend payouts.

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

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

In addition, the Company's headquarters provides payment guarantees to overseas subsidiaries to secure credit limit to brace for potential large liquidity needs. As of end-2023, our investment ratings from international rating agencies Moody's and S&P are Aa2 and AA-, respectively, allowing us to raise capital in the capital market in a timely manner.

The following table is an undiscounted cash flow analysis for financial liabilities according to their remaining contractual maturity from the end of the reporting date to the contractual maturity date.

(1) As of December 31, 2023

(KRW mil)

	Less than 3 months	~6 months	~12 months	1-5 years	More than 5 years
Financial liabilities	43,302,421	589,743	1,529,785	7,811,246	2,337,792

(2) As of December 31, 2022

(KRW mil)

	Less than 3 months	~6 months	~12 months	1-5 years	More than 5 years
Financial liabilities	42,990,570	733,984	1,925,448	5,402,672	1,562,274

(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 December 31, 2023, the figures for total liabilities and total equity are as follows:

(KRW mil)

	Dec 31, 2023	Dec 31, 2022
Total liabilities	92,228,115	93,674,903
Total equity	363,677,865	354,749,604
Total liabilities to equity ratio	25.4%	26.4%

C. Derivative instruments and put options

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

As of December 31, 2023, the Company had 2,757 currency forward contracts involving 35 foreign currencies, such as USD, EUR, and JPY, and the book value of assets and liabilities as well as related gain and loss were as follows:

(KRW mil)

	Assets	Liabilities	Valuation gain	Valuation loss
Currency forwards	119,934	82,749	834,801	999,713

According to the shareholders' agreement signed with Rainbow Robotics, its major shareholder, etc., the Company has the right, within a specific time period, to demand that the major shareholder, etc., sell all or part of their Rainbow Robotics shares to the Company or the third party designated by the Company. Moreover, the major shareholder, etc., of Rainbow Robotics has the right to demand that the Company sell all or part of the Company's Rainbow Robotics shares back to the major shareholder, etc., under certain conditions. Fair value of the above call option as of December 31, 2023, was evaluated by Deloitte Anjin LLC.

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

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

Fair value of the above put option as of December 31, 2023, was evaluated by Earnest & Young Global Limited.

6. Major contracts and research and development activities

A. Major contracts

Account	Contract information	Contents
Google	Type	Patent cross-license agreement
	Date	Jan 25, 2014
	Purpose and contents	Secure business flexibility through mutual patent licensing
	Other	Permanent license contract (including patent applications in the next 10 years)
GlobalFoundries Inc.	Type	Process technology license agreement
	Date	Feb 28, 2014
	Purpose and contents	Expand customer base of 14nm process
Google	Type	EMADA
	Date	Feb 27, 2019–Dec 31, 2023 (extended)
	Purpose and contents	Licensing agreement for using Google apps (Play Store, YouTube, etc.) in 32 European countries (EEA)
Ericsson	Type	Patent cross-license agreement
	Date	May 7, 2021
	Purpose and contents	Secure business flexibility through mutual patent licensing
Qualcomm	Type	Patent cross-license agreement
	Date	July 6, 2022
	Purpose and contents	Secure business flexibility through mutual patent licensing and signing of covenant not to sue
Huawei	Type	Patent cross-license agreement
	Date	Jul 13, 2022
	Purpose and contents	Secure business flexibility through mutual patent licensing
Nokia	Type	Patent cross-license agreement
	Date	January 19, 2023
	Purpose and contents	Secure business flexibility through mutual patent licensing

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

B. Summary of R&D activities and expenditures

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

As of December 31, 2023, the Company's year-to-date R&D expenses were KRW 28,352.8 billion. Among this, KRW 28,339.7 billion was recognized as expenditures, excluding government subsidies and capitalized expenses.

(R&D expenses)

		(KRW mil)		
		2023	2022	2021
Total R&D expenditures		28,352,769	24,929,171	22,596,487
(Government subsidies)		-13,045	-9,973	-1,053
R&D expenditures		28,339,724	24,919,198	22,595,434
Accounting	Capitalization of development expenses (intangible asset)	-	-	-193,708
	R&D costs (expenses)	28,339,724	24,919,198	22,401,726
R&D expenses/revenue ratio ¹⁾		10.9%	8.2%	8.1%

Consolidated basis.

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

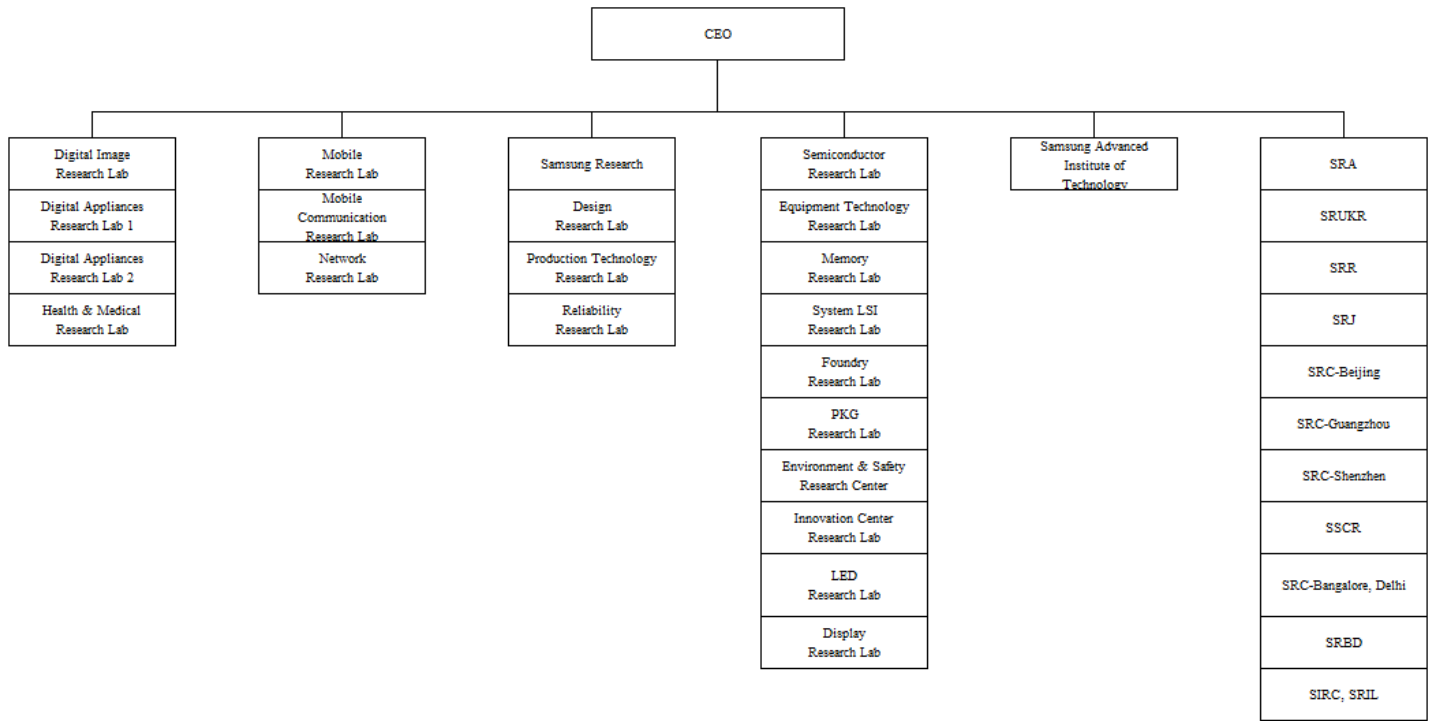
C. R&D organization and operations

(Domestic)

The Company's R&D organizations are systematically structured into three levels based on the timing of technological commercialization. R&D teams of business units under each Division develop market-ready technologies with a 1–2 year outlook, while research institutes under each Division, such as Samsung Research and semiconductor research centers, drive development of promising technologies with a mid- to long-term outlook of 3–5 years. Also, Samsung Advanced Institute of Technology (SAIT), our comprehensive research institute, pioneers the development of core technology as seeds for future growth engines. SAIT operates at a company level and offers direction for R&D related to promising growth areas, strengthens technological competitiveness for our main businesses, and performs R&D activities to establish a creative R&D framework.

(Overseas)

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



As of December 31, 2023.

☞ See 『1. Subsidiaries subject to consolidated financial statements (detailed)』 in 『XII. Appendix』 for more details about the current status of the overseas R&D (companies).

D. R&D results

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

DX Division	
Research project	Details
Galaxy Foldable	<ul style="list-style-type: none"> • Release of Galaxy Z Fold5 • Launch of Galaxy Z Flip5
Galaxy S23	• Launch of Galaxy S23 · S23+ · S23 Ultra
Galaxy Tab	• Release of Galaxy Tab S9 · S9+ · S9 Ultra
Galaxy A	<ul style="list-style-type: none"> • Rollout of A54 5G • Release of A34 5G • Release of A24 LTE • Launch of A14 LTE · 5G
Galaxy Book	<ul style="list-style-type: none"> • Rollout of Galaxy Book3 Ultra • Rollout of Galaxy Book3 Pro 360 • Release of Galaxy Book3 Pro • Launch of Galaxy Book3 360
Wearables	• Release of Galaxy Watch6 and Galaxy Watch6 Classic
Neo QLED 8K	• Release of mini LED-based UHD & Slim 8K TV
Neo QLED 4K	• Release of mini LED-based TV with 3 series, featuring 6 different sizes
Refrigerator	• Launch of ultra-efficient models that can save more energy than energy-grade 1 products can by optimizing efficiency of core components
Washing machine	• Launch of Bespoke Grande AI "OneBody Top-Fit" washer/dryer
Vacuum cleaner	• Release of Bespoke Jet AI 280W, a cordless stick vacuum with top-notch performance (in suction power, run time, etc. categories)
RAN S/W Package	• Deployment of 4th generation CPU-based vRAN for commercial network, an industry-first
DS Division	
Research project	Details
DRAM for mobile	• Development of industry's first LPCAMM
DRAM for server	<ul style="list-style-type: none"> • Mass production of the industry's most advanced 12nm-class DRAM • Development of 32Gb DDR5 DRAM, currently the industry's highest capacity
HBM	• Unveiling of ultra-high-performance HBM3E DRAM Shinebolt
SSD	<ul style="list-style-type: none"> • Mass production of PM9C1a, a high-performance PC SSD equipped with a 5nm controller • Launch of ultra-high-speed portable SSD • Launch of 8Tb portable SSD, the largest capacity in industry
Exynos	<ul style="list-style-type: none"> • Standardization of 5G non-terrestrial networks (NTN) modem technology for smartphone-satellite communication • Release of Exynos Connect U100, a chipset for near-field wireless communication
Image sensor	• Rollout of ultra-high resolution 200MP image sensor (HP2, 0.6um/200Mp)
SDC	
Research project	Details
OLED	<ul style="list-style-type: none"> • Development of ultra-high resolution OLED displays for VR • Development of 14"/16" OLED displays for laptops

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 244,731 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 December 31, 2023]

(Unit: No. of patents)

	Korea	US	Europe	China	Japan	Others	Total
Number	57,661	93,327	44,759	23,639	8,930	16,415	244,731

In 2023, the Company invested KRW 28.4 trillion in R&D and registered 8,909 domestic and 8,952 US patents.

(Number of patent registrations per year)

(Unit: No. of patents)

	2023	2022	2021
Korea	8,909	9,136	8,437
US	8,952	8,490	8,565

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

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

The Company has also been focusing on securing design patents to protect its original design applied to smartphones and smart TVs. In 2023, the Company acquired 391 US design patents, in part for the aforementioned purposes.

B. Environmental regulations

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

(Environmental regulation of products)

Environmental regulation of products are becoming stricter, reflecting the concerns of governments and regulators about potential direct and indirect impact of products to consumers' health and safety as consumers. Accordingly, the Company is working to minimize the environmental impact throughout the entire life cycle of products from the development stage of components and products to manufacturing, distribution, use, and disposal. The Company offers “Eco-Partner Certification”

to suppliers for components free of harmful substances, and runs an “eco-design evaluation” system to reflect eco-friendly elements on products (reduced use of resources, energy and harmful substances, and the use of eco-friendly materials) at the development stage, and operates a “waste electronics collection recycle system” in Europe, North America, Korea, and India for collecting and recycling waste electronics. These activities are in line with domestic and foreign environmental laws on electronics and are a differentiation factor for the Company and its products.

Relevant laws are as follows:

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

(Environmental regulations in the workplace)

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

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

Major relevant domestic and international laws are as follows:

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

(Greenhouse gas emission and energy consumption management)

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

(Unit: tCO₂-eq, TJ)

	2023	2022	2021
Greenhouse gas (tCO ₂ -eq)	17,656,953	19,285,537	19,267,835
Energy (TJ)	300,615	290,111	274,298

Consolidated basis; data for 2023 are projections

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

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

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

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

C. Current status of each division

[DX Division]

□ Industry overview

1) TV Industry

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

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

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

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

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

2) Mobile industry

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

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

The smartphone industry has grown significantly since 2007. In 2023, the smartphone portion of total HHP sales volume was approximately 85%, and the feature phone portion of the total was approximately 15%, with the latter related to dema

nd in emerging markets (*TechInsights*, February 2024). For 2023, the penetration rate of smartphones is expected to have reached 53%, rising slightly from 52% in 2022 (*TechInsights*, December 2023).

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

□ Market condition

1) TV Industry

TV demand slightly decreased from 203.28 million units in 2022 to 201.35 million units in 2023 due to impacts from weak consumer sentiment caused by global uncertainties. (*Omdia*, February 2024)

< Market share of TV >

Product	2023	2022	2021
TV	30.1%	29.7%	29.5%

Global market share in revenue; from Omdia

2) Mobile industry

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

< Market share of Smartphone >

Product	2023	2022	2021
Smartphone	19.7%	21.7%	20.0%

Global market share in quantity; data from research firm *TechInsights*. (Figure for 1H23 is estimate from *Strategy Analytics*.)
TechInsights acquired Strategy Analytics

□ Business condition

1) TV Industry

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

In 2018, we released world's first 8K TV in the global market, once again leading the premium segment in the TV industry. Our QLED lineup includes sizes ranging from mid-sized to ultra-large screens, giving customers a variety of choices. In

addition, the significantly improved picture quality was well received by consumers and experts alike. We achieved solid results by introducing ultra-large screens in the UHD lineup as well as in the QLED lineup.

Even during the global economic crisis that stemmed from pandemic in 2020, we expanded our market leadership with the launches of QLED 4K/8K TVs and new models in our Lifestyle line, including The Terrace, The Premiere, and The Sero. Also, we continued to expand our premium lineup by launching Neo QLED and OLED TVs featuring significantly upgraded contrast and picture quality. We also created new markets through the sales of various products, including Lifestyle models and sound bars. We have positioned the smart ecosystem as a new growth engine through collaborations with various partners in areas such as TV plus, OTT, gaming, and home training.

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

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

2) Mobile industry

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

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

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

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

Also, Galaxy Z Fold5 and Galaxy Z Flip5 are garnering favorable feedback backed by further enhanced completeness of core user experiences with features such as multitasking and Flex Mode. With the Company's ongoing commitment to further popularize foldables, we continue to strive to achieve sales figures that surpass those of the Galaxy Note series.

In addition, we provide richer experiences for our smartphone users with Galaxy Ecosystem products, including tablets that

help boost productivity via virtual meetings, multitasking, and note-taking with large-screen display and S Pen; and wearables such as smart watches that provide sophisticated fitness and wellness functions—thanks to the adoption of innovative biosensor technologies—and wireless earphones that provide rich, clear sound.

Not content to dwell on our achievements in hardware, we have been focusing on delivering new and helpful services such as Samsung Pay, Samsung Health, and Bixby. We are adding SmartThings features to a suite of products in addition to smartphones, including TVs, refrigerators, air conditioners, etc., to deliver a multi-device experience that provides customers with a consistent and smooth connectivity.

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

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

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

In 2024, we will lead the mobile market with our Galaxy S24 series, which can lower language barriers between people and provide new mobile AI experiences with potential to boost productivity and creativity. We will continue to apply such functions to our flagship models, including foldables.

We will continue to leverage our superior R&D capabilities to be fully prepared 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 APs for smartphones and tablets, and image sensors.

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

□ Market condition

Demand in the memory market improved as, along with rising memory deployment, customer inventory levels for finished products like PC and mobile normalized and AI related investment increased. Inventory restocking also contributed to demand amid increasing visibility that prices may have reached a bottom. To promote early normalization of our business, we focused on high-value-added products and significantly increased sales of advanced interface products, such as HBM (high bandwidth memory), DDR5, LPDDR5x, and UFS4.0. We also actively addressed demand linked with the recovery trend in server, leading our bit growth to significantly exceed market expectations and inventory depletion of both DRAM and NAND to accelerate. In particular, DRAM inventory levels improved greatly.

Most major Foundry players underperformed expectations due to the prolonged downturn stemming from a delayed recovery of global market demand. In 2024, we expect the market to recover gradually, anticipating increased demand driven by flagship smartphone releases and AI-related high-performance computing. For the medium to long term, we expect stable mobile demand while a demand increase for high-performance automotive- and AI-use SoCs should add to momentum.

< Market share of DRAM >

Product	2023	2022	2021
DRAM	42.2%	43.1%	43.0%

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

□ Business condition

In the first half, the memory market experienced persistently weak demand due to inventory adjustments at customers, which prompted suppliers to adjust production levels. In the second half, however, demand showed signs of improvement in some applications due to the adjusted production output and widening awareness that prices may have found a bottom, all amid still solid demand for high-capacity DDR5 and HBM. In the first quarter of 2024, demand for advanced products such as HBM, DDR5/LPDDR5x, and UFS4.0 is expected to remain strong even under weak seasonality. With the supply side showing limited output increases for advanced products, we expect customer demand to continue. Against this backdrop, we will focus on preparing for demand for advanced products, with particular attention on addressing the demand for HBM for generative AI and SSDs for servers to enhance profitability. Additionally, we will prioritize real demand amid constrained supply in the industry.

In 2023, System LSI faced challenges from a delayed recovery in smartphone demand and inventory adjustments in the mobile business. In the second half of the year, conditions improved somewhat, driven by component supply for MX's Galaxy and increased demand from OEMs in China. We addressed the situation by promptly developing new products with on-device AI capabilities, strengthening collaborations with customers, and diversifying applications. Regarding SoCs, we continued to expand our lineups and customer base by introducing new products for mobile integrating high-performance IP with enhanced on-device AI and Game UX functions; and by developing products applying 3nm technology and by delivering automotive-oriented solutions. Furthermore, we advanced next-generation technologies such as the commercialization of standard satellite communication systems; and we ventured into new markets with connectivity products. In image sensors, we maintained leadership in the high-value segment with our 200-megapixel product line, focusing on differentiating performance of camera zoom functions. Moreover, we broadened the application of ultra-high-resolution image sensors in smartphones while also preparing to diversify lineups targeting emerging areas such as autonomous vehicles, XR devices, and robotics.

In Foundry, we have been striving to overcome the challenges of a stagnant market since the latter half of 2022. We are implementing comprehensive measures across all facets of our operations to ensure readiness for a market recovery. For

advanced nodes, our focus remains on securing mid- to long-term demand by continuing to enhance our technological competitiveness. We consistently review and prepare for capacity expansions to future demand in the mid to long term. For mature nodes, we are concentrating on expanding our customer base and highly profitable applications via enhanced process competitiveness. In particular, we provide customer-tailored design infrastructure, and we are diversifying our portfolios into emerging sectors such as high-performance computing, automotive, 5G and IoT. Furthermore, we collaborate with customers to develop and deliver products utilizing specialty processes. And even though the market is showing signs of a modest recovery, we are committed to reinforcing our competitiveness and promoting closer collaborations with our customers, aiming to fortify our industry position while laying the groundwork for future growth.

[SDC]

□ Industry overview

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

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

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

□ Market condition

The market for smartphone display panels is recovered somewhat to 1.44 billion units in 2023 from 1.38 billion units in 2022. For smartphone-use OLED panels, the market is grown to 0.61 billion units in 2023 from 0.57 billion units in 2022, and the OLED portion of smartphone panels in 2023 is increased to 42.7% from 41.6% in 2022 (*Omdia*, December 2023).

The market for large display panels was 0.9 billion units in 2022, and it is decreased to 0.8 billion in 2023 again (*Omdia*, December 2023).

< Market share of smartphone panel >

Product	2023	2022	2021
Smartphone panels	50.7%	56.7%	51.4%

Global market share in revenue from research firm *Omdia*.

□ Business condition

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

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

In 2023, the display market encountered delays in an overall demand recovery amid the ongoing global economic downturn, while the smartphone market showed polarization between mid-range-and-below and high-end markets. For Samsung, we delivered robust results by concentrating on premium OLED products tailored for the high-end segment, from which demand was relatively strong. Furthermore, we are diversifying our mobile panel business—which concentrates on smartphones—by ramping up investment in 8.6G IT OLED lines in order to expand into IT, gaming, and auto products and further solidify our business leadership.

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

[Harman]

□ Industry overview

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

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

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

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

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

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

□ Market condition

In addition to persistent challenges stemming from supply chain instability for raw materials from both China and the US, strikes in the automobile industry have added further pressure on the North American automotive market. Moreover, uncertainties have persisted in the global macro environment as central banks implement additional tightening policies to restrain inflation.

Considering such factors, global automobile production in 2024 is forecast to stay similar year-on-year (*S&P Global Light Vehicle Production Forecast*, December 2023).

< Market share of digital cockpit >

Product	2023	2022	2021
Digital cockpits	16.5%	17.9%	15.0%

Digital cockpits refer to the digital automotive component which enables safe driving environment via infotainment system, etc.

Figures based on the global market share data (by value) from TechInsights

Figures for 2021 and 2022 were recalculated to reflect changes from unit-based to value-based, highlighting the digital cockpit's significant value-added representation

□ Business condition

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

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

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

D. Financial summary, by organization

In 2023 by organization, DX accounted for 65.7% of revenue with reported revenue of KRW 169,992.3 billion; DS contributed approximately 25.7% with revenue of KRW 66,594.5 billion; SDC was responsible for 12.0% with revenue of KRW 30,975.4 billion; and Harman contributed 5.6% with revenue of KRW 14,338.5 billion.

In 2023, DX accounted for an operating profit of KRW 14,384.7 billion; DS with KRW -14,879.5 billion; SDC with KRW 5,566.5 billion; and Harman with KRW 1,173.7 billion.

(KRW 100 mil)

Organization	Classification	2023		2022		2021	
		Amount	Portion of corresponding total	Amount	Portion of corresponding total	Amount	Portion of corresponding total
DX Division	Revenue	1,699,923	65.7%	1,824,897	60.4%	1,662,594	59.5%
	Operating profit	143,847	219.0%	127,461	29.4%	173,866	33.7%
	Total assets	2,342,534	37.2%	2,279,669	38.6%	2,479,832	42.0%
DS Division	Revenue	665,945	25.7%	984,553	32.6%	953,872	34.1%
	Operating profit	-148,795	-226.6%	238,158	54.9%	291,920	56.5%
	Total assets	2,871,411	45.6%	2,620,558	44.3%	2,258,223	38.3%
SDC	Revenue	309,754	12.0%	343,826	11.4%	317,125	11.3%
	Operating profit	55,665	84.8%	59,530	13.7%	44,574	8.6%
	Total assets	792,752	12.6%	737,798	12.5%	668,836	11.3%
Harman	Revenue	143,885	5.6%	132,137	4.4%	100,399	3.6%
	Operating profit	11,737	17.9%	8,805	2.0%	5,991	1.2%
	Total assets	179,566	2.9%	171,023	2.9%	158,874	2.7%

Includes inter-divisional transactions.

Figures for 2021 were adjusted to reflect 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-revenue ratio, number of personnel, etc.).

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

III. Financial Affairs

1. Abridged Financial statements

A. Abridged Consolidated financial statements

(KRW mil)

Classification	55th	54th	53rd
	December 31, 2023	December 31, 2022	December 31, 2021
Current assets	195,936,557	218,470,581	218,163,185
- Cash and cash equivalents	69,080,893	49,680,710	39,031,415
- Short-term financial instruments	22,690,924	65,102,886	81,708,986
- Other current financial assets	635,393	443,690	3,409,791
- Trade receivables	36,647,393	35,721,563	40,713,415
- Inventories	51,625,874	52,187,866	41,384,404
- Others	15,256,080	15,333,866	11,915,174
Non-current assets	259,969,423	229,953,926	208,457,973
- Other non-current financial assets	8,912,691	12,802,480	15,491,183
- Investment in associates and joint ventures	11,767,444	10,893,869	8,932,251
- Property, plant, and equipment	187,256,262	168,045,388	149,928,539
- Intangible assets	22,741,862	20,217,754	20,236,244
- Others	29,291,164	17,994,435	13,869,756
Total assets	455,905,980	448,424,507	426,621,158
Current liabilities	75,719,452	78,344,852	88,117,133
Non-current liabilities	16,508,663	15,330,051	33,604,094
Total liabilities	92,228,115	93,674,903	121,721,227
Equity attributable to owners of the parent company	353,233,775	345,186,142	296,237,697
- Capital stock	897,514	897,514	897,514
- Share premium	4,403,893	4,403,893	4,403,893
- Retained earnings	346,652,238	337,946,407	293,064,763
- Others	1,280,130	1,938,328	-2,128,473
Non-controlling interests	10,444,090	9,563,462	8,662,234
Total Equity	363,677,865	354,749,604	304,899,931
	Jan-Dec 2023	Jan-Dec 2022	Jan-Dec 2021
Revenue	258,935,494	302,231,360	279,604,799
Operating profit	6,566,976	43,376,630	51,633,856
Profit for the period	15,487,100	55,654,077	39,907,450
- Owners of the parent company	14,473,401	54,730,018	39,243,791
- Non-controlling interests	1,013,699	924,059	663,659
Basic earnings per share (KRW)	2,131	8,057	5,777
Diluted earnings per share (KRW)	2,131	8,057	5,777
Number of companies subject to consolidation accounting	233	233	229

Data shown in conformity with K-IFRS.

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

B. Abridged Separate financial statements

(KRW mil)

Classification	2023	54th	53rd
	December 31, 2023	December 31, 2022	December 31, 2021
Current assets	68,548,442	59,062,658	73,553,416
- Cash and cash equivalents	6,061,451	3,921,593	3,918,872
- Short-term financial instruments	50,071	137	15,000,576
- Trade receivables	27,363,016	20,503,223	33,088,247
- Inventories	29,338,151	27,990,007	15,973,053
- Others	5,735,753	6,647,698	5,572,668
Non-current assets	228,308,847	201,021,092	177,558,768
- Other non-current financial assets	1,854,503	1,364,608	1,664,667
- Subsidiary, associate, and joint venture investments	57,392,438	57,397,249	56,225,599
- Property, plant and equipment	140,579,161	123,266,986	103,667,025
- Intangible assets	10,440,211	8,561,424	8,657,456
- Others	18,042,533	10,430,825	7,344,021
Total assets	296,857,289	260,083,750	251,112,184
Current liabilities	41,775,101	46,086,047	53,067,303
Non-current liabilities	30,294,414	4,581,512	4,851,149
Total liabilities	72,069,515	50,667,559	57,918,452
- Capital stock	897,514	897,514	897,514
- Share premium	4,403,893	4,403,893	4,403,893
- Retained earnings	219,963,351	204,388,016	188,774,335
- Others	-476,984	-273,232	-882,010
Total Equity	224,787,774	209,416,191	193,193,732
Evaluation method of subsidiary, associate, and joint venture investment securities	Cost methods	Cost methods	Cost methods
	Jan–Dec 2023	Jan–Dec 2022	Jan–Dec 2021
Revenue	170,374,090	211,867,483	199,744,705
Operating profit	-11,526,297	25,319,329	31,993,162
Profit for the period	25,397,099	25,418,778	30,970,954
Basic earnings per share (KRW)	3,739	3,742	4,559
Diluted earnings per share (KRW)	3,739	3,742	4,559

Data shown in conformity with K-IFRS.

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

2. Consolidated Financial Statements

A. Consolidated Statements of Financial Position

(In millions of Korean won, in thousands of US dollars (Note 2.18))

	Notes	December 31, 2023 KRW	December 31, 2022 KRW	December 31, 2023 USD	December 31, 2022 USD
Assets					
Current assets					
Cash and cash equivalents	4, 28	69,080,893	49,680,710	52,890,158	38,036,865
Short-term financial instruments	4, 28	22,690,924	65,102,886	17,372,771	49,844,491
Short-term financial assets at amortized cost	4, 28	608,281	414,610	465,716	317,436
Short-term financial assets at fair value through profit or loss	4, 6, 28	27,112	29,080	20,758	22,264
Trade receivables	4, 5, 7, 28	36,647,393	35,721,563	28,058,213	27,349,373
Non-trade receivables	4, 7, 28	6,633,248	6,149,209	5,078,590	4,707,997
Prepaid expenses		3,366,130	2,867,823	2,577,198	2,195,681
Inventories	8	51,625,874	52,187,866	39,526,134	39,956,410
Other current assets	4, 28	5,038,838	6,316,834	3,857,868	4,836,335
Assets held-for-sale	33	217,864	-	166,802	-
		195,936,557	218,470,581	150,014,208	167,266,852
Non-current assets					
Financial assets at fair value through other comprehensive income	4, 6, 28	7,481,297	11,397,012	5,727,879	8,725,854
Financial assets at fair value through profit or loss	4, 6, 28	1,431,394	1,405,468	1,095,913	1,076,063
Investments in associates and joint ventures	9	11,767,444	10,893,869	9,009,466	8,340,634
Property, plant and equipment	10	187,256,262	168,045,388	143,368,344	128,659,991
Intangible assets	11	22,741,862	20,217,754	17,411,771	15,479,247
Net defined benefit assets	14	4,905,219	5,851,972	3,755,565	4,480,424
Deferred income tax assets	25	10,211,797	5,101,318	7,818,422	3,905,704
Other non-current assets	4, 7, 28	14,174,148	7,041,145	10,852,104	5,390,887
		259,969,423	229,953,926	199,039,464	176,058,804
Total assets		455,905,980	448,424,507	349,053,672	343,325,656

		December 31,	December 31,	December 31,	December 31,
	Notes	2023	2022	2023	2022
		KRW	KRW	USD	USD
Liabilities and Equity					
Current liabilities					
Trade payables	4, 28	11,319,824	10,644,686	8,666,757	8,149,853
Short-term borrowings	4, 5, 12, 28	7,114,601	5,147,315	5,447,127	3,940,920
Other payables	4, 28	15,324,119	17,592,366	11,732,551	13,469,180
Advances received	17	1,492,602	1,314,934	1,142,776	1,006,748
Withholdings	4, 28	892,441	1,298,244	683,276	993,970
Accrued expenses	4, 17, 28	26,013,273	29,211,487	19,916,449	22,365,087
Current income tax liabilities		3,358,715	4,250,397	2,571,521	3,254,216
Current portion of long-term liabilities	4, 12, 13, 28	1,308,875	1,089,162	1,002,109	833,891
Provisions	15	6,524,876	5,844,907	4,995,618	4,475,015
Other current liabilities	4, 17, 28	2,308,472	1,951,354	1,767,427	1,494,008
Liabilities held-for-sale	33	61,654	-	47,204	-
		75,719,452	78,344,852	57,972,815	59,982,888
Non-current liabilities					
Debentures	4, 13, 28	537,618	536,093	411,615	410,447
Long-term borrowings	4, 12, 28	3,724,850	3,560,672	2,851,844	2,726,145
Long-term other payables	4, 28	5,488,283	2,753,305	4,201,975	2,108,003
Net defined benefit liabilities	14	456,557	268,370	349,552	205,471
Deferred income tax liabilities	25	620,549	5,111,332	475,109	3,913,371
Long-term provisions	15	2,878,450	1,928,518	2,203,817	1,476,524
Other non-current liabilities	4, 17, 28	2,802,356	1,171,761	2,145,558	897,132
		16,508,663	15,330,051	12,639,470	11,737,093
Total liabilities		92,228,115	93,674,903	70,612,285	71,719,981

	Notes	December 31, 2023 KRW	December 31, 2022 KRW	December 31, 2023 USD	December 31, 2022 USD
Equity attributable to owners of the parent company					
Preference shares	18	119,467	119,467	91,467	91,467
Ordinary shares	18	778,047	778,047	595,693	595,693
Share premium		4,403,893	4,403,893	3,371,737	3,371,737
Retained earnings	19	346,652,238	337,946,407	265,406,117	258,740,703
Other components of equity	20, 33	1,280,130	1,938,328	980,102	1,484,036
		353,233,775	345,186,142	270,445,116	264,283,636
Non-controlling interests	31	10,444,090	9,563,462	7,996,271	7,322,039
Total equity		363,677,865	354,749,604	278,441,387	271,605,675
Total liabilities and equity		455,905,980	448,424,507	349,053,672	343,325,656

B. Consolidated Statements of Profit or Loss

(In millions of Korean won, in thousands of US dollars (Note 2.18))

	Notes	For the years ended December 31,			
		2023 KRW	2022 KRW	2023 USD	2022 USD
Revenue	29	258,935,494	302,231,360	198,247,859	231,396,319
Cost of sales	21	180,388,580	190,041,770	138,110,266	145,501,003
Gross profit		78,546,914	112,189,590	60,137,593	85,895,316
Selling and administrative expenses	21, 22	71,979,938	68,812,960	55,109,743	52,685,021
Operating profit	29	6,566,976	43,376,630	5,027,850	33,210,295
Other non-operating income	23	1,180,448	1,962,071	903,782	1,502,213
Other non-operating expense	23	1,083,327	1,790,176	829,424	1,370,606
Share of net profit of associates and joint ventures	9	887,550	1,090,643	679,532	835,025
Financial income	24	16,100,148	20,828,995	12,326,699	15,947,229
Financial expense	24	12,645,530	19,027,689	9,681,752	14,568,101
Profit before income tax		11,006,265	46,440,474	8,426,687	35,556,055
Income tax benefit	25	(4,480,835)	(9,213,603)	(3,430,646)	(7,054,178)
Profit for the year		15,487,100	55,654,077	11,857,333	42,610,233
Profit attributable to					
Owners of the parent company		14,473,401	54,730,018	11,081,218	41,902,749
Non-controlling interests		1,013,699	924,059	776,115	707,484
Earnings per share (in Korean won, in US dollars)	26				
- Basic		2,131	8,057	1.63	6.17
- Diluted		2,131	8,057	1.63	6.17

C. Consolidated Statements of Comprehensive Income

(In millions of Korean won, in thousands of US dollars (Note 2.18))

	Notes	For the years ended December 31,			
		2023	2022	2023	2022
		KRW	KRW	USD	USD
Profit for the year		15,487,100	55,654,077	11,857,333	42,610,233
Other comprehensive income					
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	6, 20	1,481,091	(1,969,498)	1,133,962	(1,507,900)
Share of other comprehensive income (loss) of associates and joint ventures, net of tax	9, 20	13,150	(6,318)	10,068	(4,837)
Remeasurement of net defined benefit liabilities (assets), net of tax	14, 20	(828,298)	1,153,679	(634,167)	883,287
Items that may be reclassified subsequently to profit or loss:					
Share of other comprehensive income (loss) of associates and joint ventures, net of tax	9, 20	61,962	(44,192)	47,440	(33,835)
Foreign currency translation differences for foreign operations, net of tax	20	2,621,479	4,884,886	2,007,074	3,739,998
Gain (loss) on valuation of cash flow hedge derivatives	20	927	(12,893)	710	(9,871)
Other comprehensive income for the year, net of tax		3,350,311	4,005,664	2,565,087	3,066,842
Total comprehensive income for the year		18,837,411	59,659,741	14,422,420	45,677,075
Comprehensive income attributable to:					
Owners of the parent company		17,845,661	58,745,107	13,663,110	44,976,807
Non-controlling interests		991,750	914,634	759,310	700,268

D. Consolidated Statements of Changes in Equity

(In millions of Korean won)

For the year ended December 31, 2022	Notes	Preference shares	Ordinary shares	Share premium	Retained earnings	Other components of equity	Equity attributable to owners of the parent company	Non-controlling interests	Total
Balance as of January 1, 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 year		-	-	-	54,730,018	-	54,730,018	924,059	55,654,077
Loss on valuation of financial assets at fair value through other comprehensive income, net of tax	6, 20	-	-	-	(38,937)	(1,867,530)	(1,906,467)	(63,031)	(1,969,498)
Share of other comprehensive income (loss) of associates and joint ventures, net of tax	9, 20	-	-	-	-	(51,848)	(51,848)	1,338	(50,510)
Foreign currency translation differences for foreign operations translation, net of tax	20	-	-	-	-	4,863,930	4,863,930	20,956	4,884,886
Remeasurement of net defined benefit liabilities, net of tax	14, 20	-	-	-	-	1,122,367	1,122,367	31,312	1,153,679
Loss on valuation of cash flow hedge derivatives	20	-	-	-	-	(12,893)	(12,893)	-	(12,893)
Total comprehensive income for the year		-	-	-	54,691,081	4,054,026	58,745,107	914,634	59,659,741
Dividends declared	19	-	-	-	(9,809,437)	-	(9,809,437)	(5,523)	(9,814,960)
Capital transaction under common control		-	-	-	-	-	-	(176)	(176)
Changes in consolidated entities		-	-	-	-	-	-	124	124
Other		-	-	-	-	12,775	12,775	(7,831)	4,944
Total transactions with owners		-	-	-	(9,809,437)	12,775	(9,796,662)	(13,406)	(9,810,068)
Balance as of December 31, 2022		119,467	778,047	4,403,893	337,946,407	1,938,328	345,186,142	9,563,462	354,749,604

(In thousands of US dollars (Note 2.18))

For the year ended December 31, 2022	Notes	Preference shares	Ordinary shares	Share premium	Retained earnings	Other components of equity	Equity attributable to owners of the parent company	Non- controlling interests	Total
Balance as of January 1, 2022		91,467	595,693	3,371,737	224,378,130	(1,629,615)	226,807,412	6,632,035	233,439,447
Profit for the year		-	-	-	41,902,749	-	41,902,749	707,484	42,610,233
Loss on valuation of financial assets at fair value through other comprehensive income, net of tax	6, 20	-	-	-	(29,812)	(1,429,830)	(1,459,642)	(48,258)	(1,507,900)
Share of other comprehensive income (loss) of associates and joint ventures, net of tax	9, 20	-	-	-	-	(39,696)	(39,696)	1,024	(38,672)
Foreign currency translation differences for foreign operations, net of tax	20	-	-	-	-	3,723,953	3,723,953	16,045	3,739,998
Remeasurement of net defined benefit liabilities, net of tax	14, 20	-	-	-	-	859,314	859,314	23,973	883,287
Loss on valuation of cash flow hedge derivatives	20	-	-	-	-	(9,871)	(9,871)	-	(9,871)
Total comprehensive income for the year		-	-	-	41,872,937	3,103,870	44,976,807	700,268	45,677,075
Dividends declared	19	-	-	-	(7,510,364)	-	(7,510,364)	(4,229)	(7,514,593)
Capital transaction under common control		-	-	-	-	-	-	(135)	(135)
Changes in consolidated entities		-	-	-	-	-	-	95	95
Other		-	-	-	-	9,781	9,781	(5,995)	3,786
Total transactions with owners		-	-	-	(7,510,364)	9,781	(7,500,583)	(10,264)	(7,510,847)
Balance as of December 31, 2022		91,467	595,693	3,371,737	258,740,703	1,484,036	264,283,636	7,322,039	271,605,675

(In millions of Korean won)

For the year ended December 31, 2023	Notes	Preference shares	Ordinary shares	Share premium	Retained earnings	Other components of equity	Equity attributable to owners of the parent company	Non- controlling interests	Total
Balance as of January 1, 2023		119,467	778,047	4,403,893	337,946,407	1,938,328	345,186,142	9,563,462	354,749,604
Profit for the year		-	-	-	14,473,401	-	14,473,401	1,013,699	15,487,100
Gain (loss) on valuation of financial assets at fair value through other comprehensive income, net of tax	6, 20	-	-	-	4,041,867	(2,554,690)	1,487,177	(6,086)	1,481,091
Share of other comprehensive income of associates and joint ventures, net of tax	9, 20	-	-	-	-	70,157	70,157	4,955	75,112
Foreign currency translation differences for foreign operations, net of tax	20	-	-	-	-	2,611,915	2,611,915	9,564	2,621,479
Remeasurement of net defined benefit assets, net of tax	14, 20	-	-	-	-	(797,916)	(797,916)	(30,382)	(828,298)
Gain on valuation of cash flow hedge derivatives	20	-	-	-	-	927	927	-	927
Total comprehensive income for the year		-	-	-	18,515,268	(669,607)	17,845,661	991,750	18,837,411
Dividends declared	19	-	-	-	(9,809,437)	-	(9,809,437)	(101,984)	(9,911,421)
Capital transactions under common control		-	-	-	-	-	-	(9,368)	(9,368)
Changes in consolidated entities		-	-	-	-	-	-	230	230
Others		-	-	-	-	11,409	11,409	-	11,409
Total transactions with owners		-	-	-	(9,809,437)	11,409	(9,798,028)	(111,122)	(9,909,150)
Balance as of December 31, 2023		119,467	778,047	4,403,893	346,652,238	1,280,130	353,233,775	10,444,090	363,677,865

(In thousands of US dollars (Note 2.18))

For the year ended December 31, 2023	Notes	Preference shares	Ordinary shares	Share premium	Retained earnings	Other components of equity	Equity attributable to owners of the parent company	Non-controlling interests	Total
Balance as of January 1, 2023		91,467	595,693	3,371,737	258,740,703	1,484,036	264,283,636	7,322,039	271,605,675
Profit for the year		-	-	-	11,081,218	-	11,081,218	776,115	11,857,333
Gain (loss) on valuation of financial assets at fair value through other comprehensive income, net of tax	6, 20	-	-	-	3,094,560	(1,955,938)	1,138,622	(4,660)	1,133,962
Share of other comprehensive income of associates and joint ventures, net of tax	9, 20	-	-	-	-	53,714	53,714	3,794	57,508
Foreign currency translation differences for foreign operations, net of tax	20	-	-	-	-	1,999,752	1,999,752	7,322	2,007,074
Remeasurement of net defined benefit assets, net of tax	14, 20	-	-	-	-	(610,906)	(610,906)	(23,261)	(634,167)
Gain on valuation of cash flow hedge derivatives	20	-	-	-	-	710	710	-	710
Total comprehensive income for the year		-	-	-	14,175,778	(512,668)	13,663,110	759,310	14,422,420
Dividends declared	19	-	-	-	(7,510,364)	-	(7,510,364)	(78,082)	(7,588,446)
Capital transactions under common control		-	-	-	-	-	-	(7,172)	(7,172)
Changes in consolidated entities		-	-	-	-	-	-	176	176
Others		-	-	-	-	8,734	8,734	-	8,734
Total transactions with owners		-	-	-	(7,510,364)	8,734	(7,501,630)	(85,078)	(7,586,708)
Balance as of December 31, 2023		91,467	595,693	3,371,737	265,406,117	980,102	270,445,116	7,996,271	278,441,387

E. Consolidated Statements of Cash Flows

(In millions of Korean won, in thousands of US dollars (Note 2.18))

	Notes	For the years ended December 31,			
		2023	2022	2023	2022
		KRW	KRW	USD	USD
Operating activities					
Profit for the year		15,487,100	55,654,077	11,857,333	42,610,233
Adjustments	27	36,519,534	33,073,439	27,960,321	25,321,899
Changes in assets and liabilities arising from operating activities	27	(5,458,745)	(16,998,948)	(4,179,359)	(13,014,844)
Cash generated from operations		46,547,889	71,728,568	35,638,295	54,917,288
Interest received		4,786,010	2,136,795	3,664,296	1,635,987
Interest paid		(844,691)	(714,543)	(646,718)	(547,073)
Dividends received		269,169	529,421	206,083	405,339
Income tax paid		(6,620,950)	(11,498,895)	(5,069,175)	(8,803,859)
Net cash from operating activities		44,137,427	62,181,346	33,792,781	47,607,682
Investing activities					
Net decrease in short-term financial instruments		39,421,565	15,214,321	30,182,192	11,648,486
Net decrease (increase) in short-term financial assets at amortized cost		(195,616)	3,050,104	(149,769)	2,335,240
Net decrease in short-term financial assets at fair value through profit or loss		2,718	11,677	2,081	8,940
Disposal of long-term financial instruments		4,565,426	8,272,909	3,495,411	6,333,958
Acquisition of long-term financial instruments		(5,307,770)	(4,393,754)	(4,063,769)	(3,363,974)
Disposal of financial assets at fair value through other comprehensive income		6,521,568	496,090	4,993,085	379,820
Acquisition of financial assets at fair value through other comprehensive income		(124,488)	(37,687)	(95,311)	(28,854)
Disposal of financial assets at fair value through profit or loss		63,962	166,315	48,971	127,335
Acquisition of financial assets at fair value through profit or loss		(130,459)	(158,244)	(99,883)	(121,156)
Disposal of investment in associates and joint ventures		33,457	13,233	25,616	10,132
Acquisition of investment in associates and joint ventures		(78,690)	(907,958)	(60,247)	(695,157)
Disposal of property, plant and equipment		98,341	217,878	75,292	166,813
Acquisition of property, plant and equipment		(57,611,292)	(49,430,428)	(44,108,728)	(37,845,242)
Disposal of intangible assets		11,744	23,462	8,992	17,963
Acquisition of intangible assets		(2,922,875)	(3,696,304)	(2,237,830)	(2,829,988)
Cash outflow from business combinations		(356,511)	(31,383)	(272,954)	(24,028)
Cash outflow from other investing activities		(913,897)	(413,035)	(699,705)	(316,230)
Net cash used in investing activities		(16,922,817)	(31,602,804)	(12,956,556)	(24,195,942)

	Notes	For the years ended December 31,			
		2023	2022	2023	2022
		KRW	KRW	USD	USD
Financing activities					
Net increase (decrease) in short-term borrowings	27	2,145,400	(8,339,149)	1,642,575	(6,384,673)
Increase in long-term borrowings	27	354,712	271,997	271,577	208,248
Repayment of debentures and long-term borrowings	27	(1,219,579)	(1,508,465)	(933,742)	(1,154,921)
Dividends paid		(9,864,474)	(9,814,426)	(7,552,502)	(7,514,184)
Net decrease in non-controlling interests		(9,118)	(6)	(6,981)	(4)
Net cash used in financing activities		(8,593,059)	(19,390,049)	(6,579,073)	(14,845,534)
Reclassification to assets held-for-sale	33	(14,153)	-	(10,836)	-
Effect of foreign exchange rate changes		792,785	(539,198)	606,977	(412,822)
Net increase in cash and cash equivalents		19,400,183	10,649,295	14,853,293	8,153,384
Cash and cash equivalents					
Beginning of the year		49,680,710	39,031,415	38,036,865	29,883,483
End of the year		69,080,893	49,680,710	52,890,158	38,036,867

3. Notes to the Consolidated Financial Statements

A. Consolidated Statements of Financial Position

1. General Information

1.1 Company Overview

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

These consolidated financial statements have been prepared in accordance with Korean International Financial Reporting Standards (“Korean IFRS”) 1110, *Consolidated Financial Statements*. SEC, as the controlling company, consolidates its 232 subsidiaries, including Samsung Display and Samsung Electronics America. The Company also applies the equity method of accounting for its 37 associates and joint ventures, including Samsung Electro-Mechanics Co., Ltd.

1.2 Consolidated Subsidiaries

The consolidated subsidiaries as of December 31, 2023 are as follows:

Region	Subsidiaries	Business	Percentage of ownership (%) ^(*)
	Samsung Electronics America, Inc. (SEA)	Sale of electronic devices	100.0
	Samsung International, Inc. (SII)	Manufacture of electronic devices	100.0
	Samsung Mexicana S.A. de C.V (SAMEX)	Manufacture of electronic devices	100.0
	Samsung Electronics Home Appliances America, LLC (SEHA)	Manufacture of home appliances	100.0
	Samsung Research America, Inc. (SRA)	R&D	100.0
	Samsung Next LLC (SNX)	Management of overseas subsidiaries	100.0
	Samsung Next Fund LLC (SNXF)	Venture capital investment fund	100.0
	NeuroLogica Corp.	Manufacture and sale of medical equipment	100.0
	Samsung HVAC America, LLC	Sale of air conditioning products	100.0
	Joyent, Inc.	Cloud services	100.0
	SmartThings, Inc.	Sale of smart home electronics	100.0
	TeleWorld Solutions, Inc. (TWS)	Installation of network devices	100.0
	Samsung Semiconductor, Inc. (SSI)	Sale of semiconductor and display panels	100.0
	Samsung Federal, Inc. (SFI)	R&D	100.0
	Samsung Austin Semiconductor LLC. (SAS)	Manufacture of semiconductors	100.0
	Samsung Oak Holdings, Inc. (SHI)	Management of overseas subsidiaries	100.0
	SEMES America, Inc.	Semiconductor equipment maintenance	100.0
	Samsung Display America Holdings, Inc. (SDAH)	Management of overseas subsidiaries	100.0
	eMagin Corporation	Development and manufacture of display panels	100.0
America	Samsung Electronics Canada, Inc. (SECA)	Sale of electronic devices	100.0
	AdGear Technologies Inc.	Digital advertising platforms	100.0
	Samsung Eletronica da Amazonia Ltda. (SEDA)	Manufacture and sale of electronic devices	100.0
	Samsung Electronics Mexico S.A. De C.V. (SEM)	Sale of electronic devices	100.0
	Samsung Electronics Digital Appliance Mexico, SA de CV (SEDAM)	Manufacture of home appliances	100.0
	Samsung Electronics Latinoamerica (Zona Libre), S. A. (SELA)	Sale of electronic devices	100.0
	Samsung Electronics Latinoamerica Miami, Inc. (SEMI)	Sale of electronic devices	100.0
	Samsung Electronica Colombia S.A. (SAMCOL)	Sale of electronic devices	100.0
	Samsung Electronics Argentina S.A. (SEASA)	Marketing and related 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 related 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

Region	Subsidiaries	Business	Percentage of ownership (%) ^(*)
	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
	Roon Labs, LLC.	Sale of audio products	100.0
	Beijing Integrated Circuit Industry International Fund, L.P	Venture capital investment fund	61.4
	China Materialia New Materials 2016 Limited Partnership	Venture capital investment fund	99.0

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

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

Region	Subsidiaries	Business	Percentage of ownership (%) ^(*)
	Samsung Electronics Rus Company LLC (SERC)	Sale of electronic devices	100.0
	Samsung Electronics Rus Kaluga LLC (SERK)	Manufacture of TV	100.0
	Samsung Electronics Ukraine Company LLC (SEUC)	Sale of electronic devices	100.0
	Samsung R&D Institute Ukraine (SRUKR)	R&D	100.0
	Samsung Electronics Central Eurasia LLP (SECE)	Sale of electronic devices	100.0
	Samsung Electronics Overseas B.V. (SEO)	Sale of electronic devices	100.0
	Samsung R&D Institute Rus LLC (SRR)	R&D	100.0
	Samsung Electronics Caucasus Co. Ltd (SECC)	Marketing	100.0
	Samsung Electronics Uzbekistan Ltd. (SEUZ)	Marketing	100.0
	AKG Acoustics GmbH	Manufacture and sale of audio products	100.0
	Apostera UA, LLC	Connected Service Provider	100.0
	Harman Audio Iberia Espana Sociedad Limitada	Sale of audio products	100.0
	Harman Becker Automotive Systems GmbH	Manufacture 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.zoo	Connected service provider	100.0
	Harman Connected Services UK Ltd.	Connected service provider	100.0
	Harman Consumer Nederland B.V.	Sale of audio products	100.0
	Harman Deutschland GmbH	Sale of audio products	100.0
	Harman France SNC	Sale of audio products	100.0
	Harman Holding GmbH & Co. KG	Management company	100.0
	Harman Hungary Financing Ltd.	Financing company	100.0
	Harman Inc. & Co. KG	Management of overseas subsidiaries	100.0
	Harman International Estonia OU	R&D	100.0
	Harman International Industries Limited	Sale of audio products, R&D	100.0
	Harman International Romania SRL	R&D	100.0
	Harman Management GmbH	Management of overseas subsidiaries	100.0
	Harman Professional Kft	Manufacture of audio products, R&D	100.0
	Harman Professional Denmark ApS	Sale of audio products, R&D	100.0
	Red Bend Software SAS	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

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

Region	Subsidiaries	Business	Percentage of ownership (%) [*]
Middle East & Africa	Samsung Gulf Electronics Co., Ltd. (SGE)	Sale of electronic devices	100.0
	Samsung Electronics Turkiye (SETK)	Sale of electronic devices	100.0
	Samsung Electronics Industry and Commerce Ltd. (SETK-P)	Manufacture of electronic devices	100.0
	Samsung Electronics Levant Co., Ltd. (SELV)	Sale of electronic devices	100.0
	Samsung Electronics Maghreb Arab (SEMAG)	Sale of electronic devices	100.0
	Samsung Electronics Egypt S.A.E (SEEG)	Manufacture and sale of electronic devices	100.0
	Samsung Electronics Israel Ltd. (SEIL)	Marketing	100.0
	Samsung Electronics Tunisia S.A.R.L (SETN)	Marketing	100.0
	Samsung Electronics Pakistan (Private) Ltd. (SEPAK)	Marketing	100.0
	Samsung Electronics 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
	DOWOINSYS VINA COMPANY LIMITED	Manufacture of display panel components	100.0
	PT Samsung Electronics Indonesia (SEIN)	Manufacture and sale of electronic devices	100.0
	PT Samsung Telecommunications Indonesia (STIN)	Sale of electronic devices and services	100.0
	Thai Samsung Electronics Co., Ltd. (TSE)	Manufacture and sale of electronic devices	91.8
	Laos Samsung Electronics Sole Co., Ltd (LSE)	Marketing	100.0
	Samsung Electronics Philippines Corporation (SEPCO)	Sale of electronic devices	100.0
	Samsung Electronics Australia Pty. Ltd. (SEAU)	Sale of electronic devices	100.0
	Samsung Electronics New Zealand Limited (SENZ)	Sale of electronic devices	100.0
	Samsung India Electronics Private Ltd. (SIEL)	Manufacture and sale of electronic devices	100.0
	Red Brick Lane Marketing Solutions Pvt. Ltd.	Marketing	100.0
	Samsung Display Noida Private Limited (SDN)	Manufacture of display panels	100.0
	Samsung R&D Institute India-Bangalore Private Limited (SRI-Bangalore)	R&D	100.0
	Samsung R&D Institute Bangladesh Limited (SRBD)	R&D	100.0
	Samsung Nepal Services Pvt. Ltd. (SNSL)	Service	100.0
	Samsung Japan Corporation (SJC)	Sale of semiconductor and display panels	100.0
	Samsung R&D Institute Japan Co., Ltd. (SRJ)	R&D	100.0

Region	Subsidiaries	Business	Percentage of ownership (%) [*]
	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

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

Region	Subsidiaries	Business	Percentage of ownership (%) ^(*)
	Samsung (CHINA) Investment Co., Ltd. (SCIC)	Sale of electronic devices	100.0
	Samsung Electronics Hong Kong Co., Ltd. (SEHK)	Sale of electronic devices	100.0
	Samsung Electronics Taiwan Co., Ltd. (SET)	Sale of electronic devices	100.0
	Tianjin Samsung Electronics Co., Ltd. (TSEC)	Manufacture of TV and monitors	91.2
	Suzhou Samsung Electronics Co., Ltd. (SSEC)	Manufacture of home appliances	88.3
	Samsung Suzhou Electronics Export Co., Ltd. (SSEC-E)	Manufacture of home appliances	100.0
	Samsung Electronics Suzhou Computer Co., Ltd. (SESC)	R&D	100.0
	Tianjin Samsung Telecom Technology Co., Ltd. (TSTC)	Manufacture of communication equipment	90.0
	Beijing Samsung Telecom R&D Center (SRC-Beijing)	R&D	100.0
	Samsung Electronics China R&D Center (SRC-Nanjing)	R&D	100.0
	Samsung Mobile R&D Center China-Guangzhou (SRC-Guangzhou)	R&D	100.0
	Samsung R&D Institute China-Shenzhen (SRC-Shenzhen)	R&D	100.0
	Shanghai Samsung Semiconductor Co., Ltd. (SSS)	Sale of semiconductor and display panels	100.0
	Samsung (China) Semiconductor Co., Ltd. (SCS)	Manufacture of semiconductors	100.0
China	Samsung SemiConductor Xian Co., Ltd. (SSCX)	Sale of semiconductor and display panels	100.0
	Samsung Electronics Suzhou Semiconductor Co., Ltd. (SESS)	Toll processing of semiconductors	100.0
	Tianjin Samsung LED Co., Ltd. (TSLED)	Manufacture of LED	100.0
	Samsung Semiconductor (China) R&D Co., Ltd. (SSCR)	R&D	100.0
	Samsung Display Dongguan Co., Ltd. (SDD)	Manufacture of display panels	100.0
	Samsung Display Tianjin Co., Ltd. (SDT)	Manufacture of display panels	95.0
	SEMES (XIAN) Co., Ltd.	Semiconductor/FPD equipment services	100.0
	Samsung Semiconductor Investment L.P.I	Venture capital investment fund	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

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

Region	Subsidiaries	Business	Percentage of ownership (%) ^(*)	
	Samsung Display Co., Ltd.	Manufacture and sale of display panels	84.8	
	SU Materials	Manufacture of display panel components	50.0	
	STECO Co., Ltd.	Manufacture of semiconductor components	70.0	
	SEMES Co., Ltd.	Manufacture and sale of semiconductor/FPD	91.5	
	Samsung Electronics Service Co., Ltd.	Repair services for electronic devices	99.3	
	Samsung Electronics Service Customer Satisfaction Co., Ltd.	Call center for repair services for electronic devices	100.0	
	Samsung Electronics Sales Co., Ltd.	Sale of electronic devices	100.0	
	Samsung Electronics Logitech Co., Ltd.	General logistics agency	100.0	
	Samsung Medison Co., Ltd.	Manufacture and sale of medical equipment	68.5	
	Stella Forest of Hope	Manufacture of food	100.0	
	Mirero System Co., Ltd.	Development and supply of semiconductor process defect and quality control software	99.9	
	Dowoinsys Co., Ltd.	Manufacture of display panel components	69.0	
	Gf-System Co., Ltd.	Manufacture of display panel components	100.0	
	Harman International Korea	Software development and supply	100.0	
Domestic	Samsung Venture Capital Union #21	Venture capital investment fund	99.0	
	Samsung Venture Capital Union #22	Venture capital investment fund	99.0	
	Samsung Venture Capital Union #26	Venture capital investment fund	99.0	
	Samsung Venture Capital Union #28	Venture capital investment fund	99.0	
	Samsung Venture Capital Union #29	Venture capital investment fund	99.0	
	Samsung Venture Capital Union #32	Venture capital investment fund	99.0	
	Samsung Venture Capital Union #33	Venture capital investment fund	99.0	
	Samsung Venture Capital Union #37	Venture capital investment fund	99.0	
	Samsung Venture Capital Union #40	Venture capital investment fund	99.0	
	Samsung Venture Capital Union #42	Venture capital investment fund	99.0	
	Samsung Venture Capital Union #43	Venture capital investment fund	99.0	
	Samsung Venture Capital Union #45	Venture capital investment fund	99.0	
	Samsung Venture Capital Union #48	Venture capital investment fund	99.0	
	Samsung Venture Capital Union #52	Venture capital investment fund	99.0	
	Samsung Venture Capital Union #55	Venture capital investment fund	99.0	
	Samsung Venture Capital Union #56	Venture capital investment fund	99.0	
	Samsung Venture Capital Union #57	Venture capital investment fund	99.0	
	Samsung Venture Capital Union #62	Venture capital investment fund	99.0	
		Growth Type Private Equity Trust Specialized in Semiconductors	Investment in semiconductor industry	66.7
		System LSI Mutual Benefit Private Equity Trust	Investment in semiconductor industry	62.5
		Semiconductor Ecosystem Private Equity Trust	Investment in semiconductor industry	66.7

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

1.3 Summary of Financial Data of Major Consolidated Subsidiaries

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

(1) 2023

(In millions of Korean won)

Major subsidiaries ^{(*)1}	As of December 31, 2023		For the year ended December 31, 2023	
	Assets	Liabilities	Sales	Profit (loss) for the year
Samsung Display Co., Ltd.	65,328,568	7,266,213	27,083,336	8,268,314
Samsung Electronics America, Inc. (SEA)	41,926,899	15,322,780	39,551,809	477,338
Samsung Asia Pte. Ltd. (SAPL)	22,234,942	282,614	-	14,140,195
Harman and its subsidiaries ^{(*)2}	17,956,557	6,009,675	14,367,766	896,384
Samsung Austin Semiconductor LLC. (SAS)	16,714,945	7,791,914	4,109,744	301,778
Samsung (China) Semiconductor Co., Ltd. (SCS)	15,808,283	870,453	8,693,788	877,892
Samsung Semiconductor, Inc. (SSI)	12,796,440	6,276,293	23,465,031	136,458
Samsung Electronics Vietnam THAINGUYEN Co., Ltd. (SEVT)	12,554,481	3,593,527	30,639,349	2,240,480
Samsung (CHINA) Investment Co., Ltd. (SCIC)	10,222,557	8,797,991	3,148,858	189,887
Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	9,660,481	4,585,806	-	103,387
Samsung India Electronics Private Ltd. (SIEL)	7,738,259	3,373,730	15,216,331	1,153,256
Samsung Display Vietnam Co., Ltd. (SDV)	7,383,485	1,570,459	24,200,246	1,143,824
Samsung Electronics Vietnam Co., Ltd. (SEV)	7,301,860	2,215,062	20,154,119	1,476,382
Samsung Eletronica da Amazonia Ltda. (SEDA)	5,542,627	1,587,911	7,222,304	333,812
Shanghai Samsung Semiconductor Co., Ltd. (SSS)	5,262,086	4,552,030	15,649,307	244,210
Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	4,043,677	843,736	6,152,983	402,418
Thai Samsung Electronics Co., Ltd. (TSE)	3,039,379	640,512	4,213,492	150,510
Samsung Electronics (UK) Ltd. (SEUK)	2,902,722	1,976,067	5,859,133	185,113
SEMES Co., Ltd.	2,187,919	659,607	2,502,143	58,754
Samsung Electronics Mexico S.A. De C.V. (SEM)	2,153,032	1,038,115	3,638,080	148,873
Samsung Electronics GmbH (SEG)	2,097,706	2,033,152	6,374,670	(3,157)
Samsung International, Inc. (SII)	1,879,442	383,763	6,553,383	141,226
Samsung Electronics Taiwan Co., Ltd. (SET)	1,797,627	1,139,056	4,108,479	56,467
Samsung Electronics Benelux B.V. (SEBN)	1,794,552	639,120	2,833,717	140,313
Samsung Electronics Europe Logistics B.V. (SELS)	1,639,004	1,443,005	15,462,852	4,984

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

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

(2) 2022

(In millions of Korean won)

Major subsidiaries ^(*)	As of December 31, 2022		For the year ended December 31, 2022	
	Assets	Liabilities	Sales	Profit (loss) for the year
Samsung Display Co., Ltd.	57,302,567	7,282,718	30,779,405	4,365,588
Samsung Electronics America, Inc. (SEA)	37,883,156	12,258,315	46,738,920	219,670
Samsung Asia Pte. Ltd. (SAPL)	26,894,611	2,678,285	-	8,699,679
Harman and its subsidiaries ^(**)	17,102,324	6,380,456	13,211,151	631,019
Samsung (China) Semiconductor Co., Ltd. (SCS)	17,095,000	2,970,835	9,679,757	638,385
Samsung Electronics Vietnam THAINGUYEN Co., Ltd. (SEVT)	15,718,299	2,358,140	36,336,963	2,721,701
Samsung (CHINA) Investment Co., Ltd. (SCIC)	13,830,988	9,764,636	2,865,831	257,878
Samsung Semiconductor, Inc. (SSI)	12,199,102	5,930,369	43,009,331	88,467
Samsung Electronics Vietnam Co., Ltd. (SEV)	10,931,037	1,408,387	23,667,565	1,646,165
Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	10,841,515	6,272,800	-	57,997
Samsung Austin Semiconductor LLC. (SAS)	9,301,017	828,494	3,663,909	208,879
Samsung Display Vietnam Co., Ltd. (SDV)	7,471,680	1,608,448	25,773,970	1,301,926
Samsung India Electronics Private Ltd. (SIEL)	6,772,537	3,571,863	16,180,492	508,510
Shanghai Samsung Semiconductor Co., Ltd. (SSS)	5,067,891	2,858,382	21,370,622	318,578
Samsung Eletronica da Amazonia Ltda. (SEDA)	4,600,508	1,342,517	7,485,104	(38,490)
Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	3,732,057	980,448	6,253,401	386,119
Thai Samsung Electronics Co., Ltd. (TSE)	3,263,473	486,820	4,824,734	168,524
Samsung Electronics (UK) Ltd. (SEUK)	2,819,792	1,708,064	5,929,357	243,396
Samsung Electronics Benelux B.V. (SEBN)	2,377,730	597,044	2,834,008	25,411
Samsung Electronics Hungarian Private Co. Ltd. (SEH)	2,374,317	452,628	3,935,745	199,742
Samsung Electronics Europe Logistics B.V. (SELS)	2,194,975	2,021,491	15,409,984	20,347
Samsung Display Dongguan Co., Ltd. (SDD)	2,135,132	265,835	2,556,608	111,643
SEMES Co., Ltd.	2,065,558	602,323	2,889,238	185,762
Samsung Electronics GmbH (SEG)	1,968,273	1,907,132	6,567,011	3,695
Samsung Electronics Mexico S.A. De C.V. (SEM)	1,816,895	996,002	3,270,016	110,386

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

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

1.4 Changes in Consolidation Scope

Changes in consolidation scope during the year ended December 31, 2023 are as follows:

Change	Area	Subsidiary	Description
Included	Domestic	Samsung Venture Capital Union #62	Establishment
		Semiconductor Ecosystem Private Equity Trust	Establishment
	America	Samsung Federal, Inc. (SFI)	Establishment
		Samsung Display America Holdings, Inc. (SDAH)	Establishment
		eMagin Corporation	Acquisition
Excluded	America	Roon Labs, LLC.	Acquisition
		Dacor Holdings, Inc.	Merger
	Dacor, Inc.	Merger	
	Europe & CIS	Red Bend Software Ltd.	Liquidation
		Harman Finance International GP S.a.r.l	Liquidation
Harman Finance International, SCA		Liquidation	
		Harman Automotive UK Limited	Liquidation

2. Material Accounting Policies

The followings are material accounting policies applied on financial statements. Unless mentioned otherwise, these policies are consistent throughout the accounting periods denoted.

2.1 Basis of Presentation

The Company's financial statements have been written in accordance with the Korean International Financial Reporting Standards ("Korean IFRS"). The Korean IFRS refers to standards selected by the Republic of Korea among accounting standards and interpretations published by International Accounting Standards Board (IASB).

The Korean IFRS permits application of material accounting estimates on the financial statements and requires management's judgements in applying accounting policies. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are material to the financial statements are disclosed in Note 3.

2.2 Changes in Accounting Policies and Disclosures

(A) New and amended standards adopted by the Company

The Company applied the following amended standards for the first time for the annual reporting period commencing on January 1, 2023:

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

The amendments replace the term ‘significant’ accounting policy information with ‘material’ accounting policy and clarify its meaning. These amendments do not result in a change in accounting policy but affects the accounting policy information disclosed in the consolidated financial statements. In addition, IFRS Practice Statement 2, *Making Materiality Judgments* has been amended to provide guidance on the application of the concept of materiality. The Company has adopted the amendments to the standard and discloses the Company’s material accounting policies in Note 2.

Amendments to Korean IFRS 1008, *Accounting Policies, Changes in Accounting Estimates and Errors*

The amendments clarify how accounting estimates are defined and distinguished from changes in accounting policies. The adoption of the amendments does not have a significant impact on the Company’s consolidated financial statements.

Amendments to Korean IFRS 1012, *Income Tax*

The amendments add to a condition 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 adoption of the amendments does not have a significant impact on the Company’s consolidated financial statements.

Amendments to Korean IFRS 1012, *Income Tax*

The amendments clarify that Korean IFRS 1012, *Income Taxes*, applies to income taxes arising from tax law enacted or substantively enacted to implement the Pillar Two Model Rules issued by the Organization for Economic Co-operation and Development (OECD). However, a temporary exemption from the requirements of Korean IFRS 1012, *Income Taxes*, has been adopted to allow the Company to neither recognize nor disclose deferred tax assets and liabilities relating to Pillar Two income taxes.

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

The amended accounting standards that have been issued but not yet effective for the annual reporting period commencing on January 1, 2023 which have not been early adopted by the Company are as follows:

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

The amendments to Korean-IFRS 1001 clarify that the classification of liabilities as current or non-current should be based on rights that are in existence at the end of the reporting period and that the classification is unaffected by management’s intentions or expectations about whether an entity will exercise its right to defer settlement of a liability. The amendments also introduce a definition of settlement to make clear that settlement includes the transfer to the counterparty of the entity’s own equity instruments, however, it would be excluded if an option to settle the liability by the transfer of the entity’s own equity instruments is recognized separately from the liability as an equity component of a compound financial instrument. The amendments are applied for annual periods beginning on or after January 1, 2024, with early application permitted.

Amendments to Korean IFRS 1116, *Leases*

The amendments add requirements for the subsequent measurement of sale-and-leaseback transactions that are accounted for as sales in accordance with Korean IFRS 1115, *Revenue from Contracts with Customers*. The amendments require the seller-lessee to calculate the ‘lease payments’ or ‘revised lease payments’ in a way that does not result in the seller-lessee recognizing any gain or loss for the rights of use that the seller-lessee continues to retain after the lease commences. The amendments are effective for annual reporting periods beginning on or after January 1, 2024, with early application permitted.

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

The amendments add to the disclosure objectives in Korean IFRS 1007, *Statement of Cash Flows*, that information about supplier financing arrangements should be disclosed to enable users of financial statements to assess the impact of those arrangements on the Company’s liabilities and cash flows. The amendments also amend Korean IFRS 1107, *Financial Instruments: Presentation*, to add

supplier financing arrangements as an example of a requirement to disclose information about an entity's exposure to concentrations of liquidity risk.

The amendments are effective for annual reporting periods beginning on or after January 1, 2024, and include specific transitional provisions for the first annual period in which they are applied. Early application is permitted.

2.3 Consolidation

The Company prepares its consolidated financial statements in accordance with Korean IFRS 1110, *Consolidated Financial Statements*.

(A) Non-controlling interests

Each component of profit or loss and other comprehensive income is attributable to the owners of the parent and the non-controlling interests, and total comprehensive income is attributable to the owners of the parent and the non-controlling interests, even if the non-controlling interests have a negative balance.

(B) Elimination of intercompany transactions

Intercompany transactions, balances, income and expenses and unrealized gains and losses (excluding foreign exchange gains and losses) are eliminated on consolidation. The Company's share of unrealized losses on transactions with associates accounted for using the equity method are eliminated in the same way as unrealized gains unless there is evidence of impairment of the asset.

2.4 Functional and Presentation Currency

(A) Functional and presentation currency

The Company measures the items included in the financial statements of each component using the currency of the primary economic environment in which each it operates ("functional currency"). The functional currency of the parent company is Korean won (KRW) and the consolidated financial statements are presented in Korean won (KRW).

(B) Translation into the presentation currency

The results and financial position of all entities subjected to consolidation that have a functional currency different from the parent's presentation currency are translated into the parent's presentation currency as follows:

- (1) Assets and liabilities are translated at the closing rate at the end of the reporting date.
- (2) Income and expenses in the statement of profit or loss are translated at average exchange rates for the period.
However, if this average rate is not a reasonable approximation of the cumulative effect of the exchange rates at the dates of the transactions, the transactions are translated at the exchange rates at the dates of transactions.
- (3) Exchange differences arising on translation in (1) and (2) above are recognized in other comprehensive income.

2.5 Cash and Cash Equivalents

Cash and cash equivalents include cash on hand, deposits held at call with banks, and highly liquid short-term investment assets that are readily convertible to known amounts of cash at the date of acquisition and which are subject to an insignificant risk of changes in value.

2.6 Financial Assets

(A) Classification

Financial instruments are classified based on the business model for managing the financial assets and the contractual cash flow characteristics of the financial asset. The Company considers the contractual terms of the relevant financial instrument and assesses whether the contractual cash flows consist solely of payments of principal and interest on the principal amount outstanding.

(B) Impairment

The Company assesses the expected credit losses of debt instruments carried at amortized cost or fair value through other comprehensive income on a forward-looking basis. However, the Company applies the simplified approach for trade receivables, which requires expected credit losses to be recognized over the life of the receivable from initial recognition.

2.7 Trade Receivables

Trade receivables are recognized at initial transaction price, unless they contain a significant financing component, and are subsequently measured at amortized cost using the effective interest method less any allowance for impairment.

2.8 Inventories

The Company determines the unit cost of inventories, except for materials in transit, using the average cost method. The cost of finished goods and work in progress comprises raw materials, direct labor, other direct costs and related production overheads based on normal operating capacity, excluding the cost of idle production equipment and scrapping costs.

The Company measures inventories at the lower of cost and net realizable value. Net realizable value is the estimated selling price in the ordinary course of business less the applicable variable selling expenses, and reflects the decrease in selling price, the increase in costs to completion, or decrease in value due to excess or obsolete inventory.

2.9 Property, Plant and Equipment

Depreciation of property, plant and equipment begins when assets are considered by management to be available for their intended use, such as in the production of products.

The Company's property, plant and equipment is depreciated on a straight-line method over the estimated useful lives of the assets, less any residual values. Land is not depreciated. Costs that are directly attributable to the acquisition, construction of a qualifying asset, including capitalized interest costs, are depreciated over the estimated useful lives.

The estimated useful lives of property, plant and equipment used by the Company for each asset category are as follows:

	<u>Estimated useful lives</u>
Buildings and structures	15, 30 years
Machinery and equipment	5 years
Other	5 years

2.10 Intangible Assets

Goodwill represents the excess of the cost of an acquisition over the fair value of the identifiable net assets of subsidiaries, associates and joint ventures, businesses and other entities acquired at the date of acquisition and is recognized as an intangible assets in respect of acquisitions of businesses of subsidiaries and as an investment in associates and joint ventures in respect of acquisitions of interests in associates and joint ventures.

Intangible assets, other than goodwill, are initially recognized at their historical cost and are subsequently stated at cost less accumulated amortization and accumulated impairment losses.

Membership rights are regarded as intangible assets with indefinite useful life and not amortized as there are no foreseeable restrictions on their use. However, whenever there is an indication of impairment, such as a decline in the market value of membership rights, a reasonable estimate is made to reflect the impairment. Intangible assets with finite useful lives, such as patents, trademarks and other intangible assets, are amortized on a straight-line method over their estimated useful lives.

The estimated useful lives of intangible assets used by the Company are as follows:

	<u>Estimated useful lives</u>
Patents, trademarks and other intangible assets	3 - 25 years

2.11 Financial Liabilities

The Company classifies financial liabilities into financial liabilities at fair value through profit or loss and other financial liabilities and recognizes them on the consolidated statement of financial position when the Company becomes a party to a contract, depending on the substance of the contractual terms.

2.12 Employee Benefits

The Company operates various types of post-employment benefit plans, including defined benefit plans and defined contribution plans. The defined benefit liability (asset) recognized in the consolidated statement of financial position in respect of defined benefit plans is the present value of the defined benefit obligation at the reporting date less the fair value of plan assets, less any deficit (excess of plan assets over the asset recognition threshold) and is calculated annually by an independent actuary using the projected unit credit method.

2.13 Income Tax Expense

The Company applies the exemption to the recognition and disclosure of deferred tax assets and liabilities related to the Pillar Two Model Rules of OECD. Furthermore, as the relevant legislation will be effective from January 1, 2024, the Company has not recognized any current tax expense related to Pillar Two in the fiscal year ended December 31, 2023.

The Company recognizes deferred tax liabilities for taxable temporary differences associated with investments in subsidiaries, associates and joint ventures, except where the Company is able to control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets are recognized for deductible

temporary differences arising on these assets only to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable profit will be available against which the temporary differences can be utilized.

2.14 Derivative Instruments

The Company recognizes its rights and obligations under derivative contracts as assets and liabilities at fair value and records gains and losses on these contracts in the statement of profit or loss. However, effective portion of changes in the fair value of cash flow hedges are deferred in equity.

The Company applies cash flow hedge accounting for hedges of risks including changes in the price of inventories. The effective portion of the change in fair value of a derivative that is designated as a cash flow hedge is recognized in other comprehensive income, while the ineffective portion is recognized in 'financial income' or 'financial expense'.

2.15 Revenue Recognition

The Company's revenue primarily represents the fair value of the consideration received or receivable for the sale of goods in the ordinary course of the Company's activities. Revenue is net of value-added tax, returns, sales incentives, discounts and others.

(A) Identification of performance obligations

The Company is required to transfer control of goods and services under contracts with customers. For the export of products and goods under Incoterms Group C terms (such as CIF), the Company recognize the transportation services (including insurance) provided after the control of the goods has passed to the customer as a separate performance obligation.

(B) Performance obligations satisfied at a point of time

The Company's revenue is primarily derived from the sale of goods and is recognized when control of the goods passes to the customer.

(C) Performance obligations satisfied over time

The Company recognizes revenue over time for sales of software, transportation services, installation services, and etc. where the customer has direct control over the outcome during the performance of the service.

(D) Variable consideration

The Company provides a variety of sales promotions including incentives, promotion and sales allowances. Where these sales promotion policies result in variability in the consideration promised to customers, the Company estimates the variable consideration using either the expected value or the most likely amount whichever method the Company expects to better predict the amount of consideration to which it will be entitled. The estimate of variable consideration is included in transaction price only to the extent that it is highly probable that a significant portion of the cumulative revenue already recognized will not be reversed. Revenue and contract liabilities are recognized when the related revenue is earned or when the decision to pay the variable consideration to the customer is made, whichever is later.

The Company recognizes contract liabilities (refund liabilities) after the sale of products to customers by estimating the return rate using the expected value methods based on historical experience. When the customer exercises its right to return the product, the Company recognizes the asset as a refund asset and adjusts cost of sales by the amount of the right to collect the product from the customer. The right to collect the product is measured by deducting the cost of collecting the product from the historical carrying amount of the product.

2.16 Leases

(A) Lessee accounting

The Company applies the practical expedient of Korean IFRS 1116, *Leases*, and does not separate the non-lease elements from the lease elements and accounts for the non-lease elements relating to each lease element as a single lease element.

At the commencement date of a lease, the Company recognizes a right-of-use asset (the lease asset) representing the right to use the underlying asset and a lease liability representing the obligation to make lease payments. The right-of-use asset is presented in the consolidated statement of financial position as 'property, plant and equipment' and the lease liability is presented as 'current portion of long-term liabilities' or 'long-term borrowings.'

Lease liabilities are measured at the inception of the lease at the present value of the lease payments outstanding at that date, discounted at the Company's incremental borrowing rate.

For short-term leases (lease terms of 12 months or less at the inception of the lease) and low value assets (underlying assets of USD 5,000 or less), lease payments are recognized as expenses on a straight-line basis over the lease term applying the simplified practical expedient.

(B) Lessor accounting

The Company, as a lessor, determines whether a lease is a finance or an operating lease at the inception of the lease.

Leases that transfer substantially all the risk and rewards of ownership of the leased assets are classified as finance leases and all leases other than finance leases are classified as operating leases. Lease income from operating leases is recognized on a straight-line basis over the lease term, while initial direct costs incurred during the negotiation and contracting phase of an operating lease are added to the carrying amount of the leased asset and expensed over the lease term against the lease income.

2.17 Government Grants

Government grants relating to revenues are deferred and recognized in the consolidated statement of profit or loss in the same period in which they are matched with revenues or expenses related to the purpose for which the grant was made. Government grants received related to the acquisition of assets are treated as deferred income and credited to the consolidated statement of profit or loss over the useful lives of the related assets.

2.18 Convenience Translation into United States Dollar Amounts

The US dollar amounts provided in the consolidated financial statements represent supplementary information solely for the convenience of the reader. All Korean won amounts are expressed in US dollar at the rate of ₩ 1,306.1 to \$1, the average exchange rate for the year ended December 31, 2023. 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 any other rate.

2.19 Approval of the Consolidated Financial Statements

The consolidated financial statements of the Company were approved by the Board of Directors on January 31, 2024, and may be approved as amended at the Annual General Shareholders' Meetings.

3. Material Accounting Estimates and Assumptions

The Company makes estimates and assumptions concerning the future. Estimates and assumptions are continuously evaluated and are based on historical experience and future events that are reasonably foreseeable under the circumstances. These estimates may differ from actual results. The estimates and assumptions that have the most significant risk of causing a material adjustment to the carrying amounts of assets and liabilities in the next financial year are as follows.

(A) Revenue recognition

The Company recognizes a liability for a product return and a right to the returned goods that are expected to be returned by customers following the sale of products to customers. At the point of sale, the Company estimates the return using the expected value method based on accumulated experience at the portfolio level and the Company's revenue is affected by changes in the expected return.

Revenue from the sale of goods recognized at the point of transfer of control is the contractual consideration less consideration paid to customers in relation to certain sales promotion activities. Based on the historical experience and terms of contracts, the Company makes reasonable estimates of the sales deductions which affect the Company's revenue

(B) Provision for warranty

The Company provides warranties for products sold. At the end of each reporting period, the Company recognizes a provision for warranties based on its best estimate of the amount it believes is necessary to provide for future and current warranty obligations. These best estimates are based on historical experience.

(C) Fair value of financial instruments

The fair value of financial instruments that are not traded in an active market is determined by using various valuation techniques and assumptions based on market conditions prevailing at the end of each reporting period.

(D) Impairment of financial assets

In measuring the allowance for impairment losses on financial assets, the Company make assumptions about the risk of default and expected credit rates. In making these assumptions and selecting the inputs for the impairment calculations, the Company makes judgment based on past experience and current and forecast of future economic conditions at the reporting date.

(E) Lease

In determining the lease term, the Company considers all relevant facts and circumstances that provide an economic incentive to exercise a renewal option, or not to exercise a termination option. The period covered by the renewal option (or the period covered by the termination option) is included in the lease term only if it is reasonably certain that the lessee will exercise (or not exercise) the renewal option.

The lease term is reassessed when the option is actually exercised (or not exercised) or when the Company becomes committed to exercise (or not exercise) the option. The Company only changes its assessment of whether it is reasonably certain the renewal option will be exercised (or not) if there is a significant event or change in circumstances within the lessee's control that affects the calculation of the lease term.

(F) Net defined benefit liabilities (assets)

The net defined benefit liabilities (assets) are dependent on a number of factors which are determined using actuarial methods based on a number of assumptions. Among the assumptions used to determine the net defined benefit liabilities (assets) is the discount rate, and changes in these assumptions will affect the carrying amount of the net defined benefit liability (asset). At the end of each year the Company determines an appropriate discount rate, taking into account the interest rates on high-quality corporate bonds, which represents the interest rate that should be used to determine the present value of the estimated future cash outflows expected to be required to settle the net defined benefit liability (asset). Some key assumptions relating to the net defined benefit liability (asset) are based on current market conditions.

(G) Impairment of goodwill and intangible assets that have indefinite useful life

The Company tests goodwill and intangible assets with indefinite useful life for impairment annually. The recoverable amount of a cash-generating unit or asset, including goodwill, is determined based on a value-in-use calculation. These calculations are based on estimates.

(H) Income taxes

Income taxes on the Company's taxable income are calculated by applying tax laws and decisions of tax authorities in various countries, and, therefore, there is uncertainty in determining the final tax effect. The Company has recognized current and deferred tax based on its best estimate of the tax consequences expected to be payable in future periods as a result of the Company's operating activities up to the reporting date. However, the actual future final tax liability may not be consistent with the related assets and liabilities recognized, and such differences may affect the current and deferred tax assets and liabilities when the final tax effect is determined.

The Company is subject to additional income taxes, calculated in accordance with the method prescribed by tax laws, when a certain amount is not used for investment, wage growth, etcetera, in a given period. The related tax effect is reflected in the measurement of current and deferred income taxes for the period, and the amount of income tax payable by the Company depends on the level of investment, wage growth, etcetera in each year, resulting in uncertainty in determining the final tax effects.

The Company assesses uncertainty over its tax positions and, if the Company concludes that it is not probable that the tax authorities will accept a uncertain tax position, the effect of the uncertainty is recognized in the consolidated financial statements for each uncertain tax position using the method that is expected to provide a better estimate of the resolution of the uncertainty, which is more likely of the following methods.

- (1) Most likely amount: the single most probable amount within a range of possible outcomes.
- (2) Expected value: the sum of the probability-weighted amounts in a range of possible outcomes.

4. Financial Instruments by Category

(A) Categorizations of financial assets and liabilities as of December 31, 2023 and 2022 are as follows:

(1) As of December 31, 2023

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

(*)Other financial assets include derivatives designated as hedging instruments.

<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 liabi lities ^(*)	Total
Financial liabilities				
Trade payables	11,319,824	-	-	11,319,824
Short-term borrowings	504,552	-	6,610,049	7,114,601
Other payables	13,996,395	-	-	13,996,395
Current portion of long-term liabilities	310,436	-	998,439	1,308,875
Debentures	537,618	-	-	537,618
Long-term borrowings	-	-	3,724,850	3,724,850
Long-term other payables	4,907,875	-	-	4,907,875
Other	11,330,545	49,904	33,559	11,414,008
Total	42,907,245	49,904	11,366,897	54,324,046

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

(2) As of December 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 assets^(*)	Total
Financial assets					
Cash and cash equivalents	49,680,710	-	-	-	49,680,710
Short-term financial instruments	65,102,886	-	-	-	65,102,886
Short-term financial assets at amortized cost	414,610	-	-	-	414,610
Short-term financial assets at fair value through profit or loss	-	-	29,080	-	29,080
Trade receivables	35,721,563	-	-	-	35,721,563
Financial assets at fair value through other comprehensive income	-	11,397,012	-	-	11,397,012
Financial assets at fair value through profit or loss	-	-	1,405,468	-	1,405,468
Other	9,945,209	-	334,263	61,404	10,340,876
Total	160,864,978	11,397,012	1,768,811	61,404	174,092,205

(*) Other financial assets include derivatives designated as hedging instruments.

<i>(In millions of Korean won)</i>	Financial liabilities measured at amortized cost	Financial liabilities measured at fair value through profit or loss	Other financial liabilities^(*)	Total
Financial liabilities				
Trade payables	10,644,686	-	-	10,644,686
Short-term borrowings	1,577,958	-	3,569,357	5,147,315
Other payables	16,328,237	-	-	16,328,237
Current portion of long-term liabilities	215,143	-	874,019	1,089,162
Debentures	536,093	-	-	536,093
Long-term borrowings	33,846	-	3,526,826	3,560,672
Long-term other payables	2,289,236	-	-	2,289,236
Other	12,047,761	334,415	27,353	12,409,529
Total	43,672,960	334,415	7,997,555	52,004,930

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

(B) Net gains or losses on each category of financial assets and liabilities for the years ended December 31, 2023 and 2022 are as follows:

(1) 2023

<i>(In millions of Korean won)</i>	Financial assets measured at amortized cost	Financial assets measured at fair value through other comprehensive income	Financial assets measured at fair value through profit or loss	Other financial assets^(*)	Total
Financial assets					
Gain on valuation (other comprehensive income)	-	1,481,091	-	58,290	1,539,381
Gain (loss) on valuation/disposal (profit or loss)	(64,758)	-	213,308	436	148,986
Reclassification from other comprehensive income to profit or loss	-	-	-	1,169	1,169
Interest income	4,357,792	-	230	-	4,358,022
Foreign exchange differences (profit or loss)	(98,522)	-	-	-	(98,522)
Dividend income	-	161,509	2,694	-	164,203
Impairment/reversal (profit or loss)	(74,594)	-	-	-	(74,594)

(*) Other financial assets include derivatives designated as hedging instruments.

<i>(In millions of Korean won)</i>	Financial liabilities measured at amortized cost	Financial liabilities measured at fair value through profit or loss	Other financial liabilities^(*)	Total
Financial liabilities				
Loss on valuation (other comprehensive income)	-	-	(16,809)	(16,809)
Loss on valuation/disposal (profit or loss)	-	(116,167)	(126)	(116,293)
Reclassification from other comprehensive income to profit or loss	-	-	(337)	(337)
Interest expense	(510,865)	-	(419,388)	(930,253)
Foreign exchange differences (profit or loss)	162,844	-	61,920	224,764

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

(2) 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 assets^(*)	Total
Financial assets					
Gain (loss) on valuation (other comprehensive income)	-	(1,969,498)	-	53,180	(1,916,318)
Gain (loss) on valuation/disposal (profit or loss)	(36,550)	-	83,332	474	47,256
Reclassification from other comprehensive income to profit or loss	-	-	-	310	310
Interest income	2,720,213	-	266	-	2,720,479
Foreign exchange differences (profit or loss)	(822,011)	-	-	-	(822,011)
Dividend income	-	413,467	1,134	-	414,601
Impairment/reversal (profit or loss)	(19,124)	-	-	-	(19,124)

^(*)Other financial assets include derivatives designated as hedging instruments.

