Samsung Electro-Mechanics Co., Ltd. and Subsidiaries

Consolidated Financial Statements December 31, 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 Samsung Electro-Mechanics Co., Ltd.

Opinion

We have audited the accompanying consolidated financial statements of Samsung Electro-Mechanics Co., Ltd. and its subsidiaries (collectively referred to as the "Group"), which comprise the consolidated statement of financial position as at December 31, 2020, and the consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year 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 consolidated financial position of the Group as at December 31, 2020, and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the Republic of Korea ("Korean IFRS").

Basis for Opinion

We conducted our audit 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 consolidated 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.

Emphasis of Matter

Without modifying our opinion, we draw attention to Note 28 to the consolidated financial statements of the Group. As explained in Note 28, the Group classified the Wi-Fi network module business to discontinued operations for the year ended December 31, 2020. Accordingly, related gains or losses are classified and presented as the profit (loss) from discontinued operations in the consolidated statement of comprehensive income, and comparative consolidated statement of comprehensive income was restated.

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.

Revenue recognition cut- off related to sales of goods

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

As described in Note 2 to the consolidated financial statements, the Group is engaged in manufacturing and selling electronics components. Revenue from contracts with customers is recognized when control of the goods is transferred to the customer with the relevant consideration.

The timing of the transfer of control of the Group's products may vary depending on transaction agreements with customers and export terms and conditions, and management's judgement on the timing of revenue recognition is required. Considering the possibility of deliberate manipulation or potential error, we determined the revenue recognition cut-off related to sales of goods as a Key Audit Matter.

How our audit addressed the Key Audit Matter

Key audit procedures we have performed in relation to the Group's revenue recognition cut-off are as follows.

- Evaluated reasonableness of the Group's accounting policy and standard for revenue recognition cut-off.
- Obtained an understanding of controls over sales and accounting systems and evaluated the design and operational effectiveness of those controls.
- Examined the relevant transaction agreements and evidences through audit sampling at transaction level from sales records that occurred before and after the end of the reporting period.
- Determined whether there are any unusual changes by analyzing monthly sales trend of major customers.
- Examined the cause of cancellation and the relevant evidences through audit sampling from sales records canceled within a short period after the end of the reporting period.

Other Matters

The consolidated financial statements of the Group for the year ended December 31, 2019, were audited by another auditor who expressed an unqualified opinion on those consolidated financial statements on February 24, 2020.

Auditing standards and their application in practice vary among countries. The procedures and practices used in the Republic of Korea to audit such consolidated financial statements may differ from those generally accepted and applied in other countries.

The accompanying consolidated financial statements as of and for the years ended December 31, 2020 and 2019, have been translated into the U.S. dollars solely for the convenience of the reader and have been translated on the basis set forth in Note 2 to the consolidated financial statements.

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 consolidated financial statements, including the disclosures, and whether the consolidated 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 Joonki Hong, Certified Public Accountant.

Seoul, Korea February 23, 2021

This report is effective as of February 23, 2021, 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.

		Korea	an won	U.S. dollar (Note 2)				
	Notes	2020	2019	2020	2019			
Assets								
Current assets:								
Cash and cash equivalents	4,27	₩ 1,479,767,416,889	₩ 803,810,427,528	\$ 1,360,080,346	\$ 738,796,349			
Other current financial assets	5,27	54,107,908,679	56,203,252,379	49,731,534	51,657,401			
Trade and other receivables	6,24,27	995,621,015,867	1,095,676,584,666	915,092,845	1,007,055,684			
Short-term loans	27	229,606,211	489,790,837	211,035	450,175			
Advanced payments		963,181,023	3,846,856,838	885,277	3,535,714			
Prepaid expenses		57,320,074,211	44,692,658,987	52,683,892	41,077,812			
Prepaid income tax	22	7,596,883,891	20,584,030,122	6,982,430	18,919,145			
Inventories, net	7	1,337,915,721,356	1,271,273,631,462	1,229,701,950	1,168,450,029			
Right of return assets	15	17,784,713,460	14,246,213,025	16,346,244	13,093,946			
Assets held for sale	28	198,996,129,936	196,701,119,382	182,900,855	180,791,470			
		4,150,302,651,523	3,507,524,565,226	3,814,616,408	3,223,827,725			
Non-current assets:								
Investment in associates	8	72,461,000,468	68,259,879,909	66,600,184	62,738,860			
Financial assets measured at fair value	9,27	200,955,141,868	173,348,301,305	184,701,417	159,327,483			
Long-term loans	27	2,315,313,819	2,333,652,185	2,128,046	2,144,901			
Property, plant and equipment	10	4,424,362,287,775	4,514,510,148,372	4,066,509,456	4,149,365,945			
Right-of-use assets	12	93,006,082,444	78,741,834,202	85,483,532	72,373,009			
Intangible assets, net	11	138,250,894,764	141,150,901,464	127,068,837	129,734,284			
Other non-current financial assets	5,27	18,867,166,086	14,932,284,711	17,341,145	13,724,526			
Long-term trade and other receivables	6,27	-	5,046,027,000	-	4,637,892			
Long-term prepaid expenses		26,323,605,646	24,565,588,540	24,194,490	22,578,666			
Deferred tax assets	22	98,654,331,683	143,835,047,029	90,674,937	132,201,330			
		5,075,195,824,553	5,166,723,664,717	4,664,702,045	4,748,826,898			
Total assets		₩ 9,225,498,476,076	₩ 8,674,248,229,943	\$ 8,479,318,452	\$ 7,972,654,623			

Samsung Electro-Mechanics Co., Ltd. and Subsidiaries Consolidated Statements of Financial Position December 31, 2020 and 2019

		Korean won		U.S. dolla	r (Note 2)
	Notes	2020	2019	2020	2019
Liabilities					
Current liabilities:					
Trade and other payables	13,24,27	₩ 1,126,272,811,004	₩ 891,582,052,075	\$ 1,035,177,216	\$ 819,468,798
Short-term borrowings	6,14,27	406,200,835,405	569,189,647,980	373,346,356	523,152,250
Advances received		26,897,880,317	18,178,518,968	24,722,316	16,708,198
Income tax payables	22	29,335,878,884	103,820,681,984	26,963,124	95,423,421
Current portion of long-term borrowings	14,27	204,681,307,130	173,835,740,000	188,126,201	159,775,496
Current lease liabilities	12,27	14,531,142,618	17,096,171,856	13,355,830	15,713,393
Provisions for product warranties	17	1,772,851,261	4,984,208,121	1,629,459	4,581,074
Refund liabilities	15	23,400,025,095	19,531,120,647	21,507,376	17,951,398
Liabilities directly associated with the assets held for sale	28	34,813,347,748	18,874,865,868	31,997,562	17,348,222
Other current liabilities	5,27	46,973,894,372	33,312,458,733	43,174,535	30,618,069
		1,914,879,973,834	1,850,405,466,232	1,759,999,976	1,700,740,318
Non-current liabilities:					
Long-term borrowings	14,27	1,233,208,708,882	1,219,727,736,182	1,133,463,887	1,121,073,287
Long-term other payables	13	80,567,012,080	91,209,212,197	74,050,563	83,831,997
Net employee defined benefit liabilities	16	30,567,570,059	38,962,230,341	28,095,193	35,810,873
Long-term lease liabilities	12,27	48,066,763,662	31,575,051,752	44,179,011	29,021,187
Deferred tax liabilities	22	1,127,598,377	1,196,332,280	1,036,396	1,099,570
Other non-current liabilities	5	6,684,909,685	11,075,315,451	6,144,218	10,179,518
		1,400,222,562,745	1,393,745,878,203	1,286,969,267	1,281,016,432
Total liabilities		3,315,102,536,579	3,244,151,344,435	3,046,969,243	2,981,756,750
Equity					
Issued capital	19	388,003,400,000	388,003,400,000	356,620,772	356,620,772
Share premium	19	1,045,201,199,091	1,045,201,199,091	960,662,867	960,662,867
Other components of equity	19	(146,701,455,500)	(146,701,455,500)	(134,835,897)	(134,835,897)
Accumulated other comprehensive income	19	412,519,337,686	425,665,287,555	379,153,803	391,236,478
Other capital reserves	19	2,481,265,257,472	2,158,965,257,472	2,280,574,685	1,984,343,068
Retained earnings		1,592,001,275,871	1,413,912,972,039	1,463,236,467	1,299,552,364
Equity attributable to owners of the parent		5,772,289,014,620	5,285,046,660,657	5,305,412,697	4,857,579,651
Non-controlling interests		138,106,924,877	145,050,224,851	126,936,512	133,318,221
Total equity		5,910,395,939,497	5,430,096,885,508	5,432,349,209	4,990,897,873
Total liabilities and equity		₩ 9,225,498,476,076	₩ 8,674,248,229,943	\$ 8,479,318,452	\$ 7,972,654,623

The U.S. dollar figures are provided for information purpose only and do not form part of the audited consolidated financial statements. See Note 2.

