SK hynix Inc. and Subsidiaries

Consolidated Financial Statements December 31, 2021 and 2020

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Independent Auditor's Report

(English Translation of a Report Originally Issued in Korean)

To the Shareholders and Board of Directors of SK hynix Inc.

Opinion

We have audited the accompanying consolidated financial statements of SK hynix Inc. and its subsidiaries (collectively referred to as the "Group"), which comprise the consolidated statements of financial position as at December 31, 2021 and 2020, and the consolidated statements of comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows for the years then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the financial position of the Group as at December 31, 2021 and 2020, and its financial performance and its cash flows for the years then ended in accordance with International Financial Reporting Standards as adopted by the Republic of Korea (Korean IFRS).

Basis for Opinion

We conducted our audits in accordance with Korean Standards on Auditing. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the* consolidated *Financial Statements* section of our report. We are independent of the Group in accordance with the ethical requirements of the Republic of Korea that are relevant to our audit of the financial statements and we have fulfilled our other ethical responsibilities in accordance with the ethical requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

(1) Fair value measurement of financial assets related to the Group's investments to KIOXIA Holdings Corporation presented as long-term investment assets

Reasons why the matter was determined to be a key audit matter

The Group has equity investment in a special purpose entity ("SPC1") and convertible bonds ("SPC2") in relation to investments in KIOXIA Holding Corporation ("KIOXIA") with total amount of Ψ 6,347,537 million, which represents 6.58% of consolidated total assets as at December 31, 2021, and the Group recognized Ψ 371,972 million as gain on valuation of the financial assets for the year ended December 31, 2021 with respect to the investments. The financial assets are non-listed and measured at the fair value using significant unobservable inputs; therefore, the financial assets are classified to Level 3 of the fair value.

The fair value of SPC1 and SPC2 was measured in consideration of the profit-sharing agreement between investors based on the estimated equity value of KIOXIA, a non-public company, and the Group used an independent external expert for the fair value measurement.

The carrying amount of the financial assets is material in the consolidated financial statements and the selection of the valuation techniques that will be applied in the fair value measurement, assumptions and estimates of inputs that have significant impacts on the fair value measurement involve the Group management's judgement. Accordingly, we determined the fair value measurement of the financial assets as a key audit matter.

How our audit addressed the Key Audit Matter

We performed the following audit procedures, including the use of auditor's experts.

- · Obtained an understanding and evaluated the Group's accounting policy, process and internal controls including management's review and approval in relation to the fair value measurements of the financial assets.
- · Evaluated the competence and independence of external specialist used by management.
- · Reviewed the relevant contracts to understand the investment conditions related to the financial asset investment and reviewed whether it is appropriately reflected in management's valuation details.
- · Assessed the appropriateness of the valuation technique used in the fair value estimates by management.
- · Assessed the reasonableness of key assumptions applied in fair value estimates of SPC1, SPC2 and equity value of KIOXIA.
- · Performed a lookback analysis by comparing the estimation of prior year to actual results to review whether estimates include optimistic assumptions.
- · Reviewed the consistency of the sales growth rate, operating profit margin rate and capital expenditure forecasts applied in the equity value measurement of KIOXIA with the past growth and market conditions.
- · Evaluated the results of a sensitivity analysis on the discount rates and permanent growth rate performed by management to assess the impact of changes in key assumptions on the fair value measurement.
 - (2) Appropriateness of machinery's depreciation starting point

Reasons why the matter was determined to be a key audit matter

The Group's property, plant and equipment amount to $\mbox{$W$}$ 53,034,270 million, of which the machinery accounts for $\mbox{$W$}$ 33,941,706 million. Regarding the recognition of depreciation expenses for machinery, the Group starts depreciating machinery when the acquisition and installation of the machinery is complete, and it is ready for its intended use. During the current year ended December 31, 2021, the Group has started to depreciate the machinery amounting to $\mbox{$W$}$ 10,373,227 million after determining that the machinery is ready for its intended use.

The size of the investment in machinery that the Group makes annually for the maintenance and expansion of production plants is significant and the effect of depreciation amount on the consolidated financial statements is significant depending on the determination when it is ready for its intended use. Accordingly, we determined the appropriateness of depreciation starting point as a key audit matter.

How our audit addressed the Key Audit Matter

We performed the following audit procedures.

- · Obtained an understanding on the Group's policy, process and internal controls in relation to the determination on when to start depreciation of the machinery
- · Evaluated the Group's internal controls in relation to the determination on when the machinery is ready for its intended use and when its depreciation begins including the machinery transferred from construction-in-progress
- · Assessed internal controls for identifying and reviewing the reasons for assets remaining as assets under constructions for long time
- \cdot Inspected evidence documents used by the Group in determining the depreciation starting point of the machinery
- · Observed and made inquiries on operations status of key production facilities invested during the current year
- · Made inquiries on when certain construction-in-progress is expected to be ready for its intended use and start depreciation and reviewed the relevant evidence documents

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

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with Korean IFRS, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

Auditor's Responsibilities for the Audit of the consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Korean Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with Korean Standards on Auditing, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the

entity's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in this independent auditor's report is Si-Chang, Choi, Certified Public Accountant.

Seoul, Korea

March 11, 2022

This report is effective as of March 11, 2022, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the accompanying consolidated financial statements and notes thereto. Accordingly, the readers of the audit report should understand that there is a possibility that the above audit report may have to be revised to reflect the impact of such subsequent events or circumstances, if any.

SK hynix Inc. and Subsidiaries Consolidated Statements of Financial Position December 31, 2021 and 2020

	Notes		2021		2020
Assets		_		_	·
Current assets					
Cash and cash equivalents	5,6	₩	5,057,982	₩	2,975,989
Short-term financial instruments	5,6,7		474,637		436,708
Short-term investment assets	5,6		3,139,923		1,535,518
Trade receivables, net	5,6,8,34		8,267,111		4,931,322
Loans and other receivables, net	5,6,8,34		171,464		69,194
Inventories, net	9		8,916,605		6,136,318
Current tax assets			4,113		202
Other current assets	10		838,586		485,672
Other financial assets	5,6,7		30		30
		_	26,870,451	_	16,570,953
Non-current assets		_		_	
Investments in associates and joint ventures	11		1,410,428		1,166,244
Long-term investment assets	5,6,12		6,665,513		6,139,627
Loans and other receivables, net	5,6,8,34		339,517		75,589
Other financial assets	5,6,7		91,139		353
Property, plant and equipment, net	13,16,35		53,034,270		41,230,562
Right-of-use assets, net	14,34		1,597,344		1,707,645
Intangible assets, net	15		5,065,132		3,400,278
Investment property, net	13,16		164,197		209,417
Deferred tax assets	22,32		590,244		556,194
Employee benefit assets	21		428,962		61,962
Other non-current assets	10		129,277		55,029
			69,516,023	_	54,602,900
Total assets		₩_	96,386,474	₩ _	71,173,853

SK hynix Inc. and Subsidiaries Consolidated Statements of Financial Position, Continued December 31, 2021 and 2020

(In millions of Korean won)	Notes	-	2021		2020
Liabilities					
Current liabilities	5004	147	4.050.047	107	4.040.450
Trade payables	5,6,34	₩	1,359,247	₩	1,046,159
Other payables	5,6,34,35,38		4,640,677		2,348,909
Other non-trade payables	5,6,17,34		2,278,316		1,367,193
Borrowings	5,6,18,34,35		2,880,763		3,114,250
Provisions	20		10,167		13,797
Current tax liabilities	504404		3,002,734		636,649
Lease liabilities	5,6,14,34		302,059		347,464
Other current liabilities	19		294,780		197,395
Other financial liabilities	5,6,35	-	613		544
Non-current liabilities		-	14,769,356		9,072,360
Long-term other payables	5 6 35 39		2 600 071		272,396
Other non-trade payables	5,6,35,38 5,6,17,34		2,699,071 32,433		29,923
Borrowings	5,6,18,35		14,743,046		8,137,398
Defined benefit liabilities, net	21				
Deferred tax liabilities	22		1,200 627,995		2,739
Lease liabilities	5,6,14,34				266,640
Other financial liabilities			1,223,703		1,296,252
	5,6,23,35		4,606		88,121
Other non-current liabilities	19	-	94,006	-	98,927
		-	19,426,060	-	10,192,396
Total liabilities		-	34,195,416		19,264,756
Equity					
Equity attributable to owners of the Parent					
Company					
Capital stock	24		3,657,652		3,657,652
Capital surplus	24		4,334,643		4,143,736
Other equity	24,37		(2,294,562)		(2,503,122)
Accumulated other comprehensive income(loss)	25		675,271		(405,453)
Retained earnings	26		55,784,068		46,995,728
Total equity attributable to owners of the					
Parent Company			62,157,072		51,888,541
Non-controlling interests		_	33,986	_	20,556
Total equity			62,191,058		51,909,097
Total liabilities and equity		₩	96,386,474	₩	71,173,853

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

SK hynix Inc. and Subsidiaries Consolidated Statements of Comprehensive Income Years Ended December 31, 2021 and 2020

(In millions of Korean won, except per share information)			
	Notes	2021	2020
Revenue	4,27,34 ₩	42,997,792	31,900,418
Cost of sales	29,34	24,045,600	21,089,789
Gross profit	-	18,952,192	10,810,629
Selling and administrative expenses	28,29	6,541,852	5,798,005
Operating profit	-	12,410,340	5,012,624
Finance income	5,30	2,377,516	3,327,905
Finance expenses	5,30	1,469,860	1,980,411
Share of profit of equity-accounted investees	11	162,280	(36,279)
Other income	31	116,135	84,773
Other expenses	31	180,424	171,575
Profit before income tax	-	13,415,987	6,237,037
Income tax expense	32	3,799,799	1,478,123
Profit for the year	-	9,616,188	4,758,914
Other comprehensive income (loss)			
Item that will never be reclassified to profit or loss:			
Remeasurements of defined benefit liability, net of tax	21	(13,694)	1,266
Items that are or may be reclassified to profit or			
loss:			
Foreign operations – foreign currency translation			
differences, net of tax	25	963,288	(47,407)
Gain (loss) on valuation of derivatives, net of tax	23,25	10,143	(417)
Equity-accounted investees – share of other	44.05	444.500	(00.000)
comprehensive income(loss), net of tax	11,25	111,593	(60,820)
Other comprehensive income (loss) for the year, net		4.074.000	(407.070)
of tax	· · · · · · · · · · · · · · · · · · ·	1,071,330	(107,378)
Total comprehensive income for the year	₩.	10,687,518	4,651,536
Profit attributable to:			, _
Owners of the Parent Company	₩	9,602,316	4,755,102
Non-controlling interests		13,872	3,812
Total comprehensive income attributable to:		40.000.040	4.040.055
Owners of the Parent Company		10,669,346	4,649,850
Non-controlling interests		18,172	1,686
Earnings per share	33		
Basic earnings per share (in won)		13,989	6,952
Diluted earnings per share (in won)		13,984	6,950

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

SK hynix Inc. and Subsidiaries Consolidated Statements of Changes in Equity Years Ended December 31, 2021 and 2020

			Attribu	itable to owners	of the Parent Compa	any			
(In millions of Korean won)	Notes	Capital stock	Capital surplus	Other equity	Accumulated other comprehensive income (loss)	Retained earnings	Total	Non- controlling interests	Total equity
Balance at January 1, 2020	W	3,657,652 ₩	4,143,736 ₩	(2,504,713) W	(298,935) W	42,923,362 W	47,921,102 W	14,780 W	47,935,882
Comprehensive income:									
Profit for the year		-	-	-	-	4,755,102	4,755,102	3,812	4,758,914
Remeasurements of defined									
benefit liabilities, net of tax	21	-	-	-	-	1,266	1,266	-	1,266
Other comprehensive income					(,		
of associates, net of tax	11,25	-	-	-	(60,820)	-	(60,820)	-	(60,820)
Loss on valuation of derivatives, net of tax Foreign operations – foreign	23,25	-	-	-	(417)	-	(417)	-	(417)
currency translation					(45.004)		(45.004)	(0.400)	(47.407)
differences, net of tax	25		<u> </u>	-	(45,281)		(45,281)	(2,126)	(47,407)
Total comprehensive income					(400 540)	4.750.000	4.040.050	4.000	4.054.500
for the year			- -		(106,518)	4,756,368	4,649,850	1,686	4,651,536
Transactions with owners of the Parent Company: Increase of non-controlling									
interests		-	-	-	-	-	-	4,090	4,090
Dividends paid	26	-	-	-	-	(684,002)	(684,002)	-	(684,002)
Share-based payment	37	-	_	1,591	-	-	1,591	-	1,591
Total transactions with owners				·			<u> </u>		
of the Parent Company		-	-	1,591	-	(684,002)	(682,411)	4,090	(678,321)
Balance at December 31, 2020	₩	3,657,652 W	4,143,736 W	(2,503,122) W	(405,453) W	46,995,728 W	51,888,541 W	20,556 W	51,909,097

SK hynix Inc. and Subsidiaries Consolidated Statements of Changes in Equity, Continued Years Ended December 31, 2021 and 2020

			Attrib	utable to owners	of the Parent Compa	ny			
(In millions of Korean won)					Accumulated other			Non-	
	Notes	Capital stock	Capital surplus	Other equity	comprehensive income (loss)	Retained earnings	Total	controlling interests	Total equity
Balance at January 1, 2021	7	¥ 3,657,652 ₩	4,143,736 W	(2,503,122) W	(405,453) W	46,995,728 W	51,888,541 ¥	¥ 20,556 ₩	51,909,097
Comprehensive income:									
Profit for the year		-	-	-	-	9,602,316	9,602,316	13,872	9,616,188
Remeasurements of defined									
benefit liabilities, net of tax	21	-	-	-	-	(13,694)	(13,694)	-	(13,694)
Other comprehensive income					444 = 22		444.500		444 500
of associate, net of tax	11,25	-	-	-	111,593	-	111,593	-	111,593
Gain on valuation of	23,25				10,143		10,143		10,143
derivatives, net of tax Foreign operations – foreign	23,23	-	-	-	10,143	-	10,143	-	10,143
currency translation									
differences, net of tax	25	-	-	-	958,988	-	958,988	4,300	963,288
Total comprehensive income									
for the year		-	-	-	1,080,724	9,588,622	10,669,346	18,172	10,687,518
Transactions with owners of									
the Parent Company:									
Dividends paid	26	-	-	-	-	(800,282)	(800,282)	(4,742)	(805,024)
Disposal of treasury stock	24	-	191,247	206,308	-	-	397,555	-	397,555
Share-based payment	37	-	(340)	2,252	-	-	1,912	-	1,912
Total transactions with owners									
of the Parent Company		<u> </u>	190,907	208,560	<u>-</u>	(800,282)	(400,815)	(4,742)	(405,557)
Balance at December 31, 2021	7	¥ <u>3,657,652</u> ₩	4,334,643 W	(2,294,562) W	675,271 W	55,784,068 W	62,157,072 ¥	¥33,986 ₩	62,191,058

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

SK hynix Inc. and Subsidiaries Consolidated Statements of Cash Flows Years Ended December 31, 2021 and 2020

(In millions of Korean won)	Notes 2021			2020	
Cash flows from operating activities					
Cash generated from operations	36	₩	20,951,478	₩	12,916,771
Interest received			17,341		40,635
Interest paid			(240,942)		(288,565)
Dividends received			84,679		16,365
Income tax paid			(1,014,908)		(370,635)
Net cash inflow from operating activities		-	19,797,648		12,314,571
Cash flows from investing activities					
Decrease in short-term financial instruments			2,572,550		913,591
Increase in short-term financial instruments			(2,600,586)		(1,054,401)
Increase in short-term investment assets, net			(1,548,448)		(115,122)
Decrease in other financial assets			213		773
Increase in other financial assets			(29,830)		(205)
Decrease in loans and other receivables			47,027		36,722
Increase in loans and other receivables			(79,537)		(238,727)
Proceeds from disposal of long-term investment assets			45,972		708
Acquisitions of long-term investment assets			(130,318)		(93,846)
Proceeds from disposal of property, plant and equipment			79,940		59,089
Acquisitions of property, plant and equipment			(12,486,635)		(10,068,662)
Proceeds from disposal of intangible assets			2,073		695
Acquisitions of intangible assets			(973,893)		(800,729)
Proceeds from business transfer			3,000		2,958
Acquisitions of investments in associates			(44,862)		(483,237)
Acquisitions of business			(7,250,087)		-
Net cashflow from acquisition of subsidiaries		_	1,144		
Net cash outflow from investing activities		-	(22,392,277)		(11,840,393)
Cash flows from financing activities					
Proceeds from borrowings	36		8,933,737		5,173,016
Repayments of borrowings	36		(3,320,911)		(3,921,310)
Repayments of lease liabilities	36		(323,975)		(319,740)
Dividends paid			(805,024)		(684,002)
Increase of non-controlling interests			-		4,090
Disposal of treasury stock			8,484		-
Exercise stock-option		_	2		
Net cash inflow from financing activities		_	4,492,313		252,054
Effects of exchange rate changes on cash and cash					
equivalents		_	184,309		(56,313)
Net increase in cash and cash equivalents			2,081,993		669,919
Cash and cash equivalents at the beginning of the year		_	2,975,989		2,306,070
Cash and cash equivalents at the end of the year		₩	5,057,982	₩	2,975,989

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

1. General Information

(1) General information about SK hynix Inc. (the "Parent Company") and its subsidiaries (collectively the "Group") is as follows:

The Parent Company manufactures, distributes and sells semiconductor products. The Parent Company was established on October 15, 1949 and its shares have been listed on the Korea Exchange since 1996. The Parent Company's headquarters is located at 2091 Gyeongchung-daero, Bubal-eup, Icheon-si, Gyeonggi-do, South Korea, and the Group has manufacturing facilities in Icheon-si and Cheongju-si, South Korea, and Wuxi and Chongqing, China. In December 2021, by acquiring Intel Nand business, the Group obtained additional production facility in Dalian, China.

As of December 31, 2021, the shareholders of the Parent Company are as follows:

		Percentage
Shareholder	Number of shares	of ownership (%)
SK Square Co., Ltd. ¹	146,100,000	20.07
Other investors	541,520,673	74.38
Treasury shares	40,381,692	5.55
	728,002,365	100

¹ The largest shareholder of the Parent Company changed to SK Square Co., Ltd. on November 2, 2021, as SK Square Co., Ltd., a new spin-off corporation established by SK Telecom Co., Ltd., succeeded the entire share of the Parent Company held by SK Telecom Co., Ltd.

The Parent Company's common shares and depositary receipts (DRs) are listed on the Stock Market of Korea Exchange and the Luxembourg Stock Exchange, respectively.

1. General Information, Continued

(2) Details of the Group's consolidated subsidiaries as of December 31, 2021 and 2020 are as follows:

			Owne	-
Company	Location	Business	2021	2020
SK hyeng Inc.	Korea	Construction and service	100	100
SK hystec Inc.	Korea	Business support and service	100	100
Happymore Inc.	Korea	Manufacturing cleanroom suits and cleaning	100	100
SK hynix system ic Inc.	Korea	Semiconductor manufacturing and sales	100	100
HappyNarae Co., Ltd.	Korea	Industrial material supply	100	100
SK hynix America Inc.	U.S.A.	Semiconductor sales	97.74	97.74
SK hynix Deutschland GmbH	Germany	Semiconductor sales	100	100
SK hynix Asia Pte. Ltd.	Singapore	Semiconductor sales	100	100
SK hynix Semiconductor Hong Kong Ltd.	Hong Kong	Semiconductor sales	100	100
SK hynix U.K. Ltd.	U.K.	Semiconductor sales	100	100
SK hynix Semiconductor Taiwan Inc.	Taiwan	Semiconductor sales	100	100
SK hynix Japan Inc.	Japan	Semiconductor sales	100	100
SK hynix Semiconductor (Shanghai) Co., Ltd.	-	Semiconductor sales		
	China		100	100
SK hynix Semiconductor India Private Ltd. ¹	India	Semiconductor sales	100	100
SK hynix (Wuxi) Semiconductor Sales Ltd.	China	Semiconductor sales	100	100
SK hynix Semiconductor (China) Ltd.	China	Semiconductor manufacturing	100	100
SK hynix Semiconductor (Chongqing) Ltd. ²	China	Semiconductor manufacturing	100	100
SK hynix Italy S.r.l	Italy	Semiconductor research and development	100	100
SK hynix memory solutions America Inc.	U.S.A.	Semiconductor research and development	100	100
SK hynix memory solutions Taiwan Ltd.	Taiwan	Semiconductor research and development	100	100
SK hynix memory solutions Eastern Europe LLC.	Belarus	Semiconductor research and development	100	100
SK APTECH Ltd.	Hong	Overseas investment		
	Kong	Overesus investment	100	100
SK hynix Ventures Hong Kong Limited	Hong Kong	Overseas investment	100	100
SK hynix (Wuxi) Investment Ltd.3	China	Overseas investment	100	100
SK hynix (Wuxi) Industry Development Ltd. 4	China	Foreign hospital construction	100	100
SK hynix Happiness (Wuxi) Hospital Management Ltd. ⁴	China	Foreign hospital operation	70	70
SK hynix system ic (Wuxi) Co., Ltd. ⁵	Ola i	Overseas Semiconductor manufacturing and		
	China	sales	100	100
SK hynix cleaning (Wuxi) Ltd. ⁴	China	Building maintenance	100	100
SUZHOU HAPPYNARAE Co., Ltd.6	China	Overseas industrial material supply	100	100
CHONGQING HAPPYNARAE Co., Ltd. ⁷	China	Overseas industrial material supply	100	100
SkyHigh Memory Limited ⁵	Hong	Overseas Semiconductor manufacturing and		
	Kong	sales	60	60
SK hynix (Wuxi) Education Technology	China			
Co.,Ltd. ⁴	-	Overseas Education	100	100
Gauss Labs Inc.	U.S.A	Overseas telecommunication of information	100	100
Skyhigh Memory China Limited ¹⁰	China	Semiconductor sales support	60	-
Skyhigh Memory Limited Japan ¹⁰	Japan	Semiconductor sales support	60	_
SK hynix NAND Product Solutions Corp.8	U.S.A	Semiconductor sales	100	-

SK hynix NAND Product Solutions Taiwan Co., Ltd. ⁸	Taiwan	Semiconductor research and development and sales support	100	_
SK hynix NAND Product Solutions Canada Ltd.8	Canada	Semiconductor research and development	100	_
SK hynix NAND Product Solutions Mexico, S. DE R.L. DE C.V. 8	Mexico	Semiconductor research and development	100	-
SK hynix Semiconductor (Dalian) Co., Ltd.8	China	Semiconductor manufacturing	100	_
SK hynix NAND Product Solutions UK Limited ⁸	U.K.	Semiconductor sales	100	_
SK hynix NAND Product Solutions Israel Ltd.8	Israel	Semiconductor sales support	100	-
SK hynix NAND Product Solutions Japan G.K ⁸	Japan	Semiconductor sales	100	-
SK hynix NAND Product Solutions International LLC ⁸	U.S.A	Semiconductor sales	100	-
SK hynix NAND Product Solutions Asia Pacific LLC ⁸	U.S.A	Semiconductor sales	100	-
SK hynix NAND Product Solutions Singapore Pte. Ltd. ⁸	Singapore	Semiconductor sales support	100	-
SK hynix NAND Product Solutions Malaysia Sdn. Bhd. ⁸	Malaysia	Semiconductor sales support	100	-
SK hynix NAND Product Solutions Poland sp. z o.o.8	Poland	Semiconductor research and development	100	-
SK hynix NAND Product Solutions (Beijing) Co., Ltd. ⁸	China	Semiconductor sales support	100	-
SK Hynix NAND Product Solutions (Shanghai) Co., Ltd. ⁸	China	Semiconductor research and development	100	-
Intel NDTM US LLC 9	U.S.A	Semiconductor research and development	_	_
Intel Semiconductor Storage Technology (Dalian) Ltd. ⁹	China	Semiconductor manufacturing support	_	-
SK Hynix (Wuxi) Education Service Development Co., Ltd. ¹¹	China	Overseas education	100	_
HappyNarae America LLC6	U.S.A	Overseas industrial material supply	100	_
HappyNarae Hungary Kft6	Hungary	Overseas industrial material supply	100	_
SK hynix Ventures America LLC	U.S.A	Overseas investment	100	_
MMT (Money Market Trust)	Korea	Money Market Trust	100	100
,		•		

¹ Subsidiary of SK hynix Asia Pte. Ltd.

² Subsidiary of SK APTECH Ltd.

³ Subsidiary of SK hynix Semiconductor (China) Ltd.

⁴ Subsidiary of SK hynix (Wuxi) Investment Ltd.

⁵ Subsidiary of SK hynix system ic

⁶ Subsidiary of HappyNarae Co., Ltd.

⁷ Subsidiary of SUZHOU HAPPYNARAE Co., Ltd.

⁸ It has been newly established regarding the acquisition of the Intel NAND business during the year ended December 31, 2021.

⁹ Intel holds the legal ownership of these entities as of December 31, 2021 and the Group is expected to acquire ownership through the 2nd Closing of Intel NAND business acquisition expected in 2025. However, the Group consolidated these entities as of December 31, 2021since the Group determined that it has control over these entities.

¹⁰ Subsidiaries SkyHigh Memory China Limited and SkyHigh Memory Limited Japan registered their establishment in March and May 2020, and completed the establishment process by paying capital in April 2021.

¹¹ Subsidiary of SK hynix (Wuxi) Education Technology Co., Ltd.