<i>(In millions of Korean won)</i>	Financial liabilities measured at amortized cost	Financial liabilities measured at fair value through profit or loss	Other financial liabilities^(*)	Total
Financial liabilities				
Loss on valuation (other comprehensive loss)	-	-	(10,621)	(10,621)
Loss on valuation/disposal (profit or loss)	-	(91,056)	(45)	(91,101)
Reclassification from other comprehensive income to profit or loss	-	-	59	59
Interest expense	(322,529)	-	(440,486)	(763,015)
Foreign exchange differences (profit or loss)	574,771	-	155,952	730,723

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

5. Transfer of Financial Assets

The Company discounted trade receivables through factoring arrangements with banks during the years ended December 31, 2023 and 2022. Trade receivables provided as collaterals in factoring transactions have not been derecognized as they do not meet the requirements for derecognition of financial assets as the Company retains substantially all the risks and rewards, including the recourse in the event of default by the debtor. Financial liabilities recognized in these transactions are classified as ‘short-term borrowings’ on the consolidated statement of financial position (refer to Note 12).

The carrying amount of the discounted trade receivables and the associated liabilities as of December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	December 31, 2023	December 31, 2022
Carrying amount of the discounted trade receivables (*)	6,610,049	3,569,357
Carrying amount of the associated liabilities	6,610,049	3,569,357

(*) Discounted trade receivables includes trade receivables between consolidated entities.

6. Financial Assets at Fair Value

(A) Details of financial assets at fair value as of December 31, 2023 and 2022 are as follows:

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

<i>(In millions of Korean won)</i>	December 31, 2023	December 31, 2022
Non-current		
Equity instruments	7,481,297	11,397,012

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

<i>(In millions of Korean won)</i>	December 31, 2023	December 31, 2022
Current		
Debt instruments	27,112	29,080
Non-current		
Equity instruments	812,358	773,063
Debt instruments	619,036	632,405
Subtotal	1,431,394	1,405,468
Total	1,458,506	1,434,548

(B) Changes in financial assets at fair value for the years ended December 31, 2023 and 2022 are as follows:

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

<i>(In millions of Korean won)</i>	2023	2022
Balance as of January 1	11,397,012	13,965,839
Acquisition	124,897	35,013
Disposal	(5,918,616)	(20,913)
Fair value valuation gain (loss)	1,548,022	(2,636,448)
Other	329,982	53,521
Balance as of December 31	7,481,297	11,397,012

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

<i>(In millions of Korean won)</i>	2023	2022
Balance as of January 1	1,405,468	1,525,344
Acquisition	146,392	158,244
Disposal	(81,113)	(80,718)
Fair value valuation gain (loss)	(38,110)	(198,594)
Other	(1,243)	1,192
Balance as of December 31	1,431,394	1,405,468

(C) Changes in gain (loss) on valuation of financial assets at fair value through other comprehensive income for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Balance as of January 1	3,636,478	6,222,980
Fair value valuation gain (loss)	1,548,022	(2,636,448)
Reclassification to retained earnings due to disposals	(4,935,379)	49,946
Balance as of December 31	249,121	3,636,478
Income tax effects on equity	(54,702)	(887,369)
Total	194,419	2,749,109

(D) Details of listed equity securities of financial assets at fair value as of December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won, number of shares and percentage)</i>	December 31, 2023			December 31, 2022	
	Number of shares owned	Percentage of ownership ^(*) (%)	Acquisition cost	Carrying amount (Market value)	Carrying amount (Market value)
Samsung Heavy Industries Co., Ltd.	134,027,281	15.2	932,158	1,038,711	684,879
Hotel Shilla Co., Ltd.	2,004,717	5.1	13,957	131,108	166,592
iMarketKorea Inc.	647,320	1.9	324	5,560	6,538
SFA Engineering Corporation	2,100,000	5.8	22,050	63,840	132,642
Wonik Holdings Co., Ltd.	3,518,342	4.6	30,821	11,857	11,945
Wonik IPS Co., Ltd.	3,701,872	7.5	32,428	125,679	91,621
Wacom Co., Ltd.	8,398,400	5.3	62,013	50,358	46,750
Corning Incorporated	80,000,000	9.4	3,980,636	3,140,978	3,238,205
Other			561,530	1,030,123	5,142,573
Total			5,635,917	5,598,214	9,521,745

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

7. Trade and Non-Trade Receivables

(A) Trade and non-trade receivables as of December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	December 31, 2023		December 31, 2022	
	Trade	Non-trade	Trade	Non-trade
Receivables	37,026,738	7,474,967	36,238,032	7,051,536
Less: Loss allowance	(355,456)	(82,224)	(312,221)	(78,101)
Subtotal	36,671,282	7,392,743	35,925,811	6,973,435
Less: Non-current	(23,889)	(759,495)	(204,248)	(824,226)
Current	36,647,393	6,633,248	35,721,563	6,149,209

(B) Movements in the loss allowance for receivables for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023		2022	
	Trade	Non-trade	Trade	Non-trade
Balance as of January 1	312,221	78,101	310,880	72,805
Bad debt expense (reversal)	62,964	(297)	8,784	7,312
Write-off	(18,875)	(124)	(3,557)	(6,154)
Other	(854)	4,544	(3,886)	4,138
Balance as of December 31	355,456	82,224	312,221	78,101

(C) The details of trade and non-trade receivables classified by past due date for the purpose of measuring expected credit losses as of December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	December 31, 2023		December 31, 2022	
	Trade	Non-trade	Trade	Non-trade
Receivables not past due	33,633,006	7,077,413	33,177,298	5,890,018
Past due:				
Less than 31 days past due ^(*)	2,262,296	269,390	2,206,622	981,889
31 days to 90 days past due	478,371	15,369	642,859	52,972
More than 90 days past due	653,065	112,795	211,253	126,657
Subtotal	3,393,732	397,554	3,060,734	1,161,518
Total	37,026,738	7,474,967	36,238,032	7,051,536

(*) The Company does not consider the credit risk of non-trade receivables that are overdue for less than or equal to 31 days has been significantly increased.

(D) The maximum exposure to current credit risk is equivalent to the carrying amount of receivables as of December 31, 2023. The Company has entered into insurance contracts with insurers for its major receivables.

8. Inventories

Inventories as of December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	December 31, 2023			December 31, 2022		
	Gross amount	Valuation allowance	Carrying amount	Gross amount	Valuation allowance	Carrying amount
Finished goods	16,120,367	(1,567,353)	14,553,014	17,526,178	(1,493,952)	16,032,226
Work in process	26,501,664	(4,303,216)	22,198,448	21,612,965	(1,535,446)	20,077,519
Raw materials and supplies	15,222,937	(1,525,583)	13,697,354	16,268,974	(1,289,694)	14,979,280
Materials in transit	1,177,058	-	1,177,058	1,098,841	-	1,098,841
Total	59,022,026	(7,396,152)	51,625,874	56,506,958	(4,319,092)	52,187,866

Inventories recognized as an expense for the year ended December 31, 2023 amount to W 177,539,372 million (2022: W 186,396,549 million). The amount includes a loss on the valuation of inventories.

9. Investments in Associates and Joint Ventures

(A) Changes in investments in associates and joint ventures for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Balance as of January 1	10,893,869	8,932,251
Acquisition	78,690	1,006,998
Disposal	(33,464)	(20,894)
Share of profit	887,550	1,090,643
Other ^(*)	(59,201)	(115,129)
Balance as of December 31	11,767,444	10,893,869

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

(B) Major investments in associates and joint ventures as of December 31, 2023 are as follows:

(1) Investments in associates

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

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

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

(2) Investments in joint ventures

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

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

(C) Details of investments in associates and joint ventures as of December 31, 2023 and 2022 are as follows:

(1) Investments in associates

(In millions of Korean won)

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

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

(In millions of Korean won)

Investee	Acquisition cost	December 31, 2022	
		Net asset value of equity shares ^(*)	Carrying amount
Samsung Electro-Mechanics Co., Ltd.	359,237	1,765,507	1,764,249
Samsung SDS Co., Ltd.	147,963	1,857,481	1,870,338
Samsung Biologics Co., Ltd.	1,424,358	2,804,547	2,808,673
Samsung SDI Co., Ltd.	1,242,605	3,318,875	2,691,223
Cheil Worldwide, Inc.	506,162	347,510	649,161
Other	645,255	718,801	907,333
Total	4,325,580	10,812,721	10,690,977

(*) 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)

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

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

(In millions of Korean won)

Investee	Acquisition cost	December 31, 2022	
		Net asset value of equity shares ^(*)	Carrying amount
Samsung Corning Advanced Glass LLC	215,000	137,727	137,745
Other	259,994	67,632	65,147
Total	474,994	205,359	202,892

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

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

(1) For the year ended December 31, 2023

<i>(In millions of Korean won)</i>	Balance as of January 1	Share of profit	Share of other comprehensive income (loss)	Other^(*)	Balance as of December 31
Samsung Electro-Mechanics Co., Ltd.	1,764,249	106,455	7,844	(37,155)	1,841,393
Samsung SDS Co., Ltd.	1,870,338	154,282	(2,503)	(55,911)	1,966,206
Samsung Biologics Co., Ltd.	2,808,673	267,614	(2,692)	-	3,073,595
Samsung SDI Co., Ltd.	2,691,223	214,702	20,506	(13,867)	2,912,564
Cheil Worldwide, Inc.	649,161	53,690	(94)	(33,394)	669,363
Samsung Coming Advanced Glass LLC	137,745	1,336	(124)	(19)	138,938
Other	972,480	89,471	52,175	51,259	1,165,385
Total	10,893,869	887,550	75,112	(89,087)	11,767,444

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

(2) For the year ended December 31, 2022

<i>(In millions of Korean won)</i>	Balance as of January 1	Share of profit	Share of other comprehensive income (loss)	Other^(*)	Balance as of December 31
Samsung Electro-Mechanics Co., Ltd.	1,556,386	242,139	2,880	(37,156)	1,764,249
Samsung SDS Co., Ltd.	1,652,155	241,962	18,154	(41,933)	1,870,338
Samsung Biologics Co., Ltd.	1,577,664	250,028	(183)	981,164	2,808,673
Samsung SDI Co., Ltd.	2,529,650	194,242	(19,207)	(13,462)	2,691,223
Cheil Worldwide, Inc.	621,292	55,476	1,140	(28,747)	649,161
Samsung Coming Advanced Glass LLC	135,580	1,999	144	22	137,745
Other	859,524	104,797	(53,438)	61,597	972,480
Total	8,932,251	1,090,643	(50,510)	921,485	10,893,869

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

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

- (1) Summary of condensed financial information of major associates and dividends received from associates as of December 31, 2023 and 2022, and for the years ended December 31, 2023 and 2022 are as follows:

	2023				
	Samsung Electro-Mechanics Co., Ltd.	Samsung SDS Co., Ltd.	Samsung Biolistics Co., Ltd.	Samsung SDI Co., Ltd.	Cheil Worldwide, Inc.
<i>(In millions of Korean won)</i>					
1. Condensed financial information					
Condensed statements of financial position:					
Current assets	5,208,418	8,160,300	5,521,988	9,187,029	2,372,420
Non-current assets	6,449,453	4,160,724	10,524,209	24,851,831	517,085
Current liabilities	2,900,460	2,391,861	4,157,861	8,518,933	1,375,034
Non-current liabilities	727,087	953,592	2,057,844	5,612,677	216,707
Non-controlling interests	182,613	317,562	-	1,395,877	11,206
Condensed statements of comprehensive income:					
Revenue	8,909,348	13,276,844	3,694,589	22,708,300	4,138,275
Profit from continuing operations, net of tax ^(*)	430,839	693,422	857,691	2,009,207	187,302
Profit (loss) from discontinued operations, net of tax ^(*)	(7,883)	-	-	-	-
Other comprehensive income (loss) ^(*)	45,054	(11,085)	(11,673)	85,394	3,685
Total comprehensive income ^(*)	468,010	682,337	846,018	2,094,601	190,987
2. Reconciliation to the carrying amount of investments in associates					
Net assets (a)	7,847,711	8,658,009	9,830,492	18,511,373	1,286,558
Ownership percentage (b) ^(*)	23.4%	22.6%	31.2%	20.1%	28.7%
Net assets of equity shares (a x b)	1,837,925	1,955,699	3,068,636	3,726,675	368,875
Goodwill	7,081	26,801	3,645	-	298,779
Intercompany transactions and other ^(*)	(3,613)	(16,294)	1,314	(814,111)	1,709
Carrying amount of associates	1,841,393	1,966,206	3,073,595	2,912,564	669,363
3. Dividends from associates					
Dividends	37,155	55,911	-	13,867	33,394

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

(*) Ownership percentage includes ordinary and preference shares.

(*) Consists of unrealized gains and losses and other differences.

<i>(In millions of Korean won)</i>	Samsung Elec tro- Mechanics Co ., Ltd.	Samsung SDS C o., Ltd.	Samsung Biologics Co., Ltd.	Samsung SDI C o., Ltd.	Cheil Worldwi de, Inc.
1. Condensed financial information					
Condensed statements of financial position:					
Current assets	4,888,319	8,005,764	6,457,657	9,651,702	2,193,979
Non-current assets	6,108,852	3,946,660	10,124,394	20,605,823	557,466
Current liabilities	2,525,123	2,493,323	4,181,542	8,006,939	1,335,643
Non-current liabilities	778,563	992,132	3,416,034	5,033,084	194,373
Non-controlling interests	154,991	243,777	-	731,779	9,388
Condensed statements of comprehensive income:					
Revenue	9,441,276	17,234,750	3,001,295	20,124,070	4,253,367
Profit from continuing operations, net of tax ^(*)	1,009,739	1,099,745	798,056	1,952,149	193,732
Profit (loss) from discontinued operations, net of tax ^(*)	(29,187)	-	-	-	-
Other comprehensive income (loss) ^(*)	(2,215)	80,368	6,995	(139,877)	(1,122)
Total comprehensive income ^(*)	978,337	1,180,113	805,051	1,812,272	192,610
2. Reconciliation to the carrying amount of investments in associates					
Net assets (a)	7,538,494	8,223,192	8,984,475	16,485,723	1,212,041
Ownership percentage (b) ^(*)	23.4%	22.6%	31.2%	20.1%	28.7%
Net assets of equity shares (a x b)	1,765,507	1,857,481	2,804,547	3,318,875	347,510
Goodwill	7,081	26,801	3,645	-	298,779
Intercompany transactions and other ^(*)	(8,339)	(13,944)	481	(627,652)	2,872
Carrying amount of associates	1,764,249	1,870,338	2,808,673	2,691,223	649,161
3. Dividends from associates					
Dividends	37,155	41,933	-	13,463	28,748

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

^(*) Ownership percentage includes ordinary and preference shares.

^(*) Consists of unrealized gains and losses and other differences.

- (2) Summary of condensed financial information of major joint ventures and dividends received from joint ventures as of December 31, 2023 and 2022, and for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	Samsung Corning Advanced Glass, LLC	
	2023	2022
1. Condensed financial information		
Condensed statements of financial position:		
Current assets	116,372	170,103
Non-current assets	185,100	125,507
Current liabilities	22,684	19,794
Non-current liabilities	911	363
Condensed statements of comprehensive income:		
Revenue	122,446	133,634
Profit from continuing operations, net of tax ^(*)	2,672	3,998
Other comprehensive income (loss) ^(*)	-	288
Total comprehensive income ^(*)	2,672	4,286
2. Reconciliation to the carrying amount of investments in joint ventures		
Net assets (a)	277,877	275,453
Ownership percentage (b)	50.0%	50.0%
Net assets of equity shares (a x b)	138,939	137,727
Intercompany transactions and other ^(*)	(1)	18
Carrying amount of joint ventures	138,938	137,745
3. Dividends from joint ventures		
Dividends	-	-

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

^(*) Consists of unrealized gains and losses and other differences.

- (3) Profit (loss) attributable to owners of the parent company from associates and joint ventures which are not individually material for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023		2022	
	Associates	Joint ventures	Associates	Joint ventures
Profit from continuing operations	87,072	2,399	102,930	1,867
Other comprehensive income (loss)	50,260	1,915	(50,761)	(2,677)
Total comprehensive income (loss)	137,332	4,314	52,169	(810)

(F) Fair value of marketable investments in associates as of December 31, 2023 and 2022 is as follows:

<i>(In millions of Korean won and number of shares)</i>	December 31, 2023		December 31, 2022
	Number of shares held	Market value	Market value
Samsung Electro-Mechanics Co., Ltd.	17,693,084	2,710,580	2,308,947
Samsung SDS Co., Ltd.	17,472,110	2,970,259	2,149,070
Samsung Biologics Co., Ltd.	22,217,309	16,885,155	18,240,411
Samsung SDI Co., Ltd.	13,462,673	6,354,382	7,956,440
Cheil Worldwide, Inc.	29,038,075	552,595	669,328

(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, 2021, 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, 2021, 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.

10. Property, Plant and Equipment

(A) Changes in property, plant and equipment for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023					
	Land	Buildings and structures	Machinery and equipment	Construction in progress	Other	Total
Balance as of January 1	9,892,167	40,706,918	79,714,631	33,607,564	4,124,108	168,045,388
Acquisition cost	10,024,569	67,713,808	303,000,627	33,607,564	13,248,490	427,595,058
Accumulated depreciation and impairment	(132,402)	(27,006,890)	(223,285,996)	-	(9,124,382)	(259,549,670)
Acquisitions and capital expenditures ^(*)	172,262	6,498,611	33,641,691	13,141,766	1,462,032	54,916,362
Acquisitions through business combinations	-	18,125	20,140	34,698	165	73,128
Depreciation	(49,367)	(3,884,333)	(30,031,617)	-	(1,567,094)	(35,532,411)
Disposals/scrap	(25,934)	(181,700)	(37,681)	(256)	(30,547)	(276,118)
Impairment (reversal)	-	(30,864)	(47,044)	-	(7,449)	(85,357)
Reclassify as held-for-sale	(6,615)	(54,318)	(37,101)	(6,255)	(14,100)	(118,389)
Other ^(*)	16,864	165,676	86,149	(57,189)	22,159	233,659
Balance as of December 31	9,999,377	43,238,115	83,309,168	46,720,328	3,989,274	187,256,262
Acquisition cost	10,157,963	73,689,951	328,561,492	46,720,328	14,058,654	473,188,388
Accumulated depreciation and impairment	(158,586)	(30,451,836)	(245,252,324)	-	(10,069,380)	(285,932,126)

^(*) Acquisition cost and capital expenditures include amounts reclassified from constructions in progress. Capitalized borrowing costs amount to ₩ 204,814 million and the capitalization interest rate used to calculate the capitalized borrowing costs ranged from 3.9%~5.8%.

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

<i>(In millions of Korean won)</i>	2022					
	Land	Buildings and structures	Machinery and equipment	Construction in progress	Other	Total
Balance as of January 1	9,830,154	38,869,440	79,526,297	18,009,324	3,693,324	149,928,539
Acquisition cost	9,943,570	62,651,459	274,909,571	18,009,324	11,958,070	377,471,994
Accumulated depreciation and impairment	(113,416)	(23,782,019)	(195,383,274)	-	(8,264,746)	(227,543,455)
Acquisitions and capital expenditures ^(*)	138,925	5,302,095	31,010,080	16,675,741	2,100,119	55,226,960
Depreciation	(49,516)	(3,533,917)	(30,761,685)	-	(1,606,980)	(35,952,098)
Disposals, scrap	(57,596)	(127,935)	(35,098)	(193)	(34,208)	(255,030)
Impairment (reversal)	-	(2,255)	(11,815)	-	(12,323)	(26,393)
Other ²	30,200	199,490	(13,148)	(1,077,308)	(15,824)	(876,590)
Balance as of December 31	9,892,167	40,706,918	79,714,631	33,607,564	4,124,108	168,045,388
Acquisition cost	10,024,569	67,713,808	303,000,627	33,607,564	13,248,490	427,595,058
Accumulated depreciation and impairment	(132,402)	(27,006,890)	(223,285,996)	-	(9,124,382)	(259,549,670)

^(*) Acquisition cost and capital expenditures include amounts reclassified from constructions in progress. Capitalized borrowing costs amount to ₩ 41,634 million and the capitalization interest rate used to calculate the capitalized borrowing costs ranged from 2.1~4.1%.

^(*) Other includes effects of changes in foreign currency exchange rates and effects of the deduction of government grants.

(B) Changes in the right-of-use assets included in the property, plant and equipment for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023				
	Land	Buildings and structures	Machinery and equipment	Other	Total
Balance as of January 1	503,203	3,451,596	175,151	787,659	4,917,609
Acquisition	38,677	1,594,886	10,058	158,842	1,802,463
Depreciation	(49,367)	(871,275)	(47,174)	(147,178)	(1,114,994)
Cancellation of contracts	(12,461)	(174,426)	(279)	(6,904)	(194,070)
Reclassify as held-for-sale	(4,305)	(17)	-	(414)	(4,736)
Other ^(*)	5,863	33,288	(182)	3,791	42,760
Balance as of December 31	481,610	4,034,052	137,574	795,796	5,449,032

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

<i>(In millions of Korean won)</i>	2022				
	Land	Buildings and structures	Machinery and equipment	Other	Total
Balance as of January 1	525,954	2,841,970	191,059	391,584	3,950,567
Acquisition	32,632	1,542,889	29,098	507,041	2,111,660
Depreciation	(49,516)	(823,543)	(58,000)	(116,287)	(1,047,346)
Cancellation of contracts	(13,741)	(111,145)	(263)	(4,220)	(129,369)
Other ^(*)	7,874	1,425	13,257	9,541	32,097
Balance as of December 31	503,203	3,451,596	175,151	787,659	4,917,609

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

(C) Details of depreciation of property, plant and equipment for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Cost of sales	31,647,926	32,285,800
Selling and administrative expenses and other	3,884,485	3,666,298
Total	35,532,411	35,952,098

11. Intangible Assets

(A) Changes in intangible assets for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023					
	Intellectual property rights	Development cost	Membership	Goodwill	Other	Total
Balance as of January 1	4,278,750	85,018	253,554	6,014,422	9,586,010	20,217,754
External acquisitions	401,561	-	6,251	-	4,608,488	5,016,300
Acquisition through business combinations	3,944	-	-	315,136	37,758	356,838
Amortization	(276,781)	(85,018)	-	-	(2,772,349)	(3,134,148)
Disposals/scrap	(41,492)	-	(8,656)	-	(44)	(50,192)
Impairment(reversal)	(6,265)	-	3,738	-	(2,900)	(5,427)
Reclassify as held-for-sale	(2)	-	-	(58,455)	(4,405)	(62,862)
Other ^(*)	64,851	-	1,972	186,516	150,260	403,599
Balance as of December 31	4,424,566	-	256,859	6,457,619	11,602,818	22,741,862

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

<i>(In millions of Korean won)</i>	2022					
	Intellectual property rights	Development cost	Membership	Goodwill	Other	Total
Balance as of January 1	4,153,236	236,910	241,219	5,844,259	9,760,620	20,236,244
External acquisitions	299,484	-	8,905	-	2,375,986	2,684,375
Amortization	(268,070)	(151,892)	-	-	(2,735,599)	(3,155,561)
Disposals/scrap	(50,979)	-	(417)	-	(402)	(51,798)
Impairment(reversal)	-	-	(509)	-	(5,753)	(6,262)
Other ^(*)	145,079	-	4,356	170,163	191,158	510,756
Balance as of December 31	4,278,750	85,018	253,554	6,014,422	9,586,010	20,217,754

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

(B) Goodwill

Goodwill is allocated to each cash-generating unit. Details of goodwill as of December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	December 31, 2023	December 31, 2022
DX	1,256,815	1,249,290
DS	164,607	159,359
SDC	343,967	138,754
Harman	4,691,440	4,466,339
Other	790	680
Total	6,457,619	6,014,422

The Company tests goodwill for impairment annually and the recoverable amount of each cash-generating units is determined based on value-in-use calculations. The value-in-use calculation is based on estimates of pre-tax cash flows based on financial budgets approved by management for the next five years (or longer if the medium and long-term plans are reasonable, such as in new technology business). A constant growth rate assumption (but not exceeding the industry average growth rate) has been used to calculate the perpetual cash flows for periods beyond the five-year period.

(C) Details of amortization of intangible assets for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Cost of sales	2,197,662	2,211,481
Selling and administrative expenses and other	936,486	944,080
Total	3,134,148	3,155,561

12. Borrowings

(A) Details of the carrying amounts of borrowings as of December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	Financial institutions	Interest rates (%) as of Dec 31, 2023	December 31, 2023	December 31, 2022
Short-term borrowings				
Collateralized borrowings ^(*)	Woori Bank and others	0.0~17.3	6,610,049	3,569,357
Non-collateralized borrowings	Citibank and others	0.0~62.2	504,552	1,577,958
Total			7,114,601	5,147,315
Current portion of long-term borrowings				
Bank borrowings	BNP and others	36.1~61.5	304,082	208,915
Lease liabilities ^(*)	CSSD and others	4.3	998,439	874,019
Total			1,302,521	1,082,934
Long-term borrowings				
Bank borrowings	-	-	-	33,846
Lease liabilities ^(*)	CSSD and others	4.3	3,724,850	3,526,826
Total			3,724,850	3,560,672

(*) Collateralized borrowings are secured by trade receivables.

(*) Interest expenses arising from the lease liabilities for the years ended December 31, 2023 and 2022 amount to ₩197,202 million and

₩140,111 million, respectively, which were determined using the weighted average incremental borrowing rate. Short-term lease payments and low-valued asset lease payments that are not included in lease liabilities during the years ended December 31, 2023 and 2022 amount to ₩158,395 million and ₩211,283 million, respectively.

(B) Maturities of lease liabilities outstanding as of December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	Lease liabilities
Repayment in	
2024	1,171,751
2025	965,266
2026	821,551
2027	625,811
2028 and thereafter	1,822,019
Total	5,406,398

13. Debentures

(A) Details of the carrying amounts of debentures as of December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	Issue date	Due date	Interest rate (%) as of Dec 31, 2023	December 31, 2023	December 31, 2022
US dollar denominated straight bonds ^(*1)	Oct. 2, 1997	Oct. 1, 2027	7.7	25,788 (US \$ 20 million)	31,683 (US \$ 25 million)
US dollar denominated debenture bonds ^(*2)	May 11, 2015	May 15, 2025	4.2	515,760 (US \$ 400 million)	506,920 (US \$ 400 million)
Less: Discounts				(370)	(543)
Add: Premium				2,794	4,261
Less: Current portion				(6,354)	(6,228)
Total				537,618	536,093

^(*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 in arrears.

^(*2) Harman International Industries, Inc. issued US dollar denominated debenture bonds. These debentures are repaid on the maturity and

interest is paid semi-annually in arrears.

(B) Repayment schedule of debentures outstanding as of December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	Debentures
Repayment in	
2024	6,447
2025	522,207
2026	6,447
2027	6,447
Total	541,548

14. Net Defined Benefit Liabilities (Assets)

- (A) Details of net defined benefit liabilities (assets) recognized in the statements of financial position as of December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	December 31, 2023	December 31, 2022
Present value of funded defined benefit obligations	15,403,976	13,639,460
Present value of unfunded defined benefit obligations	319,689	370,848
Subtotal	15,723,665	14,010,308
Fair value of plan assets	(20,172,327)	(19,593,910)
Total	(4,448,662)	(5,583,602)

- (B) The components of defined benefit costs recognized in profit or loss for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Current service cost	1,294,308	1,365,600
Net interest income	(354,220)	(99,356)
Past service cost	4,839	(253)
Other	9,491	28,713
Total	954,418	1,294,704

The amount recognized as expenses of defined contribution plans for the years ended December 31, 2023 and 2022 are ₩ 203,004 million and ₩ 145,395 million, respectively.

- (C) The expenses related to the defined benefit plans recognized in the statements of profit or loss for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Cost of sales	378,104	514,589
Selling and administrative expenses and other	576,314	780,115
Total	954,418	1,294,704

(D) Changes in the defined benefit obligations for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Balance as of January 1	14,010,308	14,658,185
Current service cost	1,294,308	1,365,600
Interest cost	805,084	528,884
Past service cost	4,839	(253)
Remeasurement:		
Actuarial gains or losses arising from changes in demographic assumptions	62,291	34,917
Actuarial gains or losses arising from changes in financial assumptions	266,505	(2,496,879)
Other	123,165	521,452
Benefits paid	(846,457)	(630,019)
Other ^(*)	3,622	28,421
Balance as of December 31	15,723,665	14,010,308

^(*) Other includes effects of changes in foreign currency exchange rates and reclassifications as held for sales.

(E) Changes in the fair value of plan assets for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Balance as of January 1	19,593,910	17,001,891
Interest income on plan assets	1,159,304	628,240
Remeasurement of plan assets	(654,005)	(312,565)
Contributions by employer	746,068	2,741,417
Benefits paid	(687,125)	(498,246)
Other ^(*)	14,175	33,173
Balance as of December 31	20,172,327	19,593,910

^(*) Other includes effects of changes in foreign currency exchange rates and reclassifications as held for sales.

The reasonable estimate of the employer contributions expected to be paid in 2024 in respect of the defined benefit plans as of December 31, 2023 is ₩ 1,757,413 million.

(F) Plan assets as of December 31, 2023 and 2022 consist of the following:

<i>(In millions of Korean won)</i>	December 31, 2023	December 31, 2022
Principal guaranteed fixed income financial instruments and other	18,178,623	18,766,006
Other	1,993,704	827,904
Total	20,172,327	19,593,910

Plan assets are mostly invested in instruments which have a quoted price in active markets.

(G) The principal actuarial assumptions as of December 31, 2023 and 2022 are as follows:

<i>(In percentage)</i>	December 31, 2023	December 31, 2022
Discount rate	3.9~5.9	4.3~6.4
Salary growth rate (including the effects of inflation)	3.0~6.3	2.0~6.4

(H) The sensitivity analysis of the defined benefit obligations as of December 31, 2023 and 2022 to changes in the principal assumptions is as follows:

<i>(In millions of Korean won)</i>	Defined benefit obligations	
	December 31, 2023	December 31, 2022
Discount rate		
1% p increase	14,291,442	12,920,156
1% p decrease	17,385,125	15,268,164
Salary growth rate		
1% p increase	17,365,127	15,261,609
1% p decrease	14,280,988	12,900,865

(I) The weighted average maturity of the defined benefit obligations is 9.84 years as of December 31, 2023.

15. Provisions

Changes in provisions for the year ended December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	Warranty (A)	Royalty expenses (B)	Long-term incentives (C)	Other (D, E)	Total
Balance as of January 1	2,309,726	1,546,606	783,263	3,133,830	7,773,425
Charged to profit or loss	2,456,609	595,307	468,745	2,012,062	5,532,723
Payment	(2,279,281)	(299,250)	(261,622)	(1,125,666)	(3,965,819)
Other ^(*)	53,158	(4,611)	3,365	11,085	62,997
Balance as of December 31	2,540,212	1,838,052	993,751	4,031,311	9,403,326

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

- (A) The Company accrues warranty provisions for estimated costs of quality assurance, exchanges, repairs, recalls, and future services based on historical experience and terms of warranty programs.
- (B) The Company recognizes provisions for the estimated royalty expenses that are under negotiation with counterparties. The timing and amount of payment depend on the settlement of the 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.
- (D) The Company records provisions for estimated losses from contracts associated with discontinued products.
- (E) The Company makes provisions for the emission in excess of the emission rights held by the Company. Details of emission rights and liabilities as of December 31, 2023 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 December 31, 2023 are as follows:

<i>(In million metric tons)</i>	December 31, 2023
Emission rights allocated free of charge ^(*)	18.06
Estimated volume of emission	17.66

^(*)As of December 31, 2023, emission rights allocated free of charge for the remainder of the plan period are 32.60 million metric tons (2024: 16.30 million metric tons, 2025: 16.30 million metric tons).

- (2) Changes in the emission rights for the year ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Balance as of January 1	19,567	46,073
Increase	1,272	1,872
Utilization	(17,702)	(28,378)
Balance as of December 31^(*)	3,137	19,567

^(*) The quantity of emission rights is 56.25 million metric tons and there is no emission rights provided as provision of collateral as of December 31, 2023.

- (3) Changes in emissions liabilities for the year ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Balance as of January 1	32,838	45,049
Charged to profit or loss	(15,210)	16,167
Utilization	(17,491)	(28,378)
Balance as of December 31	137	32,838

16. Commitments and Contingencies

(A) Litigation

As of December 31, 2023, the Company is involved in various claims, disputes, and investigations conducted by regulatory bodies that arose during the normal course of business with numerous entities. Although the outflow of resources and timing of these matters are uncertain, the Company believes the outcome will not have a material impact on the financial position of the Company.

(B) Other commitments

- (1) As of December 31, 2023, the Company has trade financing agreements, trade notes receivable discounting facilities, and loan facilities secured by accounts receivable with 28 financial institutions, including Woori Bank, with a combined limit of ₩ 21,762,600 million. In addition, the Company has a trade financing agreement with 23 financial institutions, including Shinhan Bank, with a limit of ₩ 15,958,875 million, and loan facilities secured by trade receivables with 13 banks, including Woori Bank, with a limit of ₩ 2,149,320 million.
- (2) As of December 31, 2023, contractual commitments for the acquisition of property, plant and equipment and intangible assets amount to ₩ 9,783,549 million.

17. Contract Liabilities

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

<i>(In millions of Korean won)</i>	December 31, 2023	December 31, 2022
Contract liabilities ^(*)	13,327,724	13,255,682

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

The revenue recognized for the year ended December 31, 2023 in relation to the contract liabilities carried forward as of January 1, 2023 amounts to ₩ 1,156,619 million.

18. Share Capital

As of December 31, 2023, the parent company's total number of authorized shares is 25,000,000,000 shares (₩ 100 per share). As well as its ordinary shares, the parent company also has non-cumulative preference shares that are eligible for an additional 1% cash dividend over par value per annum compared to ordinary shares, but without voting rights. The parent company has issued 5,969,782,550 shares of ordinary shares and 822,886,700 shares of preference shares as of December 31, 2023, excluding the number of retired shares. As of the December 31, 2023, the number of shares outstanding is the same as the number of shares aforementioned with no changes during the years ended December 31, 2023 and 2022. Due to the retirement of shares, the total par value of the shares issued which excludes the number of retired shares is ₩ 679,267 million (ordinary shares of ₩ 596,978 million and preference shares of ₩ 82,289 million), which does not agree with paid-in capital of ₩ 897,514 million.

19. Retained Earnings

(A) Retained earnings as of December 31, 2023 and 2022 consist of the following:

<i>(In millions of Korean won)</i>	December 31, 2023	December 31, 2022
Discretionary reserve and other	208,198,003	192,294,496
Unappropriated retained earnings	138,454,235	145,651,911
Total	346,652,238	337,946,407

(B) Details of interim and year-end dividends are as follows:

(1) Interim dividends (Record date: March 31, June 30 and September 30, 2023 and 2022)

<i>(In millions of Korean won and number of shares)</i>		2023	2022	
1 st Quarter	Number of shares eligible for dividends	Ordinary shares	5,969,782,550	5,969,782,550
		Preference shares	822,886,700	822,886,700
	Dividend rate (based on par value)	Ordinary/Preference	361%	361%
	Dividend amount	Ordinary shares	2,155,092	2,155,092
		Preference shares	297,062	297,062
	Total		2,452,154	2,452,154
2 nd Quarter	Number of shares eligible for dividends	Ordinary shares	5,969,782,550	5,969,782,550
		Preference shares	822,886,700	822,886,700
	Dividend rate (based on par value)	Ordinary/Preference	361%	361%
	Dividend amount	Ordinary shares	2,155,092	2,155,092
		Preference shares	297,062	297,062
	Total		2,452,154	2,452,154
3 rd Quarter	Number of shares eligible for dividends	Ordinary shares	5,969,782,550	5,969,782,550
		Preference shares	822,886,700	822,886,700
	Dividend rate (based on par value)	Ordinary/Preference	361%	361%
	Dividend amount	Ordinary shares	2,155,092	2,155,092
		Preference shares	297,062	297,062
	Total		2,452,154	2,452,154

(2) Year-end dividends (Record date: December 31, 2023 and 2022)

<i>(In millions of Korean won and number of shares)</i>		2023	2022
Number of shares eligible for dividends	Ordinary shares	5,969,782,550	5,969,782,550
	Preference shares	822,886,700	822,886,700
Dividend rate (based on par value)	Ordinary shares	361%	361%
	Preference shares	362%	362%
Dividend amount	Ordinary shares	2,155,092	2,155,092
	Preference shares	297,884	297,884
Total		2,452,976	2,452,976

20. Other Components of Equity

Other components of equity as of December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	December 31, 2023	December 31, 2022
Gain on valuation of financial assets at fair value through other comprehensive income	194,419	2,749,109
Share of other comprehensive income of associates and joint ventures	185,144	114,987
Foreign currency translation differences for foreign operations	3,651,112	1,039,197
Remeasurement of net defined benefit assets	(2,849,526)	(2,051,610)
Other	98,981	86,645
Total	1,280,130	1,938,328

21. Expenses by Nature

Expenses by nature for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Changes in finished goods, work in process, and other	(644,905)	(10,355,548)
Raw materials used, merchandise purchased, and other	96,219,181	112,591,917
Wages and salaries	30,405,245	30,078,623
Post-employment benefit	1,157,422	1,440,099
Depreciation	35,532,411	35,952,098
Amortization	3,134,148	3,155,561
Welfare	6,472,979	6,091,626
Utilities	7,502,408	6,142,317
Outsourcing	7,058,833	6,597,467
Advertising	5,213,896	6,112,951
Sales promotion	6,894,395	7,110,649
Other	53,422,505	53,936,970
Total^(*)	252,368,518	258,854,730

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

22. Selling and Administrative Expenses

Selling and administrative expenses for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Selling and administrative expenses		
Wages and salaries	8,324,562	7,763,588
Post-employment benefit	299,369	330,115
Commissions	8,753,442	7,457,896
Depreciation	1,649,335	1,574,757
Amortization	688,786	664,346
Advertising	5,213,896	6,112,951
Sales promotion	6,894,395	7,110,649
Transportation	1,721,614	3,214,301
Service	3,968,816	3,671,913
Other	6,125,999	5,993,246
Subtotal	43,640,214	43,893,762
Research and development expenses		
Research and development	28,339,724	24,919,198
Total	71,979,938	68,812,960

23. Other Non-Operating Income and Expenses

Details of other non-operating income and expenses for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Other non-operating income		
Dividend income	164,203	414,601
Rental income	150,273	140,908
Gain on disposal of property, plant and equipment	104,663	159,123
Other	761,309	1,247,439
Total	1,180,448	1,962,071

<i>(In millions of Korean won)</i>	2023	2022
Other non-operating expenses		
Loss on disposal of property, plant and equipment	85,799	61,256
Donations	243,377	305,941
Other	754,151	1,422,979
Total	1,083,327	1,790,176

24. Financial Income and Expenses

Details of financial income and expenses for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Financial income		
Interest income	4,358,022	2,720,479
Financial assets measured at amortized cost	4,357,792	2,720,213
Financial assets measured at fair value through profit or loss	230	266
Foreign exchange differences	10,608,661	16,537,855
Gain from derivatives	1,133,465	1,570,661
Total	16,100,148	20,828,995

<i>(In millions of Korean won)</i>	2023	2022
Financial expenses		
Interest expenses	930,253	763,015
Financial liabilities measured at amortized cost	510,865	322,529
Other financial liabilities	419,388	440,486
Foreign exchange differences	10,711,058	16,809,703
Loss from derivatives	1,004,219	1,454,971
Total	12,645,530	19,027,689

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

25. Income Tax Expense

(A) Income tax expense for the years ended December 31, 2023 and 2022 consists of the following:

<i>(In millions of Korean won)</i>	2023	2022
Current taxes		
Current tax on profits for the year	5,660,505	7,391,099
Adjustments recognized in the current year	(725,524)	(501,683)
Subtotal	4,934,981	6,889,416
Deferred taxes		
Changes in deferred taxes arising from unused tax credits	(5,346,657)	(1,080,068)
Changes in deferred taxes arising from temporary differences	(3,061,001)	(15,407,692)
Changes in deferred taxes arising from unused tax losses	(1,041,996)	160,123
Other	33,838	224,618
Subtotal	(9,415,816)	(16,103,019)
Income tax expense	(4,480,835)	(9,213,603)

(B) The difference between the income tax expense on the Company's profit before tax and the theoretical amount computed using the weighted-average tax rate applicable to the profit before tax of each of the Company's entities is as follows:

<i>(In millions of Korean won)</i>	2023	2022
Profit before income tax	11,006,265	46,440,474
Tax calculated at weighted average of applicable tax rates^(*)	1,901,195	13,652,900
Adjustments:		
Permanent differences	219,374	(2,090,031)
Temporary differences for which no deferred income tax was recognized	(12,588)	769,211
Tax credits and exemptions	(6,706,820)	(5,185,576)
Results of interest in subsidiaries, etc.	(389,305)	(16,186,745)
Impact of changes in tax rates	(3,926)	(376)
Other	511,235	(172,986)
Subtotal	(6,382,030)	(22,866,503)
Income tax expense	(4,480,835)	(9,213,603)

^(*) The statutory tax rate is the weighted average of the statutory tax rates applicable to the Company's year-end profits as of December 31, 2023 and 2022, which vary by tax jurisdictions.

(C) The movement in deferred income tax assets and liabilities for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023		2022			
	Balance as of January 1	Increase (Decrease)	Balance as of December 31	Balance as of January 1	Increase (Decrease)	Balance as of December 31
Deferred tax arising from temporary differences						
Revaluation of land	(898,505)	(182)	(898,687)	(936,822)	38,317	(898,505)
Investments in subsidiaries, associates and joint ventures ^(*1,2)	(4,960,247)	57,640	(4,902,607)	(20,614,554)	15,654,307	(4,960,247)
Accumulated depreciation and other	(2,566,535)	682,845	(1,883,690)	(1,771,793)	(794,742)	(2,566,535)
Accrued income	39,680	28,042	67,722	6,853	32,827	39,680
Provisions, accrued expenses, and other	5,219,130	1,923,486	7,142,616	4,560,874	658,256	5,219,130
Foreign currency translation	185,900	(12,997)	172,903	12,076	173,824	185,900
Asset impairment losses	234,734	1,011	235,745	258,886	(24,152)	234,734
Other	(969,702)	381,157	(588,545)	(638,757)	(330,945)	(969,702)
Subtotal	(3,715,545)	3,061,002	(654,543)	(19,123,237)	15,407,692	(3,715,545)
Deferred tax arising from tax losses						
Unused tax losses	276,358	1,041,996	1,318,354	436,481	(160,123)	276,358
Deferred tax arising from unused tax credits						
Unused tax credits	2,746,430	5,346,657	8,093,087	1,666,362	1,080,068	2,746,430
Deferred tax recognized in equity						
Loss (gain) on valuation of financial assets at fair value through other comprehensive income and other	(50,392)	(156,443)	(206,835)	(3,155,310)	3,104,918	(50,392)
Remeasurement of net defined benefit assets	733,135	308,050	1,041,185	1,238,713	(505,578)	733,135
Subtotal	682,743	151,607	834,350	(1,916,597)	2,599,340	682,743
Net deferred tax assets (liabilities)	(10,014)	9,601,262	9,591,248	(18,936,991)	18,926,997	(10,014)
Deferred tax assets	5,101,318	5,110,479	10,211,797	4,261,214	840,104	5,101,318
Deferred tax liabilities	(5,111,332)	4,490,783	(620,549)	(23,198,205)	18,086,873	(5,111,332)

(*) Deferred tax assets are not recognized if it is probable that the temporary differences will not reverse in the foreseeable future for investments in subsidiaries, associates and joint ventures.

The Company assessed that it is probable that deferred tax asset will be realized to the extent that the Company's expected average annual taxable losses and tax credits that can be utilized in each accounting period. However, the following temporary differences have not been recognized for tax purposes as it is not probable that they will be realized in the future as of December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Unused tax losses	597,176	594,798
Unused tax credits	118,694	46,550

Expected expiry dates of unused tax losses and credits for which no deferred tax asset is recognized are as follows:

<i>(In millions of Korean won)</i>	2023	2024	2025	2026 and after
Unused tax losses	37,899	741	-	558,536
Unused tax credits	7,163	-	110,450	1,081

(D) Details of the period when the deferred tax assets (liabilities) are expected to be recovered (settled) as of December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	December 31, 2023	December 31, 2022
Deferred tax assets		
Deferred tax assets to be recovered within 12 months	9,392,311	3,249,661
Deferred tax assets to be recovered after 12 months	819,486	1,851,657
Subtotal	10,211,797	5,101,318
Deferred tax liabilities		
Deferred tax liabilities to be settled after 12 months	(620,549)	(5,111,332)
Total	9,591,248	(10,014)

(E) Global minimum top-up tax

The global minimum top-up is a system under which multinational companies with consolidated revenue of €750 million or more in at least two of the four preceding financial years are required to pay a substantial amount of tax to the tax authorities of the country in which the parent company resides if their effective tax rate in those countries is less than 15%.

The Republic of Korea, where the parent company is domiciled, enacted the Global Minimum Tax Act in 2023, which requires the application of the Global Minimum Tax for accounting periods beginning on or after January 1, 2024.

The Company believes that it will be subject to the Global Minimum Tax Act, but as the Global Minimum Tax Act will be effective in the Republic of Korea from January 1, 2024, there is no impact on the Company's current income tax expense. In addition, the Company has applied the temporary exemption for deferred taxes under Korean IFRS 1012 and has not recognized any deferred tax assets or liabilities related to the global minimum tax law and has not disclosed any deferred tax information.

As the legislation in the countries where the Company's subsidiaries are located that are primarily affected by the global minimum top-up tax legislation has not been enacted or specific legislation is in the process of being enacted, it is not possible to reasonably estimate the impact on the Company as at December 31, 2023. Each of the Company's subsidiaries is reviewing the impact on its financial statements with tax experts in each country.

26. Earnings per Share

(A) Basic earnings per share

Basic earnings per share for the years ended December 31, 2023 and 2022 are calculated as follows:

(1) Ordinary shares

<i>(In millions of Korean won, thousands of number of shares)</i>	2023	2022
Profit for the year attributable to owners of the parent company	14,473,401	54,730,018
Profit for the year available for ordinary shares	12,719,321	48,099,117
Weighted-average number of ordinary shares outstanding	5,969,783	5,969,783
Basic earnings per ordinary share (in Korean won)	2,131	8,057

(2) Preference shares

<i>(In millions of Korean won, thousands of number of shares)</i>	2023	2022
Profit for the year attributable to owners of the parent company	14,473,401	54,730,018
Profit for the year available for preference shares	1,754,080	6,630,901
Weighted-average number of preference shares outstanding	822,887	822,887
Basic earnings per preference share (in Korean won)	2,132	8,058

(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 years ended December 31, 2023 and 2022.

27. 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 years ended December 31, 2023 and 2022 are as follows:

- Adjustments

<i>(In millions of Korean won)</i>	2023	2022
Adjustments:		
Income tax income	(4,480,835)	(9,213,603)
Financial income	(6,156,093)	(5,778,279)
Financial expenses	3,076,837	4,336,254
Post-employment benefits	1,157,422	1,440,099
Depreciation	35,532,411	35,952,098
Amortization	3,134,148	3,155,561
Bad debt expense	62,964	8,784
Dividend income	(164,203)	(414,601)
Share of profit of associates and joint ventures	(887,550)	(1,090,643)
Gain on disposal of property, plant and equipment	(104,663)	(159,123)
Loss on disposal of property, plant and equipment	85,799	61,256
Loss on valuation of inventories and others	5,037,579	4,408,767
Others	225,718	366,869
Total	36,519,534	33,073,439

- Changes in assets and liabilities arising from operating activities

<i>(In millions of Korean won)</i>	2023	2022
Changes in assets and liabilities :		
Decrease (increase) in trade receivables	(90,243)	7,856,258
Decrease (increase) in other receivables	325,894	(1,524,173)
Decrease (increase) in prepaid expenses	(390,636)	3,506
Increase in inventories	(3,206,615)	(13,311,072)
Increase (decrease) in trade payables	318,432	(5,298,547)
Increase (decrease) in other payables	785,534	(1,443,409)
Increase in advances received	138,188	106,977
Increase (decrease) in withholdings	(411,028)	25,392
Increase (decrease) in accrued expenses	(3,704,020)	919,271
Increase (decrease) in provisions	1,566,904	(34,298)
Payment of post-employment benefits	(938,691)	(707,887)
Decrease (increase) in plan assets	100,384	(2,243,171)
Other	47,152	(1,347,795)
Total	(5,458,745)	(16,998,948)

(B) Significant non-cash investing and financing transactions for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Valuation of financial assets at fair value through other comprehensive income	1,548,022	(2,636,448)
Valuation of investments in associates and joint ventures	75,112	(50,510)
Reclassification of construction in progress to property, plant and equipment	39,749,735	36,047,916
New lease contracts established	1,802,463	2,111,660
Reclassification of current portion of debentures and long-term borrowings	1,308,875	1,089,162

(C) Changes in liabilities arising from financing activities for the years ended December 31, 2023 and 2022 are as follows:

(1) 2023

<i>(In millions of Korean won)</i>	As of January 1	Cash flows from financing activities	Non-cash transactions		As of December 31
			New lease contracts	Other^(*)	
Short-term borrowings	5,147,315	2,145,400	-	(178,114)	7,114,601
Debentures and long-term borrowings	5,185,927	(864,867)	1,497,058	(246,775)	5,571,343
Total	10,333,242	1,280,533	1,497,058	(424,889)	12,685,944

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

(2) 2022

<i>(In millions of Korean won)</i>	As of January 1	Cash flows from financing activities	Non-cash transactions		As of December 31
			New lease contracts	Other^(*)	
Short-term borrowings	13,687,793	(8,339,149)	-	(201,329)	5,147,315
Debentures and long-term borrowings	4,704,356	(1,236,468)	2,111,660	(393,621)	5,185,927
Total	18,392,149	(9,575,617)	2,111,660	(594,950)	10,333,242

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

For the years ended December 31, 2023 and 2022, cash outflows from repayment of the principal of lease liabilities (financial activities) amount to W 1,098,944 million and W 998,531 million, respectively, while cash outflows due to interest expenses (operating activities) in relation to the lease liabilities amount to W 197,202 million and W 140,111 million, respectively.

(D) The Company recorded cash inflows and outflows from short-term financial instruments with frequent transactions, large gross amounts and short-term maturities, as well as from short-term borrowings on a net basis. As of December 31, 2023, most of the Company's cash and cash equivalents consist mainly of bank deposits.

28. Financial Risk Management

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

The Company establishes global financial management standards and manages the risks by periodically measuring customer's and counterparties' financial risk, applying currency hedges, and reviewing cash flows.

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

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

(A) Market risk

(1) Foreign exchange risk

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

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

As of December 31, 2023 and 2022, the impact on profit or loss (before tax) of a 5% change in exchange rates on the Company's financial assets and financial liabilities denominated in a major foreign currency other than the functional currency would be as follows:

<i>(In millions of Korean won)</i>	December 31, 2023		December 31, 2022	
	Increase	Decrease	Increase	Decrease
USD	418,776	(418,776)	258,655	(258,655)
EUR	151,740	(151,740)	92,546	(92,546)

(2) Interest rate risk

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

As of December 31, 2023 and 2022, the effect on profit or loss before tax of a 1%p change in interest rates on the Company's variable rate financial assets and liabilities at the reporting date would have been as follows:

<i>(In millions of Korean won)</i>	December 31, 2023		December 31, 2022	
	Increase	Decrease	Increase	Decrease
Financial assets	210,617	(210,617)	72,750	(72,750)
Financial liabilities	(6,197)	6,197	(8,427)	8,427
Net effect	204,420	(204,420)	64,323	(64,323)

(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 December 31, 2023 and 2022, price fluctuation of marketable equity securities (listed stocks) by 1% would result in changes in other comprehensive income (before income tax) of ₩ 52,510 million and ₩ 92,073 million, respectively, and changes in profit before tax of ₩ 3,472 million and ₩ 3,144 million, respectively.

(B) Credit risk

Credit risk arises during the normal course of transactions and investing activities where customers or other parties fail to discharge an obligation. The Company monitors and sets the customer's and counterparty's credit limit on a periodic basis based on the customer's and counterparty's financial conditions, default history and other 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 including financial instrument transactions such as cash and cash equivalents, deposits, and derivative instruments. To minimize such risk, the Company has a policy of transacting only with banks that have a strong international credit rating (S&P A and above), and new transactions with financial institutions which the Company does not have an existing relationship are subject to the completion of risk assessments prior to commencement of transactions. The Company generally enters into financial agreements without restrictions, such as debt ratio covenants, provision of collateral and/or repayment of borrowings, and otherwise separate approvals are obtained.

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

(C) Liquidity risk

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

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

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

As of December 31, 2023 and 2022, the maturity analysis of financial liabilities, based on the remaining period from the reporting date to the contractual maturity date, is as follows:

<i>(In millions of Korean won)</i>	December 31, 2023				
	Less than 3 months	~ 6 months	~1 year	1 ~ 5 years	More than 5 years
Financial liabilities	43,302,421	589,743	1,529,785	7,811,246	2,337,792

<i>(In millions of Korean won)</i>	December 31, 2022				
	Less than 3 months	~ 6 months	~1 year	1 ~ 5 years	More than 5 years
Financial liabilities	42,990,570	733,984	1,925,448	5,402,672	1,562,274

The cash flows included in the maturity classification, based on the remaining period to the contractual maturity date, are undiscounted expected cash outflows.

The Company's derivative financial liabilities of ₩ 44,252 million (December 31, 2022: ₩ 119,061 million) has been included within the less than 3 months bucket. These are the Company's trading portfolio of derivative instruments, on a net settlement term, of which the contractual maturities are not essential for understanding its cash flows. These contracts are managed on a net fair value basis rather than by the maturity date. Net settled derivatives consist of forwards on currency rates used by the Company to manage the exchange rate profile.

Derivatives that are settled on a gross basis by the delivery of underlying items, including derivatives for hedging, will be settled within the next 48 months from the end of the reporting period. These derivatives are not included in the table above.

There is no maximum liquidity risk exposure from those other than the above financial liabilities (e.g., payment and performance guarantees) as of December 31, 2023.

(D) Derivative financial instruments

The Company uses cash flow hedge accounting to hedges of the exposure to changes in the price of inventories. As of December 31, 2023, the Company's derivative financial instruments designated as cash flow hedges are as follows:

<i>(In millions of Korean won)</i>	December 31, 2023		December 31, 2022	
	Assets	Liabilities	Assets	Liabilities
Currency forward exchange contracts				
Current	50,018	15,031	44,567	11,035
Non-current	19,853	18,099	15,703	15,813
Total	69,871	33,130	60,270	26,848

For the years ended December 31, 2023 and 2022, the Company recognizes the gains and losses relating to the effective portion of changes in fair value of derivatives that are designated and qualify as cash flow hedges in other comprehensive income, which amount to the gain of ₩ 927 million (after tax) and loss of ₩ 12,893 million (after tax), respectively, and recognizes the gains relating to the ineffective portion in profit or loss, which amount to the gain of ₩ 1,304 million (before tax) and gain of ₩ 611 million (before tax), respectively. For the years ended December 31, 2023 and 2022, gains and losses reclassified directly from other comprehensive income to profit or loss amount to the gain of ₩ 6,692 million (after tax) and the loss of ₩ 4,602 million (after tax), respectively, and the gains reclassified from other comprehensive income to the carrying amount of inventory amount to the gain of ₩ 51,614 million (after tax) and the gain of ₩ 55,856 million (after tax), respectively.

(E) Capital risk management

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

The debt ratio as of December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	December 31, 2023	December 31, 2022
Total liabilities	92,228,115	93,674,903
Total equity	363,677,865	354,749,604
Debt ratio	25.4%	26.4%

(F) Fair value measurement

(1) Carrying amounts and fair value of financial instruments by category as of December 31, 2023 and 2022 are as follows:

(In millions of Korean won)	December 31, 2023		December 31, 2022	
	Carrying amount	Fair value	Carrying amount	Fair value
Financial assets				
Cash and cash equivalents	69,080,893	(*)	49,680,710	(*)
Short-term financial instruments	22,690,924	(*)	65,102,886	(*)
Short-term financial assets at amortized cost	608,281	(*)	414,610	(*)
Short-term financial assets at fair value through profit or loss	27,112	27,112	29,080	29,080
Trade receivables	36,647,393	(*)	35,721,563	(*)
Financial assets at fair value through other comprehensive income	7,481,297	7,481,297	11,397,012	11,397,012
Financial assets at fair value through profit or loss	1,431,394	1,431,394	1,405,468	1,405,468
Other ^(*)2)	14,840,275	546,021	10,340,876	395,667
Total financial assets	152,807,569		174,092,205	
Financial liabilities				
Trade payables	11,319,824	(*)	10,644,686	(*)
Short-term borrowings	7,114,601	(*)	5,147,315	(*)
Other payables	13,996,395	(*)	16,328,237	(*)
Current portion of long-term liabilities	1,308,875	6,757	1,089,162	6,580
- Long-term borrowing	1,302,521	(*) ^(*)3)	1,082,934	(*) ^(*)3)
- Debentures	6,354	6,757	6,228	6,580
Debentures	537,618	529,254	536,093	521,129
Long-term borrowings	3,724,850	(*) ^(*)3)	3,560,672	(*) ^(*)3)
Long-term other payables	4,907,875	(*)	2,289,236	(*)
Other ^(*)2)	11,414,008	83,463	12,409,529	361,768
Total financial liabilities	54,324,046		52,004,930	

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

^(*)2) Assets measured at the cost of ₩ 14,294,254 million and ₩ 9,945,209 million as at December 31, 2023 and 2022, respectively, and liabilities measured at the cost of ₩ 11,330,545 million and ₩ 12,047,761 million as at December 31, 2023 and 2022, respectively, are excluded as their carrying amounts are a reasonable estimation of fair value.

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

- (2) Fair value hierarchy classifications of the financial instruments that are measured at or only disclosed their fair value as of December 31, 2023 and 2022 are as follows:

December 31, 2023				
<i>(In millions of Korean won)</i>	Level 1	Level 2	Level 3	Total balance
Assets				
Short-term financial assets at fair value through profit or loss	-	27,112	-	27,112
Financial assets at fair value through other comprehensive income	5,250,993	-	2,230,304	7,481,297
Financial assets at fair value through profit or loss	347,221	-	1,084,173	1,431,394
Other	-	130,364	415,657	546,021
Liabilities				
Current portion of debentures	-	6,757	-	6,757
Debentures	-	529,254	-	529,254
Other	-	83,463	-	83,463

December 31, 2022				
<i>(In millions of Korean won)</i>	Level 1	Level 2	Level 3	Total balance
Assets				
Short-term financial assets at fair value through profit or loss	-	29,080	-	29,080
Financial assets at fair value through other comprehensive income	9,207,295	-	2,189,717	11,397,012
Financial assets at fair value through profit or loss	314,449	-	1,091,019	1,405,468
Other	-	373,176	22,491	395,667
Liabilities				
Current portion of debentures	-	6,580	-	6,580
Debentures	-	521,129	-	521,129
Other	-	354,364	7,404	361,768

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

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

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

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

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

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

Specific valuation techniques used to value financial instruments include:

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

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

(3) Valuation technique and the inputs

The Company utilizes a present value technique to discount future cash flows using proper interest rates for corporate bonds, government and public bonds, and bank debentures that are classified as Level 2 in the fair value hierarchy. The following table presents the valuation technique and the inputs used for major financial instruments classified as Level 3 as of December 31, 2023.

(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	32,286	Discounted cash flow	Permanent growth rate	1.0%
			Weighted average cost of capital	17.1%
MiCo Ceramics Co., Ltd.	33,973	Discounted cash flow	Permanent growth rate	0.0%
			Weighted average cost of capital	15.8%
TCL China Star Optoelectronics Technology Co. Ltd. (CSOT)	1,286,007	Discounted cash flow	Permanent growth rate	0.0%
			Weighted average cost of capital	10.6%
China Star Optoelectronics Semiconductor Display Technology Ltd (CSOSDT)	226,531	Discounted cash flow	Permanent growth rate	0.0%
			Weighted average cost of capital	10.6%
Others				
Call option on equity instruments	393,235	Binomial model	Risk-free discount rate	3.2%
			Price volatility	69.5%
Put option on equity instruments	22,422	Binomial model	Risk-free discount rate	3.9%~5.2%, 2.2%
			Price volatility	22.7%, 24.4%

(4) Changes in Level 3 instruments for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Financial assets		
Balance as of January 1	3,303,227	3,430,214
Acquisitions	207,023	207,730
Disposals	(124,477)	(207,252)
Amount recognized in profit or loss	297,680	73,782
Amount recognized in other comprehensive income	46,725	(197,830)
Other	(44)	(3,417)
Balance as of December 31	3,730,134	3,303,227

<i>(In millions of Korean won)</i>	2023	2022
Financial Liabilities		
Balance as of January 1	7,404	5,438
Amount recognized in profit or loss	619	1,966
Other	(8,023)	-
Balance as of December 31	-	7,404

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

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

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

<i>(In millions of Korean won)</i>	Favorable changes		Unfavorable changes	
	Profit or loss	Equity	Profit or loss	Equity
Financial assets at fair value through other comprehensive income ^(*1)	-	161,758	-	(111,678)
Other ^(*2)	101,749	-	(101,696)	-

^(*1) For equity securities, changes in fair value are calculated with the correlation between the growth rate (-1.0%~1.0%) and the discount rate, which are significant unobservable inputs.

^(*2) Changes in fair value were calculated based on the correlation between underlying asset price (20%) and price volatility (10%), which are significant unobservable inputs.

29. Segment Information

(A) Operating segment information

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

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

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

(1) For the year ended December 31, 2023

<i>(In millions of Korean won)</i>	DX	DS	SDC	Harman	Intercompany reconciliations	Total^(*)
Revenue	169,992,337	66,594,471	30,975,373	14,388,454	(23,015,141)	258,935,494
Depreciation	2,524,199	29,371,056	3,108,935	327,572	-	35,532,411
Amortization	1,721,938	754,901	222,045	200,896	-	3,134,148
Operating profit	14,384,705	(14,879,458)	5,566,478	1,173,702	-	6,566,976

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

Revenue by major product for the year ended December 31, 2022 are as follows:

<i>(In millions of Korean won)</i>	TV, monitor, and other	Smartphone and other	Memory	Display panels	Total^(*)
Revenue	30,375,193	108,632,515	44,125,386	30,975,373	258,935,494

^(*) Other products are not separately disclosed.

(2) For the year ended December 31, 2022

<i>(In millions of Korean won)</i>	DX	DS	SDC	Harman	Intercompany reconciliations	Total^(*)
Revenue	182,489,720	98,455,270	34,382,619	13,213,694	(26,309,943)	302,231,360
Depreciation	2,520,708	28,196,959	4,768,498	331,342	-	35,952,098
Amortization	1,678,572	809,270	237,182	211,549	-	3,155,561
Operating profit	12,746,074	23,815,810	5,952,973	880,548	-	43,376,630

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

Revenue by major product for the year ended December 31, 2022 are as follows:

<i>(In millions of Korean won)</i>	TV, monitor, and other	Smartphone and other	Memory	Display panels	Total^(*)
Revenue	33,279,488	115,425,375	68,534,930	34,382,619	302,231,360

^(*) Other products are not separately disclosed.

(B) Regional information

The regional information provided to the Management Committee for the reportable segments as of and for the years ended December 31, 2023 and 2022 are as follows:

(1) As of and for the year ended December 31, 2023

<i>(In millions of Korean won)</i>	Korea	America	Europe	Asia and Africa	China	Intercompany elimination	Consolidated
Revenue	45,599,419	92,136,669	48,108,965	44,814,355	28,276,086	-	258,935,494
Non-current assets ^(*)	163,312,301	20,346,775	6,288,864	8,737,541	12,191,879	(879,236)	209,998,124

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

(2) As of and for the year ended December 31, 2022

<i>(In millions of Korean won)</i>	Korea	America	Europe	Asia and Africa	China	Intercompany elimination	Consolidated
Revenue	48,654,656	118,974,561	50,283,975	48,692,399	35,625,769	-	302,231,360
Non-current assets ^(*)	144,936,912	14,022,225	5,839,813	9,056,272	15,338,153	(930,233)	188,263,142

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

30. Related Party Transactions

(A) Sale and purchase transactions

Sale and purchase transactions with related parties for the years ended December 31, 2023 and 2022 are as follows:

		2023			
(In millions of Korean won)	Name of company ^(*)	Sales	Disposal of non-current assets	Purchases	Purchase of non-current assets
Associates and joint ventures	Samsung SDS Co., Ltd.	202,810	-	1,984,263	291,120
	Samsung Electro-Mechanics Co., Ltd.	69,782	-	1,113,058	60
	Samsung SDI Co., Ltd.	110,025	-	754,792	31,750
	Cheil Worldwide Inc.	38,930	-	948,677	4,900
	Other	1,023,702	-	12,540,601	168,977
	Total		1,445,249	-	17,341,391
Other related parties	Samsung C&T Co., Ltd.	49,366	70	270,079	6,149,229
	Other	582,978	-	1,675,564	4,686,787
	Total	632,344	70	1,945,643	10,836,016
Other ^(*)	Samsung Engineering Co., Ltd.	1,358	-	35,482	2,837,309
	S-1	9,720	-	527,232	40,327
	Other	239,223	-	1,251,775	612,481
	Total	250,301	-	1,814,489	3,490,117

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

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

		2022			
(In millions of Korean won)	Name of company ^(*)	Sales	Disposal of non-current assets	Purchases	Purchase of non-current assets
Associates and joint ventures	Samsung SDS Co., Ltd.	214,105	-	1,865,588	378,770
	Samsung Electro-Mechanics Co., Ltd.	62,274	767	1,401,483	120
	Samsung SDI Co., Ltd.	82,062	-	803,556	24,926
	Cheil Worldwide Inc.	31,782	-	964,096	361
	Other	1,353,769	-	15,158,969	125,053
	Total		1,743,992	767	20,193,692
Other related parties	Samsung C&T Co., Ltd.	51,447	-	433,100	7,423,404
	Other	345,901	188	1,595,487	1,910,813
	Total	397,348	188	2,028,587	9,334,217
Other ^(*)	Samsung Engineering Co., Ltd.	1,666	-	53,793	3,249,254
	S-1	13,634	-	510,311	54,069
	Other	166,052	-	550,757	746,749
	Total	181,352	-	1,114,861	4,050,072

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

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

(B) Balances of receivables and payables

Balances of receivables and payables arising from the sales and purchases of goods and services as of December 31, 2023 and 2022 are as follows:

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

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

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

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

<i>(In millions of Korean won)</i>		Name of company ^(#1)	December 31, 2022	
			Receivables	Payables ^(#2)
Associates and joint ventures		Samsung SDS Co., Ltd.	49,792	512,022
		Samsung Electro-Mechanics Co., Ltd.	385	133,952
		Samsung SDI Co., Ltd.	121,605	92,452
		Cheil Worldwide Inc.	223	453,545
		Other	371,575	1,236,017
		Total	543,580	2,427,987
Other related parties		Samsung C&T Co., Ltd.	217,818	2,783,240
		Other	20,830	250,103
		Total	238,648	3,033,343
Other ^(#3)		Samsung Engineering Co., Ltd.	331	1,251,039
		S-1	3,839	73,102
		Other	15,647	545,684
		Total	19,817	1,869,825

^(#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 years ended December 31, 2023 and 2022, the Company invested ₩ 78,690 million and ₩ 907,958 million, respectively, in associates and joint ventures. In addition, the Company has made capital recovery of ₩ 33,457 million and ₩ 13,087 million from its investments in associates and joint ventures during the year ended December 31, 2023 and 2022, respectively.
- (D) For the years ended December 31, 2023 and 2022, the Company declared dividend of ₩ 1,650,995 million and ₩ 1,663,149 million, respectively, to related parties. In addition, for the years ended December 31, 2023 and 2022, the Company declared dividends of ₩ 128,232 million and ₩ 128,232 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 December 31, 2023 and 2022, there are no dividends payable to related parties.
- (E) For the years ended December 31, 2023 and 2022, the Company entered into lease agreements with its related parties amounting to ₩ 3,791 million and ₩ 25,243 million, respectively, and the lease payments made to the related parties were ₩ 25,443 million and ₩ 22,607 million, respectively.
- (F) Key management compensation

The compensation paid or payable to key management (executive directors) for their services for the years ended December 31, 2023 and 2022 consists of:

<i>(In millions of Korean won)</i>	2023	2022
Short-term employee benefits	14,073	14,768
Post-employment benefits	557	612
Other long-term employee benefits	7,834	5,434

31. Information for Non-Controlling Interests

(A) Changes in non-controlling interests

The profit or loss allocated to non-controlling interests and accumulated non-controlling interests of subsidiaries that are material to the Company for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	Samsung Display Co., Ltd. and its subsidiaries	
	2023	2022
Percentage of non-controlling interests	15.2%	15.2%
Balance as of January 1	8,853,712	8,028,555
Profit for the year	941,786	853,290
Dividends	(43,646)	(3,947)
Other	(24,178)	(24,186)
Balance as of December 31	9,727,674	8,853,712

(B) The summarized financial information for the subsidiary with non-controlling interests that are material to the Company before the intercompany eliminations for the years ended December 31, 2023 and 2022 are as follows:

(1) Summarized consolidated statements of financial position

<i>(In millions of Korean won)</i>	Samsung Display Co., Ltd. and its subsidiaries	
	December 31, 2023	December 31, 2022
Current assets	24,721,411	42,082,412
Non-current assets	46,413,723	23,070,658
Current liabilities	5,821,885	6,294,310
Non-current liabilities	1,485,250	1,220,097
Equity attributable to:	63,827,999	57,638,663
Owners of the parent company	63,769,776	57,552,528
Non-controlling interests	58,223	86,135

(2) Summarized consolidated statements of comprehensive income

<i>(In millions of Korean won)</i>	Samsung Display Co., Ltd. and its subsidiaries	
	2023	2022
Sales	30,950,579	34,298,283
Profit for the year	6,331,238	6,614,496
Other comprehensive loss	(108,689)	(67,942)
Total comprehensive income attributable to:	6,222,549	6,546,554
Owners of the parent company	6,217,248	6,539,633
Non-controlling interests	5,301	6,921

(3) Summarized consolidated statements of cash flows

<i>(In millions of Korean won)</i>	Samsung Display Co., Ltd. and its subsidiaries	
	2023	2022
Cash flows from operating activities	9,244,331	11,395,827
Cash flows from investing activities	(3,931,091)	(8,654,933)
Cash flows from financing activities	(277,515)	(1,146,117)
Reclassify as held-for-sale	(14,153)	-
Effect of exchange rate changes on cash and cash equivalents	(1,534)	(44,426)
Increase in cash and cash equivalents	5,020,038	1,550,351
Cash and cash equivalents at beginning of the year	2,309,210	758,859
Cash and cash equivalents at end of year	7,329,248	2,309,210

32. Business Combinations

To enhance the competitiveness of Micro-Display, Samsung Display America Holdings, Inc., the Company's subsidiary, acquired 100% of the equity shares of eMagin Corporation on October 18, 2023.

(1) Overview of the acquired company

Name of the acquired company	eMagin Corporation
Headquarters location	New York, USA
Representative director	Andrew G. Sculley Jr.
Industry	Development and manufacture of display panels

(2) Purchase price allocation

<i>(In millions of Korean won)</i>	Amount
I. Consideration transferred	
Cash and cash equivalents	295,291
Fair value of additional consideration transferred	15,164
Total consideration transferred	310,455
II. Identifiable assets and liabilities	
Cash and cash equivalents	4,473
Trade and other receivables	13,033
Inventory	13,753
Property, plant and equipment	77,500
Intangible assets	15,580
Other assets	1,691
Trade and other payables	(22,370)
Other liabilities	(69,653)
Total net identifiable assets	34,007
III. Goodwill (I - II)	276,448

Assuming that eMagin Corporation had been consolidated from January 1, 2023, eMagin Corporation's revenue and net loss for the year ended December 31, 2023, would have been ₩ 27,781 million and ₩ 36,021 million, respectively. Revenue and net loss for the period contributed by eMagin Corporation since consolidation amounted to ₩ 4,684 million and ₩ 6,847 million, respectively.

33. Assets and Liabilities Held-for-Sale

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

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

(In millions of Korean won)

December 31, 2023

Assets held-for-sale	
Cash and cash equivalents	14,153
Trade receivables	1,316
Inventories	4,697
Other current assets	13,134
Property, plant and equipment and intangible assets	181,251
Other non-current assets	3,313
Total	217,864
Liabilities held-for-sale	
Current liabilities	27,608
Non-current liabilities	34,046
Total	61,654

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

(In millions of Korean won)

December 31, 2023

Foreign currency translation, net of tax	(217)
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4. Separate Financial Statements

A. Separate Statements of Financial Position

(In millions of Korean won, in thousands of US dollars (Note 2.18))

	Notes	December 31, 2023 KRW	December 31, 2022 KRW	December 31, 2023 USD	December 31, 2022 USD
Assets					
Current assets					
Cash and cash equivalents	4, 28	6,061,451	3,921,593	4,640,807	3,002,475
Short-term financial instruments	4, 28	50,071	137	38,336	105
Trade receivables	4, 5, 7, 28	27,363,016	20,503,223	20,949,848	15,697,810
Non-trade receivables	4, 7, 28	1,910,054	2,925,006	1,462,388	2,239,462
Prepaid expenses		1,349,755	1,047,900	1,033,408	802,300
Inventories	8	29,338,151	27,990,007	22,462,064	21,429,889
Other current assets	4, 28	2,475,944	2,674,792	1,895,648	2,047,891
		68,548,442	59,062,658	52,482,499	45,219,932
Non-current assets					
Financial assets at fair value through other comprehensive income	4, 6, 28	1,854,503	1,364,325	1,419,857	1,044,563
Financial assets at fair value through profit or loss	4, 6, 28	1	283	1	217
Investments in subsidiaries, associates and joint ventures	9	57,392,438	57,397,249	43,941,168	43,944,851
Property, plant and equipment	10	140,579,161	123,266,986	107,631,122	94,376,463
Intangible assets	11	10,440,211	8,561,424	7,993,302	6,554,853
Net defined benefit assets	14	3,745,697	4,410,223	2,867,805	3,376,583
Deferred income tax assets	25	9,931,358	2,142,512	7,603,710	1,640,364
Other non-current assets	4, 7, 28	4,365,478	3,878,090	3,342,324	2,969,168
		228,308,847	201,021,092	174,799,289	153,907,062
Total assets		296,857,289	260,083,750	227,281,788	199,126,994

(In millions of Korean won, in thousands of US dollars (Note 2.18))

		December 31,	December 31,	December 31,	December 31,
	Notes	2023	2022	2023	2022
		KRW	KRW	USD	USD
Liabilities and Equity					
Current liabilities					
Trade payables	4, 28	7,943,834	8,729,315	6,082,009	6,683,394
Short-term borrowings	4, 5, 12, 28	5,625,163	2,381,512	4,306,773	1,823,349
Other payables	4, 28	15,256,046	18,554,543	11,680,432	14,205,849
Advances received	17	302,589	320,689	231,670	245,527
Withholdings	4, 28	445,470	523,354	341,064	400,694
Accrued expenses	4, 17, 28	6,931,991	8,359,296	5,307,316	6,400,098
Current income tax liabilities		-	2,533,481	-	1,939,700
Current portion of long-term liabilities	4, 12, 13, 28	228,491	135,753	174,939	103,936
Provisions	15	4,540,702	4,059,491	3,476,481	3,108,054
Other current liabilities	17	500,815	488,613	383,438	374,095
		41,775,101	46,086,047	31,984,122	35,284,696
Non-current liabilities					
Debentures	4, 13, 28	19,064	24,912	14,596	19,073
Long-term borrowings	4, 12, 28	22,902,035	654,979	17,534,403	501,469
Long-term other payables	4, 28	4,942,826	2,439,232	3,784,358	1,867,541
Long-term provisions	15	2,413,133	1,423,165	1,847,558	1,089,613
Other non-current liabilities		17,356	39,224	13,289	30,030
		30,294,414	4,581,512	23,194,204	3,507,726
Total liabilities		72,069,515	50,667,559	55,178,326	38,792,422

(In millions of Korean won, in thousands of US dollars (Note 2.18))

		December 31,	December 31,	December 31,	December 31,
	Notes	2023	2022	2023	2022
		KRW	KRW	USD	USD
Equity					
Preference shares	18	119,467	119,467	91,467	91,467
Ordinary shares	18	778,047	778,047	595,693	595,693
Share premium		4,403,893	4,403,893	3,371,737	3,371,737
Retained earnings	19	219,963,351	204,388,016	168,409,756	156,484,868
Other components of equity	20	(476,984)	(273,232)	(365,191)	(209,193)
Total equity		224,787,774	209,416,191	172,103,462	160,334,572
Total liabilities and equity		296,857,289	260,083,750	227,281,788	199,126,994

B. Separate Statements of Profit and Loss

(In millions of Korean won, in thousands of US dollars (Note 2.18))

	Notes	For the years ended December 31,			
		2023 KRW	2022 KRW	2023 USD	2022 USD
Revenue	29	170,374,090	211,867,483	130,442,907	162,211,346
Cost of sales	21	144,023,552	152,589,393	110,268,239	116,826,473
Gross profit		26,350,538	59,278,090	20,174,668	45,384,873
Selling and administrative expenses	21, 22	37,876,835	33,958,761	28,999,506	25,999,725
Operating profit (loss)	29	(11,526,297)	25,319,329	(8,824,838)	19,385,148
Other non-operating income	23	29,643,315	4,576,378	22,695,706	3,503,796
Other non-operating expense	23	375,723	296,344	287,663	226,889
Financial income	24	7,388,664	9,734,299	5,656,956	7,452,837
Financial expense	24	7,598,459	9,641,742	5,817,581	7,381,973
Profit before income tax		17,531,500	29,691,920	13,422,580	22,732,919
Income tax expense (benefit)	25	(7,865,599)	4,273,142	(6,022,110)	3,271,631
Profit for the year		25,397,099	25,418,778	19,444,690	19,461,288
Earnings per share	26				
(in Korean won, in US dollars)					
- Basic		3,739	3,742	2.86	2.86
- Diluted		3,739	3,742	2.86	2.86

C. Separate Statements of Comprehensive Income

(In millions of Korean won, in thousands of US dollars (Note 2.18))

	Notes	For the years ended December 31,			
		2023	2022	2023	2022
		KRW	KRW	USD	USD
Profit for the year		25,397,099	25,418,778	19,444,690	19,461,288
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	6, 20	356,472	(208,883)	272,924	(159,926)
Remeasurement of net defined benefit liabilities (assets), net of tax	14, 20	(572,551)	822,001	(438,360)	629,346
Items that may be reclassified subsequently to profit or loss		-	-	-	-
Other comprehensive income (loss) for the year, net of tax		(216,079)	613,118	(165,436)	469,420
Total comprehensive income for the year		25,181,020	26,031,896	19,279,254	19,930,708

D. 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 year		-	-	-	25,418,778	-	25,418,778
Gain (loss) on valuation of financial assets at fair value through other comprehensive income, net of tax	6, 20	-	-	-	4,340	(213,223)	(208,883)
Remeasurement of net defined benefit liabilities, net of tax	14, 20	-	-	-	-	822,001	822,001
Total comprehensive income for the year		-	-	-	25,423,118	608,778	26,031,896
Dividends declared	19	-	-	-	(9,809,437)	-	(9,809,437)
Total transactions with owners		-	-	-	(9,809,437)	-	(9,809,437)
Balance as of December 31, 2022		119,467	778,047	4,403,893	204,388,016	(273,232)	209,416,191

(In thousands of US dollars (Note 2.18))

2022 USD	Notes	Preference shares	Ordinary shares	Share premium	Retained earnings	Other components of equity	Total
Balance as of January 1, 2022		91,467	595,693	3,371,737	144,530,621	(675,290)	147,914,228
Profit for the year		-	-	-	19,461,288	-	19,461,288
Gain (loss) on valuation of financial assets at fair value through other comprehensive income, net of tax	6, 20	-	-	-	3,323	(163,249)	(159,926)
Remeasurement of net defined benefit liabilities, net of tax	14, 20	-	-	-	-	629,346	629,346
Total comprehensive income for the year		-	-	-	19,464,611	466,097	19,930,708
Dividends declared	19	-	-	-	(7,510,364)	-	(7,510,364)
Total transactions with owners		-	-	-	(7,510,364)	-	(7,510,364)
Balance as of December 31, 2022		91,467	595,693	3,371,737	156,484,868	(209,193)	160,334,572

(In millions of Korean won)

2023 KRW	Notes	Preference shares	Ordinary shares	Share premium	Retained earnings	Other components of equity	Total
Balance as of January 1, 2023		119,467	778,047	4,403,893	204,388,016	(273,232)	209,416,191
Profit for the year		-	-	-	25,397,099	-	25,397,099
Gain (loss) on valuation of financial assets at fair value through other comprehensive income, net of tax	6, 20	-	-	-	(12,327)	368,799	356,472
Remeasurement of net defined benefit assets, net of tax	14, 20	-	-	-	-	(572,551)	(572,551)
Total comprehensive income (loss) for the year		-	-	-	25,384,772	(203,752)	25,181,020
Dividends declared	19	-	-	-	(9,809,437)	-	(9,809,437)
Total transactions with owners		-	-	-	(9,809,437)	-	(9,809,437)
Balance as of December 31, 2023		119,467	778,047	4,403,893	219,963,351	(476,984)	224,787,774

(In thousands of US dollars (Note 2.18))

2023 USD	Notes	Preference shares	Ordinary shares	Share premium	Retained earnings	Other components of equity	Total
Balance as of January 1, 2023		91,467	595,693	3,371,737	156,484,868	(209,193)	160,334,572
Profit for the year		-	-	-	19,444,690	-	19,444,690
Gain (loss) on valuation of financial assets at fair value through other comprehensive income, net of tax	6, 20	-	-	-	(9,438)	282,362	272,924
Remeasurement of net defined benefit assets, net of tax	14, 20	-	-	-	-	(438,360)	(438,360)
Total comprehensive income (loss) for the year		-	-	-	19,435,252	(155,998)	19,279,254
Dividends declared	19	-	-	-	(7,510,364)	-	(7,510,364)
Total transactions with owners		-	-	-	(7,510,364)	-	(7,510,364)
Balance as of December 31, 2023		91,467	595,693	3,371,737	168,409,756	(365,191)	172,103,462

E. Separate Statements of Cash Flows

(In millions of Korean won, in thousands of US dollars (Note 2.18))

	Notes	For the years ended December 31,			
		2023	2022	2023	2022
		KRW	KRW	USD	USD
Operating activities					
Profit for the year		25,397,099	25,418,778	19,444,690	19,461,288
Adjustments	27	(4,092,924)	31,039,388	(3,133,651)	23,764,576
Changes in assets and liabilities arising from operating activities	27	(13,215,547)	(6,868,269)	(10,118,172)	(5,258,528)
Cash generated from operations		8,088,628	49,589,897	6,192,867	37,967,336
Interest received		332,111	339,560	254,273	259,976
Interest paid		(798,649)	(287,488)	(611,467)	(220,108)
Dividends received		29,497,803	3,551,435	22,584,298	2,719,073
Income tax paid		(2,664,809)	(8,404,655)	(2,040,248)	(6,434,826)
Net cash from operating activities		34,455,084	44,788,749	26,379,723	34,291,451
Investing activities					
Net decrease (increase) in short-term financial instruments		(49,934)	15,000,439	(38,231)	11,484,733
Disposal of financial assets at fair value through other comprehensive income		15,538	10,976	11,896	8,404
Acquisition of financial assets at fair value through other comprehensive income		(15,515)	-	(11,879)	-
Disposal of financial assets at fair value through profit or loss		243	1,744	186	1,335
Disposal of investments in subsidiaries, associates and joint ventures		144,292	165,089	110,474	126,397
Acquisition of investments in subsidiaries, associates and joint ventures		(108,300)	(1,001,723)	(82,917)	(766,946)
Disposal of property, plant and equipment		164,415	288,684	125,880	221,024
Acquisition of property, plant and equipment		(45,026,206)	(39,160,176)	(34,473,254)	(29,982,066)
Disposal of intangible assets		12,002	6,242	9,189	4,779
Acquisition of intangible assets		(2,639,614)	(3,298,378)	(2,020,958)	(2,525,325)
Cash outflow from other investing activities		(68,458)	(136,783)	(52,413)	(104,725)
Net cash used in investing activities		(47,571,537)	(28,123,886)	(36,422,027)	(21,532,390)

(In millions of Korean won, in thousands of US dollars (Note 2.18))

	Notes	For the years ended December 31,			
		2023	2022	2023	2022
		KRW	KRW	USD	USD
Financing activities					
Net increase (decrease) in short-term borrowings	27	3,274,337	(6,700,826)	2,506,919	(5,130,330)
Increase in debentures and long-term borrowings	27	21,990,000	-	16,836,125	-
Repayment of debentures and long-term borrowings	27	(185,316)	(155,264)	(141,883)	(118,874)
Dividends paid		(9,810,119)	(9,808,974)	(7,510,886)	(7,510,010)
Net cash from (used in) financing activities		15,268,902	(16,665,064)	11,690,275	(12,759,214)
Effect of foreign exchange rate changes		(12,591)	2,922	(9,639)	2,236
Net increase in cash and cash equivalents		2,139,858	2,721	1,638,332	2,083
Cash and cash equivalents					
Beginning of the year		3,921,593	3,918,872	3,002,475	3,000,392
End of the year		6,061,451	3,921,593	4,640,807	3,002,475

5. Notes to the Separate Financial Statements

1. General Information

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

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

2. Material Accounting Policies

The followings are material accounting policies applied on financial statements. Unless mentioned otherwise, these policies are consistent throughout the accounting periods denoted.

2.1 Basis of Presentation

The Company’s financial statements have been written in accordance with the Korean International Financial Reporting Standards (“Korean IFRS”). The Korean IFRS refers to standards selected by the Republic of Korea among accounting standards and interpretations published by International Accounting Standards Board (IASB).

The Korean IFRS permits application of material accounting estimates on the financial statements and requires management’s judgements in applying accounting policies. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are material to the financial statements are disclosed in Note 3.

2.2 Changes in Accounting Policies and Disclosures

(A) New and amended standards adopted by the Company

The Company applied the following amended standards for the first time for the annual reporting period commencing on January 1, 2023:

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

The amendments replace the term ‘significant’ accounting policy information with ‘material’ accounting policy and clarify its meaning. These amendments do not result in a change in accounting policy but affects the accounting policy information disclosed in the separate financial statements. In addition, IFRS Practice Statement 2, *Making Materiality Judgments* has been amended to provide guidance on the application of the concept of materiality. The Company has adopted the amendments to the standard and discloses the Company’s material accounting policies in Note 2.

Amendments to Korean IFRS 1008, *Accounting Policies, Changes in Accounting Estimates and Errors*

The amendments clarify how accounting estimates are defined and distinguished from changes in accounting policies. The adoption of the amendments does not have a significant impact on the Company’s separate financial statements.

Amendments to Korean IFRS 1012, *Income Tax*

The amendments add to a condition 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 adoption of the amendments does not have a significant impact on the Company’s separate financial statements.

Amendments to Korean IFRS 1012, *Income Tax*

The amendments clarify that Korean IFRS 1012, *Income Taxes*, applies to income taxes arising from tax law enacted or substantively enacted to implement the Pillar Two Model Rules issued by the Organization for Economic Co-operation and Development (OECD).

However, a temporary exemption from the requirements of Korean IFRS 1012, *Income Taxes*, has been adopted to allow the Company to neither recognize nor disclose deferred tax assets and liabilities relating to Pillar Two income taxes.

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

The amended accounting standards that have been issued but not yet effective for the annual reporting period commencing on January 1, 2023 which have not been early adopted by the Company are as follows:

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

The amendments to Korean IFRS 1001 clarify that the classification of liabilities as current or non-current should be based on rights that are in existence at the end of the reporting period, and that the classification is unaffected by management's intentions or expectations about whether an entity will exercise its right to defer settlement of a liability. The amendments also introduce a definition of settlement to make clear that settlement includes the transfer to the counterparty of the entity's own equity instruments, however, it would be excluded if an option to settle the liability by the transfer of the entity's own equity instruments is recognized separately from the liability as an equity component of a compound financial instrument. The amendments are applied for annual periods beginning on or after January 1, 2024, with early application permitted.