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

		Korean won				U.S. dollar (Note 2)					
	Notes		2020		2019		2020		2019		
Continuing operations											
Sales	3,20,24	₩	8,208,738,308,011	₩	7,718,297,731,849	\$	7,544,796,239	\$	7,094,023,651		
Cost of sales	20,24	-	6,268,998,200,490	-	5,730,019,719,107	-	5,761,946,875		5,266,562,242		
Gross profit			1,939,740,107,521		1,988,278,012,742		1,782,849,364		1,827,461,409		
Selling and administrative expenses	20		1,110,609,429,244		1,247,354,214,055	_	1,020,780,725		1,146,465,270		
Operating profit			829,130,678,277		740,923,798,687		762,068,638		680,996,138		
Financial income	21,27		10,278,965,647		19,133,926,709		9,447,579		17,586,330		
Financial costs	21,27		47,789,449,843		77,695,286,106		43,924,127		71,411,109		
Share of profit of associates	8		9,943,017,745		11,923,012,518		9,138,803		10,958,651		
Other income	21,27		260,984,978,425		192,183,185,859		239,875,899		176,638,958		
Other expenses	21,27		279,616,655,173		190,373,284,387		257,000,602		174,975,445		
Profit before tax from continuing operations			782,931,535,078		696,095,353,280		719,606,190		639,793,523		
Income tax expense	22		167,159,983,252		71,125,624,758		153,639,690		65,372,817		
Profit for the year from continuing operations			615,771,551,826		624,969,728,522		565,966,500		574,420,706		
Discontinued operations											
Profit (loss) after tax for the year from discontinued operations	28		8,039,626,015		(96,921,177,486)		7,389,362		(89,081,965)		
Profit for the year		₩	623,811,177,841	₩	528,048,551,036	\$	573,355,862	\$	485,338,742		
Other comprehensive income:											
Other comprehensive income (loss) not to be reclassified to											
profit or loss in subsequent periods (net of tax):											
Net gains on valuation of											
financial assets measured at fair value			20,116,868,380		21,217,611,286		18,489,769		19,501,481		
Net gains on disposal of											
financial assets measured at fair value			176,432,838		4,424,547,197		162,163		4,066,679		
Re-measurement gains on defined benefit plans			(20,328,932,337)		(44,193,311,937)		(18,684,680)		(40,618,853)		
Capital changes in equity method			37,750,533		(1,284,726,767)		34,697		(1,180,815)		
Other comprehensive income (loss) to be reclassified to											
profit or loss in subsequent periods (net of tax):											
Exchange differences on translation of foreign operations			(35,315,627,778)		52,410,656,837		(32,459,217)		48,171,560		
Other comprehensive income (loss) for the year, net of tax			(35,313,508,364)		32,574,776,616		(32,457,269)		29,940,052		
Total comprehensive income for the year, net of tax		₩	588,497,669,477	₩	560,623,327,652	\$	540,898,593	\$	515,278,794		

Samsung Electro-Mechanics Co., Ltd. and Subsidiaries Consolidated Statements of Comprehensive Income December 31, 2020 and 2019

		Korean won					U.S. dollar (Note 2)					
	Notes		2020		2019		2020		2019			
Profit for the year from continuing operations attributable to:												
Equity holders of the parent		₩	595,937,511,988	₩	609,844,099,572	\$	547,736,684	\$	560,518,474			
Non-controlling interests			19,834,039,838		15,125,628,950		18,229,816		13,902,232			
Profit for the year attributable to:												
Equity holders of the parent		₩	603,961,888,869	₩	514,296,120,757	\$	555,112,030	\$	472,698,640			
Non-controlling interests			19,849,288,972		13,752,430,279		18,243,832		12,640,101			
Total comprehensive income for the year attributable to:												
Equity holders of the parent		₩	570,487,006,663	₩	540,567,282,306	\$	524,344,675	\$	496,844,929			
Non-controlling interests			18,010,662,814		20,056,045,346		16,553,918		18,433,865			
Earnings per share:	23											
Basic and diluted, profit for the year attributable												
to ordinary shareholders of the parent		₩	7,993	₩	6,806	\$	7.35	\$	6.26			
Basic and diluted, profit for the year attributable												
to preferred shareholders of the parent		₩	8,043	₩	6,856	\$	7.39	\$	6.30			
Basic and diluted, profit for the year from continuing operations												
attributable to ordinary shareholders of the parent		₩	7,886	₩	8,070	\$	7.25	\$	7.42			
Basic and diluted, profit for the year from continuing operations												
attributable to preferred shareholders of the parent		₩	7,936	₩	8,120	\$	7.29	\$	7.46			

The U.S. dollar figures are provided for information purpose only and do not form part of the audited consolidated financial statements. See Note 2.

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

Samsung Electro-Mechanics Co., Ltd. and Subsidiaries Consolidated Statements of Changes in Equity December 31, 2020 and 2019

(in Korean won)

			Attributa	able to equity holders of th	ne parent				
				Accumulated					
			Other	other					
	lanced and the	Oh	components	comprehensive	Other	Retained		Non-controlling	
	Issued capital	Share premium	of equity	income	capital reserves	earnings	Sub-total Sub-total	interests	Total equity
January 1, 2019	₩ 388,003,400,000	₩ 1,045,201,199,091 ₩	(146,701,455,500)	₩ 355,200,814,069	₩ 1,952,365,257,472	₩ 1,226,978,445,193	₩ 4,821,047,660,325	₩ 125,449,895,934 +	₩ 4,946,497,556,259
Effect of adoption of new accounting standards (Note2)	-		-	-	-	(878, 354, 274)	(878,354,274)	(20,118,168)	(898,472,442)
Profit for the year	-	-	-	•	-	514,296,120,757	514,296,120,757	13,752,430,279	528,048,551,036
Other comprehensive income:									
Net gains on valuation of									
financial assets measured at fair value	-		-	21,217,611,286	-	-	21,217,611,286	-	21,217,611,286
Net gains on disposal of									
financial assets measured at fair value	-	-	-	4,424,547,197	-	-	4,424,547,197	-	4,424,547,197
Re-measurement gains on defined benefit plans	-		-	-	-	(44,193,311,937)	(44,193,311,937)	-	(44,193,311,937)
Capital changes in equity method	-	-	-	(1,284,726,767)	-	-	(1,284,726,767)	-	(1,284,726,767)
Foreign currency translation adjustments		<u> </u>	<u> </u>	46,107,041,770	-		46,107,041,770	6,303,615,067	52,410,656,837
Total comprehensive income (loss)	-	-	-	70,464,473,486	-	470,102,808,820	540,567,282,306	20,056,045,346	560,623,327,652
Dividends	-	-	-	-	-	(75,689,927,700)	(75,689,927,700)	(296,214,203)	(75,986,141,903)
Appropriation of retained earnings	-	-	-	-	206,600,000,000	(206,600,000,000)	-	-	-
Others			<u>-</u>					(139,384,058)	(139,384,058)
December 31, 2019	₩ 388,003,400,000	↑ 1,045,201,199,091 ↑	(146,701,455,500)	₩ 425,665,287,555	₩ 2,158,965,257,472	₩ 1,413,912,972,039	₩ 5,285,046,660,657	₩ 145,050,224,851	₩ 5,430,096,885,508
January 1, 2020	₩ 388,003,400,000		(146,701,455,500)	₩ 425,665,287,555	₩ 2,158,965,257,472	₩ 1,413,912,972,039	₩ 5,285,046,660,657	₩ 145,050,224,851	₩ 5,430,096,885,508
Profit for the year	-	-	-	-	-	603,961,888,869	603,961,888,869	19,849,288,972	623,811,177,841
Other comprehensive income:									
Net gains on valuation of									
financial assets measured at fair value	-	-	-	20,116,868,380	-	-	20,116,868,380	-	20,116,868,380
Net gains on disposal of									
financial assets measured at fair value	-	-	-	176,432,838	-	-	176,432,838	-	176,432,838
Re-measurement gains on defined benefit plans	-	-	-	-	-	(20,328,932,337)	(20,328,932,337)	-	(20,328,932,337)
Capital changes in equity method	-	-	-	37,750,533	-	-	37,750,533	-	37,750,533
Foreign currency translation adjustments		<u> </u>	<u>-</u>	(33,477,001,620)	<u>-</u>		(33,477,001,620)	(1,838,626,158)	(35,315,627,778)
Total comprehensive income (loss)	-	-	-	(13,145,949,869)	-	583,632,956,532	570,487,006,663	18,010,662,814	588,497,669,477
Dividends	-	-	-	-	-	(83,244,652,700)	(83,244,652,700)	(24,991,002,788)	(108,235,655,488)
Appropriation of retained earnings	-	-	-	-	322,300,000,000	(322,300,000,000)	-	-	-
Others		<u> </u>	<u>-</u>		-			37,040,000	37,040,000
December 31, 2020	₩ 388,003,400,000	₩ 1,045,201,199,091 ₩	(146,701,455,500)	₩ 412,519,337,686	₩ 2,481,265,257,472	₩ 1,592,001,275,871	₩ 5,772,289,014,620	₩ 138,106,924,877	₩ 5,910,395,939,497