1. General Information, Continued

(3) Changes in the Group's consolidated subsidiaries for the year ended December 31, 2021 are as follows:

Type	Company	Reason
Addition	SkyHigh Memory China Limited	New establishment
Addition	SkyHigh Memory Limited Japan	New establishment
Addition	SK hynix NAND Product Solutions Corp.	New establishment
Addition	SK hynix NAND Product Solutions Taiwan Co., Ltd.	New establishment
Addition	SK hynix NAND Product Solutions Canada Ltd.	New establishment
Addition	SK hynix NAND Product Solutions Mexico, S. DE R.L. DE C.V.	New establishment
Addition	SK hynix Semiconductor (Dalian) Co., Ltd.	New establishment
Addition	SK hynix NAND Product Solutions UK Limited	New establishment
Addition	SK hynix NAND Product Solutions Israel Ltd.	New establishment
Addition	SK hynix NAND Product Solutions Japan G.K.	New establishment
Addition	SK hynix NAND Product Solutions International LLC	New establishment
Addition	SK hynix NAND Product Solutions Asia Pacific LLC	New establishment
Addition	SK hynix NAND Product Solutions Singapore Pte. Ltd.	New establishment
Addition	SK hynix NAND Product Solutions Malaysia Sdn. Bhd.	New establishment
Addition	SK hynix NAND Product Solutions Poland sp. z.o.o.	New establishment
Addition	SK hynix NAND Product Solutions (Beijing) Co., Ltd.	New establishment
Addition	SK Hynix NAND Product Solutions (Shanghai) Co., Ltd.	New establishment
Addition	SK Hynix (Wuxi) Education Service Development Co., Ltd.	New establishment
Addition	HappyNarae America LLC	New establishment
Addition	HappyNarae Hungary Kft	New establishment
Addition	SK hynix Ventures America LLC	New establishment
Addition	Intel NDTM US LLC	Obtains substantial control
Addition	Intel Semiconductor Storage Technology (Dalian) Ltd.	Obtains substantial control

1. General Information, Continued

(4) Major subsidiaries' summarized statements of financial position as of December 31, 2021 and December 31, 2020 are as follows:

(In millions of Korean won)

(-)ece	ember 31, 2	021				December 31, 20			
	_	Assets		Liabilities	-	Equity		Assets	_	Liabilities		Equity
SK hynix system ic Inc.	₩	1,208,507	₩	383,496	₩	825,011	₩	998,387	₩	372,463	₩	625,924
SK hynix America Inc.		4,454,161		3,957,705		496,456		2,722,417		2,330,715		391,702
SK hynix Asia Pte. Ltd.		730,395		633,206		97,189		284,115		197,442		86,673
SK hynix Semiconductor												
Hong Kong Ltd.		584,669		421,736		162,933		282,273		134,019		148,254
SK hynix U.K. Ltd.		455,626		432,541		23,085		303,729		283,833		19,896
SK hynix Semiconductor												
Taiwan Inc.		580,449		550,944		29,505		273,651		247,895		25,756
SK hynix Japan Inc.		448,018		374,525		73,493		348,336		278,622		69,714
SK hynix (Wuxi)												
Semiconductor Sales Ltd.		1,537,853		1,159,683		378,170		1,250,087		1,024,006		226,081
SK hynix Semiconductor												
(China) Ltd.		13,097,483		7,006,089		6,091,394		11,862,866		6,685,079		5,177,787
SK hynix Semiconductor												
(Chongqing) Ltd.		1,061,317		314,466		746,851		920,531		317,216		603,315
HappyNarae Co., Ltd.		200,002		141,881		58,121		171,026		116,728		54,298
SK hynix NAND Product												
Solutions Corp. and												
subsidiaries		13,095,691		9,626,627		3,469,064		-		-		-

(5) Major subsidiaries' summarized statements of comprehensive income (loss) for the years ended December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

(III TIIIII OT COTCAIT WOT!)		2021		2020	
	_	Revenue	Profit (loss)	Revenue	Profit (loss)
SK hynix system ic Inc.	₩	699,995 W	197,568 W	702,979 W	93,333
SK hynix America Inc.		17,211,443	67,238	12,761,911	53,448
SK hynix Asia Pte. Ltd.		3,205,036	2,700	1,858,091	3,055
SK hynix Semiconductor Hong Kong Ltd.		2,566,377	2,267	1,746,160	6,320
SK hynix U.K. Ltd.		1,328,193	1,357	994,299	1,331
SK hynix Semiconductor Taiwan Inc.		3,016,752	5,219	1,917,103	4,657
SK hynix Japan Inc.		759,183	5,448	551,890	(181)
SK hynix (Wuxi) Semiconductor Sales Ltd.		12,938,905	119,984	10,423,701	90,303
SK hynix Semiconductor (China) Ltd.		4,789,444	43,552	3,936,769	484,677
SK hynix Semiconductor (Chongqing) Ltd.		971,721	71,559	699,558	73,048
HappyNarae Co., Ltd.		925,675	4,354	981,466	4,314
SK hynix NAND Product SolutionsCorp.and subsidiaries		-	(107,483)	-	-

(6) There are no significant non-controlling interests to the Group as of December 31, 2021 and 2020.

2. Significant Accounting Policies

The principal accounting policies applied in the preparation of theses consolidated financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

2.1 Basis of measurement

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

The consolidated financial statements have been prepared on the historical cost basis, except for the following material items in the consolidated statements of financial position:

- derivative financial instruments are measured at fair value
- financial instruments at fair value through profit or loss are measured at fair value
- assets or liabilities for defined benefit plans are recognized at the net of the total present value of defined benefit obligations less the fair value of plan assets

Korean IFRS permits the use of critical accounting estimates in the preparation of the consolidated financial statements and requires management judgments in applying accounting policies. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements, are disclosed in Note 3.

- 2.2 Changes in Accounting Policies and Disclosure
- 2.2.1 New and amended standards or interpretations adopted by the Group

The Group has applied the following new and revised IFRS Standards that are effective from January 1, 2021.

(a) Amendments to Korean IFRS 1116 Lease - Practical expedient for COVID-19-Related Rent Concessions

As a practical expedient, a lessee may elect not to assess whether a rent concession occurring as a direct consequence of the COVID-19 pandemic is a lease modification. A lessee that makes this election shall account for any change in lease payments resulting from the rent concession the same way it would account for the change applying this Standard if the change were not a lease modification. The amendment does not have a significant impact on the financial statements.

(b) Amendments to Korean IFRS 1109 Financial Instruments, Korean IFRS 1039 Financial Instruments: Recognition and Measurement and Korean IFRS 1107 Financial Instruments: Disclosure, Korean IFRS 1104 Insurance Contracts, Korean IFRS 1116 Lease – Interest Rate Benchmark Reform (Phase 2 amendments)

In relation to interest rate benchmark reform, the amendments provide exceptions including adjust effective interest rate instead of book amounts when interest rate benchmark of financial instruments at amortized costs is replaced, and apply hedge accounting without discontinuance although the interest rate benchmark is replaced in hedging relationship.

2. Significant Accounting Policies, Continued

2.2.2 New and amended standards or interpretations not yet adopted by the Group

The following new accounting standards and interpretations that have been published that are not mandatory for December 31, 2021 reporting periods and have not been early adopted by the Group.

(a) Amendments to Korean IFRS 1116 Lease – Practical expedient for COVID-19-Related Rent, Concessions beyond June 30, 2021

The application of the practical expedient, a lessee may elect not to assess whether a rent concession occurring as a direct consequence of the COVID-19 pandemic is a lease modification, is extended to lease payments originally due on or before June 30, 2022. The amendment should be applied for annual periods beginning on or after April 1, 2021, and earlier application is permitted. The Group does not expect that these amendments have a significant impact on the financial statements.

(b) Amendments to Korean IFRS 1103 Business Combination – Reference to the Conceptual Framework

The amendments update a reference of definition of assets and liabilities to be recognized in a business combination in revised Conceptual Framework for Financial Reporting. However, the amendments add an exception for the recognition of liabilities and contingent liabilities within the scope of Korea IFRS 1037 Provisions, Contingent Liabilities and Contingent Assets, and Korean IFRS 2121 Levies. The amendments also clarifies that contingent assets should not be recognized at the acquisition date. The amendments should be applied for annual periods beginning on or after January 1, 2022, and earlier application is permitted. The Group does not expect that these amendments have a significant impact on the financial statements.

(c) Amendemts to Korean IFRS 1016 Property, plant and equipment – Proceeds before intended use

The amendments prohibit an entity from deducting from the cost of an item of property, plant and equipment any proceeds from selling items produced while the entity is preparing the asset for its intended use. Instead, the entity will recognize the proceeds from selling such items, and the costs of producing those items, in profit or loss. The amendments should be applied for annual periods beginning on or after January 1, 2022, and earlier application is permitted. The Group is in review for the impact of these amendments on the financial statements.

(d) Amendments to Korean IFRS 1037 Provision and Contingent liabilities and Contingent assets – Onerous contracts: Cost of fulfilling a Contract

The amendments clarify that the direct costs of fulfilling a contract include both the incremental costs of fulfilling the contract and an allocation of other costs directly related to fulfilling contracts when assessing whether the contract is onerous. The amendments should be applied for annual periods beginning on or after January 1, 2022, and earlier application is permitted. The Group does not expect that these amendments have a significant impact on the financial statements.

2. Significant Accounting Policies, Continued

- 2.2.2 New and amended standards or interpretations not yet adopted by the Group, Continued
- (e) Amendments to Korean IFRS 1001 Presentation of Financial Statements Classification of Liabilities as Current or Non-current

The amendments clarify that liabilities are classified as either current or non-current, depending on the substantive rights that exist at the end of the reporting period. Classification is unaffected by the likelihood that an entity will exercise right to defer settlement of the liability or the expectations of management. Also, the settlement of liability includes the transfer of the entity's own equity instruments, however, it would be excluded if an option to settle them by the entity's own equity instruments if compound financial instruments is met the definition of equity instruments and recognized separately from the liability. The amendments should be applied for annual periods beginning on or after January 1, 2023, and earlier application is permitted. The Group is in review for the impact of these amendments on the financial statements.

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

The amendments to Korean IFRS 1001 define and require entities to disclose their material accounting policies. The IASB amended IFRS Practice Statement 2 Disclosure of Accounting Policies to provide guidance on how to apply the concept of materiality to accounting policy disclosures. The amendments should be applied for annual periods beginning on or after January 1, 2023, and earlier application is permitted. The Group is in review for the impact of these amendments on the financial statements.

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

The amendments define accounting estimates and clarify how to distinguish them from changes in accounting policies. The amendments should be applied for annual periods beginning on or after January 1, 2023, and earlier application is permitted. The Group does not expect that these amendments have a significant impact on the financial statements.

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

The amendments include an additional condition to the exemption to initial recognition of an asset or liability that a transaction does not give rise to equal taxable and deductible temporary differences at the time of the transaction. The amendments should be applied for annual periods beginning on or after January 1, 2023, and earlier application is permitted. The Group is in review for the impact of these amendments on the financial statements.

2. Significant Accounting Policies, Continued

2.2.2 New and amended standards or interpretations not yet adopted by the Group, Continued

(i) Annual Improvements to Korean IFRS 2018-2020

Annual improvements of Korean IFRS 2018-2020 Cycle should be applied for annual periods beginning on or after January 1, 2022, and earlier application is permitted. The Group does not expect that these amendments have a significant impact on the consolidated financial statements.

- Korean IFRS 1101 First-time Adoption of Korean International Financial Reporting Standards: Subsidiaries that are first-time adopters
- Korean IFRS 1109 Financial Instruments: Fees in the '10% Test' for Derecognition of Financial Liabilities
- Korean IFRS 1116 Lease: Lease Incentives
- Korean IFRS 1041 Agriculture: Fair Value Measurement

2.3 Operating Segments

An operating segment is a component of the Group that: 1) engages in business activities from which it may earn revenues and incur expenses, including revenues and expenses that relate to transactions with other components of the Group, 2) whose operating results are reviewed regularly by the Group's chief operating decision maker ("CODM") in order to allocate resources and assess its performance, and 3) for which discrete financial information is available. The Group's CODM is the board of directors, who do not receive and therefore do not review discrete financial information for any component of the Group. Accordingly, no operating segment information is included in these consolidated financial statements. Entity wide disclosures of geographic, product and customer information are provided in note 4 and 27.

2. Significant Accounting Policies, Continued

2.4 Consolidation

(a) Business combination

A business combination is accounted for by applying the acquisition method, unless it is a combination involving entities or businesses under common control.

The consideration transferred in the acquisition is generally measured at fair value, as are the identifiable net assets acquired. Any goodwill that arises is tested annually for impairment. Any gain on a bargain purchase is recognized in profit or loss immediately. Transaction costs are expensed as incurred and during period of service, except if related to the issue of debt or equity securities according to K-IFRS No. 1032 and K-IFRS No. 1109.

The consideration transferred does not include amounts related to the settlement of pre-existing relationships. Such amounts are generally recognized in profit or loss.

Any contingent consideration is measured at fair value at the date of acquisition. If an obligation to pay contingent consideration that meets the definition of a financial instrument is classified as equity, then it is not remeasured and settlement is accounted for within equity. Otherwise, subsequent changes in the fair value of the contingent consideration are recognized in profit or loss.

If share-based payment awards (replacement awards) are required to be exchanged for awards held by the acquiree's employees (acquiree's awards), then all or a portion of the amount of the acquirer's replacement awards is included in measuring the consideration transferred in the business combination. This determination is based on the market-based measure of the replacement awards compared with the market-based measure of the acquiree's awards and the extent to which the replacement awards relate to pre-combination service.

(b) Non-controlling interests

Non-controlling interests are measured at their proportionate share of the acquiree's identifiable net assets at the date of acquisition.

Changes in the Group's interest in a subsidiary that do not result in a loss of control are accounted for as equity transactions.

2. Significant Accounting Policies, Continued

2.4 Consolidation, Continued

(c) Subsidiaries

Subsidiaries are entities controlled by the Group. The Group controls an entity when it is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the entity. Consolidation of an investee begins from the date the Group obtains control of the investee and cease when the Group loses control of the investee.

(d) Loss of control

If the Group loses control of a subsidiary, the Group derecognizes the assets and liabilities of the former subsidiary from the consolidated statement of financial position and recognizes gain or loss associated with the loss of control attributable to the former controlling interest. Any investment retained in the former subsidiary is recognized at its fair value when control is lost.

(e) Interests in equity-accounted investees

The Group's interest in equity-accounted investees comprise interests in an associate and a joint venture. An associate are these entities in which the Group has significant influence, but not control or joint control, over the entity's financial and operating policies. A joint venture is an arrangement in which the Group has joint control, whereby the Group has rights to the net assets of the arrangement, rather than rights to its assets and obligations for its liabilities.

Interests in associates and the joint venture are initially recognized at cost including transaction costs. Subsequent to initial recognition, their carrying amounts are increased or decreased to recognize the Group's share of the profit or loss and changes in equity of the associate or the joint venture. Distributions from equity-accounted investees are accounted for as deduction from the carrying amounts.

(f) Transactions eliminated on consolidation

Intra-group balances and transactions, and any unrealized income and expenses arising from intra-group transactions, are eliminated in preparing the consolidated financial statements. The Group's share of unrealized gain incurred from transactions with equity-accounted investees are eliminated and unrealized loss are eliminated using the same basis if there are no evidence of asset impairments.

(g) Business combinations under common control

The assets and liabilities acquired in the combination of entities or business under common control are recognized at the carrying amounts recognized previously in the consolidated financial statements of the ultimate parent. The difference between consideration transferred and carrying amounts of net assets acquired is added to or deducted from other capital adjustments.

2.5 Cash and cash equivalents

Cash and cash equivalents comprise cash balances and call deposits with maturities of three months or less from the acquisition date that are subject to an insignificant risk of changes in their fair value, and are used by the Group in the management of its short-term commitments.

2. Significant Accounting Policies, Continued

2.6 Inventories

The cost of inventories is based on the weighted average method (except for goods in-transit that is based on the specific identification method), and includes expenditures incurred in acquiring the inventories, production or conversion costs and other costs incurred in bringing inventories to their existing location and condition. In the case of manufactured inventories and work-in-process, cost includes an appropriate share of production overheads based on the actual capacity of production facilities. However, the normal capacity is used for the allocation of fixed production overheads if the actual level of production is lower than the normal capacity. Inventories are measured 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 estimated costs of completion and selling expenses. The amount of any write-down of inventories to net realizable value and all losses of inventories shall be recognized as an expense in the period the write-down or loss occurs. The amount of any reversal of any write-down of inventories, arising from an increase in net realizable value, shall be recognized as a reduction in the amount of inventories recognized as an expense in the period in which the reversal occurs.

2.7 Trade Receivables

The trade receivables are initially recognized at fair value if it does not include a significant financing component, such as unconditional consideration if it includes a significant financing component. The trade receivables are subsequently measured by subtracting the loss allowance from the amotized cost applied with the effective interest method. (See footnote 8 for additional information on the accounting for the Group's trade receivables, and 6.(1) for accounting for impairment)

2.8 Non-derivative financial assets

(a) Initial recognition and measurement

Trade and other receivables, and debt investment are initially recognized when they are originated. Other financial assets and financial liabilities are recognized when the Group becomes a party to the contractual provisions of the instruments.

A financial asset and financial liability (unless it is an account receivable - trade without a significant financing component that is initially measured at the transaction price) are initially measured at fair value plus, for an item not at fair value through profit or loss (FVTPL), transaction costs that are directly attributable to its acquisition.

(b) Classification and subsequent measurements

On initial recognition, a financial asset is classified as measured at: amortized cost; fair value through other comprehensive income (FVOCI) - debt investment; FVOCI - equity investment; or FVTPL. The classification of financial assets is generally based on the business model in which a financial asset is managed and its contractual cash flow characteristics. In case of changing its business model, all affected financial asset are reclssified on the first day of the first reporting period after the change in the business model.

A financial asset is measured at amortized cost if it meets both of the following conditions and is not designated as at FVTPL:

- it is held within a business model whose objective is to hold assets to collect contractual cash flow; and
- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

A debt investments is measured at FVOCI if it meets both of the following conditions and is not designated as at FVTPL:

• it is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets; and

2. Significant Accounting Policies, Continued

- 2.8 Non-derivative financial assets, Continued
- (b) Classification and subsequent measurements, Continued
- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

On initial recognition of an equity investment that is not held for trading, the Group may irrevocably elect to present subsequent changes in the investment's fair value in other comprehensive income. This election is made on an investment-by-investment basis and irrevocable election can be made at initial recognition.

All financial assets not classified as measured at amortized cost or FVOCI as described above are measured at FVTPL. This includes all derivative financial assets. On initial recognition, the Group may irrevocably designate a financial asset that otherwise meets the requirements to be measured at amortized cost or at FVOCI as at FVTPL if doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise.

The Group makes an assessment of the objective of the business model in which, financial assets is held at a portfolio level because this best reflects the way the business is managed and information is provided to management. The information considered includes:

- The stated policies and objectives for the portfolio and the operation of those policies in practice;
- how the performance of the business model and the financial assets held within that business model are evaluated and reported to the entity's key management personnel;
- the risks that affect the performance of the business model (and the financial assets held within that business model) and, in particular, the way in which those risks are managed;
- how managers of the business are compensated (e.g. whether the compensation is based on the fair value of the assets managed or on the contractual cash flows collected); and
- the frequency, volume and timing of sales of financial assets in prior periods, the reason for those sales and expectation about future sales activity for financial asset.

Transfers of financial assets to third parties in transactions that do not qualify for derecognition are not considered sales for this purpose, consistent with the Group's continuing recognition of the assets.

For the purpose of this assessment, 'principal' is defined as the fair value of the financial assets on initial recognition. 'Interest' is defined as consideration for the time value of money and for the credit risk associated with the principal amount outstanding during a particular period of time and for other basic lending risks and costs (e.g. liquidity risk and administrative costs), as well as a profit margin.

In assessing whether the contractual cash flows are solely payments of principal and interest, the Group considers the contractual terms of the instrument. This includes assessing whether the financial asset contains a contractual term that could change the timing or amount of contractual cash flows such that it would not meet this condition. In making this assessment, the Group considers:

- · contingent events that would change the amount or timing of cash flows;
- terms that may adjust the contractual coupon rate, including variable-rate features;
- · prepayment and extension features; and
- terms that limit the Group's claim to cash flows from specified assets (e.g. non-recourse features).

2. Significant Accounting Policies, Continued

- 2.8 Non-derivative financial assets. Continued
- (b) Classification and subsequent measurements, Continued

A prepayment feature is consistent with the solely payments of principal and interest criterion if the prepayment amount substantially represents unpaid amounts of principal and interest on the principal amount outstanding, which may include reasonable additional compensation for early termination of the contract. Additionally, for a financial asset acquired at a discount or premium to its contractual par amount, a feature that permits or requires prepayment at an amount that substantially represents the contractual par amount plus accrued (but unpaid) contractual interest (which may also include reasonable additional compensation for early termination) is treated as consistent with this criterion if the fair value of the prepayment feature is insignificant at initial recognition.

The following accounting policies apply to subsequent measurements of financial assets.

Financial assets at FVTPL	These assets are subsequently measured at fair value. Net gains and losses, including any interest or dividend income, are recognized in profit or loss.
Financial assets at amortized cost	These assets are subsequently measured at amortized cost using the effective interest method. The amortized cost is reduced by impairment losses. Interest income, foreign exchange gains and losses and impairment are recognized in profit or loss. Any gain or loss on derecognition is recognized in profit or loss.
Debt investments at FVOCI	These assets are subsequently measured at fair value. Interest income is calculated using the effective interest method. Foreign exchange gains and losses and impairment are recognized in profit or loss. Other net gains and losses are recognized in OCI. On derecognition, gains and losses accumulated in OCI are reclassified to profit or loss.
Equity investments at FVOCI	These assets are subsequently measured at fair value. Dividends are recognized as income in profit or loss unless the dividend clearly represents a recovery of part of the cost of the investment. Other net gains and losses are recognized in OCI and are never reclassified to profit or loss.

(c) De-recognition

The Group derecognizes a financial asset when the contractual rights to the cash flows from the asset expire, or it transfers the rights to receive the contractual cash flows in a transaction in which substantially all the risks and rewards of ownership of the financial asset are transferred or in which the Group neither transfers nor retains substantially all of the risks and rewards of ownership and it does not retain control of the financial asset.

The Group enters into transactions whereby it transfers assets recognized in its statement of financial position, but retain either all or substantially all of the risks and rewards of the transferred assets. In these cases, the transferred assets are not derecognized.

2. Significant Accounting Policies, Continued

2.8 Non-derivative financial assets, Continued

(d) Offsetting between financial assets and financial liabilities

Financial assets and financial liabilities are offset and the net amount is presented in the consolidated statement of financial position only when the Group currently has a legally enforceable right to offset the recognized amounts, and there is the intention to settle on a net basis or to realize the asset and settle the liability simultaneously.

2.9 Derivative financial instruments

Derivatives are initially recognized at fair value. Subsequent to initial recognition, derivatives are measured at fair value at the end of each reporting period, and changes in the fair value of derivatives therein are accounted for as described below.

(a) Hedge accounting

The Group enters into a fixed-to-fixed cross currency swap contract and a floating-to-fixed cross currency interest rate swap contract to hedge interest rate risk and currency risk.

On initial designation of the hedge, the Group formally documents the relationship between the hedging instrument(s) and hedged item(s), including the risk management objectives and strategy in undertaking the hedge transaction. In addition, the document includes hedging instruments; hedged items; initial commencement date of those hedge relationship; fair value of hedged items based on hedged risk during the subsequent period; and the method of valuation on hedging instruments offsetting changes in cash flow.

· Cash flow hedge

When a derivative is designated to hedge the variability in cash flows attributable to a particular risk associated with a recognized asset or liability, the effective portion of changes in the fair value of the derivative is recognized in other comprehensive income, net of tax, and presented in accumulated other comprehensive income. Any ineffective portion of changes in the fair value of the derivative is recognized immediately in profit or loss. If the hedging instrument no longer meets the criteria for hedge accounting, expires or is sold, terminated, exercised, or the designation is revoked, then hedge accounting is discontinued prospectively. The cumulative gain or loss on the hedging instrument that has been recognized in other comprehensive income is reclassified to profit or loss in the periods which the forecasted transaction occurs.

(b) Other derivative financial instruments

Other derivative financial instrument not designated as a hedging instrument are measured at fair value, and the changes in fair value of the derivative financial instrument is recognized immediately in profit or loss.

2. Significant Accounting Policies, Continued

- 2.10 Impairment of financial assets
- (a) Recognition of impairment on financial assets

The Group recognizes loss allowances for expected credit losses (ECLs) on:

- financial assets measured at amortized costs; and
- contract assets.

The Group measures impairment losses at an amount equal to lifetime ECLs except for the below assets, which are measured at 12-month ECLs.

- credit risk of debt instruments is low at the end of reporting date
- credit risk has not increased significantly since the initial recognition of debt investment (lifetime ECL: ECL
 that resulted from all possible default events over the expected life of a financial instrument)

The Group adopted an accounting policy to recognize loss allowances at an amount equal to lifetime expected credit losses for trade receivables and contract assets.

In assessing whether the credit risk on a financial instrument has increased significantly since initial recognition and estimating expected credit loss, the Group considers both quantitative and qualitative information that is reasonable and supportable, including historical experience and forward-looking information that is available without undue cost or effort.

Lifetime expected credit losses are the expected credit losses that result from all possible default events over the expected life of a financial instrument.

12-month ECLs are the portion of ECLs that result from all default events that are possible within the 12 months after the reporting date (or a shorter period if the expected life of the instrument is less than 12 months).

The maximum period considered when estimating ECLs is the maximum contractual period over which the Group is exposed to credit risk.

(b) Measurement of expected credit loss

ECLs are a probability-weighted estimate of credit losses. Credit losses are measured as the present value of all cash shortfalls (i.e. the difference between the cash flows due to the entity in accordance with the contract and the cash flows that the Group expects to receive). ECLs are discounted at the effective interest rate of the financial instrument.

(c) Credit-impaired financial instrument

A debt instrument carried at amortized cost and fair value through other comprehensive income (FVOCI) is assessed at the end of each reporting period to determine whether there is objective evidence that it is impaired. A financial asset is credit- impaired when one or more events that have a detrimental impact on the estimated future cash flows of that asset have occurred.

Objective evidence that a financial asset is impaired includes:

- significant financial difficulty of the issuer or borrower;
- a breach of contract, such as default or delinquency in interest or principal payments;
- the Group, for economic or legal reasons relating to the borrower's financial difficulty, granting to the borrower a concession that the Group would not otherwise consider;
- it becomes probable that the borrower will enter bankruptcy or other financial reorganization; or

the disappearance of an active market for the financial asset because of financial difficulties.

2. Significant Accounting Policies, Continued

2.10 Impairment of financial assets, Continued

(d) Presentation of credit loss allowance on financial position

Loss allowances for financial assets measured at amortized cost are deducted from the gross carrying amount of the assets.