Amendments to Korean IFRS 1116, *Leases*

The amendments add requirements for the subsequent measurement of sale-and-leaseback transactions that are accounted for as sales in accordance with Korean IFRS 1115, *Revenue from Contracts with Customers*. The amendments require the seller-lessee to calculate the 'lease payments' or 'revised lease payments' in a way that does not result in the seller-lessee recognizing any gain or loss for the rights of use that the seller-lessee continues to retain after the lease commences. The amendments are effective for annual reporting periods beginning on or after January 1, 2024, with early application permitted.

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

The amendments add to the disclosure objectives in Korean IFRS 1007, *Statement of Cash Flows*, that information about supplier financing arrangements should be disclosed to enable users of financial statements to assess the impact of those arrangements on the Company's liabilities and cash flows. The amendments also amend Korean IFRS 1107, *Financial Instruments: Presentation*, to add supplier financing arrangements as an example of a requirement to disclose information about an entity's exposure to concentrations of liquidity risk.

The amendments are effective for annual reporting periods beginning on or after January 1, 2024, and include specific transitional provisions for the first annual period in which they are applied. Early application is permitted.

2.3 Subsidiaries, Associates and Joint Ventures

The Company, which is the ultimate controlling entity for the purposes of Korean IFRS 1110 *Consolidated Financial Statements*, recognizes its investments in subsidiaries, associates and joint ventures in its separate financial statements using the cost method in accordance with Korean IFRS 1027 *Separate Financial Statements*.

If there is objective evidence of impairment, the difference between the recoverable amount of the investments in subsidiaries, associates and joint ventures and their carrying amount is recognized as an impairment loss.

2.4 Functional and Presentation Currency

The Company measures items included in its financial statements using the currency of the primary economic environment in which it operates ("functional currency"). The functional currency of the Company is Korean won (KRW) and the financial statements are presented in Korean won (KRW).

2.5 Cash and Cash Equivalents

Cash and cash equivalents include cash on hand, deposits held at call with banks, and highly liquid short-term investment assets that are readily convertible to known amounts of cash at the date of acquisition and which are subject to an insignificant risk of changes in value.

2.6 Financial Assets

(A) Classification

Financial instruments are classified based on the business model for managing the financial assets and the contractual cash flow characteristics of the financial asset. The Company considers the contractual terms of the relevant financial instrument and assesses whether the contractual cash flows consist solely of payments of principal and interest on the principal amount outstanding.

(B) Impairment

The Company assesses the expected credit losses of debt instruments carried at amortized cost or fair value through other comprehensive income on a forward-looking basis. However, the Company applies the simplified approach for trade receivables, which requires expected credit losses to be recognized over the life of the receivable from initial recognition.

2.7 Trade Receivables

Trade receivables are recognized at initial transaction price, unless they contain a significant financing component, and are subsequently measured at amortized cost using the effective interest method less any allowance for impairment.

2.8 Inventories

The Company determines the unit cost of inventories, except for materials in transit, using the average cost method. The cost of finished goods and work in progress comprises raw materials, direct labor, other direct costs and related production overheads based on normal operating capacity, excluding the cost of idle production equipment and scrapping costs.

The Company measures inventories at the lower of cost and net realizable value. Net realizable value is the estimated selling price in the ordinary course of business less the applicable variable selling expenses, and reflects the decrease in selling price, the increase in costs to completion, or decrease in value due to excess or obsolete inventory.

2.9 Property, Plant and Equipment

Depreciation of property, plant and equipment begins when assets are considered by management to be available for their intended use, such as in the production of products.

The Company's property, plant and equipment is depreciated on a straight-line method over the estimated useful lives of the assets, less any residual values. Land is not depreciated. Costs that are directly attributable to the acquisition, construction of a qualifying asset, including capitalized interest costs, are depreciated over the estimated useful lives.

The estimated useful lives of property, plant and equipment used by the Company for each asset category are as follows:

	<u>Estimated useful lives</u>
Buildings and structures	15, 30 years
Machinery and equipment	5 years
Other	5 years

2.10 Intangible Assets

Goodwill represents the excess of the cost of an acquisition over the fair value of the net identifiable assets of the acquired business at the date of acquisition and is recorded as an intangible asset.

Intangible assets, other than goodwill, are initially recognized at their historical cost and are subsequently stated at cost less accumulated amortization and accumulated impairment losses.

Membership rights are regarded as intangible assets with indefinite useful life and not amortized as there are no foreseeable restrictions on their use. However, whenever there is an indication of impairment, such as a decline in the market value of membership rights, a reasonable estimate is made to reflect the impairment. Intangible assets with finite useful lives, such as patents, trademarks and other intangible assets, are amortized on a straight-line method over their estimated useful lives.

The estimated useful lives of intangible assets used by the Company are as follows:

	<u>Estimated useful lives</u>
Patents, trademarks and other intangible assets	5 - 10 years

2.11 Financial Liabilities

The Company classifies financial liabilities into financial liabilities at fair value through profit or loss and other financial liabilities and recognizes them on the statement of financial position when the Company becomes a party to a contract, depending on the substance of the contractual terms.

2.12 Employee Benefits

The Company operates various types of post-employment benefit plans, including defined benefit plans and defined contribution plans. The defined benefit liability (asset) recognized in the statement of financial position in respect of defined benefit plans is the present value of the defined benefit obligation at the reporting date less the fair value of plan assets, less any deficit (excess of plan assets over the asset recognition threshold) and is calculated annually by an independent actuary using the projected unit credit method.

2.13 Income Tax Expense

The Company applies the exemption to the recognition and disclosure of deferred tax assets and liabilities related to the Pillar Two Model Rules of OECD. Furthermore, as the relevant legislation will be effective from January 1, 2024, the Company has not recognized any current tax expense related to Pillar Two in the fiscal year ended December 31, 2023.

The Company recognizes deferred tax liabilities for taxable temporary differences associated with investments in subsidiaries, associates and joint ventures, except where the Company is able to control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets are recognized for deductible temporary differences arising on these assets only to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable profit will be available against which the temporary differences can be utilized.

2.14 Derivative Instruments

The Company recognizes its rights and obligations under derivative contracts as assets and liabilities at fair value and records gains and losses on these contracts in the statement of profit or loss. However, effective portion of changes in the fair value of cash flow hedges are deferred in equity.

2.15 Revenue Recognition

The Company's revenue primarily represents the fair value of the consideration received or receivable for the sale of goods in the ordinary course of the Company's activities. Revenue is net of value-added tax, returns, sales incentives, discounts and others.

(A) Identification of performance obligations

The Company is required to transfer control of goods and services under contracts with customers. For the export of products and goods under Incoterms Group C terms (such as CIF), the Company recognize the transportation services (including insurance) provided after the control of the goods has passed to the customer as a separate performance obligation.

(B) Performance obligations satisfied at a point of time

The Company's revenue is primarily derived from the sale of goods and is recognized when control of the goods passes to the customer.

(C) Performance obligations satisfied over time

The Company recognizes revenue over time for sales of software, transportation services, installation services, and etc. where the customer has direct control over the outcome during the performance of the service.

(D) Variable consideration

The Company provides a variety of sales promotions including incentives, promotion and sales allowances. Where these sales promotion policies result in variability in the consideration promised to customers, the Company estimates the variable consideration using either the expected value or the most likely amount whichever method the Company expects to better predict the amount of consideration to which it will be entitled. The estimate of variable consideration is included in transaction price only to the extent that it is highly probable that a significant portion of the cumulative revenue already recognized will not be reversed. Revenue and contract liabilities are recognized when the related revenue is earned or when the decision to pay the variable consideration to the customer is made, whichever is later.

The Company recognizes contract liabilities (refund liabilities) after the sale of products to customers by estimating the return rate using the expected value methods based on historical experience. When the customer exercises its right to return the product, the Company recognizes the asset as a refund asset and adjusts cost of sales by the amount of the right to collect the product from the customer. The right to collect the product is measured by deducting the cost of collecting the product from the historical carrying amount of the product.

2.16 Leases

(A) Lessee accounting

The Company applies the practical expedient of Korean IFRS 1116, *Leases*, and does not separate the non-lease elements from the lease elements and accounts for the non-lease elements relating to each lease element as a single lease element.

At the commencement date of a lease, the Company recognizes a right-of-use asset (the lease asset) representing the right to use the underlying asset and a lease liability representing the obligation to make lease payments. The right-of-use asset is presented in the statement of financial position as ‘property, plant and equipment’ and the lease liability is presented as ‘current portion of long-term liabilities’ or ‘long-term borrowings.’

Lease liabilities are measured at the inception of the lease at the present value of the lease payments outstanding at that date, discounted at the Company’s incremental borrowing rate.

For short-term leases (lease terms of 12 months or less at the inception of the lease) and low value assets (underlying assets of USD 5,000 or less), lease payments are recognized as expenses on a straight-line basis over the lease term applying the simplified practical expedient.

(B) Lessor accounting

The Company, as a lessor, determines whether a lease is a finance or an operating lease at the inception of the lease.

Leases that transfer substantially all the risk and rewards of ownership of the leased assets are classified as finance leases and all leases other than finance leases are classified as operating leases. Lease income from operating leases is recognized on a straight-line basis over the lease term, while initial direct costs incurred during the negotiation and contracting phase of an operating lease are added to the carrying amount of the leased asset and expensed over the lease term against the lease income.

2.17 Government Grants

Government grants relating to revenues are deferred and recognized in the statement of profit or loss in the same period in which they are matched with revenues or expenses related to the purpose for which the grant was made. Government grants received related to the acquisition of assets are treated as deferred income and credited to the statement of profit or loss over the useful lives of the related assets.

2.18 Convenience Translation into United States Dollar Amounts

The US dollar amounts provided in the separate financial statements represent supplementary information solely for the convenience of the reader. All Korean won amounts are expressed in US dollar at the rate of ₩ 1,306.1 to \$1, the average exchange rate for the year ended December 31, 2023. 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 any other rate.

2.19 Approval of the Separate Financial Statements

These separate financial statements of the Company were approved by the Board of Directors on January 31, 2024, and may be approved as amended at the Annual General Shareholders' Meetings.

3. Material Accounting Estimates and Assumptions

The Company makes estimates and assumptions concerning the future. Estimates and assumptions are continuously evaluated and are based on historical experience and future events that are reasonably foreseeable under the circumstances. These estimates may differ from actual results. The estimates and assumptions that have the most significant risk of causing a material adjustment to the carrying amounts of assets and liabilities in the next financial year are as follows.

(A) Revenue recognition

The Company recognizes a liability for a product return and a right to the returned goods that are expected to be returned by customers following the sale of products to customers. At the point of sale, the Company estimates the return using the expected value method based on accumulated experience at the portfolio level and the Company's revenue is affected by changes in the expected return.

Revenue from the sale of goods recognized at the point of transfer of control is the contractual consideration less consideration paid to customers in relation to certain sales promotion activities. Based on the historical experience and terms of contracts, the Company makes reasonable estimates of the sales deductions which affect the Company's revenue.

(B) Provision for warranty

The Company provides warranties for products sold. At the end of each reporting period, the Company recognizes a provision for warranties based on its best estimate of the amount it believes is necessary to provide for future and current warranty obligations. These best estimates are based on historical experience.

(C) Fair value of financial instruments

The fair value of financial instruments that are not traded in an active market is determined by using various valuation techniques and assumptions based on market conditions prevailing at the end of each reporting period.

(D) Impairment of financial assets

In measuring the allowance for impairment losses on financial assets, the Company makes assumptions about the risk of default and expected credit rates. In making these assumptions and selecting the inputs for the impairment calculations, the Company makes judgment based on past experience and current and forecast of future economic conditions at the reporting date.

(E) Lease

In determining the lease term, the Company considers all relevant facts and circumstances that provide an economic incentive to exercise a renewal option, or not to exercise a termination option. The period covered by the renewal option (or the period covered by the termination option) is included in the lease term only if it is reasonably certain that the lessee will exercise (or not exercise) the renewal option.

The lease term is reassessed when the option is actually exercised (or not exercised) or when the Company becomes committed to exercise (or not exercise) the option. The Company only changes its assessment of whether it is reasonably certain the renewal option

will be exercised (or not) if there is a significant event or change in circumstances within the lessee's control that affects the calculation of the lease term.

(F) Net defined benefit liabilities (assets)

The net defined benefit liabilities (assets) are dependent on a number of factors which are determined using actuarial methods based on a number of assumptions. Among the assumptions used to determine the net defined benefit liabilities (assets) is the discount rate, and changes in these assumptions will affect the carrying amount of the net defined benefit liability (asset). At the end of each year the Company determines an appropriate discount rate, taking into account the interest rates on high-quality corporate bonds, which represents the interest rate that should be used to determine the present value of the estimated future cash outflows expected to be required to settle the net defined benefit liability (asset). Some key assumptions relating to the net defined benefit liability (asset) are based on current market conditions.

(G) Impairment of goodwill and intangible assets that have indefinite useful life

The Company tests goodwill and intangible assets with indefinite useful life for impairment annually. The recoverable amount of a cash-generating unit or asset, including goodwill, is determined based on a value-in-use calculation. These calculations are based on estimates.

(H) Income taxes

Income taxes on the Company's taxable income are calculated by applying tax laws and decisions of tax authorities in various countries, and, therefore, there is uncertainty in determining the final tax effect. The Company has recognized current and deferred tax based on its best estimate of the tax consequences expected to be payable in future periods as a result of the Company's operating activities up to the reporting date. However, the actual future final tax liability may not be consistent with the related assets and liabilities recognized, and such differences may affect the current and deferred tax assets and liabilities when the final tax effect is determined.

The Company is subject to additional income taxes, calculated in accordance with the method prescribed by tax laws, when a certain amount is not used for investment, wage growth, etcetera, in a given period. The related tax effect is reflected in the measurement of current and deferred income taxes for the period, and the amount of income tax payable by the Company depends on the level of investment, wage growth, etcetera in each year, resulting in uncertainty in determining the final tax effects.

The Company assesses uncertainty over its tax positions and, if the Company concludes that it is not probable that the tax authorities will accept a uncertain tax position, the effect of the uncertainty is recognized in the financial statements for each uncertain tax position using the method that is expected to provide a better estimate of the resolution of the uncertainty, which is more likely of the following methods.

- (1) Most likely amount: the single most probable amount within a range of possible outcomes.
- (2) Expected value: the sum of the probability-weighted amounts in a range of possible outcomes.

4. Financial Instruments by Category

(A) Categorizations of financial assets and liabilities as of December 31, 2023 and 2022 are as follows:

(1) As of December 31, 2023

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

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

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

(2) As of December 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	3,921,593	-	-	3,921,593
Short-term financial instruments	137	-	-	137
Trade receivables	20,503,223	-	-	20,503,223
Financial assets at fair value through other comprehensive income	-	1,364,325	-	1,364,325
Financial assets at fair value through profit or loss	-	-	283	283
Other	5,470,355	-	-	5,470,355
Total	29,895,308	1,364,325	283	31,259,916

<i>(In millions of Korean won)</i>	Financial liabilities measured at amortized cost	Other financial liabilities^(*)	Total
Financial liabilities			
Trade payables	8,729,315	-	8,729,315
Short-term borrowings	-	2,381,512	2,381,512
Other payables	18,324,604	-	18,324,604
Current portion of long-term liabilities	6,228	129,525	135,753
Debentures	24,912	-	24,912
Long-term borrowings	-	654,979	654,979
Long-term other payables	2,083,790	-	2,083,790
Other	3,145,473	-	3,145,473
Total	32,314,322	3,166,016	35,480,338

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

(B) Net gains or net losses on each category of financial assets and liabilities for the years ended December 31, 2023 and 2022 are as follows:

(1) For the year ended December 31, 2023

<i>(In millions of Korean won)</i>	Financial assets measured at amortized cost	Financial assets measured at fair value through other comprehensive income	Financial assets measured at fair value through profit or loss	Total
Financial assets				
Gain on valuation (other comprehensive income)	-	356,472	-	356,472
Gain on valuation/disposal (profit or loss)	-	-	365,387	365,387
Interest income	371,106	-	-	371,106
Foreign exchange differences (profit or loss)	(216,145)	-	-	(216,145)
Dividend income	-	4,081	637	4,718
Impairment/reversal (profit or loss)	(2,113)	-	-	(2,113)

<i>(In millions of Korean won)</i>	Financial liabilities measured at amortized cost	Other financial liabilities^(*)	Total
Financial liabilities			
Interest expense	(310,267)	(285,498)	(595,765)
Foreign exchange differences (profit or loss)	5,103	31,557	36,660

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

(2) For the year ended December 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				
Loss on valuation (other comprehensive income)	-	(208,883)	-	(208,883)
Gain on valuation/disposal (profit or loss)	-	-	271,057	271,057
Interest income	339,242	-	-	339,242
Foreign exchange differences (profit or loss)	(668,955)	-	-	(668,955)
Dividend income	-	3,594	-	3,594
Impairment/reversal (profit or loss)	(2,130)	-	-	(2,130)

<i>(In millions of Korean won)</i>	Financial liabilities measured at amortized cost	Other financial liabilities^(*)	Total
Financial liabilities			
Interest expense	(45,883)	(244,200)	(290,083)
Foreign exchange differences (profit or loss)	477,397	132,902	610,299

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

5. Transfer of Financial Assets

The Company discounted trade receivables through factoring arrangements with banks during the years ended December 31, 2023 and 2022. Trade receivables provided as collaterals in factoring transactions have not been derecognized as they do not meet the requirements for derecognition of financial assets as the Company retains substantially all the risks and rewards, including the recourse in the event of default by the debtor. Financial liabilities recognized in these transactions are classified as 'short-term borrowings' on the separate statement of financial position (refer to Note 12).

The carrying amount of the discounted trade receivables and the associated liabilities as of December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	December 31, 2023	December 31, 2022
Carrying amount of the discounted trade receivables	5,625,163	2,381,512
Carrying amount of the associated liabilities	5,625,163	2,381,512

6. Financial Assets at Fair Value

(A) Details of financial assets at fair value as of December 31, 2023 and 2022 are as follows:

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

<i>(In millions of Korean won)</i>	December 31, 2023	December 31, 2022
Equity instruments	1,854,503	1,364,325

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

<i>(In millions of Korean won)</i>	December 31, 2023	December 31, 2022
Debt instruments	1	283

(B) Changes in financial assets at fair value for the years ended December 31, 2023 and 2022 are as follows:

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

<i>(In millions of Korean won)</i>	2023	2022
Balance as of January 1	1,364,325	1,662,532
Acquisition	15,515	-
Disposal	(15,577)	(10,976)
Fair value valuation gain (loss)	490,240	(285,585)
Other	-	(1,646)
Balance as of December 31	1,854,503	1,364,325

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

<i>(In millions of Korean won)</i>	2023	2022
Balance as of January 1	283	2,135
Disposal	(282)	(1,744)
Other	-	(108)
Balance as of December 31	1	283

- (C) Changes in gain (loss) on valuation of financial assets at fair value through other comprehensive income for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Balance as of January 1	(166,635)	124,937
Fair value valuation gain (loss)	490,240	(285,585)
Reclassification to retained earnings due to disposal	16,627	(5,987)
Balance as of December 31	340,232	(166,635)
Income tax effects	(94,077)	43,991
Total	246,155	(122,644)

- (D) Details of listed equity securities of financial assets at fair value as of December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won, number of shares and percentage)</i>	December 31, 2023			December 31, 2022	
	Number of shares owned	Percentage of ownership (%)^(*)	Acquisition cost	Carrying amount (Market value)	Carrying amount (Market value)
Samsung Heavy Industries Co., Ltd.	134,027,281	15.2	932,158	1,038,712	684,879
Hotel Shilla Co., Ltd.	2,004,717	5.1	13,957	131,108	166,592
iMarket Korea Inc.	647,320	1.9	324	5,560	6,538
Skylife Co., Ltd.	240,000	0.5	3,344	1,421	1,954
Yongpyong Resort Corporation	400,000	0.8	1,869	1,220	1,412
A-Tech Solution Co., Ltd.	1,592,000	15.9	26,348	17,241	12,879
Wonik Holdings Co., Ltd.	1,759,171	2.3	15,410	5,928	5,972
Wonik IPS Co., Ltd.	1,850,936	3.8	16,214	62,839	45,811
Dongjin Semichem Co., Ltd.	2,467,894	4.8	48,277	95,508	73,913
Soulbrain Holdings Co., Ltd.	-	-	-	-	10,989
Soulbrain Co., Ltd.	437,339	5.6	40,382	132,952	81,357
S&S Tech Corporation	1,716,116	8.0	65,933	77,740	45,220
YIK Corporation	9,601,617	11.7	47,336	47,864	26,933
KCtech Co., Ltd.	1,022,216	4.9	20,720	27,395	15,129
LOTvacuum Co., Ltd.	1,267,668	7.1	18,990	25,544	14,326
Newpower Co., Ltd.	2,140,939	4.9	12,739	11,240	7,579
Fine Semitech Corporation	1,522,975	7.0	43,009	37,541	23,758
DNF Co., Ltd.	810,030	7.0	20,964	19,400	10,692
Marvell Technology Inc.	173,187	0.0	11,705	13,468	8,129
SoundHound AI Inc.	1,702,957	0.7	13,719	4,655	3,820
Total			1,353,398	1,757,336	1,247,882

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

7. Trade and Non-Trade Receivables

(A) Trade and non-trade receivables as of December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	December 31, 2023		December 31, 2022	
	Trade	Non-trade	Trade	Non-trade
Receivables	27,421,756	1,927,564	20,720,707	2,945,898
Less: Loss allowance	(58,740)	(6,230)	(56,432)	(6,387)
Subtotal	27,363,016	1,921,334	20,664,275	2,939,511
Less: Non-current	-	(11,280)	(161,052)	(14,505)
Current	27,363,016	1,910,054	20,503,223	2,925,006

(B) Movements in the loss allowance for receivables for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023		2022	
	Trade	Non-trade	Trade	Non-trade
Balance as of January 1	56,432	6,387	56,610	4,397
Bad debt expense (reversal)	2,308	(145)	(178)	1,994
Write-off	-	(12)	-	(4)
Balance as of December 31	58,740	6,230	56,432	6,387

(C) The details of trade and non-trade receivables classified by past due date for the purpose of measuring expected credit losses as of December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	December 31, 2023		December 31, 2022	
	Trade	Non-trade	Trade	Non-trade
Receivables not past due	26,584,115	1,747,904	19,948,076	2,237,287
Past due:				
Less than 31 days past due ^(*)	430,299	142,166	581,231	651,489
31 days to 90 days past due	252,998	7,893	89,722	30,611
Over 90 days past due	154,344	29,601	101,678	26,511
Subtotal	837,641	179,660	772,631	708,611
Total	27,421,756	1,927,564	20,720,707	2,945,898

^(*) The Company does not consider the credit risk of non-trade receivables that are overdue for less than or equal to 31 days has been significantly increased.

(D) The maximum exposure to current credit risk is equivalent to the carrying amount of receivables as of December 31, 2023. The Company has entered into insurance contracts with insurers for its major receivables.

8. Inventories

Inventories as of December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	December 31, 2023			December 31, 2022		
	Gross amount	Valuation allowance	Carrying amount	Gross amount	Valuation allowance	Carrying amount
Finished goods	7,914,117	(1,203,662)	6,710,455	8,589,879	(956,427)	7,633,452
Work in process	21,866,523	(3,863,881)	18,002,642	16,738,121	(1,216,059)	15,522,062
Raw materials and supplies	4,910,170	(861,821)	4,048,349	4,891,951	(492,006)	4,399,945
Materials in transit	576,705	-	576,705	434,548	-	434,548
Total	35,267,515	(5,929,364)	29,338,151	30,654,499	(2,664,492)	27,990,007

Inventories recognized as an expense for the year ended December 31, 2023, amount to ₩ 142,735,272 million (2022: ₩ 151,436,315 million). The amount includes a loss on the valuation of inventories.

9. Investments in Subsidiaries, Associates and Joint Ventures

(A) Changes in investments in subsidiaries, associates and joint ventures for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Balance as of January 1	57,397,249	56,225,599
Acquisition	108,300	1,272,296
Disposal	(144,317)	(164,503)
Impairment reversal	31,206	63,857
Balance as of December 31	57,392,438	57,397,249

- (B) Major investments in associates as of December 31, 2023 are as follows:
(refer to Note 30 for list of the Company's 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.	Investment in new business	31.2	Korea	December
Samsung SDI Co., Ltd. ^(*2)	Manufacture and supply electronic parts including secondary cell batteries	19.6	Korea	December
Cheil Worldwide, Inc.	Advertising agency	25.2	Korea	December

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

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

(C) A summary of the condensed financial information of major subsidiaries and associates as of and for the years ended December 31, 2023 and 2022 is as follows:

(1) Major subsidiaries

<i>(In millions of Korean won)</i>	2023			
	Assets	Liabilities	Sales	Profit (loss) for the year
Samsung Display Co., Ltd. (SDC)	65,328,568	7,266,213	27,083,336	8,268,314
Samsung Electronics America, Inc. (SEA)	41,926,899	15,322,780	39,551,809	477,338
Samsung Asia Pte. Ltd. (SAPL)	22,234,942	282,614	-	14,140,195
Samsung (China) Semiconductor Co., Ltd. (SCS)	15,808,283	870,453	8,693,788	877,892
Samsung (CHINA) Investment Co., Ltd. (SCIC)	10,222,557	8,797,991	3,148,858	189,887
Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	9,660,481	4,585,806	-	103,387
Samsung India Electronics Private Ltd. (SIEL)	7,738,259	3,373,730	15,216,331	1,153,256
Samsung Eletronica da Amazonia Ltda. (SEDA)	5,542,627	1,587,911	7,222,304	333,812
Shanghai Samsung Semiconductor Co., Ltd. (SSS)	5,262,086	4,552,030	15,649,307	244,210
Thai Samsung Electronics Co., Ltd. (TSE)	3,039,379	640,512	4,213,492	150,510
Samsung Electronics (UK) Ltd. (SEUK)	2,902,722	1,976,067	5,859,133	185,113
SEMES Co., Ltd.	2,187,919	659,607	2,502,143	58,754
Samsung Electronics Mexico S.A. De C.V. (SEM)	2,153,032	1,038,115	3,638,080	148,873
Samsung Electronics Taiwan Co., Ltd. (SET)	1,797,627	1,139,056	4,108,479	56,467
Samsung Electronics Benelux B.V. (SEBN)	1,794,552	639,120	2,833,717	140,313

^(*) The above summary of condensed financial information is based on separate financial statements of each subsidiary.

<i>(In millions of Korean won)</i>	2022			
	Assets	Liabilities	Sales	Profit (loss) for the year
Samsung Display Co., Ltd. (SDC)	57,302,567	7,282,718	30,779,405	4,365,588
Samsung Electronics America, Inc. (SEA)	37,883,156	12,258,315	46,738,920	219,670
Samsung Asia Private Ltd. (SAPL)	26,894,611	2,678,285	-	8,699,679
Samsung (China) Semiconductor Co., Ltd. (SCS)	17,095,000	2,970,835	9,679,757	638,385
Samsung (CHINA) Investment Co., Ltd. (SCIC)	13,830,988	9,764,636	2,865,831	257,878
Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	10,841,515	6,272,800	-	57,997
Samsung India Electronics Private Ltd. (SIEL)	6,772,537	3,571,863	16,180,492	508,510
Shanghai Samsung Semiconductor Co., Ltd. (SSS)	5,067,891	2,858,382	21,370,622	318,578
Samsung Eletronica da Amazonia Ltda. (SEDA)	4,600,508	1,342,517	7,485,104	(38,490)
Thai Samsung Electronics Co., Ltd. (TSE)	3,263,473	486,820	4,824,734	168,524
Samsung Electronics (UK) Ltd. (SEUK)	2,819,792	1,708,064	5,929,357	243,396
Samsung Electronics Benelux B.V. (SEBN)	2,377,730	597,044	2,834,008	25,411
Samsung Electronics Hungarian Private Co., Ltd. (©)	2,374,317	452,628	3,935,745	199,742
Samsung Electronics Europe Logistics B.V. (SELS)	2,194,975	2,021,491	15,409,984	20,347
SEMES Co., Ltd.	2,065,558	602,323	2,889,238	185,762

^(*) The above summary of condensed financial information is based on separate financial statements of each subsidiary.

(2) Major associates

<i>(In millions of Korean won)</i>	2023				
	Samsung Electro- Mechanics Co., Ltd.	Samsung SDS Co., Ltd.	Samsung Biologics Co., Ltd.	Samsung SDI Co., Ltd.	Cheil Worldwide, Inc.
Current assets	5,208,418	8,160,300	5,521,988	9,187,029	2,372,420
Non-current assets	6,449,453	4,160,724	10,524,209	24,851,831	517,085
Current liabilities	2,900,460	2,391,861	4,157,861	8,518,933	1,375,034
Non-current liabilities	727,087	953,592	2,057,844	5,612,677	216,707
Revenue	8,909,348	13,276,844	3,694,589	22,708,300	4,138,275
Profit from continuing operations ^(*)	430,839	693,422	857,691	2,009,207	187,302
Profit or loss from discontinued operation, net of tax ^(*)	(7,883)	-	-	-	-
Other comprehensive income (loss) ^(*)	45,054	(11,085)	(11,673)	85,394	3,685
Total comprehensive income ^(*)	468,010	682,337	846,018	2,094,601	190,987

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

<i>(In millions of Korean won)</i>	2022				
	Samsung Electro- Mechanics Co., Ltd.	Samsung SDS Co., Ltd.	Samsung Biologics Co., Ltd.	Samsung SDI Co., Ltd.	Cheil Worldwide, Inc.
Current assets	4,888,319	8,005,764	6,457,657	9,651,702	2,193,979
Non-current assets	6,108,852	3,946,660	10,124,394	20,605,823	557,466
Current liabilities	2,525,123	2,493,323	4,181,542	8,006,939	1,335,643
Non-current liabilities	778,563	992,132	3,416,034	5,033,084	194,373
Revenue	9,441,276	17,234,750	3,001,295	20,124,070	4,253,367
Profit from continuing operations ^(*)	1,009,739	1,099,745	798,056	1,952,149	193,732
Loss from discontinued operation, net of tax ^(*)	(29,187)	-	-	-	-
Other comprehensive income (loss) ^(*)	(9,601)	80,368	6,995	(139,877)	(1,122)
Total comprehensive income ^(*)	983,918	1,180,113	805,051	1,812,272	192,610

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

(D) Fair value of marketable investments in associates as of December 31, 2023 and 2022 is as follows:

<i>(In millions of Korean won and number of shares)</i>	December 31, 2023		December 31, 2022		
	Number of shares held	Market value	Carrying amount	Market value	Carrying amount
Samsung Electro-Mechanics Co., Ltd.	17,693,084	2,710,580	445,244	2,308,947	445,244
Samsung SDS Co., Ltd.	17,472,110	2,970,259	560,827	2,149,070	560,827
Samsung Biologics Co., Ltd.	22,217,309	16,885,155	1,595,892	18,240,411	1,595,892
Samsung SDI Co., Ltd.	13,462,673	6,354,382	1,242,605	7,956,440	1,242,605
Cheil Worldwide, Inc.	29,038,075	552,595	491,599	669,328	491,599

10. Property, Plant and Equipment

(A) Changes in property, plant and equipment for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023					
	Land	Buildings and structures	Machinery and equipment	Construction in progress	Other	Total
Balance as of January 1	7,752,989	23,246,622	61,426,540	28,768,364	2,072,471	123,266,986
Acquisition cost	7,754,559	36,449,026	199,823,339	28,768,364	4,886,059	277,681,347
Accumulated depreciation and impairment	(1,570)	(13,202,404)	(138,396,799)	-	(2,813,588)	(154,414,361)
Acquisitions and capital expenditures ^(*)	131,535	5,509,158	31,107,219	5,907,608	461,345	43,116,865
Depreciation	(1,003)	(2,135,709)	(22,908,637)	-	(574,245)	(25,619,594)
Impairment	(2,277)	(25,652)	(95,125)	-	(5,330)	(128,384)
Disposals/scrap	-	(27,715)	(24,920)	-	(1,547)	(54,182)
Other	(22)	(2,408)	(12,290)	(641)	12,831	(2,530)
Balance as of December 31	7,881,222	26,564,296	69,492,787	34,675,331	1,965,525	140,579,161
Acquisition cost	7,883,620	41,814,348	228,287,817	34,675,331	5,182,709	317,843,825
Accumulated depreciation and impairment	(2,398)	(15,250,052)	(158,795,030)	-	(3,217,184)	(177,264,664)

^(*) Acquisition cost and capital expenditures include amounts reclassified from constructions in progress. Capitalized borrowing costs amount to ₩646,471 million, and the capitalization interest rate used to calculate the capitalized borrowing costs is 4.6%.

<i>(In millions of Korean won)</i>	2022					
	Land	Buildings and structures	Machinery and equipment	Construction in progress	Other	Total
Balance as of January 1	7,780,994	21,841,816	57,135,313	15,307,502	1,601,400	103,667,025
Acquisition cost	7,782,125	33,244,532	175,487,461	15,307,502	4,022,759	235,844,379
Accumulated depreciation and impairment	(1,131)	(11,402,716)	(118,352,148)	-	(2,421,359)	(132,177,354)
Acquisitions and capital expenditures ^(*)	154	3,246,081	26,182,600	13,481,591	1,085,750	43,996,176
Depreciation	(439)	(1,827,588)	(21,889,623)	-	(594,290)	(24,311,940)
Disposals/scrap	(27,720)	(20,264)	(137,496)	-	(8,247)	(193,727)
Other	-	6,577	135,746	(20,729)	(12,142)	109,452
Balance as of December 31	7,752,989	23,246,622	61,426,540	28,768,364	2,072,471	123,266,986
Acquisition cost	7,754,559	36,449,026	199,823,339	28,768,364	4,886,059	277,681,347
Accumulated depreciation and impairment	(1,570)	(13,202,404)	(138,396,799)	-	(2,813,588)	(154,414,361)

^(*) Acquisition cost and capital expenditures include amounts reclassified from constructions in progress. Capitalized borrowing costs amount to ₩40,577 million, and the capitalization interest rate used to calculate the capitalized borrowing costs is 4.1%.

(B) Changes in the right-of-use assets included in the property, plant and equipment for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023				Total
	Land	Buildings and structures	Machinery and equipment	Other	
Balance as of January 1	1,866	642,700	22,135	569,312	1,236,013
Acquisition	3,712	863,062	1,728	4,554	873,056
Depreciation	(1,003)	(189,855)	(16,057)	(40,749)	(247,664)
Cancellation of contract	-	(20,500)	-	(234)	(20,734)
Other	-	(114)	336	20	242
Balance as of December 31	4,575	1,295,293	8,142	532,903	1,840,913

<i>(In millions of Korean won)</i>	2022				Total
	Land	Buildings and structures	Machinery and equipment	Other	
Balance as of January 1	2,279	510,528	39,038	178,480	730,325
Acquisition	26	261,999	1,380	410,088	673,493
Depreciation	(439)	(128,754)	(23,276)	(19,120)	(171,589)
Disposals/scrap	-	(1,070)	-	(737)	(1,807)
Other	-	(3)	4,993	601	5,591
Balance as of December 31	1,866	642,700	22,135	569,312	1,236,013

(C) Details of depreciation of property, plant and equipment for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Cost of sales	23,618,150	22,486,452
Selling and administrative expenses and other	2,001,444	1,825,488
Total	25,619,594	24,311,940

11. Intangible Assets

(A) Changes in intangible assets for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023				
	Intellectual property rights	Development cost	Membership	Other	Total
Balance as of January 1	1,193,286	85,018	199,870	7,083,250	8,561,424
External acquisitions	371,570	-	1,069	4,174,044	4,546,683
Amortization	(229,849)	(85,018)	-	(2,299,322)	(2,614,189)
Disposals/scrap	(40,944)	-	(7,850)	(560)	(49,354)
Impairment	(6,265)	-	3,738	(3,114)	(5,641)
Other	-	-	-	1,288	1,288
Balance as of December 31	1,287,798	-	196,827	8,955,586	10,440,211

<i>(In millions of Korean won)</i>	2022				
	Intellectual property rights	Development cost	Membership	Other	Total
Balance as of January 1	1,226,241	236,910	195,135	6,999,170	8,657,456
External acquisitions	232,768	-	5,795	2,315,598	2,554,161
Amortization	(217,808)	(151,892)	-	(2,235,367)	(2,605,067)
Disposals/scrap	(47,915)	-	(197)	-	(48,112)
Impairment	-	-	(863)	-	(863)
Other	-	-	-	3,849	3,849
Balance as of December 31	1,193,286	85,018	199,870	7,083,250	8,561,424

(B) Details of amortization of intangible assets for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Cost of sales	2,016,938	2,006,928
Selling and administrative expenses and other	597,251	598,139
Total	2,614,189	2,605,067

12. Borrowings

(A) Details of the carrying amounts of borrowings as of December 31, 2023 and December 31, 2022 are as follows:

<i>(In millions of Korean won)</i>	Financial institutions	Maturity Date	Interest rate (%) as of Dec 31, 2023	December 31, 2023	December 31, 2022
Short-term borrowings					
Collateralized borrowings ^(*)	Woori Bank and other	-	0.0 ~ 17.3	5,625,163	2,381,512
Total				5,625,163	2,381,512
Current portion of long-term borrowings					
Lease liabilities ^(*)	-	-	2.9	222,137	129,525
Total				222,137	129,525
Long-term borrowings					
Lease liabilities ^(*)	-	-	2.9	912,035	654,979
Non-collateralized borrowings	Samsung Display Co.	Aug 16, 2025	4.6	21,990,000	-
Total				22,902,035	654,979

(*) Collateralized borrowings are secured by trade receivables.

(*) Interest expenses arising from the lease liabilities for the years ended December 31, 2023 and 2022 amount to ₩ 28,282 million and ₩ 10,876 million, respectively, which were determined using the weighted average incremental borrowing rate. Short-term lease payments and low-valued asset lease payments that are not included in lease liabilities during the years ended December 31, 2023 and 2022 amount to ₩ 51,569 million and ₩ 63,103 million, respectively.

(B) Maturities of unsecured borrowings outstanding as of December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	Non-collateralized Borrowings
Repayment in	
2024	1,012,236
2025	22,873,362
Total	23,885,598

(C) Maturities of lease liabilities outstanding as of December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	Lease liabilities
Repayment in	
2024	257,823
2025	178,055
2026	198,744
2027	149,858
2028 and thereafter	481,592
Total	1,266,072

13. Debentures

(A) Details of the carrying amounts of debentures as of December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	Issue date	Due date	Interest rate (%) as of Dec 31, 2023	December 31, 2023	December 31, 2022
US dollar denominated straight bonds ^(*)	Oct 2, 1997	Oct 1, 2027	7.7	25,788 (USD 20 million)	31,683 (USD 25 million)
Less: Discounts				(370)	(543)
Less: Current portion				(6,354)	(6,228)
Total				19,064	24,912

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

(B) Repayment schedule of debentures outstanding as of December 31, 2023 are as follows:

<i>(In millions of Korean won)</i>	Debentures
Repayment in	
2024	6,447
2025	6,447
2026	6,447
2027	6,447
Total	25,788

14. Net Defined Benefit Liabilities (Assets)

(A) Details of net defined benefit liabilities (assets) recognized in the statements of financial position as of December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	December 31, 2023	December 31, 2022
Present value of funded defined benefit obligations	11,959,655	10,729,126
Present value of unfunded defined benefit obligations	22,672	29,546
Subtotal	11,982,327	10,758,672
Fair value of plan assets	(15,728,024)	(15,168,895)
Total	(3,745,697)	(4,410,223)

(B) The components of defined benefit costs recognized in profit or loss for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Current service cost	962,366	1,030,033
Net interest income	(275,246)	(91,902)
Total	687,120	938,131

The amount recognized as expenses of defined contribution plans for the years ended December 31, 2023 and 2022 are ₩ 48,884 million and ₩ 36,580 million, respectively

(C) The expenses related to the defined benefit plans recognized in the statements of profit or loss for the years ended December 31, 2023 and 2022 are as follows :

<i>(In millions of Korean won)</i>	2023	2022
Cost of sales	271,113	373,835
Selling and administrative expenses and other	416,007	564,296
Total	687,120	938,131

(D) Changes in the defined benefit obligations for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Balance as of January 1	10,758,672	11,173,636
Current service cost	962,366	1,030,033
Interest cost	613,363	401,973
Remeasurement:		
Actuarial gains or losses arising from changes in demographic assumptions	(61,559)	-
Actuarial gains or losses arising from changes in financial assumptions	226,995	(1,779,803)
Other	117,800	356,672
Benefits paid	(653,343)	(455,787)
Other	18,033	31,948
Balance as of December 31	11,982,327	10,758,672

(E) Changes in the fair value of plan assets for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Balance as of January 1	15,168,895	13,497,927
Interest income on plan assets	888,609	493,875
Remeasurement of plan assets	(494,687)	(249,943)
Contributions by employer	694,100	1,757,800
Benefits paid	(537,855)	(355,311)
Other	8,962	24,547
Balance as of December 31	15,728,024	15,168,895

The reasonable estimate of the employer contributions expected to be paid in 2024 in respect of the defined benefit plans as of December 31, 2023 is ₩ 1,347,628 million.

(F) As of December 31, 2023, plan assets are invested in fixed income instruments with guaranteed principal and others.

(G) The principal actuarial assumptions as of December 31, 2023 and 2022 are as follows:

<i>(In percentage)</i>	December 31, 2023	December 31, 2022
Discount rate	5.6	6.1
Salary growth rate (including the effects of inflation)	5.6	5.8

(H) The sensitivity analysis of the defined benefit obligations as of December 31, 2023 and 2022 to changes in the principal assumptions is as follows:

<i>(In millions of Korean won)</i>	Defined benefit obligations	
	December 31, 2023	December 31, 2022
Discount rate		
1%p increase	10,888,509	9,947,680
1%p decrease	13,258,187	11,689,622
Salary growth rate		
1%p increase	13,242,324	11,703,469
1%p decrease	10,880,916	9,922,271

(I) The weighted average maturity of the defined benefit obligations is 9.89 years as of December 31, 2023.

15. Provisions

Changes in provisions for the year ended December 31, 2023 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	587,665	1,546,606	549,181	2,799,204	5,482,656
Charged to profit or loss	815,216	573,194	348,381	2,052,943	3,789,734
Payment	(728,930)	(299,250)	(183,843)	(1,111,233)	(2,323,256)
Other	-	(4,612)	-	9,313	4,701
Balance as of December 31	673,951	1,815,938	713,719	3,750,227	6,953,835

- (A) The Company accrues warranty provisions for estimated costs of quality assurance, exchanges, repairs, recalls, and future services based on historical experience and terms of warranty programs.
- (B) The Company recognizes provisions for the estimated royalty expenses that are under negotiation with counterparties. The timing and amount of payment depend on the settlement of the 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.
- (D) The Company records provisions for estimated losses from contracts associated with discontinued products.

(E) The Company makes provisions for the emission in excess of the emission rights held by the Company. Details of emission rights and liabilities as of December 31, 2023 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 December 31, 2023 are as follows:

<i>(In million metric tons)</i>	December 31, 2023
Emission rights allocated free of charge ^(*)	11.76
Estimated volume of emission	13.62

^(*) As of December 31, 2023, emission rights allocated free of charge for the remainder of the plan period are 22.34 million metric ton (2024: 11.17 million metric tons, 2025: 11.17 million metric tons).

(2) Changes in the emission rights for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Balance as of January 1	19,567	46,073
Acquisition	1,265	1,872
Utilization	(17,695)	(28,378)
Balance as of December 31^(*)	3,137	19,567

^(*) The quantity of emission rights is 39.64 million metric ton and no emission rights is provided as collateral as of December 31, 2023.

(3) Changes in the emission liabilities for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Balance as of January 1	32,825	45,049
Charged to the statement of profit or loss	(15,348)	16,154
Utilization	(17,477)	(28,378)
Balance as of December 31	-	32,825

16. Commitments and Contingencies

(A) Guarantees

- (1) Debt guarantees provided by the Company for overseas subsidiaries as of December 31, 2023 are as follows:

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

Debtor	Creditor	Date of maturity	Amount of indebtedness	Guaranteed amount
SETK	BNP and others	Dec 16, 2024	413,744	1,182,380
SEMAG	SocGen and others	Dec 16, 2024	10,399	123,782
Other	Others	-	-	9,176,026
Total			424,143	10,482,188
			USD 328,958	USD 8,129,508

- (2) The ceiling amount of guarantees provided by the Company for the execution of contracts by overseas subsidiaries is ₩ 478,560 million as of December 31, 2023.
- (3) The Company has not been provided any collateral or guarantees from its related parties as of December 31, 2023.

(B) Litigation

As of December 31, 2023, the Company is involved in various claims, disputes, and investigations conducted by regulatory bodies that arose during the normal course of business with numerous entities. Although the outflow of resources and timing of these matters are uncertain, the Company believes the outcome will not have a material impact on the financial position of the Company.

(C) Joint liabilities related to the divestiture

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

(D) Other commitments

- (1) As of December 31, 2023, the Company has trade financing agreements, trade notes receivable discounting facilities, and loan facilities secured by accounts receivable with 4 financial institutions, including Woori Bank, with a combined limit of ₩ 10,440,914 million. In addition, the Company has a trade financing agreement with 18 financial institutions, including Shinhan bank, with a limit of USD 8,908 million, and loan facilities secured by accounts receivable with 4 financial institutions, including Industrial Bank of Korea, with a limit of ₩ 470,602 million.
- (2) As of December 31, 2023, contractual commitments for the acquisition of property, plant and equipment and intangible assets amount to ₩ 6,962,653 million.

17. Contract Liabilities

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

<i>(In millions of Korean won)</i>	December 31, 2023	December 31, 2022
Contract liabilities ^(*)	1,491,085	1,133,426

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

The revenue recognized for the year ended December 31, 2023 in relation to the contract liabilities carried forward as of January 1, 2023 amounts to ₩ 262,592 million.

18. Share Capital

As of December 31, 2023, the Company's total number of authorized shares is 25,000,000,000 shares (₩ 100 per share). As well as its ordinary shares, the Company also has non-cumulative preference shares that are eligible for an additional 1% cash dividend over par value per annum compared to ordinary shares, but without voting rights. The Company has issued 5,969,782,550 shares of ordinary shares and 822,886,700 shares of preference shares as of December 31, 2023, excluding the number of retired shares. As of the December 31, 2023, the number of shares outstanding is the same as the number of shares aforementioned with no changes during the years ended December 31, 2023 and 2022. Due to the retirement of shares, the total par value of the shares issued which excludes the number of retired shares is ₩ 679,267 million (ordinary shares of ₩ 596,978 million and preference shares of ₩ 82,289 million), which does not agree with paid-in capital of ₩ 897,514 million.

19. Retained Earnings

(A) Retained earnings as of December 31, 2023 and 2022 consist of the following:

<i>(In millions of Korean won)</i>	December 31, 2023	December 31, 2022
Appropriated retained earnings		
Legal reserves:		
Earned profit reserves ^(*)	450,789	450,789
Discretionary reserves	201,484,221	185,870,540
Subtotal	201,935,010	186,321,329
Unappropriated retained earnings	18,028,341	18,066,687
Total	219,963,351	204,388,016

^(*) The Commercial Code of the Republic of Korea requires the Company to appropriate as a legal reserve, an amount equal to a minimum of 10% of annual cash dividends declared, until the reserve equals 50% of the aggregate par value of issued capital stock. As of December 31, 2023, since the Company's profit reserves reached 50% of its capital stock, the Company has no obligation to appropriate additional amount.

(B) Separate statements of appropriation of retained earnings for the years ended December 31, 2023 and 2022 are as follows:

The appropriation of retained earnings for the year ended December 31, 2023, is expected to be appropriated at the general shareholders' meeting to be held on March 20, 2024. The appropriation date for the year ended December 31, 2022 was March 15, 2023.

<i>(In millions of Korean won)</i>	2023	2022
Retained earnings before appropriations		
Unappropriated retained earnings carried over from prior year	30	30
Interim dividends:		
In 2023 - ₩ 1,083 (dividend rate: 1083%)	(7,356,461)	(7,356,461)
In 2022 - ₩ 1,083 (dividend rate: 1083%)		
Profit for the year	25,397,099	25,418,778
Disposal of financial assets measured at fair value through profit or loss	(12,327)	4,340
Retained earnings available for appropriation	18,028,341	18,066,687
Transfers from other reserves	-	-
Appropriations of retained earnings		
Cash dividends:	2,452,976	2,452,976
In 2023:		
Ordinary shares - ₩ 361 (dividend rate: 361%)		
Preference shares - ₩ 362 (dividend rate: 362%)		
In 2022:		
Ordinary shares - ₩ 361 (dividend rate: 361%)		
Preference shares - ₩ 362 (dividend rate: 362%)		
Reserve for research and human resources development	15,575,335	15,613,681
Total appropriations of retained earnings	18,028,311	18,066,657
Unappropriated retained earnings to be carried forward	30	30

(C) Details of interim and year-end dividends are as follows:

(1) Interim dividends (Record date: March 31, June 30 and September 30, 2023 and 2022)

<i>(In millions of Korean won and number of shares)</i>		2023	2022	
1 st Quarter	Number of shares eligible for dividends	Ordinary shares	5,969,782,550	5,969,782,550
		Preference shares	822,886,700	822,886,700
	Dividend rate (based on par value)	Ordinary/Preference	361%	361%
	Dividend amount	Ordinary shares	2,155,092	2,155,092
		Preference shares	297,062	297,062
	Total		2,452,154	2,452,154
2 nd Quarter	Number of shares eligible for dividends	Ordinary shares	5,969,782,550	5,969,782,550
		Preference shares	822,886,700	822,886,700
	Dividend rate (based on par value)	Ordinary/Preference	361%	361%
	Dividend amount	Ordinary shares	2,155,092	2,155,092
		Preference shares	297,062	297,062
	Total		2,452,154	2,452,154
3 rd Quarter	Number of shares eligible for dividends	Ordinary shares	5,969,782,550	5,969,782,550
		Preference shares	822,886,700	822,886,700
	Dividend rate (based on par value)	Ordinary/Preference	361%	361%
	Dividend amount	Ordinary shares	2,155,092	2,155,092
		Preference shares	297,062	297,062
	Total		2,452,154	2,452,154

(2) Year-end dividends (Record date: December 31, 2023 and 2022)

<i>(In millions of Korean won and number of shares)</i>		2023	2022
Number of shares eligible for dividends	Ordinary shares	5,969,782,550	5,969,782,550
	Preference shares	822,886,700	822,886,700
Dividend rate (based on par value)	Ordinary shares	361%	361%
	Preference shares	362%	362%
Dividend amount	Ordinary shares	2,155,092	2,155,092
	Preference shares	297,884	297,884
Total		2,452,976	2,452,976

20. Other Components of Equity

Other components of equity as of December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	December 31, 2023	December 31, 2022
Gain (loss) on valuation of financial assets at fair value through other comprehensive income	246,155	(122,644)
Remeasurement of net defined benefit assets	(2,483,547)	(1,910,996)
Others	1,760,408	1,760,408
Total	(476,984)	(273,232)

21. Expenses by Nature

Expenses by nature for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Changes in finished goods, work in process, and other	(1,557,583)	(10,475,794)
Raw materials used, merchandise purchased, and other	89,350,845	107,383,581
Wages and salaries	13,941,832	14,861,811
Post-employment benefit	736,004	974,711
Depreciation	25,619,594	24,311,940
Amortization	2,614,189	2,605,067
Welfare	3,307,047	3,220,421
Utilities	5,051,847	3,779,467
Outsourcing	3,791,485	3,623,225
Advertising	1,747,480	1,662,135
Sales promotion	1,298,806	1,385,835
Other	35,998,841	33,215,755
Total^(*)	181,900,387	186,548,154

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

22. Selling and Administrative Expenses

Selling and administrative expenses for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Selling and administrative expenses		
Wages and salaries	2,541,935	2,308,767
Post-employment benefit	133,881	171,358
Commissions	3,566,826	2,652,491
Depreciation	468,454	412,787
Amortization	390,581	361,653
Advertising	1,747,480	1,662,135
Sales promotion	1,298,806	1,385,835
Transportation	541,902	790,774
Service	981,945	935,838
Other	2,352,176	2,333,072
Subtotal	14,023,986	13,014,710
Research and development expenses		
Research and development	23,852,849	20,944,051
Total	37,876,835	33,958,761

22. Selling and Administrative Expenses

Selling and administrative expenses for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Selling and administrative expenses		
Wages and salaries	2,541,935	2,308,767
Post-employment benefit	133,881	171,358
Commissions	3,566,826	2,652,491
Depreciation	468,454	412,787
Amortization	390,581	361,653
Advertising	1,747,480	1,662,135
Sales promotion	1,298,806	1,385,835
Transportation	541,902	790,774
Service	981,945	935,838
Other	2,352,176	2,333,072
Subtotal	14,023,986	13,014,710
Research and development expenses		
Research and development	23,852,849	20,944,051
Total	37,876,835	33,958,761

24. Financial Income and Expenses

Details of financial income and expenses for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Financial income		
Interest income	371,106	339,242
Financial assets measured at amortized cost	371,106	339,242
Foreign exchange differences	6,652,107	9,124,484
Gain from derivatives	365,451	270,573
Total	7,388,664	9,734,299

<i>(In millions of Korean won)</i>	2023	2022
Financial expenses		
Interest expenses	595,765	290,083
Financial liabilities measured at amortized cost	310,267	45,883
Other financial liabilities	285,498	244,200
Foreign exchange differences	7,002,694	9,351,659
Total	7,598,459	9,641,742

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

25. Income Tax Expense

(A) Income tax expense for the years ended December 31, 2023 and 2022 consists of the following:

<i>(In millions of Korean won)</i>	2023	2022
Current taxes		
Current tax on profits for the year	337,983	5,926,928
Adjustments recognized in the current year	(487,822)	(449,536)
Subtotal	(149,839)	5,477,392
Deferred taxes		
Changes in deferred taxes arising from unused tax credits	(4,713,725)	(1,010,632)
Changes in deferred taxes arising from temporary differences	(2,073,330)	(193,618)
Changes in deferred taxes arising from unused tax losses	(928,705)	-
Subtotal	(7,715,760)	(1,204,250)
Income tax expense	(7,865,599)	4,273,142

(B) The difference between the income tax expense on the Company's profit before tax and the theoretical amount computed using the tax rate applicable to the Company's profit before tax is as follows:

<i>(In millions of Korean won)</i>	2023	2022
Profit before income tax	17,531,500	29,691,920
Tax calculated at tax rates applicable to profits^(*)	4,628,316	8,165,278
Adjustments:		
Non-taxable income	(7,340,802)	(47,446)
Non-deductible expense	6,256	507,992
Tax credits	(5,082,791)	(4,133,747)
Other	(76,578)	(218,935)
Subtotal	(12,493,915)	(3,892,136)
Income tax expense	(7,865,599)	4,273,142

^(*) The statutory tax rate regulated by tax laws as of December 31, 2023 and 2022 is applied.

(C) The movement in deferred income tax assets and liabilities for the years ended December 31, 2023 and 2022 are as follows:

	2023		2022			
	Balance as of January 1	Increase (Decrease)	Balance as of December 31	Balance as of January 1	Increase (Decrease)	Balance as of December 31
<i>(In millions of Korean won)</i>						
Deferred tax arising from temporary differences						
Revaluation of land	(898,505)	(182)	(898,687)	(936,822)	38,317	(898,505)
Investments in subsidiaries, associates and joint ventures ^(*1,2)	(819,038)	590,734	(228,304)	(853,165)	34,127	(819,038)
Accumulated depreciation and other	(1,634,038)	225,356	(1,408,682)	(675,483)	(958,555)	(1,634,038)
Accrued income	(2,487)	(1,077)	(3,564)	(14,879)	12,392	(2,487)
Provisions, accrued expenses, and other	3,613,572	1,819,455	5,433,027	3,052,034	561,538	3,613,572
Foreign currency translation	147,194	(22,342)	124,852	(1,461)	148,655	147,194
Asset impairment losses	184,282	(2,641)	181,641	220,916	(36,634)	184,282
Post-employment benefits	(1,427,630)	(451,597)	(1,879,227)	(1,675,673)	248,043	(1,427,630)
Other	624,180	(84,376)	539,804	478,445	145,735	624,180
Subtotal	(212,470)	2,073,330	1,860,860	(406,088)	193,618	(212,470)
Deferred tax arising from tax losses						
Unused tax losses	-	928,705	928,705	-	-	-
Deferred tax arising from unused tax credits						
Unused tax credits	1,625,525	4,713,725	6,339,250	614,893	1,010,632	1,625,525
Deferred tax recognized in equity						
Loss (gain) on valuation of financial assets at fair value through other comprehensive income and other	43,991	(132,286)	(88,295)	(34,358)	78,349	43,991
Remeasurement of net defined benefit assets	685,466	205,372	890,838	1,036,653	(351,187)	685,466
Subtotal	729,457	73,086	802,543	1,002,295	(272,838)	729,457
Total	2,142,512	7,788,846	9,931,358	1,211,100	931,412	2,142,512

(*1) Deferred tax assets are not recognized if it is probable that the temporary differences will not reverse in the foreseeable future for investments in subsidiaries, associates and joint ventures.

(*2) Difference in carrying amount for accounting and tax purposes for the shares of Samsung Display Co., Ltd., the Company's subsidiary, acquired through spin-off of the LCD division in the past. As of the reporting date, the Company does not have plans to dispose of its investments in Samsung Display Co., Ltd. As it is probable that the temporary differences of ₩1,086,822 million will not reverse in the foreseeable future, deferred tax assets were not recognized.

(D) Details of the period when the deferred tax assets (liabilities) are expected to be recovered (settled) as of December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	December 31, 2023	December 31, 2022
Net deferred tax assets to be recovered (settled) within 12 months	5,055,283	2,267,807
Net deferred tax assets (liabilities) to be recovered (settled) after more than 12 months	4,876,075	(125,295)
Total	9,931,358	2,142,512

(E) Global minimum top-up tax

The global minimum top-up is a system under which multinational companies with consolidated revenue of €750 million or more in at least two of the four preceding financial years are required to pay a substantial amount of tax to the tax authorities of the country in which the parent company resides if their effective tax rate in those countries is less than 15%.

The Republic of Korea, where the Company is domiciled, enacted the Global Minimum Tax Act in 2023, which requires the application of the Global Minimum Tax for accounting periods beginning on or after January 1, 2024.

The Company believes that it will be subject to the Global Minimum Tax Act, but as the Global Minimum Tax Act will be effective in the Republic of Korea from January 1, 2024, there is no impact on the Company's current income tax expense. In addition, the Company has applied the temporary exemption for deferred taxes under Korean IFRS 1012 and has not recognized any deferred tax assets or liabilities related to the global minimum tax law and has not disclosed any deferred tax information.

As the legislation in the countries where the Company's subsidiaries are located that are primarily affected by the global minimum top-up tax legislation has not been enacted or specific legislation is in the process of being enacted, it is not possible to reasonably estimate the impact on the Company as at December 31, 2023. Each of the Company's subsidiaries is reviewing the impact on its financial statements with tax experts in each country.

26. Earnings per Share

(A) Basic earnings per share

Basic earnings per share for the years ended December 31, 2023 and 2022 are calculated as follows:

(1) Ordinary shares

<i>(In millions of Korean won, thousands of number of shares)</i>	2023	2022
Profit for the year	25,397,099	25,418,778
Profit for the year available for ordinary shares	22,319,686	22,338,739
Weighted-average number of ordinary shares outstanding	5,969,783	5,969,783
Basic earnings per ordinary share (in Korean won)	3,739	3,742

(2) Preference shares

<i>(In millions of Korean won, thousands of number of shares)</i>	2023	2022
Profit for the year	25,397,099	25,418,778
Profit for the year available for preference shares	3,077,413	3,080,039
Weighted-average number of preference shares outstanding	822,887	822,887
Basic earnings per preference share (in Korean won)	3,740	3,743

(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 years ended December 31, 2023 and 2022.

27. 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 years ended December 31, 2023 and 2022 are as follows:

- Adjustments

<i>(In millions of Korean won)</i>	2023	2022
Adjustments :		
Income tax expense (income)	(7,865,599)	4,273,142
Financial income	(995,482)	(1,224,148)
Financial expenses	1,316,292	1,565,955
Post-employment benefits	736,004	974,711
Depreciation	25,619,594	24,311,940
Amortization	2,614,189	2,605,067
Bad debt expense (reversal)	2,308	(178)
Dividend income	(29,096,899)	(3,952,338)
Gain on disposal of property, plant and equipment	(105,553)	(115,861)
Loss on disposal of property, plant and equipment	49,044	18,842
Loss on valuation of inventories and others	3,558,358	2,529,351
Others	74,820	52,905
Total	(4,092,924)	31,039,388

- Changes in assets and liabilities arising from operating activities

<i>(In millions of Korean won)</i>	2023	2022
Changes in assets and liabilities :		
Decrease (increase) in trade receivables	(6,883,154)	12,354,628
Decrease (increase) in non-trade receivables	612,652	(711,933)
Decrease (increase) in prepaid expenses	(339,588)	11,033
Increase in inventories	(4,399,456)	(14,337,291)
Decrease in trade payables	(701,579)	(2,494,560)
Increase (decrease) in other payables	(335,900)	1,522,457
Decrease in advances received	(18,100)	(154,042)
Decrease in withholdings	(77,884)	(101,231)
Increase (decrease) in accrued expenses	(1,677,917)	88,828
Increase in provisions	1,076,981	74,664
Payment of post-employment benefits	(702,328)	(492,366)
Increase in plan assets	(156,245)	(1,402,489)
Other	386,971	(1,225,967)
Total	(13,215,547)	(6,868,269)

(B) Significant non-cash investing and financing transactions for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Valuation of financial assets at fair value through other comprehensive income	490,240	(285,585)
Reclassification of construction in progress to property, plant and equipment	38,188,436	30,539,179
Acquisition of right-of-use assets (new lease contracts established)	873,056	673,493
Reclassification of current portion of debentures and long-term borrowings	228,492	135,753

(C) Changes in liabilities arising from financing activities for the years ended December 31, 2023 and 2022 are as follows:

(1) 2023

<i>(In millions of Korean won)</i>	As of January 1	Cash flows from financing activities	Non-cash transactions		As of December 31
			New lease contracts	Other^(*)	
Short-term borrowings	2,381,512	3,274,337	-	(30,686)	5,625,163
Debentures and long-term borrowings	815,644	21,804,684	567,652	(38,390)	23,149,590
Total	3,197,156	25,079,021	567,652	(69,076)	28,774,753

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

(2) 2022

<i>(In millions of Korean won)</i>	As of January 1	Cash flows from financing activities	Non-cash transactions		As of December 31
			New lease contracts	Other^(*)	
Short-term borrowings	9,204,268	(6,700,826)	-	(121,930)	2,381,512
Debentures and long-term borrowings	600,291	(155,264)	673,493	(302,876)	815,644
Total	9,804,559	(6,856,090)	673,493	(424,806)	3,197,156

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

For the years ended December 31, 2023 and 2022, cash outflows from repayment of the principal of lease liabilities (financial activities) amount to ₩ 178,979 million and ₩ 149,337 million, respectively, while cash outflows due to interest expenses (operating activities) in relation to the lease liabilities amount to ₩ 28,282 million and ₩ 10,876 million, respectively.

(D) The Company recorded cash inflows and outflows from short-term financial instruments with frequent transactions, large gross amounts and short-term maturities, as well as from short-term borrowings on a net basis. As of December 31, 2023, most of the Company's cash and cash equivalents consist mainly of bank deposits.

28. Financial Risk Management

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

The Company establishes global financial management standards and manages the risks by periodically measuring customer's and counterparties' financial risk, applying currency hedges, and reviewing cash flows.

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

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

(A) Market risk

(1) Foreign exchange risk

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

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

As of December 31, 2023 and 2022, the impact on profit or loss (before tax) of a 5% change in exchange rates on the Company's financial assets and financial liabilities denominated in a major foreign currency other than the functional currency would be as follows:

<i>(In millions of Korean won)</i>	December 31, 2023		December 31, 2022	
	Increase	Decrease	Increase	Decrease
USD	201,224	(201,224)	77,795	(77,795)
EUR	(25,356)	25,356	(53,114)	53,114

(2) Interest rate risk

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

(3) Price risk

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

As of December 31, 2023 and 2022, price fluctuation of marketable equity securities (listed stocks) by 1% would result in changes in other comprehensive income (before income tax) of ₩ 17,573 million and ₩ 12,479 million, respectively.

(B) Credit risk

Credit risk arises during the normal course of transactions and investing activities where customers or other parties fail to discharge an obligation. The Company monitors and sets the customer's and counterparty's credit limit on a periodic basis based on the customer's and counterparty's financial conditions, default history and other 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 including 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 new transactions with financial institutions which the Company does not have an existing relationship are subject to the completion of risk assessments prior to commencement of transactions. The Company generally enters into financial agreements without restrictions, such as debt ratio covenants, provision of collateral and/or repayment of loans/borrowings, and otherwise separate approvals are obtained.

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

(C) Liquidity risk

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

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

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

As of December 31, 2023 and 2022, the maturity analysis of financial liabilities, based on the remaining period from the reporting date to the contractual maturity date, is as follows:

<i>(In millions of Korean won)</i>	December 31, 2023				
	Less than 3 months	~ 6 months	~ 1 year	1 - 5 years	More than 5 years
Financial liabilities	32,311,019	374,370	980,835	27,454,095	1,378,061

<i>(In millions of Korean won)</i>	December 31, 2022				
	Less than 3 months	~ 6 months	~ 1 year	1 - 5 years	More than 5 years
Financial liabilities	31,354,944	316,725	1,096,183	2,431,415	472,135

The cash flows included in the maturity classification, based on the remaining period to the contractual maturity date, are undiscounted expected cash outflows.

The maximum amount of liquidity risk in the form of payment and performance guarantees provided to subsidiaries as of December 31, 2023 and 2022, other than the financial liabilities mentioned above, is ₩ 10,960,748 million and ₩ 10,793,412 million, respectively.

(D) Capital risk management

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

The Company has maintained an AA- and Aa2 credit rating from S&P and Moody's, respectively.

The debt ratio as of December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	December 31, 2023	December 31, 2022
Total liabilities	72,069,515	50,667,559
Total equity	224,787,774	209,416,191
Debt ratio	32.1%	24.2%

(E) Fair value measurement

(1) Carrying amounts and fair value of financial instruments by category as of December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	December 31, 2023		December 31, 2022	
	Carrying amount	Fair value	Carrying amount	Fair value
Financial assets				
Cash and cash equivalents	6,061,451	(*)	3,921,593	(*)
Short-term financial instruments	50,071	(*)	137	(*)
Trade receivables	27,363,016	(*)	20,503,223	(*)
Financial assets at fair value through other comprehensive income	1,854,503	1,854,503	1,364,325	1,364,325
Financial assets at fair value through profit or loss	1	1	283	283
Other ^{(*)2}	5,365,519	393,235	5,470,355	(*)
Total financial assets	40,694,561		31,259,916	
Financial liabilities				
Trade payables	7,943,834	(*)	8,729,315	(*)
Short-term borrowings	5,625,163	(*)	2,381,512	(*)
Other payables	15,015,578	(*)	18,324,604	(*)
Current portion of long-term liabilities	228,491	6,757	135,753	6,580
- Long-term borrowing	222,137	(*)3	129,525	(*)3
- Debentures	6,354	6,757	6,228	6,580
Debentures	19,064	21,695	24,912	27,845
Long-term borrowings	22,902,035	(*)3	654,979	(*)3
Long-term other payables	4,486,390	(*)	2,083,790	(*)
Other	3,652,969	(*)	3,145,473	(*)
Total financial liabilities	59,873,524		35,480,338	

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

(*)2 Assets measured at the cost of ₩ 4,972,284 million as at December 31, 2023, which is a reasonable estimate of fair value, are excluded from the fair value disclosures.

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

- (2) Fair value hierarchy classifications of the financial instruments that are measured at or only disclosed their fair value as of December 31, 2023 and 2022 are as follows:

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

<i>(In millions of Korean won)</i>	December 31, 2022			
	Level 1	Level 2	Level 3	Total balance
Assets				
Financial assets at fair value through other comprehensive income	1,247,882	-	116,443	1,364,325
Financial assets at fair value through profit or loss	-	-	283	283
Liabilities				
Current portion of debentures	-	6,580	-	6,580
Debentures	-	27,845	-	27,845

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

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

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

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

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

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

Specific valuation techniques used to value financial instruments include:

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

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

(3) Valuation technique and the inputs

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

The following table presents the valuation technique and the inputs used for major financial instruments classified as Level 3 as of December 31, 2023.

(In millions of Korean won, and percentage)

Classification	Fair value	Valuation technique	Level 3 inputs	Input range
Financial assets at fair value through other comprehensive income				
Samsung Venture Investment	32,286	Discounted cash flow	Permanent growth rate	1.0%
			Weighted average cost of capital	17.1%
MiCo Ceramics Co., Ltd.	33,973	Discounted cash flow	Permanent growth rate	0.0%
			Weighted average cost of capital	15.8%
Call option on equity instruments	393,235	Binomial model	Risk-free rate	3.2%
			Price Variance	69.5%

(4) Changes in Level 3 instruments for the years ended December 31, 2023 and 2022 are as follows:

<i>(In millions of Korean won)</i>	2023	2022
Financial assets		
Balance as of January 1	116,726	120,347
Acquisitions	27,784	-
Disposals	(343)	(12,720)
Amount recognized in profit or loss	365,451	(108)
Amount recognized in other comprehensive income	(19,215)	22,926
Other	-	(13,719)
Balance as of December 31	490,403	116,726

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

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

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

<i>(In millions of Korean won)</i>	Favorable changes		Unfavorable changes	
	Profit or loss	Equity	Profit or loss	Equity
Financial assets at fair value through other comprehensive income ^(*)	-	2,792	-	(2,458)
Other ^(*)	97,309	-	(96,785)	-

^(*) For equity securities, changes in fair value are calculated with the correlation between the discount rate and growth rate (~1.0%), which are significant unobservable inputs.

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

29. Segment Information

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

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

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

(1) For the year ended December 31, 2023

<i>(In millions of Korean won)</i>	DX	DS	Total^(*)
Revenue	106,661,889	65,438,933	170,374,090
Depreciation	534,813	24,882,772	25,619,592
Amortization	1,682,132	696,457	2,614,189
Operating profit	5,256,921	(16,788,154)	(11,526,297)

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

(2) For the year ended December 31, 2022

<i>(In millions of Korean won)</i>	DX	DS	Total^(*)
Revenue	117,257,647	97,102,386	211,867,483
Depreciation	542,437	23,589,388	24,311,940
Amortization	1,631,289	754,791	2,605,067
Operating profit	3,083,254	22,232,180	25,319,329

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

30. Related Party Transactions

(A) Subsidiaries

List of subsidiaries as of December 31, 2023 are as follows:

Region	Subsidiaries	Business	Percentage of ownership (%) ^(*)
	Samsung Electronics America, Inc. (SEA)	Sale of electronic devices	100.0
	Samsung International, Inc. (SII)	Manufacture of electronic devices	100.0
	Samsung Mexicana S.A. de C.V (SAMEX)	Manufacture of electronic devices	100.0
	Samsung Electronics Home Appliances America, LLC (SEHA)	Manufacture of home appliances	100.0
	Samsung Research America, Inc (SRA)	R&D	100.0
	SAMSUNG NEXT LLC (SNX)	Management of overseas subsidiaries	100.0
	SAMSUNG NEXT FUND LLC (SNXF)	Venture capital investment fund	100.0
	NeuroLogica Corp.	Manufacture and sale of medical equipment	100.0
	Samsung HVAC America, LLC	Sale of air conditioning products	100.0
	Joyent, Inc.	Cloud services	100.0
	SmartThings, Inc.	Sale of smart home electronics	100.0
	TeleWorld Solutions, Inc. (TWS)	Installation of network devices	100.0
	Samsung Semiconductor, Inc. (SSI)	Sale of semiconductor and display panels	100.0
	Samsung Federal, Inc. (SFI)	R&D	100.0
	Samsung Austin Semiconductor LLC. (SAS)	Manufacture of semiconductors	100.0
	Samsung Oak Holdings, Inc. (SHI)	Management of overseas subsidiaries	100.0
	SEMES America, Inc.	Semiconductor equipment maintenance	100.0
	Samsung Display America Holdings, Inc. (SDAH)	Management of overseas subsidiaries	100.0
	eMagin Corporation	Development and manufacture of display panel	100.0
	Samsung Electronics Canada, Inc. (SECA)	Sale of electronic devices	100.0
	AdGear Technologies Inc.	Digital advertising platforms	100.0
America	Samsung Eletronica da Amazonia Ltda. (SEDA)	Manufacture and sale of electronic devices	100.0
	Samsung Electronics Mexico S.A. De C.V. (SEM)	Sale of electronic devices	100.0
	Samsung Electronics Digital Appliance Mexico, SA de CV (SEDAM)	Manufacture of home appliances	100.0
	Samsung Electronics Latinoamerica (Zona Libre), S. A. (SELA)	Sale of electronic devices	100.0
	Samsung Electronics Latinoamerica Miami, Inc. (SEMI)	Sale of electronic devices	100.0
	Samsung Electronica Colombia S.A. (SAMCOL)	Sale of electronic devices	100.0
	Samsung Electronics Argentina S.A. (SEASA)	Marketing and related 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 related 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

Region	Subsidiaries	Business	Percentage of ownership (%)^(*)
	Harman Professional, Inc.	Sale of audio products, R&D	100.0
	Roon Labs, LLC.	Sale of audio products	100.0
	Beijing Integrated Circuit Industry International Fund, L.P	Venture capital investment fund	61.4
	China Materialia New Materials 2016 Limited Partnership	Venture capital investment fund	99.0

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

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

Region	Subsidiaries	Business	Percentage of ownership (%) ^(*)
	Harman Belgium SA	Sale of audio products	100.0
	Harman Connected Services AB.	Connected service provider	100.0
	Harman Finland Oy	Connected service provider	100.0
	Harman Connected Services GmbH	Connected service provider	100.0
	Harman Connected Services Poland Sp.zoo	Connected service provider	100.0
	Harman Connected Services UK Ltd.	Connected service provider	100.0
	Harman Consumer Nederland B.V.	Sale of audio products	100.0
	Harman Deutschland GmbH	Sale of audio products	100.0
	Harman France SNC	Sale of audio products	100.0
	Harman Holding GmbH & Co. KG	Management company	100.0
	Harman Hungary Financing Ltd.	Financing company	100.0
	Harman Inc. & Co. KG	Management of overseas subsidiaries	100.0
	Harman International Estonia OU	R&D	100.0
	Harman International Industries Limited	Sale of audio products, R&D	100.0
	Harman International Romania SRL	R&D	100.0
	Harman Management GmbH	Management of overseas subsidiaries	100.0
	Harman Professional Kft	Manufacture of audio products, R&D	100.0
	Harman Professional Denmark ApS	Sale of audio products, R&D	100.0
	Red Bend Software SAS	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

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

Region	Subsidiaries	Business	Percentage of ownership (%) ^(*)
	Samsung Gulf Electronics Co., Ltd. (SGE)	Sale of electronic devices	100.0
	Samsung Electronics Turkiye (SETK)	Sale of electronic devices	100.0
	Samsung Electronics Industry and Commerce Ltd. (SETK-P)	Manufacture of electronic devices	100.0
	Samsung Electronics Levant Co., Ltd. (SELV)	Sale of electronic devices	100.0
	Samsung Electronics Maghreb Arab (SEMAG)	Sale of electronic devices	100.0
	Samsung Electronics Egypt S.A.E (SEEG)	Manufacture and sale of electronic devices	100.0
	Samsung Electronics Israel Ltd. (SEIL)	Marketing	100.0
	Samsung Electronics Tunisia S.A.R.L (SETN)	Marketing	100.0
	Samsung Electronics Pakistan(Private) Ltd. (SEPAK)	Marketing	100.0
Middle East & Africa	Samsung Electronics Saudi Arabia Ltd. (SESAR)	Sale of electronic devices	100.0
	Samsung Semiconductor Israel R&D Center, Ltd. (SIRC)	R&D	100.0
	Corephotonics Ltd.	R&D	100.0
	Samsung Electronics South Africa(Pty) Ltd. (SSA)	Sale of electronic devices	100.0
	Samsung Electronics South Africa Production (Pty) Ltd. (SSAP)	Manufacture of TV and monitors	100.0
	Samsung Electronics West Africa Ltd. (SEWA)	Marketing	100.0
	Samsung Electronics East Africa Ltd. (SEEA)	Marketing	100.0
	Global Symphony Technology Group Private Ltd.	Management of overseas subsidiaries	100.0
	Harman Connected Services Morocco	Connected service provider	100.0
	Harman Industries Holdings Mauritius Ltd.	Management of overseas subsidiaries	100.0
	Red Bend Ltd.	Manufacture of audio products	100.0

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

Region	Subsidiaries	Business	Percentage of ownership (%) ^(*)
	Samsung Asia Pte. Ltd. (SAPL)	Management of overseas subsidiaries	100.0
	Samsung Electronics Singapore Pte. Ltd. (SESP)	Sale of electronic devices	100.0
	Samsung Malaysia Electronics (SME) Sdn. Bhd. (SME)	Sale of electronic devices	100.0
	Samsung Electronics Display (M) Sdn. Bhd. (SDMA)	Manufacture of electronic devices	100.0
	Samsung Electronics (M) Sdn. Bhd. (SEMA)	Manufacture of home appliances	100.0
	Samsung Vina Electronics Co., Ltd. (SAVINA)	Sale of electronic devices	100.0
	Samsung Electronics Vietnam Co., Ltd. (SEV)	Manufacture of electronic devices	100.0
	Samsung Electronics Vietnam THAINGUYEN Co., Ltd. (SEVT)	Manufacture of communication equipment	100.0
	Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	Manufacture and sale of electronic devices	100.0
	Samsung Display Vietnam Co., Ltd. (SDV)	Manufacture of display panels	100.0
	DOWOINSYS VINA COMPANY LIMITED	Manufacture of display panel components	100.0
	PT Samsung Electronics Indonesia (SEIN)	Manufacture and sale of electronic devices	100.0
	PT Samsung Telecommunications Indonesia (STIN)	Sale of electronic devices and services	100.0
	Thai Samsung Electronics Co., Ltd. (TSE)	Manufacture and sale of electronic devices	91.8
	Laos Samsung Electronics Sole Co., Ltd (LSE)	Marketing	100.0
Asia	Samsung Electronics Philippines Corporation (SEPCO)	Sale of electronic devices	100.0
(Excluding	Samsung Electronics Australia Pty. Ltd. (SEAU)	Sale of electronic devices	100.0
China)	Samsung Electronics New Zealand Limited (SENZ)	Sale of electronic devices	100.0
	Samsung India Electronics Private Ltd. (SIEL)	Manufacture and sale of electronic devices	100.0
	Red Brick Lane Marketing Solutions Pvt. Ltd.	Marketing	100.0
	Samsung Display Noida Private Limited (SDN)	Manufacture of display panels	100.0
	Samsung R&D Institute India-Bangalore Private Limited (SRI-Bangalore)	R&D	100.0
	Samsung R&D Institute Bangladesh Limited (SRBD)	R&D	100.0
	Samsung Nepal Services Pvt. Ltd. (SNSL)	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

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

Region	Subsidiaries	Business	Percentage of ownership (%) ^(*)
	Samsung (CHINA) Investment Co., Ltd. (SCIC)	Sale of electronic devices	100.0
	Samsung Electronics Hong Kong Co., Ltd. (SEHK)	Sale of electronic devices	100.0
	Samsung Electronics Taiwan Co., Ltd. (SET)	Sale of electronic devices	100.0
	Tianjin Samsung Electronics Co., Ltd. (TSEC)	Manufacture of TV and monitors	91.2
	Suzhou Samsung Electronics Co., Ltd. (SSEC)	Manufacture of home appliances	88.3
	Samsung Suzhou Electronics Export Co., Ltd. (SSEC-E)	Manufacture of home appliances	100.0
	Samsung Electronics Suzhou Computer Co., Ltd. (SESC)	R&D	100.0
	Tianjin Samsung Telecom Technology Co., Ltd. (TSTC)	Manufacture of communication equipment	90.0
	Beijing Samsung Telecom R&D Center (SRC-Beijing)	R&D	100.0
	Samsung Electronics China R&D Center (SRC-Nanjing)	R&D	100.0
	Samsung Mobile R&D Center China-Guangzhou (SRC-Guangzhou)	R&D	100.0
	Samsung R&D Institute China-Shenzhen (SRC-Shenzhen)	R&D	100.0
	Shanghai Samsung Semiconductor Co., Ltd. (SSS)	Sale of semiconductor and display panels	100.0
	Samsung (China) Semiconductor Co., Ltd. (SCS)	Manufacture of semiconductors	100.0
	Samsung SemiConductor Xian Co., Ltd. (SSCX)	Sale of semiconductor and display panels	100.0
China	Samsung Electronics Suzhou Semiconductor Co., Ltd. (SESS)	Toll processing of semiconductor	100.0
	Tianjin Samsung LED Co., Ltd. (TSLED)	Manufacture of LED	100.0
	Samsung Semiconductor (China) R&D Co., Ltd. (SSCR)	R&D	100.0
	Samsung Display Dongguan Co., Ltd. (SDD)	Manufacture of display panels	100.0
	Samsung Display Tianjin Co., Ltd. (SDT)	Manufacture of display panels	95.0
	SEMES (XIAN) Co., Ltd.	Semiconductor equipment services	100.0
	Samsung Semiconductor Investment L.P.I	Venture capital investment fund	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

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

Region	Subsidiaries	Business	Percentage of ownership (%) ^(*)
	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
	Stellar Forest Co., Ltd.	Manufacture and processing of food products	100.0
	Mirero System Co., Ltd.	Development and supply of semiconductor process defect and quality control software	99.9
	Dowooinssys 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	100.0
	Samsung Venture Capital Union #21	Venture capital investment fund	99.0
	Samsung Venture Capital Union #22	Venture capital investment fund	99.0
	Samsung Venture Capital Union #26	Venture capital investment fund	99.0
Domestic	Samsung Venture Capital Union #28	Venture capital investment fund	99.0
	Samsung Venture Capital Union #29	Venture capital investment fund	99.0
	Samsung Venture Capital Union #32	Venture capital investment fund	99.0
	Samsung Venture Capital Union #33	Venture capital investment fund	99.0
	Samsung Venture Capital Union #37	Venture capital investment fund	99.0
	Samsung Venture Capital Union #40	Venture capital investment fund	99.0
	Samsung Venture Capital Union #42	Venture capital investment fund	99.0
	Samsung Venture Capital Union #43	Venture capital investment fund	99.0
	Samsung Venture Capital Union #45	Venture capital investment fund	99.0
	Samsung Venture Capital Union #48	Venture capital investment fund	99.0
	Samsung Venture Capital Union #52	Venture capital investment fund	99.0
	Samsung Venture Capital Union #55	Venture capital investment fund	99.0
	Samsung Venture Capital Union #56	Venture capital investment fund	99.0
	Samsung Venture Capital Union #57	Venture capital investment fund	99.0
	Samsung Venture Capital Union #62	Venture capital investment fund	99.0
	Growth Type Private Equity Trust Specialized in Semiconductors	Investment in semiconductor industry	66.7
	System LSI Mutual Benefit Private Equity Trust	Investment in semiconductor industry	62.5
	Semiconductor Ecosystem General Private Equity Trust	Investment in semiconductor industry	66.7

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

(B) Sale and purchase transactions

Sale and purchase transactions with related parties for the years ended December 31, 2023 and 2022 are as follows:

(In millions of Korean won)	Name of company ^(*)	2023			
		Sales and other	Disposal of non- current assets	Purchases and other	Purchase of non- current assets
Subsidiaries	Samsung Display Co., Ltd.	347,653	-	1,842,995	10,406
	Samsung Electronics America, Inc. (SEA)	29,881,238	-	222,087	-
	Samsung Asia Pte. Ltd. (SAPL)	16,989,574	-	21,813	-
	Harman and its subsidiaries ^{(*)2}	938	-	56,890	-
	Samsung Austin Semiconductor LLC. (SAS)	2,823	4,610	4,109,744	1,657
	Samsung (China) Semiconductor Co., Ltd. (SCS)	83,033	38,085	8,691,615	12,435
	Samsung Semiconductor, Inc. (SSI)	21,587,458	-	682,687	-
	Samsung Electronics Vietnam THAINGUYEN Co., Ltd. (SEVT)	4,338,706	196	20,044,847	591
	Samsung (CHINA) Investment Co., Ltd. (SCIC)	4,892,443	-	10,186	-
	Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	671,024	-	-	-
	Samsung India Electronics Private Ltd. (SIEL)	3,714,751	210	4,636,864	-
	Samsung Display Vietnam Co., Ltd. (SDV)	1,496,684	-	-	-
	Samsung Electronics Vietnam Co., Ltd. (SEV)	2,434,796	18	13,251,399	774
	Samsung Eletronica da Amazonia Ltda. (SEDA)	1,449,960	-	13,791	-
	Shanghai Samsung Semiconductor Co., Ltd. (SSS)	15,336,448	-	-	-
	Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	542,912	4,101	5,209,254	-
	Thai Samsung Electronics Co., Ltd. (TSE)	2,085,433	-	2,062,771	-
	Samsung Electronics (UK) Ltd. (SEUK)	1,762,387	-	109,697	-
	SEMES Co., Ltd.	7,285	-	2,245,344	-
	Samsung Electronics Mexico S.A. De C.V. (SEM)	2,668,921	-	7,501	-
	Samsung Electronics GmbH (SEG)	3,620,706	-	7,018	-
	Samsung International, Inc. (SII)	264,826	51	6,397,400	-
	Samsung Electronics Taiwan Co., Ltd. (SET)	3,500,155	-	1,261	-
	Samsung Electronics Benelux B.V. (SEBN)	1,589,366	-	1,175	-
	Samsung Electronics Europe Logistics B.V. (SELS)	5,070,057	-	8,132	-
	Others	50,707,430	3,780	13,212,836	3,689
		Total	175,047,007	51,051	82,847,307
Associates and joint ventures	Samsung SDS Co.,Ltd.	201,304	-	1,801,672	283,411
	Samsung Electro-Mechanics Co., Ltd.	65,765	-	786,087	-
	Samsung SDI Co., Ltd.	68,343	-	374,035	31,668
	Cheil Worldwide Inc.	36,020	-	907,775	1,163
	Others	601,887	-	968,224	9,167
	Total	973,319	-	4,837,793	325,409
Other related parties ^{(*)3}	Samsung C&T Co., Ltd.	23,156	70	57,652	5,588,270
	Other	468,819	-	762,644	190,405
	Total	491,975	70	820,296	5,778,675
Other	Samsung Engineering Co., Ltd.	1,162	-	31,957	2,747,278
	S-1	4,532	-	444,657	23,479
	Others	200,836	-	281,667	512,899
	Total	206,530	-	758,281	3,283,656

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

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

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

		2022			
(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.	283,011	-	981,927	-
	Samsung Electronics America, Inc. (SEA)	35,303,291	632	209,912	-
	Samsung Asia Pte. Ltd. (SAPL)	42	-	30,982	-
	Harman and its subsidiaries ^(*2)	-	-	76,891	-
	Samsung (China) Semiconductor Co., Ltd. (SCS)	184,796	10,644	9,679,473	5,534
	Samsung Electronics Vietnam THAINGUYEN Co., Ltd. (SEVT)	8,668,668	-	25,941,259	831
	Samsung (CHINA) Investment Co., Ltd. (SCIC)	1,588,710	-	9,035	-
	Samsung Semiconductor, Inc. (SSI)	40,907,261	-	532,962	-
	Samsung Electronics Vietnam Co., Ltd. (SEV)	5,804,935	256	16,441,332	50
	Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	-	-	-	-
	Samsung Austin Semiconductor LLC. (SAS)	1,053	-	3,663,909	2,457
	Samsung Display Vietnam Co., Ltd. (SDV)	2,073,972	-	-	-
	Samsung India Electronics Private Ltd. (SIEL)	7,439,341	112	5,798,974	-
Subsidiaries	Shanghai Samsung Semiconductor Co., Ltd. (SSS)	16,490,821	-	47	-
	Samsung Eletronica da Amazonia Ltda. (SEDA)	1,262,369	-	2,174	-
	Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	628,854	2,791	4,830,861	1,680
	Thai Samsung Electronics Co., Ltd. (TSE)	1,578,349	-	2,615,512	-
	Samsung Electronics (UK) Ltd. (SEUK)	1,529,791	-	98,891	-
	Samsung Electronics Benelux B.V. (SEBN)	788,385	-	2,333	-
	Samsung Electronics Hungarian Private Co. Ltd. (SEH)	408,409	141	2,191	-
	Samsung Electronics Europe Logistics B.V. (SELS)	4,772,554	-	5,104	-
	Samsung Display Dongguan Co., Ltd. (SDD)	249,142	-	-	-
	SEMES Co., Ltd.	8,224	-	2,283,556	-
	Samsung Electronics GmbH (SEG)	3,865,859	-	6,948	-
	Samsung Electronics Mexico S.A. De C.V. (SEM)	2,442,869	-	6,950	-
	Others	58,705,560	4,198	23,123,295	2,213
	Total	194,986,266	18,774	96,344,518	12,765
	Samsung SDS Co., Ltd.	212,376	-	1,672,853	348,752
	Samsung Electro-Mechanics Co., Ltd.	60,343	767	919,709	120
Associates and joint ventures	Samsung SDI Co., Ltd.	60,325	-	422,836	24,874
	Cheil Worldwide Inc.	31,194	-	931,489	361
	Others	617,779	-	881,585	10,224
	Total	982,017	767	4,828,472	384,331
	Samsung C&T Co., Ltd.	44,359	-	84,635	7,018,252
Other related parties	Others	283,122	188	602,014	132,512
	Total	327,481	188	686,649	7,150,764
	Samsung Engineering Co., Ltd.	1,490	-	32,677	3,106,154
Other ^(*3)	S-1	7,530	-	428,907	45,864
	Others	136,969	-	251,907	540,591
	Total	145,989	-	713,491	3,692,609

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

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

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

(C) Balances of receivables and payables

Balances of receivables and payables arising from the sales and purchases of goods and services as of December 31, 2023 and December 31, 2022 are as follows:

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

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

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

(*3) Payables and others include lease liabilities.