Samsung Electro-Mechanics Co., Ltd. and Subsidiaries Consolidated Statements of Changes in Equity December 31, 2020 and 2019

(in U.S. dollars (Note 2))

					Attribu	ıtable	e to equity holders of	the pa	rent					
							Accumulated							
					Other		other							
					components		comprehensive		Other	Retained		No	on-controlling	
	Is	sued capital	Share p	premium	 of equity		income		capital reserves	 earnings	 Sub-total		interests	 Total equity
January 1, 2019	\$	356,620,772	\$	960,662,867	\$ (134,835,897)	\$	326,471,336	\$	1,794,453,362	\$ 1,127,737,542	\$ 4,431,109,982	\$	115,303,213	\$ 4,546,413,195
Effect of adoption of new accounting standards (Note2)		-			-		-		-	(807,311)	(807,311)		(18,491)	(825,802)
Profit for the year		-			-		-		-	472,698,640	472,698,640		12,640,101	485,338,742
Other comprehensive income:														
Net gains on valuation of														
financial assets measured at fair value		-			-		19,501,481		-	-	19,501,481		-	19,501,481
Net gains on disposal of														
financial assets measured at fair value		-			-		4,066,679		-	-	4,066,679		-	4,066,679
Re-measurement gains on defined benefit plans		-			-		-		-	(40,618,853)	(40,618,853)		-	(40,618,853)
Capital changes in equity method		-			-		(1,180,815)		-	-	(1,180,815)		-	(1,180,815)
Foreign currency translation adjustments				-	 _		42,377,796			 	42,377,796		5,793,764	 48,171,560
Total comprehensive income (loss)		-		-	-		64,765,141		-	432,079,788	496,844,929		18,433,865	515,278,794
Dividends		-		-	-		-		-	(69,567,948)	(69,567,948)		(272,256)	(69,840,204)
Appropriation of retained earnings		-		-	-		-		189,889,706	(189,889,706)	-		-	-
Others					 						 		(128,110)	(128,110)
December 31, 2019	\$	356,620,772	\$	960,662,867	\$ (134,835,897)	\$	391,236,478	\$	1,984,343,068	\$ 1,299,552,364	\$ 4,857,579,651	\$	133,318,221	\$ 4,990,897,873
January 1, 2020	\$	356,620,772	\$	960,662,867	\$ (134,835,897)	\$	391,236,478	\$	1,984,343,068	\$ 1,299,552,364	\$ 4,857,579,651	\$	133,318,221	\$ 4,990,897,873
Profit for the year		-		-	-		-		-	555,112,030	555,112,030		18,243,832	573,355,862
Other comprehensive income:														
Net gains on valuation of														
financial assets measured at fair value		-		-	-		18,489,769		-	-	18,489,769		-	18,489,769
Net gains on disposal of														
financial assets measured at fair value		-		-	-		162,163		-	-	162,163		-	162,163
Re-measurement gains on defined benefit plans		-		-	-		-		-	(18,684,680)	(18,684,680)		-	(18,684,680)
Capital changes in equity method		-		-	-		34,697		-	-	34,697		-	34,697
Foreign currency translation adjustments		-		-	 -	_	(30,769,303)		-	 -	 (30,769,303)		(1,689,914)	 (32,459,217)
Total comprehensive income (loss)		-		-	-		(12,082,675)		-	536,427,350	524,344,675		16,553,918	540,898,593
Dividends		-		-	-		-		-	(76,511,629)	(76,511,629)		(22,969,672)	(99,481,301)
Appropriation of retained earnings		-		-	-		-		296,231,618	(296,231,618)	-		-	-
Others					 		<u>-</u>			 <u>-</u>	 		34,044	 34,044
December 31, 2020	\$	356,620,772	\$	960,662,867	\$ (134,835,897)	\$	379,153,803	\$	2,280,574,685	\$ 1,463,236,467	\$ 5,305,412,697	\$	126,936,512	\$ 5,432,349,209

The U.S. dollar figures are provided for information purpose only and do not form part of the audited consolidated financial statements. See Note 2.

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

Samsung Electro-Mechanics Co., Ltd. and Subsidiaries Consolidated Statements of Cash Flows December 31, 2020 and 2019

			Korea	an wo	n	U.S. dollar (Note 2)					
	Notes	es 2020			2019		2020		2019		
Cash flows from operating activities											
Cash generated from operations	25	₩	1,747,183,037,233	₩	1,285,068,685,680	\$	1,605,866,762	\$	1,181,129,307		
Interest received			11,987,369,026		21,135,699,942		11,017,802		19,426,195		
Income tax paid			(171,093,796,251)		(284,934,155,494)		(157,255,327)		(261,888,011)		
Net cash inflow from operating activities			1,588,076,610,008		1,021,270,230,128		1,459,629,237		938,667,491		
Cash flows from investing activities											
Decrease (increase) in other financial assets, net			(2,189,674,704)		207,651,947,238		(2,012,569)		190,856,569		
Disposal of financial assets measured at fair value			3,561,086,253		10,919,488,304		3,273,057		10,036,294		
Acquisition of financial assets measured at fair value			(3,745,493,000)		(1,109,772,000)		(3,442,549)		(1,020,011)		
Proceeds from disposal of property, plant and equipment			46,953,080,752		36,227,293,252		43,155,405		33,297,145		
Acquisition of property, plant and equipment			(756,667,711,711)		(1,547,971,686,748)		(695,466,647)		(1,422,768,094)		
Proceeds from disposal of intangible assets			41,512,013		15,502,733,255		38,154		14,248,836		
Acquisition of intangible assets			(23,726,796,020)		(25,950,644,840)		(21,807,717)		(23,851,696)		
Acquisition of right-use assets			(2,797,607,939)		-		(2,571,331)		-		
Dividends received			6,175,651,200		2,687,533,400		5,676,150		2,470,159		
Disposal of discontinued operations			-		785,000,000,000		-		721,507,353		
Net cash outflow from investing activities			(732,395,953,156)		(517,043,108,139)		(673,158,045)		(475,223,445)		
Cash flows from financing activities											
Proceeds from short-term borrowings			841,894,567,078		147,300,644,083		773,800,154		135,386,621		
Repayment of short-term borrowings			(1,001,788,923,295)		(429,314,170,175)		(920,761,878)		(394,590,230)		
Repayment of current portion of long-term borrowings			(530,298,773,280)		(362,490,729,281)		(487,406,961)		(333,171,626)		
Proceeds from long-term borrowings			630,847,814,570		553,257,197,006		579,823,359		508,508,453		
Repayment of long-term borrowings			-		(329,569,783,949)		-		(302,913,404)		
Repayment of lease liabilities			(19,576,492,843)		(33,506,787,317)		(17,993,100)		(30,796,680)		
Interest paid			(47,347,072,681)		(89,095,645,944)		(43,517,530)		(81,889,380)		
Dividends paid			(83,242,156,460)		(75,983,779,483)		(76,509,335)		(69,838,033)		
Increase (decrease) in non-controlling interests			37,040,000		(139,384,058)		34,044		(128,110)		
Net cash outflow from financing activities			(209,473,996,911)		(619,542,439,118)		(192,531,247)		(569,432,389)		
Net in a control of a control o			040 000 050 044		(445.045.047.400)		500 000 645		(405.000.040)		
Net increase (decrease) in cash and cash equivalents			646,206,659,941		(115,315,317,129)		593,939,945		(105,988,343)		
Effects of exchange rate changes on cash and cash equivalents			(16,241,358,281)		(31,570,364,266)		(14,927,719)		(29,016,879)		
Cash and cash equivalents at January 1		147	855,488,790,378	147	1,002,374,471,773		786,294,844		921,300,066		
Cash and cash equivalents at December 31		₩	1,485,454,092,038	₩	855,488,790,378	_\$	1,365,307,070	\$	786,294,844		

The U.S. dollar figures are provided for information purpose only and do not form part of the audited consolidated financial statements. See Note 2.

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

1. Organization and business

1.1 The Company

Samsung Electro-Mechanics Co., Ltd. (the "Company") was incorporated on August 8, 1973 under the laws of the Republic of Korea to engage in manufacture and sales of various electronic components. The ordinary shares of the Company have been publicly traded on the Korea Exchange since 1979.

The Company's manufacturing plants are located in Suwon, Busan, Sejong and Ulsan. The Company maintains its overseas business operations through 15 direct subsidiaries and one indirect subsidiary located in the Americas, Europe and Asia.