(e) Write-off

The Group writes off a financial asset when it has no reasonable expectations of recovering the contractual cash flows on a financial asset in its entirety or a portion thereof. For corporate customers, the Group individually makes an assessment with respect to the timing and amount of write-off based on whether there is a reasonable expectation of recovery. However financial assets that are written off could still be subject to collection activities according to the Group's past due collection process.

2.11 Property, plant and equipment

Property, plant and equipment are initially measured at cost. The cost of property, plant and equipment includes expenditures arising directly from the construction or acquisition of the asset, any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located.

Subsequent to initial recognition, an item of property, plant and equipment is carried at its cost less any accumulated depreciation and any accumulated impairment losses.

Subsequent costs are recognized in the carrying amount of property, plant and equipment at cost or, if appropriate, as separate items if it is probable that future economic benefits associated with the cost will flow to the Group and it can be measured reliably. The carrying amount of the replaced part is derecognized. The costs of the day-to-day repair and maintenance are recognized in profit or loss as incurred.

Property, plant and equipment, except for land, are depreciated on a straight-line basis over estimated useful lives that appropriately reflect the pattern in which the asset's future economic benefits are expected to be consumed.

Gains and losses on disposal of an item of property, plant and equipment are determined by comparing the proceeds from disposal with the carrying amount of property, plant and equipment and are recognized as other income or expenses.

The estimated useful lives of the Group's property, plant and equipment are as follows:

	Useful lives (years)
Buildings	10 - 50
Structures	10 - 20
Machinery	5 - 15
Vehicles	5 - 10
Other	5 - 10

Depreciation methods, useful lives, and residual values are reviewed at the end of each reporting period and, if appropriate, accounted for as changes in accounting estimates.

2. Significant Accounting Policies, Continued

2.12 Borrowing costs

The Group capitalizes borrowing costs directly attributable to the acquisition, construction or production of a qualifying asset as part of the cost of that asset. Other borrowing costs are recognized in expense as incurred. A qualifying asset is an asset that requires a substantial period of time to get ready for its intended use or sale. Financial assets and inventories that are manufactured or otherwise produced over a short period of time are not qualifying assets. Assets that are ready for their intended use or sale when acquired are not qualifying assets.

To the extent that the Group borrows funds specifically for the purpose of obtaining a qualifying asset, the Group determines the amount of borrowing costs eligible for capitalization as the actual borrowing costs incurred on that borrowing during the period less any investment income on the temporary investment of those borrowings. To the extent that the Group borrows funds generally and uses them for the purpose of obtaining a qualifying asset, the Group determines the amount of borrowing costs eligible for capitalization by applying a capitalization rate to the expenditures on that asset. The capitalization rate is the weighted average of the borrowing costs applicable to the borrowings of the Group that are outstanding during the period, other than borrowings made specifically for the purpose of obtaining a qualifying asset. The amount of borrowing costs that the Group capitalizes during a period does not exceed the amount of borrowing costs incurred during that period.

2.13 Intangible assets

Intangible assets are measured initially at cost and, subsequently, are carried at cost less accumulated amortization and accumulated impairment losses.

Goodwill arising from business combinations is recognized as the excess of the consideration transferred in the acquisition over the net fair value of the identifiable assets acquired and liabilities assumed. Any deficit is a bargain purchase that is recognized in profit or loss. Goodwill is measured at cost less accumulated impairment losses.

Amortization of intangible assets is calculated on a straight-line basis over the estimated useful lives of intangible assets from the date that they are available for use. The residual value of intangible assets is zero. However, certain intangible assets are determined as having indefinite useful lives and not amortized as there is no foreseeable limit to the period over which the assets are expected to be available for use.

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The estimated useful lives of the Group's intangible assets are as follows:

	Useful lives (years)
Industrial rights	5 - 10
Development costs	2
Other intangible assets	4 - 20

Useful lives and the amortization methods for intangible assets with finite useful lives are reviewed at the end of each reporting period. The useful lives of intangible assets that are not being amortized are reviewed at the end of each reporting period to determine whether events and circumstances continue to support indefinite useful life assessments for those assets. Changes are accounted for as changes in accounting estimates.

Expenditures on research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, are recognized in profit or loss as incurred. Development expenditures are capitalized only if development costs can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable, and the Group intends to and has sufficient resources to complete development and to use or sell the asset. Other development expenditures are recognized in profit or loss as incurred.

2. Significant Accounting Policies, Continued

2.13 Intangible assets, continued

Subsequent expenditures are capitalized only when they increase the future economic benefits embodied in the specific asset to which it relates. All other expenditures, including expenditures on internally generated goodwill and others, are recognized in profit or loss as incurred.

2.14 Government grants

Government grants are not recognized unless there is reasonable assurance that the Group will comply with the grant's conditions and that the grant will be received.

(a) Grants related to assets

Government grants whose primary condition is that the Group purchases, constructs or otherwise acquires noncurrent assets are deducted in calculating the carrying amount of the asset. The grant is recognized in profit or loss over the useful lives of depreciable assets.

(b) Grants related to income

Government grants which are intended to compensate the Group for expenses incurred are recognized in profit or loss by as deduction of the related expenses.

2.15 Investment property

Property held for the purpose of earning rental income or benefiting from capital appreciation is classified as investment property. Investment property is initially measured at its cost. Transaction costs are included in the initial measurement. Subsequently, investment property is carried at cost less accumulated depreciation and impairment losses.

Subsequent costs are recognized in the carrying amount of investment property at cost or, if appropriate, as separate items if it is probable that future economic benefits associated with the cost will flow to the Group and it can be measured reliably. The carrying amount of the replaced part is derecognized. The costs of the day-to-day repair and maintenance are recognized in profit or loss as incurred.

Investment property is depreciated on a straight-line basis over 40 years.

Depreciation methods, useful lives and residual values are reviewed at the end of each reporting period and, if appropriate, accounted for as changes in accounting estimates.

2.16 Impairment of non-financial assets

The carrying amounts of the Group's non-financial assets, other than assets arising from employee benefits, inventories, and deferred tax assets, are reviewed at the end of the reporting period to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated. Goodwill and intangible assets that have indefinite useful lives or that are not yet available for use, irrespective of whether there is any indication of impairment, are tested for impairment annually by comparing their recoverable amount to their carrying amount.

The Group estimates the recoverable amount of an individual asset; however if it is impossible to measure the individual recoverable amount of an asset, the Group estimates the recoverable amount of cash-generating unit ("CGU"). A CGU is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets. The recoverable amount of an asset or CGU is the greater of its value in use and its fair value less costs to sell.

2. Significant Accounting Policies, Continued

2.16 Impairment of non-financial assets, continued

The value in use is estimated by applying a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset or CGU for which estimated future cash flows have not been adjusted, to the estimated future cash flows expected to be generated by the asset or CGU.

An impairment loss is recognized if the carrying amount of an asset or a CGU exceeds its recoverable amount.

Goodwill acquired in a business combination is allocated to each CGU that is expected to benefit from the synergies arising from business combination. Any impairment identified at the CGU level will first reduce the carrying value of goodwill and then be used to reduce the carrying amount of the other assets in the CGU on a pro rata basis.

Except for impairment losses in respect of goodwill, which are never reversed, an impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

2.17 Trade payables and other payables

Trade payables and other payables are liabilities that the Group has received but have not been paid for goods or services before the end of the reporting period. The liability is unsecured and it usually paid within 30 days of recognition. Trade payables and other payables were marked current unless the due date was 12 months after the reporting period. Those liabilities are initially recognized at fair value and subsequently measured at amortized cost using the effective interest method.

2.18 Leases

The Group assesses whether a contract is or contains a lease at inception of a contract. Under K-IFRS No. 1116, a contract is, or contains, a lease if the contract conveys a right to control the use of an identified asset for a period of time in exchange for consideration.

(i) As a lessee

The Group recognizes for a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured at cost, the initial amount of the lease liability, adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove of the underlying asset, or to restore the underlying asset or the site on which the underlying asset is located, less any lease incentives received.

The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the end of the lease term. In case that ownership of the right-of-use asset is transferred at the end of the lease term, or the cost of the right-of-use asset includes the exercise price of a purchase option, the right-of-use asset will be depreciated over the useful life of the underlying asset, which is determined on the same basis as those of property and equipment. In addition, the right-of-use asset may be reduced by an impairment loss or adjusted for remeasurements of the lease liability.

2. Significant Accounting Policies, Continued

2.18 Leases, Continued

(i) As a lessee, Continued

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Group's incremental borrowing rate. The Group generally uses its incremental borrowing rate as the discount rate.

Lease payments included in the measurement of the lease liability consist of the following:

- fixed payments (including in-substance fixed payments)
- variable lease payments that depend on an index or a rate, initially measured using the index or rate as at the commencement date
- amounts expected to be payable under a residual value guarantee
- the exercise price under a purchase option that the Group is reasonably certain to exercise
- lease payments in an optional renewal period, if the Group is reasonably certain to exercise extension option, and penalties for early termination of a lease unless the Group is reasonably certain not to terminate early.

The lease liability is subsequently increased by the interest expense recognized for the lease liability and decreased by reflecting the payment of the lease. The lease liability is remeasured when there is a change in future lease payments arising from changes in an index or a rate (interest rate), if there's a change in the Group's estimate of the amount expected to be paid under a residual value guarantee, or if the Group changes in the assessment of whether the option to buy or extend is reasonably certain to be exercised or not to exercise the termination option.

When the lease liabilities are remeasured, a corresponding adjustment is made to the carrying amount of the right-of-use asset, or is recorded in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

A lessee shall remeasure the lease liability as an adjustment to the right-of-use asset, if either:

- a change in the lease term or a change in circumstances or significant events that result in a change in the assessment of the exercise of the purchase option. In such cases, the lease liability is remeasured by discounting the modified lease payment at the revised discount rate;
- the lease payment changes due to changes in the index or rate (interest rate) or the amount expected to be paid according to the residual value guarantee. In such cases, the lease liability measures the modified lease fee again by discounting it at an unchanged discount rate. However, if a change in the variable interest rate causes a change in the lease payments, the revised discount rate that reflects the change in interest rates is used; or
- the lease agreement changes and is not accounted for as a separate lease. In such cases, the lease liability is remeasured by discounting the modified lease payment at the revised discount rate as of the effective date of the lease change, based on the lease term of the modified lease.

The Group has elected not to recognize right-of-use assets and lease liabilities for some leases of low-value assets and short-term leases. The Group recognizes the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

2. Significant Accounting Policies, Continued

2.18 Leases, Continued

(i) As a lessee, Continued

At inception or on reassessment of a contract that contains a lease component, the Group allocates the consideration in the contract to each lease and non-lease component on the basis of their relative stand-alone prices. However, for certain agreements, the Group has elected practical expedient not to separate non-lease components and account for the lease and non-lease components as a single lease component.

The Group separately presents right-of-use assets that do not meet the definition of investment property in the statement of financial position.

Subsequently, the right-of-use asset is accounted for consistently with the accounting policies applicable to the asset.

(ii) As a lessor

As a lessor, the Group determines whether the lease is a finance lease or an operating lease at the inception of the lease.

To classify each lease, the Group generally determines whether the lease transfers most of the risks and rewards of ownership of the underlying asset. If most of the risks and rewards of ownership of the underlying asset are transferred to the lessee, the lease is classified as a finance lease, otherwise the lease is classified as an operating lease. As part of this assessment, the Group considers whether the lease term represents a significant portion of the economic life of the underlying asset.

When the Group is an intermediate lessor, it accounts for its interests in the head lease and the sublease separately. In addition, the classification of a lease is determined by the right-of-use asset arising from the head lease, not the underlying asset. If a head lease is a short-term lease to which the Group applies the recognition exemption, then the sub-lease is classified as an operating lease.

The Group has applied K-IFRS No. 1115 'Revenue from Contracts with Customers' to allocate consideration in the contract to each lease and non-lease components.

The Group recognizes the lease payments received from operating leases on a straight-line basis over the lease term as revenue in 'other revenue'.

The accounting policies that the Group has applied to the comparative period as lessors are not different from those in K-IFRS No. 1116.

2. Significant Accounting Policies, Continued

2.19 Non-derivative financial liabilities

The Group classifies non-derivative financial liabilities into financial liabilities at fair value through profit or loss or other financial liabilities in accordance with the substance of the contractual arrangement and the definitions of financial liabilities. The Group recognizes financial liabilities in the consolidated statement of financial position when the Group becomes a party to the contractual provisions of the financial liability.

(a) Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading or designated as such upon initial recognition. Subsequent to initial recognition, financial liabilities at fair value through profit or loss are measured at fair value, and changes therein are recognized in profit or loss. Upon initial recognition, any directly attributable transaction costs are recognized in profit or loss as incurred.

(b) Other financial liabilities

Non-derivative financial liabilities other than financial liabilities at fair value through profit or loss are classified as other financial liabilities. At the date of initial recognition, other financial liabilities are measured at fair value less any directly attributable transaction costs. Subsequent to initial recognition, other financial liabilities are measured at amortized cost using the effective interest rate method.

(c) Derecognition of financial liability

The Group derecognizes financial liability when its contractual obligations are discharged, cancelled or expire. The Group also derecognizes a financial liability, when its terms are modified and the cash flows of the modified liability are substantially different, in which case a new financial liability based on the modified terms is recognized at fair value. On derecognition of a financial liability, the difference between the carrying amount extinguished and the consideration paid (including any non-cash assets transferred of liabilities assumed) is recognized in profit or loss.

2.20 Employee benefits

(a) Short-term employee benefits

Short-term employee benefits are employee benefits that are due to be settled within 12 months after the end of the reporting period in which the employees render the related service. When an employee has rendered service to the Group during an accounting period, the Group recognizes the undiscounted amount of short-term employee benefits expected to be paid in exchange for that service.

(b) Other long-term employee benefits

Other long-term employee benefits include employee benefits that are settled beyond 12 months after the end of the reporting period in which the employees render the related service, and are calculated at the present value of the amount of future benefit that employees have earned in return for their service in the current and prior periods. Remeasurements are recognized in profit or loss in the period in which they arise.

(c) Retirement benefits: defined benefit plans

As of the end of reporting period, defined benefits liabilities relating to defined benefit plans are recognized as present value of defined benefit obligations, net of fair value of plan assets.

The calculation is performed annually by an independent actuary using the projected unit credit method. When the fair value of plan assets exceeds the present value of the defined benefit obligation, the Group recognizes an asset, to the extent of the present value of any economic benefits available in the form of refunds from the plan or reduction in the future contributions to the plan.

2. Significant Accounting Policies, Continued

2.20 Employee benefits, Continued

(c) Retirement benefits: defined benefit plans, Continued

Remeasurements of the net defined benefit liability (asset) comprise of actuarial gains and losses, the return on plan assets excluding amounts included in net interest on the net defined benefit liability (asset), and any change in the effect of the asset ceiling, excluding amounts included in net interest on the net defined benefit liability (asset), and are recognized in other comprehensive income.

The Group determines net interests on net defined benefit liability (asset) by multiplying discount rate determined at the beginning of the annual reporting period and considers changes in net defined benefit liability (asset) from contributions and benefit payments. Net interest costs and other costs relating to the defined benefit plan are recognized through profit or loss.

When the benefits of a plan are changed or when a plan is curtailed, the resulting change in benefit that relates to past service or the gain or loss on curtailment is recognized immediately in profit or loss. The Group recognizes gains or losses on a settlement of defined benefit plan when the settlement occurs.

(d) Retirement benefits: defined contribution plans

When an employee has provided service for a certain period of time in relation to the defined contribution plan, the contribution to the defined contribution plan is recognized in profit or loss except to be included in the cost of the asset. The contributions to be paid are recognized as liabilities (accrued expenses) less the contributions that have been already paid.

(e) Termination benefits

The Group recognizes a liability and expense for termination benefits at the earlier of the period when the Group can no longer withdraw the offer of those benefits and the period when the Group recognizes costs for a restructuring. If benefits are not payable within 12 months after the end of the reporting period, then they are discounted to their present value.

2.21 Provisions

Provisions are recognized when the Group has a present legal or constructive obligation as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

The risks and uncertainties that inevitably surround many events and circumstances are taken into account in reaching the best estimate of a provision. Where the effect of the time value of money is material, provisions are determined at the present value of the expected future cash flows.

Where some or all of the expenditures required to settle a provision are expected to be reimbursed by another party, the reimbursement is recognized when, and only when, it is virtually certain that reimbursement will be received if the Group settles the obligation. The reimbursement is treated as a separate asset.

Provisions are reviewed at the end of each reporting period and adjusted to reflect the current best estimates. If it is no longer probable that an outflow of resources embodying economic benefits will be required to settle the obligation, the provision is reversed.

A provision is used only for expenditures for which the provision was originally recognized.

2. Significant Accounting Policies, Continued

2.22 Emissions Rights

The Group accounts for greenhouse gases emission right and the relevant liability as below pursuant to the *Act on Allocation and Trading of Greenhouse Gas Emission* in Korea.

(a) Greenhouse Gases Emission Right

Greenhouse Gases Emission Right consists of emission allowances, which are allocated from the government free of charge or purchased from the market. The cost includes any directly attributable costs incurred during the normal course of business.

Emission rights held for the purpose of performing the obligation are classified as intangible asset and are initially measured at cost and after initial recognition are carried at cost less accumulated impairment losses. Emission rights held for short-swing profits are classified as current asset and are measured at fair value with any changes in fair value recognized as profit or loss in the respective reporting period.

The Group derecognizes an emission right asset when the emission allowance is unusable, disposed or submitted to government in which the future economic benefits are no longer expected to be probable.

(b) Emission liability

Emission liability is a present obligation of submitting emission rights to the government with regard to emission of greenhouse gas. Emission liability is recognized when it is probable that outflows of resources will be required to settle the obligation and the costs required to perform the obligation are reliably estimable. Emission liability is an amount of estimated obligations for emission rights to be submitted to the government for the performing period. The emission liability is measured based on the expected quantity of emission for the performing period in excess of emission allowance in possession and the unit price for such emission rights in the market at the end of the reporting period.

2.23 Foreign currencies

(a) Foreign currency transactions

Transactions in foreign currencies are translated to the respective functional currencies of Group entities at exchange rates at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies are retranslated to the functional currency at the exchange rate at the reporting data. Non-monetary assets and liabilities denominated in foreign currencies that are measured at fair value are translated to the functional currency at the exchange rate at the date that the fair value was determined.

Foreign currency differences arising on the settlement or retranslation of monetary items are recognized in profit or loss, except for differences arising on the retranslation of the net investment in a foreign operation, which are recognized in other comprehensive income. When a gain or loss on a non-monetary item is recognized in other comprehensive income, any exchange component of that gain or loss is recognized in other comprehensive income. Conversely, when a gain or loss on a non-monetary item is recognized in profit or loss, any exchange component of that gain or loss is recognized in profit or loss.

(b) Foreign operations

If the presentation currency of the Group is different from a foreign operation's functional currency, the financial statements of the foreign operation are translated into the presentation currency using the following methods:

The assets and liabilities of foreign operations, whose functional currency is not the currency of a hyperinflationary economy, are translated to presentation currency at exchange rates at the end of reporting period. The income and expenses of foreign operations are translated to functional currency at average exchange rates. Foreign currency differences are recognized in other comprehensive income.

2. Significant Accounting Policies, Continued

2.23 Foreign currencies, Continued

(b) Foreign operations, Continued

Any goodwill arising on the acquisition of a foreign operation and any fair value adjustments to the carrying amounts of assets and liabilities arising on the acquisition of that foreign operation is treated as assets and liabilities of the foreign operation. Thus, they are expressed in the functional currency of the foreign operation and translated at the exchange rates at the end of reporting date.

When a foreign operation is disposed of, the relevant amount in the translation is transferred to profit or loss as part of the profit or loss on disposal. On the partial disposal of a subsidiary that includes a foreign operation, the relevant proportion of such cumulative amount is reattributed to non-controlling interest. In any other partial disposal of a foreign operation, the relevant proportion is reclassified to profit or loss.

2.24 Equity capital

Ordinary shares are classified as equity. Incremental costs directly attributable to the issuance of ordinary shares is recognized as a deduction from equity, net of any tax effects.

When the Group repurchases its share capital, the amount of the consideration paid is recognized as a deduction from equity and classified as treasury shares. The profits or losses from the purchase, disposal, reissue, or retirement of treasury shares are not recognized as current profit or loss. If the Group acquires and disposes treasury shares, the consideration paid or received is directly recognized in equity.

2.25 Share-based payment

The Group has granted shares or share options to its employees. For equity-settled share-based payment transactions, the Group measures the goods or services received, and the corresponding increase in equity as a capital adjustment at the fair value of the goods or services received, unless that fair value cannot be estimated reliably. If the Group cannot reliably estimate the fair value of the goods or services received, the Group measures their value, and the corresponding increase in equity, indirectly, by reference to the fair value of the equity instruments granted. If the fair value of the equity instruments cannot be estimated reliably at the measurement date, the Group measures them at their intrinsic value and recognizes the goods or services received based on the number of equity instruments that ultimately vest.

For cash-settled share-based payment transactions, the Group measures the goods or services acquired and the liability incurred at the fair value of the liability. Until the liability is settled, the Group remeasures the fair value of the liability at each reporting date and at the date of settlement, with changes in fair value recognized in profit or loss for the period.

The Group accounts for share-based payment, with options to choose either cash-settled or equity-settled share-based payment, in accordance with the substance of transactions.

2. Significant Accounting Policies, Continued

2.26 Revenue from contracts with customers

Revenue is measured based on the promised consideration specified in a contract with a customer. The Group recognizes revenue when the Group transfers a promised good or service to a customer.

Revenue is recognized when the customer obtains control of that asset, which is typically upon delivery or shipment depending on the terms of the contract.

When the good is defective, the customer is granted the right to return the defective goods in exchange for a functioning product or cash.

Revenue is measured at the amount of consideration for the sale of goods, reflecting the expected amount of return estimated through historical information. The Group's right to recover products from customers and refund liability are recognized.

Refund liability is initially measured at the former carrying amount of the product less any expected costs to recover those products. Refund liability is included in other current liabilities (See note 18) and right to recover products from customers is included in other current assets (See note 9). The Group reviews its estimate of expected returns at the end of each reporting period and updates the amounts of the asset and liabilities accordingly.

Income tax expense comprises current and deferred tax. Current and deferred tax are recognized in profit or loss except to the extent that it relates to a business combination, or items recognized directly in equity or in other comprehensive income.

2.27 Finance income and finance expenses

The Group's finance income and finance expenses include:

- Interest income;
- Interest expense;
- Dividend income;
- The net gain or loss on financial assets at fair value through profit or loss;
- Gain or loss on foreign exchange(currency) translation for financial asset and liabilities;
- · Impairment losses and reversals on investment in debt securities carried at amortized cost method; and
- The gain on the remeasurement to fair value of any pre-existing interest in an acquire in a business combination

The Group uses effective interest rate method for recognizing interest income and expense. Dividend income is recognized in profit or loss on the date that the Group's right to receive dividend is established.

The 'effective interest rate' is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument to:

- The gross carrying amount of the financial asset; or
- The amortized cost of the financial liability

In calculating interest income and expense, the effective interest rate is applied to the gross carrying amount of the asset (when the asset is not credit-impaired) or to the amortized cost of the liability. However, for financial assets that have become credit-impaired subsequent to initial recognition, interest income is calculated by applying the effective interest rate to the amortized cost of the financial asset. If the asset is no longer credit-impaired, then the calculation of interest income reverts to the gross basis.

2. Significant Accounting Policies, Continued

2.28 Income taxes

Income tax expense comprises current and deferred tax. Current and deferred tax are recognized in profit or loss except to the extent that it relates to a business combination, or items recognized directly in equity or in other comprehensive income.

(a) Current tax

Current tax is the expected tax payable or refundable on the taxable income or loss for the year, using tax rates enacted or substantively enacted at the end of the reporting period and any adjustment to tax payable in respect of previous years. The amount of current tax payable or receivable is the best estimate of tax amount expected to be paid or received that reflects uncertainty related to income taxes. The taxable income is different from the accounting profit for the period since the taxable profit is calculated excluding the temporary differences, which will be taxable or deductible in determining taxable profit (tax loss) of future periods, and non-taxable or non-deductible items from the accounting profit. The tax expense is calculated on the basis of the tax laws enacted or substantively enacted at the end of the reporting period.

(b) Deferred tax

Deferred tax is recognized, using the asset-liability method, in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes.

The Group recognizes a deferred tax liability for all taxable temporary differences associated with investments in subsidiaries, associates and interests in joint ventures except to the extent that the Group 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. The Group recognizes deferred tax assets for all deductible temporary differences including unused tax loss and tax credit to the extent that it is probable that the temporary difference will reverse in the foreseeable future and taxable profit will be available against which the temporary difference can be utilized.

The carrying amount of a deferred tax asset is reviewed at the end of each reporting period and reduces the carrying amount to the extent that it is no longer probable that sufficient taxable profit will be available to allow the benefit of part or all of that deferred tax asset to be utilized.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

The measurement of deferred tax liabilities and deferred tax assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period to recover or settle the carrying amount of its assets and liabilities.

Deferred tax assets and liabilities are offset only if there is a legally enforceable right to offset the related current tax liabilities and assets, and they relate to income taxes levied by the same tax authority and they intend to settle current tax liabilities and assets on a net basis. If there are any additional income tax expense incurred in accordance with dividend payments, such income tax expense is recognized when liabilities relating to the dividend payments are recognized.

2. Significant Accounting Policies, Continued

2.29 Earnings per share

The Group presents basic and diluted earnings per share (EPS) data for its ordinary shares. Basic EPS is calculated by dividing the profit or loss attributable to ordinary shareholders of the Parent Company by the weighted average number of ordinary shares outstanding during the period, adjusted for own shares held. Diluted EPS is determined by adjusting the profit or loss attributable to ordinary shareholders and the weighted average number of outstanding ordinary shares, adjusted for own shares held, for the effects of all dilutive potential ordinary shares including stock options.

2.30 Approval of the Consolidated Financial Statements

The consolidated financial statements were authorized for issuance by the board of directors on February 23, 2022, which will be submitted for approval at the shareholders' meeting to be held on March 30, 2022.

3. Critical Accounting Estimates and Assumptions

Preparation of financial statements requires assumptions and estimates of the future, and the management requires judgement to apply the Group's accounting policies. The estimates and assumptions are continuously assessed, considering historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. The resulting accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are addressed below.