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

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

(In millions of Korean won)	Name of company ^(*1)	December 31, 2022	
		Receivables and other ^(*2)	Payables and other ^(*3)
	Samsung Display Co., Ltd.	32,521	108,011
	Samsung Electronics America, Inc. (SEA)	868,937	983,709
	Samsung Asia Pte. Ltd. (SAPL)	1,604	1,812
	Harman and its subsidiaries ^(*4)	-	6,537
	Samsung (China) Semiconductor Co., Ltd. (SCS)	57,423	751,693
	Samsung Electronics Vietnam THAINGUYEN Co., Ltd. (SEVT)	606,030	2,396,411
	Samsung (CHINA) Investment Co., Ltd. (SCIC)	131,285	283,459
	Samsung Semiconductor, Inc. (SSI)	4,700,427	263,757
	Samsung Electronics Vietnam Co., Ltd. (SEV)	369,380	1,748,670
	Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	693	-
	Samsung Austin Semiconductor LLC. (SAS)	21,309	386,640
	Samsung Display Vietnam Co., Ltd. (SDV)	196,643	7
	Samsung India Electronics Private Ltd. (SIEL)	1,219,298	312,243
Subsidiaries	Shanghai Samsung Semiconductor Co., Ltd. (SSS)	1,623,968	77
	Samsung Eletronica da Amazonia Ltda. (SEDA)	227,180	3,037
	Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	234,870	358,082
	Thai Samsung Electronics Co., Ltd. (TSE)	115,103	379,098
	Samsung Electronics (UK) Ltd. (SEUK)	76,264	-
	Samsung Electronics Benelux B.V. (SEBN)	18,403	-
	Samsung Electronics Hungarian Private Co., Ltd. (SEH)	11,449	-
	Samsung Electronics Europe Logistics B.V. (SELS)	273,816	506,872
	Samsung Display Dongguan Co., Ltd. (SDD)	20,177	11
	SEMES Co., Ltd.	54,327	561,368
	Samsung Electronics GmbH (SEG)	10,607	-
	Samsung Electronics Mexico S.A. De C.V. (SEM)	230,508	1,093
	Other	6,565,258	2,226,116
	Total (Subsidiaries)	17,667,480	11,278,703
	Samsung SDS Co., Ltd.	49,439	468,830
	Samsung Electro-Mechanics Co., Ltd.	385	101,960
Associates and joint ventures	Samsung SDI Co., Ltd.	114,618	51,199
	Cheil Worldwide Inc.	43	444,017
	Others	203,575	159,668
	Total (Associates and joint ventures)	368,060	1,225,674
	Samsung C&T Corporation	194,539	2,718,294
Other related parties	Other	14,679	160,305
	Total (Other related parties)	209,218	2,878,599
	Samsung Engineering Co., Ltd.	286	1,181,947
Other ^(*5)	S-1 Corporation	3,085	59,352
	Others	4,113	478,136
	Total (Other)	7,484	1,719,435

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

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

(*3) Payables and others include lease liabilities.

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

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

(D) For the years ended December 31, 2023 and 2022, the Company had no lending to its subsidiaries, but had borrowing from its subsidiaries amounting to ₩ 21,990,000 million and ₩ 0 million, respectively. In addition, the Company had no lending to or borrowings from associates and joint ventures during the years ended December 31, 2023 and 2022.

(E) For the years ended December 31, 2023 and 2022, the Company invested ₩ 49,318 million and ₩ 119,598 million, respectively, in subsidiaries, and has made capital recovery of ₩ 143,799 million and ₩ 164,503 million from its investments in subsidiaries, respectively. In addition, the Company invested ₩ 58,982 million and ₩ 882,125 million in associates and joint ventures and has made a recovery of ₩ 518 million and ₩ 0 million from its investments in associates and joint ventures for the year ended December 31, 2023 and 2022, respectively.

(F) For the years ended December 31, 2023 and 2022, the Company declared dividend of ₩ 1,650,995 million and ₩ 1,663,149 million, respectively, to related parties. In addition, for the years ended December 31, 2023 and 2022, the Company declared dividends of ₩ 128,232 million and ₩ 128,232 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 December 31, 2023 and December 31, 2022, there are no dividends payable to related parties.

(G) For the years ended December 31, 2023 and 2022, the Company entered into lease agreements with its related parties amounting to ₩ 182,860 million and ₩ 20 million, respectively, and the lease payments made to the related parties were ₩ 59,287 million and ₩ 46,819 million, respectively.

(H) As of December 31, 2023, the Company provides guarantees in relation to borrowings of the related parties (refer to Note 16).

(I) Key management compensation

The compensation paid or payable to key management (executive directors) for their services for the years ended December 31, 2023 and 2022 consists of:

<i>(In millions of Korean won)</i>	2023	2022
Short-term employee benefits	14,073	14,768
Post-employment benefits	557	612
Other long-term employee benefits	7,834	5,434

6. Dividends

We continue to work to enhance shareholder value alongside our efforts to strengthen competitiveness of our products and businesses. Based on the previous shareholder return policy covering FY2021 to FY2023, we distributed an annual return of 9.8 trillion won in regular dividends as a part of a total return of 50% of free cash flow. In January 2024, we announced our shareholder return policy for FY2024 to FY2026, which maintains the terms of the previous shareholder return policy: Samsung Electronics will pay an annual regular dividend of 9.8 trillion won as a part of total shareholder returns of 50% of the free cash flow for the period covering FY2024 to FY2026. At the close of each year, we will consider executing an early return of capital beyond regular dividends if we forecast there is potential for a significant surplus. Furthermore, the Company will consider implementing a new policy flexibly before the expiration of the policy for FY2024 to FY2026 in consideration of M&A activities and cash positions.

[Key dividend indices]

Classification		2023	2022	2021
Par value per share (KRW)		100	100	100
Consolidated net profit ¹⁾ (KRW mil)		14,473,401	54,730,018	39,243,791
Separate net profit (KRW mil)		25,397,099	25,418,778	30,970,954
EPS ²⁾ (KRW)		2,131	8,057	5,777
Total cash dividend (KRW mil)		9,809,438	9,809,438	9,809,438
Total stock dividend (KRW mil)		-	-	-
Dividend payout ratio (%)		67.8	17.9	25.0
Cash dividend yield (%)	Common	1.9	2.5	1.8
	Preferred	2.4	2.7	2.0
Stock dividend yield (%)	Common	-	-	-
	Preferred	-	-	-
Cash dividend per share (KRW)	Common	1,444	1,444	1,444
	Preferred	1,445	1,445	1,445
Stock dividend per share (share)	Common	-	-	-
	Preferred	-	-	-

Total cash dividend for 2023 in the above table is a prior to approval at the AGM; details will be published in future reports if the reported amount is rejected or adjusted.

Dividends were KRW 2,452,154 million or KRW 361 per share in the first three quarters of 2023, 2022 and 2021. 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』.

The history of dividend payouts is as follows:

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

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

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

The “past 3 years” refers to the period from 2021 through 2023, and the “past 5 years” refers to the period from 2019 through 2023. For the dividend yield of 2023, please refer to the table of key dividends above (common shares at 1.9%, preferred shares at 2.4%).

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 December 31, 2023)

(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	128,940	7.7	Aa2(Moody's), AA-(S&P)	Oct 1, 2027	Partial redemption	Goldman Sachs et al.
Harman International Industries, Inc	Corporate bonds	Public offering	May 11, 2015	515,760	4.2	A(S&P)	May 15, 2025	Unredeemed	J.P.Morgan et al.
Dowoosys Co., Ltd	Corporate bonds	Private placement	Feb 28, 2020	23,000	0.5	-	Feb 28, 2025	Unredeemed	-
Dowoosys Co., Ltd	Corporate bonds	Private placement	Dec 8, 2022	42,000	0.5	-	Dec 8, 2027	Unredeemed	-
SEMES	Commercial paper	Private placement	Jan 30, 2023	30,000	4.1	A1	Feb 28, 2023	Redeemed	-
SEMES	Commercial paper	Private placement	Jan 30, 2023	50,000	4.0	A1	Feb 28, 2023	Redeemed	-
SEMES	Commercial paper	Private placement	Feb 10, 2023	70,000	3.9	A1	Mar 10, 2023	Redeemed	-
SEMES	Commercial paper	Private placement	Feb 28, 2023	10,000	4.0	A1	Mar 28, 2023	Redeemed	-
SEMES	Commercial paper	Private placement	Mar 10, 2023	70,000	4.0	A1	Apr 10, 2023	Redeemed	-
SEMES	Commercial paper	Private placement	Mar 28, 2023	45,000	4.0	A1	Apr 28, 2023	Redeemed	-
SEMES	Commercial paper	Private placement	Apr 10, 2023	70,000	4.0	A1	May 10, 2023	Redeemed	-
SEMES	Commercial paper	Private placement	May 10, 2023	70,000	4.0	A1	Jun 12, 2023	Redeemed	-
SEMES	Commercial paper	Private placement	Jun 12, 2023	50,000	4.1	A1	Jul 12, 2023	Redeemed	-
SEMES	Commercial paper	Private placement	Jul 25, 2023	20,000	4.1	A1	Aug 28, 2023	Redeemed	-
SEMES	Commercial paper	Private placement	Jul 28, 2023	30,000	4.1	A1	Aug 28, 2023	Redeemed	-
Total	-	-	-	1,224,700	-	-	-	-	-

※ The rating institutions of Commercial paper are NICE Investors Service and Korea Ratings Corporation.

B. Commercial Paper Unredeemed Balance

Not Applicable

(Reporting Date: December 31, 2023)

(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: December 31, 2023)

(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: December 31, 2023)

(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	6,447	522,207	6,447	6,447	-	-	-	541,548
	Private	-	23,000	-	42,000	-	-	-	65,000
	Total	6,447	545,207	6,447	48,447	-	-	-	606,548

※ Based on consolidated financial statements

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

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

- Corporate Bond Unredeemed Balance (Samsung Electronics)

(Reporting Date: December 31, 2023)

(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	6,447	6,447	6,447	6,447	-	-	-	25,788
	Total	6,447	6,447	6,447	6,447	-	-	-	25,788

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

- Corporate Bond Unredeemed Balance (Harman)

(Reporting Date: December 31, 2023)

(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	-	515,760	-	-	-	-	-	515,760
	Total	-	515,760	-	-	-	-	-	515,760

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

- Corporate Bond Unredeemed Balance (Dowooinsys)

(Reporting Date: December 31, 2023)

(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	-	42,000	-	-	-	65,000
	Total	-	23,000	-	42,000	-	-	-	65,000

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

E. Hybrid Bond Unredeemed Balance

Not Applicable

(Reporting Date: December 31, 2023)

(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: December 31, 2023)

(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: December 31, 2023)

(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	128,940	Oct 2, 1997	The Bank of New York Mellon Trust Company, N.A.

(Reporting Date: December 31, 2023)

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 0.1% of the total assets during 2023)
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.

[Acquisition of eMagin Corporation]

To enhance the competitiveness of Micro Display, Samsung Display America Holdings, Inc. ("SDAH"), the Company's subsidiary, acquired 100% of the equity of eMagin Corporation (Representative director: Andrew Sculley, Headquarter location: New York, USA) on October 18, 2023 (refer to Note 32 in 3. Notes to consolidated financial statements).

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

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

- Not applicable

Litigation

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

Debt guarantee

- Domestic: Not applicable

- Overseas:

(USD thousand)

Company	Relationship	Creditor	Guarantee	Transactions			Limit of guarantee
			Expiry date	Beginning of period	Increase/decrease	End of period	
SEA	Subsidiary	BOA etc.	Dec 16, 2024	-	-	-	1,278,000
SEM	Subsidiary	BBVA etc.	Dec 16, 2024	-	-	-	715,000
SAMCOL	Subsidiary	Citibank etc.	Dec 16, 2024	-	-	-	210,000
SEDA	Subsidiary	BRADESCO etc.	Dec 16, 2024	-	-	-	329,000
SECH	Subsidiary	Citibank etc.	Dec 16, 2024	-	-	-	62,000
SEPR	Subsidiary	BBVA etc.	Dec 16, 2024	-	-	-	150,000
SSA	Subsidiary	SCB etc.	Dec 16, 2024	-	-	-	318,000
SEMAG	Subsidiary	SocGen etc.	Dec 16, 2024	-	8,065	8,065	96,000
SETK	Subsidiary	BNP etc.	Dec 16, 2024	239,395	81,498	320,893	917,000
SETK-P	Subsidiary	BNP etc.	Dec 16, 2024	25,649	-25,649	-	70,000
SECE	Subsidiary	Citibank	Dec 16, 2024	-	-	-	114,000
SEEG	Subsidiary	HSBC	Jun 13, 2024	-	-	-	85,000
SEIN	Subsidiary	BNP etc.	Nov 08, 2024	-	-	-	70,000
SJC	Subsidiary	Mizuho Bank etc.	Dec 16, 2024	-	-	-	835,508
SEUC	Subsidiary	Credit Agricole etc.	Dec 16, 2024	-	-	-	125,000
SEDAM	Subsidiary	Citibank etc.	Dec 16, 2024	155,768	-155,768	-	537,000
SECA	Subsidiary	BoA	Nov 08, 2024	-	-	-	70,000
SELA	Subsidiary	Citibank	Dec 16, 2024	-	-	-	60,000
SEEH	Subsidiary	HSBC etc.	Dec 16, 2024	-	-	-	888,400
SERK	Subsidiary	SMBC	Dec 16, 2024	-	-	-	-
SELV	Subsidiary	Citibank	Dec 16, 2024	-	-	-	10,000
SEIL	Subsidiary	Citibank	Dec 16, 2024	9,664	-9,664	-	15,600
SAPL	Subsidiary	BOA etc.	Dec 16, 2024	-	-	-	404,000
SAVINA	Subsidiary	HSBC	Jun 13, 2024	-	-	-	51,000
SCIC	Subsidiary	HSBC etc.	Dec 16, 2024	-	-	-	270,000
SESP	Subsidiary	SCB	Nov 08, 2024	-	-	-	30,000
SME	Subsidiary	SCB	Nov 08, 2024	-	-	-	110,000
SAMEX	Subsidiary	Citibank	Dec 16, 2024	-	-	-	5,000
SEASA	Subsidiary	Citibank	Dec 16, 2024	-	-	-	2,000
SSAP	Subsidiary	SCB	Nov 08, 2024	-	-	-	35,000
SEPM	Subsidiary	HSBC	Jun 13, 2024	-	-	-	35,000
SESAR	Subsidiary	HSBC	Jun 13, 2024	-	-	-	20,000
SEUZ	Subsidiary	Citibank	Dec 16, 2024	-	-	-	10,000
AdGear Technologies Inc.	Subsidiary	BOA	Nov 08, 2024	-	-	-	2,000
Harman International Industries, Inc.	Subsidiary	JP Morgan	Jun 13, 2024	-	-	-	100,000
Harman International Japan Co., Ltd.	Subsidiary	MUFG	Nov 08, 2024	-	-	-	25,000
Harman Holding Limited	Subsidiary	HSBC	Jun 13, 2024	-	-	-	30,000
Harman do Brasil Industria Eletronica e Participacoes Ltda.	Subsidiary	SocGen	Nov 08, 2024	-	-	-	15,000
Harman da Amazonia Industria Eletronica e Participacoes Ltda.							
Harman International Industries Limited	Subsidiary	HSBC	Jun 13, 2024	-	-	-	30,000
SDN	Subsidiary	SIEL	Feb 19, 2026	513,366	-2,389	510,977	601,149
SAS	Subsidiary	Epcor	The date of debt expiration	-	-	-	340,000
DOWOINSYS VINA COMPANY LIMITED	Subsidiary	ANZ	Nov 09, 2025	20,000	-	20,000	20,000
Total				963,842	-103,907	859,935	9,090,657

※ Information above are prepared on a consolidated basis. Debt guarantees for SDN are provided by Samsung Display Co., Ltd., SAS by SEA, and DOWOINSYS VINA COMPANY LIMITED by Dowoosys, respectively.

※ SEC requires Board approval for individual guarantees exceeding 2.5% of total equity. When the guarantee amount is between 0.1% and/or less than 2.5%, the approval decision is delegated to the Management Committee. Samsung Display Co., Ltd requires Board approval for individual guarantees over KRW 10,000 million.

※ SEC claims fees on the debt guarantees depending on the maturity date of each debt guarantee, general loan interest rate, etc.

In 2023, the Company claimed approximately USD 2,141,000 in guarantee fees and, as of the reporting date, has not collected the amount. In 2023, Samsung Display Co., Ltd. claimed approximately USD 3,066,000 in guarantee fees to SDN and, as of the reporting date, has not 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

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

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

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
2023	Trade receivables	37,002,849	355,456	1.0%
	Short-term loans	21,279	204	1.0%
	Other receivables	6,715,263	82,015	1.2%
	Advances	994,525	3,316	0.3%
	Trade receivables (long-term)	23,889	-	0.0%
	Other receivables (long-term)	759,704	209	0.0%
	Advances (long-term)	4,964,481	9,255	0.2%
	Long-term loans	239,149	77,608	32.5%
	Total	50,721,139	528,063	1.0%
2022	Trade receivables	36,033,784	312,221	0.9%
	Short-term loans	22,403	215	1.0%
	Other receivables	6,227,068	77,859	1.3%
	Advances	1,741,031	3,965	0.2%
	Trade receivables (long-term)	204,248	-	0.0%
	Other receivables (long-term)	824,468	242	0.0%
	Advances (long-term)	2,382,711	10,969	0.5%
	Long-term loans	225,983	1,206	0.5%
	Total	47,661,696	406,677	0.9%
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%

※ Based on consolidated financial statements

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

Allowance for bad debt by year

(KRW mil)

	2023	2022	2021
1. Allowance for bad debt (beginning balance)	406,677	397,525	388,943
2. Net bad debt expense (① - ②+③)	14,647	16,658	25,926
① Bad debt expense, etc (Write-off)	19,179	9,711	22,400
② Bad debt recovered	4	-	-
③ Others	-4,528	6,947	3,526
3. Bad debts expense	136,033	25,810	34,508
4. Allowance for bad debts (Ending balance)	528,063	406,677	397,525

※ 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: December 31, 2023)

(KRW mil, %)

	Less than 6 months	6 months ~ 1 year	1 year ~ 3 years	More than 3 years	Total
Amount	36,531,509	359,498	39,585	96,146	37,026,738
Ratio	98.6%	1.0%	0.1%	0.3%	100.0%

※ Base on consolidated financial statements

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

C. Inventory

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

(KRW mil, %)

Division	Category	2023	2022	2021	Note
DX	Finished goods	7,229,898	7,712,885	8,894,766	
	Work in process	967,513	1,013,606	799,218	
	Raw material	9,608,619	10,520,293	11,384,887	
	Material in transit	1,014,420	943,322	1,299,624	
	Total	18,820,450	20,190,106	22,378,495	
DS	Finished goods	6,476,768	6,601,087	2,490,097	
	Work in process	20,961,730	18,756,104	11,809,911	
	Raw material	3,484,046	3,639,061	2,118,424	
	Material in transit	76,226	61,352	36,685	
	Total	30,998,770	29,057,604	16,455,117	
SDC	Finished goods	284,394	811,518	294,777	
	Work in process	296,788	542,473	874,229	
	Raw material	564,573	788,521	810,325	
	Material in transit	6,509	23,626	48,253	
	Total	1,152,264	2,166,138	2,027,584	
Harman	Finished goods	725,484	799,919	533,008	
	Work in process	104,514	119,890	105,271	
	Raw material	700,011	913,085	736,109	
	Material in transit	319,785	269,715	321,128	
	Total	1,849,794	2,102,609	1,695,516	
Total	Finished goods	14,553,014	16,032,226	12,280,579	
	Work in process	22,198,448	20,077,519	13,473,618	
	Raw material	13,697,354	14,979,280	14,184,841	
	Material in transit	1,177,058	1,098,841	1,445,366	
	Total	51,625,874	52,187,866	41,384,404	
Inventory ratio (%) [Inventory ÷ Total Assets] × 100		11.3%	11.6%	9.7%	
Inventory turnover (x) [Yearly COGS ÷ {(Beginning of inventory + End of inventory)÷2}]		3.5	4.1	4.5	

※ 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 Display Panel 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 21 to Dec 4, 2023, and the subsidiaries conducted the inventory inspection during the same period as HQ.

Inventory aging and valuation

Inventories are stated at the lower of cost or net realizable value. Inventory as of December 31, 2023 are as follows:

(KRW mil)

Category	Acquisition cost	Inventory valuation reserve	Balance	Note
Finished goods	16,120,367	-1,567,353	14,553,014	
Work in process	26,501,664	-4,303,216	22,198,448	
Raw material	15,222,937	-1,525,583	13,697,354	
Material in transit	1,177,058	-	1,177,058	
Total	59,022,026	-7,396,152	51,625,874	

※ Based on consolidated financial statements

D. Supply contracts

As of December 31, 2023, there is no long-term agreement that has a material impact on the Company's financial statements.

E. Fair value estimation

Refer to 3. Financial Instruments by Category and 25. Financial Risk Management in 『Ⅲ. Financial Affairs』 .

IV. Management Discussion and Analysis

1. Note on forward-looking statements

This annual 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 within DX, DS, SDC 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.

2. Overview

The global business environment in 2023 was extremely difficult, with challenges stemming from economic slowdowns and persistent uncertainties linked with global monetary tightening and geopolitical issues. Against this backdrop, Samsung Electronics posted total revenue of KRW 259 trillion and an operating profit of KRW 7 trillion on a consolidated basis; and total revenue of KRW 170 trillion and an operating loss of KRW 12 trillion on a separate basis. Our financial structure remained sound—we recorded a debt ratio of 25.4%, capital adequacy ratio of 79.8%, and ROE of 4.3% on a consolidated basis. On a standalone basis, the respective figures were 32.1%, 75.7%, and 11.7%. Our brand value in 2023 was evaluated at USD 91.4 billion (*Interbrand*; November 2023), up 4% from last year’s figure and maintaining our position as the world’s fifth most valuable brand.

On the business side, we further solidified our market power and industry leadership by launching the S23 series, Galaxy Z Fold5 and Z Flip5 while strengthening our lineup of Neo QLED TVs and Bespoke products; and we further enhanced the profitability and cost competitiveness of the component business based on our capabilities in core technologies, which enable the expansion of HBM, DDR5, LPDDR5x, and other high-value-added products.

In 2024, global economic uncertainties, such as prolonged monetary tightening and heightened geopolitical conflicts, are likely to remain high, while intensifying competition for our main products and a rapidly changing paradigm in the IT

industry will present numerous hurdles. However, we will leverage such challenges as opportunities and devote all our energy—via relentless innovations and thorough preparations—to improve our earnings and ensure swift responses to future opportunities.

3. Financial position and performance (consolidated)

A. Financial position

(KRW mil)

Classification	2023	2022	Increase/decrease	change
Current assets	195,936,557	218,470,581	-22,534,024	-10.3%
- Cash and cash equivalents	69,080,893	49,680,710	19,400,183	39.0%
- Short-term financial instruments	22,690,924	65,102,886	-142,411,962	-65.1%
- Other current financial assets	635,393	443,690	191,703	43.2%
- Trade and other receivables	36,647,393	35,721,563	925,830	2.6%
- Inventories	51,625,874	52,187,866	-561,992	-1.1%
- Other current assets	15,256,080	15,333,866	-77,786	-0.5%
Non-current assets	259,969,423	229,953,926	30,015,497	13.1%
- Other non-current financial assets	8,912,691	12,802,480	-3,889,789	-30.4%
- Associates and joint ventures	11,767,444	10,893,869	873,575	8.0%
- Property, plant and equipment	187,256,262	168,045,388	19,210,874	11.4%
- Intangible assets	22,741,862	20,217,754	2,524,108	15.5%
- Other non-current assets	29,291,164	17,994,435	11,296,729	62.8%
Total assets	455,905,980	448,424,507	7,481,473	1.7%
Current liabilities	75,719,452	78,344,852	-2,625,400	-3.4%
Non-current liabilities	16,508,663	15,330,051	1,178,612	7.7%
Total liabilities	92,228,115	93,674,903	-1,446,788	-1.5%
Equity attributable to owners of the parent	353,233,775	345,186,142	8,047,633	2.3%
Non-controlling interest	10,444,090	9,563,462	880,628	9.2%
Total equity	363,677,865	354,749,604	8,928,261	2.5%
Total liabilities and equity	455,905,980	448,424,507	7,481,473	1.7%
Capital adequacy ratio	79.8%	79.1%	0.7%p	
Debt-to-equity ratio	25.4%	26.4%	-1.0%p	
Inventory turnover	3.5	4.1	-0.6	

Presented in accordance with K-IFRS.

If the agenda item related to the approval of financial statements is rejected or adjusted at the AGM, the details will be published in future reports.

Samsung Electronics' total assets in 2023 were KRW 455.9060 trillion, an increase of KRW 7.4815 trillion (1.7%) from the previous year. The increase is mainly attributable to cash and cash equivalents, which increased by KRW 19.4002 trillion, and to an increase in tangible assets caused by facility investments worth KRW 19.2109 trillion for the semiconductor and DP businesses.

Total liabilities were KRW 92.2281 trillion, a decrease of KRW 1.4468 trillion (1.5%) from the previous year. This includes a decrease of KRW 2.6254 trillion (13.4%) in current liabilities and a increase of KRW 1.1786 trillion (7.7%) in non-current liabilities. The changes are attributable to a KRW 3.1982 trillion decrease in accrued expenses and KRW 2.7350 trillion increase in long-term accounts payable.

Total equity was KRW 363.6779 trillion, an increase of KRW 8.9283 trillion (2.5%) from the previous year. Retained earnings grew by KRW 8.7058 trillion year-on-year from net income of KRW 15.4871 trillion and dividends of KRW 9.8094 trillion. Other components of equity decreased by KRW 0.8144 trillion due to factors such as the overseas operations translation difference.

In terms of financial ratios, the Company maintained a sound financial structure as the capital adequacy ratio increased by 0.7%pts from the previous year to 79.8% and the debt-to-equity ratio decreased by 1.0%pts from the previous year to 25.4%.

B. Performance

(KRW mil)

Classification	2023	2022	Increase/decrease	Change
Sales	258,935,494	302,231,360	-43,295,866	-14.3%
Cost of sales	180,388,580	190,041,770	-9,653,190	-5.1%
Gross profit	78,546,914	112,189,590	-33,642,676	-30.0%
Selling and administrative expenses	71,979,938	68,812,960	3,166,978	4.6%
Operating profit	6,566,976	43,376,630	-36,809,654	-84.9%
Other income	1,180,448	1,962,071	-781,623	-39.8%
Other expenses	1,083,327	1,790,176	-706,849	-39.5%
Gain on valuation using the equity method of accounting	887,550	1,090,643	-203,093	-18.6%
Financial income	16,100,148	20,828,995	-4,728,847	-22.7%
Financial expenses	12,645,530	19,027,689	-6,382,159	-33.5%
Income before income tax expense	11,006,265	46,440,474	-35,434,209	-76.3%
Income tax expense	-4,480,835	-9,213,603	4,732,768	-51.4%
Net income	15,487,100	55,654,077	-40,166,977	-72.2%
Equity attributable to owners of the parent	14,473,401	54,730,018	-40,256,617	-73.6%
Non-controlling interests	1,013,699	924,059	89,640	9.7%

Presented in accordance with K-IFRS.

If the agenda item related to the approval of financial statements is rejected or adjusted at the AGM, the details will be published in future reports.

In 2023, revenue decreased year-on-year by KRW 43.2959 trillion (14.3%) to KRW 258.9355 trillion due to weakness in component businesses, including memory. Operating profit decreased year-on-year by KRW 36.8097 (84.9%) to KRW

6.5670 trillion.

Income before income taxes decreased year-on-year by KRW 35.4342 trillion (76.3%) to KRW 11.0063 trillion, and net income decreased by KRW 40.1670 trillion (72.2%) to KRW 15.4871 trillion.

We continued to maintain a sound financial structure, highlighted by a year-on-year decrease in ROE of 12.6%pts to 4.3%, and an decrease in net profit ratio of 12.4%pts to 6.0%.

[Performance by division]

(KRW mil)

Classification	Division	2023		2022		Change	
		Amount	Share	Amount	Share	Amount	(%)
Revenue	DX Division	169,992,337	65.7%	182,489,720	60.4%	-12,497,383	-6.8%
	DS Division	66,594,471	25.7%	98,455,270	32.6%	-31,860,799	-32.4%
	SDC	30,975,373	12.0%	34,382,619	11.4%	-3,470,246	-9.9%
	Harman	14,388,454	5.6%	13,213,694	4.4%	1,174,760	8.9%
	Overall revenue	258,935,494	100.0%	302,231,360	100.0%	-43,295,866	-14.3%
Operating profit	DX Division	14,384,705	219.0%	12,746,074	29.4%	1,638,631	12.9%
	DS Division	-14,879,458	-226.6%	23,815,810	54.9%	-38,695,268	-162.5%
	SDC	5,566,478	84.8%	5,952,973	13.7%	-386,495	-6.5%
	Harman	1,173,702	17.9%	880,548	2.0%	293,154	33.3%
	Overall operating profit	6,566,976	100.0%	43,376,630	100.0%	-36,809,654	-84.9%

Includes inter-divisional revenue and operating profit.

(DX Division)

The DX Division in 2023 saw its revenue decrease year-on-year by KRW 12.4974 trillion (6.8%) to KRW 169.9923 trillion as concerns over the economic slowdown weighed on overall purchasing sentiment. However, operating profit increased by KRW 1.6386 trillion (12.9%) to KRW 14.3847 trillion thanks to an improved product mix focused on premium items such as flagship smartphones and Neo QLED TVs.

In the DX Division, the VD/DA businesses are sustaining growth led by sales of premium products, including those for Neo QLED TVs featuring premium technology, as well as for products tailored to experience-oriented lifestyles, such as our Lifestyle TVs, Bespoke home appliance premium products.

The VD Business has kept expanding its market share in the 75" and over TV segment thanks to its premium focus. We now offer whole new experiences with futuristic AI screens, including an automatic home-appliance integration service. Furthermore, we keep creating new products that appeal to the preferences of MZ generations, including The Terrace and The Premiere; and we increased sales contributions from new B2B products such as commercial Micro LED and The Wall.

Based on positive responses for our new products and backed by supply chain continuity, Samsung has remained atop the global TV market for 18 consecutive years, spanning from 2006 to 2023, fortifying our status as the industry leader. In 2024, we will expand our lineup of micro LED products and create an ultra-high price segment of over USD 100,000. Furthermore, we will achieve a new milestone for the screen industry by mass producing clear micro LED screens ahead of schedule.

In the Digital Appliance Business, we continue to launch products and services that not only offer advanced functions based on highly-efficient, eco-friendly technologies, but also increase convenience in our consumers' lives, all based on a deep understanding of the changing life patterns of our consumers. We are also creating new value with smart appliances that connect with various devices as well as a suite of services centering on Bixby and SmartThings.

In 2024, we will use AI functionality and energy-saving technology to keep strengthening the Bespoke lineup and accelerate its widening global sales. Using our competitive advantages, seen through our consistent release of distinctive products and new form factors, we aim to position the Samsung brand at the top of the global digital appliance market. Also, for high-value-added B2B businesses such as system air conditioners and built-in products, we will bolster order

competitiveness by providing differentiated eco-friendly features and introducing customer-tailored products, seeking to maintain our growth momentum.

Even amid challenging market conditions, including prolonged geopolitical issues and effects of inflation and the economic downturn, the DX Division's MX Business achieved solid results, including an increase in sales in the flagship smartphone market.

We optimize our smartphone lineups to the market conditions and competitive environment in each region by leveraging our diverse and competitive product portfolio that encompasses mass-market to premium models as well as devices within the Galaxy Ecosystem.

In 2023, we stayed committed to extending our technology leadership by elevating the product experiences our customers feel in their daily lives to the next level. In particular, the Galaxy S23 Ultra offers a further enhanced night portrait mode and zoom function based on 200-megapixel technology and features expanded memory capacities and use of eco-friendly materials. The Galaxy Z Fold5 and Galaxy Z Flip5 strengthened the completeness of multitasking and flex-mode, which are the respective core experiences for customers of each product. Going beyond smartphones, our customers enjoy even more abundant mobile experiences with the various products within the Galaxy Ecosystem: tablets that ensure productive experiences, Galaxy Watch that features advanced fitness and wellness functions, and wireless earphones that provide rich sound experiences. Furthermore, we are expanding our Ecosystem by strengthening strategic partnerships and striving to diversify our profit structure by bolstering the service business, which is backed by an extensive global installed-base.

In 2024, we will lead the mobile market by offering new mobile AI experiences and achieve strong earnings via ongoing technological innovation and thorough preparation for the future by leveraging our industry-leading R&D capability.

(DS Division)

The DS Division saw its revenue in 2023 decrease year-on-year by KRW 31.8608 trillion (32.4%) to KRW 66.5945 trillion due to a challenging market environment stemming from semiconductor ASP declines and sluggish demand driven by inventory adjustments at customers. Operating profit decreased by KRW 38.6953 trillion (162.5%) to KRW 14.8795 trillion.

Despite the lingering macro uncertainties, the Memory Business is fortifying the Company's technology leadership status and working to strengthen its business competitiveness via the timely fulfillment of market demand. In 2024, although we expect a number of variables to continue to weigh on the market environment, including interest rate policies and geopolitical risks, we also see prospects of a recovery in the Memory Business overall. Thus, we will continue to closely monitor market conditions and preemptively address any changes.

For DRAM, we further strengthened our technological competitiveness by preemptively establishing DRAM mass production applying multi-step EUV technology—a world's first—and will grow qualitatively by centering our portfolio on high-value-added and high density products. Samsung will also actively address the demand from rising content-per-box spurred by the spread of on-device AI, primarily from PC and mobile; as well as the demand related to approaching replacement cycles of some products sold during the early stage of the pandemic. Our status in the HBM market will keep rising as we continue to expand the portion of HBM3/3E and develop HBM4, the next-generation product, along with customized products.

For NAND in 2024, we will bolster technology competitiveness with our advanced-product lineup in V-NAND via further migrating to 8th-gen and promoting the adoption of 9th-gen. Furthermore, we are entering the mobile-use QLC market while also targeting leadership in the early stages of the market for Gen5 SSDs used in generative AI.

In 2023, System LSI faced ongoing challenges from a delayed recovery in smartphone demand and inventory adjustments in the mobile business. In the second half of the year, conditions improved somewhat, driven by component supply for MX's Galaxy and increased demand from OEMs in China. We will prepare for upcoming market changes by enhancing competitiveness in costs and core technologies and by continuing to expand our customer base, thus solidifying our foundation for continued growth. For SOCs, we are securing additional customers by releasing mobile products equipped with on-device AI and expanding lineups to include automotive-use products, etc. At the same time, we are developing 3nm SOCs and next-generation IP technology as a part of our ever-present preparations for the future. In image sensors, our differentiated zoom function led the market with our high-value-added 200-megapixel sensor based on fine-pixel technology. At the same time, we targeted diversification by entering new markets, such as ones for autonomous vehicles and XR devices.

In the Foundry Business, we expect external conditions to remain challenging, with the depressed market carried forth from 2H 2022 likely to keep weighing on demand amid a delayed market rebound. That said, we aim to enhance our competitiveness by ensuring across-the-board readiness for a market recovery. Moreover, capturing demand in the medium to long term is crucial for advanced nodes, so we are vigilantly monitoring market conditions in order to flexibly and pre-emptively expand capacity to address future demand. For mature nodes, we will keep fortifying cost competitiveness by expanding sales of high-value-added products and optimizing our product mix while fully addressing the needs of our current customers by enhancing our process/product portfolios.

(SDC)

SDC's revenue in 2023 decreased by KRW 3.4072 trillion (9.9%) from the previous year to KRW 30.9754 trillion due to muted consumer sentiment led by concerns over inflation and an economic downturn. Operating profit decreased by KRW 386.5 billion (6.5%) to KRW 5.5665trillion.

The mobile display business achieved solid earnings, led mainly by high-end products, despite a decline in smartphone demand due to weakened consumer sentiment caused by concerns over inflation, rate hikes, and the economic downturn. We actively addressed our customers' increasingly sophisticated needs by establishing an optimal product portfolio that ranges from mass-market through to premium products with our Flexible and Rigid OLED panels. Indeed, our industry-leading technological capabilities have been recognized based on our products' differentiated technologies and performance.

For large displays, we have successfully positioned QD-OLED TVs and monitors in the premium segment, and we will keep striving to diversify our product lineups and customer base.

In 2024, we expect the overall market to remain mostly flat due to the still-slow global economy and ongoing regional conflicts. On top of that, competition among panel makers has intensified further amid a stagnant smartphone market, so the business environment should remain challenging. Against this backdrop, we will continually develop new technologies and fortify our innovation leadership. For the mobile panel business, we will solidify future growth engines in areas such as IT (tablet/notebook PCs) and automotive while maintaining our dominant position in mobile panels. For the large panel business, we aim to improve our results by expanding in the monitor market and maximizing efficiencies.

(Harman)

Harman's revenue in 2023 increased by KRW 1.1748 trillion (8.9%) year-on-year to KRW 14.3885 trillion; while its

operating profit increased by KRW 293.2 billion (33.3%) to KRW 1.1737 trillion. Both revenue and operating profit achieved growth thanks to expanded orders by automotive customers and increased sales of consumer audio products such as portable speakers as well as car audio products

Since its acquisition, Harman has continued to post strong growth in its strategic automotive components and consumer audio businesses, despite the recent and further deteriorations in macroeconomic conditions. Harman has expanded its capabilities via internal innovations and synergies with various Samsung Electronics technologies from businesses such as mobile, IT, display, and semiconductor.

As a leader in the car component market, we supply car manufacturers with products that apply innovative technologies, all while maintaining quality at a level befitting a premium brand. In the infotainment market, we gained early dominance by preemptively addressing the transition to digital cockpits, and we won the industry's first order for 5G Telematics Control Units (TCUs) via our development of differentiated technologies. We will focus our capabilities on providing a more convenient, pleasant, and safe in-cabin experience by preparing for the era of autonomous vehicles based on such technological innovations.

In the consumer audio market, we have used our innovative technologies to firmly establish the brand's reputation among consumers and audiophiles. In particular, JBL has sold the most Bluetooth speakers in the global market for eight consecutive years, and it is sustaining notable growth momentum in the wireless earphone market. We will further enhance our brand reputation while consistently providing new user experiences.

In 2024, we expect global GDP growth to slow compared to 2023 and the automotive and audio markets to remain flat, thus weighing on overall business conditions. However, we will strive to further our competitiveness in products and costs by strengthening our responsiveness towards changes in the business environment, fortifying global competitiveness, and accelerating technological innovation while remaining committed to achieving solid earnings.

C. New and closed businesses

N/A

D. Changes in organizational structure

In December 2021, the Company merged and restructured the CE and IM Divisions to form the DX Division and renamed the Mobile Communications Business to the MX Business. Also, SDC and the DS Division have been separated to align with the corporate organizational structure.

[As of December 2021]

	Before	After
Business organization	CE Division (Visual Display, Digital Appliances, Health & Medical Equipment)	DX Division (Visual Display, Digital Appliances, Health & Medical Equipment, Mobile eXperience, Network)
	IM Division (Mobile, Network)	
	DS Division (Memory, System LSI, Foundry, Display Panel)	DS Division (Memory, System LSI, Foundry)
		SDC (Display Panel)
Harman Division	Harman	
Regional headquarters	Korea, North America, Latin America, Europe, CIS, Southwest Asia, Southeast Asia, China, Middle East, Africa	Korea, North America, Latin America, Europe, CIS, Southwest Asia, Southeast Asia, China, Middle East, Africa
	Americas (DS), Europe (DS), China (DS), Southeast Asia (DS), Japan (DS)	Americas (DS), Europe (DS), China (DS), Southeast Asia (DS), Japan (DS)

E. Foreign exchange risk

The Company experiences currency gains and losses based on the different functional currency of each entity due to global operations. As such, the Company is exposed to foreign currency volatility from exchange positions of currencies, especially related to the US dollar, and Euro.

(closing rate end at year-end by currency)

Currency	2023	2022	Change	Change (%)
USD	1,289.40	1,267.30	22.10	1.7%
EUR	1,426.59	1,351.20	75.39	5.6%

The foreign currency exposure to financial assets and liabilities of a 5% currency rate change against the Korean won (before income tax) are presented below:

(KRW mil)

Currency	December 31, 2023		December 31, 2022	
	Increase	Decrease	Increase	Decrease
USD	418,776	-418,776	258,655	-258,655
EUR	151,740	-151,740	92,546	-92,546

To minimize foreign exchange risk arising from operating activities, the Company maintains the same level of equity and liability in each currency. To minimize foreign exchange positions, the Company's foreign exchange management policy requires normal business transactions (including imports and exports) as well as financing transactions (such as deposits/borrowings) to be in the functional currency or for the cash-in currency to be matched up with the cash-out currency. However, when some foreign exchange positions arise, the impact of foreign exchange fluctuation is to be mitigated through measures such as bond sales and forward exchanges. While such means can reduce foreign exchange risk, they can't remove the risk entirely. The company regularly monitor and assess the foreign exchange risk to efficiently manage the risk and strictly prohibit speculative foreign exchange transactions.

F. Recognition of asset impairment loss

The Company conducts an annual review on asset impairment of CGUs (cash generating unit). The recoverable amount of a CGU is based on the calculation of value in use, and the value in use is calculated using a BTCF (before tax cash flow) assumption that based on the financial budget for the next five years (or longer if mid- to long-term plans for new businesses with emerging technologies are deemed appropriate) approved by the management committee. In calculating terminal-year cash flow for period that exceeds the term, assumption of fixed average growth (does not exceed industry average) was used.

Impairment losses are recognized to the extent the carrying amount exceeds the recoverable amount of a CGU. The recoverable amount is determined by choosing the greater figure between the use-value and fair-value, which deducts the disposal amount per cost. Recognized impairment gains or losses in 2022 reached KRW 85.4 billion for tangible assets and KRW 5.4 billion for intangible assets.

Refer to 『3. Notes to consolidated financial statements』 of 『III. Financial Affairs』 and 『B. Equity Investments in other corporations』 of 『IX. Affiliates and Subsidiaries』 for more details about asset impairment loss.

4. Liquidity, financing, and expenditure

Liquidity risk refers to the possibility of a company having difficulties in fulfilling its obligations related to financial liabilities. Our main sources of liquidity are cash generated by business operations and funds procured from capital market and financial institutions. The main demands on our liquidity include investment for production and R&D, working capital, and dividend payouts. The nature of our business requires making large investments, so maintaining an adequate level of liquidity risk is crucial. The Company maintains and manages an adequate level of liquidity by 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 reducing capital operation expenses and financial expenses.

In addition, the Company's headquarters provides payment guarantees to overseas subsidiaries to secure credit limit to brace for potential large-scale liquidity needs. As of end-2023, our investment ratings from international rating agencies Moody's and S&P are Aa2 and AA-, respectively, allowing us to raise capital in the capital market in a timely manner.

A. Current status of liquidity

The Company has ample liquidity, and its cash coverage (liquid funds/borrowings) is 728%.

	2023	2022
Cash coverage (liquid funds/borrowings)	728%	1,115%

The Company's liquidity as of December 31, 2023, is presented below:

	(KRW mil)		
Classification	2023	2022	Change
Liquid funds			
Cash and cash equivalents	69,080,893	49,680,710	19,400,183
Short-term financial instruments	22,690,924	65,102,886	-42,411,962
Short-term financial assets at amortized cost	608,281	414,610	193,671
Financial assets at fair value through profit or loss	27,112	29,080	-1,968
Total financial assets	92,407,210	115,227,286	-22,820,076
Borrowings			
Short-term borrowings	7,114,601	5,147,315	1,967,286
Current portion of long-term liabilities	1,308,875	1,089,162	219,713
Debentures	537,618	536,093	1,525
Long-term borrowings	3,724,850	3,560,672	164,178
Total financial liabilities	12,685,944	10,333,242	2,352,702
Net cash (liquid funds – borrowings)	79,721,266	104,894,044	-25,172,778

Current portion of long-term liabilities is current portion of long-term borrowings and current portion of debentures.

As of the end of 2023, the Company had KRW 92.4072 trillion of financial assets. These liquid funds include: i) cash and cash equivalents; ii) short-term financial instruments; iii) short-term financial assets at amortized cost; and iv) financial assets at fair value through other comprehensive income. This balance decreased by KRW 22.8201 trillion from KRW 115.2273 trillion at the end of the previous year.

The Company's borrowings (including debentures) are KRW 12.6859 trillion, a increase of KRW 2.3527 trillion from KRW 10.3332 trillion at the end of the previous year.

The Company's liquidity includes an inflow of KRW 44.1374 trillion in cash flows from operating activities and an outflow of KRW 60.5342 trillion in acquisition of tangible and intangible assets, and KRW 9.8645 in dividends. The Company's net cash (liquid funds – borrowings) in 2023 is KRW 79.7213 trillion, which is a decrease of KRW 25.1728 trillion from KRW 104.8940 trillion at the end of the previous year.

B. Financing and expenditures

(Borrowings)

As of December 31, 2023, the Company's borrowings (including debentures) are presented below:

(KRW mil)

Classification	Creditor	Annual interest rate (%)	2023	2022
Short-term borrowings				
Collateralized borrowings	Woori Bank, etc.	0.0–17.3	6,610,049	3,569,357
Non-collateralized borrowings	CitiBank, etc.	0.0–62.2	504,552	1,577,958
Total short-term borrowings	-	-	7,114,601	5,147,315
Liquid long-term borrowings				
Bank borrowings	BNP, etc.	36.1–61.5	304,082	208,915
Capital lease liabilities	CSSD, etc.	4.3	998,439	874,019
Total liquid long-term borrowings			1,302,521	1,082,934
Long-term borrowings				
Bank borrowings	-	-	-	33,846
Capital lease liabilities	CSSD, etc.	4.3	3,724,850	3,526,826
Total long-term borrowings	-		3,724,850	3,560,672

(KRW mil)

Classification	Issuance date	Maturity date	Annual interest rate (%)	2023	2022
Debentures					
USD denominated straight bonds	Oct 2, 1997	Oct 1, 2027	7.7	25,788 (USD 20,000,000)	31,683 (USD 25,000,000)
USD denominated debenture bonds	May 11, 2015	May 15, 2025	4.2	515,760 (USD 400,000,000)	506,920 (USD 400,000,000)
Sub Total				541,548	538,603
Premium on bonds payable (discount on bonds payable)				2,424	3,718
Total				543,972	542,321
Deduction: Current debentures				-6,354	-6,228
Non-current debentures				537,618	536,093

(Borrowings and payment of borrowings)

The Company's short-term borrowing increases or decreases depending on the discount amount of trade receivables. In 2023, short-term borrowing increased by KRW 1.9673 trillion, while KRW 0.3854 trillion of long-term borrowing increased due to increased capital lease liabilities.

(Plan for payment of borrowings)

The Company's plan for payment of borrowings (including debentures) is presented below:

(KRW mil)	
Year of payment	Amount of payment
2024	8,596,881
2025	1,487,473
2026	827,998
2027	632,258
2028~	1,822,019
Total	13,366,629

Amount calculated excluding bond discount, premium on bonds payable, and present value of bonds payable discount.

(Compliance to bond management contract conditions)

The Company's bonds are subject to conditions to protect investors such as constraint on collateral, constraint on disposal of assets, etc., and the Company complies with these conditions.

5. Off-balance sheet activities

- Refer to 『2. Notes to consolidated financial statements』 in 『III. Financial Affairs』

5. Off-balance sheet activities

- Refer to 『3. Notes to consolidated financial statements』 and 『5. Notes to non-consolidated financial statements』 in 『Ⅲ. Financial Affairs』.

6. Other information for investment decision making

A. Significant accounting policies and estimation

- The Company applied the following amended standards for the first time for the annual reporting period commencing on January 1, 2023:

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

The amendments replace the term ‘significant’ accounting policy information with ‘material’ accounting policy and clarify its meaning. These amendments do not result in a change in accounting policy but affects the accounting policy information disclosed in the consolidated financial statements. In addition, IFRS Practice Statement 2, *Making Materiality Judgments* has been amended to provide guidance on the application of the concept of materiality. The Company has adopted the amendments to the standard and discloses the Company’s material accounting policies in Note 2.

Amendments to Korean IFRS 1008, *Accounting Policies, Changes in Accounting Estimates and Errors*

The amendments clarify how accounting estimates are defined and distinguished from changes in accounting policies. The adoption of the amendments does not have a significant impact on the Company’s consolidated financial statements.

Amendments to Korean IFRS 1012, *Income Tax*

The amendments add to a condition 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 adoption of the amendments does not have a significant impact on the Company’s consolidated financial statements.

Amendments to Korean IFRS 1012, *Income Tax*

The amendments clarify that Korean IFRS 1012, *Income Taxes*, applies to income taxes arising from tax law enacted or substantively enacted to implement the Pillar Two Model Rules issued by the Organization for Economic Co-operation and Development (OECD).

However, a temporary exemption from the requirements of Korean IFRS 1012, *Income Taxes*, has been adopted to allow the Company to neither recognize nor disclose deferred tax assets and liabilities relating to Pillar Two income taxes.

B. Environment and employees

- Refer to 『3. Matters related to sanctions』 in 『XI. Other information』 for environmental sanctions or administrative actions.
- No significant changes in employee positions during this period.

C. Legal regulations

- Refer to 『3. Matters related to sanctions』 in 『XI. Other information』 for major legal regulations on the Company's businesses.

D. Derivatives and risk management policy

- To manage exchange rate risk, overseas companies hedge by buying or selling currency forwards for a foreign currency position that is not among the companies' functional currencies.
- Refer to 『5. Risk management and derivative trading』 in 『II. Businesses Overview』 and 『3. Notes to Financial Statements』 in 『III. Financial Affairs』 for the Company's key derivatives and risk management policy.

V. Auditor's Report

1. Introduction

Samjong KPMG conducted an audit on the consolidated/separate financial statements of financial position of the Company as of December 31, 2023, and the related consolidated/separate statements of profit or loss, comprehensive income, changes in equity and cash flows for the year then ended and expressed an unqualified opinion on those financial statements.

Deloitte Anjin conducted audits on the consolidated/separate financial statements of financial position of the Company as of December 31, 2022, and December 31, 2021, and the related consolidated/separate statements of profit or loss, comprehensive income, changes in equity and cash flows for the years then ended and expressed an unqualified opinion on those financial statements.

All of the Company's subsidiaries received unqualified opinion for the years ended December 31, 2023, 2022 and 2021.

Year end	Company Auditor	Audit Opinion	Emphasis of Matter	Key Audit Matter(s)
Dec 31, 2023	Samjong KPMG	Unqualified	Not applicable	(Consolidated) 1. Valuation of memory semiconductor inventory at net realizable value 2. Accuracy and completeness of sales deduction related to the sales promotion activities of products (Separate) 1. Valuation of memory semiconductor inventory at net realizable value 2. Accuracy and completeness of sales deduction related to the sales promotion activities of products
Dec 31, 2022	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, 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

※ Audit opinion on both separate and consolidated financial statements.

[Audit Contract Description]

(KRW mil)

Fiscal Year	Auditor	Description	Contract		Actual	
			Audit fee	Total Hours	Fee Claimed	Hours spent
Year ended Dec 31, 2023	Samjong KPMG	- Review of the interim separate/consolidated financial statements - Audit of separate/consolidated financial statements - Audit of separate/consolidated Internal Control over Financial Reporting	7,800	85,700	7,800	85,036
Year ended Dec 31, 2022	Deloitte Anjin	- Review of the interim separate/consolidated financial statements - Audit of separate/consolidated financial statements - Audit of Internal Control over Financial Reporting (ICFR)	8,424	78,000	8,424	78,146
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

< Review plan for the period ended December 31, 2023 >

Review Period		Planned Dates
2023 1Q	Pre-review	Mar 6, 2023 ~ Mar 29, 2023
	Review	Apr 7, 2023 ~ May 12, 2023
2023 2Q	Pre-review	Jun 5, 2023 ~ Jun 30, 2023
	Review	Jul 7, 2023 ~ Aug 11, 2023
2023 3Q	Pre-review	Sep 6, 2023 ~ Sep 27, 2023
	Review	Oct 10, 2023 ~ Nov 14, 2023
Audit of IT systems and automated internal controls		Apr 3, 2023 ~ Jan 31, 2024
Early substantive audit procedures (annual audit)		Mar 6, 2023 ~ Dec 29, 2023
Audit of Internal Control over Financial Reporting ("ICFR")		Apr 3, 2023 ~ Jan 31, 2024
Update of early substantive audit procedures and audit of financial statements		Jan 2, 2024 ~ Feb 19, 2024

※ Above schedule is for the review and audit of separate and consolidated financial statements, and audit of Internal Control over Financial Reporting ("ICFR")

[Non-Audit Service Contract Description]

(KRW mil)

Fiscal Year	Contract Date	Non-audit Service Description	Period for Service	Compensation	Note
Year ended Dec 31, 2023	Feb 2017	Tax advisory services(overseas subsidiaries)	Jan – Dec 2023	202	Samjong KPMG
	Sep 2018	Tax advisory services(overseas subsidiaries)	Jan – Dec 2023	27	
	May 2019	Tax advisory services(overseas subsidiaries)	Jan – Dec 2023	79	
	May 2023	ESG certification(domestic subsidiaries)	May – Jul 2023	25	
Year ended Dec 31, 2022	-	-	-	-	-
Year ended Dec 31, 2021	Jun 2017	E-discovery advisory services	Jan – Dec 2021	394	Deloitte Anjin

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

No.	Date	Participants	Method	Details of discussion
1	Jan 27, 2023	Audit Committee: 3 members Company: Head of Audit Team Auditor: Signing partner and 4 others	Face-to-face meeting	<ul style="list-style-type: none"> - 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 25, 2023	Audit Committee: 3 members Company: Head of Audit Team Auditor: Signing partner and 4 others	Face-to-face meeting	<ul style="list-style-type: none"> - Reporting on progress of quarterly review - Audit plan for the year ending December 31, 2023 - Other required communications at the planning stage of the audit
3	Jul 25, 2023	Audit Committee: 3 members Company: Head of Audit Team Auditor: Signing partner and 5 others	Face-to-face meeting	<ul style="list-style-type: none"> - Annual audit plan and its progress - Plan for the Key Audit Matters selection - Progress of audit of Internal Control over Financial Reporting - Discussion of quarterly review focus areas and other required communications
4	Oct 27, 2023	Audit Committee: 3 members Company: Head of Audit Team Auditor: Signing partner and 5 others	Face-to-face meeting	<ul style="list-style-type: none"> - Annual audit plan and its progress - Plan for the Key Audit Matters selection - Progress of audit of Internal Control over Financial Reporting - Discussion of quarterly review focus areas and other required communications
5	Jan 29, 2024	Audit Committee: 3 members Company: Head of Audit Team Auditor: Signing partner and 5 others	Face-to-face meeting	<ul style="list-style-type: none"> - Annual audit plan and its progress - Key Audit Matters and others audit focus areas - Progress of audit of Internal Control over Financial Reporting - Other required communications at the completion stage of the audit

※ The auditor discussed with the internal audit committee in January 2023 was Deloitte Anjin. Samjong KPMG has been discussing with the internal audit committee from April 2023.

2. Change of Independent Auditor

Upon termination of the contract with previous auditor, Deloitte Anjin, the audit committee has newly appointed Samjong KPMG as the Company's external auditor for three years from 2023 to 2025, in accordance with Article 10 (1), (3) and (4) of the "Act on External Audit of Stock Companies, Etc.". As a result, the Company's external auditor has been changed from Deloitte Anjin to Samjong KPMG from the beginning of this year.

There are 232 subsidiaries as at December 31, 2023. For the period ending December 31, 2023, 8 domestic subsidiaries, including Samsung Display Co., Ltd., changed external auditor from Deloitte Anjin to Samjong KPMG and SU Materials Co., Ltd. changed E&Y Hanyoung to Samjong KPMG. 30 overseas subsidiaries, including Samsung Electronics America, Inc. (SEA), changed Deloitte to KPMG, 65 overseas subsidiaries, including Samsung (China) Semiconductor Co., Ltd. (SCS), changed PwC to KPMG and 6 overseas subsidiaries, including Samsung Electronics Benelux B.V. (SEBN), changed E&Y to KPMG, Laos Samsung Electronics Sole Co., Ltd (LSE) changed KPP Co., Ltd to KPMG.

Stella Forest of Hope, which was established in 2022, appointed Samjong KPMG, Electronics Uzbekistan Ltd. (SEUZ), DOWOINSYS VINA COMPANY LIMITED appointed KPMG, and Samsung Venture Capital Union SVIC No. 62 appointed Samjong KPMG as their new external auditors, respectively.

These changes in external auditors were to improve efficiency in audit of consolidated financial statements due to the change of the Company's external auditor. Appointment of auditor was decided at the entities' own discretion.

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

Subsidiaries	Previous auditor	Current Auditor
Samsung Display Co., Ltd.	Deloitte Anjin	Samjong KPMG
Samsung Electronics Service Co., Ltd.	Deloitte Anjin	Samjong KPMG
Samsung Electronics Service CS Co., Ltd.	Deloitte Anjin	Samjong KPMG
Samsung Electronics Sales Co., Ltd.	Deloitte Anjin	Samjong KPMG
Samsung Electronics Logitech Co., Ltd.	Deloitte Anjin	Samjong KPMG
Dowoinsys Co., Ltd.	Deloitte Anjin	Samjong KPMG
Gf-System Co., Ltd.	Deloitte Anjin	Samjong KPMG
Mirero System Co., Ltd.	Deloitte Anjin	Samjong KPMG
SU Materials Co., Ltd.	E&Y Hanyoung	Samjong KPMG
Samsung Electronics America, Inc. (SEA)	Deloitte	KPMG
Samsung Semiconductor, Inc. (SSI)	Deloitte	KPMG
Samsung Mexicana S.A. de C.V (SAMEX)	Deloitte	KPMG
Samsung International, Inc. (SII)	Deloitte	KPMG
Samsung Austin Semiconductor LLC. (SAS)	Deloitte	KPMG
Samsung Electronics Mexico S.A. De C.V. (SEM)	Deloitte	KPMG
Samsung Electronics (UK) Ltd. (SEUK)	Deloitte	KPMG
Samsung Electronics Holding GmbH (SEHG)	Deloitte	KPMG
Samsung Semiconductor Europe GmbH (SSEG)	Deloitte	KPMG
Samsung Electronics GmbH (SEG)	Deloitte	KPMG
Samsung Semiconductor Europe Limited (SSEL)	Deloitte	KPMG
Samsung Vina Electronics Co., Ltd. (SAVINA)	Deloitte	KPMG

Subsidiaries	Previous auditor	Current Auditor
Samsung Electronics Singapore Pte. Ltd. (SESP)	Deloitte	KPMG
Samsung Asia Pte. Ltd. (SAPL)	Deloitte	KPMG
Samsung Electronics Australia Pty. Ltd. (SEAU)	Deloitte	KPMG
Thai Samsung Electronics Co., Ltd. (TSE)	Deloitte	KPMG
Samsung Display Vietnam Co., Ltd. (SDV)	Deloitte	KPMG
Samsung R&D Institute BanglaDesh Limited (SRBD)	Deloitte	KPMG
Samsung Electronics Vietnam Co., Ltd. (SEV)	Deloitte	KPMG
Samsung Electronics Vietnam THAINGUYEN Co., Ltd. (SEVT)	Deloitte	KPMG
Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	Deloitte	KPMG
Samsung (CHINA) Investment Co., Ltd. (SCIC)	Deloitte	KPMG
Samsung Electronics Taiwan Co., Ltd. (SET)	Deloitte	KPMG
Shanghai Samsung Semiconductor Co., Ltd. (SSS)	Deloitte	KPMG
Samsung Gulf Electronics Co., Ltd. (SGE)	Deloitte	KPMG
Samsung Electronics Saudi Arabia Ltd. (SESAR)	Deloitte	KPMG
Samsung Electronics South Africa(Pty) Ltd. (SSA)	Deloitte	KPMG
Samsung Electronics Turkiye (SETK)	Deloitte	KPMG
Samsung Electronics Industry and Commerce Ltd. (SETK-P)	Deloitte	KPMG
Samsung Eletronica da Amazonia Ltda. (SEDA)	Deloitte	KPMG
Samsung Japan Corporation (SJC)	PwC	KPMG
Samsung R&D Institute Japan Co. Ltd. (SRJ)	PwC	KPMG
Samsung Electronics Japan Co., Ltd. (SEJ)	PwC	KPMG
Samsung Oak Holdings, Inc. (SHI)	PwC	KPMG
Samsung Electronics Canada, Inc. (SECA)	PwC	KPMG
Samsung Research America, Inc (SRA)	PwC	KPMG
SAMSUNG NEXT LLC (SNX)	PwC	KPMG
SAMSUNG NEXT FUND LLC (SNXF)	PwC	KPMG
Samsung Electronics Home Appliances America, LLC (SEHA)	PwC	KPMG
Samsung Electronics Digital Appliance Mexico, SA de CV (SEDAM)	PwC	KPMG
Samsung Electronics Latinoamerica Miami, Inc. (SEMI)	PwC	KPMG
Samsung Electronics France S.A.S (SEF)	PwC	KPMG
Samsung Electronics Hungarian Private Co. Ltd. (SEH)	PwC	KPMG
Samsung Electronics Czech and Slovak s.r.o. (SECZ)	PwC	KPMG
Samsung Electronics Italia S.P.A. (SEI)	PwC	KPMG
Samsung Electronics Europe Logistics B.V. (SELS)	PwC	KPMG
Samsung Electronics Romania LLC (SEROM)	PwC	KPMG
Samsung Electronics Overseas B.V. (SEO)	PwC	KPMG
Samsung Electronics Polska, SP.Zo.o (SEPOL)	PwC	KPMG
Samsung Electronics Nordic Aktiebolag (SENA)	PwC	KPMG
Samsung Electronics Austria GmbH (SEAG)	PwC	KPMG
Samsung Electronics Switzerland GmbH (SESG)	PwC	KPMG
SAMSUNG ELECTRONICS BALTICS SIA (SEB)	PwC	KPMG
Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	PwC	KPMG
Samsung Electronics Poland Manufacturing SP.Zo.o (SEPM)	PwC	KPMG
Samsung Electronics Greece S.M.S.A (SEGR)	PwC	KPMG
Samsung Nanoradio Design Center (SNDC)	PwC	KPMG

Subsidiaries	Previous auditor	Current Auditor
Samsung Electronics Air Conditioner Europe B.V. (SEACE)	PwC	KPMG
Samsung Denmark Research Center ApS (SDRC)	PwC	KPMG
Samsung Cambridge Solution Centre Limited (SCSC)	PwC	KPMG
Samsung R&D Institute India-Bangalore Private Limited (SRI-Bangalore)	PwC	KPMG
Samsung Electronics New Zealand Limited (SENZ)	PwC	KPMG
PT Samsung Electronics Indonesia (SEIN)	PwC	KPMG
PT Samsung Telecommunications Indonesia (STIN)	PwC	KPMG
Samsung Display Noida Private Limited (SDN)	PwC	KPMG
Samsung Display Dongguan Co., Ltd. (SDD)	PwC	KPMG
Samsung Display Tianjin Co., Ltd. (SDT)	PwC	KPMG
Samsung Electronics Hong Kong Co., Ltd. (SEHK)	PwC	KPMG
Suzhou Samsung Electronics Co., Ltd. (SSEC)	PwC	KPMG
Samsung Suzhou Electronics Export Co., Ltd. (SSEC-E)	PwC	KPMG
Samsung Mobile R&D Center China-Guangzhou (SRC-Guangzhou)	PwC	KPMG
Samsung R&D Institute China-Shenzhen (SRC-Shenzhen)	PwC	KPMG
Samsung Electronics Suzhou Semiconductor Co., Ltd. (SESS)	PwC	KPMG
SEMES (XIAN) Co., Ltd.	PwC	KPMG
Beijing Samsung Telecom R&D Center (SRC-Beijing)	PwC	KPMG
Samsung Electronics Suzhou Computer Co., Ltd. (SESC)	PwC	KPMG
Samsung Semiconductor (China) R&D Co., Ltd. (SSCR)	PwC	KPMG
Samsung Electronics China R&D Center (SRC-Nanjing)	PwC	KPMG
Samsung (China) Semiconductor Co., Ltd. (SCS)	PwC	KPMG
Samsung SemiConductor Xian Co., Ltd. (SSCX)	PwC	KPMG
Samsung Electronics West Africa Ltd. (SEWA)	PwC	KPMG
Samsung Electronics East Africa Ltd. (SEEA)	PwC	KPMG
Samsung Electronics Israel Ltd. (SEIL)	PwC	KPMG
Samsung Electronics Tunisia S.A.R.L (SETN)	PwC	KPMG
Samsung Electronics Pakistan(Private) Ltd. (SEPAK)	PwC	KPMG
Samsung Electronics South Africa Production (pty) Ltd. (SSAP)	PwC	KPMG
Samsung Semiconductor Israel R&D Center, Ltd. (SIRC)	PwC	KPMG
Samsung Electronics Maghreb Arab (SEMAG)	PwC	KPMG
Samsung Electronics Latinoamerica(Zona Libre), S. A. (SELA)	PwC	KPMG
Samsung Electronica Colombia S.A. (SAMCOL)	PwC	KPMG
Samsung Electronics Chile Limitada (SECH)	PwC	KPMG
Samsung Electronics Peru S.A.C. (SEPR)	PwC	KPMG
Samsung Electronics Ukraine Company LLC (SEUC)	PwC	KPMG
Samsung R&D Institute Ukraine (SRUKR)	PwC	KPMG
Samsung Electronics Central Eurasia LLP (SECE)	PwC	KPMG
Samsung Electronics Iberia, S.A. (SESA)	E&Y	KPMG
Samsung Electronics Benelux B.V. (SEBN)	E&Y	KPMG
Samsung Electronics Portuguesa, Unipessoal, Lda. (SEP)	E&Y	KPMG
Samsung Electronics Philippines Corporation (SEPCO)	E&Y	KPMG
Samsung Electronics Levant Co.,Ltd. (SELV)	E&Y	KPMG
Samsung Electronics Caucasus Co. Ltd (SECC)	E&Y	KPMG
Laos Samsung Electronics Sole Co., Ltd (LSE)	KPP Co., Ltd	KPMG

3. Regarding Internal Control

[Audit opinion of Internal Control over Financial Reporting (ICFR)]

Fiscal Year	Group Auditor	Opinion	Remarks
Year ended Dec 31, 2023	Samjong KPMG	[Audit Opinion] The Company maintained, in all material respects, effective separate/consolidated internal control over financial reporting as of December 31, 2023, based on <i>Conceptual Framework for Designing and Operating Internal Control over Financial Reporting</i> .	Not applicable
Year ended Dec 31, 2022	Deloitte Anjin	[Audit Opinion] The Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on <i>Conceptual Framework for Designing and Operating Internal Control over Financial Reporting</i> .	Not applicable
Year ended Dec 31, 2021	Deloitte Anjin	[Audit Opinion] The Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on <i>Conceptual Framework for Designing and Operating Internal Control over Financial Reporting</i> .	Not applicable

VI. Corporate Governance

1. Board of Directors

A. Overview

The Board of Directors consisted of 11 directors, 5 of whom are Executive Directors (Jong-hee Han, Kye-hyun Kyung, Tae-moon Roh, Hark-kyu Park, and Jung-bae Lee) and 6 Independent Directors (Han-jo Kim, Sun-uk Kim, Jeong Kim, Jun-sung Kim, Eun-nyeong Heo, and Myung-hee Yoo). The Board has appointed Han-jo Kim as Chairman as he will be able to mediate the different opinions of Directors and is most qualified to manage Board activities. The roles of Board Chairman and CEO have been separated to enhance the Board's independence and transparency.

The Board has six committees: Management Committee, Audit Committee, Independent Director Recommendation Committee, Related Party Transactions Committee, Compensation Committee, and Sustainability Committee.

[As of December 31, 2023]

Classification	Composition	Members	Head	Role
Board of Directors	5 Executive Directors	Jong-hee Han, Kye-hyun Kyung, Tae-moon Roh, Hark-kyu Park, Jung-bae Lee	Han-jo Kim (Independent)	<ul style="list-style-type: none"> - Make resolutions on matters provided for by the relevant laws and regulations or the Articles of Incorporation, matters delegated by a general meeting of shareholders, as well as on important matters concerning basic policies and business execution. - Supervise management.
	6 Independent Directors	Han-jo Kim, Sun-uk Kim, Jeong Kim, Jun-sung Kim, Eun-nyeong Heo, Myung-hee Yoo		
Management Committee	5 Executive Directors	Jong-hee Han, Kye-hyun Kyung, Tae-moon Roh, Hark-kyu Park, Jung-bae Lee	Jong-hee Han (Executive)	<ul style="list-style-type: none"> - Deliberate and decide on matters related to finance, general management, and on matters specifically delegated by the Board.
Audit Committee	3 Independent Directors	Han-jo Kim, Sun-uk Kim, Jeong Kim	Han-jo Kim (Independent)	<ul style="list-style-type: none"> - Review and audit matters concerning management of the Company, including the Company's financial situation.
Independent Director Recommendation Committee	3 Independent Director	Sun-uk Kim, Eun-nyeong Heo, Myung-hee Yoo	Sun-uk Kim (Independent)	<ul style="list-style-type: none"> - Assess the independence, diversity, and ability of potential candidates for Independent Director positions. - Recommend candidates.
Related Party Transactions Committee	3 Independent Directors	Sun-uk Kim, Han-jo Kim, Jeong Kim	Sun-uk Kim (Independent)	<ul style="list-style-type: none"> - Voluntarily comply with fair transaction regulations to enhance corporate transparency.
Compensation Committee	3 Independent Directors	Jeong Kim, Han-jo Kim, Jun-sung Kim	Jeong Kim (Independent)	<ul style="list-style-type: none"> - Ensure the objectivity and transparency of the decision-making process for Director compensation.
Sustainability Committee	6 Independent Directors	Han-jo Kim, Sun-uk Kim, Jeong Kim, Jun-sung Kim, Eun-nyeong Heo, Myung-hee Yoo	Han-jo Kim (Independent)	<ul style="list-style-type: none"> - Promote sustainability management in ESG areas and enhance shareholder value.

☞ For more information on the appointment of each Board member, please refer to 『I. Corporate Overview-2. Company history』

Mar 16, 2022: Independent Director Han-jo Kim was appointed as Board Chair, Independent Director Jun-sung Kim as member of the Compensation Committee and Sustainability Committee, and all the Executive Directors as members of the Management Committee at the Board meeting.

Jul 28, 2022: Independent Director Sun-uk Kim was appointed as a member of the Independent Director Recommendation Committee and Independent Director Jeong Kim as a member of the Compensation Committee at the Board meeting.

Nov 3, 2022: Eun-nyeong Heo and Myung-hee Yoo were newly appointed as Independent Directors at the EGM and appointed as members of the Sustainability Committee at the Board meeting held on the same date.

Mar 15, 2023: Executive Director Jong-hee Han was appointed as a member of the Management Committee, and Independent Directors Eun-nyeong Heo and Myung-hee Yoo were appointed as members of the Independent Director Recommendation Committee at the Board meeting.

Jan 29, 2024: Independent Director Sun-uk Kim was appointed as the Head of Independent Director Recommendation Committee

The number of Independent Directors and changes in the number are shown below.

Number of Directors	Number of Independent Directors	Changes of Independent Directors		
		Appointed	Dismissed	Resigned
11	6	-	-	-

B. Agendas considered and voting results

Date	Agenda	Results	Executive Directors (attendance)					Independent Directors (attendance)						
			Jong-hee Han (100%)	Kye-hyun Kyung (75%)	Tae-moon Roh (88%)	Hark-kyu Park (100%)	Jung-bae Lee (100%)	Han-jo Kim (100%)	Sun-uk Kim (100%)	Jeong Kim (100%)	Jun-sung Kim (100%)	Eun-nyeong Heo (100%)	Myung-hee Yoo (100%)	
Jan 31	① Approval of FY22 financial statements and full-year business report	Approved	For	For	Absent	For	For	For	For	For	For	For	For	For
	② Lease agreement(lessee) with Samsung Display	Approved	For	For	Absent	For	For	For	For	For	For	For	For	For
	※ Reported Items 1) Report on FY22 internal accounting management system activities 2) Report on evaluation of FY22 internal accounting management system activities													
Feb 14	① Financial transaction with Samsung Display	Approved	For	Absent	For	For	For	For	For	For	For	For	For	For
	② Decision to convene the 54th AMG	Approved	For	Absent	For	For	For	For	For	For	For	For	For	For
	③ Decision on the 54th AGM agenda items	Approved	For	Absent	For	For	For	For	For	For	For	For	For	For
	※ Reported Items 1) FY22 annual audit report 2) FY22 full-year business report 3) Report on transaction with affiliate company 4) Report on FY22 internal accounting management system activities													
	※ Agenda item 1: Approval of FY22 financial statements, including balance sheet, income statement, and the statement of appropriation of retained earnings, etc.													
	※ Agenda item 2: Appointment of Executive Directors of Jong-hee Han													
	※ Agenda item 3: Approval of remuneration limit for Directors													
④ Approval of 2023 social contribution matching fund	Approved	For	Absent	For	For	For	For	For	For	For	For	For	For	
⑤ Donation to Chung-nam Samsung Institute	Approved	For	Absent	For	For	For	For	For	For	For	For	For	For	
⑥ Purchase of product liability insurance	Approved	For	Absent	For	For	For	For	For	For	For	For	For	For	

Date	Agenda	Results	Executive Directors (attendance)					Independent Directors (attendance)					
			Jong-hee Han (100%)	Kye-hyun Kyung (75%)	Tae-moon Roh (88%)	Hark-kyu Park (100%)	Jung-bae Lee (100%)	Han-jo Kim (100%)	Sun-uk Kim (100%)	Jeong Kim (100%)	Jun-sung Kim (100%)	Eun-nyeong Heo (100%)	Myung-hee Yoo (100%)
	⑦ Establishment of plans on health and safety for 2023	Approved	For	Absent	For	For	For	For	For	For	For	For	For
Mar 15	① Appointment of CEO	Approved	For	Absent	For	For	For	For	For	For	For	For	For
	② Appointment of Board committee members	Approved	For	Absent	For	For	For	For	For	For	For	For	For
	③ Setting remuneration of Directors	Approved	For	Absent	For	For	For	For	For	For	For	For	For
	④ Appointment of SCC member	Approved	For	Absent	For	For	For	For	For	For	For	For	For
Apr 27	① Approval of 1Q23 interim business report and quarterly dividend	Approved	For	For	For	For	For	For	For	For	For	For	For
	② Promotion of supporting a smart factory project	Approved	For	For	For	For	For	For	For	For	For	For	For
	③ Donation to incentive fund for DS Division's suppliers	Approved	For	For	For	For	For	For	For	For	For	For	For
Jul 27	① Approval of 2023 half-year business report and quarterly dividend for the second quarter	Approved	For	For	For	For	For	For	For	For	For	For	For
	② Charitable contributions	Approved	For	For	For	For	For	For	For	For	For	For	For
	③ Purchase of mobile device insurance	Approved	For	For	For	For	For	For	For	For	For	For	For
Aug 18	① Purchase of package insurance policy for domestic operations	Approved	For	For	For	For	For	For	For	For	For	For	For
	※ Reported Items												
	① Report on the request to join the Federation of Korean Industries												
Oct 31	① Approval of 3Q23 interim business report and quarterly dividend	Approved	For	For	For	For	For	For	For	For	For	For	For
	② Changes to the real estate lease agreement with Samsung Display	Approved	For	For	For	For	For	For	For	For	For	For	For
	③ License grant agreement with Samsung Display	Approved	For	For	For	For	For	For	For	For	For	For	For
	④ Purchase agreement for Green 2-dong with Samsung Display	Approved	For	For	For	For	For	For	For	For	For	For	For
	※ Reported Items												
	① Report on the CEO candidate pool												
Nov 30	① Revision of regulation on the Board of Directors and Committee	Approved	For	For	For	For	For	For	For	For	For	For	For
	② Approval of transaction with affiliate company	Approved	For	For	For	For	For	For	For	For	For	For	For
	③ Payment of retirement pension plan	Approved	For	For	For	For	For	For	For	For	For	For	For
	④ Approval of business plan for 2024	Approved	For	For	For	For	For	For	For	For	For	For	For
	⑤ Contribution to Community Chest of Korea's annual fundraising campaign for 2024	Approved	For	For	For	For	For	For	For	For	For	For	For
	⑥ Contribution to UNDP sourced from Samsung Global Goals	Approved	For	For	For	For	For	For	For	For	For	For	For
	※ Reported Items												

Date	Agenda	Results	Executive Directors (attendance)					Independent Directors (attendance)					
			Jong-hee Han (100%)	Kye-hyun Kyung (75%)	Tae-moon Roh (88%)	Hark-kyu Park (100%)	Jung-bae Lee (100%)	Han-jo Kim (100%)	Sun-uk Kim (100%)	Jeong Kim (100%)	Jun-sung Kim (100%)	Eun-nyeong Heo (100%)	Myung-hee Yoo (100%)
	① Report on the evaluation of the effectiveness of the compliance control system ② Report on results of the compliance review ③ Report on measures to develop a compliance culture												

C. Committees

(1) Composition of Board Committees

[As of December 31, 2023]

Committee	Composition	Members	Responsibilities and authorities	Note
Management	5 Executive Directors	Jong-hee Han (head), Kye-hyun Kyung, Tae-moon Roh, Hark-kyu Park, Jung-bae Lee	See below	Appointment of Executive Director Jong-hee Han as the Head (April 27, 2023)
Related Party Transactions	3 Independent Directors	Sun-uk Kim (head), Han-jo Kim, Jeong Kim		Appointment of Independent Director Sun-uk Kim as the Head (April 27, 2021)
Compensation	3 Independent Directors	Jeong Kim(head), Han-jo Kim, Jun-sung Kim		Appointment of Independent Director Jeong Kim as the Head (January 27, 2023)
Sustainability	6 Independent Directors	Han-jo Kim (head), Sun-uk Kim, Jeong Kim, Jun-sung Kim, Eun-nyeong Heo, Myung-hee Yoo		Appointment of Independent Director Han-jo Kim as the Head (April 28, 2022)

The Audit Committee and Independent Director Recommendation Committee was excluded according to Corporate Disclosure Guidelines.

For each committee under the Board of Directors, including the Management Committee, the head is appointed by the committee members.

(The Management Committee)

Responsibilities: The Management Committee deliberates and decides on matters specified by Board regulations and resolutions or specifically delegated by the Board. The composition and operation of the management committee are determined by the Board.

- **Authorities:**

(A) General management

1. Annual or mid to long-term management policy and strategy
2. Key management strategy

3. Business planning and restructuring
4. Establishment, relocation, and withdrawal of overseas branch and corporation
5. Initiating cooperation such as strategic partnership with foreign companies
6. Acquisition or disposal of domestic and overseas subsidiaries
(provided that the value of transaction exceeds 0.1% of total equity)
7. Other major management issues
8. Establishment, relocation, and withdrawal of branches and operations
9. Appointment or dismissal of supervisors
10. Suspension or shutdown of production over 5% of the total production in the recent year
11. Licensing agreements and technology transfer, partnership in regards to technology of over 0.5% of the total equity
12. Acquisitions and transfers of patents related to new material and new technology of over 0.5% of the total equity
13. Collection and destruction of products corresponding to over 5% of the total sales in the recent business year
14. Contracting for over 5% of the total sales in the recent business year
15. Contracting or canceling of single sales agency and suppliers over 5% of the total sales in the recent business year
16. Establishment of basic principles of organization management
17. Decision making on basic principles and any changes related to wages, bonus, and fringe benefits
18. Appointments, dismissals and changes of transfer agent
19. Closing of shareholder register and setting reference date
20. Establishment of corporate guidelines for business and management related activities

(B) Matters related to Finance

1. Acquisitions or disposals of equity investments with a value no less than 0.1% and less than 2.5% of the total equity
2. Direct overseas investments with a value no less than 0.1% and less than 2.5% of the total equity
3. New debt guarantee (excluding extension of period) or collateral issuance with a value no less than 0.1% and less than 2.5% of the total equity
 - A. Collateral: Only in the case of providing collateral for others
 - B. Guarantee: Excludes performance guarantee (e.g., bid, contract, defect, difference guarantee) and tax payment guarantee
4. New credit agreement contract (excluding extension of period) with a value no less than 0.1% and less than 5% of the total equity
5. Approval of related party transactions:
Related party transactions with affiliates involving cash (loans and payments), equity (stocks and bonds) or assets (such as real estate and intangible property rights) with a value no less than KRW 3 billion as defined in the Monopoly Regulation and Fair Trade Act
※ Excluding cases where existing contracts are renewed without significant change.
6. Issuance of corporate bonds
7. Acquisition and disposal of real estate with a value of over 0.1% of the total equity, provided that the transaction is with a third party
8. Any matters that the CEO deems necessary and important for the business (e.g., capex)

(C) All other matters except for those delegated to the Board and other committees in accordance with Board regulations

(Related Party Transactions Committee)

- Responsibilities: Improve management transparency through the establishment of a voluntary compliance system
- Authorities:
 1. Right to receive reports on related party transactions:
The Committee can request reports on related party transactions with affiliates
※ According to the Monopoly Regulation and Fair Trade Act, the Related Party Transactions committee is permitted to conduct preliminary reviews and approves on related party transactions and other transactions that

are deemed as significant

2. Right to order ex officio investigation of related party transactions
3. Right to propose corrective measures for related party transactions

(Compensation Committee)

- Responsibilities: Provide transparent and objective decision making process related to remuneration of directors
- Authorities:
 1. Propose remuneration limit of directors at AGM
 2. Establish the director remuneration system
 3. Other matters delegated by the Board

(Sustainability Committee)

- Responsibilities: Promote sustainability management in ESG areas and enhance shareholder value
- Authorities:
 1. Matters related to corporate sustainability management
 - Key strategies and policies on sustainability management
 - Report on key activities for sustainability management including environment, society, and governance
 - Plans for publishing the Company's Sustainability Report
 2. Matters related to shareholder value enhancement
 - Preliminary review on shareholder return policies
 - Report on key issues related to shareholder rights and interests
 - Other matters that may significantly impact sustainability management and shareholder value that are deemed necessary for the Committee to discuss
 3. Establishment, composition, operation of organizations under the committee including research groups, councils, etc.
 4. Other matters delegated by the Board

(2) Committee Activities

□ The Management Committee (2023)

Date	Agenda	Voting results	Director (attendance)				
			Jong-hee Han (100%)	Kye-hyun Kyung (100%)	Tae-moon Roh (67%)	Hark-kyu Park (100%)	Jung-bae Lee (100%)
Jan 19	① Leasing agreement	Approved	For	For	For	For	For
	② Executive OPI change	Approved	For	For	For	For	For
Apr 27	① Appointment of the head of the Management Committee	Approved	For	For	For	For	For
	② Establishment of overseas subsidiary	Approved	For	For	For	For	For
	③ Liquidation of an overseas(China) subsidiary	Approved	For	For	For	For	For
	④ Liquidation of an overseas(Europe) subsidiary	Approved	For	For	For	For	For
May 15	① Investment in Memory Business	Approved	For	For	Absent	For	For
	② Acquisition of an overseas subsidiary	Approved	For	For	Absent	For	For
Aug 11	① Investment in Memory in 2024 for EUV facilities	Approved	For	For	For	For	For
	② Investment in Foundry in 2024 and 2026 for EUV facilities	Approved	For	For	For	For	For
	③ Investment in Foundry for 3nm capacity expansion at Hwasung facility	Approved	For	For	For	For	For
	④ Investment in infrastructure for DRAM development at Pyeongtaek Semiconductor R&D Center	Approved	For	For	For	For	For
	⑤ Investment in EUV facilities in 2026 at Semiconductor R&D Center	Approved	For	For	For	For	For
Oct 12	① Investment in Foundry for 3nm capacity expansion at Hwasung facility	Approved	For	For	For	For	For
	② Investment in construction/facilities to address advanced production package production in 2024	Approved	For	For	For	For	For
Nov 21	① Construction of new buildings (offices 3-dong/6-dong) at Pyeongtaek sites	Approved	For	For	For	For	For
Nov 24	① Finishing work for Foundry clean room at Pyeongtaek P4 Ha-dong	Approved	For	For	For	For	For
	② Construction of NRD K Ph 1 and Ph 2 in Giheung Semiconductor R&D Center	Approved	For	For	For	For	For
	③ Investment in Memory fab in 3Q24	Approved	For	For	For	For	For
	④ Expansion of Supercomm at Super Computing Center and investment in infrastructure	Approved	For	For	For	For	For
Dec 21	① EMADA with Google	Approved	For	Absent	For	For	For
	② Purchase of mobile device insurance	Approved	For	Absent	For	For	For

□ **The Related Party Transactions Committee (2023)**

Date	Agenda	Voting results	Directors (attendance)		
			Sun-uk Kim (100%)	Han-jo Kim (100%)	Jeong Kim (100%)
Jan 27	① Prior review on large-scale related party transactions 1) Lease agreement (lessee) with Samsung Display	-	-	-	-
	② Report on 4Q22 related party transactions	-	-	-	-
Feb 10	① Prior review on large-scale related party transactions 1) Purchase of product liability insurance 2) Financial transaction with Samsung Display	-	-	-	-
	② Report on 1Q23 related party transactions	-	-	-	-
Apr 25	① Report on 1Q23 related party transactions	-	-	-	-
Jul 25	① Prior review on large-scale related party transactions 1) Charitable contributions 2) Purchase of mobile device insurance	-	-	-	-
	② Report on 2Q23 related party transactions	-	-	-	-
Aug 18	① Prior review on large-scale related party transactions 1) Purchase of package insurance policy for domestic operations	-	-	-	-
Oct 27	① Prior review on large-scale related party transactions 1) Changes to the real estate lease agreement with Samsung Display 2) License grant agreement with Samsung Display 3) Purchase agreement for Green 2-dong with Samsung Display	-	-	-	-
	② Report on 3Q23 related party transactions	-	-	-	-
Nov 28	① Prior review on large-scale related party transactions 1) Payment of retirement pension plan 2) Approval of 2024 large-scale product and service transactions	-	-	-	-

□ The Compensation Committee (2023)

Date	Agenda	Voting results	Directors (attendance)		
			Jeong Kim (100%)	Han-jo Kim (100%)	Jun-sung Kim (100%)
Jan 27	① Appointment of the head of the Compensation Committee	Approved	For	For	For
	② Review on 2023 fixed annual salary for each Executive Director	Approved	For	For	For
	③ Review on 2023 remuneration limit for Directors	Approved	For	For	For

Jan 27, 2023: Independent Director Jeong Kim was appointed as the Head of Compensation Committee

□ The Sustainability Committee (2023)

Date	Agenda	Voting results	Directors (attendance)					
			Han-jo Kim (100%)	Sun-uk Kim (100%)	Jeong Kim (100%)	Jun-sung Kim (100%)	Eun-nyeong Heo (100%)	Myung-hee Yoo (100%)
Jan 31	※ Reporting Item 1) Updates of IR activities	-	-	-	-	-	-	-
Apr 27	※ Reporting Item 1) Updates of IR activities	-	-	-	-	-	-	-
	2) Current status and response; ESG information disclosure request (draft)	-	-	-	-	-	-	-
	3) Current status and response: EU supply chain due diligence directive	-	-	-	-	-	-	-
Jul 25	※ Reporting Item 1) Updates of IR activities	-	-	-	-	-	-	-
	2) Updates on progress of The Universe	-	-	-	-	-	-	-
	3) Updates on progress of the Company's accessibility	-	-	-	-	-	-	-
Oct 27	※ Reporting Item 1) Updates of IR activities	-	-	-	-	-	-	-
	2) Key achievements of the New Environmental Strategy during its first year of implementation	-	-	-	-	-	-	-

D. Director independence

(1) Appointment of Directors

The Board nominates Executive Director candidates and the Independent Director Recommendation Committee nominates Independent Director candidates. Directors are then appointed at the general meeting.