1.2 Consolidated subsidiaries

Details of consolidated subsidiaries as of December 31, 2020 are as follows (Korean won in thousands):

Subsidiary	Issued capital	Number of shares	Equity interest	Principal activities	Domicile
Samsung Electro-Mechanics				Network module	
(Thailand) Co., Ltd. (*1)	₩ 13,130,733	3,181,869	75.00%	manufacturing Chip	Thailand
Dongguan Samsung Electro- Mechanics Co., Ltd. (*2)				component	
	73,534,869	-	100.00%	manufacturing Chip	China
Tianjin Samsung Electro- Mechanics Co., Ltd. (*2)	224 504 200		04.70%	component	Ohina
Samsung Electro-Mechanics	331,501,389	-	81.76%	manufacturing Chip	China
Philippines, Corp.	53,917,212	4.046.711	100.00%	component manufacturing	Philippines
Samsung High-Tech Electro-	00,011,212	1,010,711	100.0070	Camera	1 1111111111111111111111111111111111111
Mechanics(Tianjin) Co., Ltd. (*2)	38,972,998	-	95.00%	module manufacturing	China
Kunshan Samsung Electro-				Rigid flex printed circuit	
Mechanics Co., Ltd. (*2)(*4)	040 404 550		400.000/	board	Oleima
	643,181,550	-	100.00%	manufacturing Camera	China
Samsung Electro-Mechanics				module, rigid flex printed	
Vietnam Co., Ltd. (*2)				circuit board	
Samsung Electro-Mechanics	112,840,500	-	100.00%	manufacturing	Vietnam
America, Inc.	3,420,160	5,000	100.00%	Trading	USA
Samsung Electro-Mechanics GmbH (*2)	3,089,662	_	100.00%	Trading	Germany
Calamba Premier Realty				•	•
Corporation (*3)	3,383	398	39.80%	Real estate	Philippines
Samsung Electro-Mechanics Pte, Ltd. Samsung Electro-Mechanics	1,215,800	1,760,200	100.00%	Trading	Singapore
(Shenzhen) Co., Ltd. (*2)	2,368,283	-	100.00%	Trading	China
Samsung Electro-Mechanics Japan Co., Ltd.	4,696,119	330,000	100.00%	Trading	Japan
Batino Realty Corporation	2,704	1,000	39.80%	Real estate	Philippines
Samsung Electro-Mechanics Software	_,. 0 1	.,000	22.2070	Software	
India Bangalore Private Limited	16,790	100,000	100.00%	development	India
SVIC#47 (*2)	7,704,000	-	99.00%	Investment	Korea

1.2 Consolidated subsidiaries (cont'd)

The fiscal year for all subsidiaries ends on December 31.

- (*1) Sale of operations in Samsung Electro-Mechanics (Thailand) Co., Ltd. is in the process and the related assets are classified as assets held for sale as of December 31, 2020.
- (*2) These subsidiaries are limited liability entities that do not issue shares in accordance with local law.
- (*3) Calamba Premier Realty Corporation is a direct subsidiary which wholly owns Batino Realty Corporation.
- (*4) Kunshan Samsung Electro-Mechanics Co., Ltd. Discontinued its operations, and is under disposal process of the remaining assets and classified them as assets held for sale (Note 28).

Dongguan Samsung Electro-Mechanics Co., Ltd. is under liquidation process as of December 31, 2020.

Although the Company's equity interests in Calamba Premier Realty Corporation and Batino Realty Corporation are less than 50%, it is assessed that the Group holds *de facto* control over these entities as the retirement pension fund for the employees of Samsung Electro-Mechanics Philippines, Corp. owns more than 50% of the equity interests.

The summary of the consolidated subsidiaries' financial position as of December 31, 2020 and the results of their financial performance for the year then ended, which have been included in the accompanying consolidated financial statements are as follows (Korean won in thousands):

Subsidiary		Total assets	-	Total liabilities		Sales		Profit (loss) for the year
Samsung Electro-Mechanics (Thailand) Co., Ltd.	₩	231,108,773	₩	146,713,115	₩	288,451,521	₩	8,391,948
Dongguan Samsung Electro- Mechanics Co., Ltd.		128,807,658		588,934		-		4,626,145
Tianjin Samsung Electro- Mechanics Co., Ltd.		2,237,363,537		1,640,033,213		2,259,086,683		72,518,164
Samsung Electro-Mechanics Philippines, Corp.		872,703,080		627,378,233		1,028,774,434		24,655,004
Samsung High-Tech Electro- Mechanics (Tianjin) Co., Ltd.		373,759,648		179,376,079		1,158,313,772		48,704,268
Kunshan Samsung Electro- Mechanics Co., Ltd. Samsung Electro-Mechanics		211,898,339		1,222,974		3,122,041		25,193,472
Vietnam Co., Ltd. Samsung Electro-Mechanics		1,207,147,333		733,765,504		2,155,119,993		99,054,256
America, Inc. Samsung Electro-Mechanics		86,306,690		67,290,009		423,877,565		2,841,407
GmbH Calamba Premier Realty		61,502,437		27,086,824		211,617,119		1,269,818
Corporation Samsung Electro-Mechanics		8,129,617		6,545,403		-		(26,484)
Pte, Ltd. Samsung Electro-Mechanics (Shenzhen) Co., Ltd.		83,146,296 583,460,319		56,746,892 450,977,285		313,719,697 1,996,039,874		1,892,132 28,601,705
Samsung Electro-Mechanics Japan Co., Ltd.		45,264,770		40,284,872		119,470,516		260,944
Batino Realty Corporation		4,816,374		3,915,059		-		124,906
Samsung Electro-Mechanics Software India Bangalore Private Limited		3,642,960		2,580,409		4,959,858		462,150
SVIC#47		6,787,697		254,710		-,505,000		(635,014)
	₩	6,145,845,528	₩	3,984,759,515	₩	9,962,553,073	₩	317,934,821

1.2 Consolidated subsidiaries (cont'd)

Profit attributable to non-controlling interests

Details of profit or loss attributable to non-controlling interests for the year ended December 31, 2020 are as follows (Korean won in thousands):

Subsidiary	Non-controlling ownership	allo	Profit or loss ocated to non- controlling interests		idends paid to on-controlling interests		Remaining on-controlling interests
Samsung Electro-Mechanics	<u> </u>						
(Thailand) Co., Ltd.	25.00%	₩	2,128,995	₩	24,991,003	₩	21,099,034
Tianjin Samsung Electro-							
Mechanics Co., Ltd.	18.24%		15,139,468		-		105,727,094
Samsung High-Tech Electro-							
Mechanics (Tianjin) Co., Ltd.	5.00%		2,527,926		-		9,719,178
Calamba Premier Realty Corp.	60.20%		(15,943)		-		953,697
Batino Realty Corporation	60.20%		75,193		-		542,592
SVIC#47	1.00%		(6,350)				65,330
		₩	19,849,289	₩	24,991,003	₩	138,106,925

2. Significant Accounting Policies

2.1 Basis of financial statements preparation

Samsung Electro-Mechanics Co., Ltd. and its subsidiaries (collectively referred to as the "Group") prepare statutory financial statements in the Korean language in accordance with Korean International Financial Reporting Standards (Korean IFRS) enacted by the *Act on External Audit of Stock Companies*.

The accompanying consolidated financial statements have been prepared on a historical cost basis, except for financial instruments that have been measured at fair value and when otherwise noted. The consolidated financial statements are presented in Korean won (KRW) with all values rounded to the nearest thousands, except when otherwise indicated. The accompanying consolidated financial statements have been condensed, restructured and translated into English from the Korean language financial statements.

United States dollar amounts

The U.S. dollar amounts provided herein represent supplementary information solely for the convenience of the reader. All Korean won amounts of the 2020 and 2019 financial statements are translated to U.S. dollars at US\$1:\(\pi\)1,088.0, the exchange rate in effect on December 31, 2020. Such presentation is not in accordance with Korean International Financial Reporting Standards, and should not be construed as a representation that the won amounts shown could be readily converted, realized or settled in U.S. dollars at this or at any other rate.

2.2 Principles of consolidation

The consolidated financial statements comprise the financial statements of the Group and its subsidiaries as of December 31, 2020. Control is achieved when the Group 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 investee. Specifically, the Group controls an investee if and only if the Group has:

- Power over the investee (i.e. existing rights that give it the current ability to direct the relevant activities of the investee)
- > Exposure, or rights, to variable returns from its involvement with the investee, and
- The ability to use its power over the investee to affect its returns

2.2 Principles of consolidation (cont'd)

When the Group has less than a majority of the voting or similar rights of an investee, the Group considers all relevant facts and circumstances in assessing whether it has power over an investee, including:

- > The contractual arrangement with the other vote holders of the investee
- > Rights arising from other contractual arrangements
- > The Group's voting rights and potential voting rights

The Group re-assesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control. Consolidation of a subsidiary begins when the Group obtains control over the subsidiary and ceases when the Group loses control of the subsidiary. Assets, liabilities, income and expenses of a subsidiary acquired or disposed of during the year are included in the consolidated statement of comprehensive income from the date the Group gains control until the date the Group ceases to control the subsidiary.