The spread of COVID-19 in 2021 is having a significant impact on the domestic and international economy. This can negatively affect productivity, revenue decline or delay, and the recovery of existing bonds, which can also negatively affect the Group's consolidated financial position and financial performance.

Critical accounting estimates and assumptions used in preparing consolidated financial statements can be adjusted according to changes in uncertainty caused by COVID-19, and the ultimate impact on the Group's business, financial position and business performance is currently unpredictable.

The following are estimates and assumptions about management decisions and significant risks that may affect the adjustment of the carrying amount of assets and liabilities in the following financial years: Additional information on significant judgements and estimates for some items is included in the separate footnotes.

(1) Fair value of financial instruments

In principle, the fair value of financial instruments that are not traded in an active market is determined using valuation techniques. The Group is making judgments on the selection and assumptions of various evaluation techniques based on important market conditions as of the end of the reporting period. (see footnote 6)

(2) Corporate tax

There is uncertainty in determining the final tax effect as corporate tax on the Group's taxable income is calculated by applying various national tax laws and tax authorities' decisions. The Group recognized the corporate tax effect, which is expected to be borne in the future as a result of business activities until the end of the reporting period, as current tax and deferred tax after the best estimation process. However, the actual future final corporate tax burden may not be consistent with the assets and liabilities recognized, and this difference may affect current and deferred tax assets and liabilities when the final tax effect is confirmed.

The Group will pay additional corporate taxes calculated by the method prescribed by the tax law when a certain amount of taxable income is not used for investment, salary increase, etc. for a certain period of time. Therefore, when measuring current and deferred taxes during the period, the tax effects should be reflected, and the corporate tax to be borne by the Group depends on the level of investment and salary growth in each year, so there is uncertainty in calculating the final tax effect.

In accordance with K-IFRS No.1012, the Group reviews uncertainty in its tax treatment and reflects the impact of uncertainty in its financial statements if the tax authorities conclude that uncertainty is unlikely to be accepted, using a method that expects better prediction of uncertainty:

- (a) Most likely: the single most likely amount within the range of possible outcomes
- (b) Expected value: the sum of all amounts in the range of possible outcomes multiplied by each probability;

3. Critical Accounting Estimates and Assumptions, Continued

(3) Provisions

The Group calculates provisions related to litigation costs and recovery costs as of the end of the reporting period, which are determined by estimates based on past experience (see footnote 20).

(4) Net defined benefit liabilities

The present value of the net defined benefit liability is affected by various factors determined by the actuarial method, especially changes in the discount rate (see footnote 21).

(5) Inventories

Estimating the net realizable value of inventories is based on the most reliable evidence available as of the estimated date for the amount feasible from inventories. In addition, if the Group confirms the circumstances in which an event exists at the end of the reporting period, it shall estimate the change in price or cost directly related to the event.

(6) Revenue recognition

The Group recognizes revenue from the sale of goods as a reduction in specific sales promotion activities from the consideration of the contract at the time of control transfer. Based on past experiences and contracts, the Group reasonably estimates sales losses, and the Group's revenue is affected by the estimated sales losses.

(7) Development cost

The recoverable amounts of development cost has been determined based on value-in-use calculations, and those calculations are based on estimates.

(8) Depreciation of property, plant, and equipment

The depreciation method, residual values and useful lives of property, plant and equipment and Intangible assets are reviewed, and adjusted if appropriate, at the end of each reporting period. If the resulting estimates differ from previous estimates, the difference is accounted for as a change in accounting estimates in accordance with K-IFRS 1008 'Accounting Policies, Changes in Accounting Estimates and Errors'.

(9) Goodwill

The recoverable amount of cash-generating units to review goodwill for impairment is determined on the basis of their net fair value.

3. Critical Accounting Estimates and Assumptions, Continued

(10) Lease

In determining the lease term, the Group considers all relevant facts and circumstances that create an economic incentive to exercise an extension option, or not exercise a termination option. Extension options (or periods after termination options) are only included in the lease term if the lease is reasonably certain to be extended (or not terminated).

For warehouses and equipment leases, the most relevant factors are generally as follows:

- If a significant penalty is to be paid to terminate (not to extend), it is generally quite certain that the Group exercises the option to extend (not to extend).
- It is generally fairly certain that the Group exercises the option to extend (not exercise the option to terminate) if the lease is expected to have significant residual value.
- In other cases than the above, the Group will consider other factors, including the lease duration and costs, and the discontinuation required to replace the leased asset.

Most extension options in office and vehicle transport leases are not included in lease liabilities because the Group can replace the asset without significant cost or business interruption.

Reevaluate the lease term if the option is actually exercised (or not exercised) or the Group is liable to exercise (not exercised) the option. Only when significant events occur or there are significant changes in the circumstances that affect the lessee's control of the lease term, the Group changes its judgment to ensure that the option to extend (or will not be exercised) is significant.

4. Operating Segment Information

The Group has a single reportable segment that is engaged in the manufacture and sale of semiconductor products. Management of the Group reviews the operational results of the semiconductor business with the reporting information which is prepared in the same manner as management reviews during the establishment of the Group's business strategy.

(1) The Group's non-current assets (excluding long-term trade receivables, financial assets, loans and other receivables, investment in associates and joint ventures and deferred tax assets) information by region based on the location of the Parent Company and its subsidiaries as of December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

	December 31, 2021		December 31, 2020
Korea ₩	40,474,770	₩	35,954,666
China	19,484,394		10,302,196
Asia (other than China)	17,065		20,397
U.S.A.	426,723		373,767
Europe	16,230		13,868
₩	60,419,182	₩	46,664,894

(2) For the year ended December 31, 2021, revenue of ₩5,014,368 million, ₩4,581,712 million, over 10% of the Group's revenue, are derived from external customers A and B, respectively and for the year ended December 31, 2020, revenues of ₩3,510,469 million and ₩3,190,135 million and ₩3,655,937 million over 10% of the Group's revenue, are derived from external customer A, B and C, respectively.

5. Carrying Amounts of Financial Instruments by Categories

(1) Carrying amounts of financial assets by categories as of December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

,		December 31, 2021				
		Financial assets at fair value through profit or loss		Financial assets at fair value through other comprehensive income or loss		
Cash and cash equivalents	₩	-	₩	-		
Short-term financial instruments		222,500		-		
Short-term investment assets		3,139,923		-		
Trade receivables ¹		-		980,487		
Loans and other receivables		-		-		
Other financial assets		-		-		
Long-term investment assets		6,665,513		-		
	₩	10,027,936	₩	980,487		

,		December 31, 2021					
		Financial assets at amortized cost		Other financial assets		Total	
Cash and cash equivalents	Α _	5,057,982	₩	-	₩	5,057,982	
Short-term financial instruments		252,137		-		474,637	
Short-term investment assets		-		-		3,139,923	
Trade receivables ¹		7,286,624		-		8,267,111	
Loans and other receivables		510,981		-		510,981	
Other financial assets		30,076		61,093		91,169	
Long-term investment assets		-		-		6,665,513	
¥	₩	13,137,800	₩	61,093	₩	24,207,316	

¹ The Group transferred certain portion of trade receivables, which are from specific customers, and derecognized the trade receivables from the financial statements as all the risks and rewards are substantially transferred. Accordingly, the Group recognized gain or loss on disposal of trade receivables.

5. Carrying Amounts of Financial Instruments by Categories

(1) Carrying amounts of financial assets by categories as of December 31, 2021 and 2020 are as follows, Continued:

(In millions of Korean won)

,		December 31, 2020				
		Financial assets at fair value through profit or loss		Financial assets at fair value through other comprehensive income or loss		
Cash and cash equivalents	₩	-	₩	-		
Short-term financial instruments		227,500		-		
Short-term investment assets		1,535,518		-		
Trade receivables ¹		-		512,458		
Loans and other receivables		-		-		
Other financial assets		-		-		
Long-term investment assets		6,139,627		-		
	₩	7,902,645	₩	512,458		

		December 31, 2020				
		Financial assets at amortized cost		Total		
Cash and cash equivalents	₩	2,975,989	₩	2,975,989		
Short-term financial instruments		209,208		436,708		
Short-term investment assets		-		1,535,518		
Trade receivables ¹		4,418,864		4,931,322		
Loans and other receivables		144,783		144,783		
Other financial assets		383		383		
Long-term investment assets		-		6,139,627		
	₩ _	7,749,227	₩	16,164,330		

¹ The Group transferred certain portion of trade receivables, which are from specific customers, and derecognized the trade receivables from the financial statements as all the risks and rewards are substantially transferred. Accordingly, the Group recognized gain or loss on disposal of trade receivables.

5. Carrying Amounts of Financial Instruments by Categories, Continued

(2) Carrying amounts of financial liabilities by categories as of December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

(m. manerie er reream men)	December 31, 2021					
	Fir	nancial liabilities at	Other financial			
		amortized cost	liabilities	Total		
Trade payables	₩	1,359,247 W	_ :	W 1,359,247		
Other payables		7,339,748	-	7,339,748		
Other non-trade payables		2,310,749	-	2,310,749		
Borrowings		17,623,809	-	17,623,809		
Lease liabilities		1,525,762	-	1,525,762		
Other financial liabilities		4,517	702	5,219		
	₩	30,163,832 W	702	W 30,164,534		

	December 31, 2020					
	F	inancial liabilities at	Other financial			
		amortized cost	liabilities	Total		
Trade payables	₩	1,046,159	<u> </u>	1,046,159		
Other payables		2,621,305	-	2,621,305		
Other non-trade payables		1,397,116	-	1,397,116		
Borrowings		11,251,648	-	11,251,648		
Lease liabilities		1,643,716	-	1,643,716		
Other financial liabilities		3,958	84,707	88,665		
	₩	17,963,902 W	84,707	W 18,048,609		

5. Categories of Financial Instruments, Continued

(3) Details of gain and loss on financial assets and liabilities by category for the years ended December 31, 2021 and 2020 are as follows:

		2021	2020
Financial assets at amortized cost			
Interest income	₩	22,419 ₩	27,872
Foreign exchange differences		811,250	(959,065)
Loss on disposal		(125)	-
Reversal of impairment		(839)	(550)
		832,705	(931,743)
Financial assets at fair value through profit or loss			
Dividend income		10,163	1,325
Gain on disposal		81,937	27,510
Gain on valuation		566,321	1,736,345
Foreign exchange differences		(50,074)	(40,222)
		608,347	1,724,958
Financial liabilities at amortized cost			
Interest expenses		(259,960)	(253,468)
Foreign exchange differences		(272,052)	809,001
		(532,012)	555,533
Financial liabilities at fair value through profit or loss			
Loss on financial liabilities		(1,716)	(1,681)
	W	907,324 W	1,347,067

6. Financial Risk Management

(1) Financial risk management

The Group's activities are exposed to a variety of financial risks: market risk (including foreign exchange risk, interest rate risk and price risk), credit risk and liquidity risk. The Group's overall risk management program focuses on the unpredictability of financial markets and seeks to minimize potential adverse effects on the Group's financial performance.

Risk management is carried out by the Parent Company's corporate finance division in accordance with policies approved by the board of directors. The Parent Company's corporate finance division identifies, evaluates and hedges financial risks in close cooperation with the Group's operating units. The board of directors provides written principles for overall risk management, as well as written policies covering specific areas, such as foreign exchange risk, interest rate risk, and credit risk, use of derivative financial instruments and non-derivative financial instruments, and investment of excess liquidity

(a) Market risk

(i) Foreign exchange risk

The Group operates internationally and is exposed to foreign exchange risk arising from various currency exposures, primarily with respect to the US dollar, Japanese yen, Chinese yuan and Euro. Foreign exchange risk arises from future commercial transactions; recognized assets and liabilities in foreign currencies; and net investments in foreign operations.

Monetary foreign currency assets and liabilities as of December 31, 2021 are as follows:

(In millions of Korean won and millions of foreign currencies)

•	Ass	ets	Liabili	ties
	Foreign currencies	Korean won equivalent	Foreign currencies	Korean won equivalent
USD	13,819 W	16,381,874	17,186 W	20,373,896
JPY	1,034	10,650	51,731	532,949
CNY	270	50,212	1,179	219,610
EUR	8	11,392	186	249,734

Also, as described in note 23, the Group entered into a fixed-to-fixed cross currency swap and a floating-to-fixed cross currency interest rate swap to hedge foreign currency rate risk relating to bonds and borrowings denominated in foreign currencies

When the exchange rate of the functional currency for each foreign currency fluctuates by 10% as of December 31, 2021, the impact of the change in the exchange rate on profit before income tax expenses are as follows:

	_	If increased by 10%	If decreased by 10%
USD	₩	(281,098) W	281,098
JPY		(52,230)	52,230
CNY		(16,940)	16,940
EUR		(23,834)	23,834

6. Financial Risk Management, Continued

- (1) Financial risk management, Continued
- (a) Market risk, Continued

(ii) Interest rate risk

Interest rate risk of the Group is defined as the risk that the interest expenses arising from borrowings will fluctuate due to changes in future market interest rate. The interest rate risk mainly arises through floating rate borrowings, and is partially offset by interests received from floating rate financial assets.

The Group is managing cash flow interest rate risk using floating-to-fixed cross currency interest rate swaps. These interest rate swaps have an economic effect of converting floating interest borrowings into fixed interest borrowings. Generally, the Group borrows at a floating interest rate and then swaps at a fixed rate. Under the swap agreement, the Group will settle the difference between fixed interest costs and the floating interest costs calculated according to the principal agreed upon for each counterparty and specific period (mainly quarterly).

The Group is partially exposed to the risk of changing net interest costs due to changes in interest rates as of December 31, 2021. The Group has signed a currency interest rate swap contract on floating interest rate borrowings of W592,750 million and a interest rate swap contract on floating interest rate borrowings of W118,550 million. Therefore, the changes in interest costs subject to fluctuation of interest rates do not have an impact on the profit before income tax for the year ended December 31, 2021.

As of December 31, 2021, if interest rates on borrowings and financial assets had been 100 basis points higher/lower with all other variables held constant, profit before income tax would have been \(\pi\)78,278 million(2020: \(\pi\)50,270 million) lower/higher, mainly as a result of higher/lower interest expense on floating rate borrowings and net interest costs on floating rate financial assets.

(iii) Price risk

The Group invests in equity and debt securities resulted from its business needs and the purpose of liquidity management. The Group's equity and debt securities are exposed to price risk as of December 31, 2021.

Equity investments that the Group owns are all unlisted equities and the effect of the equity investments on the Group's profit for the year and other comprehensive income are explained in note 12.

(b) Credit risk

Credit risk is the risk of financial loss to the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises mainly from operating and investing activities. In order to manage credit risk, the Group periodically evaluates the credit worthiness of each customer or counterparty through the analysis of its financial information, historical transaction records and other factors, and establishes credit limits for each customer or counterparty.

6. Financial Risk Management, Continued

- (1) Financial risk management, Continued
- (b) Credit risk, Continued

(i) Trade and other receivables

For each new customer, the Group individually analyzes its credit worthiness before standard payment and delivery terms and conditions are offered. In addition, the Group is continuously managing trade and other receivables by reevaluating the customer's credit worthiness and securing collaterals in order to limit its credit risk exposure. The Group reviews at the end of each reporting period whether trade and other receivables are impaired and maintains credit insurance policies to manage credit risk exposure from oversea customers. The maximum exposure to credit risk as of December 31, 2021 is the carrying amount of trade and other receivables

(ii) Other financial assets

Credit risk also arises from other financial assets such as cash and cash equivalents, short-term financial instruments, long-term and short-term investment assets, and short-term and long-term loans mainly due to the bankruptcy of each counterparty to those financial assets. The maximum exposure to credit risk as of December 31, 2021 is the carrying amount of those financial assets. The Group transacts only with banks and financial institutions with high credit ratings, and accordingly management does not expect any significant loss from non-performance by the counterparties.

(c) Liquidity risk

Liquidity risk is defined as the risk that the Group is unable to meet its short-term payment obligations on time due to deterioration of its business performance or inability to access financing. The Group forecasts its cash flow and liquidity status and sets action plans on a regular basis to manage liquidity risk proactively.

The Group invests surplus cash in interest-bearing current accounts, time deposits, and demand deposits choosing instruments with appropriate maturities or sufficient liquidity to provide sufficient head-room as determined by the above-mentioned forecasts.

6. Financial Risk Management, Continued

(1) Financial risk management, Continued

(c) Liquidity risk, Continued

The contractual maturity of financial liabilities held by the Group as of December 31, 2021 and 2020 term are as follows:

(In millions of Korean won)

December 31, 2021 Less than More than 5 1 year 1 - 2 years 2 - 5 years years Total 3,181,897 Borrowings1 3,351,918 8,824,353 3,461,705 18,819,873 Lease liabilities 323,145 219,289 474,595 604,977 1,622,006 Trade payables 1,359,247 1,359,247 Other payables 4,642,258 64,699 2,748,978 28,452 7,484,387 Other non-trade payables 2,230,267 9,021 15,079 8,332 2,262,699 **Derivative Liabilities** 837 64 901 Other financial liabilities 129,710 129,710 11,867,361 3,644,991 12,063,005 4,103,466 31,678,823

(In millions of Korean won)

December 31, 2020

	_	Less than		More than 5				
		1 year	1 - 2 years	2 - 5 years	years	Total		
Borrowings ¹	₩	3,309,009	2,317,331	5,136,314	1,121,480	11,884,134		
Lease liabilities		352,201	250,840	391,356	848,315	1,842,712		
Trade payables		1,046,159	-	-	-	1,046,159		
Other payables		2,348,909	56,902	160,488	78,336	2,644,635		
Other non-trade payables		1,346,254	17,896	12,028	-	1,376,178		
Derivative Liabilities		(3,538)	(3,839)	77,573	13,460	83,656		
Other financial liabilities		117,106	-	-	-	117,106		
Financial guarantee contract		87,040	-	-	-	87,040		
	₩	8,603,140	2,639,130	5,777,759	2,061,591	19,081,620		

¹ The cash flow includes payment of interest under terms and conditions of borrowing.

The table above analyzes the Group's financial liabilities into relevant maturity groups based on the remaining period at the statement of financial position date to the contractual maturity date. The amounts disclosed in the table are the contractual undiscounted cash flows and include estimated interest payments.

¹ The cash flow includes payment of interest under terms and conditions of borrowing.

6. Financial Risk Management, Continued

(2) Capital management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

In order to maintain or adjust the capital structure, the Group may adjust the amount of dividends to shareholders and proceeds and repayments of borrowings, and issue new shares or sell assets to reduce debt.

The debt-to-equity ratio and net borrowing ratio as of December 31, 2021 and 2020 are as follows:

(In millions of Korean won)		December 31, 2021	December 31, 2020
Total liabilities (A)	₩	34,195,416 W	19,264,756
Total equity (B)		62,191,058	51,909,097
Cash and cash equivalents, and others ¹ (C)		8,672,542	4,948,215
Total borrowings (D)		17,623,809	11,251,648
Debt-to-equity ratio (A/B)		54.98%	37.11%
Net borrowing ratio (D-C)/B		14.39%	12.14%

¹ Total amount of cash and cash equivalents, short-term investment assets and short-term financial instruments. Under major loan contracts, the Group must comply with a certain level of debt ratio, and the Group has complied with these conditions at the end of December 31, 2021.

(3) Fair value

Fair values are categorized into different levels in a fair value hierarchy based on the inputs used in valuation techniques as follows:

- Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities that an entity can access at the measurement date.
- Level 2: inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices)
- Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs)

6. Financial Risk Management, Continued

- (3) Fair value, Continued
- (a) The following table presents the carrying amounts and fair values of financial instruments by categories, including their levels in the fair value hierarchy, as of December 31, 2021 and 2020:

(III IIIIIII OI Korean won)			December 31, 2021					
	Carrying amounts		Level 1	Level 2	Level 3	Total		
Financial assets measured a	at fair value							
Short-term financial								
instruments	₩ 222,50		- W	-	¥ 222,500 ¥	222,500		
Short-term investment assets	3,139,92		-	3,139,923	-	3,139,923		
Trade receivables ¹	980,48		-	980,487	-	980,487		
Long-term investment assets	6,665,51			-	6,665,513	6,665,513		
Other financial assets	61,09		<u> </u>	61,093	<u> </u>	61,093		
	11,069,51	6		4,181,503	6,888,013	11,069,516		
Financial assets not measur								
Cash and cash equivalents ² Short-term financial	5,057,98	2	-	-	-	-		
instruments ²	252,13	7	-	-	-	-		
Trade receivables ²	7,286,62	4	-	-	-	_		
Loans and other receivables ²	510,98	1	-	-	-	-		
Other financial assets ²	30,07	6	-	-	-	-		
	13,137,80	0		_	<u> </u>	_		
Total financial asset	₩ 24,207,31	<u>6</u> ₩	₩	4,181,503	₩ 6,888,013 ₩	11,069,516		
Financial liabilities measure	d at fair value							
Other financial liabilities	₩ 70	2 ₩	- W	702 V	V - ₩	702		
Financial liabilities not meas	sured at fair val	ıe						
Trade payables ²	1,359,24	7	-	-	-	-		
Other payables ²	7,339,74	8	-	-	-	-		
Other non-trade payables ²	2,310,74	9	-	-	-	-		
Borrowings	17,623,80	9	-	17,491,195	-	17,491,195		
Lease liabilities ²	1,525,76	2	-	-	-	-		
Other financial liabilities ²	4,51	7	-	-	-	-		
	30,163,83	2		17,491,195	<u> </u>	17,491,195		
Total financial liabilities	₩ 30,164,53	4 ₩	₩	17,491,897	₩ <u>-</u> ₩	17,491,897		

¹ The Group transferred some of the trade receivables and majority of the risks and rewards to the customer. Accordingly, the Group derecognized trade receivables from the financial statement on the date of assets transfer and recognized gain or loss on disposal of trade receivables.

² The Group did not include fair values of financial assets and liabilities of which carrying amounts are considered to be a reasonable approximation of fair values.

6. Financial Risk Management, Continued

- (3) Fair value, Continued
- (a) The following table presents the carrying amounts and fair values of financial instruments by categories, including their levels in the fair value hierarchy, as of December 31, 2021 and 2020, Continued:

(In millions of Korean won)				December 31, 2020					
		Carrying amounts		Level 1		Level 2		Level 3	Total
Financial assets measured a	t fair	value							
Short-term financial									
instruments	₩	227,500	₩	- !	₩		₩	227,500 ₩	227,500
Short-term investment assets		1,535,518		-		1,535,518		-	1,535,518
Trade receivables ¹		512,458		-		512,458		-	512,458
Long-term investment assets		6,139,627		-	_	-		6,139,627	6,139,627
		8,415,103		-	_	2,047,976		6,367,127	8,415,103
Financial assets not measur	ed at	fair value							
Cash and cash equivalents ² Short-term financial		2,975,989		-		-		-	-
instruments ²		209,208		-		-		-	-
Trade receivables ²		4,418,864		-		-		-	-
Loans and other receivables ²		144,783		-		-		-	-
Other financial assets ²		383		-		-		-	-
		7,749,227		-		-		-	-
Total financial asset	₩	16,164,330	₩	_ !	₩ _	2,047,976	₩	6,367,127 W	8,415,103
Financial liabilities measured	d at f	air value							
Other financial liabilities	₩	84,707	₩	- !	₩	84,707	₩	- ₩	84,707
Financial liabilities not meas	ured	at fair value							
Trade payables ²		1,046,159		-		-		-	-
Other payables ²		2,621,305		-		-		-	_
Other non-trade payables ²		1,397,116		-		-		-	_
Borrowings		11,251,648		-		11,372,509		-	11,372,509
Lease liabilities ²		1,643,716		-		-		-	-
Other financial liabilities ²		3,958		-		-		-	-
		17,963,902		-	_	11,372,509		-	11,372,509
Total financial liabilities	₩	18,048,609	W	_ :	₩ _	11,457,216	₩	- W	11,457,216

¹ The Group transferred some of the trade receivables and majority of the risks and rewards to the customer. Accordingly, the Group derecognized trade receivables from the financial statement on the date of assets transfer and recognized gain or loss on disposal of trade receivables.

² The Group did not include fair values of financial assets and liabilities of which carrying amounts are considered to be a reasonable approximation of fair values.

6. Financial Risk Management, Continued

- (3) Fair value, Continued
- (b) The valuation techniques

The valuation techniques of recurring and non-recurring fair value measurements and quoted prices classified as level 2 or level 3 are as follows:

(In millions of Korean won)

	Fair value	Level	Valuation Techniques			
Financial assets at fair value through profit or loss	<u> </u>					
Short-term financial instruments ₩	222,500	3	Present value technique			
Short-term investment assets	3,139,923	2	Present value technique			
Long-term investment assets	6,665,513	3	Present value technique and others			
Other financial assets	61,093	2	Present value technique			
Financial assets at fair value through other compre	hensive income:					
Trade receivables ₩	980,487	2	Present value technique			
Financial liabilities at fair value through other comprehensive income:						
Other financial liabilities \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	702	2	Present value technique			

Long-term investments measured at level 3 in the fair value hierarchy include investments in special purpose companies of BCPE Pangea Intermediate Holdings Cayman, L.P. ("SPC1") amounting to \(\pmu3,828,182\) million and BCPE Pangea Cayman2 Limited ("SPC2") amounting to \(\pmu2,519,355\) million in connection with the Group's investments in acquisition of KIOXIA Holdings Corporation ("KIOXIA", formerly Toshiba Memory Corporation) (see note 12). The fair value of the long-term investments is measured based on the equity value of the underlying asset, KIOXIA estimated utilizing present value discount model.

The fair value of equity investment in SPC1 is measured using an option pricing model allocating the estimated fair value of KIOXIA equity between investors based on distribution priority pursuant to the underlying investment arrangement together with consideration of expected KIOXIA initial public offering and SPC1 liquidation.

The fair value of debt investment in SPC2 convertible bonds is measured based on the estimated KIOXIA's equity value and SPC2' equity ownership in KIOXIA (15.0%).