A candidate for Director needs to meet the requirements of relevant laws and the Articles of Incorporation. Executive Directors are recommended at a Board meeting based on his or her expertise and leadership from among a list of candidates that is continually updated. Independent Directors candidates are recommended by the Independent Director Recommendation Committee, and the Board reviews and finalizes the choices as agenda items at an AGM. Independent Directors should have no material interests with the Company and its major shareholder, possess knowledge and experience in finance, law, IT, ESG, investment, environment, energy, and international trade, etc., and be able to fulfill the roles and responsibilities of supervising management from an independent position.

Please refer to 『VIII. Executives and Employees』 for more information about the career of each Director.

The Board submits shareholders' proposal for appointment of Directors at the general shareholder meeting as a separate agenda if the proposal satisfies related laws and regulations.

The composition of the Board of Directors, as appointed by shareholders, is as follows:

[As of December 31, 2023]

Position	Name	Term (No. of reappointments)	Reasons for appointment	Nominator	Responsibility	Transaction with the Company	Relationship with the Company's major shareholders
Executive Director (CEO)	Jong-hee Han	Mar 2020 – Mar 2026 (1)	Director Jong-hee Han is an expert in display R&D and played a leading role in continuously achieving the top position in the global TV market. As the Head of the DX Division, he will contribute to further solidifying leadership amid intensifying competition by using his outstanding business capabilities.	The Board	Overall management of the DX Division	N/A	Related party
Executive Director (CEO)	Kye-hyun Kyung	Mar 2022 – Mar 2025 (None)	As the Head of the DS Division, Director Kye-hyun Kyung has developed technologies in all three major memory products—DRAM, flash, and solution. He was judged to be the most qualified person to improve organization's fundamentals through communicative and empathetic leadership as well as to firmly solidify our position as a leader in the global semiconductor market.	The Board	Overall management of the DS Division	N/A	Related party

Position	Name	Term (No. of reappointments)	Reasons for appointment	Nominator	Responsibility	Transaction with the Company	Relationship with the Company's major shareholders
Executive Director	Tae-moon Roh	Mar 2022 – Mar 2025 (None)	Director Tae-moon Roh has served in various core positions in the MX Business, and in 2021, delivered record results—the highest since 2014—achieving KRW 104 trillion in revenue through products such as S21 and foldables. He is expected to contribute significantly to enhancing corporate fundamentals, such as improving profitability and solidifying business fundamentals.	The Board	Overall management of the MX Business	N/A	Related party
Executive Director	Hark-kyu Park	Mar 2022 – Mar 2025 (None)	Director Hark-kyu Park has held numerous key positions in core businesses and proved his risk management capabilities. Furthermore, he has successfully led business innovations with a broad perspective. As the Head of Corporate Management Office of the DX Division, his responsibilities include overall corporate support, management analysis, and even risk management to deliver business achievements, and he contributes significantly to coordinating management issues across the entire Company.	The Board	Overall management	N/A	Related party

Position	Name	Term (No. of reappointments)	Reasons for appointment	Nominator	Responsibility	Transaction with the Company	Relationship with the Company's major shareholders
Executive Director	Jung-bae Lee	Mar 2022 – Mar 2025 (None)	Director Jung-bae Lee is an expert who has the experience of serving in key positions, including development, quality, and strategy. He oversaw the Company achievement of being the top firm in terms of DRAM revenue for a 30th consecutive year by securing product competitiveness, and he spearheaded the efforts to regain the title of No.1 global semiconductor revenue in 2021, demonstrating his extensive experience and outstanding capabilities in DS Division businesses.	The Board	Overall management of the Memory Business	N/A	Related party
Independent Director	Han-jo Kim	Mar 2019 – Mar 2025 (1)	Director Han-jo Kim has built expertise in finance and business management through his experience as a President of Korea Exchange Bank and now serves as the chairman of a social contribution foundation. He will contribute to the Company by providing valuable insight on overall business issues and by utilizing expertise in finance, co-growth, etc.	Independent Director Recommendation Committee	Overall management	N/A	N/A
Independent Director	Sun-uk Kim	Mar 2018 – Mar 2024 (1)	Director Sun-uk Kim is a legal expert and has experience as a professor at a school of law and the Legislation Minister. She can present a new perspective to the Board based on objective and juridical reasoning.	Independent Director Recommendation Committee	Overall management	N/A	N/A

Position	Name	Term (No. of reappointments)	Reasons for appointment	Nominator	Responsibility	Transaction with the Company	Relationship with the Company's major shareholders
Independent Director	Jeong Kim	Mar 2018 – Mar 2024 (1)	Director Jeong Kim is an IT expert and an entrepreneur. He will contribute to the Board's strategic decisions by utilizing his expertise, wide network, and business capability.	Independent Director Recommendation Committee	Overall management	N/A	N/A
Independent Director	Jun-sung Kim	Mar 2022 – Mar 2025 (None)	Director Jun-sung Kim is an expert in the global economy and investment who has experience analyzing and investing in stock markets in advanced economies. He will effectively represent foreign markets and investors and contribute significantly to establishing investment strategies in line with current trends via global networking.	Independent Director Recommendation Committee	Overall management	N/A	N/A
Independent Director	Eun-nyeong Heo	Nov 2022 – Nov 2025 (None)	Director Eun-nyeong Heo is an expert in energy, resources, and the environment and, in particular, how they relate to economy and policy. As a renowned international scholar, he will contribute to strengthening the Company's management in the relevant fields and provide practical advice to the Board.	Independent Director Recommendation Committee	Overall management	N/A	N/A
Independent Director	Myung-hee Yoo	Nov 2022 – Nov 2025 (None)	Director Myung-hee Yoo is an expert in international trade who served as Korea's Trade Minister. Backed by her diplomatic communication skills and global network, she will enhance communication with the Company's key investors and stakeholders.	Independent Director Recommendation Committee	Overall management	N/A	N/A

Relationship with Company's major shareholders is in accordance with Article 542-8 of the Commercial Act.

(2) Independent Director Recommendation Committee

The Independent Director Recommendation Committee assesses the independence and ability of potential candidates and recommends selected candidates to be appointed at the AGM. As of the reporting date (December 31, 2023), The Committee currently consists of 3 Independent Directors (Sun-uk Kim, Eun-nyeong Heo, and Myung-hee Yoo), meeting the requirement of having Independent Directors comprise the majority of Committee members, as stipulated in Article 542-8, Paragraph 4 of the Commercial Act.

The Independent Director Recommendation Committee conducts a thorough evaluation for the candidates (including those recommended by Independent Directors and external organizations) of factors including Board composition, the professional background of the outgoing Independent Director, and committee engagements within the Board. Based on this assessment, the committee selects the ultimate candidate to be recommended as a member of the Independent Director.

Date	Agenda	Voting results	Directors (attendance)		
			Sun-uk Kim (-)	Eun-nyeong Heo(-)	Myung-hee Yoo(-)
-	-	-	-	-	-

Jul 28, 2022: Independent Director Sun-uk Kim was appointed as an Independent Director Recommendation Committee member at the Board meeting
Mar 15, 2023: Eun-nyeong Heo and Myung-hee Yoo were appointed as Independent Director Recommendation Committee members at the AGM.

Jan 29, 2024: Independent Director Sun-uk Kim was appointed as the Head of the Independent Director Recommendation Committee; and February 19 was set as the date for recommending Independent Directors.

Feb 19 2024: The Independent Director Recommendation Committee deliberated and decided on recommending one candidate as an Independent Director for the Audit Committee member and another candidate as an Independent Director.

(3) Expertise of Independent Directors

1) Support team for Independent Directors

[As of December 31, 2023]

Team	Number of employees	Position (total years served/ years in support team)	Key activities
Board of Directors Office	4	Corporate EVP: 1 person (18 years and 11 months / 1 year 1 month) Principal Professional: 2 person (18 years and 11 months / 5 year and 8 months) Professional: 1 person (6 years and 11 months / 10 months)	<ul style="list-style-type: none"> Support operation of annual shareholders' meeting, Board meetings, and Committee meetings Support education for Independent Directors and their activities Establish database on Director candidates Provide information regarding the agenda to each Director Administrative work for meetings Record meeting agendas for the Board and committee meetings

2) Education programs to provide updates on key management issues for Independent Directors

① Inspection of domestic and overseas business sites

Date	Organizer	Participants	Reasons for absence	Education contents
Apr 28, 2022	MX Business	Han-jo Kim, Sun-uk Kim, Byung-gook Park, Jeong Kim, Jun-sung Kim	N/A	On-site visit to check the current management status of businesses
Jul 28, 2022	Memory Business	Han-jo Kim, Sun-uk Kim, Jeong Kim, Jun-sung Kim	N/A	On-site visit to check the current management status of businesses
Aug, 2022	SEUK, SRUK, SEF, SENA, SEH	Han-jo Kim, Sun-uk Kim, Jeong Kim	COVID-19 (Jun-sung Kim)	Report on current management status and inquiries on key issues Visits to TV production lines and business sites, etc.
Nov 30, 2022	Foundry Business	Han-jo Kim, Sun-uk Kim, Jeong Kim, Jun-sung Kim, Eun-nyeong Heo, Myung-hee Yoo	N/A	On-site visit to check the current management status of businesses
Jan 31, 2023	Design Management Center	Han-jo Kim, Sun-uk Kim, Jeong Kim, Jun-sung Kim, Eun-nyeong Heo, Myung-hee Yoo	N/A	On-site visit to check the current status of business organizations
Apr 27, 2023	Digital Appliances Business Unit	Han-jo Kim, Sun-uk Kim, Jeong Kim, Eun-nyeong Heo, Myung-hee Yoo	Concurrent Business (Jun-sung Kim)	On-site visit(Gwangju) to check the current management status of businesses
Jul 27, 2023	S.LSI Business	Han-jo Kim, Sun-uk Kim, Jeong Kim, Jun-sung Kim, Eun-nyeong Heo, Myung-hee Yoo	N/A	Report on current management status of businesses and medium-to-long term business strategies, etc.
Aug, 2023	SEDA, SECH, SELA, SEM	Han-jo Kim, Sun-uk Kim, Jeong Kim, Eun-nyeong Heo, Myung-hee Yoo	Concurrent Business (Jun-sung Kim)	Report on current management status, inquiries on key issues, and assessments of internal control activities Visits to production lines and marketing sites, and meetings with employees
Oct 31, 2023	VD Business	Han-jo Kim, Sun-uk Kim, Jeong Kim, Eun-nyeong Heo, Myung-hee Yoo	Concurrent Business (Jun-sung Kim)	Report on current management status of businesses and business strategies, etc.

We provide educational materials to Independent Directors if their current occupation makes it difficult for them to participate in on-site programs prepared by the Company such as visits to Business Units or subsidiaries and training sessions.

② Orientation for newly appointed Independent Directors

Date	Organizer	Participants	Reasons for absence	Education contents
Apr 27, 2022	Corporate Management Office	Jun-sung Kim	N/A	Key issues regarding Board activities and management
Nov 28, 2022	Corporate Management Office	Eun-nyeong Heo, Myung-hee Yoo	N/A	Key issues regarding Board activities and management

New Independent Directors are subject to the orientation.

③ Orientation for Independent Directors

Date	Organizer	Participants	Reasons for absence	Education contents
Mar 15, 2023	Samsung Human Resources Development Center	Han-jo Kim, Sun-uk Kim, Jeong Kim, Jun-sung Kim, Eun-nyeong Heo, Myung-hee Yoo	N/A	Key issues regarding management, including the company history and management philosophy
Apr 25, 2023	Global Marketing Division Global EHS Center	Han-jo Kim, Sun-uk Kim, Jeong Kim, Eun-nyeong Heo, Myung-hee Yoo	Concurrent Business (Jun-sung Kim)	Understanding marketing activities Understanding EHS management status and environment management
Oct 27, 2023	CSR Software academy for youth Creative Development Center	Han-jo Kim, Sun-uk Kim, Jeong Kim, Eun-nyeong Heo, Myung-hee Yoo	Concurrent Business (Jun-sung Kim)	Understanding CSR activities including Samsung Stepping Stone of Hope Introduce SSAFY program Introduce C-Lab and its activities

2. Audit System

A. Profiles of Audit Committee members

As of December 31, 2023, SEC operates an Audit Committee consisting of three Independent Directors. Director Han-jo Kim qualifies as an expert in finance in accordance with relevant regulations.

Name	Major experience	Accounting/financial expertise ¹⁾	
		Classification	Relevant experience
Han-jo Kim	<ul style="list-style-type: none"> • 2021–present: CEO/Rep Director, Hana Nanum Foundation • 2019–2021: CEO/Rep Director, Hana Foundation • 2015–2019: CEO/Rep Director, Hana Nanum Foundation • 2015–2016: Vice Chairman, Hana Financial Group • 2014–2015: President, Korea Exchange Bank • 2013–2014: President, KEB Capital Inc. 	Type 4 ²⁾	<ul style="list-style-type: none"> • 2015–2016: Vice Chairman, Hana Financial Group • 2014–2015: President, Korea Exchange Bank • 2013–2014: President, KEB Capital • 2012–2013: Head of Corporate Business Group, Korea Exchange Bank • 1999–2002, 2004–2005: Head of Branch, Korea Exchange Bank
Sun-uk Kim	<ul style="list-style-type: none"> • 2018–present: Professor Emeritus, School of Law, Ewha Womans University • 1995–2018: Professor, Ewha Law School, Ewha Womans University • 2010–2014: President, Ewha Womans University • 2005–2007: Minister of Government Legislation 	–	–
Jeong Kim	<ul style="list-style-type: none"> • 2013-present: Co-Founder and Executive Chairman, Kiswe Mobile • 2011-2013: Chief Strategy Officer, Alcatel-Lucent • 2005-2013: President, Alcatel-Lucent Bell Labs • 2002-2013: Professor of Electrical and Computer Engineering & Mechanical Engineering, University of Maryland 	–	–

Name	Major experience	Accounting/financial expertise ¹⁾	
		Classification	Relevant experience
	<ul style="list-style-type: none"> • 1998-2001: President, Lucent Technologies • 1992-1998: Founder, Chairman & CEO, Yurie Systems 		

1) Defined in Public Disclosure Guideline and Article 37-2 of the Enforcement Decree of the Commercial Act

2) Experience at financial, government, securities-related organizations in charge of accounting or finance or in charge of supervision over accounting or finance for an aggregate of at least five years

B. Audit Committee independence

Pursuant to related laws and the Articles of Incorporation, SEC has prepared internal audit regulations which encompass composition, operation, authority, and responsibility of the Audit Committees to carry out audit related activities.

Among the members of Audit Committee, Sun-uk Kim was recommended by the Independent Director Recommendation Committee as Independent Director for Audit Committee Member and subsequently confirmed as a candidate for the Audit Committee member by the Board; Independent Directors Han-jo Kim and Jeong Kim were recommended by the Board; and all Directors were appointed to the Audit Committee members through resolutions at the AGM. The recommendations were based on expertise and experience as a financial expert (Han-jo Kim), legal expert (Sun-uk Kim), and global management expert (Jeong Kim). Samsung believed the candidates would faithfully fulfill activities as Audit Committee members independently from the Company and the Company's major or key shareholders.

Requirements	Requirement status	Applicable acts, etc.
The audit committee shall consist of at least three directors.	Satisfied: the committee consists of three Directors	Article 415-2 (2) of the Commercial Act, Article 2 of the Company's Audit Committee Regulation
The ratio of independent directors shall exceed two thirds of the total number of members.	Satisfied: all members are independent directors)	
At least one member of the committee shall be an accounting or financing expert.	Satisfied: Independent Director Han-jo Kim	Article 542-11 (2) of the Commercial Act, Article 3 of the Company's Audit Committee Regulation
The representative of the committee shall be an Independent Director.	Satisfied: Independent Director Han-jo Kim	
Other conditions (related party of the major shareholder, etc.)	Satisfied (n/a)	Article 542-11 (3) of the Commercial Act

[As of December 31, 2023]

Name	Term (No. of reappointments)	Reasons for appointment	Nominator	Relationship with the Company	Relationship with the Company's major shareholders	Concurrent positions
Han-jo Kim	Mar 2019– Mar 2025 (1)	As an expert in finance with broad experience and expertise, he will offer impartial judgement on overall management activities while carrying out his duties.	Board of Directors	N/A	N/A	-
Sun-uk Kim	Mar 2018– Mar 2024 (1)	Based on the legal expertise and experience running organizations in areas including administration, finance, international affairs, etc., she can carry out the duties in an aboveboard manner with strict standards.	Independent Director Recommendation Committee	N/A	N/A	-
Jeong Kim	Mar 2022– Mar 2024 (N/A)	As a global business leader with the experience of operating a number of companies transparently and fairly, he will offer independent and objective perspective while carrying out his duties	Board of Directors	N/A	N/A	Chairman of Kiswe Mobile (2013- present)

Relationship with the Company and Company's major shareholders is in accordance with Article 542-8 of the Commercial Act.

The Audit Committee reviews accounting documents including financial statements and audit process related documents presented by the external auditor, and if needed, requests the external auditor to perform additional reviews on accounting books and records. To ensure the reliability of accounting related disclosures, the audit committee receives and reviews a report on internal accounting control systems prepared by internal accounting managers. In addition, the Committee attends the Board meetings and other significant meetings. The Committee receives reports on deliberations of the Management Committee and on business performance from Directors and requests additional reviews and supplementation of data as needed.

C. Major activities of the Audit Committee (2023)

Date	Agenda	Voting results	Directors (attendance)		
			Han-jo Kim(100%)	Sun-uk Kim(100%)	Jeong Kim(100%)
Jan 27	- Report on 2022 internal accounting management system activities	-	-	-	-
	- Report on evaluation of 2022 internal accounting management system activities	-	-	-	-
	- Communication between external auditor and audit committee	-	-	-	-
	- Report on 2022 financial statement and business report	-	-	-	-
	- Report on 4Q22 non-audit activities	-	-	-	-
	- Report on 4Q22 external contributions	-	-	-	-
	- Report on 2022 audit activities	-	-	-	-
Feb 10	- Review of the 54th AGM agenda	-	-	-	-
	- Report on activities of internal compliance system in 2022	-	-	-	-
Apr 25	- Communication between external auditor and audit committee	-	-	-	-
	- Report on 2022 audit activities	-	-	-	-
	- Report on 1Q23 interim business report	-	-	-	-
	- Report on 1Q23 non-audit activities	-	-	-	-
	- Report on plans for reviewing 2023 internal accounting management system activities	-	-	-	-
	- Report on 1Q23 external contributions	-	-	-	-
	- Report on plans for evaluating 2023 internal accounting management system activities	-	-	-	-
Jul 25	- Communication between external auditor and Audit Committee	-	-	-	-
	- Report on 2023 half-year business report	-	-	-	-
	- Report on 2Q23 non-audit activities	-	-	-	-
	- Interim report on 2023 internal accounting management system activities	-	-	-	-
	- Report on 2Q23 external contributions	-	-	-	-
	- Report on 1H23 audit activities	-	-	-	-
	- Report on evaluation of 2023 internal accounting management system and the establishment of operational regulations	Approved	-	-	-
Oct 27	- Communication between external auditor and audit committee	-	-	-	-
	- Report on 3Q23 interim business report	-	-	-	-
	- Report on 3Q23 non-audit activities	-	-	-	-
	- Report on 3Q23 external contributions	-	-	-	-

※ The external auditor reported that it did not perform non-audit services subject to approval by the Audit Committee, which was confirmed by the Audit Committee. Audit Committee made final confirmation through internal discussion that non-audit services subject to the Committee's approval had not been performed.

D. Education programs for the Audit Committee

In accordance with the working guide for internal accounting management system, we are conducting additional training to ensure the expertise of the Audit Committee. Organized by external experts, finance team, and audit team, education on changes to internal control, internal accounting management system is provided more than once a year.

E. Previous education sessions

Date	Organizer	Participants	Reasons for absence	Education contents
Jul 27, 2021	External experts	Jae-wan Bahk Sun-uk Kim Han-jo Kim	N/A	Introduction of consolidated internal accounting control system
May 25, 2022	Corporate Finance & Accounting Team, External experts	Jeong Kim	N/A	Purpose of internal accounting control system and roles of Audit Committee
Jul 26, 2022	External experts	Han-jo Kim Sun-uk Kim Jeong Kim	N/A	Best practices from abroad in organizational operations of internal accounting control system
Oct 27, 2023	External experts	Han-jo Kim Sun-uk Kim Jeong Kim	N/A	Measures for advancement of internal accounting control system using generative AI, etc.

F. Support team for the Audit Committee

[As of December 31, 2023]

Team	Composition	Service years on team	Major tasks
Audit team	1 Executive Vice President, 1 Principal Professional, 2 Senior Professionals	Executive Vice President: 1 month Principal professional: 6 years Senior Professional: 3 year and 5 months	Support the Audit Committee
Internal accounting assessment support group	1 Vice President, 1 Lawyer, 1 Principle Professional, 1 Senior Professional	Executive Vice President: 5 years Lawyer: 2 years and 9 months Principle Professional: 7 month Senior Professional: 7 months	Support assessment of the internal accounting management system

Service years are based on the period in charge of the assigned duty.

G. Compliance Officer

[As of December 31, 2023]

1. Personal information and major career	Name	Jung-ho Park
	Date of birth	September 1971
	Sex	Male
	Current position	Corporate Compliance Team leader at Samsung Electronics (December 2022–present)
	Career	May 2004: HR Team, Corporate Management Office, SEC (lawyer) Dec 2014: Corporate Legal Team, Corporate Legal Office, SEC (Vice President) Mar 2018: Legal & Compliance Team, DS Division, SEC (Vice President) Jan 2020: Compliance Team, SEC (Vice President) Dec 2022: Head of Compliance Team, SEC (Executive Vice President)
	Academic background	Bachelor's Degree in Law (Seoul National University) Master's Degree in Human Resources & Labor Relations (Michigan State University)
2. Date of Board resolution		December 20, 2022
3. Disqualifications		N/A
4. Others		N/A

Compliance officer meets the eligibility requirement (lawyer) stated in Article 542-13 (5) of the Commercial Act.

H. Major compliance activities

The Company conducts compliance assessments on a regular and ad-hoc basis and reflects the results in the Company's business activities to improve compliance of the Company and its employees.

Date	Assessment subject	Assessment area	Results
Jan 2023	Compliance of domestic organizations involved with quality	Trade secrets, technology misuse, etc	Overall result was satisfactory. Internal policies were followed in areas where there was room for improvement.
Mar 2023	Compliance of domestic and overseas third-party production customers	Technology leak, product liability, etc.	
May 2023	Voluntary compliance of overseas subsidiaries	Status of compliance program	
	Monitored potential risks of trade secret infringement	Trade secrets	
Jun 2023	Compliance of overseas sales subsidiaries	Fair transaction, trade secrets, etc.	
	Compliance of domestic and overseas third-party production customers	Technology leak, product liability, etc.	
Jul 2023	Compliance of domestic organizations involved with trade	Fair transaction, Trade secrets, etc.	
Aug 2023	Monitoring of external contributions and related party transaction risks	Anti-corruption, fair transaction	
	Compliance of subsidiaries	Trade secrets, personal information, etc.	
Sep 2023	Compliance of patent application process	Technology misuse, trade secrets, etc.	
	Compliance of online sales sites	Consumer protection, dark patterns	
	Compliance of domestic and overseas third-party production customers	Technology leak, product liability, etc.	
Oct 2023	Monitoring of external contributions and related party transaction risks	Anti-corruption, fair transaction	
	Voluntary compliance of overseas subsidiaries	Status of compliance program	
Nov 2023	Compliance of patent application process	Technology misuse, trade secrets, etc.	
Dec 2023	Compliance of domestic and overseas third-party production customers	Technology leak, product liability, etc.	

Assessment conducted in the final month of each quarter.
Each assessment was conducted on selected organizations.

I. Support team for the Compliance Officer

[As of December 31, 2023]

Team	Composition	Service years (average)	Major tasks
Compliance team, etc.	Vice Presidents (2) Principal Professionals/Engineers (17) Lawyers (12) Senior Professionals (34) Professionals (2) Total: 67	Vice Presidents (6 years and 7 months) Principal Professionals (8 years and 11 months) Lawyers (5 years) Senior Professionals (5 years and 7 months) Professionals (2 years and 4 months)	Supports activities of the Compliance Officer

3. General meeting of shareholders

A. Voting method

As of December 31, 2023, the Company has not adopted cumulative voting or paper voting and has adopted electronic voting, which was used at the AGM on March 15, 2023.

On January 30, 2020, the Board resolved to adopt electronic voting to enhance convenience in exercising voting rights for shareholders in accordance with Article 368-4 (Exercise of Voting Rights by Electronic Means) of the Commercial Act. E-voting has been used at every AGM since it was introduced at the AGM on March 18, 2020.

The convocation notice of general meeting of shareholders includes the information that voting rights can be exercised electronically. Owners of shares as of the last day of every settlement term can exercise their voting rights via the electronic voting system of Korea Securities Depository ten days prior to general meeting date until the day before the meeting, without being present at the meeting.

[As of December 31, 2023]

Classification	Cumulative voting	Paper voting	Electronic voting
Adoption	Excluded	Not adopted	Adopted
Implementation	-	-	AGM (2022)

The Company as of the reporting date employs proxy voting and it contacts shareholders directly to recommend delegating voting rights, contacts shareholders by mail or email, and also made a power of attorney form available on the Company website.

B. Minority shareholder rights

No minority shareholder rights were exercised during the reporting period.

C. Competition over management rights

No competition over management rights occurred during the reporting period.

D. Voting shares

As of December 31, 2023, SEC has 5,969,782,550 issued shares of common stock, and 822,886,700 issued shares of preferred stock with no voting rights. There are 603,811,048 shares of common stock with limited voting rights under relevant laws. Thus, the total number of shares with full voting rights is 5,365,971,502.

[As of December 31, 2023]

Classification	Share type	Number of shares	Note
Number of issued shares (A)	Common	5,969,782,550	-
	Preferred	822,886,700	-
Shares with no voting rights (B)	Common	-	-
	Preferred	-	-

Classification	Share type	Number of shares	Note
Shares with no voting rights according to Articles of Incorporation (C)	Common	-	-
	Preferred	822,886,700	-
Shares with limited voting rights under relevant laws (D)	Common	603,324,100 ¹⁾	508,157,148 shares held by Samsung Life Insurance & 88,802,052 shares held by Samsung Fire & Marine Insurance 4,484,150 shares held by Samsung Welfare Foundation 1,880,750 shares held by Samsung Foundation of Culture
	Common	486,948	Restricted by the Insurance Business Act: Shares held by Samsung Life Insurance in certain special accounts
Shares with voting rights (F = A - B - C - D)	Common	5,365,971,502	-
	Preferred	-	-

1) Pursuant to Korea's Monopoly Regulation and Fair Trade Act, owners can exercise certain rights on some shares in accordance with related laws, including the right to vote on agendas such as the appointment or dismissal of directors and revisions to the Articles of Incorporation.

E. Stock affairs

Preemptive rights in the Articles of Incorporation
<p>1. New shares to be issued by the Company shall be allocated to the shareholders in proportion to their respective shareholdings in accordance with Paragraph 6, Article 8. If shares are not subscribed for as a result of waiver or loss of the preemptive right of the shareholders to subscribe for new shares, or if fractional shares remain at the time of allocation of new shares, such shares may be disposed of by a resolution of the Board of Directors in accordance with applicable laws and regulations.</p> <p>2. Notwithstanding the above Paragraph 1, new shares may be allocated to persons other than shareholders in the following cases:</p> <p>a. If the Company issues new shares or causes underwriters to underwrite new shares by a resolution of the Board of Directors in accordance with applicable laws and regulations including the Financial Investment Services and Capital Markets Act;</p> <p>b. If the Company allocates new shares preferentially to members of the Employee Stock Ownership Association by a resolution of the Board of Directors in accordance with applicable laws and regulations including the Financial Investment Services and Capital Markets Act;</p> <p>c. If the Company issues new shares for the issuance of depositary receipts (DR) by a resolution of the Board of Directors in accordance with the applicable laws and regulations including the Financial Investment Services and Capital Markets Act;</p> <p>d. If the Company issues new shares by public offering in accordance with Article 11-3;</p> <p>e. If new shares are issued by the exercise of stock options in accordance with Article 11-4;</p> <p>f. If the Company issues new shares to the extent of 20% of the total issued and outstanding shares to domestic or foreign financial institutions for the purpose of obtaining financing urgently or to the relevant partner company for the purpose of inducing technology therefrom, etc., by a resolution of the Board of Directors; provided that the issue price of the new shares shall not be less than the price prescribed by the Financial Investment Services and Capital Markets Act and other applicable laws and regulations.</p> <p>☞ (Note) Paragraph 6, Article 8</p> <p>In the case of rights issue, bonus issue or stock dividend, the holders of common shares shall be entitled to common shares, and the holders of preferred shares shall be entitled to preferred shares, in proportion to their respective shareholdings; provided that in the case of rights issue and stock dividend the Company may, if necessary, issue only one kind of shares, where all the shareholders shall be entitled to such kind of shares to be issued.</p> <p>☞ (Note) Article 11-3 (Public Offering)</p>

Preemptive rights in the Articles of Incorporation

1. The Company may issue new shares by public offering to the extent that the new shares do not exceed 20% of the total number of issued and outstanding shares by a resolution of the Board of Directors, pursuant to Article 165-6, Paragraph 1, Item 3 of the Financial Investment Services and Capital Markets Act.
2. If the Company issues new shares by public offering, the type, quantity and issue price of the shares to be newly issued shall be determined by a resolution of the Board of Directors; provided that the issue price of such new shares shall not be less than the price prescribed by the Financial Investment Services and Capital Markets Act and other applicable laws and regulations.

☞ (Note) Article 11-4 (Stock Options)

1. The Company may grant stock options to its officers and employees (including officers and employees of the related companies as set forth in Article 542-3, Paragraph 1 of the Commercial Code; the same shall apply for the purpose of this Article) by a special resolution of the general meeting of shareholders pursuant to Article 542-3 of the Commercial Code, to the extent permitted by the Commercial Code; provided, however, that the Company may grant the stock options to its officers and employees (except for the directors of the Company) by a resolution of the Board of Directors to the extent determined by the relevant laws and regulations.
2. The person to whom stock options may be granted are the officers and employees who have contributed or have the capacity to contribute to the establishment, management, overseas business, technical innovation, etc. of the Company; provided, however, that the officers and employees who may not be entitled to stock options under the relevant laws and regulations shall be excluded.
3. The shares to be issued to the officers or employees by the exercise of their stock options (in case the Company pays, either in cash or treasury shares, the difference between the exercise price of stock options and the market price, they refer to the shares which are the basis for such calculation) shall be common shares in registered form or preferred shares in registered form.
4. Total number of shares to be delivered in accordance with the exercise of stock options shall be up to the extent permitted by the relevant laws and regulations.
5. The stock options may be exercised until an expiry date determined by a resolution of the general meeting of shareholders or the Board of Directors and such expiry date shall be determined within a period not exceeding eight (8) years from the date when two (2) years have elapsed from the date of the general meeting of shareholders or the date of the Board of Directors' meeting at which a resolution to grant such stock options is adopted; provided, however, that the person to whom a stock option is granted should serve the Company for at least two (2) years after the date of such resolution in order to exercise such stock option, unless otherwise set forth by relevant laws and regulations.
6. The terms and conditions for stock options, such as the contents and exercise price thereof shall be determined by a special resolution of the general meeting of shareholders or by a resolution of the Board of Directors in accordance with the relevant laws and regulations and the Articles of Incorporation; provided, however, that such matters which are not provided for as matters reserved for resolutions of the general meeting of shareholders or the Board of Directors' meeting under the relevant laws and regulations or the Articles of Incorporation may be determined by the Board of Directors or a committee authorized by the Board of Directors.
7. The Company may cancel the grant of stock options by a resolution of the Board of Directors in any of the following cases:
 - a. In case the relevant officer or employee voluntarily retires from his/her office or leaves the Company after the grant of stock options;
 - b. In case the relevant officer or employee causes substantial damages to the Company due to his/her willful misconduct or negligence;
 - c. In case any of the causes for cancellation set forth in the stock option agreement occurs.

Settlement date	Dec 31	Annual General Meetings of Shareholders	Within 3 months after the end of every business year	
Record date (closing period)			Last day of fiscal year (One month from Jan 1)	
Transfer agent	Korea Securities Depository (T: +82-51-519-1500): 40 Munhyeongeumyung-ro, Nam-gu, Busan, Korea			
Shareholder benefit	n/a	Published on	Joongang Daily	

With Act on Electronic Registration of Stocks, Bonds, etc. ("Electronic Securities Act") taking effect Sep 16, 2019, rights specified on stocks and subscription warrants are subject to mandatory electronic registration, therefore, "Stock types" are no longer applicable.

Related information is published on Joongang Daily in pursuant to our Articles of Incorporation, as well as on our website

F. Results of shareholder meetings

[As of December 31, 2023]

Date	Agenda	Results
AGM (Mar 15, 2023)	1. Approval of FY22 financial statements, including balance sheet, income statement, and the statement of appropriation of retained earnings, etc. 2. Appointment of Executive Directors as Jong-hee Han 3. Approval of remuneration limit for Directors	Approved Approved Approved
EGM (Nov 3, 2022)	1. Appointment of Independent Directors 1-1: Appointment of Eun-nyeong Heo as an Independent Director 1-2: Appointment of Myung-hee Yoo as an Independent Director	Approved Approved
AGM (Mar 16, 2022)	1. Approval of FY21 financial statements, including balance sheet, income statement, and the statement of appropriation of retained earnings, etc. 2. Appointment of Directors 2-1: Appointment of Independent Directors 2-1-1: Appointment of Han-jo Kim as Independent Director 2-1-2: Appointment of Wha-jin Han as Independent Director 2-1-3: Appointment of Jun-sung Kim as Independent Director 2-2: Appointment of Executive Directors 2-2-1: Appointment of Kye-hyun Kyung as Executive Director 2-2-2: Appointment of Tae-moon Roh as Executive Director 2-2-3: Appointment of Hark-kyu Park as Executive Director 2-2-4: Appointment of Jung-bae Lee as Executive Director 2-3: Appointment of Audit Committee Member 2-3-1: Appointment of Han-jo Kim as Audit Committee Member 2-3-2: Appointment of Jeong Kim as Audit Committee Member 3. Approval of remuneration limit for Directors	Approved Approved Approved Approved Approved Approved Approved Approved Approved Approved Approved
AGM (Mar 17, 2021)	1. Approval of Balance Sheet, Income Statement, and Statement of Appropriation of Retained Earnings, etc. for 2020 2. Appointment of Directors 2.1: Appointment of Independent Directors 2.1.1: Appointment of Byung-gook Park as Independent Director 2.1.2: Appointment of Jeong Kim as Independent Director 2.2: Appointment of Executive Directors 2.2.1: Appointment of Ki-nam Kim as Executive Director 2.2.2: Appointment of Hyun-suk Kim as Executive Director 2.2.3: Appointment of Dong-jin Koh as Executive Director 3. Appointment of Sun-uk Kim as Independent Director for Audit Committee Member 4. Approval of remuneration limit for Directors	Approved Approved Approved Approved Approved Approved Approved Approved

VII. Information on Shareholders

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

[As of December 31, 2023]

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	10,246,942	0.17	8,097,938	0.14	Open market transactions
		Preferred	403,278	0.05	417,085	0.06	Open market transactions
Samsung C&T	Affiliate	Common	298,818,100	5.01	298,818,100	5.01	-
Samsung Fire & Marine Insurance	Affiliate	Common	88,802,052	1.49	88,802,052	1.49	-
Samsung Welfare Foundation	Funded foundation	Common	4,484,150	0.08	4,484,150	0.08	-
Samsung Foundation Of Culture	Funded foundation	Common	1,880,750	0.03	1,880,750	0.03	-
Ra-hee Hong	Related party of the major shareholder	Common	117,302,806	1.96	117,302,806	1.96	-
		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	15,000	0.00	15,000	0.00	-
Kye-hyun Kyung	Executive member of affiliate	Common	18,050	0.00	21,050	0.00	Open market transactions
Tae-moon Roh	Executive member of affiliate	Common	13,000	0.00	13,000	0.00	-
Hark-kyu Park	Executive member of affiliate	Common	22,500	0.00	22,500	0.00	-

Name	Relationship ¹⁾	Type of share	Ownership				Notes
			Period start		Period end		
			Shares	Stake (%)	Shares	Stake (%)	
Jung-bae Lee	Executive member of affiliate	Common	15,000	0.00	15,000	0.00	-
Han-jo Kim	Executive member of affiliate	Common	3,655	0.00	3,655	0.00	-
Total		Common	1,237,981,437	20.74	1,235,835,433	20.70	-
		Preferred	1,067,128	0.13	1,080,935	0.13	-

1) In accordance with Article 3 Paragraph 1 of Enforcement Decree of the Act on Corporate Governance of Financial Companies. Common shares carry full voting rights while preferred shares do not. (Owners of certain common shares have limited voting rights in accordance with relevant laws.)

For changes after December 31, 2023, please refer to ‘Ownership status of securities, etc. of executives and major shareholder’ published in Korean in DART (<https://dart.fss.or.kr>).

Trust agreement for disposal of securities, dated as of October 31, 2023, was made for disposal of a portion of shares owned by related parties (Ra-hee Hong, Boo-jin Lee, and Seo-hyun Lee) of the major shareholder, and trusted securities were all disposed of as of January 11, 2024. Please refer to the disclosures released on November 3, 2023 and January 15, 2024 (Report on significant holdings of stocks, etc. (General)) published in DART (<http://dart.fss.or.kr>) for more details.

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	88,408	Young-muk Jeon	0.00	Samsung C&T	19.34

As of December 31, 2023, based on common shares.

5) Changes to the CEO and major shareholder of the major shareholder (Samsung Life Insurance)

Date of change	CEO		Major shareholder	
	Name	Share ratio (%)	Name	Share ratio (%)
Mar 16, 2021	Young-muk Jeon	0.00	-	-
Apr 29, 2021	-	-	Kun-hee Lee	-
Apr 29, 2021	-	-	Samsung C&T	19.34

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	314,655,050
Total liabilities	270,317,609
Total equity	44,337,441
Revenue	30,937,013
Operating profit	2,398,377
Net profit	2,033,709

The financial status is as of December 31, 2023, based on the consolidated K-IFRS financial statements.

(3) Business conditions of the major shareholder (Samsung Life Insurance)

Samsung Life Insurance is a company in which life insurance and its related reinsurance contract are the key purpose of business operations, and it operates businesses in accordance with the Insurance Business Act and other related laws.

Its key subsidiary, Samsung Card, is a specialized credit finance business company that operates specialized credit finance businesses (including credit card business, facility leasing business, and installment financing business) in accordance with the Specialized Credit Finance Business Act and other related laws.

Please refer to the business report (interim and half-year) of Samsung Life Insurance published in DART (<https://dart.fss.or.kr>) for more details of the major shareholder.

B. Certain transaction that may cause changes in the major shareholder

N/A

C. Overview of the major shareholder of the major shareholder

(1) Basic information of the major shareholder (Samsung C&T) of the major shareholder (Samsung Life Insurance)

1) Legal, commercial name: Samsung C&T Corporation

2) Date of establishment and period of existence: Dongwha Real Estate was first established on December 23, 1963, and the company name was changed to Cheil Industries in July 2014. It merged with Samsung C&T Corporation (founded as

Samsung Sanghoe on March 1, 1938, and established as Samsung C&T in January 1951) and changed the company name to Samsung C&T Corporation on September 2, 2015 (merger registration date).

3) Address, phone number, and English language website of the corporate headquarters

- Address: 26, Sangil-ro 6-gil, Gangdong-gu, Seoul, Republic of Korea
- Phone: +82-2-2145-5114
- Website: <https://www.samsungcnt.com>

4) CEO and major shareholder of the major shareholder (Samsung C&T) of the major shareholder

Name	Number of investors	CEO		Major shareholder	
		Name	Share ratio (%)	Name	Share ratio (%)
Samsung C&T	146,861	Jung-suk Koh	0.00	Jae-yong Lee	18.26
		Se-chul Oh	0.00		
		Hai-lin Jeong	0.00		

As of December 31, 2023, 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	Jung-suk Koh	0.00	-	-
Mar 19, 2021	Se-chul Oh	0.00	-	-
Apr 29, 2021	-	-	Jae-yong Lee	18.13
Mar 17, 2023	Seung-hwan Han	-	-	-
Mar 17, 2023	Hai-lin Jeong	0.00	-	-
Apr 21, 2023	-	-	Jae-yong Lee	18.26

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%→18.26%) as the shares were inherited (by Jae-yong Lee and three others).

Mar 17, 2023: Seung-hwan Han resigned from his position as CEO, and Executive Director Hai-lin Jeong was appointed as CEO.

Apr 21, 2023: The share ratio of the major shareholder was changed (18.13%→18.26%) due to the cancellation of treasury shares (1,295,411 common shares).

(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	66,127,029
Total liabilities	26,229,919
Total equity	39,897,109
Revenue	41,895,681
Operating profit	2,870,174
Net profit	2,719,106

The financial status is as of December 31, 2023, based on the consolidated K-IFRS financial statements.

(3) Business conditions of the major shareholder (Samsung C&T) of the major shareholder (Samsung Life Insurance)

Samsung C&T is consisted of Engineering & Construction, Trading & Investment, Fashion, and Resort Groups as well as biomedicine OEM and biosimilar businesses. The Engineering & Construction Group operates businesses in building, civil infrastructure, plant, and housing areas domestically and globally; Trading & Investment trades internationally in various fields, including resource development, steel, chemical, industrial materials, and textiles. The Fashion Group imports and sells clothing. The Resort Group manages landscaping business, Everland (dry park), Caribbean Bay (water park), golf course, food supply services, and food distribution business (Samsung Welstory).

☞ Please refer to the business report (interim and half-year) of Samsung C&T published in DART (<https://dart.fss.or.kr>) for more details of the major shareholder of the major shareholder.

3. Change of the major shareholder

[As of December 31, 2023]

Date of change	Name of major Shareholder	Number of shares owned	Share ratio (%)	Reason for change	Note
Apr 29, 2021	Samsung Life Insurance	1,263,050,053	21.16	Shares of the previous major shareholder were inherited by beneficiaries	-

Number of shares owned and share ratio are the sum of those of the major shareholder and its related parties, and the number of shares is based on shares with voting rights (including those with limited voting rights in accordance with relevant laws).

4. Ownership of shares

A. Share ownership status

[As of December 31, 2023]

Classification	Name	Number of shares owned	Share ratio (%)	Note
Shareholders with over 5% voting shares ¹⁾	Samsung Life Insurance	516,255,086	8.65	Including special accounts
	National Pension Service	434,549,036	7.28	-
	BlackRock Fund Advisors	300,391,061	5.03	Based on January 28, 2019
	Samsung C&T	298,818,100	5.01	-
Employee Stock Ownership Association		-	-	-

Including shares with limited voting rights in accordance with relevant laws. For more information, please refer to 『VI. Corporate Governance-3. General meeting of shareholders-D. Voting shares』

Number of shares owned and share ratio of BlackRock Fund Advisors is based on the “Report on Mass Holding of Securities” disclosed on DART (<http://dart.fss.or.kr>) on February 7, 2019.

B. Minority shareholders

[As of December 31, 2023]

Classification	Shareholder			Shares owned ¹⁾			Note
	Number of shareholders	Total shareholders	Portion (%)	Number of shares	Total number of shares	Portion (%)	
Minority shareholder	4,672,039	4,672,130	99.99	4,017,892,514	5,969,782,550	67.30	-

Number of voting shares, including those with limited voting rights in accordance with relevant laws.
Shareholders with shares less than 1/100 of total issued stocks

5. Stock price and stock transactions

A. Domestic stock market

Type			Jul 2023	Aug 2023	Sep 2023	Oct 2023	Nov 2023	Dec 2023
Common stock	Stock price (KRW)	High	73,400	71,100	72,200	70,500	72,800	78,500
		Low	69,500	66,300	68,400	66,000	68,600	71,200
		Average	71,348	67,686	70,168	67,911	71,409	73,811
	Volume (shares)	High (day)	30,016,221	20,087,090	29,738,235	25,209,349	22,228,489	27,567,593
		Low (day)	9,732,730	5,824,628	9,897,840	9,724,086	6,676,685	8,123,087
		Month	303,283,444	258,464,791	283,534,308	290,080,133	273,455,511	254,875,780
Preferred stock	Stock price (KRW)	High	60,300	58,100	58,100	55,700	58,000	62,300
		Low	57,400	54,000	54,200	53,000	55,600	57,300
		Average	59,086	55,586	56,589	54,358	57,177	59,311
	Volume (shares)	High (day)	2,275,284	2,440,052	2,803,240	2,331,421	2,131,331	2,241,939
		Low (day)	564,879	546,924	552,257	593,828	439,370	857,002
		Month	21,483,981	22,531,530	23,087,718	21,141,990	22,430,034	24,240,536

Stock price is based on the closing exchange rate of the applicable trading day.

B. Overseas stock market

□ Name of stock exchange: London Stock Exchange (common stock)

Type				Jul 2023	Aug 2023	Sep 2023	Oct 2023	Nov 2023	Dec 2023
Common stock	Price per GDR	High	USD	1,442.00	1,363.00	1,347.00	1,292.00	1,403.00	1,506.00
			KRW	1,840,280	1,736,189	1,788,547	1,746,655	1,815,482	1,949,366
		Low	USD	1,339.00	1,228.00	1,253.00	1,223.00	1,277.00	1,349.00
			KRW	1,750,475	1,647,485	1,685,034	1,650,36	1,723,439	1,756,128
		Average	USD	1,389.81	1,275.82	1,350.05	1,253.27	1,365.95	1,408.63
			KRW	1,787,761	1,682,882	1,737,401	1,692,120	1,791,140	1,835,183
	Volume (shares)	High (day)		15,097	15,039	12,554	10,088	17,847	17,444
		Low (day)		3,259	3,197	3,759	3,905	2,779	4,984
		Month		171,510	181,494	152,689	168,362	222,854	200,660

Stock price in KRW is based on the closing exchange rate of the applicable trading day.

High and low price in KRW are based on the KRW/USD closing exchange rate of the applicable trading day; average price in KRW is based on monthly average KRW/USD exchange rate.

Conversion ratio between GDRs and original shares is 1:25.

□ Name of stock exchange: Luxembourg Stock Exchange (preferred stock)

Type				Jul 2023	Aug 2023	Sep 2023	Oct 2023	Nov 2023	Dec 2023
Preferred stock	Price per GDR	High	USD	1,184.00	1,122.00	1,088.00	1,022.00	1,116.00	1,190.00
			KRW	1,499,062	1,429,20	1,435,290	1,377,963	1,444,550	1,540,336
		Low	USD	1,106.00	1,010.00	994.00	974.00	1,030.00	1,084.00
			KRW	1,445,874	1,355,016	1,336,731	1,309,835	1,390,088	1,421,883
		Average	USD	1,147.24	1,051.36	1,053.29	1,001.23	1,093.55	1,129.05
			KRW	1,475,733	1,386,813	1,402,232	1,351,818	1,433,937	1,470,944
	Volume (shares)	High (day)		1,158	2,390	5,625	1,717	1,835	1,358
		Low (day)		245	215	122	220	265	94
		Month		12,354	16,767	21,445	17,834	19,117	15,661

Stock price in KRW is based on the closing exchange rate of the applicable trading day.

High and low price in KRW are based on the KRW/USD closing exchange rate of the applicable trading day; average price in KRW is based on monthly average KRW/USD exchange rate.

Conversion ratio between GDRs and original shares is 1:25.

VIII. Executives and Employees

1. Executives and employees

A. Registered Executives

[As of December 31, 2023]

(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	46	Mar 17, 2026
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	21,050	-	- Executive Member of an affiliate	22	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	22	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	22,500	-	- Executive Member of an affiliate	22	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	15,000	-	- Executive Member of an affiliate	22	Mar 15, 2025
Han-jo Kim	M	Jul 1956	Director	Independent Director	Part	- Board Chair - Head of Audit Committee - Related Party Transactions Committee - Compensation Committee - Head of Sustainability Committee	- Bachelor's degree in French language and Literature from Yonsei University - Chairman of Hana Foundation	3,655	-	- Executive Member of an affiliate	58	Mar 19, 2025
Sun-uk Kim	F	Dec 1952	Director	Independent Director	Part	- Audit Committee - Head of the Related Party Transactions Committee - Independent Director Recommendation	- Doctor's degree in Administrative Law from University of Konstanz - Professor Emeritus at Ewha Womans University	-	-	- Executive Member of an affiliate	70	Mar 22, 2024

						Committee - Sustainability Committee						
Jeong Kim	M	Aug 1960	Director	Independent Director	Part	- Audit Committee - Related Party Transactions Committee - Head of Compensation Committee - Sustainability Committee	- Doctor's degree in Reliability Engineering from the University of Maryland - President of Kiswe Mobile	-	-	Executive Member of an affiliate	70	Mar 22, 2024
Jun-sung Kim	M	Oct 1967	Director	Independent Director	Part	- Compensation Committee - Sustainability Committee	- Bachelor's degree in Economics & Business Administration from Carnegie Mellon University - Managing Director of Government of Singapore Investment Corporation (GIC) Total Return Group	-	-	Executive Member of an affiliate	22	Mar 15, 2025
Eun- nyeong Heo	M	Aug 1964	Director	Independent Director	Part	- Independent Director Recommendation Committee - Sustainability Committee	- Doctor's degree in Mineral Economics from The Pennsylvania State University - Professor of College of Engineering at Seoul National University	-	-	Executive Member of an affiliate	14	Nov 2, 2025
Myung- hee Yoo	F	Jun 1967	Director	Independent Director	Part	- Independent Director Recommendation Committee - Sustainability Committee	- Doctor's degree in Administrative Law from Vanderbilt University - Visiting Professor of Graduate School of International Studies at Seoul National University	-	-	Executive Member of an affiliate	14	Nov 2, 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 (<https://dart.fss.or.kr>).

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

B. Registered executive director candidates (or to be retired)

[As of Dec 31, 2023]

	Name	Gender	Date of birth	Executive or Independent Director	Career highlights	Due Date of appointment or retirement	Relationship with the major shareholder ¹⁾
Appointment	Je-Yoon Shin	M	Mar 1958	Independent Director	- 1st Vice Minister, Ministry of Strategy and Finance (2011–2013) - Chairman, Financial Services Commission (2013–2015) - President, Financial Action Task Force on Money Laundering (2015–2016) - Ambassador for International Financial Cooperation, Ministry of Foreign Affairs (2017–2018) - President, Financial Education Council (2017–2023) - Senior Advisor, Bae, Kim & Lee LLC (2017–present)	Mar 29, 2024	-
Appointment	Hye-Kyung Cho	F	Jul 1964	Audit Committee Member	- Professor, Applied AI at Hansung University (1996–present) - Director, The Korea Institute for Robot Industry Advancement (Board Chair) (2012–2015) - Vice President, Institute of Control, Robotics and Systems (2020–2021) - President, Korea Robotics Society (2022–2022) - Full member, National Academy of Engineering of Korea (2023–present)	Mar 20, 2024	-
Appointment	Myung-Hee Yoo	F	Jun 1967	Audit Committee Member	- J.D., Vanderbilt University Law School (2002) - Visiting Professor, Graduate School of International Studies, Seoul National University (2022–present)	Mar 20, 2024	Executive member of affiliate

This is an agenda item for the 55th AGM, which is held after the disclosure of the report, and if it is rejected or adjusted at the AGM, the details will be published in future reports.

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

C. Registered Executives with concurrent positions

[As of December 31, 2023]

Concurrent office holder		Company		
Name	Position	Name of company	Position	Period
Jeong Kim	Independent Director	Kiswe Mobile	Chairman	2013–present
Myung-hee Yoo	Independent Director	HD Hyundai Construction Equipment	Independent Director	2022–present

D. Employees

[As of December 31, 2023]

(KRW mil)

Division	Gender	Number of employees ¹⁾				Average length of service (years)	Total compensation (KRW mil)	Average compensation per employee ²⁾ (KRW mil)	Non-affiliated ³⁾		
		Regular	Contract-based	Others	Total				Male	Female	Total
DX	M	37,962	324	-	38,286	16.5			30,499	13,403	43,902
	F	12,422	97	-	12,299	13.3	-	-			
DS	M	53,372	148	-	53,520	10.8	-	-			
	F	20,851	28	-	20,699	11.1	-	-			
Gender	M	91,334	472	-	91,806	13.2	11,530,492	128			

Division	Gender	Number of employees ¹⁾				Average length of service (years)	Total compensation (KRW mil)	Average compensation per employee ²⁾ (KRW mil)	Non-affiliated ³⁾		
		Regular	Contract-based	Others	Total				Male	Female	Total
total	F	33,273	125	-	32,998	11.9	2,947,780	97			
Total		124,607	597	-	124,804	12.8	14,478,272	120			

Separate basis; represents employees of domestic headquarters in Korea, including employees on leave and excluding 11 registered executives (5 Executive Directors and 6 Independent Directors).

Total compensation for 2023 and average compensation per employee were calculated before income tax and other deductions based on the earned income payment record submitted to the district tax office in accordance with Article 20 of the Income Tax Act.

Calculated based on average number of employees: 120,509 employees (male: 90,109, female: 30,400).

E. Remuneration of non-registered Executives

[As of December 31, 2023]

(KRW mil)

Classification	Number of employees ¹⁾	Total compensation	Average compensation per employee	Note
Non-registered Executives	1,015	705,410	726	-

In office as of the reporting date, and non-registered executives whose earned income was not domestic were excluded.

Total compensation for 2023 and average compensation per employee is calculated based on the earned income payment record (before earned income tax credit) submitted to the district tax office in accordance with Article 20 of the Income Tax Act.

Total compensation for 2023 includes incentives, and timing of the incentives being paid differ every year.

Average compensation per employee is calculated based on the average of the 970 employees.

2. Remuneration for Directors

A. Summary on total remuneration

<Remuneration of directors and auditors>

(1) Remuneration approved at the annual general meetings of shareholders

(KRW mil)

	Number of persons ¹⁾	Amount approved at shareholders' meeting ²⁾	Note
Registered Directors	5	-	-
Independent Directors	3	-	-
Audit Committee members or Auditor	3	-	-
Total	11	48,000	-

1) As of the day of AGM, as approved on the occasion

2) Remuneration limit for directors (including those retired) approved at the AGM on March 15, 2023, as per Article 388 of the Commercial Act and our Articles of Incorporation.

(2) Remuneration Paid

[Remuneration paid for directors and auditors]

(KRW mil)

Number of persons ¹⁾	Total amount of remuneration ²⁾	Average remuneration per Director	Note
11	23,227	2,112	-

There are no recognized expenses (compensation expenses) in this term from granting stock options.

Based on the Income Tax Act that incumbent registered directors, independent directors, and members of audit committee in the fiscal year received in accordance with Article 159 of the Financial Investment Services and Capital Markets Act and Article 168 of the Enforcement Decree of the same Act. 1) Based on the number of persons as of the reporting date.

2) Earned income as per Income Tax Act (Article 20: Wage and Salary Income, Article 21: Other Income, Article 22: Retirement income).

[Remuneration paid, by Director type]

(KRW mil)

	Number of persons ¹⁾	Total amount of remuneration ²⁾	Average remuneration per Director
Registered Directors (excluding Independent Directors and Audit Committee members)	5	22,009	4,402
Independent Directors (excluding Audit Committee members)	3	620	207
Audit Committee members	3	598	199
Auditor	-	-	-

There are no recognized expenses (compensation expenses) in this term from granting stock options.

Based on the Income Tax Act that incumbent registered directors, independent directors, and members of audit committee in the fiscal year received in accordance with Article 159 of the Financial Investment Services and Capital Markets Act and Article 168 of the Enforcement Decree of the same Act.

1) Based on the number of persons as of the reporting date.

2) Earned income as per Income Tax Act (Article 20: Wage and Salary Income, Article 21: Other Income, Article 22: Retirement income)

(3) Criteria and methodology

Remuneration of directors is paid in accordance with internal regulations for Executive treatment and Independent Director treatment within the remuneration limit approved at the AGM.

Type	Criteria and methodology
Registered Directors (excluding Independent Directors and Audit Committee members)	<ul style="list-style-type: none"> • Salary: In accordance with internal regulations for executive treatment (Board resolution), remuneration is determined based on position, responsibilities, and performance results. • Traditional-holiday bonuses: 100% of monthly wage for each • Target achievement incentive: Paid on biannual basis within the range of 0–200% of monthly wage, and CEO decides the amount according to the level of target achieved. (Adjusted according to division performance.) • Performance incentive: Paid once a year within 0–50% of salary based on the compensation resources calculated according to financial factors such as profit after tax (\pm assessed considerations) and cost of capital for the fiscal year by business unit. (Adjusted according to individual performance.) • Long-term incentive: Calculated within the director remuneration limit, based on the average salary of 3 years, using ROE, stock performance, and EBIT margin as criteria. Paid over the course of 3 years. • Fringe benefits: Medical services, checkups, group accident insurance are provided in line with the internal regulations for executive treatment (Board resolution)

Type	Criteria and methodology
Independent Directors (excluding Audit Committee members)	<ul style="list-style-type: none"> Salary: In accordance with internal regulations for independent director treatment, remuneration is determined based on responsibilities, etc. Fringe benefits: Medical services, checkups, group accident insurance are provided in line with the internal regulations for independent director treatment
Audit Committee members	<ul style="list-style-type: none"> Salary: In accordance with internal regulations for independent director treatment, remuneration is determined based on responsibilities, etc. Fringe benefits: Medical services, checkups, group accident insurance are provided in line with the internal regulations for independent director treatment

<Remuneration for individual Directors and Auditors who are paid KRW 500 million or more >

(1) Summary on Remuneration by Executive

(KRW mil)

Name	Position	Total amount of remuneration	Remuneration not included in total amount
Jong-hee Han	CEO	6,904	-
Kye-hyun Kyung	CEO	2,403	-
Tae-moon Roh	Executive Director	6,193	-
Hark-kyu Park	Executive Director	3,792	-
Jung-bae Lee	Executive Director	2,717	-

Based on the Income Tax Act that incumbent or retired registered directors, independent directors, and members of audit committee in the fiscal year received in accordance with Article 159 of the Financial Investment Services and Capital Markets Act and Article 168 of the Enforcement Decree of the same Act.

Earned income as per Income Tax Act (Article 20: Wage and Salary Income, Article 21: Other Income, Article 22: Retirement income). Includes remuneration that directors who were newly appointed or resigned during the fiscal year received as non-registered executives.

(2) Criteria and methodology

(KRW mil)

Name	Type of remuneration	Total amount	Criteria and methodology
Jong-hee Han (CEO)	Salary	1,467	In accordance with internal regulations for executive treatment (Board resolution), remuneration is determined based on position (vice chairman), responsibilities, and performance results. He was paid KRW 101 million per month from January to February, KRW 181 million in March, and KRW 121 million per month from April to December.
	Bonus	5,306	<ul style="list-style-type: none"> - Traditional-holiday bonus: 100% of monthly wage - Target achievement incentive: Paid on biannual basis within the range of 0–200% of monthly wage, and CEO decides the amount according to the level of target achieved. (Adjusted according to division performance; applied retroactively) - Performance incentive: Paid once a year within 0–50% of salary based on the compensation resources calculated according to financial factors such as profit after tax (\pm assessed considerations) and cost of capital for the fiscal year by business unit. (Adjusted according to individual performance.) - Long-term incentive: Calculated within the director remuneration limit, based on the average salary of 3 years, using ROE, stock performance, and EBIT margin as criteria. Paid over the course of 3 years. - Quantitative indicators suggest that the Company recorded a ROE of 13.2%, EBIT margin of 16.6%, and stock performance of -0.9% over 2020–2022; and that the DX

Name	Type of remuneration		Total amount	Criteria and methodology
				Division achieved revenue of KRW 170 trillion and operating profit of KRW 14.4 trillion in 2023. Qualitative indicators include his contributions to leading the improvement of product competitiveness of the DX Division by enhancing the B2B businesses and expanding synergies between products. The bonus amount was determined based on the indicators listed above.
		Profit from exercising stock option	-	n/a
		Other Income	130	- Fringe benefits: Medical services, checkups, and group accident insurance are provided in line with the internal regulations for executive treatment (Board resolution)
	Retirement Income		-	n/a
	Other Income		-	n/a

(KRW mil)

Name	Type of remuneration		Total amount	Criteria and methodology
Kye-hyun Kyung (CEO)	Earned Income	Salary	1,205	In accordance with internal regulations for executive treatment (Board resolution), remuneration is determined based on position (president), responsibilities, and performance results. He was paid KRW 83 million per month from January to February, KRW 149 million in March, and KRW 99 million per month from April to December.
		Bonus	1,109	<ul style="list-style-type: none"> - Traditional-holiday: 100% of monthly wage - Target achievement incentive: Paid on biannual basis within the range of 0–200% of monthly wage, and CEO decides the amount according to the level of target achieved. (Adjusted according to division performance; applied retroactively) - Performance incentive: Paid once a year within 0–50% of salary based on the compensation resources calculated according to financial factors such as profit after tax (\pm assessed considerations) and cost of capital for the fiscal year by business unit. (Adjusted according to individual performance.) - Long-term incentive: Calculated within the director remuneration limit, based on the average salary of 3 years, using ROE, stock performance, and EBIT margin as criteria. Paid over the course of 3 years. - Quantitative indicators suggest that the Company recorded a ROE of 13.2%, EBIT margin of 16.6%, and stock performance of -0.9% over 2020–2022; and that the DS Division achieved revenue of KRW 66.6 trillion and operating loss of KRW 14.9 trillion in 2023. Qualitative indicators include his contributions to boosting future competitiveness of the semiconductor businesses, including through discovery of new businesses linking memory–logic–pkg and capability enhancement in responding to overseas customers. The bonus amount was determined based on the indicators listed above.
		Profit from exercising stock option	-	n/a
		Other Income	89	- Fringe benefits: Medical services, checkups, and group accident insurance are provided in line with the internal regulations for executive treatment (Board resolution)
		Retirement Income	-	n/a

	Other Income	-	n/a
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(KRW mil)

Name	Type of remuneration		Total amount	Criteria and methodology
Tae-moon Roh (Director)	Earned Income	Salary	1,254	In accordance with internal regulations for executive treatment (Board resolution), remuneration is determined based on his position (president), responsibilities, and performance results. He was paid KRW 94 million per month from January to February, KRW 132 million in March, and KRW 104 million per month from April to December.
		Bonus	4,824	<ul style="list-style-type: none"> - Traditional-holiday bonus: 100% of monthly wage - Target achievement incentive: Paid on biannual basis within the range of 0–200% of monthly wage, and CEO decides the amount according to the level of target achieved. (Adjusted according to division performance; applied retroactively) - Performance incentive: Paid once a year within 0–50% of salary based on the compensation resources calculated according to financial factors such as profit after tax (\pm assessed considerations) and cost of capital for the fiscal year by business unit. (Adjusted according to individual performance.) - Long-term incentive: Calculated within the director remuneration limit, based on the average salary of 3 years, using ROE, stock performance, and EBIT margin as criteria. Paid over the course of 3 years. - Quantitative indicators suggest that the Company recorded a ROE of 13.2%, EBIT margin of 16.6%, and stock performance of -0.9% over 2020–2022; and that the MX Business achieved revenue of KRW 108.6 trillion in 2023. Qualitative indicators include his contributions to driving solid earnings through technology innovations in mobile and effective marketing, and by laying groundwork for growth via preemptive response to the future market. The bonus amount was determined based on the indicators listed above.
		Profit from exercising stock option	-	n/a
		Other Income	116	- Fringe benefits: Medical services, checkups, and group accident insurance are provided in line with the internal regulations for executive treatment (Board resolution)
		Retirement Income	-	n/a
	Other Income	-	n/a	

(KRW mil)

Name	Type of remuneration		Total amount	Criteria and methodology
Hark-kyu Park (Director)	Earned Income	Salary	1,025	In accordance with internal regulations for executive treatment (Board resolution), remuneration is determined based on his position (president), responsibilities, and performance results. He was paid KRW 74 million per month from January to February, KRW 118 million in March and KRW 85 million per month from April to December.
		Bonus	2,662	<ul style="list-style-type: none"> - Traditional-holiday bonus: 100% of monthly wage - Target achievement incentive: Paid on biannual basis within the range of 0–200% of monthly wage, and CEO decides the amount according to the level of target achieved. (Adjusted according to division performance; applied retroactively) - Performance incentive: Paid once a year within 0–50% of salary based on the

Name	Type of remuneration		Total amount	Criteria and methodology
				<p>compensation resources calculated according to financial factors such as profit after tax (\pm assessed considerations) and cost of capital for the fiscal year by business unit. (Adjusted according to individual performance.)</p> <ul style="list-style-type: none"> - Long-term incentive: Calculated within the director remuneration limit, based on the average salary of 3 years, using ROE, stock performance, and EBIT margin as criteria. Paid over the course of 3 years. - Quantitative indicators suggest that the Company recorded a ROE of 13.2%, EBIT margin of 16.6%, and stock performance of -0.9% over 2020–2022; and that the DX Division achieved revenue of KRW 170 trillion and operating profit of KRW 14.4 trillion in 2023. Qualitative indicators include his contribution to supporting the Company to achieve solid results through efficient resource management even in the period of low growth; and to recover new growth engines including new technologies and businesses. The bonus amount was determined based on the indicators listed above.
		Profit from exercising stock option	-	n/a
		Other Income	104	- Fringe benefits: Medical services, checkups, and group accident insurance are provided in line with the internal regulations for executive treatment (Board resolution)
	Retirement Income		-	n/a
	Other Income		-	n/a

(KRW mil)

Name	Type of remuneration		Total amount	Criteria and methodology
Jung-bae Lee (Director)	Earned Income	Salary	1,006	In accordance with internal regulations for executive treatment (Board resolution), remuneration is determined based on his position (president), responsibilities, and performance results. He was paid KRW 69 million per month from January to February, KRW 124 million in March and KRW 83 million per month from April to December.
		Bonus	1,591	<ul style="list-style-type: none"> - Traditional-holiday bonus: 100% of monthly wage - Target achievement incentive: Paid on biannual basis within the range of 0–200% of monthly wage, and CEO decides the amount according to the level of target achieved. (Adjusted according to division performance; applied retroactively) - Performance incentive: Paid once a year within 0–50% of salary based on the compensation resources calculated according to financial factors such as profit after tax (\pm assessed considerations) and cost of capital for the fiscal year by business unit. (Adjusted according to individual performance.) - Long-term incentive: Calculated within the director remuneration limit, based on the average salary of 3 years, using ROE, stock performance, and EBIT margin as criteria. Paid over the course of 3 years. - Quantitative indicators suggest that the Company recorded a ROE of 13.2%, EBIT margin of 16.6%, and stock performance of -0.9% over 2020–2022; and that the Memory Business achieved revenue of KRW 44.1 trillion in 2023. Qualitative indicators include his contribution to expanding business and laying the foundation to enhance competitiveness by expanding the lineup of memory products and securing new customers. The bonus amount was determined based on the indicators listed above.

Name	Type of remuneration	Total amount	Criteria and methodology
	Profit from exercising stock option	-	n/a
	Other Income	121	- Fringe benefits: Medical services, checkups, and group accident insurance are provided in line with the internal regulations for executive treatment (Board resolution)
	Retirement Income	-	n/a
	Other Income	-	n/a

< Remuneration for five highest-paid Executive Directors who are paid KRW 500 million or more >

(1) Summary on remuneration by Executive

(KRW mil)

Name	position	Total amount of remuneration	Remuneration not included in total amount
Ki-nam Kim	Senior Advisor	17,265	-
Won-jin Lee	Executive Advisor	8,600	-
Gyoyoung Jin	Senior Advisor	8,485	-
Jong-hee Han	CEO	6,904	-
Tae-moon Roh	Executive Director	6,193	-

Earned income as per Income Tax Act (Article 20: Wage and Salary Income, Article 21: Other Income, Article 22: Retirement income).

(2) Criteria and methodology

Name	Type of remuneration	Total amount	Criteria and methodology
Ki-nam Kim	Salary	1,680	In accordance with internal regulations for executive treatment (Board resolution), remuneration is determined based on position (chairman), responsibility, and performance results. He was paid an average of KRW 144 million per month from January to November, and KRW 101 million in December.
	Bonus	2,445	<ul style="list-style-type: none"> - Traditional-holiday bonus: 100% of monthly wage - Target achievement incentive: Paid on biannual basis within the range of 0–200% of monthly wage, and CEO decides the amount according to the level of target achieved. (Adjusted according to division performance; applied retroactively) - Performance incentive: Paid once a year within 0–50% of salary based on the compensation resources calculated according to financial factors such as profit after tax (± assessed considerations) and cost of capital for the fiscal year by business unit. (Adjusted according to individual performance.) ※ Payment rate in 2023: 0% - Long-term incentive: Calculated within the director remuneration limit, based on the average salary of 3 years, using ROE, stock performance, and EBIT margin as criteria. Paid over the course of 3 years. - Quantitative indicators suggest that the Company recorded a ROE of 13.2%,

Name	Type of remuneration		Total amount	Criteria and methodology
				EBIT margin of 16.6%, and stock performance of -0.9% over 2020–2022; and that the DS Division achieved revenue of KRW 66.6 trillion and operating loss of KRW 14.9 trillion in 2023. Qualitative indicators include his contributions to the Company management through domestic and international R&D exchange and sensing future technologies. The bonus was determined based on the indicators listed above.
		Profit from exercising stock option	-	n/a
		Other Income	149	- Fringe benefits: Medical services, checkups, and group accident insurance are provided in line with the internal regulations for executive treatment (Board resolution)
	Retirement Income		12,990	- In accordance with internal regulations for severance pay of executives (Board resolution), calculated by multiplying KRW 144 million (monthly wage at the time of retirement) by 25 (years of service) and a variable within a 1.0–3.5 range.
	Other Income		-	n/a

(KRW mil)

Name	Type of remuneration		Total amount	Criteria and methodology
Won-jin Lee	Earned Income	Salary	2,143	In accordance with internal regulations for executive treatment (Board resolution), remuneration is determined based on position (president), responsibility, and performance results. He was paid an average of KRW 179 million per month from January to December.
		Bonus	3,912	- Traditional-holiday bonus: 100% of monthly wage - Target achievement incentive: Paid on biannual basis of the incentive based on the payment rate decided by CEO according to the level of target achieved by the relevant division and the amount set for the individual. - Performance incentive: Paid once a year of the incentive based on the payment rate decided by CEO according to the level of achievement for the annual individual target (enhancing gaming/media/advertisement services, strengthening service partnership, etc.) and the amount set for the individual. - Quantitative indicators suggest that the VD Business achieved revenue of KRW 30.4 trillion in 2023 and include revenue related to the MX Business and the growth of the service businesses he is in charge of. Qualitative indicators include his contributions to securing foundation for sustainable growth engines based on services, breaking away from a business structure centered on products. The bonus was determined based on the indicators listed above.
		Profit from exercising stock option	-	n/a
		Other Income	115	- Fringe benefits: Medical services, checkups, and group accident insurance are provided in line with the internal regulations for executive treatment (Board resolution)
	Retirement Income		2,431	- In accordance with internal regulations for severance pay of executives (Board resolution), calculated by multiplying KRW 208 million (monthly wage at the time of retirement) by 10 (years of service) and a variable within a 1.0–3.5 range.
	Other Income		-	n/a

Name	Type of remuneration		Total amount	Criteria and methodology
Kyoyoung Jin	Earned Income	Salary	1,010	In accordance with internal regulations for executive treatment (Board resolution), remuneration is determined based on position (president-level), responsibility, and performance results. He was paid an average of KRW 89 million in January, KRW 85 million per month from February to November, and KRW 68 million in December.
		Bonus	2,116	<ul style="list-style-type: none"> - Traditional-holiday bonus: 100% of monthly wage - Target achievement incentive: Paid on biannual basis within the range of 0–200% of monthly wage, and CEO decides the amount according to the level of target achieved. (Adjusted according to division performance; applied retroactively) - Performance incentive: Paid once a year within 0–50% of salary based on the compensation resources calculated according to financial factors such as profit after tax and cost of capital for the fiscal year by business unit. (Adjusted according to individual performance) ※ Payment rate in 2023: 0% <ul style="list-style-type: none"> - Long-term incentive: Calculated within the director remuneration limit, based on the average salary of 3 years, using ROE, stock performance, and EBIT margin as criteria. Paid over the course of 3 years. - Quantitative indicators suggest that the Company recorded a ROE of 13.2%, EBIT margin of 16.6%, and stock performance of -0.9% over 2020–2022; and that the DS Division achieved revenue of KRW 66.6 trillion and operating loss of KRW 14.9 trillion in 2023. Qualitative indicators include his contributions to the Company management by discovering future technologies for the business, suggesting medium-to-long term R&D strategies, and securing new technologies. The bonus was determined based on the indicators listed above.
		Profit from exercising stock option	-	n/a
		Other Income	101	<ul style="list-style-type: none"> - Fringe benefits: Medical services, checkups, and group accident insurance are provided in line with the internal regulations for executive treatment (Board resolution)
	Retirement Income	5,259	<ul style="list-style-type: none"> - In accordance with internal regulations for severance pay of executives (Board resolution), calculated by multiplying KRW 83 million (monthly wage at the time of retirement) by 19 (years of service) and a variable within a 1.0–3.5 range. 	
	Other Income	-	n/a	

Name	Type of remuneration		Total amount	Criteria and methodology
Jong-hee Han	Earned Income	Salary	1,467	In accordance with internal regulations for executive treatment (Board resolution), remuneration is determined based on position (vice chairman), responsibility, and performance results. He was paid an average of KRW 101 million per month from January to February, KRW 181 million in March, and KRW 121 million per month from April to December.
		Bonus	5,306	<ul style="list-style-type: none"> - Traditional-holiday bonus: 100% of monthly wage - Target achievement incentive: Paid on biannual basis within the range of 0–200% of monthly wage, and CEO decides the amount according to the level of target achieved. (Adjusted according to division performance; applied retroactively) - Performance incentive: Paid once a year within 0–50% of salary based on the compensation resources calculated according to financial factors such as profit after tax (± assessed considerations) and cost of capital for the fiscal year by business

Name	Type of remuneration		Total amount	Criteria and methodology
				unit. (Adjusted according to individual performance.) <ul style="list-style-type: none"> - Long-term incentive: Calculated within the director remuneration limit, based on the average salary of 3 years, using ROE, stock performance, and EBIT margin as criteria. Paid over the course of 3 years. - Quantitative indicators suggest that the Company recorded a ROE of 13.2%, EBIT margin of 16.6%, and stock performance of -0.9% over 2020-2022; and that the DX Division achieved revenue of KRW 170 trillion and operating profit of KRW 14.4 trillion in 2023. Qualitative indicators include his contributions to leading the improvement of product competitiveness of the DX Division by enhancing the B2B businesses and expanding synergies between products. The bonus amount was determined based on the indicators listed above.
		Profit from exercising stock option	-	n/a
		Other Income	130	- Fringe benefits: Medical services, checkups, and group accident insurance are provided in line with the internal regulations for executive treatment (Board resolution)
	Retirement Income		-	n/a
	Other Income		-	n/a

(KRW mil)

Name	Type of remuneration		Total amount	Criteria and methodology
Tae-moon Roh	Earned Income	Salary	1,254	In accordance with internal regulations for executive treatment (Board resolution), remuneration is determined based on position (president), responsibility, and performance results. He was paid an average of KRW 94 million per month from January to February, KRW 132 million in March, and KRW 104 million per month from April to December.
		Bonus	4,824	<ul style="list-style-type: none"> - Traditional-holiday bonus: 100% of monthly wage - Target achievement incentive: Paid on biannual basis within the range of 0–200% of monthly wage, and CEO decides the amount according to the level of target achieved. (Adjusted according to division performance; applied retroactively) - Performance incentive: Paid once a year within 0–50% of salary based on the compensation resources calculated according to financial factors such as profit after tax (\pm assessed considerations) and cost of capital for the fiscal year by business unit. (Adjusted according to individual performance.) - Long-term incentive: Calculated within the director remuneration limit, based on the average salary of 3 years, using ROE, stock performance, and EBIT margin as criteria. Paid over the course of 3 years. - Quantitative indicators suggest that the Company recorded a ROE of 13.2%, EBIT margin of 16.6%, and stock performance of -0.9% over 2020-2022; and that the MX Business achieved revenue of KRW 108.6 trillion in 2023. Qualitative indicators include his contributions to driving solid earnings through technology innovations in mobile and effective marketing, and by laying groundwork for growth via preemptive responses to the future market. The bonus amount was determined based on the indicators listed above.
		Profit from exercising stock	-	n/a

Name	Type of remuneration	Total amount	Criteria and methodology
	option		
	Other Income	116	- Fringe benefits: Medical services, checkups, and group accident insurance are provided in line with the internal regulations for executive treatment (Board resolution)
	Retirement Income	-	n/a
	Other Income	-	n/a

B. Stock options granted and exercised

(1) Status of stock options granted to registered Directors

As of December 31, 2023, there were no accumulated-basis unexercised stock options granted to registered Directors, auditors, or people who instruct another person to conduct business.

(KRW mil)			
Type	Number ¹⁾	Total fair value of stock options	Note
Registered Director	5	-	-
Independent Director	3	-	-
Audit Committee member or auditor	3	-	-
Person who instructs another person to conduct business	1,158	-	-
Total	1,169	-	-

1) Based on the number of persons as of the reporting date.

IX. Affiliates and Subsidiaries

1. Affiliates & subsidiaries

A. Affiliates

As of December 31, 2023, Samsung Group is consisted of 63 domestic affiliates. Among the Samsung Group's 63 domestic affiliates, seventeen (17) affiliates including Samsung Electronics are listed, and forty-six (46) affiliates are unlisted.