Profit or loss and each component of other comprehensive income (OCI) are attributed to the equity holders of the parent of the Group and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance. When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies into line with the Group's accounting policies. All intra-group assets and liabilities, equity, income, expenses and cash flows relating to transactions between members of the Group are eliminated in full on consolidation.

A change in the ownership interest of a subsidiary, without a loss of control, is accounted for as an equity transaction.

If the Group loses control over a subsidiary, it derecognizes the related assets (including goodwill), liabilities, non-controlling interest and other components of equity while any related gain or loss is recognized in profit or loss. Any remaining investment is recognized at fair value.

2.3 Business combinations and goodwill

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred, measured at acquisition date fair value and the amount of any non-controlling interest in the acquiree. For each business combination, the acquirer measures the non-controlling interest in the acquiree either at fair value or at the proportionate share of the acquiree's identifiable net assets. Acquisition costs incurred are expensed and included in administrative expenses.

When the Group acquires a business, it assesses the financial assets and liabilities assumed for appropriate classification and designation in accordance with the contractual terms, economic circumstances and pertinent conditions as of the acquisition date.

If the business combination is achieved in stages, any previously held equity interest is re-measured at its acquisition date fair value and any resulting gain or loss is recognized in profit or loss. It is then considered in the determination of goodwill.

Any contingent consideration to be transferred by the acquirer will be measured at fair value at the acquisition date. Contingent consideration classified as equity is not remeasured and its subsequent settlement is accounted for within equity. Contingent consideration classified as an asset or liability that is a financial instrument and within the scope of Korean IFRS 1109 *Financial Instruments*, is measured at fair value with the changes in fair value recognized in the statement of profit or loss in accordance with Korean IFRS 1109. Other contingent consideration that is not within the scope of Korean IFRS 1109 is measured at fair value at each reporting date with changes in fair value recognized in profit or loss.

2.3 Business combinations and goodwill (cont'd)

Goodwill is initially measured at cost, being the excess of the aggregate of the consideration transferred and the amount recognized for non-controlling interests, and any previous interest held, over the net identifiable assets acquired and liabilities assumed. If the fair value of the net assets acquired is in excess of the aggregate consideration transferred, the Group re-assesses whether it has correctly identified all of the assets acquired and all of the liabilities assumed and reviews the procedures used to measure the amounts to be recognized at the acquisition date. If the re-assessment still results in an excess of the fair value of net assets acquired over the aggregate consideration transferred, then the gain is recognized in profit or loss.

After initial recognition, goodwill is measured at cost less any accumulated impairment losses. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the Group's cash generating units that are expected to benefit from the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units.

Where goodwill has been allocated to a cash-generating unit and part of the operation within that unit is disposed of, the goodwill associated with the disposed operation is included in the carrying amount of the operation when determining the gain or loss on disposal. Goodwill disposed in these circumstances is measured based on the relative values of the disposed operation and the portion of the cash-generating unit retained.

2.4 Investment in associates and joint arrangements

Investment in associates

An associate is an entity over which the Group has significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee, but is not control or joint control over those policies.

The Group's investments in its associate and are accounted for using the equity method. Under the equity method, the investment in an associate is initially recognized at cost. The carrying amount of the investment is adjusted to recognize changes in the Group's share of net assets of the associate since the acquisition date. Goodwill relating to the associate is included in the carrying amount of the investment and is neither amortized nor individually tested for impairment.

The consolidated statement of comprehensive income reflects the share of the results of financial performance of the associate. Where there has been a change recognized directly in the equity of the associate, the Group recognizes its share of any changes and discloses this, when applicable, in the statement of changes in equity. Unrealized gains and losses resulting from transactions between the Group and the associate are eliminated to the extent of the interest in the associate.

The share of profit of associates is shown on the face of the statements of profit or loss and other comprehensive income. This is the profit attributable to equity holders of the associate and therefore is profit after tax and non-controlling interests in the subsidiaries of the associates.

The financial statements of the associate are prepared for the same reporting period as the Group. Where necessary, adjustments are made to bring the accounting policies in line with those of the Group.

After application of the equity method, the Group determines whether it is necessary to recognize an additional impairment loss on the Group's investment in its associates. At each reporting date, the Group determines whether there is objective evidence that the investment in the associate is impaired. If this is the case, the Group calculates the amount of impairment as the difference between the recoverable amount of the associate and its carrying value and recognizes the amount in the statements of profit or loss and other comprehensive income.

Upon loss of significant influence over the associate, the Group measures and recognizes any retaining investment at its fair value. Any difference between the carrying amount of the associate upon loss of significant influence and the fair value of the retaining investment and proceeds from disposal is recognized in profit or loss.

2.4 Investment in associates and Joint arrangements (cont'd)

Joint arrangements

A joint arrangement, wherein two or more parties have joint control, is classified as either a joint operation or a joint venture. A joint operator recognizes its direct right to the assets, liabilities, revenues and expenses of joint operations and its share of any jointly held or incurred assets, liabilities, revenues and expenses. Interests in joint ventures are accounted for using the equity method, after initially being recognized at cost in the consolidated statement of financial position.

2.5 Current versus non-current classification

The Group presents assets and liabilities in the statement of financial position based on current/non-current classification.

An asset is current when it is:

- > Expected to be realized or intended to be sold or consumed in the normal operating cycle
- Held primarily for the purpose of trading
- Expected to be realized within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period

All other assets are classified as non-current.

A liability is current when:

- It is expected to be settled in the normal operating cycle
- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period

The Group classifies all other liabilities as non-current.

Deferred tax assets and liabilities are classified as non-current assets and liabilities.

2.6 Foreign currency translation

The Group's consolidated financial statements are presented in Korean won, which is also its functional currency. Each entity in the Group determines its own functional currency and items included in the financial statements of each entity are measured using that functional currency.

Transactions and balances

Transactions in foreign currencies are initially recorded by the Group entities at their respective functional currency rates prevailing at the date of the transaction.

Monetary assets and liabilities denominated in foreign currencies are retranslated at the functional currency spot rate of exchange ruling at the reporting date.

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates as of the dates of the initial transactions. Non-monetary items measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value is determined.

In determining the spot exchange rate to use on initial recognition of the related asset, expense or income (or part of it) on the derecognition of a non-monetary asset or non-monetary liability relating to advance consideration, the date of the transaction is the date on which the Group initially recognizes the non-monetary asset or non-monetary liability arising from the advance consideration. If there are multiple payments or receipts in advance, the Group determines the transaction date for each payment or receipt of advance consideration.

2.6 Foreign currency translation (cont'd)

Foreign operations

The assets and liabilities of foreign operations are translated into Korean won at the rate of exchange prevailing at the reporting date and their statements of profit or loss and other comprehensive incomes are translated at average exchange rate during the applicable period. The exchange differences arising on the translation are recognized in other comprehensive income. On disposal of a foreign operation, the gain or loss on translation of foreign operations recorded in other comprehensive income is reclassified to the statements of profit or loss and other comprehensive income. 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 are treated as assets and liabilities of the foreign operation and translated at the spot rate of exchange at the reporting date.

2.7 Cash and cash equivalents

Cash and cash equivalents in the consolidated statement of financial position comprise cash at banks and on hand and short-term deposits with a maturity of three months or less, which represent cash and cash equivalents on the consolidated statements of cash flows.

2.8 Financial instruments: Initial recognition and subsequent measurement

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial assets

Initial recognition and measurement

Financial assets are classified, at initial recognition, as subsequently measured at amortised cost, fair value through other comprehensive income (OCI), and fair value through profit or loss.

The classification of financial assets at initial recognition depends on the financial asset's contractual cash flow characteristics and the Group's business model for managing them. With the exception of trade receivables that do not contain a significant financing component or for which the Group has applied the practical expedient, the Group initially measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs. Trade receivables that do not contain a significant financing component or for which the Group has applied the practical expedient are measured at the transaction price determined under Korean IFRS 1115.

In order for a financial asset to be classified and measured at amortised cost or fair value through OCI, it needs to give rise to cash flows that are 'solely payments of principal and interest (SPPI)' on the principal amount outstanding. This assessment is referred to as the SPPI test and is performed at an instrument level.

The Group's business model for managing financial assets refers to how it manages its financial assets in order to generate cash flows. The business model determines whether cash flows will result from collecting contractual cash flows, selling the financial assets, or both.

Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the marketplace (regular way trades) are recognised on the trade date, i.e., the date that the Group commits to purchase or sell the asset.