6. Financial Risk Management, Continued

- (3) Fair value, Continued
- (b) Valuation Techniques, Continued

The valuation techniques and key inputs used in valuation of the equity investment in SPC1 and investment in SPC2 convertible bonds are as follows:

(In millions of Korean won)

					Input
		Fair value	Valuation Techniques	Level 3 inputs	Range
Equity investment	₩	3,828,182	Present value technique,	Terminal growth rate	0%
in SPC1			and option-pricing method	Weighted-average capital cost	7.10%
				Expected expiration(years)	2.41
				Volatility	41.9%
				Risk free rate	-0.10%
SPC2 convertible		2,519,355	Present value technique	Terminal growth rate	0%
bonds				Weighted-average capital cost	7.10%

In these level 3 significant unobservable inputs, the higher in terminal growth rate or the lower in weighted-average capital cost will result the higher fair value of the equity investment in SPC1, while any change in volatility and risk free rate may have either positive or negative impact on the fair value of the investment in SPC1. In addition, the higher in terminal growth rate and the lower in weighted-average capital cost will result in the higher fair value of the investment in SPC2 convertible bonds.

Any positive or negative changes in the above inputs will have a significant and direct impact on the fair value of investments in SPC1 and SPC2, respectively. They are significant, but unobservable. Accordingly, the investments are classified as fair value hierarchy level 3 and the above inputs may have a significant impact on the value of investments in SPC1 and SPC2.

The sensitivity analysis results for the effect of changes in each long-term investment input classified as Level 3 under sensitivity analysis on fair value are as follows:

		Positive flucutaion	Negative fluctuation
Equity investment in SPC1 ¹	₩	962,956	W (767,497)
SPC2 convertible bonds ¹		640,892	(484,655)

¹ Fair value fluctuations were calculated by increasing or decreasing the terminal growth rate and weighted average capital cost, which are major unobservable input variables, by 0.5%.

6. Financial Risk Management, Continued

- (3) Fair value, Continued
- (c) There was no transfer between fair value hierarchy levels during the year ended December 31, 2021 and the changes in financial assets and financial liabilities classified as level 3 fair value measurements during the year ended December 31, 2021 are as follows:

		Short-term financial instrements		Long-term investment assets
Beginning balance	₩	227,500	₩	6,139,627
Acquisition		-		131,634
Disposal		(5,000)		(12,631)
Payments		-		-
Valuation		-		524,409
Foreign exchange difference		-		(117,526)
Ending balance	₩ _	222,500	₩	6,665,513

7. Restricted Financial Instruments

Details of restricted financial instruments as of December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

		December 31, 2021		December 31, 2020	Description
Short-term financial instruments	₩	222,500 8,242	₩	227,500 8,434	Restricted for supporting small businesses Pledged for consumption tax
		0,242		0,404	Guarantee deposits for repayments of
		90,220		84,419	borrowings
		320,962		320,353	
Other financial assets		28,790		-	Down Payment, Bank Balance for the share sale contract
		11		11	Bank overdraft guarantee deposit
		1,245		305	Others
		30,046	•	316	
	₩	351,008	₩	320,669	

8. Trade Receivables and Loans and Other Receivables

(1) Details of trade receivables as of December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

	J		December 31, 2020		
Trade receivables	₩	8,115,796	₩	4,873,602	
Trade receivables to be collected					
from related parties		151,315		57,720	
	₩	8,267,111	₩	4,931,322	

(2) Details of loans and other receivables as of December 31, 2021 and 2020 are as follows:

		December 31, 2021	December 31, 2020	
Current				
Other receivables	₩	118,120 ₩	13,603	
Accrued income		2,252	2,570	
Short-term loans		11,104	5,045	
Short-term guarantee and other deposits		39,988	47,976	
		171,464	69,194	
Non-current				
Long-term other receivables		3	2,977	
Long-term loans		292,300	37,838	
Guarantee deposits		46,984	34,558	
Others		230	216	
		339,517	75,589	
	₩	510,981 W	144,783	

8. Trade Receivables and Loans and Other Receivables, Continued

(3) Trade receivables and loans and other receivables, net of provision for impairment, as of December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

		December 31, 2021					
	_	Gross amount		Provision for impairment		Carrying amount	
Trade receivables	₩	8,268,072	₩	(961)	₩	8,267,111	
Current loans and other receivables		172,739		(1,275)		171,464	
Non-current loans and other receivables		340,647		(1,130)		339,517	
	₩	8,781,458	₩	(3,366)	₩	8,778,092	

		December 31, 2020					
		Gross amount		Provision for impairment		Carrying amount	
Trade receivables	₩	4,931,366	₩	(44)	₩	4,931,322	
Current loans and other receivables		70,472		(1,278)		69,194	
Non-current loans and other receivables		76,743		(1,154)		75,589	
	₩	5,078,581	₩	(2,476)	₩	5,076,105	

8. Trade Receivables and Loans and Other Receivables, Continued

(4) Details of provision for impairment

Changes in the provision for impairment of trade receivables for the years ended December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

		2021	2020
Beginning balance	₩	44 W	9
Bad debt expense		912	555
Write-off		-	(517)
Foreign exchange difference		5	(3)
Ending balance	₩	961 W	44

Changes in the provision for impairment of current loans and other receivables for the years ended December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

		2021	2020		
Beginning balance	₩	1,278 ₩	1,280		
Reversal		(3)	(2)		
Ending balance	₩	1,275 W	1,278		

Movements in the provision for impairment of non-current loans and other receivables for the years ended December 31, 2021 and 2020 are as follows:

		2021	2020
Beginning balance	₩ -	1,154 W	1,162
Reversal		(114)	(3)
Write-off		-	64
Foreign exchange difference		90	(69)
Ending balance	₩ _	1,130 W	1,154

8. Trade Receivables and Loans and Other Receivables, Continued

(5) The aging analysis of trade receivables and loans and other receivables as of December 31, 2021 and 2020 are as follows:

(In millions of Korean v	von)			December 3	31, 2021					
	_		Not i	mpaired						
	-			Overdue	_					
Trade receivables Current loans and		Not past	Less than	Over 3 months and less than	Over					
		due	3 months	6 months	6 months	Impaired	Total			
Trade receivables	₩	8,267,111				961	8,268,072			
Current loans and other receivables		171,464	_	_	-	1,275	172,739			
receivables		339,517	-	-	-	1,130	340,647			
	₩	8,778,092		-		3,366	8,781,458			

(In millions of Korean v	von)			December 3	31, 2020			
			Not i	mpaired				
				Overdue				
		Not past due	Less than 3 months			Impaired	Total	
Trade receivables	₩	4,931,328	-	-	-	38	4,931,366	
Current loans and other receivables		69,194	_	_	_	1,278	70,472	
Non-current loans and other receivables		75,589	<u>-</u>	_	-	1,154	76,743	
	₩	5,076,111				2,470	5,078,581	
	=							

9. Inventories

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

(In millions of Korean won)

December 31, 2021

		Acquisition	inventory valuation	Carrying
		cost	allowance	amount
Merchandise	₩ _	2,650	₩ (48) ₩	2,602
Finished goods		1,357,610	(113,566)	1,244,044
Work-in-process		5,910,133	(104,981)	5,805,152
Raw materials		1,074,600	(34,393)	1,040,207
Supplies		771,626	(56,324)	715,302
Goods in transit		109,298	-	109,298
	₩ _	9,225,917	₩ (309,312) ₩	8,916,605

(In millions of Korean won)

December 31, 2020

			December of, Lot	•
	_	Acquisition	Inventory valuation	Carrying
		cost	allowance	amount
Merchandise	₩ _	2,197 ₩	₩ (24)	₩ 2,173
Finished goods		1,293,801	(214,834)	1,078,967
Work-in-process		3,724,374	(139,419)	3,584,955
Raw materials		759,818	(35,336)	724,482
Supplies		619,382	(31,373)	588,009
Goods in transit		157,732	-	157,732
	₩ _	6,557,304 ¥	¥ (420,986)	₩ 6,136,318

⁽²⁾ The amount of the inventories recognized as cost of sales and loss on valuation allowance of inventories charged to cost of sales are as follows:

		2021	2020
Inventories recognized as cost of sales	₩	24,151,572	21,313,696
Gain from reversal of valuation allowance of inventories		(111,674)	(226,512)

10. Other Current and Non-current Assets

Details of other current and non-current assets as of December 31, 2021 and 2020 are as follows:

		December 31, 2021		December 31, 2020
Current	_			
Advance payments	₩	69,010	₩	51,047
Prepaid expenses		177,125		145,298
Value added tax refundable		534,958		235,602
Contract assets		56,700		53,605
Others		793		120
	_	838,586	-	485,672
Non-current	_			
Long-term advance payments		68,347		36,985
Long-term prepaid expenses		54,451		14,961
Others		6,479		3,083
	_	129,277	-	55,029
	W	967,863	₩	540,701

11. Investments in Associates and Joint Ventures

(1) General information of investments in associates and joint ventures is as follows:

Туре	Investee	Location	Business
			Development and manufacture
Associate	Stratio, Inc ¹ .	U.S.A	of semiconductor parts
	SK China Company Limited ²	China	Consulting and investment
	Gemini Partners Pte. Ltd.	Singapore	Consulting
	TCL Fund ¹	China	Investment
	SK South East Asia Investment Pte. Ltd. Hushan Xinju (Chengdu) Venture	Singapore	Consulting and investment
	Investment Center(Smartsource) ²	China	Venture Capital
	Prume Social Farm, Co., Ltd.	Korea	Growing crops Developing Science-
	Wuxi xinfa IC industry park., Ltd [.]	China	Technological Park
	Magnus Private Investment Co.,Ltd	Korea	Investment
	L&S (No.10) Early Stage Ⅲ Investment		
	Association	Korea	Investment Design and manufacture of
	SiFive Inc. ¹	U.S.A	semiconductor
	YD-SK-KDB Scocial Value	Korea	Investment
	Ningbo Zhongxin Venture Capital		
	Partnership (Limited Partnership) 1,3 Jiangsu KVTS Semiconductor science and	China	Investment Manufacturing semiconductor
	Technology Co Ltd.3	China	parts
	Mirae Asset Committee Semiconductor No. 1 Startup Venture Private Equity	J	F
Joint	Investment Co., Ltd. ³	Korea	Investment Manufacture of semiconductor
venture	HITECH Semiconductor (Wuxi) Co., Ltd4.	China	parts
	Hystars Semiconductor (Wuxi) Co., Ltd ⁴ . Specialized Investment-type Private Equity Investment Trust For Growth Of	China	Foundry factory construction
	Semiconductor ⁴ Specialized Investment-type Private Equity Investment Trust For Win-win	Korea	Investment
	System Semiconductor ⁴	Korea	Investment

11. Investments in Associates and Joint Ventures, Continued

(2) Details of investments in associates and joint ventures as of December 31, 2021 and 2020 are as follows:

(In millions of Korean won)	De	ecem	ber 31, 2021		December 31, 2020			
Investee	Owners hip (%)	_	Net asset value	Carrying amount	Ownership (%)	Carrying amount		
Associate: Stratio, Inc¹. SK China Company Limited² Gemini Partners Pte. Ltd. TCL Fund¹	9.35 11.87 20 11.05	₩	94 W 291,389 2,236 12,895	397 343,987 2,236 13,328	9.12 ₩ 11.87 20.00 11.05	407 257,474 1,771 11,538		
SK South East Asia Investment Pte. Ltd.	20		347,317	347,317	20.00	325,006		
Hushan Xinju (Chengdu) Venture Investment Center(Smartsource) ² Prume Social Farm, Co., Ltd.	16.67 35.52		9,747 2,188	9,747 2,752	16.67 35.52	7,970 2,221		
Wuxi xinfa IC industry park., Ltd·	30		33,289	33,288	30.00	20,952		
Magnus Private Investment Co.,Ltd	49.76		183,760	183,760	49.76	150,840		
L&S (No.10) Early Stage Ⅲ Investment Association	24.39		3,980	3,980	24.39	2,609		
SiFive Inc. ¹	7.55		17,366	43,499	7.87	34,372		
YD-SK-KDB Scocial Value Ningbo Zhongxin Venture Capital	23.26		7,180	7,180	23.26	2,566		
Partnership (Limited Partnership) 1,3 Jiangsu KVTS Semiconductor science and	7.32		3,624	3,625	-	-		
Technology Co Ltd. ³ Mirae Asset Committee Semiconductor No. 1 Startup Venture Private Equity	33		4,576	7,369	-	-		
Investment Co., Ltd. ³	29.97		3,000	3,000	-	-		
Joint venture:								
HITECH Semiconductor (Wuxi) Co., Ltd. ⁴	45		126,559	123,864	45.00	113,430		
Hystars Semiconductor (Wuxi) Co., Ltd. ⁴ Specialized Investment-type Private Equity Investment Trust For Growth Of	50.10		225,183	226,773	50.10	195,423		
Semiconductor ⁴ Specialized Investment-type Private Equity Investment Trust For Win-win System	33.33		24,602	24,603	33.33	24,818		
Semiconductor ⁴	37.50	٠,,-	29,724	29,723	37.50	14,847		
		₩_	1,328,709 W	1,410,428	₩	1,166,244		

¹ The Group is able to exercise significant influence through its right to appoint a director to the Board of Directors of each investee. Accordingly, the investments in these investees have been classified as associates.

² Management of the Group is able to exercise significant influence over the entity by participating Board of Directors. Accordingly, the investments in these investees have been classified as associates.

³Additional aquistion during the year ended December 31, 2021.

⁴ The relevant contract stipulates that important matters have to be resolved unanimously. Accordingly, the Group has classified them as joint ventures.

11. Investments in Associates and Joint Ventures, Continued

(3) Changes in investments in associates and joint ventures for years ended December 31, 2021 and 2020 are as follows :

(III IIIIIIIOIIS OI NOICAII WOII)				202	21		
		Beginning balance	Acquisition	Share of profit (loss)	Other equity movement	_Dividend	Ending balance
Stratio, Inc.	₩	407	₩ -	₩ (19)	₩ 9	₩ - ₩	397
SK China Company Limited		257,474	-	110,952	32,211	(56,650)	343,987
Gemini Partners Pte. Ltd.		1,771	-	331	134	-	2,236
TCL Fund SK South East Asia		11,538	679	889	1,352	(1,130)	13,328
Investment Pte. Ltd. Hushan Xinju (Chengdu) Venture Investment		325,006	-	(18,195)	40,506	-	347,317
Center (Smartsource) Prume Social Farm, Co.,		7,970	-	815	962	-	9,747
Ltd. Wuxi xinfa IC industry park.,		2,221	-	531	-	-	2,752
Ltd. Magnus Private Investment		20,952	9,603	(136)	2,869	-	33,288
Co., Ltd.		150,840	-	32,920	-	-	183,760
L&S (No.10) Early Stage III Investment Association		2,609	1,500	(129)	-	-	3,980
SiFive Inc.		34,372	-	8,532	595	-	43,499
YD-SK-KDB Scocial Value Ningbo Zhongxin Venture Capital Partnership		2,566	4,800	(186)	-	-	7,180
(Limited Partnership) Jiangsu KVTS		-	3,448	(67)	244	-	3,625
Semiconductor science and Technology Co Ltd. HITECH Semiconductor		-	6,832	316	221	-	7,369
(Wuxi) Co., Ltd. Hystars Semiconductor		113,430	-	17,545	9,660	(16,771)	123,864
(Wuxi) Co., Ltd. Specialized Investment-type Private Equity Investment		195,423	-	8,520	22,830	-	226,773
Trust For Growth Of Semiconductor Specialized Investment-type Private Equity Investment		24,818	-	(215)	-	-	24,603
Trust For Win-win System Semiconductor Mirae Asset Committee Semiconductor No. 1 Startup Venture Private		14,847	15,000	(124)	-	-	29,723
Equity Investment Co., Ltd.			3,000			<u> </u>	3,000
	₩	1,166,244	₩ <u>44,862</u>	₩ <u>162,280</u>	₩ <u>111,593</u>	₩ <u>(74,551)</u> ₩	1,410,428

11. Investments in Associates and Joint Ventures, Continued

(3) Changes in investments in associates and joint ventures for the years ended December 31, 2021 and 2020 are as follows, Continued:

(III Millions of Notean work	')						2	020						
		Beginning balance		Acquisition	_	Transfer		Share of profit (loss)	<u>ı</u>	Other equity novement		Dividend	_	Ending balance
Stratio, Inc.	₩	395	₩	-	₩	-	₩	19	₩	(7)	₩	-	₩	407
SK China Company Limited		259,272		-		_		5,746		(7,544)		-		257,474
Gemini Partners Pte. Ltd.		2,735		-		-		(872)		(92)		-		1,771
TCL Fund SK South East Asia		4,995		5,280		-		999		264		-		11,538
Investment Pte. Ltd. Hushan Xinju (Chengdu) Venture Investment		237,599		121,450		-		10,889		(44,932)		-		325,006
Center (Smartsource) Prume Social Farm, Co.,		5,659		2,565		-		(233)		(14)		(7)		7,970
Ltd. Wuxi xinfa IC industry		1,000		1,000		-		221		-		-		2,221
park., Ltd. Magnus Private		-		21,860		-		(86)		(822)		-		20,952
Investment Co., Ltd. L&S (No.10) Early Stage		-		207,346		-		(56,506)		-		-		150,840
III Investment														
Association		-		2,250		500		(141)		-		-		2,609
SiFive Inc. YD-SK-KDB Scocial		-		35,709		-		(880)		(457)		-		34,372
Value HITECH Semiconductor		-		1,400		1,400		(234)		-		-		2,566
(Wuxi) Co., Ltd. Hystars Semiconductor		114,518		-		-		21,241		(7,296)		(15,033)		113,430
(Wuxi) Co., Ltd. Specialized Investment- type Private Equity Investment Trust For Growth Of		142,594		69,377		-		(16,627)		79		-		195,423
Semiconductor Specialized Investment- type Private Equity Investment Trust For Win-win System		-		-		24,480		338		-		-		24,818
Semiconductor				15,000	_	_		(153)	_				_	14,847
	₩	768,767	₩	483,237	₩	26,380	₩	(36,279)	₩_	(60,821)	₩	(15,040)	₩_	1,166,244

11. Investments in Associates and Joint Ventures, Continued

(4) Associates and joint ventures' summarized statements of financial position as of December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

(III IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII								
,		December 31, 2021						
	_	Current assets	Non-current assets	Current liabilities	Non-current liabilities			
SK China Company Limited	₩	982,428 W	1,841,336 W	52,979 W	314,823			
SK South East Asia Investment Pte. Ltd.		132,551	2,841,200	411,228	-			
Magnus Private Investment Co., Ltd.		241,256	514,986	132,763	439,719			
HITECH Semiconductor (Wuxi) Co., Ltd.		279,304	357,074	129,193	225,942			
Hystars Semiconductor (Wuxi) Co., Ltd.		176,141	580,937	20,139	287,473			

,		December 31, 2020						
		Current assets	Non-current assets		Current liabilities		Non-current liabilities	
SK China Company Limited	₩	380,413 W	1,706,634	₩	51,485	₩	308,147	
SK South East Asia Investment Pte. Ltd. Magnus Private Investment		797,045	1,672,412		67		-	
Co Ltd.		175.007	522,600		85,754		461,012	
HITECH Semiconductor		208.103	380.648		129.135		203,246	
(Wuxi) Co., Ltd. Hystars Semiconductor		200, 103	300,040		129,133		203,240	
(Wuxi) Co., Ltd.		89,629	555,551		31,557		226,732	

11. Investments in Associates and Joint Ventures, Continued

(5) Associates and joint ventures' summarized statements of comprehensive income (loss) for the years ended December 31, 2021 and 2020 are as follows:

(III IIIIIII OII O OI I (OI O OII I WOII)								
	2021				2020			
_			Profit (loss) for				Profit (loss) for	
	Revenue		the year		Revenue		the year	
SK China Company Limited W	80,178	₩	935,034	W	154,355	₩	48,427	
SK South East Asia Investment								
Pte. Ltd.	9,937		(90,977)		9,467		54,448	
Magnus Private Investment								
Co., Ltd.	615,954		32,920		164,662		(56,505)	
HITECH Semiconductor								
(Wuxi) Co., Ltd.	636,882		40,309		622,653		51,871	
Hystars Semiconductor							(00 (00)	
(Wuxi) Co., Ltd.	72,220		17,005		-		(33,188)	

12. Long-term Investment Assets

(1) Details of long-term investment assets as of December 31, 2021 and 2020 are as follows:

(In millions of Korean won)	De	December 31, 2020		
	Ownership (%)/	Acquisition		Book
	Туре	cost	value	value
ProMOS Technologies Inc.	Equity securities	₩ 21,847	7 ₩ - ₩	-
Intellectual Discovery	Equity securities	4,000	2,005	2,182
China Walden Venture Investments II, L.P.	Certificate	8,457	7 12,671	10,965
China Walden Venture Investments III, L.P.	Certificate	7,53 ⁻	10,561	7,085
BCPE Pangea Intermediate Holdings Cayman, L.P. ¹	Certificate	2,765,924	3,828,182	3,595,494
BCPE Pangea Cayman2, Ltd. ¹	Convertible bond	1,283,09	5 2,519,355	2,351,225
FemtoMetrix, Inc.	Equity securities	4,387	4,742	4,387
GigalO Networks, Inc.	Equity securities	4,066	3,242	3,103
Shanghai IoT Phase II Venture Capital Fund Partnership, L.P	Certificate	6,812	17,961	13,262
Beijing Horizon Robotics Technology Co., Ltd.	Equity securities	55,09 ⁻	61,577	56,190
Shanghi Sitrus Microelectronics Technology Co., Ltd.	Equity securities	5,254	3,172	1,314
Jiangsu Jiequan Junhai Rongxin Investment Partnership	Certificate	52,443	3 54,161	20,035
Impact Venture Capital I, L.P.	Certificate	5,08	8,082	5,881
AutoTech Fund I, L.P.	Certificate	4,294	4,875	3,840
TransLink Capital Partners IV, L.P.	Certificate	4,357	4,683	3,563
NuVolta Technologies (Hefei) Co., Ltd.	Equity securities	12,420	12,327	_
Global Power Technology (Beijing) Co., Ltd.	Certificate	12,420	13,038	-
Chipone Technology (Beijing) Co., Ltd.	Certificate	14,194	14,901	-
Hubei Sinophorus Electronic MATERIALS Co., Ltd.	Certificate	8,517	8,940	-
Others	-	76,680	81,038	61,101
		₩ 4,356,874	¥ ₩ 6,665,513 ₩	6,139,627

In 2017, the Group participated in a consortium that includes Bain Capital in connection with acquisition of a stake in Toshiba Memory Corporation ("TMC"). On March 1, 2019 Toshiba Memory Holdings Corporation ("TMCHD") was established as the holding company for TMC. Subsequently TMCHD and TMC were renamed KIOXIA Holdings Corporation ("KIOXIA") and KIOXIA Corporation, respectively. As of December 31, 2021, the Group holds equity interests in SPC1, which holds equity interests in KIOXIA, and convertible bonds issued by SPC2, which may be later convertible to 15% stake in KIOXIA. Management and decision-making rights of the Group for SPC1 and SPC2 are limited. Accordingly, the Group does not control or have any significant influence on SPC1 and SPC2. The investments in SPC1 and SPC2 are classified as financial assets which are debt instruments measured at fair value through profit or loss.

12. Long-term Investment Assets, Continued

(2) Changes in the carrying amount of long-term investment assets for the years ended December 30, 2021 and 2020 are as follows:

(In millions of Korean won)

	2021		2020
Beginning balance	6,139,627	₩	4,381,812
Acquisition	131,634		95,332
Disposal	(12,631)		(706)
Gain on valuation	524,409		1,733,783
Foreign exchange difference	(117,526)		(44,214)
Transfer ¹	-		(26,380)
Ending balance	6,665,513	₩	6,139,627

¹ Certain long-term invenstment assets were transferred to associates and joint venture.

13. Property, Plant and Equipment

(1) Changes in property, plant and equipment for the years ended December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

2021 Construction **Vehicles** Land **Buildings Structures** Machinery Others -in-progress Total Beginning balance 971,606 7,018,249 1,812,107 26,491,042 40,557 724,825 4,172,176 W 41,230,562 Changes during 2021 Acquisitions 22,031 223,588 283,158 8,558,128 249 208,926 4,073,975 13,370,055 **Business combination** 1,410,039 30,378 5,044,352 5,136 362,935 6,852,840 (19,576) (6,250)Disposals (55)(2,005)(26)(11, 137)(103)Depreciation (291,053)(131,213)(8,822,372)(3,349)(288.709)(9,536,696)Transfers1 147,905 110,006 36,117 1,815,099 75,229 (2,144,401)39,955 Exchange differences and others 98,897 66,449 866,594 16,490 44,594 1,097,130 4,070 36 37,493 741,794 **Ending balance** 1,145,557 8,567,721 2,096,970 33,941,706 6,503,029 53,034,270 Acquisition cost 1,145,557 10,364,089 2,933,606 90,191,998 49,126 2,323,722 6,503,029 113,511,127 Accumulated depreciation (1,756,215)(817,532)(56,080,096)(11,627)(1,581,899)(60,247,369)Accumulated impairment (162,535)(205, 361)(23,699)(19,104)(23)Government grants (7,661)(24, 127)(16,454)(6)(6)W 1,145,557 8,567,721 2,096,970 33,941,706 37,493 741,794 6,503,029 W 53,034,270

¹ Included transfers between investment property and property, plant and equipment during the year ended December 31, 2021.

13. Property, Plant and Equipment, Continued

(1) Changes in property, plant and equipment for the years ended December 31, 2021 and 2020 are as follows, Continued:

(In millions of Korean won)

		2020							
	-	Construction							
		Land	Buildings	Structures	Machinery	Vehicles	Others	-in-progress	Total
Beginning balance	W	1,041,771	5,547,744	1,619,064	26,974,270	43,096	764,043	3,959,952 W	39,949,940
Changes during									
2020									
Acquisitions		38,075	476,831	284,113	6,044,813	55	192,353	3,012,558	10,048,798
Disposals		(9,231)	(327)	(73)	(17,095)	-	(884)	(37,850)	(65,460)
Depreciation		-	(233,909)	(114,307)	(7,888,654)	(3,351)	(274,913)	-	(8,515,134)
Transfers1		(96,096)	1,222,639	21,076	1,367,213	753	45,476	(2,767,284)	(206,223)
Exchange differences									
and others		(2,913)	5,271	2,234	10,495	4	(1,250)	4,800	18,641
Ending balance		971,606	7,018,249	1,812,107	26,491,042	40,557	724,825	4,172,176	41,230,562
	-								
Acquisition cost		971,606	8,459,016	2,494,982	74,141,182	48,860	2,045,915	4,172,176	92,333,737
Accumulated		•							
depreciation		-	(1,401,792)	(663,771)	(47,485,857)	(8,292)	(1,321,067)	-	(50,880,779)
Accumulated			,	,	,	, ,	,		,
impairment		_	(23,699)	(19,104)	(162,276)	_	(23)	_	(205, 102)
Government grants		-	(15,276)	-	(2,007)	(11)	-	-	(17,294)
•	₩	971,606	7,018,249	1,812,107	26,491,042	40,557	724,825	4,172,176 W	41,230,562

¹ Included transfers between investment property and property, plant and equipment during the year ended December 31, 2020.