[As of December 31, 2023]

Name of affiliated group	No. of Affiliates		
	Listed	Unlisted	Total
Samsung	17	46	63

B. Ownership status of affiliates and subsidiaries

1) Domestic

Investee Investor	Samsung C&T Corporation	Samsung BioLogics	Samsung Life Insurance	Samsung SDI	Samsung SDS	SamsungFN REIT	Samsung Engineering	Samsung Electro-mechanics	Samsung Electronics	Samsung Heavy Industries	Samsung Securities	Samsung Card	Samsung Fire & Marine Insurance	MULTI CAMPUS	S1 Corporation	Cheil Worldwide
Samsung C&T Corporation		43.1	19.3		17.1		7.0		5.0	0.1						
Samsung BioLogics																
Samsung Life Insurance	0.1	0.1		0.1	0.1	19.5	0.1	0.2	8.6	3.1	29.4	71.9	15.0	0.0	5.4	0.4
Samsung SDI							11.7			0.4					11.0	
Samsung SDS														47.2		
Samsung Electro-mechanics										2.1						
Samsung Electronics		31.2		19.6	22.6			23.7		15.2						25.2
Samsung Heavy Industries																
Samsung Securities.						1.8									1.3	
Samsung Card															1.9	3.0
Samsung Fire & Marine Insurance						18.7	0.2		1.5						1.0	
S1 Corporation						0.8										
Cheil Worldwide										0.1						
Hotel Shilla																
SDC																
Samsung Asset Management																
Samsung Electronics Service																
Miracom																
Samsung Global Research														15.2		

Investee Investor	Samsung C&T Corporation	Samsung BioLogics	Samsung Life Insurance	Samsung SDI	Samsung SDS	SamsungFN REIT	Samsung Engineering	Samsung Electro-mechanics	Samsung Electronics	Samsung Heavy Industries	Samsung Securities	Samsung Card	Samsung Fire & Marine Insurance	MULTI CAMPUS	S1 Corporation	Cheil Worldwide
Harman International Industries, Inc.																
Total	0.1	74.3	19.3	19.7	39.7	40.8	19.0	23.9	15.1	20.9	29.4	71.9	15.0	62.4	20.7	28.7

※ Percent of ownership as of December 31, 2023 based on common shares

Investee Investor	Hotel Shilla	Samsung Display	Samsung Medison	Samsung BioEpis	Samsung Venture Investment	Samsung Life Service	Samsung Futures	Samsung Active Asset Management	Samsung SRA Asset Management	Samsung Welstory	Samsung Asset Management	Samsung Electronics Logitech	Samsung Electronics Service	Samsung Electronics Service CS	Samsung Electronics Sales	Samsung Card Customer Service
Samsung C&T Corporation					16.7					100.0						
Samsung BioLogics				100.0												
Samsung Life Insurance	7.5					99.8			100.0		100.0					
Samsung SDI	0.1	15.2			16.3											
Samsung SDS																
Samsung Electro-mechanics					17.0											
Samsung Electronics	5.1	84.8	68.5		16.3							100.0	99.3		100.0	
Samsung Heavy Industries					17.0											
Samsung Securities.	3.1				16.7		100.0									
Samsung Card	1.3															100.0
Samsung Fire & Marine Insurance																
S1 Corporation																
Cheil Worldwide																
Hotel Shilla																
SDC																
Samsung Asset Management								100.0								

Investee Investor	Hotel Shilla	Samsung Display	Samsung Medison	Samsung BioEpis	Samsung Venture Investment	Samsung Life Service	Samsung Futures	Samsung Active Asset Management	Samsung SRA Asset Management	Samsung Welstory	Samsung Asset Management	Samsung Electronics Logitech	Samsung Electronics Service	Samsung Electronics Service CS	Samsung Electronics Sales	Samsung Card Customer Service
Samsung Eelectronics Service														100.0		
Miracom																
Samsung Global Research																
Harman International Industries, Inc.																
Total	17.0	100.0	68.5	100.0	100.0	99.8	100.0	100.0	100.0	100.0	100.0	100.0	99.3	100.0	100.0	100.0

※ Percent of ownership as of December 31, 2023 based on common shares

Investee Investor	Samsung Corning Advanced Glass	Samsung Hedge Asset Management	Samsung Fire & Marine Insurance Service	Samsung Claim Adjustment Service	SEMES	Suwon Samsung Bluewings FC	STECO	Shilla HM	SD Flex	SBTM	S-1CRM	SU Materials	S-Core	STM	HDC Shilla Duty Free LTD	Open Hands
Samsung C&T Corporation																
Samsung BioLogics																
Samsung Life Insurance																
Samsung SDI									50.0					100.0		
Samsung SDS													81.8			100.0
Samsung Electro-mechanics																
Samsung Electronics					91.5		70.0									
Samsung Heavy Industries																
Samsung Securities.																
Samsung Card																
Samsung Fire & Marine Insurance			100.0	100.0												
S1 Corporation											100.0		0.6			

Investee Investor	Samsung Corning Advanced Glass	Samsung Hedge Asset Management	Samsung Fire & Marine Insurance Service	Samsung Claim Adjustment Service	SEMES	Suwon Samsung Bluewings FC	STECO	Shilla HM	SD Flex	SBTM	S-1CRM	SU Materials	S-Core	STM	HDC Shilla Duty Free LTD	Open Hands
Cheil Worldwide						100.0							5.2			
Hotel Shilla								100.0		100.0					50.0	
SDC	50.0											50.0				
Samsung Asset Management		100.0														
Samsung Eelectronics Service																
Miracom													0.5			
Samsung Global Research																
Harman International Industries, Inc.																
Total	50.0	100.0	100.0	100.0	91.5	100.0	70.0	100.0	50.0	100.0	100.0	50.0	88.1	100.0	50.0	100.0

※ Percent of ownership as of December 31, 2023 based on common shares

Investee Investor	Cheil Fashion Retail	Miracom	Samsung Global Research	Samsung Lions	Samsung Life Financial Service	Samsung Fire & Marine Financial Service	Samwoo Architects & Engineers	Seoul Lakeside CC	SECUI	CVnet	SHP Corporation	Harman International Korea	Human TSS	Stellarforest	Mirero System
Samsung C&T Corporation	100.0		1.0				100.0	100.0	8.7	40.1					
Samsung BioLogics															
Samsung Life Insurance			14.8		100.0										
Samsung SDI			29.6												
Samsung SDS		83.6							56.5	9.4					
Samsung Electro-mechanics			23.8												
Samsung Electronics			29.8											100.0	
Samsung Heavy Industries			1.0												

Investee Investor	Cheil Fashion Retail	Miracom	Samsung Global Research	Samsung Lions	Samsung Life Financial Service	Samsung Fire & Marine Financial Service	Samwoo Architects & Engineers	Seoul Lakeside CC	SECUI	CVnet	SHP Corporation	Harman International Korea	Human TSS	Stellarforest	Mirero System
Samsung Securities.															
Samsung Card															
Samsung Fire & Marine Insurance						100.0									
S1 Corporation		0.6											100.0		
Cheil Worldwide		5.4		67.5											
Hotel Shilla											100.0				
SDC															
Samsung Asset Management															
Samsung Eelectronics Service															
Miracom															
Samsung Global Research															
Harman International Industries, Inc.												100.0			
Total	100.0	89.6	100.0	67.5	100.0	100.0	100.0	100.0	65.2	49.5	100.0	100.0	100.0	100.0	0.0

※ Percent of ownership as of December 31, 2023 based on common shares

2) Overseas

Investor	Investee	Ownership
Samwoo Architects & Engineers	SAMOO AUSTIN INC	100.0
Samwoo Architects & Engineers	SAMOO HU Designer and Engineering Services Limited	100.0
Samwoo Architects & Engineers	SAMOO DESIGNERS & ENGINEERS INDIA PRIVATE LIMITED	100.0
Samwoo Architects & Engineers	SAMOO (KL) SDN. BHD.	100.0
Samwoo Architects & Engineers	SAMOO Design Consulting Co.,Ltd	100.0
Samsung C&T America Inc.	Samsung Green repower, LLC	100.0
Samsung C&T America Inc.	Samsung Solar Construction Inc.	100.0
Samsung C&T America Inc.	QSSC, S.A. de C.V.	20.0
Samsung C&T America Inc.	Samsung Solar Energy LLC	100.0

Investor	Investee	Ownership
Samsung C&T America Inc.	Equipment Trading Solutions Group, LLC	70.0
Samsung Renewable Energy Inc.	SP Armow Wind Ontario LP	50.0
Samsung Renewable Energy Inc.	SRE GRW EPC GP Inc.	100.0
Samsung Renewable Energy Inc.	SRE GRW EPC LP	100.0
Samsung Renewable Energy Inc.	SRE SKW EPC GP Inc.	100.0
Samsung Renewable Energy Inc.	SRE SKW EPC LP	100.0
Samsung Renewable Energy Inc.	SRE WIND PA GP INC.	100.0
Samsung Renewable Energy Inc.	SRE WIND PA LP	100.0
Samsung Renewable Energy Inc.	SRE GRS Holdings GP Inc.	100.0
Samsung Renewable Energy Inc.	SRE GRS Holdings LP	100.0
Samsung Renewable Energy Inc.	SRE K2 EPC GP Inc.	100.0
Samsung Renewable Energy Inc.	SRE K2 EPC LP	100.0
Samsung Renewable Energy Inc.	SRE KS HOLDINGS GP INC.	100.0
Samsung Renewable Energy Inc.	SRE KS HOLDINGS LP	100.0
Samsung Renewable Energy Inc.	SP Belle River Wind LP	42.5
Samsung Renewable Energy Inc.	SRE Armow EPC GP Inc.	100.0
Samsung Renewable Energy Inc.	SRE Armow EPC LP	100.0
Samsung Renewable Energy Inc.	North Kent Wind 1 LP	35.0
Samsung Renewable Energy Inc.	SRE Wind GP Holding Inc.	100.0
Samsung Renewable Energy Inc.	South Kent Wind LP Inc.	50.0
Samsung Renewable Energy Inc.	Grand Renewable Wind LP Inc.	45.0
Samsung Renewable Energy Inc.	SRE North Kent 2 LP Holdings LP	100.0
Samsung Renewable Energy Inc.	SRE Solar Development GP Inc.	100.0
Samsung Renewable Energy Inc.	SRE Solar Development LP	100.0
Samsung Renewable Energy Inc.	SRE Windsor Holdings GP Inc.	100.0
Samsung Renewable Energy Inc.	SRE Southgate Holdings GP Inc.	100.0
Samsung Renewable Energy Inc.	SRE Solar Construction Management GP Inc.	100.0
Samsung Renewable Energy Inc.	SRE Solar Construction Management LP	100.0
Samsung Renewable Energy Inc.	SRE BRW EPC GP INC.	100.0
Samsung Renewable Energy Inc.	SRE BRW EPC LP	100.0
Samsung Renewable Energy Inc.	SRE North Kent 1 GP Holdings Inc	100.0
Samsung Renewable Energy Inc.	SRE North Kent 2 GP Holdings Inc	100.0
Samsung Renewable Energy Inc.	SRE Belle River GP Holdings Inc	100.0
Samsung Renewable Energy Inc.	SRE NK1 EPC GP Inc	100.0
Samsung Renewable Energy Inc.	SRE NK1 EPC LP	100.0
Samsung Renewable Energy Inc.	SRE Summerside Construction GP Inc.	100.0
Samsung Renewable Energy Inc.	SRE Summerside Construction LP	100.0
Samsung Green repower, LLC	Monument Power, LLC	100.0
SP Armow Wind Ontario GP Inc	SP Armow Wind Ontario LP	0.0
Samsung C&T Oil & Gas Parallel Corp.	PLL Holdings LLC	83.6
SRE GRW EPC GP Inc.	SRE GRW EPC LP	0.0
SRE SKW EPC GP Inc.	SRE SKW EPC LP	0.0
SRE WIND PA GP INC.	SRE WIND PA LP	0.0
SRE GRS Holdings GP Inc.	Grand Renewable Solar GP Inc.	50.0
SRE GRS Holdings GP Inc.	SRE GRS Holdings LP	0.0
SRE K2 EPC GP Inc.	SRE K2 EPC LP	0.0
SRE KS HOLDINGS GP INC.	KINGSTON SOLAR GP INC.	50.0
SRE KS HOLDINGS GP INC.	SRE KS HOLDINGS LP	0.0
SP Belle River Wind GP Inc	SP Belle River Wind LP	0.0

Investor	Investee	Ownership
SRE Armow EPC GP Inc.	SRE Armow EPC LP	0.0
SRE Wind GP Holding Inc.	SP Armow Wind Ontario GP Inc	50.0
SRE Wind GP Holding Inc.	South Kent Wind GP Inc.	50.0
SRE Wind GP Holding Inc.	Grand Renewable Wind GP Inc.	50.0
South Kent Wind GP Inc.	South Kent Wind LP Inc.	0.0
Grand Renewable Wind GP Inc.	Grand Renewable Wind LP Inc.	0.0
North Kent Wind 1 GP Inc	North Kent Wind 1 LP	0.0
SRE Solar Development GP Inc.	SRE Solar Development LP	0.0
SRE Solar Construction Management GP Inc.	SRE Solar Construction Management LP	0.0
SRE BRW EPC GP INC.	SRE BRW EPC LP	0.0
SRE North Kent 1 GP Holdings Inc	North Kent Wind 1 GP Inc	50.0
SRE North Kent 2 GP Holdings Inc	SRE North Kent 2 LP Holdings LP	0.0
SRE Belle River GP Holdings Inc	SP Belle River Wind GP Inc	50.0
SRE NK1 EPC GP Inc	SRE NK1 EPC LP	0.0
SRE Summerside Construction GP Inc.	SRE Summerside Construction LP	0.0
Samsung Solar Energy LLC	Samsung Solar Energy 1 LLC	100.0
Samsung Solar Energy LLC	Samsung Solar Energy 2 LLC	100.0
Samsung Solar Energy LLC	Samsung Solar Energy 3, LLC	100.0
Samsung Solar Energy 1 LLC	CS SOLAR LLC	50.0
Samsung Solar Energy 2 LLC	5S ENERGY HOLDINGS, LLC	50.0
Samsung C&T Deutschland GmbH	SungEel Recycling Park Thuringen GmbH	50.0
Samsung C&T Deutschland GmbH	POSS-SLPC, S.R.O	20.0
Samsung C&T Deutschland GmbH	Solluce Romania 1 B.V.	20.0
Samsung C&T Deutschland GmbH	S.C. Otelinox S.A	99.9
Samsung C&T Malaysia SDN. BHD	WARIS GIGIH ENGINEERING AND TECHNOLOGY SDN. BHD.	70.0
Samsung C&T Singapore Pte., Ltd.	Samsung Chemtech Vina LLC	48.3
Samsung C&T Singapore Pte., Ltd.	Samsung C&T Thailand Co., Ltd	0.2
Samsung C&T Singapore Pte., Ltd.	Malaysia Samsung Steel Center Sdn.Bhd	30.0
Samsung C&T Singapore Pte., Ltd.	S&G Biofuel PTE.LTD	12.6
S&G Biofuel PTE.LTD	PT. Gandaerah Hendana	95.0
S&G Biofuel PTE.LTD	PT. Inecda	95.0
Vista Contracting and Investment Global Pte. Ltd.	VISTA CONTRACTING AND DEVELOPMENT BANGLADESH LTD.	100.0
Vista Contracting and Investment Global Pte. Ltd.	Vista NEXT Limited	51.0
Vista Contracting and Investment Global Pte. Ltd.	WELVISTA COMPANY LIMITED	30.0
CHEIL HOLDING INC.	SAMSUNG CONST. CO. PHILS.	75.0
Samsung C&T Hongkong Ltd.	Samsung C&T Thailand Co., Ltd	6.8
Samsung C&T Hongkong Ltd.	SAMSUNG TRADING (SHANGHAI) CO., LTD	100.0
Samsung C&T Hongkong Ltd.	Samsung Precision Stainless Steel(pinghu) Co.,Ltd.	45.0
Samsung Electronics	Samsung Japan Corporation	100.0
Samsung Electronics	Samsung R&D Institute Japan Co. Ltd.	100.0
Samsung Electronics	Samsung Electronics America, Inc.	100.0
Samsung Electronics	Samsung Electronics Canada, Inc.	100.0
Samsung Electronics	Samsung Electronics Mexico S.A. De C.V.	63.6
Samsung Electronics	Samsung Electronics Ltd.	100.0
Samsung Electronics	Samsung Electronics (UK) Ltd.	100.0
Samsung Electronics	Samsung Electronics Holding GmbH	100.0
Samsung Electronics	Samsung Electronics Iberia, S.A.	100.0
Samsung Electronics	Samsung Electronics France S.A.S	100.0
Samsung Electronics	Samsung Electronics Hungarian Private Co. Ltd.	100.0

Investor	Investee	Ownership
Samsung Electronics	Samsung Electronics Italia S.P.A.	100.0
Samsung Electronics	Samsung Electronics Europe Logistics B.V.	100.0
Samsung Electronics	Samsung Electronics Benelux B.V.	100.0
Samsung Electronics	Samsung Electronics Overseas B.V.	100.0
Samsung Electronics	Samsung Electronics Polska, SP.Zo.o	100.0
Samsung Electronics	Samsung Electronics Portuguesa, Unipessoal, Lda.	100.0
Samsung Electronics	Samsung Electronics Nordic Aktiebolag	100.0
Samsung Electronics	Samsung Electronics Austria GmbH	100.0
Samsung Electronics	Samsung Electronics Slovakia s.r.o	55.7
Samsung Electronics	Samsung Electronics Europe Holding Cooperatief U.A.	100.0
Samsung Electronics	Samsung Electronics Display (M) Sdn. Bhd.	75.0
Samsung Electronics	Samsung Electronics (M) Sdn. Bhd.	100.0
Samsung Electronics	Samsung Vina Electronics Co., Ltd.	100.0
Samsung Electronics	Samsung Asia Pte. Ltd.	100.0
Samsung Electronics	Samsung India Electronics Private Ltd.	100.0
Samsung Electronics	Samsung R&D Institute India-Bangalore Private Limited	100.0
Samsung Electronics	Samsung Electronics Australia Pty. Ltd.	100.0
Samsung Electronics	PT Samsung Electronics Indonesia	100.0
Samsung Electronics	Thai Samsung Electronics Co., Ltd.	91.8
Samsung Electronics	Samsung Malaysia Electronics (SME) Sdn. Bhd.	100.0
Samsung Electronics	Samsung Electronics Hong Kong Co., Ltd.	100.0
Samsung Electronics	Suzhou Samsung Electronics Co., Ltd.	69.1
Samsung Electronics	Samsung (CHINA) Investment Co., Ltd.	100.0
Samsung Electronics	Samsung Electronics Suzhou Semiconductor Co., Ltd.	100.0
Samsung Electronics	Tianjin Samsung Electronics Co., Ltd.	48.2
Samsung Electronics	Samsung Electronics Taiwan Co., Ltd.	100.0
Samsung Electronics	Tianjin Samsung Telecom Technology Co., Ltd.	90.0
Samsung Electronics	Shanghai Samsung Semiconductor Co., Ltd.	100.0
Samsung Electronics	Samsung Electronics Suzhou Computer Co., Ltd.	73.7
Samsung Electronics	Samsung Semiconductor (China) R&D Co., Ltd.	100.0
Samsung Electronics	Samsung (China) Semiconductor Co., Ltd.	100.0
Samsung Electronics	Samsung SemiConductor Xian Co., Ltd.	100.0
Samsung Electronics	Samsung Gulf Electronics Co., Ltd.	100.0
Samsung Electronics	Samsung Electronics Egypt S.A.E	0.1
Samsung Electronics	Samsung Electronics South Africa(Pty) Ltd.	100.0
Samsung Electronics	Samsung Electronics Latinoamerica(Zona Libre), S. A.	100.0
Samsung Electronics	Samsung Eletronica da Amazonia Ltda.	87.0
Samsung Electronics	Samsung Electronics Argentina S.A.	98.0
Samsung Electronics	Samsung Electronics Chile Limitada	4.1
Samsung Electronics	Samsung Electronics Rus Company LLC	100.0
Samsung Electronics	Samsung Electronics Rus Kaluga LLC	100.0
Samsung Electronics	Tianjin Samsung LED Co., Ltd.	100.0
Samsung Biologics	Samsung Biologics America, Inc.	100.0
Samsung BioEpis	Samsung Bioepis United States Inc.	100.0
Samsung BioEpis	SAMSUNG BIOEPIS UK LIMITED	100.0
Samsung BioEpis	Samsung Bioepis NL B.V.	100.0
Samsung BioEpis	Samsung Bioepis CH GmbH	100.0
Samsung BioEpis	Samsung Bioepis PL Sp z o.o.	100.0
Samsung BioEpis	SAMSUNG BIOEPIS AU PTY LTD	100.0

Investor	Investee	Ownership
Samsung BioEpis	SAMSUNG BIOEPIS NZ LIMITED	100.0
Samsung BioEpis	Samsung Bioepis TW Limited	100.0
Samsung BioEpis	Samsung Bioepis HK Limited	100.0
Samsung BioEpis	SAMSUNG BIOEPIS IL LTD	100.0
Samsung BioEpis	SAMSUNG BIOEPIS BR PHARMACEUTICAL LTDA	100.0
Samsung Display	Intellectual Keystone Technology LLC	41.9
Samsung Display	Samsung Display America Holdings, Inc	100.0
Samsung Display	Samsung Display Slovakia, s.r.o., v likvidácii	100.0
Samsung Display	Samsung Display Vietnam Co., Ltd.	100.0
Samsung Display	Samsung Display Noida Private Limited	100.0
Samsung Display	Samsung Display Dongguan Co., Ltd.	100.0
Samsung Display	Samsung Display Tianjin Co., Ltd.	95.0
Samsung Display	Novaled GmbH	9.9
SEMES	SEMES America, Inc.	100.0
SEMES	SEMES (XIAN) Co., Ltd.	100.0
Samsung Electronics America, Inc.	NeuroLogica Corp.	100.0
Samsung Electronics America, Inc.	Samsung HVAC America, LLC	100.0
Samsung Electronics America, Inc.	SmartThings, Inc.	100.0
Samsung Electronics America, Inc.	Samsung Oak Holdings, Inc.	100.0
Samsung Electronics America, Inc.	Joyent, Inc.	100.0
Samsung Electronics America, Inc.	TeleWorld Solutions, Inc.	100.0
Samsung Electronics America, Inc.	Samsung Semiconductor, Inc.	100.0
Samsung Electronics America, Inc.	Samsung Research America, Inc	100.0
Samsung Electronics America, Inc.	Samsung Electronics Home Appliances America, LLC	100.0
Samsung Electronics America, Inc.	Samsung International, Inc.	100.0
Samsung Electronics America, Inc.	Harman International Industries, Inc.	100.0
Samsung Semiconductor, Inc.	Samsung Federal, Inc.	100.0
Samsung Semiconductor, Inc.	Samsung Austin Semiconductor LLC.	100.0
Samsung Electronics Canada, Inc.	AdGear Technologies Inc.	100.0
Samsung Research America, Inc	SAMSUNG NEXT LLC	100.0
SAMSUNG NEXT LLC	SAMSUNG NEXT FUND LLC	100.0
Samsung International, Inc.	Samsung Mexicana S.A. de C.V	100.0
Samsung Electronics Mexico S.A. De C.V.	Samsung Electronics Digital Appliance Mexico, SA de CV	100.0
Samsung Display America Holdings, Inc	eMagin Corporation	100.0
Harman International Industries, Inc.	Harman International Japan Co., Ltd.	100.0
Harman International Industries, Inc.	Harman International Industries Canada Ltd.	100.0
Harman International Industries, Inc.	Harman Becker Automotive Systems, Inc.	100.0
Harman International Industries, Inc.	Harman Professional, Inc.	100.0
Harman International Industries, Inc.	Harman Connected Services, Inc.	100.0
Harman International Industries, Inc.	Harman Financial Group LLC	100.0
Harman International Industries, Inc.	Roon Labs, LLC	100.0
Harman International Industries, Inc.	Harman Belgium SA	100.0
Harman International Industries, Inc.	Harman France SNC	100.0
Harman International Industries, Inc.	Red Bend Software SAS	100.0
Harman International Industries, Inc.	Harman Inc. & Co. KG	66.0
Harman International Industries, Inc.	Harman KG Holding, LLC	100.0
Harman International Industries, Inc.	Harman Becker Automotive Systems Italy S.R.L.	100.0
Harman International Industries, Inc.	Harman Industries Holdings Mauritius Ltd.	100.0
Harman International Industries, Inc.	Harman International Mexico, S. de R.L. de C.V.	99.9

Investor	Investee	Ownership
Harman Becker Automotive Systems, Inc.	Harman International Estonia OU	100.0
Harman Professional, Inc.	Harman Singapore Pte. Ltd.	100.0
Harman Professional, Inc.	Harman da Amazonia Industria Eletronica e Participacoes Ltda.	0.0
Harman Professional, Inc.	Harman do Brasil Industria Eletronica e Participacoes Ltda.	0.0
Harman Connected Services, Inc.	Harman Connected Services Engineering Corp.	100.0
Harman Connected Services, Inc.	Harman Connected Services AB.	100.0
Harman Connected Services, Inc.	Harman Connected Services UK Ltd.	100.0
Harman Connected Services, Inc.	Harman Connected Services Corp. India Pvt. Ltd.	1.6
Harman Connected Services, Inc.	Global Symphony Technology Group Private Ltd.	100.0
Harman Financial Group LLC	Harman International (India) Private Limited	0.0
Harman Financial Group LLC	Harman International Mexico, S. de R.L. de C.V.	0.1
Harman Financial Group LLC	Harman de Mexico, S. de R.L. de C.V.	0.0
Samsung Electronics (UK) Ltd.	Samsung Semiconductor Europe Limited	100.0
Samsung Electronics Holding GmbH	Samsung Semiconductor Europe GmbH	100.0
Samsung Electronics Holding GmbH	Samsung Electronics GmbH	100.0
Samsung Electronics Hungarian Private Co. Ltd.	Samsung Electronics Czech and Slovak s.r.o.	31.4
Samsung Electronics Hungarian Private Co. Ltd.	Samsung Electronics Slovakia s.r.o	44.3
Samsung Electronics Benelux B.V.	Samsung Electronics Mexico S.A. De C.V.	36.4
Samsung Electronics Benelux B.V.	SAMSUNG ELECTRONICS BALTICS SIA	100.0
Samsung Electronics Benelux B.V.	Samsung Electronics West Africa Ltd.	100.0
Samsung Electronics Benelux B.V.	Samsung Electronics East Africa Ltd.	100.0
Samsung Electronics Benelux B.V.	Samsung Electronics Saudi Arabia Ltd.	100.0
Samsung Electronics Benelux B.V.	Samsung Electronics Egypt S.A.E	99.9
Samsung Electronics Benelux B.V.	Samsung Electronics Israel Ltd.	100.0
Samsung Electronics Benelux B.V.	Samsung Electronics Tunisia S.A.R.L	99.0
Samsung Electronics Benelux B.V.	Samsung Electronics Pakistan(Private) Ltd.	100.0
Samsung Electronics Benelux B.V.	Samsung Electronics South Africa Production (pty) Ltd.	100.0
Samsung Electronics Benelux B.V.	Samsung Electronics Turkiye	100.0
Samsung Electronics Benelux B.V.	Samsung Electronics Industry and Commerce Ltd.	100.0
Samsung Electronics Benelux B.V.	Samsung Semiconductor Israel R&D Center, Ltd.	100.0
Samsung Electronics Benelux B.V.	Samsung Electronics Levant Co.,Ltd.	100.0
Samsung Electronics Benelux B.V.	Samsung Electronics Maghreb Arab	100.0
Samsung Electronics Benelux B.V.	Samsung Electronics Venezuela, C.A.	100.0
Samsung Electronics Benelux B.V.	Samsung Eletronica da Amazonia Ltda.	13.0
Samsung Electronics Benelux B.V.	Samsung Electronics Chile Limitada	95.9
Samsung Electronics Benelux B.V.	Samsung Electronics Peru S.A.C.	100.0
Samsung Electronics Benelux B.V.	Samsung Electronics Ukraine Company LLC	100.0
Samsung Electronics Benelux B.V.	Samsung R&D Institute Ukraine	100.0
Samsung Electronics Benelux B.V.	Samsung R&D Institute Rus LLC	100.0
Samsung Electronics Benelux B.V.	Samsung Electronics Central Eurasia LLP	100.0
Samsung Electronics Benelux B.V.	Samsung Electronics Caucasus Co. Ltd	100.0
Samsung Electronics Benelux B.V.	Samsung Electronics Uzbekistan FC LLC	100.0
Samsung Electronics Benelux B.V.	Corephotonics Ltd.	100.0
Samsung Electronics Nordic Aktiebolag	Samsung Nanoradio Design Center	100.0
AKG Acoustics GmbH	Harman Professional Denmark ApS	100.0
AKG Acoustics GmbH	Studer Professional Audio GmbH	100.0
Harman Professional Denmark ApS	Martin Professional Japan Ltd.	40.0
Harman Becker Automotive Systems GmbH	Harman International Romania SRL	0.0
Harman Becker Automotive Systems GmbH	Apostera UA, LLC	100.0

Investor	Investee	Ownership
Harman Holding GmbH & Co. KG	Harman Becker Automotive Systems GmbH	100.0
Harman Holding GmbH & Co. KG	Harman Deutschland GmbH	100.0
Harman Holding GmbH & Co. KG	Harman Becker Automotive Systems Manufacturing Kft	100.0
Harman Holding GmbH & Co. KG	Harman RUS CIS LLC	100.0
Harman Inc. & Co. KG	Harman Holding GmbH & Co. KG	100.0
Harman Inc. & Co. KG	Harman Management GmbH	100.0
Harman Inc. & Co. KG	Harman Hungary Financing Ltd.	100.0
Harman Connected Services GmbH	Harman Connected Services OOO	100.0
Harman KG Holding, LLC	Harman Inc. & Co. KG	34.0
Harman Becker Automotive Systems Manufacturing Kft	Harman Professional Kft	100.0
Harman Becker Automotive Systems Manufacturing Kft	Harman Consumer Nederland B.V.	100.0
Harman Becker Automotive Systems Manufacturing Kft	Harman International Romania SRL	100.0
Harman Becker Automotive Systems Manufacturing Kft	Red Bend Ltd.	100.0
Harman Becker Automotive Systems Manufacturing Kft	Harman do Brasil Industria Eletronica e Participacoes Ltda.	100.0
Harman Hungary Financing Ltd.	Harman International Industries Limited	100.0
Harman Consumer Nederland B.V.	AKG Acoustics GmbH	100.0
Harman Consumer Nederland B.V.	Harman Audio Iberia Espana Sociedad Limitada	100.0
Harman Consumer Nederland B.V.	Harman Holding Limited	100.0
Harman Audio Iberia Espana Sociedad Limitada	Harman France SNC	0.0
Harman Connected Services AB.	Harman Finland Oy	100.0
Harman Connected Services AB.	Harman Connected Services GmbH	100.0
Harman Connected Services AB.	Harman Connected Services Poland Sp.zoo	100.0
Harman Connected Services AB.	Harman Connected Services Solutions (Chengdu) Co., Ltd.	100.0
Harman International Industries Limited	Harman International Industries PTY Ltd.	100.0
Harman International Industries Limited	Harman de Mexico, S. de R.L. de C.V.	100.0
Harman Connected Services UK Ltd.	Harman Connected Services Morocco	100.0
Samsung Electronics Austria GmbH	Samsung Electronics Switzerland GmbH	100.0
Samsung Electronics Europe Holding Cooperatief U.A.	Samsung Electronics Czech and Slovak s.r.o.	68.6
Samsung Electronics Europe Holding Cooperatief U.A.	Samsung Electronics Romania LLC	100.0
Samsung Electronics Europe Holding Cooperatief U.A.	SAMSUNG Zhilabs, S.L.	100.0
Samsung Electronics Europe Holding Cooperatief U.A.	Porta Nuova Varesine Building 2 S.r.l.	49.0
Samsung Electronics Europe Holding Cooperatief U.A.	Samsung Electronics Poland Manufacturing SP.Zo.o	100.0
Samsung Electronics Europe Holding Cooperatief U.A.	Samsung Electronics Greece S.M.S.A	100.0
Samsung Electronics Europe Holding Cooperatief U.A.	Samsung Electronics Air Conditioner Europe B.V.	100.0
Samsung Electronics Europe Holding Cooperatief U.A.	FOODIENT LTD.	100.0
Samsung Electronics Europe Holding Cooperatief U.A.	Samsung Denmark Research Center ApS	100.0
Samsung Electronics Europe Holding Cooperatief U.A.	Samsung Cambridge Solution Centre Limited	100.0
Samsung Electronics Europe Holding Cooperatief U.A.	Novald GmbH	40.0
Samsung Electronics Singapore Pte. Ltd.	Samsung Electronics Display (M) Sdn. Bhd.	25.0
Samsung Asia Pte. Ltd.	Samsung Electronics Japan Co., Ltd.	100.0
Samsung Asia Pte. Ltd.	Samsung Electronics Singapore Pte. Ltd.	100.0
Samsung Asia Pte. Ltd.	Samsung Electronics New Zealand Limited	100.0
Samsung Asia Pte. Ltd.	Samsung Electronics Philippines Corporation	100.0
Samsung Asia Pte. Ltd.	Samsung R&D Institute BanglaDesh Limited	100.0
Samsung Asia Pte. Ltd.	Samsung Electronics Vietnam Co., Ltd.	100.0
Samsung Asia Pte. Ltd.	Samsung Electronics Vietnam THAINGUYEN Co., Ltd.	100.0
Samsung Asia Pte. Ltd.	Samsung Electronics HCMC CE Complex Co., Ltd.	100.0
Samsung India Electronics Private Ltd.	Samsung Nepal Services Pvt, Ltd	100.0
Samsung India Electronics Private Ltd.	Red Brick Lane Marketing Solutions Pvt. Ltd.	100.0

Investor	Investee	Ownership
PT Samsung Electronics Indonesia	PT Samsung Telecommunications Indonesia	100.0
Thai Samsung Electronics Co., Ltd.	Laos Samsung Electronics Sole Co., Ltd	100.0
Samsung Electronics Hong Kong Co., Ltd.	iMarket Asia Co., Ltd.	42.0
Suzhou Samsung Electronics Co., Ltd.	Samsung Suzhou Electronics Export Co., Ltd.	100.0
Samsung (CHINA) Investment Co., Ltd.	Suzhou Samsung Electronics Co., Ltd.	19.2
Samsung (CHINA) Investment Co., Ltd.	Samsung Mobile R&D Center China-Guangzhou	100.0
Samsung (CHINA) Investment Co., Ltd.	Samsung R&D Institute China-Shenzhen	100.0
Samsung (CHINA) Investment Co., Ltd.	Tianjin Samsung Electronics Co., Ltd.	43.1
Samsung (CHINA) Investment Co., Ltd.	Beijing Samsung Telecom R&D Center	100.0
Samsung (CHINA) Investment Co., Ltd.	Samsung Electronics Suzhou Computer Co., Ltd.	26.3
Samsung (CHINA) Investment Co., Ltd.	Samsung Electronics China R&D Center	100.0
Harman International (China) Holdings Co., Ltd.	Harman (Suzhou) Audio and Infotainment Systems Co., Ltd.	100.0
Harman International (China) Holdings Co., Ltd.	Harman Technology (Shenzhen) Co., Ltd.	100.0
Harman International (China) Holdings Co., Ltd.	Harman (China) Technologies Co., Ltd.	100.0
Harman Holding Limited	Harman Commercial (Shanghai) Co., Ltd.	100.0
Harman Holding Limited	Harman International (China) Holdings Co., Ltd.	100.0
Harman Holding Limited	Harman Automotive Electronic Systems (Suzhou) Co., Ltd.	100.0
Samsung Gulf Electronics Co., Ltd.	Samsung Electronics Egypt S.A.E	0.1
Samsung Electronics Maghreb Arab	Samsung Electronics Tunisia S.A.R.L	1.0
Harman Industries Holdings Mauritius Ltd.	Harman International (India) Private Limited	100.0
Global Symphony Technology Group Private Ltd.	Harman Connected Services Corp. India Pvt. Ltd.	98.4
Samsung Electronics Latinoamerica(Zona Libre), S. A.	Samsung Electronics Latinoamerica Miami, Inc.	100.0
Samsung Electronics Latinoamerica(Zona Libre), S. A.	Samsung Electronica Colombia S.A.	100.0
Samsung Electronics Latinoamerica(Zona Libre), S. A.	Samsung Electronics Panama. S.A.	100.0
Samsung Eletronica da Amazonia Ltda.	Samsung Electronics Argentina S.A.	2.0
Harman do Brasil Industria Eletronica e Participacoes Ltda.	Harman da Amazonia Industria Eletronica e Participacoes Ltda.	100.0
Samsung Electronics Central Eurasia LLP	Samsung Electronics Caucasus Co. Ltd	0.0
Samsung SDI	Intellectual Keystone Technology LLC	41.0
Samsung SDI	Samsung SDI Japan Co., Ltd.	89.2
Samsung SDI	Samsung SDI America, Inc.	91.7
Samsung SDI	Samsung SDI Hungary., Zrt.	100.0
Samsung SDI	Samsung SDI Europe GmbH	100.0
Samsung SDI	Samsung SDI Battery Systems GmbH	100.0
Samsung SDI	Samsung SDI Vietnam Co., Ltd.	100.0
Samsung SDI	Samsung SDI Energy Malaysia Sdn, Bhd.	100.0
Samsung SDI	Samsung SDI India Private Limited	100.0
Samsung SDI	Samsung SDI(Hong Kong) Ltd.	97.6
Samsung SDI	Samsung SDI China Co., Ltd.	100.0
Samsung SDI	Samsung SDI-ARN (Xi'An) Power Battery Co., Ltd.	65.0
Samsung SDI	Samsung SDI (Tianjin) Battery Co.,Ltd.	80.0
Samsung SDI	STARPLUS ENERGY LLC.	51.0
Samsung SDI	Novaled GmbH	50.1
Samsung SDI	SAMSUNG SDI WUXI CO.,LTD.	100.0
Samsung SDI	iMarket Asia Co., Ltd.	8.7
Samsung SDI(Hong Kong) Ltd.	Samsung SDI India Private Limited	0.0
Samsung SDI(Hong Kong) Ltd.	Tianjin Samsung SDI Co., Ltd.	80.0
Samsung Electro-Mechanics	Samsung Electro-Mechanics Japan Co., Ltd.	100.0
Samsung Electro-Mechanics	Samsung Electro-Mechanics America, Inc.	100.0
Samsung Electro-Mechanics	Samsung Electro-Mechanics Mexico, S.A. de C.V.	100.0

Investor	Investee	Ownership
Samsung Electro-Mechanics	Samsung Electro-Mechanics GmbH	100.0
Samsung Electro-Mechanics	Samsung Electro-Mechanics Philippines, Corp.	100.0
Samsung Electro-Mechanics	Calamba Premier Realty Corporation	39.8
Samsung Electro-Mechanics	Samsung Electro-Mechanics Pte Ltd.	100.0
Samsung Electro-Mechanics	Samsung Electro-Mechanics Vietnam Co., Ltd.	100.0
Samsung Electro-Mechanics	Samsung Electro-Mechanics Software India Bangalore Private Limited	99.9
Samsung Electro-Mechanics	Tianjin Samsung Electro-Mechanics Co., Ltd.	81.8
Samsung Electro-Mechanics	Samsung High-Tech Electro-Mechanics(Tianjin) Co., Ltd.	95.0
Samsung Electro-Mechanics	Samsung Electro-Mechanics (Shenzhen) Co., Ltd.	100.0
Samsung Electro-Mechanics	Kunshan Samsung Electro-Mechanics Co., Ltd.	100.0
Samsung Electro-Mechanics	iMarket Asia Co., Ltd.	8.7
Samsung Electro-Mechanics America, Inc.	Samsung Electro-Mechanics Mexico, S.A. de C.V.	0.0
Calamba Premier Realty Corporation	Batino Realty Corporation	100.0
Samsung Electro-Mechanics Pte Ltd.	Samsung Electro-Mechanics Software India Bangalore Private Limited	0.1
Samsung Fire & Marine Insurance	Samsung Fire & Marine Management Corporation	100.0
Samsung Fire & Marine Insurance	SAMSUNG FIRE & MARINE INSURANCE COMPANY OF EUROPE LTD.	100.0
Samsung Fire & Marine Insurance	PT. Asuransi Samsung Tugu	70.0
Samsung Fire & Marine Insurance	SAMSUNG VINA INSURANCE COMPANY LIMITED	75.0
Samsung Fire & Marine Insurance	Samsung Reinsurance Pte. Ltd.	100.0
Samsung Fire & Marine Insurance	Samsung Property & Casualty Insurance Company(China), Ltd	37.0
Samsung Fire & Marine Insurance	Samsung Fire & Marine Insurance Management Middle East Limited	100.0
Samsung Heavy Industries Co.,Ltd.	Camellia Consulting Corporation	100.0
Samsung Heavy Industries Co.,Ltd.	Samsung Heavy Industries India Pvt.Ltd.	100.0
Samsung Heavy Industries Co.,Ltd.	SAMSUNG HEAVY INDUSTRIES (M) SDN.BHD	100.0
Samsung Heavy Industries Co.,Ltd.	Samsung Heavy Industries(Rongcheng) Co., Ltd	100.0
Samsung Heavy Industries Co.,Ltd.	SAMSUNG HEAVY INDUSTRIES NIGERIA LIMITED	100.0
Samsung Heavy Industries Co.,Ltd.	Samsung Heavy Industries Mozambique LDA	100.0
Samsung Heavy Industries Co.,Ltd.	Samsung Heavy Industries Rus LLC	100.0
SAMSUNG HEAVY INDUSTRIES NIGERIA LIMITED	SHI - MCI FZE	70.0
Samsung Life Insurance	Porta Nuova Varesine Building 2 S.r.l.	51.0
Samsung Life Insurance	Samsung Life Insurance (Thailand) Public Co., Ltd	48.9
Samsung Life Insurance	Beijing Samsung Real Estate Co.. Ltd	90.0
Samsung Asset Management	Samsung Asset Management (New York), Inc.	100.0
Samsung Asset Management	Samsung Global SME Private Equity Manager Fund Co., Ltd.	100.0
Samsung Asset Management	Samsung Asset Management U.S. Holdings, Inc.	100.0
Samsung Asset Management	Samsung Private Equity Fund 2022 GP, Ltd.	100.0
Samsung Asset Management	Samsung Co-Investment 2021 GP, Ltd.	100.0
Samsung Asset Management	Samsung Asset Management(London) Ltd.	100.0
Samsung Asset Management	Samsung Private Equity Manager I Co., Ltd.	100.0
Samsung Asset Management	Samsung Asset Management (Hong Kong) Ltd.	100.0
Samsung C&T Corporation	Samsung C&T Japan Corporation	100.0
Samsung C&T Corporation	Samsung C&T America Inc.	100.0
Samsung C&T Corporation	Samsung E&C America, INC.	100.0
Samsung C&T Corporation	Samsung Renewable Energy Inc.	100.0
Samsung C&T Corporation	QSSC, S.A. de C.V.	80.0
Samsung C&T Corporation	Samsung C&T Oil & Gas Parallel Corp.	100.0
Samsung C&T Corporation	Samsung C&T Lima S.A.C.	100.0
Samsung C&T Corporation	Samsung C&T Deutschland GmbH	100.0
Samsung C&T Corporation	Samsung C&T U.K. Ltd.	100.0

Investor	Investee	Ownership
Samsung C&T Corporation	Samsung C&T ECUK Limited	100.0
Samsung C&T Corporation	Whesoe engineering Limited	100.0
Samsung C&T Corporation	POSS-SLPC, S.R.O	50.0
Samsung C&T Corporation	Solluce Romania 1 B.V.	80.0
Samsung C&T Corporation	SAM investment Manzanilo.B.V	53.3
Samsung C&T Corporation	Samsung C&T Corporation Poland LLC	100.0
Samsung C&T Corporation	Samsung C&T (KL) Sdn.,Bhd.	100.0
Samsung C&T Corporation	Samsung C&T Malaysia SDN. BHD	100.0
Samsung C&T Corporation	Erdsam Co., Ltd.	100.0
Samsung C&T Corporation	Samsung Chemtech Vina LLC	51.7
Samsung C&T Corporation	Samsung C&T Thailand Co., Ltd	93.0
Samsung C&T Corporation	Samsung C&T India Private Limited	100.0
Samsung C&T Corporation	Samsung C&T Corporation India Private Limited	100.0
Samsung C&T Corporation	Malaysia Samsung Steel Center Sdn.Bhd	70.0
Samsung C&T Corporation	Samsung C&T Singapore Pte., Ltd.	100.0
Samsung C&T Corporation	S&G Biofuel PTE.LTD	50.5
Samsung C&T Corporation	SAMSUNG C&T Mongolia LLC.	70.0
Samsung C&T Corporation	Samsung C&T Eng.&Const. Mongolia LLC.	100.0
Samsung C&T Corporation	S&WOO CONSTRUCTION PHILIPPINES,INC.	100.0
Samsung C&T Corporation	VSSC STEEL CENTER LIMITED LIABILITY COMPANY	70.0
Samsung C&T Corporation	Vista Contracting and Investment Global Pte. Ltd.	100.0
Samsung C&T Corporation	SAMSUNG CONST. CO. PHILS.	25.0
Samsung C&T Corporation	CHEIL HOLDING INC.	40.0
Samsung C&T Corporation	Samsung C&T Renewable Energy Australia Pty Ltd	100.0
Samsung C&T Corporation	Samsung C&T Hongkong Ltd.	100.0
Samsung C&T Corporation	Samsung C&T Taiwan Co., Ltd.	100.0
Samsung C&T Corporation	Samsung Precision Stainless Steel(pinghu) Co.,Ltd.	55.0
Samsung C&T Corporation	SAMSUNG C&T (SHANGHAI) CO., LTD.	100.0
Samsung C&T Corporation	Samsung C&T (Xi'an) Co., Ltd.	100.0
Samsung C&T Corporation	WARIS GIGIH ENGINEERING AND TECHNOLOGY SDN. BHD.	30.0
Samsung C&T Corporation	SAMSUNG C&T CORPORATION SAUDI ARABIA	100.0
Samsung C&T Corporation	SAM Gulf Investment Limited	100.0
Samsung C&T Corporation	Samsung C&T Chile Copper SpA	100.0
Samsung C&T Corporation	SCNT Power Kelar Inversiones Limitada	100.0
Samsung C&T Corporation	Samsung C&T Corporation Rus LLC	100.0
Samsung C&T Corporation	Samsung SDI America, Inc.	8.3
Samsung C&T Corporation	Samsung SDI(Hong Kong) Ltd.	2.4
Samsung C&T Corporation	Beijing Samsung Real Estate Co.. Ltd	10.0
Samsung C&T Corporation	CHEIL INDUSTRIES ITALY SRL	100.0
Samsung C&T Corporation	Samsung Fashion Trading Co. ,Ltd	100.0
Samsung C&T Corporation	SAMSUNG C&T CORPORATION VIETNAM CO., LTD	100.0
Samsung C&T Corporation	Samsung C&T Corporation UEM Construction JV Sdn Bhd	60.0
Samsung Welstory	WELSTORY VIETNAM COMPANY LIMITED	100.0
Samsung Welstory	Shanghai Ever-Hongjun Business Mgt Service Co.,LTD	85.0
Samsung Welstory	Shanghai Welstory Food Company Limited	81.6
MULTICAMPUS	LANGUAGE TESTING INTERNATIONAL, INC.	82.4
WELSTORY VIETNAM COMPANY LIMITED	WELVISTA COMPANY LIMITED	70.0
Pengtai Greater China Company Limited	PENGTAI CHINA CO.,LTD.	100.0
Pengtai Greater China Company Limited	PengTai Taiwan Co., Ltd.	100.0

Investor	Investee	Ownership
PENGTAI CHINA CO.,LTD.	PENGTAI E-COMMERCE CO.,LTD	100.0
PENGTAI CHINA CO.,LTD.	Beijing Pengtai Borui E-commerce Co.,Ltd.	100.0
PENGTAI INTERACTIVE ADVERTISING CO.,LTD	Medialytics Inc.	100.0
PENGTAI INTERACTIVE ADVERTISING CO.,LTD	Beijing Pengtai Baozun E-commerce Co., Ltd.	51.0
iMarket Asia Co., Ltd.	iMarket China Co., Ltd.	80.0
Samsung Securities	Samsung Securities (America), Inc.	100.0
Samsung Securities	Samsung Securities (Europe) Limited.	100.0
Samsung Securities	Samsung Securities (Asia) Limited.	100.0
Samsung SDS	iMarket Asia Co., Ltd.	40.6
Samsung SDS	Samsung SDS America, Inc.	100.0
Samsung SDS	SAMSUNG SDS GSCL Canada., Ltd.	100.0
Samsung SDS	Samsung SDS Europe, Ltd.	100.0
Samsung SDS	Samsung SDS Global SCL Hungary, Kft.	100.0
Samsung SDS	Samsung SDS Global SCL Slovakia, S.R.O.	100.0
Samsung SDS	Samsung SDS Global SCL Poland Sp. Z.o.o.	100.0
Samsung SDS	Samsung GSCL Sweden AB	100.0
Samsung SDS	Samsung SDS Global SCL France SAS	100.0
Samsung SDS	Samsung SDS Global SCL Italy S.R.L. A Socio Unico	100.0
Samsung SDS	Samsung SDS Global Supply Chain Logistics Spain S.L.U	100.0
Samsung SDS	Samsung SDS Global SCL Netherlands Cooperatief U.A.	100.0
Samsung SDS	Samsung SDS Global SCL Germany GmbH	100.0
Samsung SDS	Samsung SDS Global SCL Romania S.R.L	100.0
Samsung SDS	Samsung SDS Asia Pacific Pte, Ltd.	100.0
Samsung SDS	Samsung Data Systems India Private Limited	100.0
Samsung SDS	Samsung SDS Vietnam Co., Ltd.	100.0
Samsung SDS	PT. Samsung SDS Global SCL Indonesia	100.0
Samsung SDS	Samsung SDS Global SCL Philippines Co., Ltd.Inc.	100.0
Samsung SDS	Samsung SDS Global SCL Thailand Co.,Ltd	100.0
Samsung SDS	SAMSUNG SDS MALAYSIA SDN. BHD.	100.0
Samsung SDS	SAMSUNG SDS Global SCL Australia Pty.,Ltd.	100.0
Samsung SDS	SDS-ACUTECH CO., Ltd.	50.0
Samsung SDS	ALS SDS Joint Stock Company	51.0
Samsung SDS	SDS-MP Logistics Joint Stock Company	51.0
Samsung SDS	Samsung SDS China Co., Ltd.	100.0
Samsung SDS	Samsung SDS Global SCL Hong Kong Co., Ltd.	100.0
Samsung SDS	SAMSUNG SDS Global SCL Egypt	100.0
Samsung SDS	Samsung SDS Global SCL South Africa (PTY) Ltd.	100.0
Samsung SDS	Samsung SDS Global SCL Nakliyat ve Lojistik Anonim Sirketi	100.0
Samsung SDS	Samsung SDS Global Supply Chain Logistics Middle East DWC-LLC	100.0
Samsung SDS	Samsung SDS Latin America Solucoes Em Tecnologia Ltda.	99.7
Samsung SDS	INTE-SDS Logistics S.A. de C.V.	51.0
Samsung SDS	Samsung SDS Rus Limited Liability Company	100.0
Samsung SDS America, Inc.	Samsung SDS Mexico, S.A. DE C.V.	99.0
Samsung SDS America, Inc.	Samsung SDS Global SCL Panama S.A.	100.0
Samsung SDS America, Inc.	Samsung SDS Global SCL Chile Limitada	100.0
Samsung SDS America, Inc.	Samsung SDS Global SCL Peru S.A.C	100.0
Samsung SDS America, Inc.	Samsung SDS Global SCL Colombia S.A.S	100.0
Samsung SDS America, Inc.	Samsung SDS Latin America Solucoes Em Tecnologia Ltda.	0.3
Samsung SDS Europe, Ltd.	Samsung SDS Global SCL Netherlands Cooperatief U.A.	0.0

Investor	Investee	Ownership
Samsung SDS Global SCL Netherlands Cooperatief U.A.	Samsung SDS Global SCL Poland Sp. Z.o.o.	0.0
Samsung SDS Global SCL Netherlands Cooperatief U.A.	Samsung SDS Global SCL Romania S.R.L	0.0
Samsung SDS Global SCL Netherlands Cooperatief U.A.	Samsung SDS Rus Limited Liability Company	0.0
Samsung Engineering	Samsung Engineering America Inc.	100.0
Samsung Engineering	Samsung Project Management Inc.	100.0
Samsung Engineering	Samsung Engineering Hungary Ltd.	100.0
Samsung Engineering	Samsung Engineering Italy S.R.L.	100.0
Samsung Engineering	Samsung Engineering (Malaysia) SDN. BHD.	100.0
Samsung Engineering	PT Samsung Engineering Indonesia Co., Ltd.	100.0
Samsung Engineering	Samsung Engineering (Thailand) Co., Ltd.	81.0
Samsung Engineering	Samsung Engineering India Private Limited	100.0
Samsung Engineering	Samsung Engineering Vietnam Co., Ltd.	100.0
Samsung Engineering	Samsung Engineering Global Private Limited	100.0
Samsung Engineering	Samsung Engineering Construction(Shanghai) Co., Ltd	100.0
Samsung Engineering	Samsung Engineering Construction Xi' an Co., Ltd.	100.0
Samsung Engineering	Samsung Saudi Arabia Co., Ltd.	100.0
Samsung Engineering	Muharrag Wastewater Services Company W.L.L.	99.8
Samsung Engineering	Muharrag STP Company B.S.C.	6.6
Samsung Engineering	Muharrag Holding Company 1 Ltd.	65.0
Samsung Engineering	Samsung Ingenieria Mexico Construccion Y Operacion S.A. De C.V.	99.9
Samsung Engineering	Samsung Engineering Trinidad Co., Ltd.	100.0
Samsung Engineering	Samsung Ingenieria Manzanillo, S.A. De C.V.	99.9
Samsung Engineering	Grupo Samsung Ingenieria Mexico, S.A. De C.V.	100.0
Samsung Engineering	Samsung Ingenieria Energia S.A. De C.V.	100.0
Samsung Engineering	Samsung Engineering Bolivia S.A	100.0
Samsung Engineering	Samsung Ingenieria DUBA S.A. de C.V.	100.0
Samsung Engineering	Samsung Engineering Kazakhstan L.L.P.	100.0
Samsung Engineering America Inc.	SEA Construction, LLC	100.0
Samsung Engineering America Inc.	SEA Louisiana Construction, L.L.C.	100.0
Samsung Engineering (Malaysia) SDN. BHD.	Muharrag Wastewater Services Company W.L.L.	0.3
Samsung Engineering India Private Limited	Samsung Engineering Global Private Limited	0.0
Samsung Engineering India Private Limited	Samsung Saudi Arabia Co., Ltd.	0.0
Samsung Saudi Arabia Co., Ltd.	Samsung EPC Company Ltd.	75.0
Muharrag Holding Company 1 Ltd.	Muharrag Holding Company 2 Ltd.	100.0
Muharrag Holding Company 2 Ltd.	Muharrag STP Company B.S.C.	89.9
Samsung Ingenieria DUBA S.A. de C.V.	Asociados Constructores DBNR, S.A. de C.V.	49.0
S1 Corporation	S-1 CORPORATION HUNGARY LLC	100.0
S1 Corporation	S-1 CORPORATION VIETNAM CO., LTD	100.0
S1 Corporation	Samsung Beijing Security Systems	100.0
Cheil Worldwide	Pengtai Greater China Company Limited	98.8
Cheil Worldwide	PENGTAI INTERACTIVE ADVERTISING CO.,LTD	100.0
Cheil Worldwide	Cheil USA Inc.	100.0
Cheil Worldwide	Cheil Central America Inc.	100.0
Cheil Worldwide	Iris Worldwide Holdings Limited	100.0
Cheil Worldwide	CHEIL EUROPE LIMITED	100.0
Cheil Worldwide	Cheil Germany GmbH	100.0
Cheil Worldwide	Cheil France SAS	100.0
Cheil Worldwide	CHEIL SPAIN S.L	100.0
Cheil Worldwide	Cheil Benelux B.V.	100.0

Investor	Investee	Ownership
Cheil Worldwide	Cheil Nordic AB	100.0
Cheil Worldwide	Cheil India Private Limited	100.0
Cheil Worldwide	Cheil (Thailand) Ltd.	100.0
Cheil Worldwide	Cheil Singapore Pte. Ltd.	100.0
Cheil Worldwide	CHEIL VIETNAM COMPANY LIMITED	99.0
Cheil Worldwide	Cheil Integrated Marketing Philippines, Inc.	100.0
Cheil Worldwide	CHEIL MALAYSIA SDN. BHD.	100.0
Cheil Worldwide	Cheil New Zealand Limited	100.0
Cheil Worldwide	Cheil Worldwide Australia Pty Ltd	100.0
Cheil Worldwide	CHEIL CHINA	100.0
Cheil Worldwide	Cheil Hong Kong Ltd.	100.0
Cheil Worldwide	Caishu (Shanghai) Business Consulting Co., Ltd	100.0
Cheil Worldwide	Cheil MEA FZ-LLC	100.0
Cheil Worldwide	Cheil South Africa (Pty) Ltd	100.0
Cheil Worldwide	CHEIL KENYA LIMITED	99.0
Cheil Worldwide	Cheil Communications Nigeria Ltd.	99.0
Cheil Worldwide	Cheil Worldwide Inc./Jordan LLC.	100.0
Cheil Worldwide	Cheil Ghana Limited	100.0
Cheil Worldwide	Cheil Egypt LLC	99.9
Cheil Worldwide	Cheil Maghreb LLC	100.0
Cheil Worldwide	Cheil Brasil Comunicacoes Ltda.	100.0
Cheil Worldwide	Cheil Mexico, S.A. de C.V.	98.0
Cheil Worldwide	Cheil Chile SpA.	100.0
Cheil Worldwide	Cheil Peru S.A.C.	100.0
Cheil Worldwide	CHEIL ARGENTINA S.A.	98.0
Cheil Worldwide	Cheil Rus LLC	100.0
Cheil Worldwide	Cheil Ukraine LLC	100.0
Cheil Worldwide	Cheil Kazakhstan LLC	100.0
Hotel Shilla	Samsung Hospitality America Inc.	100.0
Hotel Shilla	Shilla Travel Retail Pte. Ltd.	100.0
Hotel Shilla	Samsung Shilla Business Service Beijing Co., Ltd.	100.0
Hotel Shilla	Shilla Travel Retail Hong Kong Limited	100.0
HDC Shilla Duty Free LTD	HDC SHILLA (SHANGHAI) CO., LTD	100.0
SBTM	Samsung Hospitality U.K. Ltd.	100.0
SBTM	Samsung Hospitality Europe GmbH	100.0
SBTM	SAMSUNG HOSPITALITY ROMANIA SRL	100.0
SBTM	Samsung Hospitality Vietnam Co., Ltd.	99.0
SBTM	Samsung Hospitality Philippines Inc.	100.0
SBTM	Samsung Hospitality India Private Limited	100.0
Samsung Venture Investment	Samsung Venture Investment (Shanghai) Co., Ltd.	100.0
Iris Americas, Inc.	Iris (USA) Inc.	100.0
Iris Americas, Inc.	Iris Atlanta, Inc.	100.0
Iris Americas, Inc.	89 Degrees, Inc.	100.0
Cheil USA Inc.	The Barbarian Group LLC	100.0
Cheil USA Inc.	McKinney Ventures LLC	100.0
Cheil USA Inc.	Cheil India Private Limited	0.0
Cheil USA Inc.	Cheil Mexico, S.A. de C.V.	2.0
Iris Worldwide Holdings Limited	Iris Nation Worldwide Limited	100.0
Iris Nation Worldwide Limited	Iris Americas, Inc.	100.0

Investor	Investee	Ownership
Iris Nation Worldwide Limited	Irisnation Latina No.2, S. de R.L. de C.V.	100.0
Iris Nation Worldwide Limited	Irisnation Latina, S. de R.L. de C.V.	100.0
Iris Nation Worldwide Limited	Pricing Solutions Ltd	100.0
Iris Nation Worldwide Limited	Iris London Limited	100.0
Iris Nation Worldwide Limited	Iris Promotional Marketing Ltd	100.0
Iris Nation Worldwide Limited	Iris Ventures 1 Limited	100.0
Iris Nation Worldwide Limited	Founded Partners Limited	100.0
Iris Nation Worldwide Limited	Iris Digital Limited	100.0
Iris Nation Worldwide Limited	Iris Amsterdam B.V.	100.0
Iris Nation Worldwide Limited	Iris Ventures (Worldwide) Limited	100.0
Iris Nation Worldwide Limited	WDMP Limited	49.0
Iris Nation Worldwide Limited	Iris Services Limited Doel Skopje	100.0
Iris Nation Worldwide Limited	Irisnation Singapore Pte. Ltd.	100.0
Iris Nation Worldwide Limited	Iris Worldwide Integrated Marketing Private Limited	100.0
Iris Nation Worldwide Limited	Iris Sydney PTY Ltd	100.0
Iris Nation Worldwide Limited	Iris Worldwide (Thailand) Limited	100.0
Iris London Limited	Iris Partners LLP	100.0
Iris Promotional Marketing Ltd	Holdings BR185 Limited	100.0
Iris Ventures 1 Limited	Iris Germany GmbH	100.0
Founded Partners Limited	Founded, Inc.	100.0
Iris Germany GmbH	Pepper NA, Inc.	100.0
CHEIL EUROPE LIMITED	Beattie McGuinness Bungay Limited	100.0
CHEIL EUROPE LIMITED	Cheil Italia S.r.l	100.0
Cheil Germany GmbH	Cheil Austria GmbH	100.0
Cheil Germany GmbH	Centrade Integrated SRL	100.0
Centrade Integrated SRL	Centrade Cheil HU Kft.	100.0
Centrade Integrated SRL	Centrade Cheil Adriatic D.O.O.	100.0
Cheil India Private Limited	Experience Commerce Software Private Limited	100.0
Cheil Singapore Pte. Ltd.	PT. CHEIL WORLDWIDE INDONESIA	100.0
Cheil Integrated Marketing Philippines, Inc.	Cheil Philippines Inc.	30.0
Shilla Travel Retail Pte. Ltd.	Shilla Retail Plus Pte. Ltd.	100.0
Samsung Shilla Business Service Beijing Co., Ltd.	Tianjin Samsung International Travel Service Co., Ltd	100.0
Shilla Travel Retail Hong Kong Limited	Shilla Retail Limited	100.0
Shilla Travel Retail Hong Kong Limited	BNY Trading Hong Kong Limited	100.0
Cheil MEA FZ-LLC	One Agency FZ-LLC	100.0
Cheil MEA FZ-LLC	One RX Project Management Design and Production Limited Company	0.0
Cheil MEA FZ-LLC	Cheil Egypt LLC	0.1
Cheil South Africa (Pty) Ltd	CHEIL KENYA LIMITED	1.0
Cheil South Africa (Pty) Ltd	Cheil Communications Nigeria Ltd.	1.0
One Agency FZ-LLC	ONE RETAIL EXPERIENCE KOREA LIMITED	100.0
One Agency FZ-LLC	One RX India Private Limited	100.0
One Agency FZ-LLC	One RX Project Management Design and Production Limited Company	100.0
One Agency FZ-LLC	ONE RX INTERIOR DECORATION L.L.C	100.0
One Agency FZ-LLC	ONE AGENCY PRINTING L.L.C	100.0
ONE RX INTERIOR DECORATION L.L.C	One RX India Private Limited	0.0
Holdings BR185 Limited	Brazil 185 Participacoes Ltda	100.0
Brazil 185 Participacoes Ltda	Iris Router Marketing Ltda	100.0
Cheil Brasil Comunicacoes Ltda.	CHEIL ARGENTINA S.A.	2.0

C. Related statute & regulation

Restrictions on cross-holdings within Samsung Group in accordance with the Monopoly Regulation and Fair Trade Act

(1) Date of announcement by authorities of companies deemed Samsung Group companies for the current year:
May 1, 2023

(2) Summary of Regulation

- Restriction on cross-holdings
- Restriction on debt guarantee between affiliates
- Restriction on affiliate voting rights of financial & insurance companies
- Decision making of board committee and public disclosure of large-scale inter-affiliate transactions
- Public disclosure of important matters of unlisted companies
- Other public disclosures related to Group status

D. Concurrent position with other affiliates

[As of December 31, 2023]

		Concurrent position		
Name	Position	Name of company	Position	Full/part time
Yong-kwan Kim	Executive VP	Samsung Medison	Representative Director	Full time
Keun-sung Yook	Executive VP	Samsung Electronics Sales	Auditor	Part time
		Samsung Electronics Logitech	Auditor	Part time
		Samsung Electronics Service	Auditor	Part time
Kyu-tae Yoo	Executive VP	Samsung Medison	Internal Director	Full time
Han-jong Yoo	VP	Samsung Global Research	Auditor	Part time
Khi-jae Cho	Executive VP	Samsung Display	Auditor	Part time
Jong-hoon Oh	Executive VP	SEMES	Auditor	Part time
Hee-don Hwang	Executive VP	SEMES	Non-Executive director	Part time
Doug-yong Sung	Executive VP	SEMES	Non-Executive director	Part time
Jae-kyun Oh	Executive VP	STECO	Auditor	Part time
Dong-wook Park	VP	STECO	Non-Executive director	Part time
Chi-hoon Lee	VP	Mirero System	Non-Executive director	Part time

E. Equity investments in other corporations

The total book value of equity investments in other corporations as of December 31, 2023 is KRW 59,247 billion (for the purpose of management participation, etc.)

(As of December 31, 2023)

(KRW Million)

Investment Purpose	No. of investees			Invested amount			
	Listed	Unlisted	Total	Beginning Balance	Increase(decrease)		Ending Balance
					Acquisition (Disposal)	Valuation gain(loss)	
Management Participation	21	81	102	58,678,404	-35,500	535,650	59,178,554
General Investment	-	-	-	-	-	-	-
Simple Investment	5	31	36	83,453	-861	-14,204	68,388
	26	112	138	58,761,857	-36,361	521,446	59,246,942

X. Transactions with Affiliates and Subsidiaries

1. Credit offerings for affiliates and subsidiaries

As of December 31, 2023, 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 16, 2023	Dec 16, 2024	1,278,000	1,278,000	-	-	-	
SEM	Subsidiary	BBVA etc.	Payment guarantee	Operating fund	Mar 28, 2023	Dec 16, 2024	715,000	715,000	-	-	-	
SAMCOL	Subsidiary	Citibank etc.	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	210,000	210,000	-	-	-	
SEDA	Subsidiary	BRADESCO etc.	Payment guarantee	Operating fund	Oct 01, 2023	Dec 16, 2024	409,000	329,000	-	-	-	
SECH	Subsidiary	Citibank etc.	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	62,000	62,000	-	-	-	
SEPR	Subsidiary	BBVA etc.	Payment guarantee	Operating fund	Jun 01, 2023	Dec 16, 2024	150,000	150,000	-	-	-	
SSA	Subsidiary	SCB etc.	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	318,000	318,000	-	-	-	
SEMAG	Subsidiary	SocGen etc.	Payment guarantee	Operating fund	Nov 09, 2023	Dec 16, 2024	110,000	96,000	-	8,065	8,065	5.0%
SETK	Subsidiary	BNP etc.	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	777,000	917,000	239,395	81,498	320,893	48.8%
SETK-P	Subsidiary	BNP etc.	Payment guarantee	Operating fund	Nov 09, 2023	Dec 16, 2024	130,000	70,000	25,649	-25,649	-	
SECE	Subsidiary	Citibank	Payment guarantee	Operating fund	Dec 17, 2023	Dec 16, 2024	60,000	114,000	-	-	-	
SEEG	Subsidiary	HSBC	Payment guarantee	Operating fund	Jun 14, 2023	Jun 13, 2024	85,000	85,000	-	-	-	
SEIN	Subsidiary	BNP etc.	Payment guarantee	Operating fund	Jun 14, 2023	Nov 08, 2024	70,000	70,000	-	-	-	
SJC	Subsidiary	Mizuho Bank etc.	Payment guarantee	Operating fund	Apr 28, 2023	Dec 16, 2024	832,572	835,508	-	-	-	
SEUC	Subsidiary	Credit Agricole etc.	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	150,000	125,000	-	-	-	
SEDAM	Subsidiary	Citibank etc.	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	537,000	537,000	155,768	-155,768	-	
SECA	Subsidiary	BoA	Payment guarantee	Operating fund	Nov 09, 2023	Nov 08, 2024	70,000	70,000	-	-	-	
SELA	Subsidiary	Citibank	Payment guarantee	Operating fund	Dec 17, 2023	Dec 16, 2024	60,000	60,000	-	-	-	
SEEH	Subsidiary	HSBC etc.	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	888,400	888,400	-	-	-	
SERK	Subsidiary	SMBC	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	45,000	-	-	-	-	
SELV	Subsidiary	Citibank	Payment guarantee	Operating fund	Dec 17, 2023	Dec 16, 2024	10,000	10,000	-	-	-	
SEIL	Subsidiary	Citibank	Payment guarantee	Operating fund	Dec 17, 2023	Dec 16, 2024	15,600	15,600	9,664	-9,664	-	
SAPL	Subsidiary	BOA etc.	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	404,000	404,000	-	-	-	
SAVINA	Subsidiary	HSBC	Payment guarantee	Operating fund	Jun 14, 2023	Jun 13, 2024	51,000	51,000	-	-	-	
SCIC	Subsidiary	HSBC etc.	Payment guarantee	Operating fund	Jun 14, 2023	Dec 16, 2024	300,000	270,000	-	-	-	
SESP	Subsidiary	SCB.	Payment guarantee	Operating fund	Nov 09, 2023	Nov 08, 2024	-	30,000	-	-	-	
SME	Subsidiary	SCB	Payment guarantee	Operating fund	Nov 09, 2023	Nov 08, 2024	110,000	110,000	-	-	-	
SAMEX	Subsidiary	Citibank	Payment guarantee	Operating fund	Dec 17, 2023	Dec 16, 2024	5,000	5,000	-	-	-	
SEASA	Subsidiary	Citibank	Payment guarantee	Operating fund	Dec 17, 2023	Dec 16, 2024	2,000	2,000	-	-	-	
SSAP	Subsidiary	SCB	Payment guarantee	Operating fund	Nov 09, 2023	Nov 08, 2024	35,000	35,000	-	-	-	

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	
SEPM	Subsidiary	HSBC	Payment guarantee	Operating fund	Jun 14, 2023	Jun 13, 2024	35,000	35,000	-	-	-	
SESAR	Subsidiary	HSBC	Payment guarantee	Operating fund	Jun 14, 2023	Jun 13, 2024	20,000	20,000	-	-	-	
SEUZ	Subsidiary	Citibank	Payment guarantee	Operating fund	Dec 17, 2023	Dec 16, 2024	-	10,000				
AdGear Technologies Inc.	Subsidiary	BOA	Payment guarantee	Operating fund	Nov 09, 2023	Nov 08, 2024	2,000	2,000	-	-	-	
Harman International Industries, Inc.	Subsidiary	JP Morgan	Payment guarantee	Operating fund	Jun 14, 2023	Jun 13, 2024	100,000	100,000	-	-	-	
Harman International Japan Co., Ltd.	Subsidiary	MUFG	Payment guarantee	Operating fund	Nov 09, 2023	Nov 08, 2024	25,000	25,000	-	-	-	
Harman Holding Limited	Subsidiary	HSBC	Payment guarantee	Operating fund	Jun 14, 2023	Jun 13, 2024	30,000	30,000	-	-	-	
Harman do Brasil Industria Eletronica e Participacoes Ltda.	Subsidiary	SocGen	Payment guarantee	Operating fund	Nov 09, 2023	Nov 08, 2024	15,000	15,000	-	-	-	
Harman da Amazonia Industria Eletronica e Participacoes Ltda.												
Harman International Industries Limited	Subsidiary	HSBC	Payment guarantee	Operating fund	Jun 14, 2023	Jun 13, 2024	30,000	30,000	-	-	-	
Total							8,146,572	8,129,508	430,476	-101,518	328,958	

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.

In 2023, the Company claimed approximately USD 2,141,000 in guarantee fees and has not collected the amount as of end-2023.

2. Acquisitions and disposals of assets with affiliates and subsidiaries

In 2023, the Company sold assets to affiliates, including Samsung (China) Semiconductor Co., Ltd. (SCS), to increase production capacity of such affiliates. Also, the Company acquired assets including facility equipment from affiliates to improve efficiency of 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	Oct 31, 2023	Machinery, etc.	Enhance capacity and production efficiency	50,521	26,222
SDC	Affiliates	Asset purchase	Nov 1, 2023	Machinery, etc.	Enhance capacity and production efficiency	10,406	-
SESS	Affiliates	Asset sale/purchase	Dec 24, 2023	Machinery, etc.	Enhance capacity and production efficiency	6,285	785
SAS	Affiliates	Asset sale/purchase	Dec 19, 2023	Machinery, etc.	Enhance capacity and production efficiency	6,267	2,014
SEHC	Affiliates	Asset sale	Nov 21, 2023	Machinery, etc.	Enhance capacity and production efficiency	4,102	77
TSLED	Affiliates	Asset sale/purchase	Nov 23, 2023	Machinery, etc.	Enhance capacity and production efficiency	973	601
SEV	Affiliates	Asset sale/purchase	Oct 30, 2023	Machinery, etc.	Enhance capacity and production efficiency	792	-4
SEVT	Affiliates	Asset sale/purchase	Dec 19, 2023	Machinery, etc.	Enhance capacity and production efficiency	787	148
SIEL	Affiliates	Asset sale	Aug 4 2023	Machinery, etc.	Enhance capacity and production efficiency	210	38
SESK	Affiliates	Asset sale	Jul 5, 2023	Machinery, etc.	Enhance capacity and production efficiency	153	-

Separate basis

The above acquisition and disposal transactions of assets are not subject to the Board's approval.

1) Most recent transaction.

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

Transactions worth less than KRW 100 million were excluded according to Corporate Disclosure Guidelines.

3. Business transactions with affiliates and subsidiaries

In 2023, the Company had transactions (e.g., sales and purchases) with affiliates, including Samsung Electronics America, Inc. (SEA)

(KRW mil)

Company	Relationship	Type of transaction	Date	Details	Amount
SEA	Affiliates	Sales, purchases, etc.	Jan 2023–Dec 2023	Smartphone, consumer electronics, etc.	30,103,325
SEVT	Affiliates	Sales, purchases, etc.	Jan 2023–Dec 2023	Smartphone, etc.	24,383,553
SSI	Affiliates	Sales, purchases, etc.	Jan 2023–Dec 2023	Semiconductor, etc	22,270,145
SEV	Affiliates	Sales, purchases, etc.	Jan 2023–Dec 2023	Smartphone, etc	15,686,195
SSS	Affiliates	Sales, purchases, etc.	Jan 2023–Dec 2023	Semiconductor, etc	13,520,403

Separate basis; Transactions worth 5% and above of revenue of the current business year are subject to public disclosure.

4. Transactions with stakeholders other than affiliates and subsidiaries

As of December 31, 2023, the Company's outstanding loan amount is KRW 135.3 billion related to support for supplier companies for product competitiveness and mutual development as well as home loan and educational expenses for employee welfare.

(KRW mil)

Company	Relationship	Loans			
		Account title	Transaction		
			Beginning of period (Jan 1, 2023)	Change	End of period (Dec 31, 2023)
Elentec Co., Ltd., etc.	Partner company and employee	Short-term loans	47,161	-1,092	46,069
Daeduk Elec., etc.	Partner company and employee	Long-term loans	92,898	-3,645	89,253
Total			140,059	-4,737	135,322

Separate basis; amounts reflect the discounted present value of debts before accounting for impaired debts (impairment losses).

XI. Other Information

1. Changes in public disclosure

- N/A

2. Contingent liabilities

A. Litigation

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

Samsung Electronics and its spun-off companies, including SDC, are liable to fulfill in solidarity the debts of SDC which relate to the periods prior to SDC's separation from the Company.

For information related to other contingent liabilities and commitments, see retained earnings in 『3. Notes to consolidated financial statements』 and 『5. Notes to non-consolidated financial statements』 in 『III. Financial Affairs』.

B. Guarantees

(USD thousand)

Company	Relationship	Creditor	Guarantee	Transactions				Limit of guarantee
			Expiry date	Beginning of period	Increase	Decrease	End of period	
SEA	Subsidiary	BOA etc.	16-Dec-24	-	-	-	-	1,278,000
SEM	Subsidiary	BBVA etc.	16-Dec-24	-	-	-	-	715,000
SAMCOL	Subsidiary	Citibank etc.	16-Dec-24	-	-	-	-	210,000
SEDA	Subsidiary	BRADESCO etc.	16-Dec-24	-	-	-	-	329,000
SECH	Subsidiary	Citibank etc.	16-Dec-24	-	-	-	-	62,000
SEPR	Subsidiary	BBVA etc.	16-Dec-24	-	-	-	-	150,000
SSA	Subsidiary	SCB etc.	16-Dec-24	-	-	-	-	318,000
SEMAG	Subsidiary	SocGen etc.	16-Dec-24	-	8,065	-	8,065	96,000
SETK	Subsidiary	BNP etc.	16-Dec-24	239,395	81,498	-	320,893	917,000
SETK-P	Subsidiary	BNP etc.	16-Dec-24	25,649	-	-25,649	-	70,000
SECE	Subsidiary	Citibank etc.	16-Dec-24	-	-	-	-	114,000
SEEG	Subsidiary	HSBC	13-Jun-24	-	-	-	-	85,000
SEIN	Subsidiary	BNP etc.	08-Nov-24	-	-	-	-	70,000
SJC	Subsidiary	Mizuho Bank etc.	16-Dec-24	-	-	-	-	835,508
SEUC	Subsidiary	Credit Agricole etc.	16-Dec-24	-	-	-	-	125,000
SEDAM	Subsidiary	Citibank etc.	16-Dec-24	155,768	-	-155,768	-	537,000
SECA	Subsidiary	BoA	08-Nov-24	-	-	-	-	70,000
SELA	Subsidiary	Citibank	16-Dec-24	-	-	-	-	60,000
SEEH	Subsidiary	HSBC etc.	16-Dec-24	-	-	-	-	888,400
SERK	Subsidiary	SMBC	16-Dec-24	-	-	-	-	-
SELV	Subsidiary	Citibank	16-Dec-24	-	-	-	-	10,000
SEIL	Subsidiary	Citibank	16-Dec-24	9,664	-	-9,664	-	15,600
SAPL	Subsidiary	BOA etc.	16-Dec-24	-	-	-	-	404,000
SAVINA	Subsidiary	HSBC	13-Jun-24	-	-	-	-	51,000
SCIC	Subsidiary	HSBC etc.	16-Dec-24	-	-	-	-	270,000
SESP	Subsidiary	SCB	08-Nov-24	-	-	-	-	30,000
SME	Subsidiary	SCB	08-Nov-24	-	-	-	-	110,000

Company	Relationship	Creditor	Guarantee	Transactions				Limit of guarantee
			Expiry date	Beginning of period	Increase	Decrease	End of period	
SAMEX	Subsidiary	Citibank	16-Dec-24	-	-	-	-	5,000
SEASA	Subsidiary	Citibank	16-Dec-24	-	-	-	-	2,000
SSAP	Subsidiary	SCB	08-Nov-24	-	-	-	-	35,000
SEPM	Subsidiary	HSBC	13-Jun-24	-	-	-	-	35,000
SESAR	Subsidiary	HSBC	13-Jun-24	-	-	-	-	20,000
SEUZ	Subsidiary	Citibank	16-Dec-24	-	-	-	-	10,000
AdGear Technologies Inc.	Subsidiary	BOA	08-Nov-24	-	-	-	-	2,000
Harman International Industries, Inc.	Subsidiary	JP Morgan	13-Jun-24	-	-	-	-	100,000
Harman International Japan Co., Ltd.	Subsidiary	MUFG	08-Nov-24	-	-	-	-	25,000
Harman Holding Limited	Subsidiary	HSBC	13-Jun-24	-	-	-	-	30,000
Harman do Brasil Industria Eletronica e Participacoes Ltda.	Subsidiary	SocGen	08-Nov-24	-	-	-	-	15,000
Harman da Amazonia Industria Eletronica e Participacoes Ltda.								
Harman International Industries Limited	Subsidiary	HSBC	13-Jun-24	-	-	-	-	30,000
SDN	Subsidiary	SIEL	19-Feb-26	513,366	-	-2,389	510,977	601,149
SAS	Subsidiary	Epcor	Date of debt expiration	-	-	-	-	340,000
DOWOINSYS VINA COMPANY LIMITED	Subsidiary	ANZ	09-Nov-25	20,000	-	-	20,000	20,000
Total				963,842	89,563	-193,470	859,935	9,090,657

Consolidated basis.

Debt guarantees for SDN are provided by SDC, SAS by SEA, and DOWOINSYS VINA COMPANY LIMITED by Dowooinssys Co., Ltd.

SEC requires Board approval for individual guarantees exceeding 2.5% of total equity; the approval decision is delegated to the Management Committee when the guarantee amount is between 0.1% and/or less than 2.5%.

SDC requires Board approval for individual guarantees over KRW 10,000 million. In 2023, the Company claimed approximately USD 2,141,000 in guarantee fees and has not collected the amount as of end-2023.

In 2023, Samsung Display Co., Ltd. claimed approximately USD 3,066,000 in guarantee fees to SDN and has not collected the amount as of end-2023.

3. Sanctions and others

A. Sanctions of investigative and judicial agencies

[Summary]

(KRW mil)

Date	Agency	Subject	Punishment or measure	Amount of monetary sanction	Amount of embezzlement/breach of trust	Relevant laws
Jan 25, 2021	Seoul High Court (Retrial)	Employees of SEC	Imprisonment	-	Approximately 8,681	Act on the Aggravated Punishment, etc. of Specific Economic Crimes
Feb 4, 2021	Supreme Court of Korea	Employees of SEC	Imprisonment	-	-	Articles 90, 81, etc., of the Trade Union and Labor Relations Adjustment Act
		Subsidiary and employees (Samsung Electronics Service)	Fine, Imprisonment	50	-	Articles 90, 81, etc., of the Trade Union and Labor Relations Adjustment Act, Article 10 of the Punishment of Tax Offenses Act
Jul 7, 2022	Gwangju District Court	Employees of SEC	Fine	6	-	Article 33 Paragraph 7, Article 34, Article 18 Paragraph 1, etc., of the Environmental Testing and Inspection Act

Date	Agency	Subject	Punishment or measure	Amount of monetary sanction	Amount of embezzlement/breach of trust	Relevant laws
Feb 9, 2023	Gwangju District Court	Employees of SEC	Fine	25	-	Article 10 Paragraph 1 of the former Occupational Safety and Health Act, Article 57 Paragraph 1 of the Occupational Safety and Health Act, etc.

Regarding matters related to the allegations of violation of the Act on the Aggravated Punishment, etc., of Specific Economic Crimes (embezzlement) by five of the Company's executives (Vice Chairman Jae-yong Lee, former Vice Chairman Gee-sung Choi, former President Choong-ki Chang, former President Sang-jin Park, and former Senior Vice President Seong-soo Hwang) in the case of an influence-peddling scandal involving South Korea's president, the Supreme Court of Korea on August 29, 2019 rejected part of a lower court's ruling and ordered a retrial to the Seoul High Court. On January 18, 2021 at the retrial, the Seoul High Court sentenced Vice Chairman Jae-yong Lee, former Vice Chairman Gee-sung Choi, and former President Choong-ki Chang each to 2 years and 6 months in prison. Former President Sang-jin Park and former Senior Vice President Seong-soo Hwang each received sentences of 2 years and 6 months in prison and a 4-year suspended sentence. The judgments were confirmed on January 25, 2021. On August 15, 2022, under the Amnesty Act, the Ministry of Justice granted a special amnesty to strictly selected key economic figures who lead the nation's growth, which included Vice Chairman Jae-yong Lee. Chairman on October 2022 to strengthen future technology investment and global partnerships.

Meanwhile, to prevent recurrences, the Company has strengthened its process regarding external contributions and newly established the Samsung Compliance Committee, an external and independent organization.

On February 4, 2021, the Supreme Court dismissed an appeal regarding the violation of Articles 90 and 81 of the Trade Union and Labor Relations Adjustment Act by SEC and employees of SEC and confirmed the sentences of 1 year and 4 months for Executive Vice President A (29 service years), 1 year and 2 months and a 2-year suspended sentence for former Executive Vice President B, 10 months and a 2-year suspended sentence for Executive Vice President C (34 service years), 1 year and a 2-year suspended sentence for former Executive Vice President D, 1 year for Senior Vice President E (32 service years), 1 year and 2 months and a 2-year suspended sentence for Senior Vice President F (24 service years), 10 months and a 2-year suspended sentence for Vice President G (27 service years), 10 months and a 2-year suspended sentence for Vice President H (18 service years) as ordered by the Seoul High Court on August 10, 2020; and SEC and former SEC Chairman of the Board (39 service years) were pronounced not guilty. Moreover, regarding the violation of Articles 90 and 81 of the Trade Union and Labor Relations Adjustment Act and violation of Article 10 of the Punishment of Tax Offenses Act with regard to receiving fake tax invoices (amount of violation approximately KRW 1,678 million) by Samsung Electronics Service and employees, the court issued a penalty of KRW 50 million for Samsung Electronics Service (amount of tax collected is approximately KRW 97 million), and confirmed sentencing of prison terms for Samsung Electronics Service's former CEO (4 service years) of 1 year and 4 months, Senior Vice President I (11 service years) of 1 year, Vice President J (21 service years) of 10 months and a 2-year suspended sentence.

To prevent recurrence, the Company has specified the guarantee of labor's three primary rights in the code of conduct and provides education on the prevention of unfair labor practices to all employees.

On January 20, 2021, the Suncheon Branch of Gwangju District Court ordered SEC employees A (11 service years) and B (8 service years) to pay a fine of KRW 3 million each for violating Article 18, etc., of the Environmental Testing and Inspection Act, and on July 7, 2022 at the retrial, the Gwangju District Court dismissed the appeal. To prevent recurrence, the Company is conducting regular cross measurement, etc.

On February 9, 2023, the Gwangju District Court issued a summary order against SEC and five SEC employees for violations of Article 10 Paragraph 1 of the former Occupational Safety, Health Act, Article 57 Paragraph 1 of the

Occupational Safety and Health Act, etc. Neither the Company nor the five employees applied for a formal trial, thus resulting in the confirmation of the summary order (with fine of KRW 15 million for SEC and KRW 2 million for each employee), and the Company has subsequently paid the fine. As part of SEC's efforts to prevent recurrence of such issues, the Company has provided special education for Environmental Safety Managers and Supervisors to ensure compliance with the relevant regulations.

B. Sanctions of administrative agencies

(1) Sanctions of Fair Trade Commission (FTC)

[Summary]

(KRW mil)

Date	Agency	Subject	Punishment or measure	Amount of monetary sanction	Reasons and relevant laws
Jun 22, 2021	FTC	SEC and employees of SEC	Prosecution charge	-	Article 23 (Prohibition on Unfair Trade Practices) Paragraph 1 Subparagraph 7 of the Monopoly Regulation and Fair Trade Act
Aug 27, 2021	FTC	SEC	Corrective measure, penalty surcharge	101,217	Article 23 (Prohibition on Unfair Trade Practices) Paragraph 1 Subparagraph 7 of the Monopoly Regulation and Fair Trade Act
		Subsidiary (Samsung Display)	Corrective measure, penalty surcharge	22,857	Article 23 (Prohibition on Unfair Trade Practices) Paragraph 1 Subparagraph 7 of the Monopoly Regulation and Fair Trade Act
Nov 17, 2021	FTC	Subsidiary (Samsung Electronics Service CS)	Fine	2.4	Article 11-4 (Disclosure of Status of Business Groups) of the Monopoly Regulation and Fair Trade Act
Mar 17, 2022	FTC	Employees of SEC	Warning	-	Article 31 (Designation of Business Groups Subject to Limitations on Cross Shareholding) Paragraph 4 of the Monopoly Regulation and Fair Trade Act
Jun 27, 2022	FTC	SEC	Fine	10	Article 5 (Duty to Prepare Agency Transaction Contract) Paragraph 1 of the Fair Agency Transactions Act

On June 22, 2021, the Fair Trade Commission, regarding matters related to food service transactions with Samsung Welstory, filed a complaint against the Company and the former Head of Future Strategy Office Gee-sung Choi, a retiree, for violating Article 23 (Prohibition on Unfair Trade Practices) Paragraph 1 Subparagraph 7 of the Monopoly Regulation and Fair Trade Act.

On August 27, 2021, the Fair Trade Commission, regarding matters related to food service transactions with Samsung Welstory, issued corrective measures and ordered Samsung Electronics and Samsung Display to pay penalties (SEC: KRW 101.217 billion; SD: 22.857 billion) for violating Article 23 Paragraph 1 Subparagraph 7 of the Act of the Monopoly Regulation and Fair Trade Act. The administrative litigation against the disposition is in progress, and on January 27, 2022, the decision to suspend the execution of the corrective measures was finalized.

On November 5, 2021, the Fair Trade Commission, regarding a voluntary correction disclosure of Status of Large Business Groups (omission of member of the Board of Directors) of the Company's subsidiary, Samsung Electronics Service CS, ordered the company to pay a fine of KRW 2.4 million for violating Article 11-4 (Disclosure of Status of Business Groups) of the Monopoly Regulation and Fair Trade Act, and on November 17, 2021, the company has subsequently paid the fine.

To prevent recurrences and comply with the relevant law, Samsung Electronics Service CS has strengthened its internal management standard, including adding more people in charge.

On March 17, 2022, the Fair Trade Commission issued a warning against SEC's Vice Chairman Jae-yong Lee for omitting three companies—Balbec KPL Korea, Balbec KPL Partners, and Balbec KPL Asset Management—controlled by an Independent Director of Samsung Card from the affiliate list of Samsung, a business group subject to limitations on cross shareholding, when submitting materials in 2018 and 2019 pursuant to Article 31 Paragraph 4.

On June 27, 2022, the Fair Trade Commission ordered the Company to pay a fine of KRW 10 million for violating Article 5 (Duty to Prepare Agency Transaction Contract) Paragraph 1 of the Fair Agency Transactions Act, and the Company is in the middle of a procedure to object to the order.

To comply with the Monopoly Regulation and Fair Trade Act, the Act on Fair Labeling and Advertising, Fair Agency Transactions Act, and relevant laws, the Company has strengthened its internal management standard and is providing relevant prevention education for executives and employees.

(2) Sanctions of other administrative or public agencies (including financial supervision and tax authorities)

[Summary]

(KRW mil)

Date	Agency	Subject	Punishment or measure	Amount of monetary sanction	Reasons and relevant laws
Mar 2, 2021	Ministry of Environment	SEC (Gwangju site)	Cancellation of designation of green enterprise	-	Article 16-3 Paragraph 1 Subparagraph 1 of the Environmental Technology and Industry Support Act
Aug 10, 2021	Ministry of Justice	SEC	Fine	0.1	Article 19 of the Immigration Act
Apr 1, 2021	Ministry of Employment and Labor	Subsidiary (Samsung Electronics Service CS)	Fine	1	Article 15 of the Employment Insurance Act
Sep 29, 2021	Ministry of Employment and Labor	Subsidiary (Samsung Electronics Service)	Partial suspension of work order, fine	14	Article 16 Paragraph 1, Article 41 Paragraph 7, Article 53 Paragraph 3, and Article 114 Paragraph 3 of the Occupational Safety and Health Act
Nov 23, 2021	Ministry of Employment and Labor	Subsidiary (Samsung Display)	Fine	0.2	Article 46 Paragraph 1 of the Occupational Safety And Health Act
Oct 13, 2022	City of Gwangju	SEC (Gwangju site)	Fine	3.2	Article 39 Paragraph 1 of the Clean Air Conservation Act
Dec 14, 2022	Ministry of Environment	SEC (Overall domestic operations)	Fine	2.0	Article 17 Paragraph 2 of the Act on the Allocation and Trading of Greenhouse-gas Emission Permits

Date	Agency	Subject	Punishment or measure	Amount of monetary sanction	Reasons and relevant laws
Dec 22, 2022	Ministry of Environment	SEC (Gwangju site)	Fine	1.6	Article 31 Paragraph 1 Subparagraph 1 of the Clean Air Conservation
Dec 23, 2022	Ministry of Employment and Labor	SEC (Gwangju site)	Fine	0.08	Article 37 Paragraph 1 of the Occupational Safety And Health Act
Jan 16, 2023	Ministry of Employment and Labor	SEC (Gwangju site)	Fine	0.16	Article 37 Paragraph 1, Article 115 Paragraph 2 of the Occupational Safety And Health Act
Apr 21, 2022	Ministry of Employment and Labor	SEC (Onyang site)	Fine	0.6	Article 46 Paragraph 1 of the Occupational Safety And Health Act
Aug 16, 2023	Gumi Fire Station	SEC (Gumi site)	Fine	-	Article 5 Paragraph 1, Article 6 Paragraph 1 of the Safety Control Of Hazardous Substances Act
Aug 18, 2023	Personal Information Protection Commission	SEC	Penalty	875.6	Article 29 of the Personal Information Protection Act and Article 48-2 Paragraph 1 Subparagraph 2 of the Enforcement Decree of the same Act
			Fine	2.4	
Aug 23, 2023	City of Gwangju	SEC (Gwangju site)	Fine	2.0	Article 31 Paragraph 2 of the Clean Air Conservation Act
Sep 4, 2023	Ministry of Trade, Industry and Energy	Subsidiary (Samsung Display)	Order to Take Training Course (2 persons)	-	Article 19, Article 31, Article 49 of the Foreign Trade Act

On March 2, 2021, Yeongsangang River Basin Environmental Office of Ministry of Environment, based on its air pollutant measurement, cancelled the Green Enterprise designation on our Gwangju site in pursuant to Article 16-3 (Cancellation of Designation of Green Enterprise) Paragraph 1 Subparagraph 1 of the Environmental Technology and Industry Support Act.

To enhance the credibility of the measurement, the Company is conducting regular cross measurement, etc.

On August 10, 2021, the Suwon Immigration Office ordered the Company to pay a fine of KRW 100,000 for violating the obligation to report changes to the employment status of non-Korean employees under Article 19 (Obligation to Report by Employers of Aliens) Paragraph 1 of the Immigration Act and the Company has subsequently paid the fine.

To strengthen compliance of the deadline for reporting changes in employment of non-Korean employees no longer employed by the Company, the Company has improved the exit process.

Pursuant to the regular assessment of the implementation of a PSM system at the Onyang site by the Ministry of Employment and Labor from February 21–23, 2022, the rating went up by one stage, but the Company was ordered to pay a fine of KRW 0.6 million for violating Article 46 (Implementation of Process-Safety Reports) Paragraph 1 of the Occupational Safety and Health Act on April 21, 2022 and has subsequently paid the fine. The Company took measures regarding the violations above and submitted a report on improvements to the Ministry of Employment and Labor. We also established a PSM Innovation Organization and a PSM Management System which manages activities related to approval, design, 12 key tasks, expertise improvement, etc. We also foster development of on-site process safety experts and conduct voluntary process safety evaluation.

On July 7, 2022, the Gwangju District Court ruled that two employees of the Company had violated Article 18, etc., of the Environmental Testing and Inspection Act, and on October 13, 2022, the City of Gwangju levied a fine of KRW 3.2 million for violating Article 39 (Self-Measurement) Paragraph 1 of the Clean Air Conservation Act concerning the record of the results of self-measurement of air pollutants, and the Company subsequently paid the fine.

To enhance credibility of measurements, the Company conducts regular cross measurements, etc.

Pursuant to the results of the inspection of the air pollution prevention facilities on the Gwangju site by the Ministry of Environment on November 28–29, 2022, the Company was ordered to pay a fine of KRW 1.6 million for violating Article 31 (Operation of Emission Facilities and Prevention Facilities) Paragraph 1 of the Clean Air Conservation Act on December 22, 2022, and it has subsequently paid the fine.

To prevent the recurrence and strengthen compliance, the Company has strengthened inspection of the air pollution prevention facilities.

On December 14, 2022, the Ministry of Environment ordered the Company to pay a fine of KRW 2 million for violating Article 17 (Revocation of Allocation of Emission Permits) Paragraph 2 of the Act on the Allocation and Trading of Greenhouse-gas Emission Permits, and the Company has subsequently paid the fine. To prevent the recurrence and strengthen compliance, the Company has strengthened management of greenhouse-gas emitting facilities.

Pursuant to the results of the inspection of the Occupational Safety and Health Management on the Gwangju site by the Ministry of Employment and Labor on December 19–21, 2022, the Company was ordered to pay a fine of KRW 80 thousand for violating Article 37 (Installation and Affixing of Safety and Health Signs) Paragraph 1 of the Occupational Safety and Health Act on December 23, 2022, and it has subsequently paid the fine. Also, pursuant to the results of the inspection of the Occupational Safety and Health Management on the Gwangju site by the Ministry of Employment and Labor on January 9–11, 2023, the Company was ordered to pay a fine of KRW 160,000 for violating Article 115 (Warnings on Containers of Substances Subject to Material Safety Data Preparation) Paragraph 1 and Article 37 (Installation and Affixing of Safety and Health Signs) Paragraph 1 of the Occupational Safety and Health Act on January 16, 2023, and it has subsequently paid the fine. To prevent the recurrence and strengthen compliance, the Company has strengthened monitoring of the installation and affixing of safety signs.

On August 16, 2023, the Gumi Fire Station ordered the Company to take corrective measures for violating Article 5 (Restrictions on Storage and Handling of Hazardous Substances) Paragraph 1 and Article 6 (Construction of Facilities for Hazardous Substances and Alteration Thereof) Paragraph 1 of the Safety Control Of Hazardous Substances Act at its Gumi site, and the Company subsequently completed corrective measures by applying for permission of constructing hazardous substance handling place. To prevent the recurrence and strengthen compliance, the Company has strengthened permit management regarding hazardous substance handling place.

On August 18, 2023, Personal Information Protection Commission ordered the Company to take corrective measures along with orders to pay a penalty of KRW 875.6 million and a fine of KRW 2.4 million for violating Article 29 (Duty of Safeguards) of the Personal Information Protection Act and Article 48-2 (Special Measures to Ensure Safety of Personal

Information) Paragraph 1 Subparagraph 2 of the Enforcement Decree of the same Act, and it has subsequently paid the fine. To prevent the recurrence and strengthen compliance, the Company has strengthened education and security-related contracts with our system operation partners.