Subsequent measurement

For purposes of subsequent measurement, financial assets are classified in four categories:

- > Financial assets measured at amortised cost (debt instruments)
- Financial assets measured at fair value through OCI with recycling of cumulative gains and losses (debt instruments)
- Financial assets measured at fair value through OCI with no recycling of cumulative gains and losses upon
- Financial assets measured at fair value through profit or loss

2.8 Financial instruments: Initial recognition and subsequent measurement (cont'd)

Financial assets measured at amortised cost (debt instruments)

This category is the most relevant to the Group. The Group measures financial assets at amortised cost if both of the following conditions are met:

- > The financial asset is held within a business model with the objective to hold financial assets in order to collect contractual cash flows
- The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding

Financial assets at amortised cost are subsequently measured using the effective interest (EIR) method and are subject to impairment. Gains and losses are recognised in profit or loss when the asset is derecognised, modified or impaired.

Financial assets measured at fair value through OCI (debt instruments)

The Group measures debt instruments at fair value through OCI if both of the following conditions are met:

- > The financial asset is held within a business model with the objective of both holding to collect contractual cash flows and selling, and
- > The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding

For debt instruments measured at fair value through OCI, interest income, foreign exchange revaluation and impairment losses or reversals are recognized in the statement of profit or loss and computed in the same manner as for financial assets measured at amortised cost. The remaining fair value changes are recognized in OCI. Upon derecognition, the cumulative fair value change recognized in OCI is recycled to profit or loss.

The Group's debt instruments at fair value through OCI includes investments in quoted debt instruments included under other non-current financial assets.

Financial assets measured at fair value through OCI (equity instruments)

Upon initial recognition, the Group can elect to classify irrevocably its equity investments as equity instruments designated at fair value through OCI when they meet the definition of equity under Korean IFRS 1032 Financial Instruments: Presentation and are not held for trading. The classification is determined on an instrument-by-instrument basis.

Gains and losses on these financial assets are never recycled to profit or loss. Dividends are recognised as other income in the statement of profit or loss when the right of payment has been established, except when the Group benefits from such proceeds as a recovery of part of the cost of the financial asset, in which case, such gains are recorded in OCI. Equity instruments designated at fair value through OCI are not subject to impairment assessment.

The Group elected to classify irrevocably its non-listed equity investments under this category.

2.8 Financial instruments: Initial recognition and subsequent measurement (cont'd)

Financial assets measured at fair value through profit or loss

Financial assets measured at fair value through profit or loss include financial assets held for trading and financial assets designated upon initial recognition at fair value through profit or loss. Financial assets are classified as held for trading if they are acquired for the purpose of selling or repurchasing in the near term. Derivatives, including separated embedded derivatives, are also classified as held for trading unless they are designated as effective hedging instruments. Financial assets with cash flows that are not solely payments of principal and interest are classified and measured at fair value through profit or loss, irrespective of the business model. Notwithstanding the criteria for debt instruments to be classified at amortised cost or at fair value through OCI, as described above, debt instruments may be designated at fair value through profit or loss on initial recognition if doing so eliminates, or significantly reduces, an accounting mismatch.

Financial assets measured at fair value through profit or loss are carried in the statement of financial position at fair value with net changes in fair value recognized in the statement of profit or loss.

A derivative embedded in a hybrid contract, with a financial liability or non-financial host, is separated from the host and accounted for as a separate derivative if: the economic characteristics and risks are not closely related to the host; a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and the hybrid contract is not measured at fair value through profit or loss. Embedded derivatives are measured at fair value with changes in fair value recognised in profit or loss. Reassessment only occurs if there is either a change in the terms of the contract that significantly modifies the cash flows that would otherwise be required or a reclassification of a financial asset out of the fair value through profit or loss category.

A derivative embedded within a hybrid contract containing a financial asset host is not accounted for separately. The financial asset host together with the embedded derivative is required to be classified in its entirety as a financial asset at fair value through profit or loss.

Derecognition

A financial asset (or, where applicable a part of a financial asset or part of a group of similar financial assets) is derecognized when:

- The rights to receive cash flows from the asset have expired.
- The Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Group has transferred substantially all the risks and rewards of the asset, or (b) the Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Group has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if, and to what extent, it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Group continues to recognize the transferred asset to the extent of the Group's continuing involvement. In that case, the Group also recognizes an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Group has retained.

Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Group could be required to repay.

2.8 Financial instruments: Initial recognition and subsequent measurement (cont'd)

Impairment of financial assets

Further disclosures relating to impairment of financial assets are also provided in the following notes:

- Disclosures for significant assumptions
- Debt instruments at fair value through OCI
- > Trade receivables, including contract assets

The Group recognises an allowance for expected credit losses (ECLs) for all debt instruments not held at fair value through profit or loss. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate. The expected cash flows will include cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms.

ECLs are recognised in two stages. For credit exposures for which there has not been a significant increase in credit risk since initial recognition, ECLs are provided for credit losses that result from default events that are possible within the next 12-months (a 12-month ECL). For those credit exposures for which there has been a significant increase in credit risk since initial recognition, a loss allowance is required for credit losses expected over the remaining life of the exposure, irrespective of the timing of the default (a lifetime ECL).

For trade receivables and contract assets, the Group applies a simplified approach in calculating ECLs. Therefore, the Group does not track changes in credit risk, but instead recognises a loss allowance based on lifetime ECLs at each reporting date. The Group has established a provision matrix that is based on its historical credit loss experience, adjusted for forward-looking factors specific to the debtors and the economic environment.

Financial liabilities

Initial recognition and measurement

Financial liabilities within the scope of Korean IFRS 1039 are classified at initial recognition, as financial liabilities at fair value through profit or loss, loans and borrowings, payables, or as derivatives designated as hedging instruments in an effective hedge, as appropriate.

All financial liabilities are recognized initially at fair value and in the case of loans and borrowings and payable, net of directly attributable transaction costs.

The Group's financial liabilities include trade and other payables, loans and borrowings including bank overdrafts, financial guarantee contracts and derivative financial instruments.

Subsequent measurement

The measurement of financial liabilities depends on their classification.

Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss includes financial liabilities held for trading and financial liabilities designated upon initial recognition as of fair value through profit or loss.

Financial liabilities are classified as held for trading if they are acquired for the purpose of selling in the near term. This category includes derivative financial instruments entered into by the Group that are not designated as hedging instruments in hedge relationships as defined by Korean IFRS 1109. Separated embedded derivatives are also classified as held for trading unless they are designated as effective hedging instruments. Gains or losses on liabilities held for trading are recognized in the consolidated statement of profit or loss.

Financial liabilities designated upon initial recognition at fair value through profit or loss are designated at the initial date of recognition, and only if the criteria in Korean IFRS 1109 are satisfied. The Group has not designated any financial liability as of fair value through profit or loss.

2.8 Financial instruments - impairment of financial assets (cont'd)

Loans and borrowings

After initial recognition, interest bearing loans and borrowings are subsequently measured at amortized cost using the effective interest rate method. Gains and losses are recognized in the consolidated statement of profit or loss when the liabilities are derecognized as well as through the effective interest rate method (EIR) amortization process.

Amortized cost is calculated by taking into account any discount or premium on acquisition and fee or costs that are an integral part of the EIR.

Derecognition

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and the recognition of a new liability, and the difference in the respective carrying amounts is recognized in the statements of profit or loss.

Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount reported in the consolidated statement of financial position if there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, or to realize the assets and settle the liabilities simultaneously.

2.9 Fair value measurement

The Group measures financial instruments, at fair value at each balance sheet date. Fair value related disclosures for financial instruments that are measured at fair value or where fair values are disclosed, are summarized in the following notes:

	Notes
Quantitative disclosures of fair value measurement hierarchy	27
Investment in unquoted equity shares	9
Financial instruments (including those carried at amortized cost)	27

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Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

- In the principal market for the asset or liability, or
- In the absence of a principal market, in the most advantageous market for the asset or liability

The principal or the most advantageous market must be accessible by the Group.

The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs.

2.9 Fair value measurement (cont'd)

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorized within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

- Level 1 Quoted (unadjusted) market prices in active markets for identical assets or liabilities
- ➤ Level 2 Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
- > Level 3 Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

For assets and liabilities that are recognized in the consolidated financial statements on a recurring basis, the Group determines whether transfers have occurred between levels in the hierarchy by re-assessing categorization (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

For the purpose of fair value disclosures, the Group has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.

2.10 Inventories

Inventories are valued at the lower of cost and net realizable value. Purchase costs, transfer costs and costs incurred in bringing each product to its present location and conditions are accounted for initial cost of inventories. Unit costs of inventories are measured by weighted average basis. Net realizable value is the estimated selling price in the ordinary course of business, less estimated costs of completion and the estimated costs necessary to make the sale.