(2) Details of depreciation expense allocation for the years ended December 31, 2021 and 2020 are as follows:

(In millions of Korean won)		2021		2020
Cost of sales	₩	8,743,316	₩	7,749,569
Selling and administrative expenses		701,532		725,791
Other expenses		11,662		7,418
Development costs and other		80,186		32,356
	₩	9,536,696	₩	8,515,134

⁽³⁾ Certain property, plant and equipment are pledged as collaterals for borrowings of the Group as of December 31, 2021 (Note 35).

⁽⁴⁾ The Group capitalized borrowing costs amounting to ₩55,876 million (2020: ₩53,311 million) on qualifying assets during the year ended December 31, 2021. Borrowing costs were calculated using a capitalization rate of 2.47% (2020: 1.93%) for the year ended December 31, 2021.

13. Property, Plant and Equipment, Continued

(5) Details of insured assets as of December 31, 2021 are as follows:

(In millions of Korean won)		Insured		
	Insured assets		amount	Insurance Company
Package insurance	Property, plant and equipment; investment property; inventories; and business interruption	₩	125,475,697	Hyundai Marine & Fire Insurance Co., Ltd.
Fire insurance	Property, plant and equipment; investment property		78,912	and others
Erection all risks insurance	Property, plant and equipment		8,312,352	
		₩	133,866,961	

In addition to the assets stated above, vehicles are insured by vehicle comprehensive insurance and liability insurance.

(6) The Group provides certain property, plant, and equipment as operating leases. Rental income from the property, plant and equipment during the year ended December 31, 2021 are \text{\text{\text{W}}14,699 million} (2020: \text{\text{\text{\text{W}}27,737 million}}).

14. Leases

- (1) Leases as lessee
- (a) Changes in right-of-use assets for the years ended December 31, 2021 and 2020 are as follows

		2021							
		Properties	Structures	Machinery	Vehicles	Others	Total		
Beginning balance	W	111,860	1,048,208	504,539	18,207	24,831 W	1,707,645		
Increase		57,663	13,958	85,791	9,002	55	166,469		
Business Combination		48,933	-	580	_	-	49,513		
Others		3,037	(10,879)	(67,812)	(2,795)	1,876	(76,573)		
Depreciation		(31,904)	(86,716)	(179,536)	(10,197)	(15,743)	(324,096)		
Foreign									
exchange difference		10,885	58,106	3,791	240	1,364	74,386		
Ending balance		200,474	1,022,677	347,353	14,457	12,383	1,597,344		
Acquisition cost		278,367	1,250,828	670,345	29,996	35,101	2,264,637		
Accumulated depreciation		(43,921)	(228,151)	(322,992)	(15,539)	(22,718)	(633,321)		
Government grants		(33,972)	-	-	-	-	(33,972)		
	₩	200,474	1,022,677	347,353	14,457	12,383 W	1,597,344		

14. Leases, Continued

- (1) Leases as lessee, Continued
- (a) Changes in right-of-use assets for the years ended December 31, 2021 and 2020 are as follows, Continued:

(In millions of Korean won)

T-4-1
Total
1,706,658
284,466
9,978
(296,218)
2,761
1,707,645
2,261,886
(522,994)
(31,247)
1,707,645
- :

(b) Changes in lease liabilities for the years ended December 31, 2021 and 2020 are as follows.

		2021		2020
Beginning balance	W	1,643,716	₩	1,666,999
Acquisition		166,469		284,466
Business combination		582		-
Others		(76,580)		9,389
Interest expenses		32,410		34,435
Payments		(333,434)		(326,665)
Foreign exchange difference		92,599		(24,908)
Ending balance	W _	1,525,762	₩	1,643,716

14. Leases, Continued

(c) The details of the minimum lease payment to be paid in the future for each period in connection with lease liabilities, present value and current/non-current classification of lease liabilities as of December 31, 2021 are as follows:

(In millions of Korean won)

		2021
Less than 1 year	₩	323,145
1~5 years		693,883
More than 5 years		604,977
Total lease liabilities undiscounted as of December 31, 2021		1,622,006
Present value of lease liabilities recognized as of December 31, 2021		1,525,762
Current lease liabilities		302,059
Noncurrent lease liabilities		1,223,703

(d) The amounts recognized in profit or loss in relation to right-of-use assets and lease liabilities for the years ended December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

		2021		2020
Depreciation of right-to-use assets	₩	324,096	₩	296,218
Interest expenses of lease liabilities		32,410		34,435
Expenses relating to short-term leases		29,389		17,911
Expenses relating to leases of low-value assets		1,741		1,733

The total cash outflow from leases during the year ended December 31, 2021 is \W364,564 million (2020: \W346,309 million).

(2) Leases as lessor

The Group provides certain property, plant, and equipment and investment property as leases (See note 13,16). All leases are classified as operating leases.

Details of the undiscounted operating lease payments to be received in the future periods subsequent to December 31, 2021 are as follows:

		Property, Plant and Equipment	Investment Property	Total
Less than 1 year	₩	12,458	14,650	27,108
1~2 years		3,948	14,547	18,495
2~3 years		<u> </u>	14,438	14,438
	₩	16,406	43,635	60,041

15. Intangible Assets

(1) Changes in intangible assets for the years ended December 31, 2021 and 2020 are as follows:

(In millions of Korean won)				2021			
,	-	Goodwill	Industrial property rights	Development costs	Others		Total
Beginning balance	W	701,596	86,127	597,930	2,014,625	w -	3,400,278
Changes during 2021	• •	,	00,	33.,333	2,0 : :,020	• •	0, 100,210
Internal development		_	_	362,863	_		362,863
External acquisition		-	11,336	-	549,344		560,680
Business combination		829,610	-	-	727,973		1,557,583
Disposals		-	(2,194)	-	(13,484)		(15,678)
Amortization		-	(16,831)	(369,650)	(409,452)		(795,933)
Impairment		-	-	(43,069)	(723)		(43,792)
Transfers		-	9,958	-	(6,466)		3,492
Others	_	24,303			11,336	_	35,639
Ending balance	_	1,555,509	88,396_	548,074	2,873,153	_	5,065,132
Acquisition cost		1,555,509	210,878	3,548,213	4,351,279		9,665,879
Accumulated amortization							
and impairment	_	-	(122,482)	(3,000,139)	(1,478,126)	_	(4,600,747)
	₩ _	1,555,509	88,396	548,074	2,873,153	₩	5,065,132

(In millions of Korean won)				2020		
	_	Goodwill	Industrial property rights	Development costs	Others	Total
Beginning balance	₩	720,197	85,724	931,788	833,340 ¥	¥ 2,571,049
Changes during 2020						
Internal development		-	-	259,020	-	259,020
External acquisition		-	13,693	-	412,524	426,217
Disposals		-	(3,782)	-	(8,504)	(12,286)
Amortization		-	(16,001)	(576,334)	(368,215)	(960,550)
Impairment		-	-	(16,544)	-	(16,544)
Transfers		-	6,493	-	(9,720)	(3,227)
Others ¹	_	(18,601)			1,155,200	1,136,599
Ending balance	_	701,596	86,127	597,930	2,014,625	3,400,278
	_					
Acquisition cost		701,596	195,637	3,185,403	3,110,632	7,193,268
Accumulated amortization						
and impairment		-	(109,510)	(2,587,473)	(1,096,007)	(3,792,990)
	W	701,596	86,127	597,930	2,014,625 ¥	₹ 3,400,278
	_					

¹ Others include reclassification of license assets and increase/decrease due to foreign exchange difference is included

(2) Details of amortization expense allocation for the years ended December 31, 2021 and 2020 are as follows:

(In	millions	of	Korean	won)
,,,,	11111110113	\mathbf{v}	Norcan	WUII	

		2021		2020
Cost of sales	₩	248,920	₩	219,851
Selling and administrative expenses		545,405		739,247
Development costs		1,608		1,452
	₩	795,933	₩	960,550

15. Intangible Assets, Continued

(3) Goodwill impairment tests

The Group performs goodwill impairment tests annually. For the purpose of impairment tests, goodwill is allocated to CGU. The recoverable amount of the CGU as of December 31, 2021 was determined based on fair value less costs to sell, which was determined based on the amount using the current stock price as of December 31, 2021. No impairment loss of goodwill was recognized since the recoverable amount is higher than the carrying value of the CGU as of December 31, 2021.

(4) Details of development costs

(a) Detailed criteria for capitalization of development costs

The Group's development projects for a new product proceeds in the process of review and planning phases (Phase $0 \sim 4$) and product design and pre-mass production phases (Phase $5 \sim 8$). The Group recognizes expenditures incurred after Phase 4 in relation with the development for new technology is recognized as an intangible asset. Expenditures incurred at phase 0 through 4 are recognized as expenses.

(b) Development cost capitalized and expenses on research and development Among costs associated with development activities, W362,863 million (2020: W259,020 million) that met capitalization criteria, were capitalized as development cost for the year ended December 31, 2021. In addition, costs associated with research activities and other development expenditures that did not meet the criteria in the amount of W3,551,197 million (2020: W3,111,298 million) were recognized as expenses for the year ended December 31, 2021.

15. Intangible Assets, Continued

- (4) Details of development costs, Continued
- (c) Details of development costs as of December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

2021 **Book value** Residual amortization period **DRAM** ₩ 99,307 18 months 5,624 **NAND** 260,896 6~19 months 147,842 1 CIS 34,405 548,074

		2020)
		Book value	Residual amortization period
DRAM	₩	46,995	11 months
		60,549	1
NAND		296,317	18 months
		124,328	1
CIS		43,883	2~12 months
		25,858	1
	₩	597,930	
		•	

¹ Amortization has not started as of December 31, 2020

¹ Amortization has not started as of December 31, 2021

⁽d) The Group recognized W43,069 million (2020: W16,544 million) impairment loss in development costs for the year ended December 31, 2021.

16. Investment Property

(1) Changes in investment property for the years ended December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

(III Tillillotts of Noteur Worl)		2021	2020
Beginning net book amount	₩	209,417 W	258
Depreciation		(1,773)	(291)
Transfer ¹		(43,447)	209,450
Ending net book amount		164,197	209,417
Acquisition cost		170,549	249,135
Accumulated depreciation		(6,352)	(39,718)
	₩	164,197 W	209,417

¹ Certain property, plant and equipment was transferred to invenstment property during the year ended December 31, 2021 and certain investment property was transferred to property, plant and equipment during the year ended December 31, 2020.

- (2) The depreciation expense of \(\psi 1,773 \) million was charged to cost of sales for the year ended December 31, 2021 (2020: \(\psi 291 \) million).
- (3) Rental income from investment property during the year ended December 31, 2021 was ₩14,759 million (2020: ₩1,235 million).

17. Other Payables

Details of other payables as of December 31, 2021 and 2020 are as follows:

Current	_	December 31, 2021	December 31, 2020
	W	5,702 W	
Rent deposits payable	₩	•	4 007 400
Accrued expenses	_	2,272,614	1,367,193
	_	2,278,316	1,367,193
Non-current			
Rent deposits payable		8,690	6,360
Long-term accrued expenses		23,743	23,563
		32,433	29,923
	₩	2,310,749 W	1,397,116

18. Borrowings

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

(In millions of Korean won)		2021		2020
Current	_		-	
Short-term borrowings	₩	233,199	₩	179,579
Current portion of long-term borrowings		2,087,796		2,604,724
Current portion of debentures		559,768		329,947
		2,880,763	-	3,114,250
Non-current	_		-	
Long-term borrowings		7,529,063		4,526,968
Debentures		7,213,983		3,610,430
	_	14,743,046	-	8,137,398
	₩ _	17,623,809	₩	11,251,648

(2) Details of short-term borrowings as of December 31, 2021 and 2020 are as follows:

	Financial Institutions	Maturity date	Interest rate per annum in 2021 (%) ¹		2021	_	2020
Local currency							
borrowings: General borrowings	Shinhan Bank	2021.09.27	-	₩	-	₩	4,000
•	Cypress	2021.12.31	-		-		6,924
	Industrial & Commercial Bank of China	2021.01.20	-		-		32,682
Foreign	China Construction Bank and others	2021.02.26	-		-		76,258
currency borrowings:	City Bank	2021.07.14 ~ 2022.11.17	1M USD LIBOR +0.55		38,860		59,715
General borrowings	China Merchants Bank	2022.01.21 ~ 2022.09.27	3M USD Libor +0.55 ~ 1.90		58,370		-
Ū	Bank of China	2022.09.07 ~ 2022.12.10	3M USD Libor +1.18 ~ 1.20		57,150		-
	Hystars Semiconductor (Wuxi) Co., Ltd.	2022.03.21 ~ 2022.05.13	4.15 ~ 5.10		78,819		-
				W	233,199	₩	179,579

18. Borrowings, Continued

(3) Details of long-term borrowings as of December 31, 2021 and 2020 are as follows:

(In millions of Korean won)	Financial institutions	Maturity date	Interest rate per annum in 2021 (%) ¹	2021		2020
Local currency borrowings:						
Funds for equipment	Korea Development Bank	2021.09.29 ~	1.98 ~ 2.50			
		2025.04.14		₩ 475,000	₩	725,000
	The Export-Import Bank of	2022.10.23 ~	1.31 ~ 2.00			
	Korea	2025.05.15		600,000		600,000
	Shinhan Bank and others	2025.03.31 ~	1.00 ~ 3.08			
		2028.04.09		5,105		3,573
Commercial Paper	Shinhan Bank General	2023.11.20	CD(91 days) +			
	Finance Department		0.67	300,000		300,000
				1,380,105		1,628,573
Foreign currency borrowings:						
General borrowings	The Export-Import Bank of Korea	2021.05.31	-	_		843,408
	The Export-Import Bank of	2023.02.03	3M USD LIBOR +			,
	Korea		1.30	118,550		108,800
	China Development Bank	2023.05.26 ~	3M USD LIBOR +			
	•	2023.11.25	1.00	184,068		212,432
Funds for equipment	The Export-Import Bank of	2021.02.25~	3M USD LIBOR +			
	Korea	2026.04.28	0.95~1.40	414,925		244,800
	The Export-Import Bank of	2022.03.28	3M USD LIBOR +			
	Korea		1.31	296,884		272,349
	Korea Development Bank	2026.10.02	3M USD LIBOR +			
			1.10	592,750		544,000
	China Bank	2022.11.28 ~	3M USD LIBOR +			
		2025.04.18	0.80~ 1.70	415,877		187,376
	Industrial & Commercial	2027.12.21	3M USD LIBOR +			
	Bank of China and others		1.65	237,508		-
Syndicated loan	Korea Development Bank	2025.12.29	3M USD LIBOR +			
	and others		1.10	2,371,000		-
		2027.12.28	3M USD LIBOR +			
			1.25	1,185,500		-
	Industrial & Commercial	2024.04.24	3M USD LIBOR +			
	Bank of China and others		1.65	2,337,965		3,097,974
				8,155,027		5,511,139
Collateralized borrowings						
Collateralized borrowings	Macquarie Finance Korea	2024.03.22	4.17	103,910		-
	Co., Ltd.	2024.04.26	7.85	11,747		
				115,657		_
				9,650,789		7,139,712
Less: Current portion				(2,087,796)		(2,604,724)
Less: Present value discount				(33,930)		(8,020)
				₩ 7,529,063	₩	4,526,968

¹ As of December 31, 2021, the annual interest rates are as follows:

Type	Interest rate per annum as of December 31, 2021
1M USD LIBOR	0.11
3M USD LIBOR	0.21
CD(91 Days)	1.29

18. Borrowings, Continued

(4) Details of debentures as of December 31, 2021 and 2020 are as follows:

(In millions of Korean won)		Interest rate per			
	Maturity date	annum in 2021 (%)		2021	2020
Unsecured notes in local currency:					
Unsecured corporate bonds 214-2nd	2022.08.26	2.63	₩	140,000 W	140,000
Unsecured corporate bonds 215-3rd	2022.11.25	2.75		10,000	10,000
Unsecured corporate bonds 216-2nd	2021.02.19	-		-	180,000
Unsecured corporate bonds 216-3rd	2023.02.19	2.53		80,000	80,000
Unsecured corporate bonds 217-2nd	2021.05.27	-		-	150,000
Unsecured corporate bonds 218th	2023.03.14	3.01		300,000	300,000
Unsecured corporate bonds 219-1st	2023.08.27	2.48		250,000	250,000
Unsecured corporate bonds 219-2nd	2025.08.27	2.67		90,000	90,000
Unsecured corporate bonds 220-1st	2022.05.09	1.96		410,000	410,000
Unsecured corporate bonds 220-2nd	2024.05.09	1.99		200,000	200,000
Unsecured corporate bonds 220-3rd	2026.05.09	2.17		120,000	120,000
Unsecured corporate bonds 220-4th	2029.05.09	2.54		250,000	250,000
Unsecured corporate bonds 221-1st	2023.02.14	1.61		340,000	340,000
Unsecured corporate bonds 221-2nd	2025.02.14	1.72		360,000	360,000
Unsecured corporate bonds 221-3rd	2027.02.14	1.93		130,000	130,000
Unsecured corporate bonds 221-4th	2030.02.14	2.21		230,000	230,000
Unsecured corporate bonds 222-1st	2030.11.10	2.33		70,000	70,000
Unsecured corporate bonds 222-2nd	2035.11.10	2.73		100,000	100,000
Unsecured corporate bonds 223-1st	2024.04.12	1.51		550,000	-
Unsecured corporate bonds 223-2nd	2026.04.13	1.89		360,000	-
Unsecured corporate bonds 223-3rd	2028.04.13	2.11		80,000	-
Unsecured corporate bonds 223-4th	2031.04.13	2.48		190,000	-
				4,260,000	3,410,000
Unsecured notes in foreign currency:					
Unsecured global bonds 9th	2024.09.17	3.00		592,750	544,000
Unsecured global bonds 10-1st	2024.01.19	1.00		592,750	-
Unsecured global bonds 10-2nd	2026.01.19	1.50		1,185,500	-
Unsecured global bonds 10-3rd	2031.01.19	2.38		1,185,500	
			_	3,556,500	544,000
			_	7,816,500	3,954,000
Less: Discounts on debentures			-	(42,749)	(13,623)
Less: Current portion				(559,768)	(329,947)
			₩	7,213,983 W	3,610,430

19. Other Current and Non-current Liabilities

Details of other current and non-current liabilities as of December 31, 2021 and 2020 are as follows:

(In millions of Korean won)		December 31, 2021		December 31, 2020
Current	•		_	
Advance receipts	₩	22,158	₩	13,006
Unearned income		486		404
Withholdings		134,811		67,043
Deposits received		-		14,063
Contract liabilities		125,414		96,378
Others		11,911		6,501
		294,780	-	197,395
Non-current	•		-	
Other long-term employee benefits		94,005		94,026
Long-term advance receipts		-		4,901
Others		1		-
		94,006	-	98,927
	₩	388,786	₩	296,322

20. Provisions

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

(In millions of Korean won)

		Beginning			Ending	
		Balance	Increase	Utilization	Balance	
Warranty	₩	3,015 ₩	26,482	№ (26,170) ₩	3,327	
Emission allowances		10,782	5,785	(9,727)	6,840	
	₩	13,797 W	32,267	₩ (35,897) ₩	10,167	

(In millions of Korean won)

		Beginning					Ending
		Balance		Increase		Utilization	Balance
Warranty	₩	4,081	₩	1,087	₩	(2,153) ₩	3,015
Emission allowances		6,620		13,070		(8,908)	10,782
	₩	10,701	W	14,157	₩	(11,061) W	13,797

(2) Provisions for warranty

The Group estimates the expected warranty costs based on historical results and records provisions for warranty.

(3) Provisions for legal claims

The Group recognizes provisions for legal claims when the Group has a present legal or constructive obligation as a result of past events and an outflow of resources required to settle the obligation is probable and the amount can be reliably estimated.

20. Provisions, Continued

(4) Provision for emission allowances

The Group recognizes estimated future payment for the number of emission certificates required to settle the Group's obligation exceeding the actual number of certificates on hand as emission allowances according to the Act on Allocation and Trading of Greenhouse Gas Emission Permits.

(a) Details of the allocated amount of emission permits as of the second and third compliance periods are as follows:

(In ten thousand tons CO2-eq)

	The second compliance period (2018 - 2020)	The					
	2020	2021	2022	2023	2024	2025	Total
Allocated emission permits	476	505	505	505	505	505	2,525

(b) Changes in the emission permits rights for the year ended December 31, 2021 are as follows:

(In ten thousand tons CO2-eq)

	2021
Beginning balance	-
Allocated	476
Purchase	60
Submission	(536)
Ending balance	-

(c) The estimated volume of emission made by the Group is 5.18 million tons as of December 31, 2021.

21. Defined Benefit Liabilities

Under the defined benefit plan, the Group pays employee benefits to retired employees in the form of a lump sum based on their salaries and years of service at the time of their retirement. Accordingly, the Group is exposed to a variety of actuarial assumption risks such as risk associated with expected years of service, interest risk, and market (investment) risk.

(1) Details of defined benefit liabilities as of December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

		December 31, 2021		December 31, 2020
Present value of defined benefit obligations	₩	2,392,020	₩	2,169,154
Fair value of plan assets		(2,819,782)		(2,228,377)
Net defined benefit liabilities	₩	(427,762)	₩	(59,223)
Defined benefit liabilities	•	1,200	-	2,739
Defined benefit assets ¹		(428,962)		(61,962)

¹ The Parent Company and certain subsidiaries' fair value of plan assets in excess of the present value of defined benefit obligations amounted to ₩428,962 million and ₩61,962 million as of December 31, 2021 and 2020 are presented as defined benefit assets.

(2) Principal actuarial assumptions as of December 31, 2021 and 2020 are as follows:

	December 31, 2021	December 31, 2020
	(%)	(%)
Discount rate for defined benefit obligations	2.50 ~ 4.01	1.96 ~ 3.56
Expected rate of salary increase	3.00 ~ 5.52	3.00 ~ 5.51

- (3) Weighted average durations of defined benefit obligations as of December 31, 2021 and 2020 are 11.76 and 11.77 years, respectively.
- (4) Changes in defined benefit obligations for the years ended December 31, 2021 and 2020 are as follows:

(III millions of Notean worl)		2021	2020
Beginning balance	₩	2,169,154 W	1,936,868
Current service cost		256,867	250,098
Past service cost		(2,199)	(714)
Interest expense		74,615	65,002
Transfer from associates		(2,763)	(2,205)
Remeasurements:		(13,956)	(25,036)
Demographic assumption		(292)	39,198
Financial assumption		(123,677)	(35,429)
Adjustment based on experience		110,013	(28,805)
Benefits paid		(89,784)	(54,824)
Effect of movements in exchange rates		86	(35)
Ending balance	₩	2,392,020 W	2,169,154

21. Defined Benefit Liabilities, Continued

(5) Changes in plan assets for the years ended December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

		2021	2020
Beginning balance	₩	2,228,377 ₩	1,886,650
Contributions		641,680	355,664
Interest income		76,607	62,834
Transfer from associates		56	231
Benefits paid		(94,276)	(53,588)
Remeasurements		(32,695)	(23,373)
Foreign exchange differences		33	(41)
Ending balance	₩	2,819,782 ₩	2,228,377

(6) The amounts recognized in profit or loss for the years ended December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

		2021		2020
Current service cost	₩	256,867	₩	250,098
Past service cost		(2,199)		(714)
Net interest expense		(1,993)		2,168
	₩ _	252,675	₩	251,552

(7) The amounts in which defined benefit plan related expenses are included for the years ended December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

		2021		2020
Cost of sales	₩	137,401	₩	135,999
Selling and administrative expenses		115,274		115,553
	₩	252,675	₩	251,552

(8) Details of plan assets as of December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

		2021	2020
Deposits	₩	2,818,634	₩ 2,227,196
Others		1,148	1,181
	₩	2,819,782	₩ 2,228,377

Actual return on plan assets for the years ended December 31, 2021 and 2020 amounted to \text{\$\psi 43,915\$ million and \$\psi 32,645\$ million, respectively.

(9) As of December 31, 2021, the Group funded defined benefit obligations through insurance plans with Mirae Asset Life Insurance Co., Ltd. and other insurance companies. The Group's reasonable estimation of contribution to the plan assets for the year ending December 31, 2021 is \text{\$\psi\$}552,999 million under the assumption that the Group maintains the defined benefit plan.

21. Defined Benefit Liabilities, Continued

(10) The sensitivity analysis of the defined benefit obligations as of December 31, 2021 to changes in the principal assumptions is as follows:

(In millions of Korean won)

		Effects on defined b	penefit obligation
		Increase of rate	Decrease of rate
Discount rate (if changed by 1%)	₩	(246,053)	289,318
Expected rate of salary increase (if changed by 1%)		289,527	(250,644)

The sensitivity analysis above was calculated under the assumption that other assumptions were constant. The sensitivity of defined benefit liabilities to changes in major actuarial assumptions was calculated using the same predictive unit approach used to calculate defined benefit liabilities recognized in the statement of financial position.

(11) Information about the maturity profile of the defined benefit obligation as of December 31, 2021 is as follows:

(In millions of Korean won)

	L	ess than		More than			
		1 year	2 - 5 years	6 - 10 years	11 years	Total	
Benefits paid	₩	77,628	517,474	1,218,062	9,659,470	11,472,633	

Information about the maturity profile is based on the undiscounted and vested amount of defined benefit obligation as of December 31, 2021, and classified by employee's expected years of remaining services.

(12) The Group adopted defined contribution plan for retirement benefit for employees subject to peak wage system. Contributions to defined contribution plans amounting to \(\psi_3,040\) million (2020: \(\psi_931\) million) was expensed for the year ended December 31, 2021.