On August 23, 2023, City of Gwangju issued an administrative disposition (warning) and ordered the Company to pay a fine of KRW 2 million for violating Article 31 (Operation of Emission Facilities and Prevention Facilities) Paragraph 2 of the Clean Air Conservation at its Gwnagju site, and it has subsequently paid the fine. To prevent the recurrence and strengthen compliance, the Company has strengthened computer input management process regarding operating status of emission and prevention facilities.

On April 1, 2021, Samsung Electronics Service CS was ordered by the Jungbu Regional Employment and Labor Office of Ministry of Employment and Labor to pay a fine of KRW 1 million for the delayed report of the attainment of the employment insurance, violating Article 15 (Reporting, etc. on Insured Status) of the Employment Insurance Act, and the Company has subsequently paid the fine.

To prevent reoccurrences and strengthen compliance, Samsung Electronics Service CS is monitoring the revision of the Employment Insurance Act periodically and providing education for managers.

Regarding an electrocution accident of a worker who was repairing a washing machine on September 28, 2021, the Southern Seoul District Office of the Seoul Regional Employment and Labor Office of the Ministry of Employment and Labor ordered Samsung Electronics Service on September 29, 2021 to partially suspend work in pursuant to Article 53 (Corrective Measures by Minister of Employment and Labor) of the Occupational Safety and Health Act.

In response, Samsung Electronics Service submitted plans to improve safety and health measures for all of its domestic worksites, and the order of partial suspension was withdrawn on November 10, 2021.

Moreover, on November 15, 2021, Samsung Electronics Service was ordered to pay fines of KRW 14 million in total for violating Article 16 (Supervisors) Paragraph 1, Article 41 (Measures for Preventing Health Impairments Caused by Abusive Language of Customers) Paragraph 7, and Article 114 (Posting of Material Safety Data Sheets and Education) Paragraph 3 of the Occupational Safety and Health Act, and on December 28, 2021, it has subsequently paid the fine.

Pursuant to results of monitoring the implementation of a PSM system at the Giheung site by the Ministry of Employment and Labor from November 15–16, 2021, Samsung Display was ordered to pay a fine of KRW 0.16 million for violating Article 46 (Implementation of Process-Safety Reports) Paragraph 1, etc., of the Occupational Safety and Health Act on November 23, 2021 and has subsequently paid the fine.

Samsung Medison exported certain items subject to situational permission by the Ministry of Trade, Industry and Energy without obtaining prior approval. Accordingly, Samsung Medison on September 4, 2023, received an administrative disposition of taking training course (2 persons) from the Ministry of Trade, Industry and Energy for violating Article 19 (Public Notice of Strategic Items and Export Permission Therefor), etc., of the Foreign Trade Act, and it has completed the training course provided by the Ministry of Trade, Industry and Energy on November 7, 2023. To prevent the recurrence and strengthen compliance, Samsung Medison has enhanced educational activities for personnel responsible for strategic item management and improved internal process.

C. Sanctions from Korea Exchange

- N/A

D. Return of short-swing profits

- N/A

4. Subsequent events and other matters

A. Subsequent events

- N/A

B. External contributions

Contribution	Amount	Details	Date of Board approval
Management plans for Social Contribution Fund for 2021	KRW 11.61 billion	<ul style="list-style-type: none"> The Fund consists of voluntary contributions of employees and matching funds raised by SEC. SEC plans to contribute KRW 11.61 billion in matching funds in 2021. The contribution will be used for educating adolescents and vulnerable population. 	Feb 16, 2021
Donation to Chung-nam Samsung Institute	KRW 2.446 billion	<ul style="list-style-type: none"> The contribution was made to improve education of the region. 	
Donation to Samsung Welfare Foundation, etc.	KRW 60.1 billion	<ul style="list-style-type: none"> The contribution was made to support Dream Class, a program to support learning for underprivileged middle school students (Samsung Welfare Foundation, KRW 11.5 billion) The contribution was made to support facilities and research infrastructure at Samsung Medical Center and support the operation of emergency helicopters (Samsung Life Public Welfare Foundation, KRW 29.9 billion) The contribution was made to provide funds for legal expenses for faculty members and Samsung scholarships for students (Sungkyunkwan University, KRW 15 billion) The contribution was made to help award those with significant contributions in the field of academia, art, and human welfare (Ho-Am Foundation, KRW 3.7 billion) 	Apr 29, 2021
Performance incentive to suppliers of the DS division	Approximately KRW 63.2 billion	<ul style="list-style-type: none"> The incentive was provided to prevent safety incidents at sites, enhance productivity, and promote co-growth with suppliers For the first and secondary suppliers of the DS division stationed at the sites 	

Contribution	Amount	Details	Date of Board approval
Sponsoring the WorldSkills Competition	EUR 1.5 million (approximately KRW 2.09 billion)	<ul style="list-style-type: none"> The contribution was made to support WorldSkills International and WorldSkills Shanghai 2020. 	Oct 28, 2021
Contribution to Joint Investment Technology Development Agreement Fund	KRW 15 billion	<ul style="list-style-type: none"> Participated in Joint Investment Technology Development Agreement Fund supervised by the Ministry of SMEs and Startups. The contribution was made to establish an agreement fund with the Ministry of SMEs and Startups, which will be allocated to chosen SMEs based on evaluations of tasks related to robotics, AI, biohealth, system semiconductors, and domestic production of materials, parts, and equipment. 	
Donation to Heemang 2022 Nanum Campaign	KRW 25.6 billion	<ul style="list-style-type: none"> The contribution was made to Community Chest of Korea to fulfill corporate social responsibilities and help the marginalized. 	Nov 30, 2021
Contribution to the United Nations Development Programme (Samsung Global Goals)	USD 2,689,094 (approximately KRW 3.20 billion)	<ul style="list-style-type: none"> The contribution was made to the UNDP (United Nations Development Programme) for relief activities in different countries. 	
Management plans for Social Contribution Fund for 2022	KRW 11.75 billion	<ul style="list-style-type: none"> The Fund consists of voluntary contributions of employees and matching funds raised by SEC. SEC plans to contribute KRW 11.75 billion in matching funds in 2022. The contribution will be used for educating adolescents and vulnerable population. 	Feb 15, 2022
Donation to Chung-nam Samsung Institute	KRW 2.324 billion	<ul style="list-style-type: none"> The contribution was made to improve education of the region. 	
Donation to Samsung Welfare Foundation, etc.	KRW 46.8 billion	<ul style="list-style-type: none"> The contribution was made to support Dream Class, a program to support learning for underprivileged middle school students (Samsung Welfare Foundation, KRW 4.4 billion) The contribution was made to support the construction expenses for the renovation of Samsung Medical Center (Samsung Life Public Welfare Foundation, KRW 23.2 billion) The contribution was made to provide funds for legal expenses for faculty members and Samsung scholarships for students (Sungkyunkwan University, KRW 15 billion) The contribution was made to help award those with significant contributions in the field of academia, art, and human welfare (Ho-Am Foundation, KRW 4.2 billion) 	Apr 28, 2022
Performance incentive to suppliers of the DS division	Approximately KRW 74.0 billion	<ul style="list-style-type: none"> The incentive was provided to prevent safety incidents at sites, enhance productivity, and promote co-growth with suppliers For the first and secondary suppliers of the DS division stationed at the sites 	
Donation to the Inter-University Semiconductor Research Center of Seoul National University to help cover operating costs	KRW 5 billion	<ul style="list-style-type: none"> Support of operating costs for education infrastructure and employment of research talents for the Inter-University Semiconductor Research Center of Seoul National University 	Jul 28, 2022
Contribution for support related to the tragedy in Itaewon and to strengthen the public safety system	KRW 4 billion	<ul style="list-style-type: none"> The contribution of KRW 4 billion in cash was made to Hope Bridge Korea Disaster Relief Association to offer assistance related to the tragedy in Itaewon and strengthen the public safety system. 	Nov 3, 2022 Board resolution
Donation to Heemang 2023 Nanum Campaign	KRW 18.37 billion	<ul style="list-style-type: none"> The contribution was made to Community Chest of Korea to fulfill corporate social responsibilities and help the marginalized. 	Nov 30, 2022 Board resolution
Contribution to the United Nations Development Programme (Samsung Global Goals)	USD 7,188,329 (approximately KRW 9.57 billion)	<ul style="list-style-type: none"> The contribution was made to the UNDP (United Nations Development Programme) for relief activities in different countries. 	

Contribution	Amount	Details	Date of Board approval
Sponsorship of the Worldskills Competition	EUR 1.65 million (approximately KRW 2.25 billion)	· Sponsorship supporting the 47th WorldSkills Competition that will take place in Lyon, France, and WorldSkills International	
Management plans for Social Contribution Fund for 2023	KRW 12.34 billion	· The fund consists of voluntary contributions of employees and matching funds raised by SEC. SEC plans to contribute KRW 12.34 billion in matching funds in 2023 · The contribution will be used for educating adolescents and vulnerable members of the population	Feb 14, 2023 Board resolution
Donation to Chung-nam Samsung Institute	KRW 2.378 billion	· The contribution was made to improve education of the region	
Promotion of supporting a smart factory project	KRW 22.4 billion	· The contribution was made to enhance domestic manufacturing competitiveness and promote balanced development of regions by supporting a smart factory project	April 27, 2023 Board resolution
Incentives for Excellent Partners in the DS Division	KRW 80.1 billion	· The incentive was provided to prevent safety incidents at sites, enhance productivity, and promote co-growth with suppliers · Incentive targets first and secondary suppliers of the DS division stationed at the sites	
Donation to Samsung Welfare Foundation, etc.	KRW 32.83 billion	· The contribution was made to support the construction expenses for the renovation of Samsung Medical Center (Samsung Life Public Welfare Foundation; KRW 17.19 billion) · The contribution was made to provide funds for legal expenses for faculty members and Samsung scholarships for students (Sungkyunkwan University; KRW 12.24 billion) · The contribution was made to be used for the awards in connection with the presentation of the Samsung Ho-Am Prize in the following six fields—physics/mathematics, chemistry/biology, engineering, medicine, art, and volunteering (Ho-Am Foundation; KRW 3.4 billion)	July 27, 2023 Board resolution
Donation to Heemang 2024 Nanum Campaign	KRW 8.65 billion	· The contribution was made to Community Chest of Korea to fulfill corporate social responsibilities and help the marginalized	November 30, 2023 Board resolution
Contribution to the United Nations Development Programme (Samsung Global Goals)	USD 4,366,270 (approximately KRW 5.68 billion)	· The contribution was made to the UNDP (United Nations Development Programme) for relief activities in different countries.	

External contributions are based on a resolution of the Board.

C. Green management

The Company is actively securing “Designation of Green Enterprise” and “Green Technology Certifications” to follow the Low Carbon Green Growth policy of the Korean government. In particular, greenhouse gas emission and energy consumption generated at our operations are reported to the government, required by relevant law. Also, relevant information are provided transparently to stakeholders through the Sustainability Report, etc.

(Designation of Green Enterprise)

The Company strives to fulfill its responsibility as an eco-friendly enterprise by reducing pollutants, conserving resources and energy, establishing/utilizing a green management system, etc. As of December 31, 2023 (on a separate basis), our business sites in Suwon, Gumi, Giheung, Hwaseong, Pyeongtaek, and Onyang have been designated as green enterprises in accordance with Article 16-2 (Designation, etc., of Green Enterprise) of the Environmental Technology and Industry Support Act. In March 2021, the Green Enterprise designation was cancelled for Gwangju site pursuant to Article 16-3 (Cancellation of Designation of Green Enterprise) Paragraph 1 Subparagraph 1 of the Environmental Technology and Industry Support Act.

(Green Technology Certification)

The Company acquired Certification of Green Technology in accordance with Article 60 (Standardization and Certification of Green Technology and Green Industries) Paragraph 1 of the Framework Act on Carbon Neutrality and Green Growth for Coping with Climate Crisis. Since 2010, the year when the certification first began, we have consistently explored green technologies and obtained certifications. We hold valid certifications for 7 green technologies as of the end of 2023, and we have also acquired certification of “Confirmation of Green Technology Product” for 179 green-technology-applied models.

Certified Green Technologies as of December 31, 2023, are as follows:

Certification number	Description/purpose	Certification date	Expiration date
GT-23-01728	Activating low-load operation catalyst for high-efficiency operation of heat pumps integrated with emission reduction devices	Jul 27, 2023	Jul 26, 2026
GT-20-00880	Improving energy efficiency in clothes dryers by incorporating high-efficiency heat pumps and heat exchangers	May 21, 2020	May 20, 2026
GT-20-00826	Ceiling-mounted wind-free air conditioners with micro air holes	Jan 30, 2020	Jan 29, 2026
GT-22-01562	Energy-saving dehumidification technology using dew point temperature	Nov 24, 2022	Nov 23, 2025
GT-19-00664	Power-saving technology for reducing standby power consumption of monitors that have Self Wake-Up function	May 16, 2019	May 15, 2025
GT-21-01256	Power-saving technology for printers and multi-function printers in sleep mode	Nov 18, 2021	Nov 17, 2024
GT-21-01248	Power-saving technology for reducing standby power consumption of laptops using high-efficiency power conversion technology	Oct 14, 2021	Oct 13, 2024

Separate basis.

(Greenhouse gas emission and energy consumption management)

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

The reported amount of greenhouse gas emission and energy use on a separate basis are provided below:

(Unit: tCO₂-eq, TJ)

	2023	2022	2021
Greenhouse gas (tCO ₂ -eq)	13,618,815	14,929,733	14,515,620
Energy (TJ)	240,275	222,876	200,942

Separate 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 the result of governmental evaluations on emissions.

Amounts for 2023 are projections

From 2015, in accordance with 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.

D. Certification as health-friendly company

The Company operates various medical facilities—including an in-house clinic, physiotherapy room, musculoskeletal disorder prevention center, and mental health clinic—to promote employee health, and through health promotion programs, the Company helps employees care for their own health. In recognition of our efforts, the DS Division was certified as a health-friendly company by the Minister of Health and Welfare on December 7, 2022, pursuant to Article 6-2 Paragraph 1 of the National Health Promotion Act (Validity period: December 7, 2022–December 6, 2025).

XII. Appendix

1. Subsidiaries subject to consolidated financial statements (detailed)

As of December 31, 2023, Samsung Electronics' consolidated subsidiaries numbered 232 with the addition of 6 subsidiaries and reduction of 6 subsidiary when compared to totals as of December 31, 2022. Below is the list of consolidated subsidiaries.

(KRW mil)

Subsidiary	Date established	Major business	Assets as of Dec 31, 2022	Ownership	Classified as major subsidiary (Y/N)
Samsung Electronics America, Inc. (SEA)	Jul 1978	Electronic goods sales	41,926,899	Over 50%	Y
Samsung International, Inc. (SII)	Oct 1983	Electronic goods production	1,690,752	Over 50%	Y
Samsung Mexicana S.A. de C.V (SAMEX)	Mar 1988	Electronic goods production	190,798	Over 50%	Y
Samsung Electronics Home Appliances America, LLC (SEHA)	Aug 2017	Home appliance production	863,840	Over 50%	Y
Samsung Research America, Inc (SRA)	Oct 1988	R&D	984,163	Over 50%	Y
SAMSUNG NEXT LLC (SNX)	Aug 2016	Subsidiary management (overseas)	257,924	Over 50%	Y
SAMSUNG NEXT FUND LLC (SNXF)	Aug 2016	Tech/emerging-tech venture firm investments	370,961	Over 50%	Y
NeuroLogica Corp.	Feb 2004	Medical device production and sales	243,481	Over 50%	Y
Samsung HVAC America, LLC	Jul 2001	Air conditioner sales	113,088	Over 50%	N
Joyent, Inc.	Mar 2005	Cloud services	202,727	Over 50%	Y
SmartThings, Inc.	Apr 2012	Smart home platform	220,123	Over 50%	Y
TeleWorld Solutions, Inc. (TWS)	May 2002	Network equipment installation and optimization	32,371	Over 50%	N
Samsung Semiconductor, Inc. (SSI)	Jul 1983	Semiconductor and display panel sales	12,796,440	Over 50%	Y
Samsung Federal, Inc. (SFI)	May 2023	R&D	1,263	Over 50%	N
Samsung Austin Semiconductor LLC. (SAS)	Feb 1996	Semiconductor production	16,714,945	Over 50%	Y
Samsung Oak Holdings, Inc. (SHI)	Jun 2016	Subsidiary management (overseas)	558,656	Over 50%	Y
SEMES America, Inc.	Oct 1998	Semiconductor equipment services	2,529	Over 50%	N
Samsung Display America Holdings, Inc. (SDAH)	May 2023	Subsidiary management (overseas)	307,429	Over 50%	N
eMagin Corporation	Mar 2000	Display panel development and production	370,378	Over 50%	N
Samsung Electronics Canada, Inc. (SECA)	Jul 1980	Electronic goods sales	1,302,924	Over 50%	Y
AdGear Technologies Inc.	Aug 2010	Digital advertising platform	161,458	Over 50%	Y
Samsung Eletronica da Amazonia Ltda. (SEDA)	Oct 1994	Electronic goods production and sales	5,542,627	Over 50%	Y
Samsung Electronics Mexico S.A. De C.V. (SEM)	Jul 1995	Electronic goods sales	2,153,032	Over 50%	Y
Samsung Electronics Digital Appliance Mexico, SA de CV (SEDAM)	Dec 2012	Home appliance production	1,324,763	Over 50%	Y
Samsung Electronics Latinoamerica (Zona Libre), S. A. (SELA)	Apr 1989	Electronic goods sales	643,286	Over 50%	Y

Subsidiary	Date established	Major business	Assets as of Dec 31, 2022	Ownership	Classified as major subsidiary (Y/N)
Samsung Electronics Latinoamerica Miami, Inc. (SEMI)	May 1995	Electronic goods sales	553,965	Over 50%	Y
Samsung Electronica Colombia S.A. (SAMCOL)	Mar 1997	Electronic goods sales	463,772	Over 50%	Y
Samsung Electronics Argentina S.A. (SEASA)	Jun 1996	Marketing and services	83,075	Over 50%	Y
Samsung Electronics Chile Limitada (SECH)	Dec 2002	Electronic goods sales	524,530	Over 50%	Y
Samsung Electronics Peru S.A.C. (SEPR)	Apr 2010	Electronic goods sales	295,477	Over 50%	Y
Samsung Electronics Venezuela, C.A. (SEVEN)	May 2010	Marketing and services	168	Over 50%	N
Samsung Electronics Panama. S.A. (SEPA)	Jul 2012	Consulting	5,864	Over 50%	N
Harman International Industries, Inc.	Jan 1980	Subsidiary management (overseas)	16,329,845	Over 50%	Y
Harman Becker Automotive Systems, Inc.	Jun 1981	Audio product production, sales, and R&D	3,137,078	Over 50%	Y
Harman Connected Services, Inc.	Feb 2002	Connected Service Provider	2,265,938	Over 50%	Y
Harman Connected Services Engineering Corp.	Sep 2004	Connected Service Provider	-	Over 50%	N
Harman da Amazonia Industria Eletronica e Participacoes Ltda.	Jul 2005	Audio product production and sales	196,081	Over 50%	Y
Harman de Mexico, S. de R.L. de C.V.	Feb 1997	Audio product production	261,655	Over 50%	Y
Harman do Brasil Industria Eletronica e Participacoes Ltda.	Nov 1958	Audio product sales and R&D	304,138	Over 50%	Y
Harman Financial Group LLC	Jun 2004	Management Company	1	Over 50%	N
Harman International Industries Canada Ltd.	May 2005	Audio product sales	326	Over 50%	N
Harman International Mexico, S. de R.L. de C.V.	Dec 2014	Audio product sales	47,811	Over 50%	N
Harman KG Holding, LLC	Mar 2009	Subsidiary management (overseas)	-	Over 50%	N
Harman Professional, Inc.	Jul 2006	Audio product sales and R&D	898,008	Over 50%	Y
Roon Labs, LLC.	Jan 2015	Audio product sales	69,748	Over 50%	N
Beijing Integrated Circuit Industry International Fund, L.P	Dec 2014	Venture firm investments	13,652	Over 50%	N
China Materialia New Materials 2016 Limited Partnership	Sep 2017	Venture firm investments	8,141	Over 50%	N
Samsung Electronics (UK) Ltd. (SEUK)	Jul 1995	Electronic goods sales	2,902,722	Over 50%	Y
Samsung Electronics Ltd. (SEL)	Jan 1999	Subsidiary management (overseas)	7,212	Over 50%	N
Samsung Semiconductor Europe Limited (SSEL)	Apr 1997	Semiconductor and display panel sales	109,216	Over 50%	Y
Samsung Electronics GmbH (SEG)	Dec 1984	Electronic goods sales	2,097,706	Over 50%	Y
Samsung Electronics Holding GmbH (SEHG)	Feb 1982	Subsidiary management (overseas)	438,172	Over 50%	Y
Samsung Semiconductor Europe GmbH (SSEG)	Dec 1987	Semiconductor and display panel sales	1,024,701	Over 50%	Y
Samsung Electronics France S.A.S (SEF)	Jan 1986	Electronic goods sales	1,265,823	Over 50%	Y
Samsung Electronics Italia S.P.A. (SEI)	Apr 1991	Electronic goods sales	1,053,955	Over 50%	Y
Samsung Electronics Iberia, S.A. (SESA)	Jan 1989	Electronic goods sales	1,266,167	Over 50%	Y

Subsidiary	Date established	Major business	Assets as of Dec 31, 2022	Ownership	Classified as major subsidiary (Y/N)
Samsung Electronics Portuguesa, Unipessoal, Lda. (SEP)	Sep 1982	Electronic goods sales	304,248	Over 50%	Y
Samsung Electronics Hungarian Private Co. Ltd. (SEH)	Oct 1989	Electronic goods production and sales	1,426,079	Over 50%	Y
Samsung Electronics Europe Logistics B.V. (SELS)	May 1991	Logistics	1,639,004	Over 50%	Y
Samsung Electronics Benelux B.V. (SEBN)	Jul 1995	Electronic goods sales	1,794,552	Over 50%	Y
Samsung Electronics Europe Holding Cooperatief U.A. (SEEH)	Oct 2008	Subsidiary management (overseas)	9,660,481	Over 50%	Y
Samsung Electronics Nordic Aktiebolag (SENA)	Mar 1992	Electronic goods sales	591,101	Over 50%	Y
Samsung Electronics Slovakia s.r.o (SESK)	Jun 2002	TV and monitor production	928,129	Over 50%	Y
Samsung Display Slovakia, s.r.o. (SDSK)	Mar 2007	Display panel processing	29,695	Over 50%	N
Samsung Electronics Polska, SP.Zo.o (SEPOL)	Apr 1996	Electronic goods sales	1,384,273	Over 50%	Y
Samsung Electronics Poland Manufacturing SP.Zo.o (SEPM)	Feb 2010	Home appliance production	882,673	Over 50%	Y
Samsung Electronics Romania LLC (SEROM)	Sep 2007	Electronic goods sales	460,478	Over 50%	Y
Samsung Electronics Austria GmbH (SEAG)	Jan 2002	Electronic goods sales	519,776	Over 50%	Y
Samsung Electronics Switzerland GmbH (SESG)	May 2013	Electronic goods sales	264,260	Over 50%	Y
Samsung Electronics Czech and Slovak s.r.o. (SE CZ)	Jan 2010	Electronic goods sales	391,308	Over 50%	Y
SAMSUNG ELECTRONICS BALTICS SIA (SEB)	Oct 2001	Electronic goods sales	131,129	Over 50%	Y
Samsung Electronics Greece S.M.S.A (SEGR)	Apr 2010	Electronic goods sales	153,107	Over 50%	Y
Samsung Electronics Air Conditioner Europe B.V. (SEACE)	Apr 2017	Air conditioner sales	273,604	Over 50%	Y
Samsung Nanoradio Design Center (SND C)	Feb 2004	R&D	28,657	Over 50%	N
Samsung Denmark Research Center ApS (SDRC)	Sep 2012	R&D	28,791	Over 50%	N
Samsung Cambridge Solution Centre Limited (SCSC)	Sep 2012	R&D	210,343	Over 50%	Y
Samsung Zhilabs, S.L.	Nov 2008	Network solution R&D and sales	11,879	Over 50%	N
FOODIENT LTD.	Mar 2012	R&D	10,004	Over 50%	N
Samsung Electronics Rus Company LLC (SERC)	Oct 2006	Electronic goods sales	839,493	Over 50%	Y
Samsung Electronics Rus Kaluga LLC (SERK)	Jul 2007	TV production	1,030,743	Over 50%	Y
Samsung Electronics Ukraine Company LLC (SEUC)	Sep 2008	Electronic goods sales	280,470	Over 50%	Y
Samsung R&D Institute Ukraine (SRUKR)	Feb 2022	R&D	9,454	Over 50%	N
Samsung Electronics Central Eurasia LLP (SECE)	Sep 2008	Electronic goods sales	362,213	Over 50%	Y
Samsung Electronics Overseas B.V. (SEO)	Jan 1997	Electronic goods sales	1,913	Over 50%	N
Samsung R&D Institute Rus LLC (SRR)	Nov 2011	R&D	49,646	Over 50%	N
Samsung Electronics Caucasus Co. Ltd (SECC)	Oct 2014	Marketing	2,632	Over 50%	N
Samsung Electronics Uzbekistan FC LLC. (SEUZ)	Mar 2022	Marketing	91,356	Over 50%	N

Subsidiary	Date established	Major business	Assets as of Dec 31, 2022	Ownership	Classified as major subsidiary (Y/N)
AKG Acoustics Gmbh	Mar 1947	Audio product production and sales	356,482	Over 50%	Y
Apostera UA, LLC	Oct 2020	Connected Service Provider	1,037	Over 50%	N
Harman Audio Iberia Espana Sociedad Limitada	Nov 2012	Audio product sales	1,254	Over 50%	N
Harman Becker Automotive Systems GmbH	Jul 1990	Audio product production, sales, and R&D	3,949,170	Over 50%	Y
Harman Becker Automotive Systems Italy S.R.L.	Dec 2005	Audio product sales	879	Over 50%	N
Harman Becker Automotive Systems Manufacturing Kft	Aug 1994	Audio product R&D and production	3,230,387	Over 50%	Y
Harman Belgium SA	Apr 1967	Audio product sales	2,993	Over 50%	N
Harman Connected Services AB.	Oct 1984	Connected Service Provider	11,306	Over 50%	N
Harman Finland Oy	Jul 1998	Connected Service Provider	379	Over 50%	N
Harman Connected Services GmbH	Dec 2005	Connected Service Provider	52,425	Over 50%	N
Harman Connected Services Poland Sp.zoo	Jun 2007	Connected Service Provider	11,538	Over 50%	N
Harman Connected Services UK Ltd.	Sep 2008	Connected Service Provider	55,034	Over 50%	N
Harman Consumer Nederland B.V.	Dec 1995	Audio product sales	497,888	Over 50%	Y
Harman Deutschland GmbH	Mar 1998	Audio product sales	13,602	Over 50%	N
Harman France SNC	Nov 1995	Audio product sales	166,979	Over 50%	Y
Harman Holding Gmbh & Co. KG	Jun 2002	Management Company	5,848,586	Over 50%	Y
Harman Hungary Financing Ltd.	Jun 2012	Financing Company	46,365	Over 50%	N
Harman Inc. & Co. KG	Jun 2012	Subsidiary management (overseas)	4,619,985	Over 50%	Y
Harman International Estonia OU	May 2015	R&D	1	Over 50%	N
Harman International Industries Limited	Mar 1980	Audio product sales and R&D	77,383	Over 50%	Y
Harman International Romania SRL	Feb 2015	R&D	13,910	Over 50%	N
Harman Management Gmbh	Apr 2002	Subsidiary management (overseas)	-	Over 50%	N
Harman Professional Kft	Dec 2014	Audio product R&D and production	59,000	Over 50%	N
Harman Professional Denmark ApS	Jul 1987	Audio product sales and R&D	54,778	Over 50%	N
Red Bend Software SAS	Oct 2002	Software design	8,162	Over 50%	N
Studer Professional Audio GmbH	Nov 2003	Audio product sales and R&D	476	Over 50%	N
Harman Connected Services OOO	Nov 1998	Connected Service Provider	27,181	Over 50%	N
Harman RUS CIS LLC	Aug 2011	Audio product sales	38,224	Over 50%	N
Samsung Gulf Electronics Co., Ltd. (SGE)	May 1995	Electronic goods sales	1,027,977	Over 50%	Y
Samsung Electronics Turkiye (SETK)	Dec 1984	Electronic goods sales	793,352	Over 50%	Y
Samsung Electronics Industry and Commerce Ltd. (SETK-P)	Feb 2021	Electronic goods production	134,709	Over 50%	Y

Subsidiary	Date established	Major business	Assets as of Dec 31, 2022	Ownership	Classified as major subsidiary (Y/N)
Samsung Electronics Levant Co.,Ltd. (SELV)	Jul 2009	Electronic goods sales	444,609	Over 50%	Y
Samsung Electronics Maghreb Arab (SEMAG)	Nov 2009	Electronic goods sales	352,506	Over 50%	Y
Samsung Electronics Egypt S.A.E (SEEG)	Jul 2012	Electronic goods production and sales	1,348,469	Over 50%	Y
Samsung Electronics Israel Ltd. (SEIL)	Sep 2012	Marketing	22,070	Over 50%	N
Samsung Electronics Tunisia S.A.R.L (SETN)	Sep 2012	Marketing	4,885	Over 50%	N
Samsung Electronics Pakistan(Private) Ltd. (SEPAK)	Nov 2012	Marketing	3,393	Over 50%	N
Samsung Electronics Saudi Arabia Ltd. (SESAR)	Nov 2019	Electronic goods sales	428,067	Over 50%	Y
Samsung Semiconductor Israel R&D Center, Ltd. (SIRC)	Oct 2007	R&D	162,934	Over 50%	Y
Corephotonics Ltd.	Jan 2012	R&D	24,159	Over 50%	N
Samsung Electronics South Africa(Pty) Ltd. (SSA)	Jun 1994	Electronic goods sales	527,416	Over 50%	Y
Samsung Electronics South Africa Production (pty) Ltd. (SSAP)	Jul 2014	TV and monitor production	87,759	Over 50%	Y
Samsung Electronics West Africa Ltd. (SEWA)	Mar 2010	Marketing	23,348	Over 50%	N
Samsung Electronics East Africa Ltd. (SEEA)	Dec 2011	Marketing	18,072	Over 50%	N
Global Symphony Technology Group Private Ltd.	Jan 2002	Subsidiary management (overseas)	56,523	Over 50%	N
Harman Connected Services Morocco	Apr 2012	Connected Service Provider	73	Over 50%	N
Harman Industries Holdings Mauritius Ltd.	Oct 2009	Subsidiary management (overseas)	95,209	Over 50%	Y
Red Bend Ltd.	Feb 1998	Audio product production	110,476	Over 50%	Y
Samsung Asia Pte. Ltd. (SAPL)	Jul 2006	Subsidiary management (overseas)	22,234,942	Over 50%	Y
Samsung Electronics Singapore Pte. Ltd. (SESP)	Oct 2020	Electronic goods sales	658,918	Over 50%	Y
Samsung Malaysia Electronics (SME) Sdn. Bhd. (SME)	May 2003	Electronic goods sales	618,803	Over 50%	Y
Samsung Electronics Display (M) Sdn. Bhd. (SDMA)	Mar 1995	Electronic goods production	26,388	Over 50%	N
Samsung Electronics (M) Sdn. Bhd. (SEMA)	Sep 1989	Home appliance production	313,767	Over 50%	Y
Samsung Vina Electronics Co., Ltd. (SAVINA)	Jan 1995	Electronic goods sales	110,276	Over 50%	Y
Samsung Electronics Vietnam Co., Ltd. (SEV)	Mar 2008	Electronic goods production	7,301,860	Over 50%	Y
Samsung Electronics Vietnam THAINGUYEN Co., Ltd. (SEVT)	Mar 2013	Telecom product production	12,554,481	Over 50%	Y
Samsung Electronics HCMC CE Complex Co., Ltd. (SEHC)	Feb 2015	Electronic goods production and sales	4,043,677	Over 50%	Y
Samsung Display Vietnam Co., Ltd. (SDV)	Jul 2014	Display panel production	7,383,485	Over 50%	Y
DOWOINSYS VINA COMPANY LIMITED	Jun 2022	Display panel component production	96,061	Over 50%	N
PT Samsung Electronics Indonesia (SEIN)	Aug 1991	Electronic goods production and sales	1,110,178	Over 50%	Y
PT Samsung Telecommunications Indonesia (STIN)	Mar 2003	Electronic goods sales and service	75,638	Over 50%	N
Thai Samsung Electronics Co., Ltd. (TSE)	Oct 1988	Electronic goods production and sales	3,039,379	Over 50%	Y

Subsidiary	Date established	Major business	Assets as of Dec 31, 2022	Ownership	Classified as major subsidiary (Y/N)
Laos Samsung Electronics Sole Co., Ltd (LSE)	Sep 2016	Marketing	1,318	Over 50%	N
Samsung Electronics Philippines Corporation (SEPCO)	Mar 1996	Electronic goods sales	372,478	Over 50%	Y
Samsung Electronics Australia Pty. Ltd. (SEAU)	Nov 1987	Electronic goods sales	612,161	Over 50%	Y
Samsung Electronics New Zealand Limited (SENZ)	Sep 2013	Electronic goods sales	204,114	Over 50%	Y
Samsung India Electronics Private Ltd. (SIEL)	Aug 1995	Electronic goods production and sales	7,738,259	Over 50%	Y
Red Brick Lane Marketing Solutions Pvt. Ltd.	Jan 2012	Marketing	1,429	Over 50%	N
Samsung Display Noida Private Limited (SDN)	Jul 2019	Display panel production	675,743	Over 50%	Y
Samsung R&D Institute India-Bangalore Private Limited (SRI-Bangalore)	May 2005	R&D	430,987	Over 50%	Y
Samsung R&D Institute BanglaDesh Limited (SRBD)	Aug 2010	R&D	17,625	Over 50%	N
Samsung Nepal Services Pvt, Ltd (SNSL)	Nov 2017	Service	1,263	Over 50%	N
Samsung Japan Corporation (SJC)	Dec 1975	Semiconductor and display panel sales	1,013,103	Over 50%	Y
Samsung R&D Institute Japan Co. Ltd. (SRJ)	Aug 1992	R&D	136,782	Over 50%	Y
Samsung Electronics Japan Co., Ltd. (SEJ)	Sep 2008	Electronic goods sales	705,460	Over 50%	Y
Harman Connected Services Corp. India Pvt. Ltd.	Apr 2002	Connected Service Provider	353,291	Over 50%	Y
Harman International (India) Private Limited	Jan 2009	Audio product sales and R&D	395,349	Over 50%	Y
Harman International Industries PTY Ltd.	Dec 2014	Subsidiary management (overseas)	-4,549	Over 50%	N
Harman International Japan Co., Ltd.	Jun 1991	Audio product sales and R&D	72,958	Over 50%	Y
Harman Singapore Pte. Ltd.	Aug 2007	Audio product sales	15,187	Over 50%	N
Samsung (CHINA) Investment Co., Ltd. (SCIC)	Mar 1996	Electronic goods sales	10,222,557	Over 50%	Y
Samsung Electronics Hong Kong Co., Ltd. (SEHK)	Sep 1988	Electronic goods sales	985,438	Over 50%	Y
Samsung Electronics Taiwan Co., Ltd. (SET)	Nov 1994	Electronic goods sales	1,797,627	Over 50%	Y
Tianjin Samsung Electronics Co., Ltd. (TSEC)	Apr 1993	TV and monitor production	382,260	Over 50%	Y
Suzhou Samsung Electronics Co., Ltd. (SSEC)	Apr 1995	Home appliance production	636,160	Over 50%	Y
Samsung Suzhou Electronics Export Co., Ltd. (SSEC-E)	Apr 1995	Home appliance production	488,014	Over 50%	Y
Samsung Electronics Suzhou Computer Co., Ltd. (SESC)	Sep 2002	R&D	94,528	Over 50%	Y
Tianjin Samsung Telecom Technology Co., Ltd. (TSTC)	Mar 2001	Telecom product production	646,732	Over 50%	Y
Beijing Samsung Telecom R&D Center (SRC-Beijing)	Sep 2000	R&D	131,677	Over 50%	Y
Samsung Electronics China R&D Center (SRC-Nanjing)	May 2004	R&D	33,031	Over 50%	N
Samsung Mobile R&D Center China- Guangzhou (SRC-Guangzhou)	Jan 2010	R&D	43,195	Over 50%	Y
Samsung R&D Institute China-Shenzhen (SRC-Shenzhen)	Mar 2013	R&D	38,382	Over 50%	N
Shanghai Samsung Semiconductor Co., Ltd. (SSS)	Oct 2001	Semiconductor and display panel sales	5,262,086	Over 50%	Y

Subsidiary	Date established	Major business	Assets as of Dec 31, 2022	Ownership	Classified as major subsidiary (Y/N)
Samsung (China) Semiconductor Co., Ltd. (SCS)	Sep 2012	Semiconductor production	15,808,283	Over 50%	Y
Samsung SemiConductor Xian Co., Ltd. (SSCX)	Apr 2016	Semiconductor and display panel sales	854,932	Over 50%	Y
Samsung Electronics Suzhou Semiconductor Co., Ltd. (SESS)	Dec 1994	Semiconductor processing	869,225	Over 50%	Y
Tianjin Samsung LED Co., Ltd. (TSLED)	May 2009	LED production	257,820	Over 50%	Y
Samsung Semiconductor (China) R&D Co., Ltd. (SSCR)	Apr 2003	R&D	89,911	Over 50%	Y
Samsung Display Dongguan Co., Ltd. (SDD)	Nov 2001	Display panel production	752,934	Over 50%	Y
Samsung Display Tianjin Co., Ltd. (SDT)	Jun 2004	Display panel production	583,728	Over 50%	Y
SEMES (XIAN) Co., Ltd.	Jul 2013	Semiconductor/FPD equipment services	3,588	Over 50%	N
Samsung Semiconductor Investment L.P. I	Dec 2021	Tech/emerging-tech venture firm investments	10,314	Over 50%	N
Harman (China) Technologies Co., Ltd.	Mar 2011	Audio product production	214,710	Over 50%	Y
Harman (Suzhou) Audio and Infotainment Systems Co., Ltd.	Mar 2013	Audio product sales	5,795	Over 50%	N
Harman Automotive Electronic Systems (Suzhou) Co., Ltd.	Sep 2006	Audio product R&D and production	465,961	Over 50%	Y
Harman Commercial (Shanghai) Co., Ltd.	Oct 2010	Audio product sales	367	Over 50%	N
Harman Connected Services Solutions (Chengdu) Co., Ltd.	Aug 2007	Connected Service Provider	12,426	Over 50%	N
Harman Holding Limited	May 2007	Audio product sales	648,529	Over 50%	Y
Harman International (China) Holdings Co., Ltd.	Jun 2009	Audio product sales and R&D	685,227	Over 50%	Y
Harman Technology (Shenzhen) Co., Ltd.	Sep 2004	Audio product sales and R&D	40,712	Over 50%	N
Samsung Display	Apr 2012	Display panel production and sales	65,328,568	Over 50%	Y
SU Materials	Aug 2011	Display panel component production	37,027	Over 50%	N
STECO	Jun 1995	Semiconductor component production	132,675	Over 50%	Y
SEMES	Jan 1993	Semiconductor/FPD manufacturing equipment production and sales	2,187,919	Over 50%	Y
Samsung Electronics Service	Oct 1998	Electronics goods repair services	795,640	Over 50%	Y
Samsung Electronics Service CS	Oct 2018	Customer management services	23,897	Over 50%	N
Samsung Electronics Sales	Jul 1996	Electronic goods sales	1,358,597	Over 50%	Y
Samsung Electronics Logitech	Apr 1998	Total logistics services	465,079	Over 50%	Y
Samsung Medison	Jul 1985	Medical device production and sales	629,302	Over 50%	Y
Stellarforest	Dec 2022	Food manufacturing and processing	7,255	Over 50%	N
Mirero System	Jan 1994	Semiconductor software development and supply	39,931	Over 50%	N
Dowoo Insys	Mar 2010	Display panel component production	142,726	Over 50%	Y
GF Co., Ltd.	Oct 2015	Display panel component production	8,418	Over 50%	N
Harman Korea	Jan 2005	Semiconductor software development and supply	16,696	Over 50%	N

Subsidiary	Date established	Major business	Assets as of Dec 31, 2022	Ownership	Classified as major subsidiary (Y/N)
SVIC #21 Venture Capital Union	Nov 2011	Tech/emerging-tech venture firm investments	82,411	Over 50%	Y
SVIC #22 Venture Capital Union	Nov 2011	Tech/emerging-tech venture firm investments	17,438	Over 50%	N
SVIC #26 Venture Capital Union	Nov 2014	Tech/emerging-tech venture firm investments	27,631	Over 50%	N
SVIC #28 Venture Capital Union	Feb 2015	Tech/emerging-tech venture firm investments	337,949	Over 50%	Y
SVIC #29 Venture Capital Union	Apr 2015	Tech/emerging-tech venture firm investments	34,222	Over 50%	N
SVIC #32 Venture Capital Union	Aug 2016	Tech/emerging-tech venture firm investments	223,258	Over 50%	Y
SVIC #33 Venture Capital Union	Nov 2016	Tech/emerging-tech venture firm investments	315,348	Over 50%	Y
SVIC #37 Venture Capital Union	Nov 2017	Tech/emerging-tech venture firm investments	22,559	Over 50%	N
SVIC #40 Venture Capital Union	Jun 2018	Tech/emerging-tech venture firm investments	37,275	Over 50%	N
SVIC #42 Venture Capital Union	Nov 2018	Tech/emerging-tech venture firm investments	33,102	Over 50%	N
SVIC #43 Venture Capital Union	Dec 2018	Tech/emerging-tech venture firm investments	17,093	Over 50%	N
SVIC #45 Venture Capital Union	May 2019	Tech/emerging-tech venture firm investments	175,893	Over 50%	Y
SVIC #48 Venture Capital Union	Dec 2019	Tech/emerging-tech venture firm investments	85,250	Over 50%	Y
SVIC #52 Venture Capital Union	May 2021	Tech/emerging-tech venture firm investments	77,174	Over 50%	N
SVIC #55 Venture Capital Union	Sep 2021	Tech/emerging-tech venture firm investments	155,442	Over 50%	Y
SVIC #56 Venture Capital Union	Nov 2021	Tech/emerging-tech venture firm investments	56,070	Over 50%	N
SVIC #57 Venture Capital Union	Aug 2022	Tech/emerging-tech venture firm investments	33,102	Over 50%	N
SVIC #62 Venture Capital Union	Mar 2023	Tech/emerging-tech venture firm investments	17,093	Over 50%	N
Private Equity Fund for Semiconductor Growth	Mar 2017	Semiconductor industry investments	175,893	Over 50%	N
Private Equity Fund for Co-existence of System Semiconductor Firms	Apr 2020	Semiconductor industry investments	85,250	Over 50%	Y
General Private Equity Fund for Semiconductor Ecosystem	Jul 2023	Semiconductor industry investments	753	Over 50%	N

Companies with over KRW 75 billion in total assets as of December 31, 2022 are classified as major subsidiaries.

See 『II. Businesses Overview』 for detailed information about major business segments.

(Changes in subsidiaries)

	Americas	Europe/ CIS	MEA /Africa	Asia ex China	China	Domestic	Total	Increase	Decrease
As of Dec 31 2020	55	75	19	30	33	29	241	-	-
Changes in 2021	(9)	(4)	1	-	(3)	2	(13)	<p>[China: 1] Samsung Semiconductor Investment L.P. I</p> <p>[MEA/Africa: 1] Samsung Electronics Industry and Commerce Ltd. (SETK-P)</p> <p>[Domestic: 3] SVIC #52 Venture Capital Union SVIC #55 Venture Capital Union SVIC #56 Venture Capital Union</p>	<p>[Americas: 9] Viv Labs, Inc. Stellus Technologies, Inc. SigMast Communications Inc. Prismview, LLC Zhilabs, Inc. TWS LATAM B, LLC TWS LATAM S, LLC SNB Technologies, Inc. Mexico, S.A. de C.V. - RT SV CO-INVEST, LP</p> <p>[Europe/CIS: 4] Arcam Limited A&R Cambridge Limited Harman Connected Services Limited Martin Manufacturing (UK) Ltd.</p> <p>[China: 4] Samsung Suzhou Module Co., Ltd. (SSM) Samsung Suzhou LCD Co., Ltd. (SSL) Samsung Electronics Huizhou Co., Ltd. (SEHZ) Shenzhen Samsung Electronics Telecommunication Co., Ltd. (SSET)</p> <p>[Domestic: 1] SVIC #27 Venture Capital Union</p>
As of Dec 31 2021	46	71	20	30	30	31	228	-	-
Changes in 2022	(1)	1	-	2	-	2	4	<p>[Europe/CIS: 4] Samsung R&D Institute Ukraine (SRUKR) Samsung Electronics Uzbekistan FC LLC. (SEUZ) Apostera GmbH Apostera UA, LLC</p> <p>[Asia ex China: 2] DOWOINSYS VINA COMPANY LIMITED Red Brick Lane Marketing Solutions Pvt. Ltd.</p> <p>[Domestic: 2] SVIC #57 Venture Capital Union Stellarforest</p>	<p>[Americas: 1] Dacor Canada Co.</p> <p>[Europe/CIS: 3] AMX UK Limited Harman International s.r.o Apostera GmbH</p>
As of Dec 31 2022	45	72	20	32	30	33	232	-	-
Changes in 2023	(1)	1	-	2	-	2	4	<p>[Americas: 4] Samsung Federal, Inc. (SFI) Samsung Display America Holdings, Inc. (SDAH) eMagin Corporation Roon Labs, LLC</p> <p>[Domestic: 2] SVIC #62 Venture Capital Union General Private Equity Fund for Semiconductor Ecosystem</p>	<p>[Americas: 2] Dacor Holdings, Inc Dacor, Inc</p> <p>[Europe/CIS: 4] Red Bend Software Ltd. Harman Finance International GP S.a.r.l Harman Finance International, SCA Harman Automotive UK Limited</p>
As of Dec 31 2023	47	68	20	32	30	35	232	-	-

2. Affiliates

A. Domestic Affiliates

As of December 31, 2023, Samsung Group is consisted of 63 domestic affiliates. Among the Samsung Group's 63 domestic affiliates, seventeen (17) affiliates including Samsung Electronics are listed, and forty-six (46) affiliates are unlisted.

[As of December 31, 2023]

Listing	No. of affiliates	Name of affiliates
Listed	17	Samsung C&T; Samsung Biologics; Samsung Life Insurance; Samsung SDI; Samsung SDS; SamsungFN REIT; Samsung Engineering; Samsung Electro-mechanics; Samsung Electronics; Samsung Heavy Industries; Samsung Securities; Samsung Card; Samsung Fire & Marine Insurance; Multicampus; S1; Cheil Worldwide; Hotel Shilla
Unlisted	46	Samsung Display; Samsung Medison; Samsung Bioepis; Samsung Venture Investment Corporation; Samsung Life Service; Samsung Futures; Samsung Active Asset Management; Samsung SRA Asset Management; Samsung Welstory; Samsung Asset Management; Samsung Electronics Logitech; Samsung Electronics Service; Samsung Electronics Service CS; Samsung Electronics Sales; Samsung Card Customer Service; Samsung Corning Advanced Glass; Samsung Hedge Asset Management; Samsung Fire & Marine Insurance Service; Samsung Claim Adjustment Service; SEMES; Suwon Samsung Bluewings FC; STECO; Shilla HM; SD Flex; SBTM; S-1CRM; SU Materials; S-Core; STM; HDC Shilla Duty Free LTD; OpenHands; Cheil Fashion Retail Co., Ltd.; Miracom; Mirero System; Samsung Global Research(SGR); Samsung Lions; Samsung Life Financial Service; Samsung Fire & Marine Insurance Financial Service; Samwoo Architects & Engineers; Seoul Lakeside CC; SECUI; CVnet Corporation; SHP Corporation; Harman International Korea; Human TSS; Stellarforest
Total	63	

B. Foreign Affiliates

[As of December 31, 2023]

Listing	No. of affiliates	Name of affiliates	Country
Unlisted	562	SAMOO AUSTIN INC	USA
		SAMOO HU Designer and Engineering Services Limited	Hungary
		SAMOO DESIGNERS & ENGINEERS INDIA PRIVATE LIMITED	India
		SAMOO (KL) SDN. BHD.	Malaysia
		SAMOO Design Consulting Co.,Ltd	China
		Samsung Green repower, LLC	USA
		Samsung Solar Construction Inc.	USA
		QSSC, S.A. de C.V.	Mexico
		Samsung Solar Energy LLC	USA
		Equipment Trading Solutions Group, LLC	USA
		SP Armow Wind Ontario LP	Canada
		SRE GRW EPC GP Inc.	Canada
		SRE GRW EPC LP	Canada
		SRE SKW EPC GP Inc.	Canada
		SRE SKW EPC LP	Canada
		SRE WIND PA GP INC.	Canada
		SRE WIND PA LP	Canada
		SRE GRS Holdings GP Inc.	Canada
		SRE GRS Holdings LP	Canada
		SRE K2 EPC GP Inc.	Canada
		SRE K2 EPC LP	Canada
		SRE KS HOLDINGS GP INC.	Canada
		SRE KS HOLDINGS LP	Canada
		SP Belle River Wind LP	Canada
		SRE Armow EPC GP Inc.	Canada
		SRE Armow EPC LP	Canada
		North Kent Wind 1 LP	Canada
		SRE Wind GP Holding Inc.	Canada
		South Kent Wind LP Inc.	Canada
		Grand Renewable Wind LP Inc.	Canada
		SRE North Kent 2 LP Holdings LP	Canada
		SRE Solar Development GP Inc.	Canada
		SRE Solar Development LP	Canada
SRE Windsor Holdings GP Inc.	Canada		
SRE Southgate Holdings GP Inc.	Canada		
SRE Solar Construction Management GP Inc.	Canada		
SRE Solar Construction Management LP	Canada		
SRE BRW EPC GP INC.	Canada		
SRE BRW EPC LP	Canada		

Listing	No. of affiliates	Name of affiliates	Country
		SRE North Kent 1 GP Holdings Inc	Canada
		SRE North Kent 2 GP Holdings Inc	Canada
		SRE Belle River GP Holdings Inc	Canada
		SRE NK1 EPC GP Inc	Canada
		SRE NK1 EPC LP	Canada
		SRE Summerside Construction GP Inc.	Canada
		SRE Summerside Construction LP	Canada
		Monument Power, LLC	USA
		PLL Holdings LLC	USA
		Grand Renewable Solar GP Inc.	Canada
		KINGSTON SOLAR GP INC.	Canada
		SP Armow Wind Ontario GP Inc	Canada
		South Kent Wind GP Inc.	Canada
		Grand Renewable Wind GP Inc.	Canada
		North Kent Wind 1 GP Inc	Canada
		SP Belle River Wind GP Inc	Canada
		Samsung Solar Energy 1 LLC	USA
		Samsung Solar Energy 2 LLC	USA
		Samsung Solar Energy 3, LLC	USA
		CS SOLAR LLC	USA
		5S ENERGY HOLDINGS, LLC	USA
		SungEel Recycling Park Thuringen GmbH	Germany
		POSS-SLPC, S.R.O	Slovakia
		Solluce Romania 1 B.V.	Romania
		S.C. Otelinox S.A	Romania
		WARIS GIGIH ENGINEERING AND TECHNOLOGY SDN. BHD.	Malaysia
		Samsung Chemtech Vina LLC	Vietnam
		Samsung C&T Thailand Co., Ltd	Thailand
		Malaysia Samsung Steel Center Sdn.Bhd	Malaysia
		S&G Biofuel PTE.LTD	Singapore
		PT. Gandaerah Hendana	Indonesia
		PT. Inecda	Indonesia
		VISTA CONTRACTING AND DEVELOPMENT BANGLADESH LTD.	Bangladesh
		Vista NEXT Limited	Bangladesh
		WELVISTA COMPANY LIMITED	Vietnam
		SAMSUNG CONST. CO. PHILS.	Philippines
		SAMSUNG TRADING (SHANGHAI) CO., LTD	China
		Samsung Precision Stainless Steel(pinghu) Co.,Ltd.	China
		Samsung Japan Corporation	Japan
		Samsung R&D Institute Japan Co. Ltd.	Japan
		Samsung Electronics America, Inc.	USA
		Samsung Electronics Canada, Inc.	Canada
		Samsung Electronics Mexico S.A. De C.V.	Mexico

Listing	No. of affiliates	Name of affiliates	Country
		Samsung Electronics Ltd.	United Kingdom
		Samsung Electronics (UK) Ltd.	United Kingdom
		Samsung Electronics Holding GmbH	Germany
		Samsung Electronics Iberia, S.A.	Spain
		Samsung Electronics France S.A.S	France
		Samsung Electronics Hungarian Private Co. Ltd.	Hungary
		Samsung Electronics Italia S.P.A.	Italy
		Samsung Electronics Europe Logistics B.V.	Netherlands
		Samsung Electronics Benelux B.V.	Netherlands
		Samsung Electronics Overseas B.V.	Netherlands
		Samsung Electronics Polska, SP.Zo.o	Poland
		Samsung Electronics Portuguesa, Unipessoal, Lda.	Portugal
		Samsung Electronics Nordic Aktiebolag	Sweden
		Samsung Electronics Austria GmbH	Austria
		Samsung Electronics Slovakia s.r.o	Slovakia
		Samsung Electronics Europe Holding Cooperatief U.A.	Netherlands
		Samsung Electronics Display (M) Sdn. Bhd.	Malaysia
		Samsung Electronics (M) Sdn. Bhd.	Malaysia
		Samsung Vina Electronics Co., Ltd.	Vietnam
		Samsung Asia Pte. Ltd.	Singapore
		Samsung India Electronics Private Ltd.	India
		Samsung R&D Institute India-Bangalore Private Limited	India
		Samsung Electronics Australia Pty. Ltd.	Australia
		PT Samsung Electronics Indonesia	Indonesia
		Thai Samsung Electronics Co., Ltd.	Thailand
		Samsung Malaysia Electronics (SME) Sdn. Bhd.	Malaysia
		Samsung Electronics Hong Kong Co., Ltd.	Hong Kong
		Suzhou Samsung Electronics Co., Ltd.	China
		Samsung (CHINA) Investment Co., Ltd.	China
		Samsung Electronics Suzhou Semiconductor Co., Ltd.	China
		Tianjin Samsung Electronics Co., Ltd.	China
		Samsung Electronics Taiwan Co., Ltd.	Taiwan
		Tianjin Samsung Telecom Technology Co., Ltd.	China
		Shanghai Samsung Semiconductor Co., Ltd.	China
		Samsung Electronics Suzhou Computer Co., Ltd.	China
		Samsung Semiconductor (China) R&D Co., Ltd.	China
		Samsung (China) Semiconductor Co., Ltd.	China
		Samsung SemiConductor Xian Co., Ltd.	China
		Samsung Gulf Electronics Co., Ltd.	Utd.Arab Emir.
		Samsung Electronics Egypt S.A.E	Egypt
		Samsung Electronics South Africa(Pty) Ltd.	South Africa
		Samsung Electronics Latinoamerica(Zona Libre), S. A.	Panama
		Samsung Eletronica da Amazonia Ltda.	Brazil

Listing	No. of affiliates	Name of affiliates	Country
		Samsung Electronics Argentina S.A.	Argentina
		Samsung Electronics Chile Limitada	Chile
		Samsung Electronics Rus Company LLC	Russian Fed.
		Samsung Electronics Rus Kaluga LLC	Russian Fed.
		Tianjin Samsung LED Co., Ltd.	China
		Samsung Biologics America, Inc.	USA
		Samsung Bioepis United States Inc.	USA
		SAMSUNG BIOEPIS UK LIMITED	United Kingdom
		Samsung Bioepis NL B.V.	Netherlands
		Samsung Bioepis CH GmbH	Switzerland
		Samsung Bioepis PL Sp z o.o.	Poland
		SAMSUNG BIOEPIS AU PTY LTD	Australia
		SAMSUNG BIOEPIS NZ LIMITED	New Zealand
		Samsung Bioepis TW Limited	Taiwan
		Samsung Bioepis HK Limited	Hong Kong
		SAMSUNG BIOEPIS IL LTD	Israel
		SAMSUNG BIOEPIS BR PHARMACEUTICAL LTDA	Brazil
		Intellectual Keystone Technology LLC	USA
		Samsung Display America Holdings, Inc	USA
		Samsung Display Slovakia, s.r.o., v likvidácii	Slovakia
		Samsung Display Vietnam Co., Ltd.	Vietnam
		Samsung Display Noida Private Limited	India
		Samsung Display Dongguan Co., Ltd.	China
		Samsung Display Tianjin Co., Ltd.	China
		Novald GmbH	Germany
		SEMES America, Inc.	USA
		SEMES (XIAN) Co., Ltd.	China
		NeuroLogica Corp.	USA
		Samsung HVAC America, LLC	USA
		SmartThings, Inc.	USA
		Samsung Oak Holdings, Inc.	USA
		Joyent, Inc.	USA
		TeleWorld Solutions, Inc.	USA
		Samsung Semiconductor, Inc.	USA
		Samsung Research America, Inc	USA
		Samsung Electronics Home Appliances America, LLC	USA
		Samsung International, Inc.	USA
		Harman International Industries, Inc.	USA
		Samsung Federal, Inc.	USA
		Samsung Austin Semiconductor LLC.	USA
		AdGear Technologies Inc.	Canada
		SAMSUNG NEXT LLC	USA
		SAMSUNG NEXT FUND LLC	USA

Listing	No. of affiliates	Name of affiliates	Country
		Samsung Mexicana S.A. de C.V	Mexico
		Samsung Electronics Digital Appliance Mexico, SA de CV	Mexico
		eMagin Corporation	USA
		Harman International Japan Co., Ltd.	Japan
		Harman International Industries Canada Ltd.	Canada
		Harman Becker Automotive Systems, Inc.	USA
		Harman Professional, Inc.	USA
		Harman Connected Services, Inc.	USA
		Harman Financial Group LLC	USA
		Roon Labs, LLC	USA
		Harman Belgium SA	Belgium
		Harman France SNC	France
		Red Bend Software SAS	France
		Harman Inc. & Co. KG	Germany
		Harman KG Holding, LLC	USA
		Harman Becker Automotive Systems Italy S.R.L.	Italy
		Harman Industries Holdings Mauritius Ltd.	Mauritius
		Harman International Mexico, S. de R.L. de C.V.	Mexico
		Harman International Estonia OU	Estonia
		Harman Singapore Pte. Ltd.	Singapore
		Harman da Amazonia Industria Eletronica e Participacoes Ltda.	Brazil
		Harman do Brasil Industria Eletronica e Participacoes Ltda.	Brazil
		Harman Connected Services Engineering Corp.	USA
		Harman Connected Services AB.	Sweden
		Harman Connected Services UK Ltd.	United Kingdom
		Harman Connected Services Corp. India Pvt. Ltd.	India
		Global Symphony Technology Group Private Ltd.	Mauritius
		Harman International (India) Private Limited	India
		Harman de Mexico, S. de R.L. de C.V.	Mexico
		Samsung Semiconductor Europe Limited	United Kingdom
		Samsung Semiconductor Europe GmbH	Germany
		Samsung Electronics GmbH	Germany
		Samsung Electronics Czech and Slovak s.r.o.	Czech Republic
		SAMSUNG ELECTRONICS BALTICS SIA	Latvia
		Samsung Electronics West Africa Ltd.	Nigeria
		Samsung Electronics East Africa Ltd.	Kenya
		Samsung Electronics Saudi Arabia Ltd.	Saudi Arabia
		Samsung Electronics Israel Ltd.	Israel
		Samsung Electronics Tunisia S.A.R.L	Tunisia
		Samsung Electronics Pakistan(Private) Ltd.	Pakistan
		Samsung Electronics South Africa Production (pty) Ltd.	South Africa
		Samsung Electronics Turkiye	Turkiye
		Samsung Electronics Industry and Commerce Ltd.	Turkiye

Listing	No. of affiliates	Name of affiliates	Country
		Samsung Semiconductor Israel R&D Center, Ltd.	Israel
		Samsung Electronics Levant Co.,Ltd.	Jordan
		Samsung Electronics Maghreb Arab	Morocco
		Samsung Electronics Venezuela, C.A.	Venezuela
		Samsung Electronics Peru S.A.C.	Peru
		Samsung Electronics Ukraine Company LLC	Ukraine
		Samsung R&D Institute Ukraine	Ukraine
		Samsung R&D Institute Rus LLC	Russian Fed.
		Samsung Electronics Central Eurasia LLP	Kazakhstan
		Samsung Electronics Caucasus Co. Ltd	Azerbaijan
		Samsung Electronics Uzbekistan FC LLC	Uzbekistan
		Corephotonics Ltd.	Israel
		Samsung Nanoradio Design Center	Sweden
		Harman Professional Denmark ApS	Denmark
		Studer Professional Audio GmbH	Switzerland
		Martin Professional Japan Ltd.	Japan
		Harman International Romania SRL	Romania
		Apostera UA, LLC	Ukraine
		Harman Becker Automotive Systems GmbH	Germany
		Harman Deutschland GmbH	Germany
		Harman Becker Automotive Systems Manufacturing Kft	Hungary
		Harman RUS CIS LLC	Russian Fed.
		Harman Holding GmbH & Co. KG	Germany
		Harman Management GmbH	Germany
		Harman Hungary Financing Ltd.	Hungary
		Harman Connected Services OOO	Russian Fed.
		Harman Professional Kft	Hungary
		Harman Consumer Nederland B.V.	Netherlands
		Red Bend Ltd.	Israel
		Harman International Industries Limited	United Kingdom
		AKG Acoustics GmbH	Austria
		Harman Audio Iberia Espana Sociedad Limitada	Spain
		Harman Holding Limited	Hong Kong
		Harman Finland Oy	Finland
		Harman Connected Services GmbH	Germany
		Harman Connected Services Poland Sp.zoo	Poland
		Harman Connected Services Solutions (Chengdu) Co., Ltd.	China
		Harman International Industries PTY Ltd.	Australia
		Harman Connected Services Morocco	Morocco
		Samsung Electronics Switzerland GmbH	Switzerland
		Samsung Electronics Romania LLC	Romania
		SAMSUNG Zhilabs, S.L.	Spain
		Porta Nuova Varesine Building 2 S.r.l.	Italy

Listing	No. of affiliates	Name of affiliates	Country
		Samsung Electronics Poland Manufacturing SP.Zo.o	Poland
		Samsung Electronics Greece S.M.S.A	Greece
		Samsung Electronics Air Conditioner Europe B.V.	Netherlands
		FOODIENT LTD.	United Kingdom
		Samsung Denmark Research Center ApS	Denmark
		Samsung Cambridge Solution Centre Limited	United Kingdom
		Samsung Electronics Japan Co., Ltd.	Japan
		Samsung Electronics Singapore Pte. Ltd.	Singapore
		Samsung Electronics New Zealand Limited	New Zealand
		Samsung Electronics Philippines Corporation	Philippines
		Samsung R&D Institute BanglaDesh Limited	Bangladesh
		Samsung Electronics Vietnam Co., Ltd.	Vietnam
		Samsung Electronics Vietnam THAINGUYEN Co., Ltd.	Vietnam
		Samsung Electronics HCMC CE Complex Co., Ltd.	Vietnam
		Samsung Nepal Services Pvt, Ltd	Nepal
		Red Brick Lane Marketing Solutions Pvt. Ltd.	India
		PT Samsung Telecommunications Indonesia	Indonesia
		Laos Samsung Electronics Sole Co., Ltd	Laos
		iMarket Asia Co., Ltd.	Hong Kong
		Samsung Suzhou Electronics Export Co., Ltd.	China
		Samsung Mobile R&D Center China-Guangzhou	China
		Samsung R&D Institute China-Shenzhen	China
		Beijing Samsung Telecom R&D Center	China
		Samsung Electronics China R&D Center	China
		Harman (Suzhou) Audio and Infotainment Systems Co., Ltd.	China
		Harman Technology (Shenzhen) Co., Ltd.	China
		Harman (China) Technologies Co., Ltd.	China
		Harman Commercial (Shanghai) Co., Ltd.	China
		Harman International (China) Holdings Co., Ltd.	China
		Harman Automotive Electronic Systems (Suzhou) Co., Ltd.	China
		Samsung Electronics Latinoamerica Miami, Inc.	USA
		Samsung Electronica Colombia S.A.	Colombia
		Samsung Electronics Panama. S.A.	Panama
		Samsung SDI Japan Co., Ltd.	Japan
		Samsung SDI America, Inc.	USA
		Samsung SDI Hungary., Zrt.	Hungary
		Samsung SDI Europe GmbH	Germany
		Samsung SDI Battery Systems GmbH	Austria
		Samsung SDI Vietnam Co., Ltd.	Vietnam
		Samsung SDI Energy Malaysia Sdn, Bhd.	Malaysia
		Samsung SDI India Private Limited	India
		Samsung SDI(Hong Kong) Ltd.	Hong Kong
		Samsung SDI China Co., Ltd.	China

Listing	No. of affiliates	Name of affiliates	Country
		Samsung SDI-ARN (Xi'An) Power Battery Co., Ltd.	China
		Samsung SDI (Tianjin) Battery Co.,Ltd.	China
		STARPLUS ENERGY LLC.	USA
		SAMSUNG SDI WUXI CO.,LTD.	China
		Tianjin Samsung SDI Co., Ltd.	China
		Samsung Electro-Mechanics Japan Co., Ltd.	Japan
		Samsung Electro-Mechanics America, Inc.	USA
		Samsung Electro-Mechanics Mexico, S.A. de C.V.	Mexico
		Samsung Electro-Mechanics GmbH	Germany
		Samsung Electro-Mechanics Philippines, Corp.	Philippines
		Calamba Premier Realty Corporation	Philippines
		Samsung Electro-Mechanics Pte Ltd.	Singapore
		Samsung Electro-Mechanics Vietnam Co., Ltd.	Vietnam
		Samsung Electro-Mechanics Software India Bangalore Private Limited	India
		Tianjin Samsung Electro-Mechanics Co., Ltd.	China
		Samsung High-Tech Electro-Mechanics(Tianjin) Co., Ltd.	China
		Samsung Electro-Mechanics (Shenzhen) Co., Ltd.	China
		Kunshan Samsung Electro-Mechanics Co., Ltd.	China
		Batino Realty Corporation	Philippines
		Samsung Fire & Marine Management Corporation	USA
		SAMSUNG FIRE & MARINE INSURANCE COMPANY OF EUROPE LTD.	United Kingdom
		PT. Asuransi Samsung Tugu	Indonesia
		SAMSUNG VINA INSURANCE COMPANY LIMITED	Vietnam
		Samsung Reinsurance Pte. Ltd.	Singapore
		Samsung Property & Casualty Insurance Company(China), Ltd.	China
		Samsung Fire & Marine Insurance Management Middle East Limited	Utd.Arab Emir.
		Camellia Consulting Corporation	USA
		Samsung Heavy Industries India Pvt.Ltd.	India
		SAMSUNG HEAVY INDUSTRIES (M) SDN.BHD	Malaysia
		Samsung Heavy Industries(Rongcheng) Co., Ltd	China
		SAMSUNG HEAVY INDUSTRIES NIGERIA LIMITED	Nigeria
		Samsung Heavy Industries Mozambique LDA	Mozambique
		Samsung Heavy Industries Rus LLC	Russian Fed.
		SHI - MCI FZE	Nigeria
		Samsung Life Insurance (Thailand) Public Co., Ltd	Thailand
		Beijing Samsung Real Estate Co.. Ltd	China
		Samsung Asset Management (New York), Inc.	USA
		Samsung Global SME Private Equity Manager Fund Co., Ltd.	Cayman Islands
		Samsung Asset Management U.S. Holdings, Inc.	USA
		Samsung Private Equity Fund 2022 GP, Ltd.	Cayman Islands
		Samsung Co-Investment 2021 GP, Ltd.	Cayman Islands
		Samsung Asset Management(London) Ltd.	United Kingdom
		Samsung Private Equity Manager I Co., Ltd.	Cayman Islands

Listing	No. of affiliates	Name of affiliates	Country
		Samsung Asset Management (Hong Kong) Ltd.	Hong Kong
		Samsung C&T Japan Corporation	Japan
		Samsung C&T America Inc.	USA
		Samsung E&C America, INC.	USA
		Samsung Renewable Energy Inc.	Canada
		Samsung C&T Oil & Gas Parallel Corp.	USA
		Samsung C&T Lima S.A.C.	Peru
		Samsung C&T Deutschland GmbH	Germany
		Samsung C&T U.K. Ltd.	United Kingdom
		Samsung C&T ECUK Limited	United Kingdom
		Whessoe engineering Limited	United Kingdom
		SAM investment Manzanilo.B.V	Netherlands
		Samsung C&T Corporation Poland LLC	Poland
		Samsung C&T (KL) Sdn.,Bhd.	Malaysia
		Samsung C&T Malaysia SDN. BHD	Malaysia
		Erdsam Co., Ltd.	Hong Kong
		Samsung C&T India Private Limited	India
		Samsung C&T Corporation India Private Limited	India
		Samsung C&T Singapore Pte., Ltd.	Singapore
		SAMSUNG C&T Mongolia LLC.	Mongolia
		Samsung C&T Eng.&Const. Mongolia LLC.	Mongolia
		S&WOO CONSTRUCTION PHILIPPINES,INC.	Philippines
		VSSC STEEL CENTER LIMITED LIABILITY COMPANY	Vietnam
		Vista Contracting and Investment Global Pte. Ltd.	Singapore
		CHEIL HOLDING INC.	Philippines
		Samsung C&T Renewable Energy Australia Pty Ltd	Australia
		Samsung C&T Hongkong Ltd.	Hong Kong
		Samsung C&T Taiwan Co., Ltd.	Taiwan
		SAMSUNG C&T (SHANGHAI) CO., LTD.	China
		Samsung C&T (Xi'an) Co., Ltd.	China
		SAMSUNG C&T CORPORATION SAUDI ARABIA	Saudi Arabia
		SAM Gulf Investment Limited	Utd.Arab Emir.
		Samsung C&T Chile Copper SpA	Chile
		SCNT Power Kelar Inversiones Limitada	Chile
		Samsung C&T Corporation Rus LLC	Russian Fed.
		CHEIL INDUSTRIES ITALY SRL	Italy
		Samsung Fashion Trading Co. ,Ltd	China
		SAMSUNG C&T CORPORATION VIETNAM CO., LTD	Vietnam
		Samsung C&T Corporation UEM Construction JV Sdn Bhd	Malaysia
		WELSTORY VIETNAM COMPANY LIMITED	Vietnam
		Shanghai Ever-Hongjun Business Mgt Service Co.,LTD	China
		Shanghai Welstory Food Company Limited	China
		LANGUAGE TESTING INTERNATIONAL, INC.	USA

Listing	No. of affiliates	Name of affiliates	Country
		PENGTAI CHINA CO.,LTD.	China
		PengTai Taiwan Co., Ltd.	Taiwan
		PENGTAI E-COMMERCE CO.,LTD	China
		Beijing Pengtai Borui E-commerce Co.,Ltd.	China
		Medialytics Inc.	China
		Beijing Pengtai Baozun E-commerce Co., Ltd.	China
		iMarket China Co., Ltd.	China
		Samsung Securities (America), Inc.	USA
		Samsung Securities (Europe) Limited.	United Kingdom
		Samsung Securities (Asia) Limited.	Hong Kong
		Samsung SDS America, Inc.	USA
		SAMSUNG SDS GSCL Canada., Ltd.	Canada
		Samsung SDS Europe, Ltd.	United Kingdom
		Samsung SDS Global SCL Hungary, Kft.	Hungary
		Samsung SDS Global SCL Slovakia, S.R.O.	Slovakia
		Samsung SDS Global SCL Poland Sp. Z.o.o.	Poland
		Samsung GSCL Sweden AB	Sweden
		Samsung SDS Global SCL France SAS	France
		Samsung SDS Global SCL Italy S.R.L. A Socio Unico	Italy
		Samsung SDS Global Supply Chain Logistics Spain S.L.U	Spain
		Samsung SDS Global SCL Netherlands Cooperatief U.A.	Netherlands
		Samsung SDS Global SCL Germany GmbH	Germany
		Samsung SDS Global SCL Romania S.R.L	Romania
		Samsung SDS Asia Pacific Pte, Ltd.	Singapore
		Samsung Data Systems India Private Limited	India
		Samsung SDS Vietnam Co., Ltd.	Vietnam
		PT. Samsung SDS Global SCL Indonesia	Indonesia
		Samsung SDS Global SCL Philippines Co., Ltd.Inc.	Philippines
		Samsung SDS Global SCL Thailand Co.,Ltd	Thailand
		SAMSUNG SDS MALAYSIA SDN. BHD.	Malaysia
		SAMSUNG SDS Global SCL Australia Pty.,Ltd.	Australia
		SDS-ACUTECH CO., Ltd.	Thailand
		ALS SDS Joint Stock Company	Vietnam
		SDS-MP Logistics Joint Stock Company	Vietnam
		Samsung SDS China Co., Ltd.	China
		Samsung SDS Global SCL Hong Kong Co., Ltd.	Hong Kong
		SAMSUNG SDS Global SCL Egypt	Egypt
		Samsung SDS Global SCL South Africa (PTY) Ltd.	South Africa
		Samsung SDS Global SCL Nakliyat ve Lojistik Anonim Sirketi	Turkiye
		Samsung SDS Global Supply Chain Logistics Middle East DWC-LLC	Utd.Arab Emir.
		Samsung SDS Latin America Solucoes Em Tecnologia Ltda.	Brazil
		INTE-SDS Logistics S.A. de C.V.	Mexico
		Samsung SDS Rus Limited Liability Company	Russian Fed.

Listing	No. of affiliates	Name of affiliates	Country
		Samsung SDS Mexico, S.A. DE C.V.	Mexico
		Samsung SDS Global SCL Panama S.A.	Panama
		Samsung SDS Global SCL Chile Limitada	Chile
		Samsung SDS Global SCL Peru S.A.C	Peru
		Samsung SDS Global SCL Colombia S.A.S	Colombia
		Samsung Engineering America Inc.	USA
		Samsung Project Management Inc.	Canada
		Samsung Engineering Hungary Ltd.	Hungary
		Samsung Engineering Italy S.R.L.	Italy
		Samsung Engineering (Malaysia) SDN. BHD.	Malaysia
		PT Samsung Engineering Indonesia Co., Ltd.	Indonesia
		Samsung Engineering (Thailand) Co., Ltd.	Thailand
		Samsung Engineering India Private Limited	India
		Samsung Engineering Vietnam Co., Ltd.	Vietnam
		Samsung Engineering Global Private Limited	India
		Samsung Engineering Construction(Shanghai) Co., Ltd	China
		Samsung Engineering Construction Xi' an Co., Ltd.	China
		Samsung Saudi Arabia Co., Ltd.	Saudi Arabia
		Muharraq Wastewater Services Company W.L.L.	Bahrain
		Muharraq STP Company B.S.C.	Bahrain
		Muharraq Holding Company 1 Ltd.	Utd.Arab Emir.
		Samsung Ingenieria Mexico Construccion Y Operacion S.A. De C.V.	Mexico
		Samsung Engineering Trinidad Co., Ltd.	Trinidad,Tobago
		Samsung Ingenieria Manzanillo, S.A. De C.V.	Mexico
		Grupo Samsung Ingenieria Mexico, S.A. De C.V.	Mexico
		Samsung Ingenieria Energia S.A. De C.V.	Mexico
		Samsung Engineering Bolivia S.A	Bolivia
		Samsung Ingenieria DUBA S.A. de C.V.	Mexico
		Samsung Engineering Kazakhstan L.L.P.	Kazakhstan
		SEA Construction, LLC	USA
		SEA Louisiana Construction, L.L.C.	USA
		Samsung EPC Company Ltd.	Saudi Arabia
		Muharraq Holding Company 2 Ltd.	Utd.Arab Emir.
		Asociados Constructores DBNR, S.A. de C.V.	Mexico
		S-1 CORPORATION HUNGARY LLC	Hungary
		S-1 CORPORATION VIETNAM CO., LTD	Vietnam
		Samsung Beijing Security Systems	China
		Pengtai Greater China Company Limited	Hong Kong
		PENGTAI INTERACTIVE ADVERTISING CO.,LTD	China
		Cheil USA Inc.	USA
		Cheil Central America Inc.	USA
		Iris Worldwide Holdings Limited	United Kingdom
		CHEIL EUROPE LIMITED	United Kingdom

Listing	No. of affiliates	Name of affiliates	Country
		Cheil Germany GmbH	Germany
		Cheil France SAS	France
		CHEIL SPAIN S.L	Spain
		Cheil Benelux B.V.	Netherlands
		Cheil Nordic AB	Sweden
		Cheil India Private Limited	India
		Cheil (Thailand) Ltd.	Thailand
		Cheil Singapore Pte. Ltd.	Singapore
		CHEIL VIETNAM COMPANY LIMITED	Vietnam
		Cheil Integrated Marketing Philippines, Inc.	Philippines
		CHEIL MALAYSIA SDN. BHD.	Malaysia
		Cheil New Zealand Limited	New Zealand
		Cheil Worldwide Australia Pty Ltd	Australia
		CHEIL CHINA	China
		Cheil Hong Kong Ltd.	Hong Kong
		Caishu (Shanghai) Business Consulting Co., Ltd	China
		Cheil MEA FZ-LLC	Utd.Arab Emir.
		Cheil South Africa (Pty) Ltd	South Africa
		CHEIL KENYA LIMITED	Kenya
		Cheil Communications Nigeria Ltd.	Nigeria
		Cheil Worldwide Inc./Jordan LLC.	Jordan
		Cheil Ghana Limited	Ghana
		Cheil Egypt LLC	Egypt
		Cheil Maghreb LLC	Morocco
		Cheil Brasil Comunicacoes Ltda.	Brazil
		Cheil Mexico, S.A. de C.V.	Mexico
		Cheil Chile SpA.	Chile
		Cheil Peru S.A.C.	Peru
		CHEIL ARGENTINA S.A.	Argentina
		Cheil Rus LLC	Russian Fed.
		Cheil Ukraine LLC	Ukraine
		Cheil Kazakhstan LLC	Kazakhstan
		Samsung Hospitality America Inc.	USA
		Shilla Travel Retail Pte. Ltd.	Singapore
		Samsung Shilla Business Service Beijing Co., Ltd.	China
		Shilla Travel Retail Hong Kong Limited	Hong Kong
		HDC SHILLA (SHANGHAI) CO., LTD	China
		Samsung Hospitality U.K. Ltd.	United Kingdom
		Samsung Hospitality Europe GmbH	Germany
		SAMSUNG HOSPITALITY ROMANIA SRL	Romania
		Samsung Hospitality Vietnam Co., Ltd.	Vietnam
		Samsung Hospitality Philippines Inc.	Philippines
		Samsung Hospitality India Private Limited	India

Listing	No. of affiliates	Name of affiliates	Country
		Samsung Venture Investment (Shanghai) Co., Ltd.	China
		Iris (USA) Inc.	USA
		Iris Atlanta, Inc.	USA
		89 Degrees, Inc.	USA
		The Barbarian Group LLC	USA
		McKinney Ventures LLC	USA
		Iris Nation Worldwide Limited	United Kingdom
		Iris Americas, Inc.	USA
		Irisnation Latina No.2, S. de R.L. de C.V.	Mexico
		Irisnation Latina, S. de R.L. de C.V.	Mexico
		Pricing Solutions Ltd	Canada
		Iris London Limited	United Kingdom
		Iris Promotional Marketing Ltd	United Kingdom
		Iris Ventures 1 Limited	United Kingdom
		Founded Partners Limited	United Kingdom
		Iris Digital Limited	United Kingdom
		Iris Amsterdam B.V.	Netherlands
		Iris Ventures (Worldwide) Limited	United Kingdom
		WDMP Limited	United Kingdom
		Iris Services Limited Dooel Skopje	Macedonia
		Irisnation Singapore Pte. Ltd.	Singapore
		Iris Worldwide Integrated Marketing Private Limited	India
		Iris Sydney PTY Ltd	Australia
		Iris Worldwide (Thailand) Limited	Thailand
		Iris Partners LLP	United Kingdom
		Holdings BR185 Limited	Brit.Virgin Is.
		Iris Germany GmbH	Germany
		Founded, Inc.	USA
		Pepper NA, Inc.	USA
		Beattie McGuinness Bungay Limited	United Kingdom
		Cheil Italia S.r.l	Italy
		Cheil Austria GmbH	Austria
		Centrade Integrated SRL	Romania
		Centrade Cheil HU Kft.	Hungary
		Centrade Cheil Adriatic D.O.O.	Serbia/Monten.
		Experience Commerce Software Private Limited	India
		PT. CHEIL WORLDWIDE INDONESIA	Indonesia
		Cheil Philippines Inc.	Philippines
		Shilla Retail Plus Pte. Ltd.	Singapore
		Tianjin Samsung International Travel Service Co., Ltd	China
		Shilla Retail Limited	Macau
		BNY Trading Hong Kong Limited	Hong Kong
		One Agency FZ-LLC	Utd.Arab Emir.

Listing	No. of affiliates	Name of affiliates	Country
		One RX Project Management Design and Production Limited Company	Turkiye
		Iris Korea Limited	United Kingdom
		One RX India Private Limited	India
		ONE RX INTERIOR DECORATION L.L.C	Utd.Arab Emir.
		ONE AGENCY PRINTING L.L.C	Utd.Arab Emir.
		Brazil 185 Participacoes Ltda	Brazil
		Iris Router Marketing Ltda	Brazil

3. Equity investments in other corporations (Details)

The total book value of equity investments in other corporations as of December 31, 2023 is KRW 59,247 billion (for the purpose of management participation, etc.).