2.11 Property, plant and equipment

Property, plant and equipment is stated at cost, net of accumulated depreciation and/or accumulated impairment losses, if any. Such cost includes the cost of replacing part of the property, plant and equipment and borrowing costs for long-term construction projects if the recognition criteria are met. When significant parts of property, plant and equipment are required to be replaced at intervals, the Group recognizes such parts as individual assets with specific useful lives and depreciates them accordingly. Likewise, when a major inspection is performed, its cost is recognized in the carrying amount of the plant and equipment as a replacement if the recognition criteria are satisfied. All other repair and maintenance costs are recognized in profit or loss as incurred. The residual values, useful lives and methods of depreciation of property, plant and equipment are reviewed at each financial year end and adjusted prospectively, if appropriate.

Depreciation of property, plant and equipment are calculated by using the straight-line method over the estimated useful life of the assets as follows:

	rears
Buildings	17 – 52
Structures	20 – 40
Machinery	4 – 5
Equipment	4 – 5
Vehicles	4 – 5

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2.12 Leases

The Group assess whether the contract contains lease when the contract is settled, by considering if the right to control the use of the identified asset is transferred in exchange for price.

Group as lessee

The Group applies a single approach on identification and measurement, except for short-term leases and leases of low-value assets. The Group identifies lease liability, as obligation to pay for the lease, and right-of-use asset, as right to control the underlying asset.

At the commencement date, the day that the underlying asset of the lease becomes available, the Group identifies the right-of-use asset. The right-of-use asset is measured as cost initially, and as cost model in subsequent measurements. Besides of accumulated depreciation and impairment loss being deducted, adjustments from remeasurement of lease liability is reflected in the cost model. The cost of right-of-use assets includes the amount of the recognized lease liability, the initial direct cost, and the lease fee paid on lease commencement date or before, less the incentive received. Right-of-use assets are depreciated on a straight-line basis over a short period of the lease term and the estimated useful life of the following assets:

If the ownership on the underlying asset is transferred to the Group when the lease is terminated, or the exercise price of a purchase option is reflected on the cost of right-of-use asset, depreciation will be calculated based on estimated useful life of the underlying asset.

Rights-of-use assets are also susceptible to impairment. See note 2.15, accounting policy on the impairment of non-financial assets.

On the commencement date, the Group measures the lease liability with the present value of the lease payments to be made during the lease term. The lease payments consist of fixed payments (including insubstance fixed payments), less lease incentives receivable, variable payments that depend on an index or a rate and amounts expected to be payable under residual value guarantees. Lease payments also contains exercise price, when it is reasonably certain that the purchase option will be exercised, and penalties for terminating lease when the lease term reflects the Group's exercise of an option to terminate the lease.

The variable payments that do not depend on an index or a rate will be recognized as expense in the period in which the event or condition that triggers those payments occurs, unless the payments are accrued in regard of manufacturing the inventory assets.

The Group utilizes incremental borrowing rate on the commencement date as the interest rates implicit in the lease are cannot be readily determined to calculate the present value of the lease payment. After the commencement date, lease liability will be increased by the interests accrued and decreased by payments made. Additionally, book value of lease liability will be remeasured with the change in lease term, lease payments (e.g. fluctuation of unpaid lease payments occurred by an index or a rate) or reassessment on exercise of purchase option on underlying asset.

The Group's lease liabilities are included in interest bearing debts (See note 27).

The Group applies recognition exemption on short-term leases of machineries and equipment. It is same on lease of low-value assets, furniture and fixtures. Lease payments on those leases will be recognized on straight-line basis.

2.13 Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalized as part of the cost of the respective assets. All other borrowing costs are expensed in the period they occur.

2.14 Intangible assets

Intangible assets acquired separately are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is its fair value as of the date of acquisition. Following initial recognition, intangible assets are carried at cost less any accumulated amortization and any accumulated impairment losses. Internally generated intangible assets, excluding capitalized development costs, are not capitalized and expenditure is reflected in the statements of profit or loss and other comprehensive income in the year in which the expenditure is incurred.

The useful lives of intangible assets are assessed as either finite or indefinite. Intangible assets with finite lives are amortized over the useful economic life and assessed for impairment whenever there is an indication that the intangible asset may be impaired. The amortization period and the amortization method for an intangible asset with a finite useful life is reviewed at least at each financial year end. Changes in the expected useful life or the expected pattern of consumption of future economic benefits embodied in the asset is accounted for by changing the amortization period or method, as appropriate, and are treated as changes in accounting estimates. The amortization expense on intangible assets with finite lives is recognized in the statements of profit or loss and other comprehensive income in the expense category consistent with the function of the intangible asset.

Intangible assets with indefinite useful lives are not amortized, but are tested for impairment annually, either individually or at the cash generating unit level. The assessment of indefinite life is reviewed annually to determine whether the indefinite life continues to be supportable. If not, the change in useful life from indefinite to finite is made on a prospective basis.

Gains or losses arising from derecognition of an intangible asset are measured as the difference between the net disposal proceeds and the carrying amount of the asset and are recognized in the consolidated statement of loss or profit when the asset is derecognized.

Research and development costs

Expenditures on research activities are recognized as expense in the period in which they incur. Expenditures on development activities are capitalized as intangible assets (development costs) when the assets become ready to use (development activities for the project are finished). The expenditures on specific projects are recognized as an intangible asset when the Group can demonstrate:

- > The technical feasibility of completing the intangible asset so that it will be available for use or sale
- > Its intention to complete and its ability to use or sell the asset
- > How the asset will generate future economic benefits
- > The availability of resources to complete the asset
- The ability to measure reliably the expenditure during development

Goodwill

Goodwill is accounted for as an intangible asset and is initially measured consideration paid which exceeds the cost of the investment over the Company's share of the fair value of the subsidiary's net identifiable assets.

Patents, licenses, software and membership

The patents have been granted for a period of 7~10 years by the relevant government agency with the option of renewal at the end of this period. Licenses for the use of intellectual property and software are granted for periods 5 and 4~5 years, respectively. Memberships for usage rights that are not kept for investment purposes, are regarded to have indefinite useful lives and are not amortized.

The Group amortizes intangible assets with a limited useful life using the straight-line method over the following periods:

31	Estimated useful life
Patents	7~10 years
Industrial proprietary rights	5 years
Other intangible assets	5 years
Software	4 ~ 5 years

2.15 Impairment of non-financial assets

The Group assesses at each reporting date whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Group estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. Recoverable amount is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining net fair value costs to sell, an appropriate valuation model is used. These calculations are corroborated by valuation multiples, quoted share prices for publicly traded subsidiaries or other available fair value indicators.

The Group bases its impairment calculation on detailed budgets and forecast calculations, which are prepared separately for each of the Group's CGUs to which the individual assets are allocated. These budgets and forecast calculations generally cover a period of five years. For longer periods, a long-term growth rate is calculated and applied to project future cash flows after the fifth year.

Impairment losses of continuing operations are recognized in the consolidated statement of comprehensive income in expense categories consistent with the function of the impaired asset, except for property previously revalued with the revaluation was taken to other comprehensive income. In this case, the impairment is also recognized in other comprehensive income up to the amount of any previous revaluation.

For assets excluding goodwill, an assessment is made at each reporting date to determine whether there is an indication that previously recognized impairment losses no longer exist or have decreased. If such indication exists, the Group estimates the asset's or cash-generating unit's recoverable amount. A previously recognized impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognized. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognized for the asset in prior years. Such reversal is recognized in the statements of profit or loss and other comprehensive income unless the asset is carried at a revalued amount, in which case the reversal is treated as a revaluation increase.

The following criteria are also applied in assessing impairment of specific assets:

Intangible assets

Intangible assets with indefinite useful lives are tested for impairment annually as of December 31 either individually or at the cash generating unit level, as appropriate and when circumstances indicate that the carrying value may be impaired.

2.16 Trade and Other Payables

These amounts represent liabilities for goods and services provided to the Group prior to the end of reporting period which are unpaid. Trade and other payables are presented as current liabilities, unless payment is not due within 12 months after the reporting period.

2.17 Provisions

Provisions are recognized when the Group has a present obligation (legal or constructive) 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. When the Group expects some or all of a provision to be reimbursed, for example under an insurance contract, the reimbursement is recognized as a separate asset but only when the reimbursement is virtually certain. The expense relating to any provision is presented in the consolidated statement of comprehensive income net of any reimbursement.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognized as a finance cost.

Provision for product warranties

The Group accrues provision for warranty corresponding to the estimated costs of future repairs and returns, based on the past experience. The provision for product warranties is charged to selling and administrative expenses when the goods covered by warranties are sold to customers.

Asset (allowance) and liability (emission obligation)

The Group is allocated with emission allowances free of charge by the government in accordance with the Act on Allocation and Trading of Emission Allowances in the Republic of Korea. The allowances are allocated to the Group every year for planned periods, and the Group should submit the equivalent number of emission allowances for actual emissions.

The Group measures the emission allowances that it receives from the government free of charge at nil, and measures any purchased emission allowances at cost. In addition, emission allowances are derecognized in the financial statements when they are delivered to the government or sold.

A liability (emission obligation) is recognized only where actual emissions exceed the allocated emission allowances, and the cost of emissions is recognized as an operating cost. The liability is measured by adding the following (1) and (2).