22. Deferred Income Tax

(1) Changes in deferred income tax assets and liabilities for the years ended December 31, 2021 and 2020 without taking into consideration the offsetting of balances within the same tax authority, are as follows:

	2021						
	_	Beginning	Profit or loss	Equity	Foreign exchange differences		Ending
Inventories, net	₩	123,341	(18,116)	-	483	₩	105,708
Property, plant and equipment, net Defined benefits liabilities,		436,672	(112,254)	-	45,394		369,812
net		(1,876)	(112,888)	5,028	(6)		(109,742)
Short-term and long-term investment assets and others		(542,300)	(130,663)	_	_		(672,963)
Employee benefits		59,471	(2,946)	_	6		56,531
Provisions		(9,441)	(18,471)	_	50		(27,862)
Other assets and other liabilities		19,378	7,939	_	(172)		27,145
Accrued expenses		100,714	23,851	_	()		124,565
Others		11,815	1,994	_	1,043		14,852
Deferred tax assets for temporary differences, net Tax credit carryforwards	_	197,774	(361,554)	5,028	46,798	_	(111,954)
recognized		3,899	227	_	331		4,457
Tax loss carryforwards recognized	_	87,881	(24,771)	<u>-</u>	6,636	_	69,746
Deferred tax assets recognized, net	₩_	289,554	(386,098)	5,028	53,765	₩_	(37,751)

22. Deferred Income Tax, Continued

(1) Changes in deferred income tax assets and liabilities for the years ended December 31, 2021 and 2020 without taking into consideration the offsetting of balances within the same tax authority, are as follows; Continued:

(In millions of Korean won)

		2020					
	_	Beginning	Adjustment	Profit or loss	Equity	Foreign exchange differences	Ending
Inventories, net	₩	176,742	-	(52,937)	-	(464) W	123,341
Property, plant and equipment, net Defined benefits		208,478	27,188	201,165	-	(159)	436,672
liabilities, net		7,756	-	(9,798)	169	(3)	(1,876)
Short-term and long-term investment assets and							
others		(27,555)	-	(514,745)	-	-	(542,300)
Employee benefits		46,537	-	12,936	-	(2)	59,471
Provisions		3,589	-	(13,006)	-	(24)	(9,441)
Other assets and other liabilities		11,629	-	7,632	-	117	19,378
Accrued expenses		92,408	-	8,306	-	-	100,714
Others		14,681	-	(2,410)	-	(456)	11,815
Deferred tax assets for temporary differences,	_						
net		534,265	27,188	(362,857)	169	(991)	197,774
Tax credit carryforwards recognized		6,251	-	(2,192)	-	(160)	3,899
Tax loss carryforwards recognized		117,381	-	(24,561)	-	(4,939)	87,881
Deferred tax assets recognized, net	₩	657,897	27,188	(389,610)	169	(6,090) W	289,554

(2) As of December 31, 2021 and 2020, the temporary differences that are not recognized as deferred tax assets (liabilities) are as follows:

(In millions of Korean won)		December 31, 2021		December 31, 2020
Investments in subsidiaries, associates, and joint ventures and others	10/	2.843.394	₩	2.637.294
Deductible temporary differences Taxable temporary differences	₩	(3,334,324)	**	(3,130,362)
randolo temperary amereness	_	(490,930)	_	(493,068)
Deductible temporary differences and others	_	5,304		12,790

22. Deferred Income Tax, Continued

(3) Details of period when the deferred income tax assets (liabilities) are recovered (settled) as of December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

	December 31, 2021	December 31, 2020
Deferred income tax assets to be recovered after more than 12 months 4	√ 1,322,134 ₩	1,410,835
Deferred income tax assets to be recovered within 12 months	275,415	142,651
Deferred income tax assets recognized	1,597,549	1,553,486
Deferred income tax liabilities to be recovered after more than 12 months	(1,634,805)	(1,263,264)
Deferred income tax liabilities to be settled within 12 months	(495)	(668)
Deferred income tax liabilities recognized	(1,635,300)	(1,263,932)
Net income deferred tax assets (liabilities) recognized	√ (37,751) W	289,554

23. Derivative Financial Instruments

- (1) Cross currency and interest rate swap
- (a) Details of derivative financial instruments applying cash flow hedge accounting as of December 31, 2021 are as follows:

(In thousands of foreign currencies)

Hedged items Hedging instrume			dging instruments		
Borrowing date	Financial instrument	Hedged risk	Type of contract	Financial institution	Contract period
2019.09.17	Foreign currency denominated bond with fixed rate (Par value: USD 500,000)	Foreign currency risk	Fixed-to-fixed cross currency swap	Kookmin Bank and others	2019.09.17
2019.10.02	Foreign currency denominated borrowing for equipment with floating rate (Par value: USD 500,000)	Foreign currency and interest rate risk	Floating-to-fixed cross currency interest rate swap	Korea Development Bank	2019.10.02 ~ 2026.10.02
2020.02.03	Foreign currency denominated borrowing with floating rate (Par value: USD 50,000)	Interest rate risk	Interest rate swap	Woori Bank	2020.02.03 ~ 2023.02.03
2020.03.18	Foreign currency denominated borrowing with floating rate (Par value: USD 50,000)	Interest rate risk	Interest rate swap	Woori Bank	2020.03.18 ~ 2023.02.03

23. Derivative Financial Instruments, Continued

(b) The derivative financial instruments held by the Group are presented in non-current other financial assets and non-current other financial liabilities in the consolidated financial statements of financial position as of December 31, 2021, and the details are as follows:

(In millions of Korean won and thousands of foreign currencies)

			Cash flow	
Type of contract	Hedged items		hedge	Fair value
Financial assets				
Fixed-to-fixed cross currency swap	Foreign currency denominated bond with fixed rate			
	(Par value: USD 500,000)	₩	22,259	22,259
Floating-to-fixed cross currency	Foreign currency denominated borrowing for equipment with floating rate			
interest rate swap	(Par value: USD 500,000)		4,288	4,288
			₩	26,547
Financial liabilities				
Interest rate swap	Foreign currency denominated borrowing with floating rate			
	(Par value: USD 50,000)	₩	575	575
Interest rate swap	Foreign currency denominated borrowing with floating rate			
	(Par value: USD 50,000)		127	127
			₩	702

As of December 31, 2021, changes of fair value of the derivative is recognized in other comprehensive income or loss as all of designated hedging instruments are effective for foreign currency risk or foreign currency and interest rate risk.

(2) Option contracts

(a) As of December 31, 2021, the Group has a option contract entered with Cypress, a non-controlling shareholder of its subsidiary, SkyHigh Memory Ltd., and the contract details are as follows:

Target of Evaluation		Description
Put option	Option owner	Cypress
	Option buyer	SK hynix system ic (subsidiary of the Group and the immediate parent of SkyHigh Memory)
	Terms and	If an agreement regarding the extension of the
	conditions	contract fails in five years since the inception of the Joint Venture Agreement, Cypress has the right to sell all of Cypress' shares in SkyHigh Memory to SK hynix system ic at a book value per share.
Call option	Option buyer	SK hynix system ic
	Option Seller	Cypress
	Terms and conditions	If an agreement regarding the extension of the contract fails in five years since the inception of the Joint Venture Agreement, SK hynix system ic has the right to purchase all of Cypress' shares in SkyHigh Memory at a book value per share from Cypress.

23. Derivative Financial Instruments, Continued

- (2) Option contracts, Continued
- (b) The Group recognizes option valuation gains (loss) during the current year as financial income (expenses). The fair value of options as of December 31, 2021 is as follows:

(In millions of Korean won)

			December 31, 2021	
			Held for trading	_
		Hedge accounting	accounting	Fair value
Call option	₩		34,808	34,808
Put option		-	(262)	(262)
Derivative Financial			- -	34,546

(c) The sensitivity analysis of the options as of December 31, 2021 to changes in the value of underlying assets is as follows:

	The value of underlying assets			
	10% decrease	10% increase		
Call option	29,822	39,830		
Put option	(370)	(187)		
	29,452	39,643		

24. Capital Stock, Capital Surplus and Other Equity

(1) The Parent Company has 9,000,000,000 authorized shares and the face value per share is ₩ 5,000 as of December 31, 2021. The number of shares issued, common stock, capital surplus and other capital as of December 31, 2021 and 2020, are as follows:

(In millions of Korean won and thousands of shares)

	ı	December 31, 2021	December 31, 2020
Issued shares ¹	_	731,530	731,530
Capital stock:			
Common stock	₩	3,657,652 W	3,657,652
Capital surplus:			
Additional paid-in capital		3,625,797	3,625,797
Others		708,846	517,939
	_	4,334,643	4,143,736
Other equity:	_		
Acquisition cost of treasury shares ²		(2,302,119)	(2,508,427)
Share options		7,557	5,305
	₩_	(2,294,562) W	(2,503,122)
Number of treasury shares	=	40,382	44,001

¹ As of December 31, 2021, the number of outstanding shares is 728,002 thousand shares, which differs from total issued shares due to share retirement.

(2) The number of outstanding shares, which deducted treasury shares held by the Parent Company from listed shares of December 31, 2021 and 2020, are as follows:

(In shares)

		December 31, 2021	
	Outstanding shares	Treasury shares	Total
The number of outstanding shares	728,002,365	40,381,692	687,620,673
(In shares)			
		December 31, 2020	
	Outstanding	Treasury	
	shares	shares	Total
The number of outstanding shares	728,002,365	44,000,570	684,001,795

² Through the resolution of the Board of Directors on April 28, 2021, the Group transferred 3,618,878 treasury shares to employee stock ownership association (3,282,343 shares of discounted acquisition and 336,535 shares of free acquisition) and, accordingly, gain on disposal of treasury of ₩ 191,247 million occurred.

25. Accumulated Other Comprehensive Loss

(1) Details of accumulated other comprehensive loss as of December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

		December 31, 2021		December 31, 2020
Equity-accounted investees – share of other comprehensive income	₩	54.051	₩	(57,542)
Foreign operations – foreign currency		- ,		(- ,- ,
translation differences		598,741		(360,247)
Gain on valuation of derivatives		22,479		12,336
	₩	675,271	₩	(405,453)

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

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			2021		
_	Beginning		Change		Ending
₩	(57,542)	₩	111,593	₩	54,051
	(360,247)		958,988		598,741
	12,336		10,143		22,479
₩ _	(405,453)	₩ _	1,080,724	₩	675,271
			2020		
_	Beginning		Change		Ending
₩	3,278	₩	(60,820)	₩	(57,542)
	(314,966)		(45,281)		(360,247)
	12,753		(417)		12,336
₩	(298,935)	₩	(106,518)	₩	(405,453)
	₩ <u>-</u> - -	₩ (57,542) (360,247) 12,336 ₩ (405,453) Beginning ₩ 3,278 (314,966) 12,753	₩ (57,542) ₩ (360,247) 12,336 ₩ (405,453) ₩ Beginning ₩ 3,278 ₩ (314,966) 12,753	Beginning Change ₩ (57,542) ₩ 111,593 (360,247) 958,988 10,143 12,336 10,143 1,080,724 2020 2020 Beginning Change ₩ 3,278 ₩ (60,820) (314,966) (45,281) 12,753 (417)	Beginning Change ₩ (57,542) ₩ 111,593 ₩ (360,247) 958,988 10,143 ₩ (405,453) ₩ 1,080,724 ₩ 2020 Beginning Change ₩ 3,278 ₩ (60,820) ₩ (314,966) (45,281) (417)

26. Retained Earnings

Retained earnings as of December 31, 2021 and 2020, are as follows:

(In millions of Korean won)

		December 31, 2021		December 31, 2020
Legal reserve ¹	₩	429,983	₩	349,954
Discretionary reserve ²		235,506		235,506
Unappropriated retained earnings		55,118,579		46,410,268
	₩	55,784,068	₩	46,995,728

¹ The Commercial Code of the Republic of Korea requires the Parent Company to appropriate for each financial period, as a legal reserve, an amount equal to a minimum of 10% of cash dividends paid until such reserve equals 50% of its issued capital stock. The reserve is not available for cash dividends payment, but may be transferred to capital stock or used to reduce accumulated deficit.

- (2) Dividends of the Parent Company
- (a) Details of dividends for the years ended December 31, 2021 and 2020 are as follows:

(In millions of Korean won and In thousands of shares)

	2021		2020
Type of dividends	Cash Dividends	-	Cash Dividends
Outstanding ordinary shares	687,621		684,002
Par value (in won)	5,000	₩	5,000
Dividend rate	31%		23%
Total dividends W	1,058,936	₩	800,282

(b) Dividend payout ratio for the years ended December 31, 2021 and 2020 is as follows:

(In millions of Korean won)

,		2021	2020
Dividends	₩	1,058,936	₩ 800,282
Profit attributable to owners of the Parent Company		9,602,316	4,755,102
Dividend payout ratio		11.03%	16.83%

(c) Dividend yield ratio for the years ended December 31, 2021 and 2020 is as follows:

	2021	2020
Dividends per share \tag{\psi}	1,540	₩ 1,170
Closing stock price	131,000	118,500
Dividend yield ratio	1.18%	0.99%

² Discretionary reserve is the reserve for technology development.

27. Revenue

(1) Details of the Group's revenue for years ended December 31, 2021 and 2020 are as follows:

	_	2021	2020
Sale of goods	₩	42,932,963 W	31,837,538
Providing services	_	64,829	62,880
	₩	42,997,792 W	31,900,418

(2) Details of the Group's revenue by product and service types for the years ended December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

		2021	2020
DRAM	₩	30,599,711 ₩	22,536,404
NAND Flash		10,529,447	7,471,242
Others		1,868,634	1,892,772
	₩	42,997,792 ₩	31,900,418

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(3) The Group's revenue information by region based on the location of selling entities for the years ended December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

		2021	2020
Korea	₩	1,461,982 W	1,452,006
China		15,730,223	12,217,634
Taiwan		2,989,315	1,905,650
Asia (other than China and Taiwan)		4,033,614	2,416,321
U.S.A.		17,144,323	12,686,108
Europe	_	1,638,335	1,222,699
	₩	42,997,792 W	31,900,418

(4) Details of the Group's revenue by the timing of revenue recognition during the years ended December 31, 2021 and 2020 are as follows:

		2021	2020
Performance obligations satisfied at a point in time	₩	42,932,963 ₩	31,837,538
Performance obligations satisfied over time		64,829	62,880
	₩	42,997,792 W	31,900,418

28. Selling and Administrative Expenses

Selling and administrative expenses for the years ended December 31, 2021 and 2020 are as follows:

		2021	2020
Selling and administrative expenses:			
Salaries	₩	787,830 ₩	592,894
Defined benefit plan		41,326	40,927
Employee benefits		181,651	159,600
Commission		519,432	334,570
Depreciation		218,673	245,858
Amortization		526,181	719,652
Training		68,132	67,626
Advertising		93,050	95,158
Supplies		109,138	100,748
Sales promotion expenses		165,482	107,316
Others		279,760	222,358
		2,990,655	2,686,707
Research and development:			
Expenditure on research and development		3,914,060	3,370,318
Development cost capitalized		(362,863)	(259,020)
		3,551,197	3,111,298
	₩	6,541,852 W	5,798,005

29. Expenses by Nature

Nature of expenses for the years ended December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

		2021	2020
Changes in finished goods and work-in-process	₩	(660,386) W	(616,725)
Raw materials, supplies and consumables		8,243,214	7,649,164
Employee benefit		5,311,842	3,833,439
Depreciation and others		10,646,887	9,764,776
Royalty		2,521,074	2,149,025
Utilities		1,612,864	1,459,346
Repair		1,298,083	1,129,642
Outsourcing		1,035,735	1,188,589
Others		961,171	639,284
Transfer: capitalized development cost and others		(383,032)	(308,746)
Total ¹	₩	30,587,452 W	26,887,794

¹ Total expenses consist of cost of sales and selling and administrative expenses.

30. Finance Income and Expenses

Finance income and expenses for the years ended December 31, 2021 and 2020 are as follows:

		2021	2020	
Finance income:				
Interest income	₩	22,419 W	27,872	
Dividend income		10,163	1,325	
Foreign exchange differences		1,693,274	1,527,580	
Gain on valuation of short-term investment assets		7,366	2,592	
Gain on valuation of long-term investment assets		527,811	1,741,026	
Gain on valuation of derivatives		34,546	-	
Gain on disposal of short-term investment assets		48,595	27,510	
Gain on disposal of long-term investment assets		33,342	-	
		2,377,516	3,327,905	
Finance expenses:				
Interest expenses		259,960	253,468	
Foreign exchange differences ¹		1,204,657	1,717,989	
Loss on disposal of short-term investment assets		125	-	
Loss on valuation of long-term investment assets		3,402	7,273	
Loss on valuation of financial liabilities		1,716	1,681	
		1,469,860	1,980,411	
Net finance income (expenses)	₩	907,656 W	1,347,494	

¹ For the year ended December 31, 2021, the foreign exchange difference gain from long-term investment assets amounting to W117,526 million (2020: W44,214 million) is included.

31. Other Income and Expenses

(1) Other income for years ended December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

		2021	2020
Gain on disposal of property, plant and equipment	₩	71,681 W	38,585
Others		44,454	46,188
	₩	116,135 W	84,773

(2) Other expenses for the years ended December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

	2021		2020	
Loss on disposal of property, plant and equipment	₩	12,324 W	44,955	
Loss on disposal of intangible assets		3,890	4,841	
Loss on disposal of trade receivables		5,462	6,320	
Loss on impairment of intangible assets		43,792	16,544	
Donation		77,334	70,461	
Others		37,622	28,454	
	₩	180,424 W	171,575	

32. Income Tax Expense

(1) Income tax expense for the years ended December 31, 2021 and 2020 are as follows:

	2021 202		2020	
Current tax:				
Current tax on profits for the year Adjustments for the current tax liabilities attributable to prior year, but recognized in	₩	3,308,525	₩	1,113,166
current year		105,176		(24,653)
		3,413,701		1,088,513
Deferred tax:				
Changes in net deferred tax assets		386,098		389,610
Income tax expense	₩	3,799,799	₩	1,478,123

32. Income Tax Expense, continued

(2) The relationship between tax expense and accounting profit for the years ended December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

		2021		2020
Profit before income tax	₩	13,415,987	₩	6,237,037
Tax calculated at domestic tax rates applicable to profits				
in the respective countries		3,774,276		1,704,823
Tax effects of:				
Tax-exempt income		(6,401)		(70,922)
Non-deductible expenses		15,668		19,977
Change in unrecognized deferred tax assets		(889)		8,667
Tax credits		(207,886)		(118,011)
Adjustments for the current tax liabilities attributable to prior				
year, but recognized in current year		78,151		(24,653)
Others		146,880		(41,758)
Income tax expense	₩	3,799,799	₩	1,478,123

(3) Income taxes recognized in other comprehensive income (loss) for the years ended December 31, 2021 and 2020 are as follows:

		2021	2020	
Remeasurements of defined benefit liabilities	₩	5,028 W	169	
Gain on valuation of derivatives		(3,275)	(680)	
Gain on disposal of treasury stock		(72,542)	-	
	₩	(70,789) W	(511)	

33. Earnings per Share

Basic earnings per share is calculated by dividing the profit attributable to ordinary shareholders of the Parent Company by the weighted average number of outstanding ordinary shares for years ended December 31, 2021 and 2020.

(1) Basic earnings per share for the years ended December 31, 2021 and 2020 are as follows:

(In millions of Korean won, except for shares and per share information)

		2021	2020
Profit attributable to ordinary shareholders of the Parent			
Company	₩	9,602,316 W	4,755,102
Weighted average number of outstanding ordinary shares ¹		686,411,075	684,001,795
Basic earnings per share (in won)	₩	13,989 W	6,952

¹ Weighted average number of outstanding ordinary shares is calculated as follows:

(In shares)

	2021	2020
Outstanding ordinary shares	728,002,365	728,002,365
Acquisition of treasury shares	(41,591,290)	(44,000,570)
Weighted average number of outstanding ordinary shares	686,411,075	684,001,795

(2) Diluted earnings per share for the years ended December 31, 2021 and 2020 are as follows:

(In millions of Korean won, except for shares and per share information)

		2021	2020
Profit attributable to ordinary shareholders of the Parent			
Company	₩	9,602,316 W	4,755,102
Weighted average number of diluted outstanding ordinary			
shares ¹		686,661,446	684,139,222
Diluted earnings per share (in won)	₩	13,984 W	6,950

¹ Weighted average number of diluted outstanding ordinary shares is calculated as follows:

(In shares)

2021	2020
686,411,075	684,001,795
250,371	137,427
686,661,446	684,139,222
	686,411,075 250,371

34. Transactions with Related Parties and Others

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

Type	Name of related parties					
Associates	Stratio, Inc., SK China Company Limited, Gemini Partners Pte. Ltd., TCL Fund,					
	SK South East Asia Investment Pte. Ltd.,					
	Hushan Xinju (Chengdu) Venture Investment Center (Smartsource),					
	Prume Social Farm, Co., Ltd, Wuxi xinfa IC industry park., Ltd.,					
	Magnus Private Investment Co., Ltd.,					
	Mirae Asset Committee Semiconductor No. 1 Startup Venture Private Equity Investment Co., Ltd.					
	L&S (No.10) Early Stage III Investment Association,					
	SiFive Inc., YD-SK-KDB Social Value					
	Ningbo Zhongxin Venture Capital Partnership (Limited Partnership)					
	Jiangsu KVTS Semiconductor science and Technology Co Ltd.					
Joint ventures	HITECH Semiconductor (Wuxi) Co., Ltd., Hystars Semiconductor (Wuxi) Co., Ltd.					
	Specialized Investment-type Private Equity Investment Trust For Growth Of Semiconductor,					
	Specialized Investment-type Private Equity Investment Trust For Win-win System Semiconductor					
Other related	SK Square Co., Ltd., which has significant influence over the Group, and its subsidiaries,					
parties	SK Holdings Co., Ltd., which has control over SK Square Co., Ltd., and its subsidiaries					

34. Transactions with Related Parties and Others, Contiuned

(2) Significant transactions for the years ended December 31, 2021 and 2020 are as follows:

,	Norcan wony	For the year ended December 31, 2021					
	-	Operating	Operating		· · · · · · · · · · · · · · · · · · ·		
		revenue	expense	Asset	Dividend		
	Company	and others	and others	acquisition	received	Borrowings ³	
Associate	SK China Company Limited A	33 W	11,947 W	- ₩	56,650 W	_	
	Magnus PrivateInvestment	54,908					
	Co.,Ltd	54,906	357	-	-	-	
	Prume Social Farm, Co.,						
	Ltd.	-	4	-	-	-	
Joint venture	HITECH Semiconductor	0.456					
	(Wuxi) Co., Ltd.	2,456	558,352	44,438	16,771	-	
	Hystars Semiconductor	219					
	(Wuxi) Co., Ltd.	219	21,858	9,233	-	78,819	
Other related	SK Telecom Co., Ltd. ¹	133,903	199,520	11,163	-	-	
parties	SK Holdings Co., Ltd. ²	24,902	300,562	225,956	-	-	
	ESSENCORE Limited	824,182	-	-	-	-	
	SK Ecoplant Co.,Ltd.	30,069	266	1,981,424	-	-	
	(former, SK Engineering &						
	Construction Co., Ltd.)						
	SK Energy Co., Ltd.	46,723	96,484	2,558	-	-	
	SK Networks Co., Ltd.	6,763	8,721	10,210	-	-	
	SKC Solmics Co., Ltd.	1,050	138,592	338	-	-	
	Chungcheong energy	54					
	service Co., Ltd.	34	28,807	-	-	-	
	SK Materials Co., Ltd.	3,980	141,251	-	-	-	
	SK Siltron Co., Ltd.	33,707	336,717	-	-	-	
	SK Materials Airplus Inc.	823	128,039	-	-	-	
	Techdream Co., Ltd.	-	130,229	-	-	-	
	SK Tri Chem Co.,Ltd.	635	145,013	-	-	-	
	SK Shieldus Co.,Ltd.	2,184	73,713	34,928	-	-	
	SK Innovation Co., Ltd.	31,343	68,379	44	-	-	
	SK Square Co.,Ltd.	-	167	-	-	-	
	Others	147,643	281,611	50,325	-	-	
	₩_	1,345,577 W	2,670,589 W	2,370,617 W	73,421 W	78,819	

¹ Operating expense and others include dividend of ₩170,937 million paid.

² For the year ended December 31, 2021, royalty paid for the use of the SK brand amounted to W64,198 million.

³ For the year ended December 31, 2021, borrowed from the Hystars Semiconductor(Wuxi) Co., Ltd.

34. Transactions with Related Parties and Others, Continued

(2) Significant transactions for the years ended December 31, 2021 and 2020 are as follows, Continued:

(In millions of Korean won)

For the year ended December 31, 2020 Operating Operating Dividend revenue expense Asset and others Company and others acquisition received Associate SK China Company Limited 18 W 8,019 W Joint venture HITECH Semiconductor (Wuxi) 15,033 Co., Ltd. 4,766 543,575 21,780 Hystars Semiconductor (Wuxi) Co., Ltd. 168 Other related 166,019 82.044 SK Telecom Co., Ltd. 1 135.050 parties SK Holdings Co., Ltd. 2 20,905 264,994 272,980 **ESSENCORE** Limited 675,915 1,375,083 SK Ecoplant Co.,Ltd. 42,814 8,507 (former, SK Engineering & Construction Co., Ltd.) SK Energy Co., Ltd. 50,035 72,386 SK Networks Co., Ltd. 6,638 9,434 526 623 93.862 178 SKC Solmics Co., Ltd. Chungcheong energy service 24,335 Co., Ltd. 118 SK Materials Co., Ltd. 4,349 95,007 SK Siltron Co., Ltd. 32,429 380,571 SK Materials Airplus Inc. 110,858 13,220 75,990 Others 631,656 65,385 173,971 1,161,019 2,374,355 1,928,834 15,033

The above related party transactions include transactions executed based on agreements executed in the course of the Group's business activities such as purchase or contruction of property, plant and equipment, procurements of gas and raw materials, and system developments and maintenance services.

¹ Operating expense and others include dividend of \w146,100 million paid.

² For the year ended December 31, 2021, royalty paid for the use of the SK brand amounted to ₩54,434 million.