[As of December 31, 2023]

(1,000 shares, KRW million, %)

Listing	Name of Company	Acquisition Date	Objective	Acquisition Cost	Beginning Balance			Increase/Decrease			Ending Balance			Current Financial Stats	
					Qty	Owner ship (%)	Book Value	Acquisition/Disposal		Valuation	Qty	Owner ship (%)	Book Value	Total Asset	Net Income (Loss)
								Qty	Amount						
Listed	Samsung Electro-Mechanics	1977.01	Management Participation	250	17,693	23.7	445,244	-	-	-	17,693	23.7	445,244	11,657,872	450,482
Listed	Samsung SDI	1977.01	Management Participation	304	13,463	19.6	1,242,605	-	-	-	13,463	19.6	1,242,605	34,038,860	2,066,047
Listed	Samsung Heavy Industries	1977.09	Management Participation	125	134,027	15.2	684,879	-	-	353,832	134,027	15.2	1,038,711	15,593,400	-155,600
Listed	Hotel Shilla	1979.12	Management Participation	252	2,005	5.1	166,592	-	-	-35,483	2,005	5.1	131,108	3,006,539	85,978
Listed	Cheil Worldwide	1988.09	Management Participation	185	29,038	25.2	491,599	-	-	-	29,038	25.2	491,599	2,889,505	190,122
Listed	Samsung SDS	1992.07	Management Participation	6,160	17,472	22.6	560,827	-	-	-	17,472	22.6	560,827	12,321,025	701,326
Listed	Samsung BioLogics	2011.04	Management Participation	30,000	22,217	31.2	1,595,892	-	-	-	22,217	31.2	1,595,892	16,046,197	857,691
Unlisted	Samsung Display	2012.04	Management Participation	16,009,547	221,969	84.8	18,509,307	-	-	-	221,969	84.8	18,509,307	65,328,568	8,268,314
Unlisted	STECO	1995.06	Management Participation	24,000	2,590	70.0	35,861	-	-	-	2,590	70.0	35,861	132,675	779
Unlisted	SEMES	1992.12	Management Participation	1,000	2,173	91.5	71,906	-	-	-	2,173	91.5	71,906	2,187,919	58,754
Unlisted	Samsung Electronics Service	1998.01	Management Participation	30,000	6,000	99.3	48,121	-	-	-	6,000	99.3	48,121	795,640	10,348
Unlisted	Samsung Electronics Sales	2000.12	Management Participation	3,100	1,767	100.0	247,523	-	-	-	1,767	100.0	247,523	1,358,597	2,515
Unlisted	Samsung Electronics Logitech	1999.04	Management Participation	76	1,011	100.0	46,669	-	-	-	1,011	100.0	46,669	465,079	16,540
Unlisted	Samsung Medison	2011.02	Management Participation	286,384	87,350	68.5	433,026	-	-	31,206	87,350	68.5	464,232	629,302	81,673
Unlisted	Samsung Global Research	1991.05	Management Participation	320	3,576	29.8	24,942	-	-	-	3,576	29.8	24,942	183,742	203

Unlisted	Samsung Venture Investment	1999.11	Management Participation	4,900	980	16.3	32,073	-	-	213	980	16.3	32,286	199,098	2,185
Unlisted	SVIC #21	2011.11	Management Participation	19,800	0	99.0	970	-	-871	-	0	99.0	99	82,411	4,596
Unlisted	SVIC #22	2011.11	Management Participation	19,800	0	99.0	49,520	-	-34,650	-	0	99.0	14,870	17,438	-3,932
Unlisted	SVIC #26	2014.11	Management Participation	19,800	1	99.0	75,653	-	-14,850	-	1	99.0	60,803	27,631	-7,983
Unlisted	SVIC #28	2015.02	Management Participation	7,425	0	99.0	35,486	-	-7,920	-	0	99.0	27,566	337,949	-24,526
Unlisted	SVIC #32	2016.08	Management Participation	19,800	1	99.0	143,421	-	-24,057	-	1	99.0	119,364	223,258	-35,160
Unlisted	SVIC #33	2016.11	Management Participation	4,950	1	99.0	122,622	-	-10,098	-	1	99.0	112,524	315,348	-9,228
Unlisted	SVIC #42	2018.11	Management Participation	4,950	0	99.0	43,477	-	967	-	0	99.0	44,444	33,102	-3,706
Unlisted	SVIC #45	2019.05	Management Participation	19,800	2	99.0	191,323	-	-32,577	-	2	99.0	158,746	175,893	-12,472
Unlisted	SVIC #52	2021.05	Management Participation	9,900	0	99.0	49,599	-	-	-	0	99.0	49,599	77,174	30,345
Unlisted	SVIC #56	2021.11	Management Participation	22,084	0	99.0	32,380	-	24,136	-	1	99.0	56,516	56,070	556
Unlisted	SVIC #57	2022.08	Management Participation	14,850	0	99.0	18,860	-	22,631	-	0	99.0	41,491	37,155	-4,393
Unlisted	Semiconductor Growth Fund	2017.03	Management Participation	500	50,000,000	66.7	50,000	-17,693,020	-17,693	-	32,306,980	66.7	32,307	58,356	15,619
Unlisted	System LSI Mutual benefit private equity trust	2020.04	Management Participation	25,000	50,000,000	62.5	50,000	-	-	-	50,000,000	62.5	50,000	79,856	194
Unlisted	Semiconductor Ecosystem Fund	2023.07	Management Participation	500	-	-	-	-	500	-	500,000	66.7	500	753	-249
Unlisted	Stellarforest	2022.12	Management Participation	900	180	100.0	900	-	-	-	180	100.0	900	7,255	1,227
Listed	Rainbow Robotics	2023.01	Management Participation	58,982	-	-	-	2,854	58,982	-	2,854	14.8	58,982	132,611	-843
Listed	iMarket Korea	2000.12	Management Participation	1,900	647	1.9	6,538	-	-	-977	647	1.9	5,560	1,373,717	24,301
Listed	KT Skylife	2001.12	Simple Investment	3,344	240	0.5	1,954	-	-	-533	240	0.5	1,421	1,220,732	-109,517
Listed	Yongpyong Resort	2007.05	Simple Investment	1,869	400	0.8	1,412	-	-	-192	400	0.8	1,220	1,004,552	9,079
Listed	ATech Solution	2009.11	Simple	26,348	1,592	15.9	12,879	-	-	4,362	1,592	15.9	17,241	269,808	1,359

			Investment												
Listed	Wonik Holdings	2013.12	Management Participation	15,411	1,759	2.3	5,972	-	-	-44	1,759	2.3	5,928	1,830,611	-37,468
Listed	Wonik IPS	2016.04	Management Participation	16,214	1,851	3.8	45,811	-	-	17,029	1,851	3.8	62,839	1,084,863	-13,508
Listed	Dongjin Semichem	2017.11	Management Participation	48,277	2,468	4.8	73,913	-	-	21,594	2,468	4.8	95,507	1,606,588	123,534
Listed	Soulbrain Holdings	2017.11	Management Participation	30,752	462	2.2	10,989	-462	-15,515	4,526	-	-	-	-	-
Listed	Soulbrain	2020.07	Management Participation	24,866	373	4.8	81,357	64	15,515	36,079	437	5.6	132,951	996,470	129,491
Listed	S&S Tech	2020.08	Management Participation	65,933	1,716	8.0	45,220	-	-	32,520	1,716	8.0	77,740	256,771	25,855
Listed	YIK Corp	2020.08	Management Participation	47,336	9,602	11.7	26,933	-	-	20,932	9,602	11.7	47,864	479,837	13,436
Listed	KCTech	2020.11	Management Participation	20,720	1,022	4.9	15,129	-	-	12,267	1,022	4.9	27,395	499,635	31,701
Listed	lotvacuum	2020.11	Management Participation	18,990	1,268	7.1	14,325	-	-	11,219	1,268	7.1	25,544	366,912	49,060
Listed	NEW POWER PLASMA	2020.11	Management Participation	12,739	2,141	4.9	7,579	-	-	3,661	2,141	4.9	11,240	673,589	14,825
Listed	FineSemitech	2021.03	Management Participation	43,009	1,523	7.0	23,758	-	-	13,783	1,523	7.0	37,541	412,550	-15,073
Listed	DNF	2021.08	Management Participation	20,964	810	7.0	10,692	-	-	8,708	810	7.0	19,400	165,587	5,174
Listed	Marvell	2021.10	Simple Investment	11,705	173	0.0	8,130	-	-	5,338	173	0.0	13,468	27,372,028	-1,219,132
Unlisted	The Korea Economic Daily	1987.05	Simple Investment	150	72	0.4	365	-	-	-	72	0.4	365	707,762	33,516
Unlisted	Korea Business Banking	1995.01	Simple Investment	5,000	1,000	17.2	2,964	-	-	-	1,000	17.2	2,964	86,700	1,164
Unlisted	Cyber Bank	2000.12	Simple Investment	8,000	1,083	7.5	-	-	-	-	1,083	7.5	-	-	-
Unlisted	FineChips	2001.12	Simple Investment	10	2	3.3	10	-	-	-	2	3.3	10	16,450	883
Unlisted	Inkel	2006.11	Simple Investment	130	0	0.0	0	-	-	-	0	0.0	0	11,123	972
Unlisted	Intellectual Discovery	2011.05	Simple Investment	5,000	357	10.7	1,922	-	-	-	357	10.7	1,922	71,809	3,682
Unlisted	Maltani Corp.	2012.04	Simple Investment	16,544	45	15.0	7,431	-	-	460	45	15.0	7,891	86,711	750

Unlisted	Pantech	2013.06	Simple Investment	53,000	53,000	10.0	-	-	-	-	53,000	10.0	-	-	-
Unlisted	AI Research Institute	2016.07	Simple Investment	3,000	600	14.3	3,000	-	-	-	600	14.3	3,000	4,107	1,832
Unlisted	Mico Ceramics	2020.11	Management Participation	21,667	747	13.7	29,385	-	-	4,587	747	13.7	33,973	250,981	42,068
Unlisted	Shinsung Eng & Construction	2010.07	Simple Investment	1	0	0.0	0	-	-	-	0	0.0	0	139,416	-9,416
Unlisted	Woobang	2010.07	Simple Investment	-	1	0.0	0	-	-	-	1	0.0	0	514,572	-34,684
Unlisted	Sambo Computer	2012.09	Simple Investment	-	0	0.0	0	-	-	-	0	0.0	0	49,422	-3,055
Unlisted	Daewoo Development	2012.12	Simple Investment	-	0	0.0	0	-	-	-	0	0.0	0	149,587	-136,767
Unlisted	Daewoo Songdo Development	2012.12	Simple Investment	-	9	0.0	0	-	-	-	9	0.0	0	19,369	-350
Unlisted	Zyle Motor Sales	2012.12	Simple Investment	-	1	0.0	0	-	-	-	1	0.0	0	196,194	-23,417
Unlisted	Sungwon Construction	2014.04	Simple Investment	-	1	0.0	0	-	-	-	1	0.0	0	27,744	-627
Unlisted	Inhee	2014.04	Simple Investment	-	0	0.1	0	-	-	-	0	0.1	0	2,418	177
Unlisted	Point Anybeam	2019.12	Simple Investment	61	12	3.5	61	-12	-61	-	-	-	-	-	-
Unlisted	JNT	2011.02	Simple Investment	1,800	0	24.0	1,758	-	-518	-	0	24.0	1,240	2,173	18
Unlisted	L&S	2012.07	Simple Investment	848	-	7.5	1	-	-	-	-	7.5	1	3,239	2
Unlisted	KTCNP-GC	2013.12	Simple Investment	960	-	3.6	222	-	-222	-	-	-	-	-	-
Unlisted	POSCO Social Enterprise Fund	2013.12	Simple Investment	600	-	10.0	60	-	-60	-	-	-	-	-	-
Unlisted	Bearport Resort	2022.04	Simple Investment	-	51	0.5	0	-	-	-	51	0.5	0	115,380	-9,846
Unlisted	SEA	1978.07	Management Participation	59,362	492	100.0	17,166,557	-	-	-	492	100.0	17,166,557	41,926,899	509,668
Unlisted	SECA	1992.08	Management Participation	3,823	0	100.0	90,922	-	-	-	0	100.0	90,922	1,302,924	75,479
Unlisted	SEDA	1994.01	Management Participation	13,224	77,205,709	87.0	647,620	-	-	-	77,205,709	87.0	647,620	5,542,627	333,812
Unlisted	SEM	1995.07	Management Participation	3,032	3,837	63.6	165,638	-	-	-	3,837	63.6	165,638	2,153,032	148,873

Unlisted	SELA	1989.04	Management Participation	319	40	100.0	86,962	-	-	-	40	100.0	86,962	649,150	45,612
Unlisted	SEASA	1996.06	Management Participation	4,696	21,854	98.0	6,779	-	-	-	21,854	98.0	6,779	83,075	18,833
Unlisted	SECH	2002.12	Management Participation	597	-	4.1	597	-	-	-	-	4.1	597	524,530	25,826
Unlisted	SEUK	1995.07	Management Participation	33,908	109,546	100.0	433,202	-	-	-	109,546	100.0	433,202	2,902,722	185,113
Unlisted	SEL	1998.12	Management Participation	8,280	4,393	100.0	-	-	-	-	4,393	100.0	-	7,212	-
Unlisted	SEHG	1982.02	Management Participation	28,042	-	100.0	354,846	-	-	-	-	100.0	354,846	438,172	93,092
Unlisted	SEF	1991.08	Management Participation	230	2,700	100.0	234,115	-	-	-	2,700	100.0	234,115	1,265,823	65,460
Unlisted	SEI	1993.05	Management Participation	862	677	100.0	143,181	-	-	-	677	100.0	143,181	1,053,955	56,071
Unlisted	SESA	1989.01	Management Participation	3,276	8,021	100.0	142,091	-	-	-	8,021	100.0	142,091	1,266,167	46,746
Unlisted	SEP	1982.09	Management Participation	204	1,751	100.0	37,616	-	-	-	1,751	100.0	37,616	304,248	10,591
Unlisted	SEH	1991.05	Management Participation	1,954	753	100.0	650,157	-	-	-	753	100.0	650,157	1,426,079	577,538
Unlisted	SELS	1991.05	Management Participation	18,314	1,306	100.0	24,288	-	-	-	1,306	100.0	24,288	1,639,004	4,984
Unlisted	SEBN	1995.07	Management Participation	236	539,138	100.0	914,751	-	-	-	539,138	100.0	914,751	1,794,552	140,313
Unlisted	SEEH	2008.01	Management Participation	4,214	-	100.0	1,369,992	-	-	-	-	100.0	1,369,992	9,660,481	103,387
Unlisted	SENA	1992.03	Management Participation	392	1,000	100.0	69,372	-	-	-	1,000	100.0	69,372	591,101	35,047
Unlisted	SESK	2002.06	Management Participation	8,976	-	55.7	263,767	-	-	-	-	55.7	263,767	928,129	83,304
Unlisted	SEPOL	1996.04	Management Participation	5,462	106	100.0	78,267	-	-	-	106	100.0	78,267	1,384,273	108,288
Unlisted	SEAG	2002.01	Management Participation	40	-	100.0	32,162	-	-	-	-	100.0	32,162	519,776	166,348
Unlisted	SERC	2006.01	Management Participation	24,877	-	100.0	188,290	-	-	-	-	100.0	188,290	839,493	40,845
Unlisted	SERK	2007.07	Management Participation	4,600	-	100.0	204,555	-	-	-	-	100.0	204,555	1,030,743	64,771
Unlisted	SEO	1997.01	Management Participation	120	0	100.0	-10,043	-	-	-	0	100.0	-10,043	1,913	50

Unlisted	SGE	1995.05	Management Participation	827	0	100.0	32,836	-	-	-	0	100.0	32,836	1,027,977	-2,365
Unlisted	SEEG	2012.07	Management Participation	23	-	0.1	39	-	-	-	-	0.1	39	1,348,469	156,005
Unlisted	SSA	1998.12	Management Participation	263	2,000	100.0	32,622	-	-	-	2,000	100.0	32,622	527,416	23,826
Unlisted	SAPL	2006.07	Management Participation	793	877,133	100.0	981,483	-	-	-	877,133	100.0	981,483	22,234,942	14,140,195
Unlisted	SME	2003.05	Management Participation	4,796	17,100	100.0	7,644	-	-	-	17,100	100.0	7,644	618,803	18,490
Unlisted	SDMA	1995.03	Management Participation	21,876	71,400	75.0	18,741	-	-	-	71,400	75.0	18,741	26,388	2,908
Unlisted	SEMA	1989.09	Management Participation	4,378	16,247	100.0	103,402	-	-	-	16,247	100.0	103,402	313,767	23,877
Unlisted	SAVINA	1995.01	Management Participation	5,839	-	100.0	28,365	-	-	-	-	100.0	28,365	110,276	18,161
Unlisted	SEIN	1991.08	Management Participation	7,463	46	100.0	118,909	-	-	-	46	100.0	118,909	1,110,178	170,952
Unlisted	TSE	1988.01	Management Participation	1,390	11,020	91.8	279,163	-	-	-	11,020	91.8	279,163	3,039,379	150,510
Unlisted	SEAU	1987.11	Management Participation	392	53,200	100.0	111,964	-	-	-	53,200	100.0	111,964	612,161	44,768
Unlisted	SIEL	1995.08	Management Participation	5,414	216,787	100.0	75,263	-	-	-	216,787	100.0	75,263	7,738,259	1,153,256
Unlisted	SRI-Bangalore	2005.05	Management Participation	7,358	17	100.0	31,787	-	-	-	17	100.0	31,787	430,987	79,895
Unlisted	SJC	1975.12	Management Participation	273	1,560	100.0	253,108	-	-	-	1,560	100.0	253,108	1,013,103	-5,381
Unlisted	SRJ	1992.08	Management Participation	3,120	122	100.0	117,257	-	-	-	122	100.0	117,257	136,782	1,792
Unlisted	SCIC	1996.03	Management Participation	23,253	-	100.0	640,452	-	-	-	-	100.0	640,452	10,222,557	189,887
Unlisted	SEHK	1988.09	Management Participation	349	274,250	100.0	79,033	-	-	-	274,250	100.0	79,033	985,438	26,885
Unlisted	SET	1994.11	Management Participation	456	27,270	100.0	112,949	-	-	-	27,270	100.0	112,949	1,797,627	56,467
Unlisted	TSEC	1993.04	Management Participation	15,064	-	48.2	103,134	-	-	-	-	48.2	103,134	382,260	11,732
Unlisted	SSEC	1995.04	Management Participation	32,128	-	69.1	130,551	-	-	-	-	69.1	130,551	636,160	84,614
Unlisted	SESC	2002.09	Management Participation	5,471	-	73.7	34,028	-	-	-	-	73.7	34,028	94,528	10,678

Unlisted	TSTC	2001.03	Management Participation	10,813	-	90.0	260,092	-	-	-	-	90.0	260,092	646,732	5,167
Unlisted	SSS	2001.01	Management Participation	1,200	-	100.0	19,189	-	-	-	-	100.0	19,189	5,262,086	244,210
Unlisted	SCS	2012.09	Management Participation	111,770	-	100.0	5,275,760	-	-	-	-	100.0	5,275,760	15,808,283	877,892
Unlisted	SSCX	2016.04	Management Participation	1,141	-	100.0	1,141	-	-	-	-	100.0	1,141	854,932	47,820
Unlisted	SESS	1994.12	Management Participation	18,875	-	100.0	504,313	-	-	-	-	100.0	504,313	869,225	95,067
Unlisted	TSLED	2012.04	Management Participation	119,519	-	100.0	119,519	-	-	-	-	100.0	119,519	257,820	16,380
Unlisted	SSCR	2006.09	Management Participation	3,405	-	100.0	9,332	-	-	-	-	100.0	9,332	89,911	16,465
Unlisted	TSST Japan	2004.03	Management Participation	1,639	30	49.0	-	-	-	-	30	49.0	-	232,877	-
Unlisted	STE	1996.01	Management Participation	4,206	2	49.0	-	-	-	-	2	49.0	-	7,405	-
Unlisted	Semiconductor Portal Inc.	2002.12	Simple Investment	38	0	1.2	10	-	-	-	0	1.2	10	2,016	9
Unlisted	Nanosys Inc.	2010.08	Simple Investment	4,774	2,000	0.6	1,082	-	-	-1,082	2,000	0.6	-	55,449	-164,399
Unlisted	One-Blue, LLC	2011.07	Management Participation	1,766	-	16.7	1,766	-	-	-	-	16.7	1,766	25,051	563
Unlisted	TidalScale Inc.	2013.08	Simple Investment	1,112	2,882	4.3	1,112	-2,882	-	-1,112	-	-	-	-	-
Unlisted	Sentiance NV	2012.12	Simple Investment	3,422	7	7.2	3,422	-	-	-	7	7.2	3,422	5,015	-10,711
Unlisted	Mantis Vision Ltd.	2014.01	Simple Investment	1,594	355	2.1	1,980	-	-	-1,980	355	2.1	0	14,234	14
Unlisted	Leman Micro Devices SA	2014.08	Simple Investment	1,019	17	3.4	1,019	-	-	-1,019	17	3.4	0	1,868	-3,111
Unlisted	Sensifree LTD	2016.01	Simple Investment	2,111	666	9.5	2,111	-	-	-2,111	666	9.5	0	473	-1,552
Unlisted	Unispectral Ltd.	2016.02	Simple Investment	1,112	2,308	7.9	2,130	-	-	-1,327	2,308	7.9	803	5,076	-864
Unlisted	Quobyte, Inc.	2016.04	Simple Investment	2,865	729	11.8	2,865	-	-	-2,865	729	11.8	0	4,322	1,272
Unlisted	Afero, Inc.	2016.05	Simple Investment	5,685	723	5.5	5,685	-	-	-	723	5.5	5,685	46,935	-13,857
Unlisted	Graphcore Limited	2016.06	Simple Investment	3,494	12,000	1.4	3,494	-	-	-425	12,000	1.4	3,069	273,484	-259,662

Listed	SoundHound Inc.	2016.12	Simple Investment	7,059	1,703	0.9	3,820	-	-	835	1,703	0.9	4,655	194,857	-116,162
Unlisted	Fasetto, Inc.	2019.01	Simple Investment	6,701	475	5.2	12,554	-	-	-12,554	475	5.1	0	5,160	-8,899

※ Based on separate financial statements

※ Ownership percentage is calculated based on the number of common shares issued

※ The Company measures fair value of financial instruments (equity shares) in accordance with K-IFRS. The Company annually evaluates if there is indication of impairment that investment in subsidiaries or affiliates may be impaired, and estimates the recoverable amount of assets with indication of impairment.

※ Financial stats of Sungwon Construction is as of December 31 2016, financial stats of Daewoo Songdo Development is as of December 31 2017, financial stats of Mantis Vision is as of December 31 2021, financial stats of Nanosys, Sentiance, Lemnan Micro Devices, Sensifree, Afero, Graphcore is as of December 31 2022, financial stats of One-Blue is as of March 31 2023, financial stats of Inkel, Unispectral is as of September 30 2023 and financial stats of Quobyte is as of October 31 2023 due to difficulties in obtaining the most recent financial data.

4. R&D results (detailed)

DX Division	
Research project	Details
Visual Display	
Neo QLED 8K March 2021–March 2023	<ul style="list-style-type: none"> □ Ultra high-resolution, slim 8K TV based on Mini LED technology (65 · 75 · 85") <ul style="list-style-type: none"> - QN900 (65 · 75 · 85") / QN800 (65 · 75 · 85") / QN700 (55 · 65 · 75 ") - QLED 8K resolution offers real-life viewing experience with enhanced contrast of sophisticated Mini LED - Added the feature of OTS Pro (Object Tracking Sound Pro)
Neo QLED 4K March 2021–March 2023	<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
OLED TV ~August 2023	<ul style="list-style-type: none"> □ Quantum-Dot-based self-emitting Display Flat 4K TV (55 · 65 · 77") <ul style="list-style-type: none"> - S95(55 · 65 · 77")/S90(55 · 65 · 77") - QD-Display TV that provides TV's true value with full applications from Quantum-Dot-based high-definition self-emitting Display and sleek Blade Slim Design to OTS and True Ch. ATMOS □ White OLED-based self-emitting Display Flat 4K TV (83") <ul style="list-style-type: none"> - S90 (83") - Strengthened OLED lineup alongside Neo QLED to fortify positioning in the premium TV market by Strengthened OLED lineup along with Neo QLED to fortify positioning in the premium TV market <ul style="list-style-type: none"> · Incorporated a laser slim design, emphasizing the TVs thinnest part, leveraging the features of a self-emitting display · Integrated OTS Lite and ATMOS to provide customers with an immersive 3D sound experience
QLED TV ~March 2023	<ul style="list-style-type: none"> □ Flat QLED 4K TV (43 · 50 · 55 · 60 · 65 · 70 · 75 · 82 · 85 · 98") □ Specs and features <ul style="list-style-type: none"> - Flagship QLED maximizes viewing experience with unrivaled picture quality within 4K (AI/brightness/viewing angle) and sound quality (OTS) - Maximizes immersive experience with ideal brightness contrast, free viewing angle, life-like color, and optimal brightness - Optimizes viewing experience by identifying user context based on voice recognition and AI technologies - Convenient calibration of picture quality with the touch of a button from a mobile device without expensive, professional equipment - Upgraded gaming experience for casual gamers through Game Bar 3.0
UHD TV ~March 2023	<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 ~April 2023	<ul style="list-style-type: none"> □ The SERO (43") <ul style="list-style-type: none"> - Simple, modern vertical screen that rotates 360 degrees with flat-type speaker - Easily installed in any living space, mobile floor stand included - Significantly improved VoC compared to existing products with anti-glare/anti-reflective screen even for rotated form factor □ The Frame (32 · 43 · 50 · 55 · 65 · 75 · 85") <ul style="list-style-type: none"> - Design resembles a real picture frame; completes a picture frame experience - Exhibit various famous paintings and pictures; adopted lifestyle design which blends in with the interior - Additional introduction of 85" to meet the needs for ultra-large Lifestyle products - Completes the Real Frame experience with the anti-glare/anti-reflective screen that shows a paper-like image □ The Serif (43 · 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 □ The Terrace (55 · 65 · 75") <ul style="list-style-type: none"> - Differentiated product tailored to a lifestyle of relaxing and enjoying entertainment outdoors □ The Premiere (100–130") <ul style="list-style-type: none"> - Ultra-short-throw laser projector with high-resolution, providing a top-notch Smart UX/OTT experience - Complements any environment with blended design, can be placed directly in front of a wall and has an easily adjustable screen size. - Complete experience of our TV models including the differentiated picture quality and sound □ The Freestyle (30–100") <ul style="list-style-type: none"> - Movable Smart Screen that enables users to enjoy content anytime, anywhere - Easy to set up in various locations and provides an optimal viewing experience regardless of angle/distance (Auto Focus/Auto Keystone) - Added usability via the basic cradle, enabling easy placement in various locations; and the socket adapter expands usability.
Micro-LED TV ~December 2023	<ul style="list-style-type: none"> □ The Wall 2.0 (110") <ul style="list-style-type: none"> - Released completed version of Micro-LED to strengthen technology leadership and dominance of Micro-LED market - Ultra-large Home Screen that reproduces the real world on display - Micro-LED picture quality with a sense of space and depth that seems like the real thing without limitation on resolution □ Micro-LED Screen (76 · 89 · 101 · 114") <ul style="list-style-type: none"> - Next-generation flagship model that satisfies premium customer and distribution needs - Released completed version of TFT glass-based 12.7" module (pitch 0.51) microLED Screen - microLED Processor: creates vivid 3D picture quality based on AI scaling + HDR enhancing features
Sound Bar ~March 2022	<ul style="list-style-type: none"> □ Soundbar <ul style="list-style-type: none"> - Bar-shaped audio product well suited to TVs - Adopted AI solution enabling voice recognition - Adopted 3D surround system, creating enriching sounds close to first-hand experiences □ Sound Bar Q990B <ul style="list-style-type: none"> - Industry's first wireless ATMOS transmission from TV to soundbar - Provides the optimal Cinema True ATMOS just like in the cinema, utilizing all channels of TV and soundbar - Equipped with soundbar room-correction technology

DX Division

Research project	Details
Monitor January 2021–September 2023	<ul style="list-style-type: none"> □ Space monitor <ul style="list-style-type: none"> - Application of integrated arm stand that minimizes space needed for the monitor □ Neo QLED Gaming monitor (49") <ul style="list-style-type: none"> - Strengthened black gamut based on enhanced brightness contrast by applying Neo QLED - More immersive gaming experience with 1000R curvature—the world's highest □ High-resolution QHD monitor (34") <ul style="list-style-type: none"> - Offers picture solution comfortable to the eye with Intelligent Eye Care solution, etc. □ LCD Smart monitor <ul style="list-style-type: none"> - Enjoy VOD services without using a PC via Smart TV services (Netflix, YouTube, etc.) □ Smart monitor M80B (32") <ul style="list-style-type: none"> - Ultra-slim, flat back, lifestyle design that adopts Warm White color - Includes magnetic-mount webcam - Strengthened smart experiences (watching VOD/connecting mobile devices/PC-less function/IoT/communication/game) □ Gaming monitor G85NB (32") <ul style="list-style-type: none"> - World's first UHD 240Hz 1ms (GTG) gaming monitor with premium gaming performance features (1000R Curved) - Odyssey Neo that offers a new level of picture quality experience (Mini LED, Quantum HDR2000) □ World's first 1000R large game screen G97NB (55") <ul style="list-style-type: none"> - Offers top-notch immersive experience with a large screen-size without viewing-angle limitations—even near-field viewing angles—via 1000R, 16:9, 55" Big Curved Screen - Provides a new immersive experience, almost like sitting in the cockpit of a space shuttle, by allowing users to rotate the screen vertically and in any direction - Game-exclusive panel that offers a 4K 165Hz refresh rate and 1ms response time □ QD-OLED gaming monitor (G85SB 34") <ul style="list-style-type: none"> - Exquisite expression of various colors with the combination of True RGB self-luminous display and quantum dot technology - Can play games with an extremely fast response time of 0.1ms and clear screen with 175Hz refresh rate - Implemented an all-in-one game streaming discovery platform, including cloud gaming and consoles, with the adoption of the Samsung Gaming Hub □ 5K ultra-high resolution monitor (S90PC 27") <ul style="list-style-type: none"> - 5K (5120x2880) resolution that expresses more information, with at least 50% more pixels compared to a 4K monitor - Matte Display reduces glare without a monitor hood and eliminates distortion, thus protecting your eyesight - Equipped with thunderbolt 4 and miniDP, compatible with both MAC/Windows - "Smart Screen" can be customized to satisfy your work/daily life/space needs □ DUHD Flagship Gaming Monitor (G95NC 57") <ul style="list-style-type: none"> - Allows users to experience maximum immersion with the new super large form factor (57") and ultra-high definition Dual UHD (7680X2160) - Can play games with a clear screen with 240Hz refresh rate and extremely fast 1 ms response time
Signage ~June 2023	<ul style="list-style-type: none"> □ LCD-based B2B Smart Signage (LFD, Video Wall, Outdoor, etc.) (13 · 24 · 32 · 43 · 49 · 50 · 55 · 65 · 75 · 85 · 98") □ Indoor/outdoor signage using LED □ All-in-one Kiosk (24"), all additional equipment embedded <ul style="list-style-type: none"> - Payment platform for developing Tizen payment module and ordering app, antibacterial finishing □ Flip-edu (75 · 85") interactive feature for education

DX Division

Research project	Details
Home appliances	
Refrigerators ~October 2023	<ul style="list-style-type: none"> □ 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) □ 177cm one-door built-in fridge enters the European market <ul style="list-style-type: none"> - Expanded lineup of built-in packages - Highest energy rating based on new standards - Secured superior capacity of the indirect cooling system - Differentiated features of fresh storage of food (high-humidity refrigeration) and temperature flexibility (freezer→refrigerator) □ Address replacement demand and new demand for 48" refrigerators in the North American market <ul style="list-style-type: none"> - Large capacity of 27.4cf for a built-in refrigerator - Differentiated Ice & Water Solution (Auto Fill Water Pitcher, Dual Auto Ice Maker) - Soft-closing doors give the product an high-quality, luxurious ambience □ Introduced a super-gap energy model in Korea (achieved first-class rating for its ultra-energy-efficiency, 22% achieved the first-class) <ul style="list-style-type: none"> - Applies one of the world's most efficient compressor (W1, EER 9.3) - Reduced the SET heat load (with increased VIP Coverage) - Enhanced heat dissipation in machine room (additional side cooling on the comp side) □ Introduced 4-Door Kitchen Fit Refrigerator in Korea <ul style="list-style-type: none"> - Provides separate space for subdivided food material storage and low-temperature ripening (strengthened usability with various modes for fermenting kimchi, defrosting meat, fermenting dough, etc.) - Introduced high-efficiency model with grade 1 rating according to revised Energy Efficiency Standard
Washer ~October 2023	<ul style="list-style-type: none"> □ 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 □ BESPOKE Grande AI OneBody Top-Fit <ul style="list-style-type: none"> - BESPOKE Grande AI all-in-one washer for Korean market - One-body design with 21 kg washer and 17 kg dryer all-in-one combo - Simple flat design

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Research project	Details
Air conditioner ~August 2023	<ul style="list-style-type: none"> □ 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 □ Increased revenue in the European market with an enhanced lineup that adopts the new the EHS platform <ul style="list-style-type: none"> - Low-frequency noise regulation: met limits for noise regulation of each European country, centering on Germany - Reinforced low-temperature performance: full heating performance at -25 °C - High-temperature discharged water: discharged water of up to 70 °C in a single heat pump cycle - Differentiated design: deep dark color 1 fan outdoor AC unit that harmoniously blends in with the living environment □ BESPOKE wind-free air conditioner WindowFit <ul style="list-style-type: none"> - Wind-free mode cools air without directly blowing wind into the room - Low-noise mode, with a 32dB level, reduces vibration and noise for better sleep - Selection of high efficient energy saving modes tailored to different situations - Enhanced cooling capabilities and larger fans enable stronger and more consistent cooling for a wider area - Safe and simple installation kit allows for a seamless installation □ Infinite Line 1Way BESPOKE wind-free built-in air conditioner <ul style="list-style-type: none"> - Ambient indirect edge lighting that creates a natural ambiance in the space - Wind-free on wider area with high-efficiency energy saving mode - 8-stage care system including for management of air quality and the inside of the air conditioner - AI energy mode for energy reduction tailored to different situations □ New platform for the new Eco Heating System refrigerant (R290) for the European market <ul style="list-style-type: none"> - Introduced a new refrigerant (R290) solution to comply with 2027 regulations - High-temperature discharged water (max 75 °C) for boiler market's alternatives - Achieved low noise (minimum 35dBA)
Vacuums ~September 2023	<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) □ Bespoke Jet AI Vacuum (up to 280W suction) <ul style="list-style-type: none"> - Continued to enhance suction power and the original POD (Clean Station); increased market share - Enabled world's strongest suction power of up to 280W, which ensures powerful and hygienic cleaning - Auto setting of the optimal cleaning mode and provides maintenance guidance based on self-diagnosis □ Jet Stick Vacuum 4.0 High-temperature cleaning brush <ul style="list-style-type: none"> - Damp cloth brush that directly sprays high-temperature water onto stains - Effectively removes stains by directly spraying high-temperature water (approximately 50 °C or above) onto the floor - Quick preheating (around 20 seconds) and at least 30 minutes of use with one battery - Enables convenient cleaning with lightweight damp cloth (1.51kg); no need to attach extra battery
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.

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Research project	Details
Range hoods February 2022	<ul style="list-style-type: none"> □ Expanded lineup of premium hoods for home <ul style="list-style-type: none"> - Unparalleled performance compared to existing products <ul style="list-style-type: none"> · Optimal air flow with a smart monitoring ventilation system equipped with Triple Air Sensor · Industry's strongest suction power of 780CMH; industry's lowest noise (29dB, Quiet Mark certification) - Improved user convenience by pairing with an electric range and by adopting stainless steel filters with easy-to-clean coatings - Design that reflects various needs of consumers (Bespoke colors) - Entered the B2C market with easy-to-install products and adoption of installment process
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 ~May 2021	<ul style="list-style-type: none"> □ 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
Inverter dehumidifier May 2022	<ul style="list-style-type: none"> □ Ultra-quiet inverter dehumidifier with first-class energy efficiency rating in Korea <ul style="list-style-type: none"> - Fast and strong large-capacity dehumidifier with a wide blade - Smart space care that keeps spaces from bathroom to dressing room pleasant - Dries a wide range of clothing—even delicate items—with swing blade - Simple design and compact size that fits anywhere - Low-noise mode that remains quiet throughout extended hours of use
Dishwasher June 2022	<ul style="list-style-type: none"> □ In-house technology platform that has a competitive edge in the European/Korean markets <ul style="list-style-type: none"> - Fit for Tall Tubs for the European market - Secured competitiveness with top-notch energy/water/low-noise specifications - Strengthened premium experiences via differentiating features, such as an automatic dispenser (for Korean detergents) and a simple UX - Differentiated specifications of Z-wash, Smart, Flexible Basket
Gas oven August 2023	<ul style="list-style-type: none"> □ Dacor 48" Pro-Range for North American market <ul style="list-style-type: none"> - Introduced Heritage Style all gas 48" Pro range - Incorporated healthier cooking POD features, such as air fry and air sous-vide - Equipped with a 7" pop-up display □ Dacor 48" Pro-Range (Dual Fuel) for North American market <ul style="list-style-type: none"> - Introduced 48" Dual Fuel Pro range, with transitional (Chef) look design on the exterior - Dual fuel, with electricity for the oven and gas for the cooktop - Applied 6 burners + griddle cooktop specifications - Combination of small oven 12" (new platform) + big oven 36" (previous platform) - Provides Steam Assist function
Mobile eXperience	
Galaxy Foldable ~August 2023	<ul style="list-style-type: none"> □ 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) 67.1mm x 158.2mm x 14.4~16.0mm (unfolded) 128.1mm x 158.2mm x 6.4mm - Platform (H/W, S/W):SDM888, 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

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Research project	Details
	<ul style="list-style-type: none"> □ 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) 72.2mm x 86.4mm x 15.9~17.1mm (unfolded) 72.2mm x 166mm x 6.9mm - Platform (H/W, S/W):SDM888, 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
	<ul style="list-style-type: none"> □ Galaxy Z Fold 4 (August 2022) <ul style="list-style-type: none"> - Screen: Main display 7.6", cover display 6.2" - Size (W x H x D): (folded) 67.1mm x 155.1mm x 14.2~15.8mm (unfolded) 130.1mm x 155.1mm x 6.3mm - Platform (H/W, S/W): Snapdragon 8+ Gen 1, Android 12.0, One UI 4.1.1 - Improved camera experience via Nightography picture/video, high-resolution (50M/8K), Space Zoom (30X) lens - Easier and faster multi-tasking with the new Taskbar feature - Easy-to-use Multi window thanks to various entry points - AI-based recommendation of related features after recognition of text from an image
	<ul style="list-style-type: none"> □ Galaxy Z Flip 4 (August 2022) <ul style="list-style-type: none"> - Screen: Main display 6.7", cover display 1.9" - Size (W x H x D): (folded) 71.9mm x 84.9mm x 15.9~17.1mm (unfolded) 71.9mm x 165.2mm x 6.9mm - Platform (H/W, S/W): Snapdragon 8+ Gen 1, Android 12.0, One UI 4.1.1 - Supports 25W charging and offers 3700mAh battery - Supports FlexCam, optimized for taking pictures/videos from various angles - Easy and quick switch to and manipulation of applications in Flex mode - Expanded the Cover screen function (simple reply, Samsung Wallet platform, increased Quick settings, etc.)
	<ul style="list-style-type: none"> □ Galaxy Z Fold5 (2023.08.) <ul style="list-style-type: none"> - Screen: Main display 6.7", cover display 6.2" - Size (W x H x D): (folded) 67.1mm x 154.9mm x 13.4mm (unfolded) 129.9mm x 154.9mm x 6.1mm - Platform (H/W, S/W): SM8550, Snapdragon 8 Gen 2, Android 13.0, One UI 5.1 - Slim, flat-folding design with the application of the Dumbbell Flex Hinge (waterdrop design) - Improved portability with an enhanced grip by reducing weight and thickness - Enhanced user experience by optimization for a large screen - Two-handed mode: Touch and hold the app/content with one hand and perform the action you like to carry out with the other <ul style="list-style-type: none"> • Taskbar optimization: Shows more recently used apps (2→4 apps); automatically extends the navigation bar • Enhanced Multi window switch function: Able to switch popup windows into the multi-window easily on the home screen • Gaming optimization: Set the preferred resolution for most-used games in advance - Enhanced durability: Strengthened shock absorption layers within display and changed structure of the hinge set - Slim and lightweight S-Pen and Case: Reduced the thickness and weight of S-Pen and its case by changing their shape
	<ul style="list-style-type: none"> □ Galaxy Z Flip 5 (August 2023) <ul style="list-style-type: none"> - Screen: Main display 6.7", cover display 3.4" - Size (W x H x D): (folded) 71.9mm x 85.1mm x 15.1mm (unfolded) 71.9mm x 165.1mm x 6.9mm - Platform (H/W, S/W): Snapdragon 8 Gen 2, Android 13.0, One UI 5.1 - Enlarged cover screen (1.9" → 3.4") with an optimized design - Enhanced grip by reducing thickness and applying a slim, flat-folding design with a new hinge - Provided key functions for differentiated user experiences and strengthened usability with the large cover screen <ul style="list-style-type: none"> • Provided Fast Scroll function for 13 key widgets (music, alarm, etc.) and main apps (Samsung Wallet, message reply) • Add more buttons (6 → 9) on the Quick Settings panel (Mobile Data, Screen Recording, Modes 3, etc.) - Provided various photo effects and functions using the large cover screen - Enhanced durability: Strengthened shock absorption layers within display and changed structure of the hinge set

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Research project	Details
Galaxy S ~February 2023	<ul style="list-style-type: none"> □ 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): SDM888 Exynos2100, 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): Snapdragon 8 Gen 1 Exynos2200, Android 12.0, One UI 4.1 - Strengthened camera video filming and low-light function performance <ul style="list-style-type: none"> · Video: Improved HDR and OIS+AI Stabilizer performance to support rich colors and minimize shaking/jittering · Enhanced low-light performance: Applies Big Pixel sensor and On-device AI algorithm - Integrated Ultra/Note by equipping with S Pen* Optimized latency : 5.6ms (S21 Ultra) → 2.8ms (S22 Ultra) - Improved outdoor visibility of display* Peak brightness: 1,500nit (S21 Ultra) → 1,750nit (S22 Ultra) - Battery that can be used all-day and 45W ultra-fast charging speed (S22 Ultra/S22+) - Enhanced durability: Adopts Amor AL and Victus+ Glass with a 10% improvement in durability - Improved completion of Galaxy foundation experience <ul style="list-style-type: none"> · One UI 4.1: sophisticated, sensible interaction experience and personal experience of users · Galaxy Eco: improved end-to-end completion and enhanced convenient experience

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Research project	Details
	<ul style="list-style-type: none"> □ Galaxy S23 · S23+ · S23 Ultra (February 2023) <ul style="list-style-type: none"> - Design: Ultimate Premium Experience designed for today and beyond <ul style="list-style-type: none"> * Unrivalled Camera, Ultimate Gaming, Eco-conscious Design - Screen: S23 6.1", S23+ 6.6", S23 Ultra 6.8" - Size (W x H x D): S23 70.9 x 146.3 x 7.6 mm, 168g, S23+ 76.2 x 157.8 x 7.6 mm, 195g S23 Ultra 78.1 x 163.4 x 8.9 mm, 233g - Platform (H/W, S/W): Snapdragon 8 Gen 2, Android 13, One UI 5.1 - Enhanced low-light performance based on AI and improved video experience <ul style="list-style-type: none"> · Capable of expressing precise color and tone in portrait mode even in the dark with improved color solutions leveraging AI-based scene optimization technology · Less camera shake for videos thanks to increased Optical Image Stabilization (OIS) correction angle (S22 Ultra 1.5° → S23 Ultra 3°) - Offers crisp and clear, high-resolution details and high-resolution camera experience <ul style="list-style-type: none"> · S23 Ultra adopted ultra-high-resolution 200MP camera · Provides optimal picture quality with auto adjustment of pixel size for sections with different lighting conditions - Improved basic performance, such as heat dissipation and durability against drops <ul style="list-style-type: none"> · Offers seamless gaming experience by enhancing heat dissipation performance, including improved power efficiency and revamped heat dissipation structure · Greater drop protection with adoption of Victus 2 Glass with durability enhanced by 21% - S23 Ultra offers top-notch productivity experience with S-pen <ul style="list-style-type: none"> · AI-based recommendation of related features after text recognition from an image/video - Improved connected experience with multiple devices (phone-PC) <ul style="list-style-type: none"> · Capable of mirroring the smartphone screen on a PC and continuing browsing on the same webpage - Adds to our sustainability story with the adoption of eco-friendly materials overall from dyes to the actual materials <ul style="list-style-type: none"> · Packaging box is 100% recycled paper · Adopts recycled PBT resin to bond metal (10%), recycled metal materials adopted in side keys (30%), etc. · Incorporated recycled glass into the front and back glass panels (25%), natural dyes when processing metals, recycled PET films, etc. - Strengthened privacy and security <ul style="list-style-type: none"> · Visualization of security status; notification of sensitive information when sharing images; and limiting access to private information when repairing products
Galaxy Tab ~August 2023	<ul style="list-style-type: none"> □ Galaxy Tab S7 FE (June 2021) <ul style="list-style-type: none"> - Screen: 12.4" WQXGA (2560x1600) - Size (W x H x D) & weight: 185.0mm x 284.8mm x 6.3mm, 610g (based on the 5G/LTE model) - SDM750G, WIFI SDM778G - 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

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Research project	Details
	<ul style="list-style-type: none"> □ 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: 161.9mm x 246.8mm x 6.9mm, 508 g - Platform (H/W, S/W): UniSOC T618, Android 11, One UI 3 - Memory : 3GB + 32GB / 4GB + 64GB / 4GB + 128GB, microSD up to 1TB <li style="padding-left: 40px;">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 <ul style="list-style-type: none"> · Wider support of One UI 3.1.1 Galaxy Experience (Copy&Paste, Auto Sync, Auto Switch)
	<ul style="list-style-type: none"> □ Galaxy Tab S8 · S8+ · S8 Ultra (February 2022) <ul style="list-style-type: none"> - Screen: Tab S8 11" WQXGA+ (2560 x 1600) <li style="padding-left: 40px;">Tab S8+ 12.4" WQXGA+ (2800 x 1752) <li style="padding-left: 40px;">Tab S8 Ultra 14.6" WQXGA+ (2960 x 1848) - Size (W x H x D) & weight: Tab S8 165.3mm x 253.8mm x 6.3mm, 503g <li style="padding-left: 40px;">Tab S8+ 185.0mm x 285.0mm x 5.7mm, 567g <li style="padding-left: 40px;">Tab S8 Ultra 208.6mm x 326.4mm x 5.5mm, 726g - Platform (H/W, S/W):Snapdragon 8 Gen 1, Android 12, One UI 4.1 - Memory : 8GB+128GB / 8GB+256GB / 12GB+256GB / 16G+512G, microSD up to 1TB - Enhanced video call experienced <li style="padding-left: 20px;">[Tab S8 Ultra] Provides dual front cameras (12M 80-degrees, 12M 120-degrees) and Auto Framing function <li style="padding-left: 20px;">[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 <li style="padding-left: 20px;">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

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Research project	Details
	<ul style="list-style-type: none"> □ Galaxy Tab S9 · S9+ · S9 Ultra (August 2023) <ul style="list-style-type: none"> - Screen: Tab S9 11" WQXGA+ (2560 x 1600) Tab S9+ 12.4" WQXGA+ (2800 x 1752) Tab S9 Ultra 14.6" WQXGA+ (2960 x 1848) - Size (W x H x D) & weight: Tab S9 254.2mm x 165.8mm x 5.9mm, 498g Tab S9+ 285.4mm x 185.4mm x 5.7mm, 581g Tab S9 Ultra 326.4mm x 208.6mm x 5.5mm, 732g - Platform (H/W, S/W): Snapdragon 8 Gen 2, Android 13, One UI 5.1 - Provided large-screen experience adapted with rich color impression and various environment settings <ul style="list-style-type: none"> · Adopted Dynamic AMOLED 2X technology for all models in Tab S9 series, offering clear and comfortable screen experience · Implemented Vision Booster technology that ensures a vibrant screen, even in direct sunlight - Secured mobility and dependability so users can use the product anywhere without any concerns <ul style="list-style-type: none"> · Achieved IP68 rating, the highest level of waterproof/dustproof accreditation · Armor Aluminum frame protects the product from impacts · · Enhanced usability eco-system by introducing an S-Pen that can be charged in either direction, and enhanced durability of accessories. · Strengthened compatibility by making the keyboard and other accessories compatible with Tab FE models · Introduced a new two-way heat dissipation structure using a vapor chamber, allowing users to use the product for a long time without discomfort - Secured sufficient Android App Eco system in various areas <ul style="list-style-type: none"> · Strengthened key android productivity apps, including apps for taking notes, managing documents, and browsing—e.g., Samsung note, Good note · Secured key apps to improve usability in drawing and photo/video editing: LumaFusion, Clip studio, etc. - Utilized eco-friendly materials throughout the product, incorporating recycled components for the exterior and tempered glass <ul style="list-style-type: none"> · Newly adopted recycled plastic on the S-Pen dock surface · Used new recycled materials for tempered glass of the display (10%, Gorilla Glass 5) · Used 100% recycled paper and armor aluminum (20%) for package box and recycled plastic for interior materials
Galaxy A ~October 2023	<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 HID (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) □ 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 HID (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)

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Research project	Details
	<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 G80/5G D720, 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: 73.8mm x 161.9mm 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 <ul style="list-style-type: none"> · Powerful camera that enables photographing on a professional level (ultra-wide 12MP, main 64MP, close-up 5MP)
	<ul style="list-style-type: none"> □ Galaxy A03-Core (December 2021) <ul style="list-style-type: none"> - Screen: 6.5" HD+(1600 x 720) TFT 60Hz - Size (W x H x D) & weight: 75.9mm x 164.2mm x 9.1mm, 211g - Platform (H/W, S/W): UniSOC SC9863A, Android 11(Android GO) <ul style="list-style-type: none"> · Enhanced CPU performance compared to previous model A01-Core (MT6739) - Highly price efficient product that applies large-screen/high-capacity battery to address the entry market - 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"> □ Galaxy A23 (March 2022) <ul style="list-style-type: none"> - Screen: 6.6" FHD+ (2408 x 1080) 90Hz - Size (W x H x D) & weight: 76.9mm x 165.4mm x 8.4mm, 195g - Platform (H/W, S/W):SDM680, Android 12, One UI 4.1 - 6.6" FHD+ display, supports 90Hz screen refresh rate (previous model: A22 6.4" HD+ 90Hz) - Vivid pictures in the dark without camera shake with the adoption of high-definition 50MP OIS camera <ul style="list-style-type: none"> · Adoption of high-capacity 5,000mAh battery and supports 25W ultra-fast charging
	<ul style="list-style-type: none"> □ Galaxy A13 5G (January 2022) <ul style="list-style-type: none"> - Screen: 6.5" HD+ (1600 x 720) 90Hz - Size (W x H x D) & weight: 76.5mm x 164.5mm x 8.8mm, 195g - 6.5" HD+ display, supports 90Hz screen refresh rate (previous model: A12 6.5" HD+ 60Hz) - Super-low priced 5G model for LTE user migration and expansion of the 5G market - Strengthened AP (P35 → D700) to address entry market - Higher definition of pictures compared to the previous model (A12 16MP) with the application of 50MP camera
	<ul style="list-style-type: none"> □ Galaxy A13 LTE (March 2022) <ul style="list-style-type: none"> - Screen: 6.6" FHD+ (2408 x 1080) 60Hz - Size (W x H x D) & weight: 76.4mm x 165.1mm x 8.8mm, 195g - Platform (H/W, S/W):Exynos850, Android 12, One UI Core 4.1 - Provides better large screen experience compared to the previous model (A12 6.5" HD+) by adopting 6.6" FHD+ display - Higher definition of pictures compared to the previous model (A12 48MP) by adopting 50MP camera - Able to use up to two days on a single charge by applying 5,000mAh high-capacity battery and AI Power mode
	<ul style="list-style-type: none"> □ Galaxy A73 5G (April 2022) <ul style="list-style-type: none"> - Screen: 6.7" FHD+ Super AMOLED+ (1080 x 2400) 120Hz - Size (W x H x D) & weight: 76.1mm x 163.7mm x 7.6mm, 181g - Platform (H/W, S/W): SDM778G, Android 12, One UI 4.1 - Vivid pictures in the dark without camera shake with the support of 108MP high-resolution picture quality and OIS - Soft and clear screen experience with the adoption of high refresh rate of 120Hz and sAMOLED display - Adopts 5,000mAh high-capacity battery (2-day battery life) and supports 25W ultra-fast charging speed - Offers strong durability with the adoption of Gorilla Glass 5 and IP67 rating - Provides the latest flagship experience with the support of One UI 4.1

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Research project	Details
	<ul style="list-style-type: none"> □ Galaxy A53 5G (April 2022) <ul style="list-style-type: none"> - Screen: 6.5" FHD+ Super AMOLED (1080 x 2400) 120Hz - Size (W x H x D) & weight: 74.8mm x 159.6mm x 8.1mm, 189g - Platform (H/W, S/W): Exynos1280, Android 12, One UI 4.1 - 8.1t slim design and 5,000 mAh high-capacity battery (0.3t↓, 500 mAh↑ compared to previous model) - Soft and clear screen experience provided by the combination of high refresh rate of 120Hz and fast response speed of sAMOLED - Enhanced glass durability with the adoption of Gorilla Glass 5 - Provides the latest flagship experience with the support of One UI 4.1
	<ul style="list-style-type: none"> □ Galaxy A33 5G (April 2022) <ul style="list-style-type: none"> - Screen: 6.4" FHD+ Super AMOLED (1080 x 2400) 90Hz - Size (W x H x D) & weight: 74.0mm x 159.7mm x 8.1mm, 186g - Platform (H/W, S/W): Exynos1280, Android 12, One UI 4.1 - Delivers enhanced screen experience with the support of 6.4" FHD+ display and 90Hz (previous model: A32-5G HD+ TFT 60Hz) - High-definition pictures without camera shake with the adoption of 48MP OIS camera - Enhanced durability with the adoption of Gorilla Glass 5 and support of IP67 rating for dust and water resistance - Adopts 5,000 mAh high-capacity battery (2-day battery) and supports 25W ultra-fast charging speed
	<ul style="list-style-type: none"> □ Galaxy A23 5G (September 2022) <ul style="list-style-type: none"> - Screen: 6.6" FHD+ TFT LCD (1080 x 2408) 120Hz - Size (W x H x D) & weight: 76.9mm x 165.4mm x 8.4mm, 197g - Platform (H/W, S/W): SDM695, Android 12, One UI 4.1 - Upgraded AP performance compared to previous model (A22-5G D700) with the application of SDM695 - High-resolution pictures without camera shake with the adoption of 50MP OIS camera (OIS is not supported in the North America region) - Provides enhanced large-screen experience compared to previous model (A22-5G 6.6" HD+ 90Hz) by adopting 6.6" FHD+ - Applies 5,000mAh large-capacity battery (2-day battery) and supports 25W ultra-fast charging
	<ul style="list-style-type: none"> □ Galaxy A14 5G (January 2023) <ul style="list-style-type: none"> - Screen: 6.6" FHD+ TFT LCD (2408 x 1080) 90Hz - Size (W x H x D) & weight: 78.0 x 167.7 x 9.1mm, 201g - Platform(H/W, S/W) : D700/Exynos1330, Android 13, One UI core 5.0 - High-resolution pictures (5MP → 13MP) with adoption of higher spec front camera compared to previous model (A13-5G) - Enhanced screen experience compared to previous model (A13-5G 6.5" HD+) with adoption of 6.6" FHD+ large-screen display - Applies 5,000mAh large-capacity battery
	<ul style="list-style-type: none"> □ Galaxy A54 5G (March 2023) <ul style="list-style-type: none"> - Screen: 6.4" FHD+ Super AMOLED (2340 x 1080) 19.5:9 120Hz - Size (W x H x D) & weight: 76.7 x 158.2 x 8.2mm, 202 g - Platform (H/W, S/W) : Exynos1380, Android 13, One UI 5.1 - Improved visibility through enhanced performance of AP picture quality, fine-tuning by light condition, and peak brightness of 1,000nit - Maximized performance by offering optimal refresh rate of 120Hz and boosted battery efficiency - Provides rich haptics experience thanks to elaborate adjustment of linear motor vibration - Enhanced balanced design and premium CMF (adopts 6.4", 19.5:9) - Offers the latest flagship experience with One UI 5.1
	<ul style="list-style-type: none"> □ Galaxy A34 5G (March 2023) <ul style="list-style-type: none"> - Screen: 6.6" FHD+ Super AMOLED (2340 x 1080) 120Hz - Size (W x H x D) & weight: 78.1 x 161.3 x 8.2mm, 199g - Platform (H/W, S/W) : MT6877V, Android 13, One UI 5.1 - Offers enhanced screen experience by featuring 6.6" FHD+, 1,000nit brightness, and 120Hz refresh rate - High-resolution pictures without camera shake with adoption of 48MP OIS camera - Equipped with a linear motor, which provides haptics experience of a flagship model

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Research project	Details
	<ul style="list-style-type: none"> □ Galaxy A14 (March 2023) <ul style="list-style-type: none"> - Screen: 6.6" FHD+ TFT LCD (2408 x 1080) 60Hz - Size (W x H x D) & weight: 78.0 x 167.7 x 9.1mm, 201g - Platform (H/W, S/W): Exynos 850/G80, Android 13, One UI core 5.1 - Offers enhanced selfie experience (8MP → 13MP) with adoption of higher spec front camera compared to previous model (A13) - Applies 5,000mAh large-capacity battery
	<ul style="list-style-type: none"> □ Galaxy A24 (May 2023) <ul style="list-style-type: none"> - Screen: 6.5" FHD+ sAMOLED U-Cut (1080 x 2340) 90Hz - Size (W x H x D) & weight: 77.6mm x 162.1mm x 8.3mm, 195g - Platform (H/W, S/W): G99, Android 13, One UI core 5.1 - Enhanced selfie experience (8MP → 13MP) with adoption of higher spec front camera compared to A23 - Records videos without camera shake via the adoption of new VDIS in addition to the previous OIS feature - Offers improved outdoor visibility compared to the A23, with wider color gamut spectrum, providing a brighter and more convenient screen experience
	<ul style="list-style-type: none"> □ Galaxy A05s (October 2023) <ul style="list-style-type: none"> - Screen : 6.7" FHD+ TFT LCD U-cut (1080 x 2400) 90Hz - Size (W x H x D) & weight : 77.8mm x 168.0mm x 8.8mm, 194g - Platform (H/W, S/W): SDM680, Android 13, One UI core 5.1 - Drives market volume/share in entry-level LTE market - Higher spec than the previous A04S: Equipped with high-performance AP (Exynos850 8nm → SDM680 6nm) and high-spec front camera (5MP → 13MP) - Adoption of high-capacity global 5,000 mAh battery and supports 25W ultra-fast charging (15W → 25W)
	<ul style="list-style-type: none"> □ Galaxy A05 (October 2023) <ul style="list-style-type: none"> - Screen : 6.7" HD+ TFT LCD U-cut (720 x 1600) 60Hz - Size (W x H x D) & weight : 78.2mm x 168.8mm x 8.8mm, 195g - Platform(H/W, S/W) : G85, Android 13, One UI Core 5.1 - Provides enhanced multimedia experiences with supports of large screen (6.7") and high-resolution camera (50MP) - Improves customers' product usability by incorporating high-performance AP (CPU 33% ↑ , GPU 150% compared to the previous model) - Able to use long period on a 30-minute-charge with 25W fast charging
Galaxy Book ~February 2023	<ul style="list-style-type: none"> □ Galaxy Book Go (April 2021) <ul style="list-style-type: none"> - Screen: 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 Gen 2, Windows 10 - Supports LTE that enables 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

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Research project	Details
	<ul style="list-style-type: none"> □ Galaxy Book2 Pro 360 (April 2022) <ul style="list-style-type: none"> - Screen: 15.6" FHD Super AMOLED (16:9), up to 500nit (HDR), Color Volume 120% 13.3" FHD Super AMOLED (16:9), up to 500nit (HDR), Color Volume 120% - Size (W x H x D) & weight: 15.6" 354.85 x 227.97 x 11.9mm, 1.41kg 13.3" 302.5 x 202 x 11.5 mm, 1.04kg - Platform, OS: Intel® Core™ Processor 12th Gen CPU, Windows 11 - sAMOLED: Default 370nit/HDR 500nit, Color volume 120% - S Pen & Touchscreen support - 1080p FHD Camera (87-degree wide angle, supports Auto Framing, which recognizes users and adjusts them to the center of the screen) - SSD: Gen4 SSD, Expendable SSD (M.2 2230) - Supports WiFi 6E - Battery: 15.6" 68Wh (21hrs), 13.3" 63Wh (21hrs) - Galaxy Apps: Quick Share, 2nd Screen, Multi-Control, etc. <ul style="list-style-type: none"> • QR Sign-in: logs into Galaxy Book with a QR scan linked to the account on your phone • Security: supports Secured-Core PC with enhanced security for each stage for hardware, firmware, and software
	<ul style="list-style-type: none"> □ Galaxy Book2 Pro (April 2022) <ul style="list-style-type: none"> - Screen: 15.6" FHD AMOLED (16:9), up to 500nit (HDR), Color Volume 120% 13.3" FHD AMOLED (16:9), up to 500nit (HDR), Color Volume 120% - Size (W x H x D) & weight: 15.6" 355.4 x 225.8 x 11.7mm, 1.11kg 13.3" 304.4 x 199.8 x 11.2mm, 0.87kg - Platform, OS: Intel® Core™ Processor 12th Gen CPU, Windows 11 - AMOLED: Default 400nit/HDR 500nit, Color volume 120% - 1080p FHD Camera (87-degree wide angle, supports Auto Framing, which recognizes users and adjusts them to the center of the screen) - SSD: Gen4 SSD, Expendable SSD (15.6" Only, M.2 2280) - Supports WiFi 6E, 5G Sub6 (15.6" Only) - Battery: 15.6" 68Wh (21hrs), 13.3" 63Wh (21hrs) - Galaxy Apps: Quick Share, 2nd Screen, Multi-Control, etc. <ul style="list-style-type: none"> • QR Sign-in: logs into Galaxy Book with a QR scan linked to the account on your phone - Security: supports Secured-Core PC with enhanced security for each stage for hardware, firmware, and software
	<ul style="list-style-type: none"> □ Galaxy Book2 Go 5G (December 2022) <ul style="list-style-type: none"> - Screen: 14" IPS (1920 x 1080) - Size (W x H x D): 323.9mm x 224.8mm x 15.5mm - Platform: Snapdragon 7C+ Gen 3, Windows 11 - Developed Mass WoA product adopting 7C+ Gen3 (CPU 63%↑, GPU 102%↑ compared to Snapdragon 7C Gen 2) - Improved picture quality of display (TN → IPS) - Supports WiFi 6E, 5G Sub6 - Adopted 5G model for the mass market which supports ENDC/eSIM - Supports 45W charging - Completed eight tests from the MIL-STD-810H certification <ul style="list-style-type: none"> • Shock, high/low temperature, thermal shock, dust, vibration, low pressure, humidity
	<ul style="list-style-type: none"> □ Galaxy Book2 Pro 360 (2023) (December 2022) <ul style="list-style-type: none"> - Screen: 13.3" FHD AMOLED (16:9), Touch Screen, Color Volume (DCI-P3) 100%, S Pen - Size (W x H x D) & weight: 13.3" 302.5 x 202.0 x 11.5mm, 1.04kg - Platform, OS: Snapdragon 8cx Gen 3, Windows 11 Home - AMOLED: 13.3" FHD Super AMOLED (16:9), Color Volume (DCI-P3) 100%, up to 370nit, S Pen - Speakers: Stereo 2 x 4W (Smart AMP), AKG, Dolby Atmos - SSD: eUFS on board, 256GB - WiFi 6E (802.11ax) - Battery: 63Wh (Video Play 35hrs↑) - Galaxy ecosystem: Smart Switch, Samsung Account, Samsung Apps, Keyboard & Touch Pad Sharing between Galaxy devices - Security: fingerprint recognition, Secured Core PC (Level 3, H/W & F/W Protection) - AI: Noise Reduction, Video Call with Neural Engine

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Research project	Details
	<ul style="list-style-type: none"> □ Galaxy Book3 Ultra (February 2023) <ul style="list-style-type: none"> - Screen: 16.0" OLED 120Hz, 370nit/500nit, 16:10 (2880 x 1800, 3K) - Size (W x D x H): 355.4 x 250.5 x 16.5mm, 1.79kg, - Intel® Core™ Processor 13th Gen CPU, Win 11, LPDDR5, NVIDIA® GeForce RTX™ 4050/4070, 76W Battery, FHD MIPI Camera, A/C/D AI, B Glass, TA 100W - Adopts 13th Gen Intel® Core™ H-series mobile processor and next-generation Nvidia® GeForce RTX™ 40 Series graphics - 3K high-resolution display that adopts WQXGA+; color volume 120% - Touch pad 39% larger in size (compared to Galaxy Book 2 Pro 33.7 cm / 39.6cm) - Fast charging speed of 100W; charges 55% of battery in 30 minutes - Quad Speaker: features AKG and Dolby Atmos - Supports Galaxy Ecosystem <ul style="list-style-type: none"> • Multi Control: capable of using keyboard and mouse on a smartphone and a tablet; can transfer files or copy and paste files and images between devices • Second Screen: using Galaxy Tab as a dual monitor; capable of extending or replicating PC screen • Quick Share: wireless file sharing between Galaxy devices, such as phone and tablet
	<ul style="list-style-type: none"> □ Galaxy Book3 Pro 360 (February 2023) <ul style="list-style-type: none"> - Screen: 16.0" WQXGA+ AMOLED (16:10) 2880 x 1800, Touch Screen, DCI-P3 120%, S Pen - Size (W x H x D) & weight: 16.0" 355.4 x 252.2 x 12.8mm, 1.66kg - Platform, OS: Intel® Core™ Processor 13th Gen CPU, Windows 11 - Dynamic AMOLED 2X: 3K (2880x1800), 500nit (HDR), 120Hz, DCI-P3 120% - S Pen & Touchscreen support - 1080p FHD Camera (87-degree wide angle, supports Auto Framing, which recognizes users and adjusts them to the center of the screen) - Quad SPK (AKG/Dolby, Max 5Wx2, 2Wx2), Studio Grade Dual Mic - SSD: Gen4 SSD - Supports WiFi 6E - Battery: 76Wh - Galaxy Apps: Quick Share, 2nd Screen, Multi-Control, Samsung Pass, etc. - Security: supports Secured-Core PC with enhanced security for each stage for hardware, firmware, and software
	<ul style="list-style-type: none"> □ Galaxy Book3 Pro (February 2023) <ul style="list-style-type: none"> - Screen: 16" WQXGA+ AMOLED (16:10), up to 500nit(HDR), 120Hz, DCI-P3 120% <li style="padding-left: 40px;">14" WQXGA+ AMOLED (16:10), up to 500nit(HDR), 120Hz, DCI-P3 120% - Size (W x H x D) & weight: 16" 355.4 x 250.4 x 12.5mm, 1.56kg <li style="padding-left: 40px;">14" 312.3 x 223.8 x 11.3mm, 1.17kg - Platform, OS: Intel® Core™ Processor 13th Gen CPU, Windows 11 - Dynamic AMOLED 2X: 3K (2880 x 1800), 500nit (HDR), 120Hz, DCI-P3 120% - 1080p FHD Camera (87-degree wide angle, supports Auto Framing, which recognizes users and adjusts them to the center of the screen) - Quad SPK (AKG/Dolby, Max 5Wx2, 2Wx2), Studio Grade Dual Mic - SSD: Gen4 SSD, Expendable SSD (M.2 2280) - Supports WiFi 6E - Battery: 16" 76Wh, 14" 63Wh - Galaxy Apps: Quick Share, 2nd Screen, Multi-Control, Samsung Pass, etc. - Security: supports Secured-Core PC with enhanced security for each stage for hardware, firmware, and software

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Research project	Details
	<ul style="list-style-type: none"> □ Galaxy Book3 360 (February 2023) <ul style="list-style-type: none"> - Screen: 15.6" FHD Super AMOLED (16:9), up to 500nit (HDR), DCI-P3 120% <li style="padding-left: 20px;">13.3" FHD Super AMOLED (16:9), up to 500nit (HDR), DCI-P3 120% - Size (W x H x D) & weight: 15.6" 355.4 x 228.0 x 13.7mm, 1.49kg <li style="padding-left: 20px;">13.3" 304.4 x 202.0 x 12.9 mm, 1.16kg - Platform, OS: Intel 13th Gen CPU (EVO Verified by Intel), Windows 11 - sAMOLED: 1080p FHD, 500nit (HDR), 60Hz, DCI-P3 120% - S Pen & Touchscreen support - 1080p FHD Camera (87-degree wide angle, supports Auto Framing, which recognizes users and adjusts them to the center of the screen) - Stereo SPK (Dolby, 2Wx2), Studio Grade Dual Mic - SSD: Gen4 DRAM-less SSD, Expendable SSD (15.6") - Supports WiFi 6E - Battery: 15.6" 68Wh, 13.3" 61.1Wh - Galaxy Apps: Quick Share, 2nd Screen, Multi-Control, Samsung Pass, etc. - Security: supports Secured-Core PC with enhanced security for each stage for hardware, firmware, and software
Galaxy Watch ~August 2023	<ul style="list-style-type: none"> □ 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 Watch5 & Galaxy Watch5 Pro (August 2022) <ul style="list-style-type: none"> - Display: Watch5 Pro (46mm) : 34.6mm AMOLED (450 x 450) 330PPI <li style="padding-left: 40px;">Watch5 (44mm) : 34.6mm AMOLED (450 x 450) 330PPI <li style="padding-left: 40px;">Watch5 (40mm) : 30.4mm AMOLED (396 x 396) 330PPI - Size (W x H x D) & weight: Watch5 Pro (46mm) → 45.4 x 45.4 x 10.5 mm, 46.5g <li style="padding-left: 20px;">Watch5 (44mm) → 44.4 x 43.3 x 9.8 mm, 33.5g <li style="padding-left: 20px;">Watch5 (40mm) → 40.4 x 39.3 x 9.8 mm, 28.7g - Platform (H/W, S/W): Exynos W920, Wear OS Powered by Samsung (Wear OS 3.5) - Signature circular design with adoption of sapphire crystal glass - Enhanced integrated health monitoring function equipped with the advanced BioActive Sensor <ul style="list-style-type: none"> • Improved accuracy of body composition, heart rate, blood pressure, and ECG; and advanced sleep monitoring function - Equipped with One UI Watch 4.5 based on Wear OS, which enables various Google mobile services and apps - Premium titanium body; optimized for outdoor activities with enhanced GPS tracking features (Watch5 Pro) <ul style="list-style-type: none"> • Enhanced performance and durability for better utilization in outdoor activities, such as hiking and cycling • Provides Magnetic D-Buckle Sport Band, which offers better durability, convenience, and style • Save and share workout journey using Route Workout and GPS Exchange Format (GPX) files • Provides turn-by-turn navigation along previous routes through the Track Back feature • Enables lengthy use for outdoor activities via the adoption of large-capacity battery (590mAh)

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Research project	Details
	<ul style="list-style-type: none"> □ Galaxy Watch6 & Galaxy Watch6 Classic (August 2023) <ul style="list-style-type: none"> - Display: Watch6 Classic (47mm) : 37.3mm Super AMOLED (480 x 480) <li style="padding-left: 40px;">Watch6 Classic(43mm) :33.3mm Super AMOLED (432 x 432) <li style="padding-left: 40px;">Watch6 (44mm) : 37.3mm Super AMOLED (480 x 480) <li style="padding-left: 40px;">Watch6 (40mm) : 33.3mm Super AMOLED (432 x 432) - Size (W x H x D) & weight: Watch6 Classic (47mm) → 46.5 x 46.5 x 10.9 mm, 59.0g <li style="padding-left: 40px;">Watch6 Classic (43mm) → 42.5 x 42.5 x 10.9 mm, 52.0g <li style="padding-left: 40px;">Watch6 (44mm) → 44.4 x 42.8 x 9.0 mm, 33.3g <li style="padding-left: 40px;">Watch6 (40mm) → 40.4 x 38.8 x 9.0 mm, 28.7g - Platform (H/W, S/W): Exynos W930, Wear OS Powered by Samsung (Wear OS 4) - Design and performance that improve visibility <ul style="list-style-type: none"> • Reduced bezel thickness and increased display size (by about 20%) compared to the previous model • Featured high-resolution Super AMOLED display with peak brightness of 2,000nit - Provided enhanced sleep monitoring experience <ul style="list-style-type: none"> • Shows sleep score via in-depth analyses of each measured factor and integrates the results • Offers enhanced, personalized sleep coaching program - Introduced new features, including a more personalized fitness management program <ul style="list-style-type: none"> • Provides a customized exercise guide by measuring heart rate within 5 cardiorespiratory capacity zones • Offers recording functions for track exercise, such as designation of the lane using the track running function • Features alarm functions to detect irregular heart rhythms - Applied one-click band for effortless and convenient watch strip replacement - Strengthened performance by increasing battery capacity <ul style="list-style-type: none"> • Applied 47/44mm 425mAh, 43/40mm 300mAh
Galaxy buds ~August 2022	<ul style="list-style-type: none"> □ 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 □ 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) <li style="padding-left: 40px;">* 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

DX Division

Research project	Details
	<ul style="list-style-type: none"> □ Galaxy Buds 2 Pro (August 2022) <ul style="list-style-type: none"> - Kernel-type premium TWS that offers high-quality 24bit Hi-Fi audio and comfortable fit - Size (W x H x D): Earbuds 21.6mm x 19.9mm x 18.7mm Cradle 50.2mm x 50.1mm x 27.7mm - Platform (H/W, S/W): BES2700YP 1Chip solution, RTOS <ul style="list-style-type: none"> • First Samsung Buds to apply 24bit/48kHz Hi-Fi technologies to offer a high-quality audio experience by minimizing loss of sound quality of the original recording; Intelligence ANC which adopts All High-SNR MIC, noise cancelling solution, and voice detect technology • Strengthened listening experience of the immersive 360 Audio feature via multi-channel audio and enhanced technology that tracks head movements • Provides clear and upgraded call quality through improved VPU and personalized beamforming technology - Offers comfortable and stable fit thanks to the ergonomic design <ul style="list-style-type: none"> • Improved fit through smaller size—15% size reduction compared to previous model—and enhanced structure of vent holes - Strengthened user experience via easy connection between Galaxy Devices <ul style="list-style-type: none"> • Expanded the Auto Switch feature from smartphones, tablets, and watches to TVs, and the transition between devices is made easier and faster
Network	
RAN S/W Package ~November 2023	<ul style="list-style-type: none"> □ SVR21B NR vDU SW package (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 □ vRAN* SW Package (November 2023) <ul style="list-style-type: none"> - Integrated 4th generation CPU from company "I" into our vRAN SW Package, applying it to a vRAN commercial network for the first time in industry <ul style="list-style-type: none"> • Successfully conducted data call on vRAN commercial network equipped with 4th generation CPU, following previous success in large-scale vRAN commercialization utilizing 3rd generation CPU * vRAN (virtualized RAN)

DX Division

Research project	Details
Base stations ~May 2023	<ul style="list-style-type: none"> □ Developed MMU Beam Forming SoC (February 2021) <ul style="list-style-type: none"> - SoC performs functions that Beam Forming FPGA, within MMU board, performs - 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 Dual Band 16T16R FDD MMU for North America (October 2021) <ul style="list-style-type: none"> - The Company's first commercialized 16T16R FDD dual band 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 □ Developed high-performance RFIC + DFE integrated chip (April 2022) <ul style="list-style-type: none"> * RFIC (Radio Frequency Integrated Circuit): high-frequency integrated circuit suitable for wireless communication * DFE (Digital Front End): last stage of digital signal processing for communication □ Two types of FDD RU for Dish (Dual Band/Tri Band RU) (September 2022) <ul style="list-style-type: none"> - Developed 5G FDD RU product that complies with the O-RAN standard and supports multiple frequency bands at the same time * frequency supported by RU: n71(600MHz), n29(700MHz), n66(AWS: 1.7GHz/2.1GHz), n70(AWS: 1.7GHz/1.9GHz) □ Gen.3 Dual Band NR 2T2R AU (October 2022) <ul style="list-style-type: none"> - Developed the world's first Dual Band (28GHz+39GHz) AU - Upgraded product performance by increasing output and capacity twofold with the same size compared to the existing 2nd generation AU □ Domestic 3.5GHz NR 64T64R MMU (November 2022) <ul style="list-style-type: none"> - Developed 64T64R Massive MIMO MMU, which was commercialized in the domestic market for the first time - Increased antenna elements twofold and output by 2.7 times compared to the existing 32T32R MMU (old model) for the domestic market □ 3.5GHz CBRS NR Strand Smallcell (March 2023) <ul style="list-style-type: none"> - Developed Strand Small Cell (small cell solution designed to be installed on cables) for the first commercial use - Cell solution that integrates baseband, radio, and antenna into a single form factor - Equipped with the Company's newest in-house chipset—2nd generation 5G modem SoC—and its small size enables installation on cables □ C-band NR 64T64R MMU (2023.05.) for North America <ul style="list-style-type: none"> - More compact and lightweight 64T64R MMU allows higher output with low-power mode compared to the 1st generation

DS Division

Research project	Details
Memory	
DRAM for mobile November 2021–September 2023	<ul style="list-style-type: none"> □ 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 14nm; expansion of application areas that use high performance, low power consumption memory from mobile to server and automotives, with expansion to up to 64GB per memory package - Verified the industry-leading operating speed (8.5Gbps) by mounting the 8GB LPDDR5X DRAM package on Qualcomm's Snapdragon mobile platform □ Development of industry's first LPCAMM <ul style="list-style-type: none"> - Developed LPDDR-based modules, leading the next-generation markets like PC and laptops - Improved performance by 50%, power efficiency by 70%, and mounting area by 60% compared to SO-DIMMs, and improved flexibility in manufacturing as well as user convenience with easy upgrade/replacement - Set to be tested using next-generation systems with major customers and slated for commercialization in 2024: expected to gain wide adoption in next-generation PCs, laptops and data centers.
DRAM for server March 2021–September 2023	<ul style="list-style-type: none"> □ 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 □ Mass production of the industry's most advanced 12nm-class DRAM <ul style="list-style-type: none"> - Enhanced productivity and improved low power consumption characteristics compared to 14-nano DRAM, improving productivity by approximately 20% and reducing power consumption by approximately 23%, which maximizes next-generation computing - Produced via our completed highly advanced node that applies cutting-edge technologies, such as a capacitor utilizing a new material with a high dielectric constant - Provide high-performance and high-density DRAM solutions to meet demand for the high-throughput computing market and expand 12nm-class DRAM lineup, which will be supplied to various applications □ Development of the largest-capacity 32Gb DDR5 DRAM to date <ul style="list-style-type: none"> - 40 years after the development of 64Kb DRAM in 1983, capacity has increased by 500,000 times - Enables the production of 128GB modules without TSV processes; improved power efficiency by 10% compared to 12-nano 16Gb based modules with the same capacity - Provides high density DRAM solutions optimized for AI and enables 1TB module production - Expects to enter mass production within 2023 to be supplied to various applications such as AI and next-generation computing
Graphic DRAM July 2022–July 2023	<ul style="list-style-type: none"> □ Development of GDDR6 DRAM, industry's one of the fastest graphic DRAMs <ul style="list-style-type: none"> - First in the industry to deliver speeds up to 24Gbps by applying 3rd generation 10nm-class (1z) process - Met customer needs by enhancing performance by more than 30% compared to the previous product, leading to processing speeds of up to 1.1TB per second; supporting operation voltage of 1.1V; and improving power efficiency by 20% - Secured compatibility by being fully compliant with specifications of JEDEC, an international semiconductor standardization body - Expanded applications, including next-generation graphics cards, AI, and HPC □ Development of GDDR6W, graphics memory that applies advanced packaging technology <ul style="list-style-type: none"> - GDDR6W is manufactured by introducing Fan-Out Wafer-Level Packaging (FOWLP) technology—a construction and stacking technology—without developing a new memory die - Increased performance (bandwidth) and capacity by twofold while maintaining the same packaging size of GDDR6 □ Development of the industry's first GDDR7 DRAM <ul style="list-style-type: none"> - With the development of industry's fastest 32Gbps GDDR7 DRAM, we improved performance by 1.4 times and power efficiency by 20% compared to the previous 24Gbps GDDR6 - Minimized heat generation during high-speed operation through optimization of the circuit design with new package materials - Set to be tested using next-generation systems with major customers within this year and planned for a timely commercialization to gain wide adoption in next-generation graphic cards, high-performance computing and AI

DS Division

Research project	Details
HBM DRAM February 2021–October 2023	<ul style="list-style-type: none"> □ 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, a highly reputable organization 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 □ Developed AI-accelerator equipped with HBM-PIM and GPU <ul style="list-style-type: none"> - Materialized HBM-PIM Cluster by installing HBM-PIM memory in AMD's GPU accelerator - Compared to existing GPU accelerators, on average, the addition of HBM-PIM improved performance by more than double and reduced energy consumption by more than 50% - In preparation to provide software that supports accelerators equipped with HBM-PIM, so consumers are expected to be able to use PIM memory solutions in an integrated software environment □ Unveiled ultra-high performance HBM3E DRAM Shinebolt that will lead AI technology innovation <ul style="list-style-type: none"> - Provides high-performance of up to 9.8Gbps per one data input/output pin, allowing speed capable of processing up to 1.2TB of data per second - Achieves high-level stacking for HBM chips by optimizing non-conductive film technology for dense chip stacking without gaps, and improved heat transfer coefficient by maximizing heat conduction - Currently mass-producing 8-layer and 12-layer HBM3 products and delivering samples of the next-generation HBM3E to customers
NAND November 2022	<ul style="list-style-type: none"> □ Mass production of 8th generation V-NAND <ul style="list-style-type: none"> - Mass production of 1Tb 8th generation V-NAND, which is among the highest capacities in the world - Significantly enhanced bit productivity per wafer and secured one of the industry's highest bit density - Enhanced performance by 1.2 times compared to existing model, featuring an input and output (I/O) speed of up to 2.4Gbps with the adoption of a next-generation interface - Expected to lead the trend of expanding storage capacity in next-generation enterprise servers and extend use into the automotive market, in which reliability is critical
eStorage –May 2022	<ul style="list-style-type: none"> □ Development of highly advanced UFS 4.0 <ul style="list-style-type: none"> - Improved reading/writing speed by approximately twofold compared to UFS 3.1 product - Enhanced power efficiency by approximately 46% for processing the same amount of data, which allows longer hours of use - Improved a function that reads and saves customer's important data by adopting the latest security technologies - Expected to expand into consumer devices, such as smartphones, automotives, and VR/AR

DS Division

Research project	Details
SSD for server February 2021–July 2022	<ul style="list-style-type: none"> □ 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 □ Development of '2nd generation smart SSD' with upgraded processing functionality <ul style="list-style-type: none"> - Enhances processing functionality by twofold and cuts processing time by over 50%, energy consumption by up to 70%, and CPU utilization by up to 97% - Processes data directly, thereby improving system performance and energy efficiency at the same time - Actively address various market needs, including database and video transcoding - Lead standardization of computational storage and increase development of next-generation storage products
SSD for Client January 2023	<ul style="list-style-type: none"> □ Mass production of PM9C1a, a high-performance PC SSD equipped with a 5nm controller <ul style="list-style-type: none"> - Elevated performance with a new 5nm controller and 7th generation V-NAND - Enhanced speed by up to 1.8 times and power efficiency by up to 70% vs the previous generation - Supports device authentication and verification technology with strengthened security solutions such as the new adoption of the Device Identifier Composition Engine (DICE) security standard

DS Division

Research project	Details
Brand SSD January 2021–November 2023	<ul style="list-style-type: none"> □ 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 □ Released portable SSD 'T7 Shield' for experts that offers both performance and durability <ul style="list-style-type: none"> - Built with dust and water resistance and drop resistance up to 3m - Transmits data stably without performance degradation, including when recording and editing high-resolution videos □ Unveiled high-performance SSD '990 PRO' optimized for gaming <ul style="list-style-type: none"> - Offers unparalleled performance by featuring the latest V-NAND technology and a new proprietary controller - Enhanced speed by up to 55% and power efficiency by up to 50% compared to previous model - Offers optimal performance for an environment in which ultra-high speed data processing is required, such as high-performance graphic games and 4K/8K high-resolution videos □ Released high-performance SSD '990 PRO' 4TB <ul style="list-style-type: none"> - Offers the fastest random read speed among PCIe 4.0-based consumer SSDs by applying state-of-art 8th generation V-NAND and achieving industry's highest performance - Optimized for tasks that require ultra-fast data processing, such as high-performance games and 3D/4K graphics - Strengthened compatibility and heat dissipation through design and application of a heat diffuser and heat sink □ Launched ultra-fast portable SSD 'T9' <ul style="list-style-type: none"> - Supports new data transmission interface, USB 3.2 Gen2x2, achieving approximately 2x improvement in consecutive reading/writing compared to the previous generation - Improves surface materials and achieves software optimization to reduce degradation and overheating during transmission of large files □ Launched 8TB portable SSD T5 EVO, the largest capacity in industry <ul style="list-style-type: none"> - Provides consecutive reading/writing with a speed of up to 460MB/s based on USB3.2 Gen1 - Enhanced portability with compact size and weight, and metal ring - Equipped with overheating prevention and hardware data encryption technologies
EUV ~October 2021	<ul style="list-style-type: none"> □ Mass production of 14nm 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–May 2023	<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 □ Development of industry's first high-capacity 512GB CXL DRAM <ul style="list-style-type: none"> - Enhanced capacity of CXL DRAM by four times, which allows expansion of over tens of terabytes per server - Equipped with CXL-exclusive controller, reducing data latency by 1/5 □ Development of CXL-based PNM solution for high-capacity AI models <ul style="list-style-type: none"> - PNM's (Processing-near-Memory) computational functions are performed closer to the memory to reduce the bottleneck between the CPU and memory data transference and to improve system performance - Enhanced performance by approximately twofold in applications, such as recommendation systems or in-memory databases, that require high memory bandwidth □ Development of industry's first CXL 2.0 DRAM <ul style="list-style-type: none"> - Overcomes limitations of DRAM modules, enabling expansion of bandwidth and capacity - Reduced server operation costs by supporting memory pooling, which assists splitting-use of CXL DRAM - Expands CXL ecosystem through continued collaboration with data centers and server and chipset companies; and become an industry leader by promptly addressing demand in the next-generation computing market

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-August 2023	<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 □ Released memory card 'PRO Endurance' with enhanced performance and durability <ul style="list-style-type: none"> - Adopts high-quality server-level NAND durability that allows up to 16 years of continuous recording time - Optimized for high-resolution (4K, Full HD) video recording equipment, such as surveillance video and black box - Keeps stable recording performance even in tough conditions, applies 6-proof protection - Supports speed of Class 10, UHS Class U3, and video speed of Class V30; can continuously record Full HD · 4K high-resolution videos □ Released memory card 'PRO Ultimate' with enhanced speed and stability <ul style="list-style-type: none"> - 'PRO Ultimate' provides the highest level of 200MB/s read speed and 130MB/s write speed under the UHS-I standard, improving power efficiency by 37% compared to previous models and achieving data protection against extreme external conditions such as water, moisture, abrasion, X-ray, and temperature. - Provides the optimal SD Cards/Micro SD Cards for high-resolution content work catering to professional photographers and creators who use devices like drones, action cameras, and DSLR
Automotives December 2021-October 2023	<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°C-105°C range) □ Mass production of ultra-low-power UFS 3.1 for vehicles <ul style="list-style-type: none"> - Began mass production of Infotainment (IVI) UFS 3.1 for vehicles, which has the lowest power consumption in the industry and is optimized for EVs and autonomous vehicles - Offers 33% lower power consumption compared to the previous generation, with a maximum read speed of 2,000MB/s and a maximum write speed of 700MB/s for 256GB - Strengthened storage product lineup for automotives by establishing lineup of 128GB/256GB/512GB products to meet various customer needs; and established UFS 3.1 products for advanced driver assistance systems □ Unveiled key solutions for vehicles to reach no.1 in automotive memory market in 2025 <ul style="list-style-type: none"> - Unveiled Detachable AutoSSD that allows multiple SoCs to use a single SSD divided through storage virtualization, supporting consecutive read speed up to 6,500MB/s and providing 4TB capacity - Showcased high bandwidth GDDR7 for vehicles and LPDDR5X with reduced packaging size

DS Division

Research project	Details
<p>System LSI</p> <p>Image Sensor January 2021–December 2023</p>	<ul style="list-style-type: none"> □ 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 megapixel" ISOCELL HP1 - Industry's smallest-sized dual pixel image cell ISOCELL GN5 □ Unveiled 200-megapixel image sensor, industry's smallest pixel size (HP3, 0.56um/200Mp) <ul style="list-style-type: none"> - Reduced camera module area by up to 20% with 12% smaller pixels compared to the previous HP1(0.64um) - With the Super Quad Phase Detection (QPD) technology, enables auto-focusing feature for all 200 megapixels - Utilizes Tetra2pixel technology, which offers vivid picture quality even in low-light environments - Improves picture resolution for 200 megapixel and usability of a 50 megapixel sensor zoom by applying AI-based image process solutions □ Launched 200-megapixel image sensor combined with ultra-high resolution technologies (HP2, 0.6um/200Mp) <ul style="list-style-type: none"> - Applied Dual Vertical Transfer Gate technology—industry's first—and enhanced color expression and picture quality - Leveraged Tetra2pixel technology, offering vivid picture quality even in low-lit environments - Adopted Dual Slope Gain, creating an HDR image as high as 50MP—industry's first - Applied Super QPD, which allows the sensor to use all its pixels for auto-focusing □ Launched industry's highest- performance image sensor for vehicles (1H1, 2.1um/8.3Mp) <ul style="list-style-type: none"> - Enables automotive 120dB HDR, LFM (LED flicker mitigation) and motion-artifact free simultaneously - Applies DTI (deep trench isolation) to prevent interference between adjacent pixels and improves low-light SNR □ Unveiled ISOCELL vision 63D iTOF (indirect time of flight) sensor (63D, 3.5um/0.3Mp) <ul style="list-style-type: none"> - Measures three dimensional information of objects by sensing light wavelengths - An industry-first single-chip iTOF sensor which reduces system power consumption by 40% compared to the previous sensor (33D) - Supports surface light source and point light source modes and extends maximum measurement distance to 10m □ Unveiled ISOCELL Vision 931 Global Shutter sensor (931, 2.2um/0.4Mp) <ul style="list-style-type: none"> - Simultaneously exposes all pixels to light, just like the human eye, increasing speed and accuracy. - Recognizes even minute movements in the user's pupils, facial expressions, hand motions, etc.

DS Division

Research project	Details
<p>Exynos January 2021–October 2023</p>	<ul style="list-style-type: none"> □ Launched Exynos 2100, 5G-integrated premium mobile AP <ul style="list-style-type: none"> - Applied state-of-the-art 5nm 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 □ Secured internationally standardized 5G non-terrestrial networks (NTN) modem technology for satellite communications <ul style="list-style-type: none"> - Reflects the latest standard (Release-17) of 3GPP, which unites telecommunications standard development organizations - Adopted technologies that accurately predict low Earth orbit satellite locations and minimize frequency offsets - Supports two-way transmission of large-capacity data, including text messaging and video sharing □ Unveiled Exynos Connect U100, an ultra-wideband (UWB) chipset for short-range wireless communications <ul style="list-style-type: none"> - Provides an accuracy of single-digit centimeters and 5-degrees and under - Low-power, one-chip solution optimized for various mobile, automotive, and IoT devices - Equipped with a scrambled timestamp sequence (STS) function and a secure hardware encryption engine to prevent external hacking - Certified by FiRa Consortium, an organization that certifies UWB products for conformity to interoperability standards □ Unveiled Exynos 2400, a state-of-the-art mobile AP <ul style="list-style-type: none"> - Equipped with industry's most advanced ray tracing technology, with 2.1 times improvement over predecessor - Strengthened AI function enables on-device generative AI performance without internet connection - First Exynos to be equipped with non-terrestrial network technology

DS Division

Research project	Details
LSI January 2021–March 2023	<ul style="list-style-type: none"> □ 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	
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
8nm RF process June 2021	<ul style="list-style-type: none"> □ Radio Frequency (RF) process for 5G communication that 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 14nm RF process <ul style="list-style-type: none"> - Total number of transistors of chips decreased with the drastic improvement of RFeFET performance
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
World's first 3nm process that adopts GAA technology June 2022	<ul style="list-style-type: none"> □ World's first mass production of 3nm process that adopts Gate-All-Around (GAA) transistor technology <ul style="list-style-type: none"> - Maximized power efficiency and performance by implementing 'MBCFET', our in-house GAA technology that utilizes nanosheets - 1st-generation 3nm process reduced power consumption by 45%, improved performance by 23%, and reduced surface area by 16% compared to 5nm □ GAA technology overcomes the performance limitations of FinFET, allowing to continue to make smaller chips <ul style="list-style-type: none"> - The gate surrounds all four faces of the channel, which enables finer control of current flow and reduces operating voltage and power consumption - The structure in which the channels are piled up vertically boosts performance as it increases channel width per unit area and allows greater amount of current to flow - The width of channels can be adjusted, giving better design flexibility □ Providing verified 3nm design infrastructure and services with ecosystem partners □ Planning to expand adoption into high-performance, low-power system semiconductors for HPC, mobile SoCs, etc.

SDC

Research project	Details
Display panel	
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
Foldable OLED for Galaxy Z Fold 4 August 2022	<ul style="list-style-type: none"> □ Promoting additional improvements compared to previous model <ul style="list-style-type: none"> - Significantly improved display quality in the location of the Under Panel Camera while maintaining camera performance and emphasized large-screen experience - Enhanced energy efficiency with Eco² OLED Plus with improved transmittance efficiency - Reduced costs and weight via integrated FRP-Digitizer panel
14/16" OLED for Galaxy Book 3 Pro February 2023	<ul style="list-style-type: none"> □ Development of the world's first large-sized (16") OCTA technology <ul style="list-style-type: none"> - Expanded the application of OCTA—touch-integrated technology—from smartphone OLED to middle-sized laptop OLED panels - Minimized the dead space of panels via development of new materials and process technologies - Reduced power consumption with the first adoption of OLED notebooks with refresh rate of 48–120Hz
16" OLED Development for HP Elitebook April 2023	<ul style="list-style-type: none"> □ Achieves power-efficiency and durability through improvements in OLED organic materials <ul style="list-style-type: none"> - 16" WQ+ (2,880 x 1,800, 16:10) - Applied 48Hz–120Hz, VRR (Variable Refresh Rate) and received AMD Freesync Premium Pro certification; provides an optimal gaming environment
OLED for Google Pixel 8 pro October 2023	<ul style="list-style-type: none"> □ Through application of new OLED materials that are highly efficient and long-lasting, high luminance (HBM 1,600nits, peak 2,400nits) was achieved. <ul style="list-style-type: none"> - 6.7" WQXGA+ (1,344 x 2,992) - Applied 1–120Hz VRR (variable refresh rate) and technology to minimize dead space