34. Transactions with Related Parties and Others, Continued

(3) The balances from significant transactions as of December 31, 2021 and December 31, 2020 are as follows: (In millions of Korean won)

			Decemb	December 31, 2021		
	Company		Trade receivables and others		Other payables and others ¹	
Associate	SK China Company Limited	_₩	2	₩ -	11,360	
	Magnus PrivateInvestment Co.,Ltd		806		5	
	Prume Social Farm, Co., Ltd.		-		4	
Joint ventures	HITECH Semiconductor (Wuxi) Co., Ltd.		23		427,476	
	Hystars Semiconductor (Wuxi) Co., Ltd. ¹		33		185,585	
Other related	SK Telecom Co., Ltd.		48,575		11,789	
parties	SK Holdings Co., Ltd.		1,938		200,176	
	ESSENCORE Limited		60,527		-	
	SK Ecoplant Co.,Ltd.		3,216		1,185,318	
	(former, SK Engineering & Construction					
	Co., Ltd.)					
	SK Energy Co., Ltd.		3,204		27,773	
	SK Networks Co., Ltd.		256		10,493	
	SKC Solmics Co., Ltd.		137		39,974	
	Chungcheong energy service Co., Ltd.		10		5,742	
	SK Materials Co., Ltd.		3		16,533	
	SK Siltron Co., Ltd.		3,904		32,434	
	SK Materials Airplus Inc.		13		376,050	
	Techdream Co., Ltd.		-		5,835	
	SK Tri Chem Co.,Ltd.		156		13,251	
	SK Shieldus Co.,Ltd.		3,236		35,285	
	SK Innovation Co., Ltd.		1,074		7,794	
	SK Square Co.,Ltd.		-		167	
	Others		26,765		59,789	
		₩	153,878	₩	2,652,833	

¹ Other payables and others include ₩ 78,819 million of borrowings.

34. Transactions with Related Parties and Others, Continued

(3) The balances from significant transactions as of December 31, 2021 and December 31, 2020 are as follows, Continued:

(In millions of Korean won)

			Decemb	er 3	1, 2020
	Company		Trade receivables and others ¹		Other payables and others
Associate	SK China Company Limited	W	7	₩	8,771
Joint ventures	HITECH Semiconductor (Wuxi) Co., Ltd.		198		417,730
	Hystars Semiconductor (Wuxi) Co., Ltd.		7		-
Other related	SK Telecom Co., Ltd.		10,747		7,920
parties	SK Holdings Co., Ltd.		1,757		176,752
	ESSENCORE Limited		55,500		-
	SK Ecoplant Co.,Ltd.		3,397		592,630
	(former, SK Engineering & Construction				
	Co., Ltd.)				
	SK Energy Co., Ltd.		1,204		22,328
	SK Networks Co., Ltd.		289		1,712
	SKC Solmics Co., Ltd.		74		24,128
	Chungcheong energy service Co., Ltd.		69		3,295
	SK Materials Co., Ltd.		411		10,130
	SK Siltron Co., Ltd. ¹		44,847		36,792
	SK Materials Airplus Inc.		12		390,967
	Others		31,324		124,499
		₩	149,843	₩	1,817,654

¹ Trade receivable and others include W42,432 million of advance paid for the purchase of wafers .

34. Transactions with Related Parties and Others, Continued

(4) Key management compensation

The Group considers registered directors who have authority and responsibility for planning, directing and controlling the activities of the Group as key management. The compensation paid to key management for employee services for the years ended December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

Details		2021	2020
Salaries	₩	5,133 W	5,006
Defined benefit plan related expenses		640	545
Share-based payment		851	1,175
	₩	6,624 W	6,726

(5) The significant transactions between the Group and the companies that are in the same conglomerate group according to 'Fair Trade Law' for the years ended December 31, 2021 and 2020 are as follows. These entities are not related parties according to Korean IFRS 1024 Related Party Disclosures.

(In millions of Korean won)

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,	u	/	•

Name of entity		Operating revenue and others		Operating expense and others		Asset acquisition
SK Chemicals Co., Ltd.	₩	11,472	₩	1,192	W	-
SK Bioscience Co., Ltd.		2,733		265		-
ANTS Co., Ltd.		4		12,679		22
SM Core Co., Ltd.		11		742		3,140
Korea Nexlene Company		4,797		-		-
Others		2,484		1,296		-
	₩	21,501	₩_	16,174	W	3,162

(In millions of Korean won)

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_	υ	4	υ

Name of entity		Operating revenue and others		Operating expense and others		Asset acquisition
SK Chemicals Co., Ltd.	₩	10,338	₩	1,465	₩	_
SK Bioscience Co., Ltd.		1,944		298		-
ANTS Co., Ltd.		4		8,179		-
SM Core Co., Ltd.		-		633		17,874
Korea Nexlene Company		4,099		-		-
Others		3,644		964		-
	₩	20,029	₩	11,539	₩	17,874

34. Transactions with Related Parties and Others, Continued

(6) The balances of significant transactions between the Group and the companies that are in the same conglomerate group designated by 'Fair Trade Law' as of December 31, 2021, 2020 are as follows. These entities are not related parties according to Korean IFRS 1024 Related Party Disclosures.

(In millions of Korean won)	December 31, 2021				
Name of entity	Trade receivables and others		Other payables and others		
SK Chemicals Co., Ltd.	₩	1,135 ₩	95		
SK Bioscience Co., Ltd		414	195		
ANTS Co., Ltd.		1	12		
SMCore. Inc		7	3,212		
Korea Nexlene Company		182	-		
Others		249	-		
	₩	1,988 ₩	3,514		

(In millions of Korean won)		December 31, 2020				
	Trade receivables		Other payables			
Name of entity		and others	and others			
SK Chemicals Co., Ltd.	W	789 W	115			
SK Bioscience Co., Ltd		128	15			
ANTS Co., Ltd.		1	542			
SMCore. Inc		-	3,439			
Korea Nexlene Company		157	-			
Others		204	88			
	₩	1,279 ₩	4,199			

- (7) The right-of-use assets and lease liabilities recognized regarding the lease agreements with HITECH Semiconductor (Wuxi) Co., Ltd. and Hystars Semiconductor (Wuxi) Co., Ltd., a joint venture for the year ended December 31, 2021 amount to W52,895 million and W52,895 million, respectively, and lease payments to HITECH Semiconductor (Wuxi) Co., Ltd. and Hystars Semiconductor (Wuxi) Co., Ltd., amount to W127,530 million. The right-of-use assets and lease liabilities recognized regarding the lease agreements with other related parties including SK Airgas Co., Ltd. for the year ended December 31, 2021 amount to W16,708 million and W16,708 million, respectively, and lease payments to SK Airgas Co., amount to W42,904 million.
- (8) The Group provides a payment guarantee amounting to RMB 696 million to Hystars Semiconductor (Wuxi) Co., Ltd., a joint venture (Note 35-(6)).
- (9) The establishment of the subsidiary is explained in Note 1, and the acquisitions and additional investments of associates and joint ventures are explained in Note 11.
- (10) On June 30, 2021, the Group signed an agreement with SK REIT Co., Ltd. on the preferred purchase regarding the sale and lease of real estate held by the Group. In accordance with this agreement, the Group will grant a preferred purchase right to SK REIT Co., Ltd. if the Group intends to dispose of the real estate to a third party or if SK REIT Co., Ltd. requests negotiation for preferred purchase and the Group accepts. The preferred purchase right is to negotiate the purchase of real estate in preference to a third party and the lease to the Group. The exercise of the preferred purchase right will expire within three years from the date of the agreement, and if a sales and lease agreement could not be signed within six months from the date of exercise of the preferred purchase right, the right may be lost.

35. Commitments and Contingencies

(1) Significant pending litigations and claims of the Group as of December 31, 2021 are as follows:

(a) Lawsuit from Netlist, Inc. ("Netlist")

Netlist filed lawsuits against the Parent Company and its subsidiaries, SK hynix America Inc. and SK hynix memory solutions America Inc., with the U.S. District Court for the Central District of California on August 31, 2016 and June 14, 2017, and filed a lawsuit against the Parent Company and its subsidiary, SK hynix America Inc., with the U.S. District Court for the Western District of Texas on March 17, 2020 and June 15, 2020 for infringement of U.S. patent of Netlist.

During the year ended December 31, 2021, Netlist and the Group jointly filed an application for withdrawal of a patent infringement suit on March 30, 2021 filed with the California Central District Court and the lawsuit was finalized on April 2, 2021.

In addition, Netlist and the Group and its subsidiaries jointly submitted an application to withdraw the lawsuit for infringement of patent to the Western District Court of Texas on April 20, 2021. The lawsuit was finalized on May 10, 2021 as the Western District Court of Texas finally approved it.

(b) Price-fixing class action lawsuits in North America

On April 27, 2018, a class action lawsuit against the Parent Company and its subsidiary, SK hynix America Inc., for price fixing by major DRAM companies (period from June 1, 2016 to February 1, 2018) was filed with the U.S. District Court for the Northern District of California. Similar class action lawsuits have been filed with the U.S. District Court for the Northern District of California, the Supreme Court of British Columbia, the Quebec District Court, the Ontario Federal and District Court. In December 2020 and September 2021, the U.S. District Court for the Northern District of California ruled dismissal all lawsuits filed by direct purchasers and indirect purchasers in the United States, and in June 2021 and November 2021, the Quebec District Court in Canada and the Ontario Federal Court decided to dismiss the lawsuits filed by the group of buyers in Canada, but the plaintiffs in the United States and Canada later filed for an appeal. Meanwhile, on March 7, 2022, after the end of the current reporting period, the U.S. 9th Federal Court of Appeals dismissed the complaint filed by indirect buyers in the United States and maintained the decision to dismiss from the first trial. The appeals by direct buyers in the United States 9th Federal Court of Appeals and appeals in the Quebec District Court and Ontario Federal Court of Appeals are still in the progress.

(c) The antitrust investigation in China

The State Administration for Market Regulation of China initiated to investigate the violation of the antitrust law regarding on primary DRAM businesses' sales in China in May 2018, and the investigation has been started. The pending case currently is under investigation. As of December 31, 2021, the Group cannot predict the outcome of these investigation.

(d) Other patent infringement claims and litigation

In addition to the above litigations, the Group has responded to various disputes related to intellectual property rights and recognizes liabilities when it represents a present obligation as a result of past event and it is probable that an outflow of resources will arise and a loss can be reliably estimated.

35. Commitments and Contingencies, Continued

(2) Contract for supply of industrial water

The Group has entered into a re-newal contract with Veolia Water Industrial Development Co., Ltd. ("Veolia") under which the Group purchases industrial water from Veolia during the period of June 2018 through May 2023. According to the contract, the Group is obligated to pay base service charges, which are predetermined and additional service charges which are variable according to the amount of water used.

(3) Back-end process service contract with HITECH Semiconductor (Wuxi) Co., Ltd. ("HITECH")

The Group has entered into an agreement with HITECH to be provided with back-end process service by HITECH. The conditions of the service provided includes package, package test, modules and others. According to the agreement, the Group is liable to guarantee a certain level of margin to HITECH as the Group has priority to use HITECH's equipment.

(4) Assets provided as collateral

Details of assets provided as collateral as of December 31, 2021 are as follows:

(In millions of Korean won and millions of foreign currencies)

	Book	value	F	Pledged amou	unt	
Category	Currency	Amount	Currency	Amount in USD	Amount in KRW	Remark
Land and	KRW		USD	134	158,600	
buildings		162,704	KRW	-	14,854	Borrowings for
Machinery	KRW		USD	5,527	6,552,057	equipment and others
		4,468,400	KRW	-	660,000	otricis
			USD	5,661	6,710,657	
	KRW	4,631,104	KRW		674,854	

(In millions of Korean won and millions of foreign currencies)

	Book	value	Collate	llateral liabilities amount			
Category	Currency	Amount	Currency	Amount in USD	Amount in KRW	Remark	
Land and	KRW	162,704	USD	7	8,113		
buildings			KRW	-	5,105	Borrowings for	
Machinery	KRW	4,468,400	USD	2,870	3,402,950	equipment and others	
			KRW	-	475,000	others	
			USD	2,877	3,411,063		
	KRW	4,631,104	KRW		480,105		

35. Commitments and Contingencies, Continued

(5) Financing agreements

Details of credit lines with financial institutions as of December 31, 2021 are as follows:

(In millions of Korean won and millions of foreign currencies)

	Financial			
	Institution	Commitment	Currency	Amount
		Import finance including usance	USD	420
		Comprehensive limit contract	USD	1,070
		for import and export including		
The Parent	Hana Bank and	usance		
Company	others	Overdrafts with banks	KRW	20,000
		Accounts receivable factoring	KRW	70,000
		contracts which have no right to		
		recourse		
SK hynix	Agricultural Pank of		RMB	950
Semiconductor	Agricultural Bank of China and others	Import finance including usance		
(China) Ltd.	Cillia and others		USD	490
SK hynix America	Citibank and	Accounts receivable factoring		
Inc. and other	others	contracts which have no right to	USD	942
sales entities	Olliers	recourse		
Domestic	Hana Bank and	Import finance including usance	USD	45
subsidiaries	others	import illiance illoluding usance	000	43

35. Commitments and Contingencies, Continued

(6) Details of guarantees provided to others as of December 31, 2021 are as follows:

(In millions of foreign currencies)
Wuxi Xinfa Group Co., Ltd. 1

Currency	Amount	Remark
RMB	696	Guarantees for borrowing

¹ The Group provides a payment guarantee to Wuxi Xinfa Group Co., Ltd. for borrowings of Hystars Semiconductor (Wuxi) Co., Ltd., a joint venture of the Group.

(7) Capital commitments

The Group's unrecorded commitments in relation to the capital expenditures on property, plant and equipment and intangible assets as of December 31, 2021 are \times13,846,585 million (as of December 31, 2020: \times3,404,386 million).

(8) Investment in KIOXIA Holdings Corporation ("KIOXIA")

In regard to the Group's interests in KIOXIA through its investments in BCPE Pangea Intermediate holdings Cayman, L.P. and BCPE Pangea Cayman2 Limited, equity shares in KIOXIA owned, directly or indirectly, by the Group are limited to a certain percentage during certain periods after the date of acquisition. In addition, during the same periods, the Group does not have the right in appointing KIOXIA's directors and is unable to exercise significant influence over decision-making for KIOXIA's operations and management.

(9) Acquisition of the Intel NAND business

The Group has entered into a master purchase agreement with Intel Corporation ("Intel") to acquire the entire NAND business of Intel excluding the Optane division of Non-Volatile Memory Solutions Group during the year ended December 31, 2020. Pursuant to the terms and conditions of the master purchase agreement, the entire business with assets and liabilities attributable to the business shall be transferred in two separate processes through subsidiaries that newly established overseas, and payment shall be made in two installments. Total purchase consideration of US\$ 8,880 million shall be paid with the first installment of US\$ 6,109 million which was paid in the current year ended December 31, 2021 as part of the first deal closing and the second installment of US\$ 2,771 million shall be paid by March 2025 as part of the second deal closing. The second deal closing of the business transfer depends on the satisfaction of an agreed upon set of conditions that include regulatory approvals of governmental authorities and the agreed termination fee shall be paid when the contract is terminated under certain circumstances. However, the Group believes that the possibility that the second deal closing will not be completed is low.

In the process of obtaining a conditional business combination approval for the Intel NAND business acquisition from the Chinese competition authority (Chinese State Administration for Market Regulation) in connection with the first closing of the Intel NAND business completed at the end of the current year, the Group was imposed with certain conditions, mainly including the obligation to maintain a reasonable pricing policy and increase production and to support the entry of third-party competitors into the Chinese eSSD market over the next five years. Therefore, the Group must comply with these obligations for the next five years and may apply to waive them after five years. If the Group makes such an application, the Chinese competition authorities will decide whether to accept the application in consideration of the competition in the Chinese eSSD market.

35. Commitments and Contingencies, Continued

(10) Contracts for corporate purchasing card

The Group signed contracts for corporate purchasing card with financial institutions for paying electricity bills. The Group pays the payment to the credit card companies at the end of the credit period stipulated in the contracts and the balance of the payables to the credit card comapanies as of December 31, 2021 is \text{\text{\$\psi}}355,618 million.

(11) Share purchase agreement for the acquisition of Key Foundry Co., Ltd.

The Group entered into a share purchase agreement with Magnus Semiconductor, LLC to acquire 100% shares of Key Foundry Co., Ltd. on October 29, 2021. When this transaction is closed, the Group will acquire entire shares (100%) of Key Foundry Co., Ltd. Currently owned by Magnus Semiconductor, LLC, and the purchase price will be \text{\$\psi_575,800\$ million.} The purchase price can be adjusted by the net assets and business activities of Key Foundry Co., Ltd. The termination and timing of the transaction may vary depending on whether the prerequisites set in the contract are fulfilled, including the approvals from domestic and foreign government agencies and whether the reasons for cancellation occur.

36. Cash Flows

(1) Reconciliations between profit for the period and cash generated from operations for the years ended December 31, 2021 and 2020 are as follows:

(In millions of Korean won)		2021		2020
Profit for the year	₩	9,616,188	₩	4,758,914
Adjustment		, ,		, ,
Income tax expense		3,799,799		1,478,123
Defined benefit plan		252,675		251,552
Depreciation		9,536,696		8,515,134
Depreciation of investment property		1,773		291
Amortization		795,933		960,550
Depreciation of right-of-use assets		324,096		296,218
Share-based compensation expenses		2,491		1,591
Loss on disposal of property, plant and equipment		12,324		44,955
Loss on disposal of intangible assets		3,890		4,841
Loss on impairment of intangible assets		43,792		16,544
Loss on disposal of short-term investment assets		125		-
Loss on valuation of long-term investment asset		3,402		7,273
Loss on valuation of financial liabilities		1,716		1,681
Interest expense		259,960		253,468
Loss on foreign currency translation		509,386		375,504
Loss on disposal of trade receivables		5,462		6,320
Gain(loss) on equity method investments, net		(162,280)		36,279
Gain on disposal of property, plant and equipment		(71,681)		(38,585)
Gain on disposal of intangible assets		-		(122)
Gain on disposal of short-term investment assets		(48,595)		(27,510)
Gain on valuation of short-term investment assets		(7,366)		(2,592)
Gain on disposal of long-term investment assets		(33,342)		<u>-</u>
Gain on valuation of long-term investment assets		(527,811)		(1,741,026)
Interest income		(22,419)		(27,872)
Gain on foreign currency translation		(448,324)		(595,266)
Gain on transaction or valuation of derivatives, net		(34,546)		-
Others, net		156,496		(9,646)
Changes in operating assets and liabilities		(0.505.500)		(00=040)
Increase in trade receivables		(2,525,722)		(935,346)
Decrease(increase) in loans and other receivables		(2,938)		5,303
Increase in inventories		(696,559)		(843,842)
Decrease (increase) in other assets		(194,397)		47,350
Increase (decrease) in trade payables		(197,980)		222,036
Increase(decrease) in other payables		374,102		(6,583)
Increase in other non-trade payables		771,169		158,514
Increase in provisions		6,092		12,008
Increase in other liabilities		90,495		46,961
Payment of defined benefit liabilities		(928)		(585)
Contributions to plan assets	\^/	(641,696)		(355,664)
Cash generated from operating activities	₩	20,951,478	₩	12,916,771

36. Cash Flows, Continued

(2) Details of significant transactions without inflows and outflows of cash for the years ended December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

	_	2021	2020
Increase in other payables related to acquisition of property,			
plant and equipment	₩	2,805,789 W	1,938,446
Transfer of property, plant and equipment to investment property		-	209,450
Transfer of investment property to property, plant and equipment		43,295	-

(3) Changes in liabilities arising from financing activities during the years ended December 31, 2021 and 2020 are as follows:

(In millions of Korean won)

		2021	2020
Beginning balance	₩	12,895,364 W	12,190,505
Cash flows from financing activities			
Proceeds from borrowings		8,933,737	5,173,016
Repayments of borrowings		(3,320,911)	(3,921,310)
Payments of lease liabilities		(323,975)	(319,740)
Increase of lease liabilities		90,469	293,855
Foreign currency differences		792,563	(557,923)
Present value discount (interest expense)		91,784	43,885
Interest paid		(9,460)	(6,924)
Ending balance	₩	19,149,571 W	12,895,364

(4) The Group presented the inflow and outflow of cash from short-term investment assets and related investments in subsidiaries related to MMT, which are frequently traded and have a large total amount and mature in a short period of time, as net increases and decreases.

37. Share-based Payment

(1) The Parent Company granted equity-settled share options to the Parent Company's key management during the year ended December 31, 2021 and the details of the share options as of December 31, 2021 are as follows:

(In shares)

	Total numbers of	Forfeited or		Outstanding at
	share option granted	Cancelled	Exercised	December 31, 2021
1 st	99,600	-	-	99,600
2 nd	99,600	-	-	99,600
3 rd	99,600	-	-	99,600
4 th	7,747	-	7,747	-
5 th	7,223	-	-	7,223
6 th	8,171	8,171	-	-
7 th	61,487	-	-	61,487
8 th	61,487	-	-	61,487
9 th	61,487	-	-	61,487
10 th	54,020	-	-	54,020
11 th	6,397	-	-	6,397
12 th	6,469	-	-	6,469
13 th	75,163	-	-	75,163
	648,451	8,171	7,747	632,533

		Service Period for		Exercise price
	Grant date	Vesting	Exercisable Period	(in Korean won)
		March 24, 2017 -	March 25, 2019 -	
1 st	March 24, 2017	March 24, 2019	March 24, 2022	48,400
		March 24, 2017 -	March 25, 2020 -	
2 nd	March 24, 2017	March 24, 2020	March 24, 2023	52,280
		March 24, 2017 -	March 25, 2021 -	
3 rd	March 24, 2017	March 24, 2021	March 24, 2024	56,460
		January 1, 2018 -	January 1, 2020 -	
4 th	January 1, 2018	December 31, 2019	December 31, 2022	77,440
		March 28, 2018 -	March 29, 2020 -	
5 th	March 28, 2018	March 28, 2020	March 28, 2023	83,060
		February 28, 2019 -	March 1, 2021 -	
6 th	February 28, 2019	February 28, 2021	February 29, 2024	73,430
		March 22, 2019 -	March 23, 2021 -	
7 th	March 22, 2019	March 22, 2021	March 22, 2024	71,560
		March 22, 2019 -	March 23, 2022 -	
8 th	March 22, 2019	March 22, 2022	March 22, 2025	77,290
		March 22, 2019 -	March 23, 2023 -	
9 th	March 22, 2019	March 22, 2023	March 22, 2026	83,470
		March 20, 2020 -	March 21, 2023 -	
10 th	March 20, 2020	March 20, 2023	March 20, 2027	84,730
		March 20, 2020 -	March 21, 2023 -	
11 th	March 20, 2020	March 20, 2023	March 20, 2027	84,730
		March 30, 2021 -	March 31, 2023 -	
12 th	March 30, 2021	March 30, 2023	March 30, 2026	136,060
		March 30, 2021 -	March 31, 2023 -	
13 th	March 30, 2021	March 30, 2023	March 30, 2026	136,060
			_	

37. Share-based Payment, Continued

(2) Measurement of fair value

The compensation cost is calculated by applying a binomial option-pricing model in estimating the fair value of the option at each grant date. The inputs used are as follows:

	1 st	2 nd	3 rd	4 th	5 th	6 th	7 th
Expected volatility	23.23%	23.23%	23.23%	22.50%	25.30%	25.60%	26.17%
Estimated fair value of share							
option (in Korean won)	10,026	9,613	9,296	16,687	18,362	16,505	17,744
Dividend yield ratio	1.20%	1.20%	1.20%	0.78%	1.23%	1.36%	1.98%
Risk free ratio	1.86%	1.95%	2.07%	2.38%	2.46%	1.89%	1.82%
	8 th	9 th	10 th	11 th	12 th	13 th	
Expected volatility	26.17%	9 th 26.17%	10 th 26.15%	11 th 26.15%	12 th 35.50%	13 th 35.50%	
Expected volatility Estimated fair value of share							
•							
Estimated fair value of share	26.17%	26.17%	26.15%	26.15%	35.50%	35.50%	

⁽³⁾ The compensation expense for the year ended December 31, 2021 was ₩2,491 million (2020: ₩1,591 million).

38. Business Combinations

- (1) Details of business combinations during the year ended December 31, 2021 are as follows:
- (a) The Group has entered into a master purchase agreement to acquire the Intel NAND business during the previous year and, under the terms and conditions of the agreement, certain part of the business was transferred to the Group upon the first deal closing consumated on December 29, 2021. The remainder part of the business ("the remainder business") will be transferred to the Group upon the second deal closing expected to occur in March 2025. Therefore, as of the end of the reporting period, Intel Corporation, the seller, continues to hold legal ownership of the remainder business expected to be transferred to the Group upon the second deal closing, and the Group will acquire relevant legal ownership then. Meanwhile, the Group determined that it has control over the remainder business as well as the other business already obtained legal ownership upon first closing because it has the power to direct relevant activities of the remainder business and is exposed to variable returns, so the remainder business is included in the assets acquired and liabilities assumed by the Group during the current year together with the other part of business transferred to the Group upon the first deal closing. Therefore, the purchase consideration scheduled to be paid in connection with the second closing is recognized as liability on the consolidated statements of financial position.
- (b) Details of consideration transferred and identifiable assets acquired and liabilities assumed as of acquisition date are as follows:

(In millions of Korean won)

	December 31, 2021
Consideration transferred	₩
Cash and cash equivalents	7,250,087
Other payables	713,977
Long-term other payables	2,448,370
	10,412,434
Identifiable assets acquired and liabilities assumed ¹	
Inventories	1,952,385
Property, plant and equipment	6,852,840
Intangible assets	727,973
Other assets	110,672
Other liabilities	61,046
Identifiable net assets	9,582,824
Goodwill	W 829,610

¹ As of the date of approval of issuance of the consolidated financial statements, the initial accounting processing for the business combination has not been completed, and the fair value of the assets acquired and the liabilities assumed on the date of acquisition due to the business combination has been determined by the provisional amount.

(2) Profit or loss before the acquisition

If the acquisition of NAND business division of Intel Corporation had been completed on January 1, 2021, the Group's revenue and operating profit for the year would have been \text{\$\psi 47,925,665 million} and \text{\$\psi 12,974,539 million, respectively.}