- (1) The carrying value of emission allowances for the year to be delivered to the government
- (2) The best estimate of expenditures, as of the end of a reporting period, in performing emission obligations exceeding the above emission allowances

2.18 Employee benefits

Post-employment benefits

The Group operates both defined contribution and defined benefit pension plans.

For defined contribution plans, the Group pays contribution to publicly or privately administered pension insurance plans on mandatory, contractual or voluntary basis. The Group has no further payment obligation once the contribution has been paid. The contribution is recognized as employee benefit expense when they are due.

The Group operates a defined benefit pension plan in Korea, the cost of providing benefits under the defined benefit plan is determined using the projected unit credit method. Re-measurements, comprising of actuarial gains and losses, the effect of the asset ceiling, excluding net interest (not applicable to the Group) and the return on plan assets (excluding net interest), are recognized immediately in the statement of financial position with a corresponding debit or credit to retained earnings through OCI in the period in which they occur. Remeasurements are not reclassified to profit or loss in subsequent periods.

Past service costs are recognized in profit or loss on the earlier of:

- > The date of the plan amendment or curtailment, and
- The date that the Group recognizes restructuring-related costs

Net interest is calculated by applying the discount rate to the net defined benefit liability or asset. The Group recognizes the following changes in the net defined benefit obligation under 'cost of sales' and 'Selling and administrative expenses' in consolidated statement of comprehensive income.

Other long-term employee benefits

The Group provide long-term employee benefits that are entitled to employees with service period for ten years and above. The expected costs of these benefits are accrued over the period of employment using the same accounting methodology as used for defined benefit pension plans. The Group recognizes service cost, net interest on other long-term employee benefits and remeasurements as profit or loss for the year. These liabilities are valued annually by an independent qualified actuary.

2.19 Treasury shares

Own equity instruments which are reacquired (treasury shares) are recognized at cost and deducted from equity. No gain or loss is recognized in the statements of profit or loss and other comprehensive income on the purchase, sale, issue or cancellation of the Group's own equity instruments. Any difference between the carrying amount and the consideration is recognized in other capital reserves.

2.20 Cash dividend

The Company recognizes a liability to pay a dividend when the distribution is authorized and the distribution is no longer at the discretion of the Company. A distribution is authorized when it is approved by the shareholders. A corresponding amount is recognized directly in equity.

2.21 Revenue recognition

Sale of goods

The Group is in the business of manufacturing and selling electronics equipment. Revenue from contracts with customers is recognised when control of the goods or services are transferred to the customer at an amount that reflects the consideration to which the Group expects to be entitled in exchange for those goods or services. Revenue from sale of equipment is recognised at the point in time when control of the asset is transferred to the customer, generally on delivery of the equipment.

Royalty revenue

The Group entered into royalty agreements with its subsidiaries. The Group is obligated to provide know-how to customers over the service period; therefore, the Group will recognize a certain amount of the allocated transaction price for each performance obligation over the service period as revenue.

Warranty obligations

The Group typically provides warranties for general repairs of defects that existed at the time of sale, as required by law. These assurance-type warranties are accounted for under Korean IFRS 1037 *Provisions, Contingent Liabilities and Contingent Assets*. See the Note 16 on warranty provisions.

Assets and liabilities arising from rights of return

Right of return asset represents the Group's right to recover the goods expected to be returned by customers. The asset is measured at the former carrying amount of the inventory, less any expected costs to recover the goods, including any potential decreases in the value of the returned goods. The Group updates the measurement of the asset recorded for any revisions to its expected level of returns, as well as any additional decreases in the value of the returned products.

A refund liability is the obligation to refund some or all of the consideration received (or receivable) from the customer and is measured at the amount the Group ultimately expects it will have to return to the customer. The Group updates its estimates of refund liabilities (and the corresponding change in the transaction price) at the end of each reporting period. See above accounting policy on variable consideration.

2.22 Taxes

Current income tax

Current income tax assets and liabilities for the current and prior periods are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted, at the reporting date in the countries where the Group operates and generates taxable income.

Current income tax relating to items recognized directly in equity is recognized in equity and not in the statements of profit or loss and other comprehensive income. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred tax

Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognized for all taxable temporary differences, except:

- When the deferred tax liability arises from the initial recognition of goodwill.
- When the deferred tax liability arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.
- In respect of taxable temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, where the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

2.22 Taxes (cont'd)

Deferred tax assets are recognized for all deductible temporary differences, the carry forward of unused tax credits and unused tax losses, to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilized except:

- When the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.
- In respect of deductible temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, deferred tax assets are recognized only to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable profit will be available against which the temporary differences can be utilized.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilized. Unrecognized deferred tax assets are reassessed at each reporting date and are recognized to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

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

Deferred tax relating to items recognized outside profit or loss is recognized outside profit or loss. Deferred tax items are recognized in correlation to the underlying transaction either in other comprehensive income or directly in equity.

Deferred tax assets and deferred tax liabilities are offset, if a legally enforceable right exists to set off current tax assets against current income tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

2.23 Government grants

Government grants relating to assets are recognized as deferred income and they are credited to profit or loss in depreciation expenses over the useful life of the related assets and the period necessary to match them with the costs that they are intended to compensate.

2.24 New and amended standards adopted by the Group

The Group has applied the following standards and amendments for the first time for their annual reporting period commencing January 1, 2020.

Amendments to Korean IFRS 1001 Presentation of Financial Statements and Korean IFRS 1008 Accounting policies, changes in accounting estimates and errors – Definition of Material

The amendments clarify the definition of material. Information is material if omitting, misstating or obscuring it could reasonably be expected to influence the decisions that the primary users of general-purpose financial statements make on the basis of those financial statements. The amendments do not have a significant impact on the financial statements.

Amendments to Korean IFRS 1103 Business Combination - Definition of a Business

The amended definition of a business requires an acquisition to include an input and a substantive process that together significantly contribute to the ability to create outputs and the definition of output excludes the returns in the form of lower costs and other economic benefits. If substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or group of similar identifiable assets, an entity may elect to apply an optional concentration test that permits a simplified assessment of whether an acquired set of activities and assets is not a business. The amendments do not have a significant impact on the financial statements.

2.24 New and amended standards adopted by the Group (cont'd)

Amendments to Korean IFRS 1109 Financial Instruments, Korean IFRS 1039 Financial Instruments: Recognition and Measurement and Korean IFRS 1107 Financial Instruments: Disclosure – Interest Rate Benchmark Reform

The amendments allow to apply the exceptions in relation the application of hedge accounting while uncertainties arising from interest rate benchmark reform exist. The exceptions require the Group assumes that the interest rate benchmark on which the hedged items and the hedging instruments are based on is not altered as a result of interest rate benchmark reform, when determining whether the expected cash flows are highly probable, whether an economic relationship between the hedged item and the hedging instrument exists, and when assessing the hedging relationship is highly effective. The amendments do not have a significant impact on the financial statements.

2.25 New standards and interpretations not yet adopted by the Group

The following new accounting standards and interpretations have been published that are not mandatory for December 31, 2020 reporting periods and have not been early adopted by the Group.

Amendments to Korean IFRS 1116 Lease – Practical expedient for COVID-19 - Related Rent Exemption, Concessions, Suspension

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, and the amounts recognized in profit or loss as a result of applying this exemption should be disclosed. The amendments should be applied for annual periods beginning on or after June 1, 2020, and earlier application is permitted. The Group does not expect that these amendments have a significant impact on the financial statements.

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

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. The amendments should be applied for annual periods beginning on or after January 1, 2021, and earlier application is permitted. The Group does not expect that these amendments have a significant impact on the financial statements.

Amendments to Korean IFRS 1103 Business Combination - Reference to the Conceptual Framework

The amendments update a reference of definition of assets and liabilities qualify for recognition 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 confirm 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.

Amendments 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.

Amendments to Korean IFRS 1037 Provisions, 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.

2.25 New standards and interpretations not yet adopted by the Group (cont'd)

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 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 related to the 10% test for derecognition of financial liabilities
- ➤ Korean IFRS 1116 *Leases* Lease incentives
- Korean IFRS 1041 Agriculture Measuring fair value

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 include 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.

2.26 Significant accounting judgments, estimates and assumptions

The preparation of the Group's consolidated financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities, and the accompanying disclosures, and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of assets or liabilities affected in future periods.

Other disclosures relating to the Group's exposure to risks and uncertainties includes Capital management, Financial instruments risk management and policies, Sensitivity analyses disclosures (Note 26).

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing material adjustments to the carrying amounts of assets and liabilities within the next financial year, are described below. The Group based its assumptions and estimates on parameters available when the consolidated financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising beyond control of the Group. Such changes are reflected in the assumptions when they occur.

Impairment of non-financial assets

The Group assesses, at each reporting date, whether there is an indication that an asset may be impaired. Goodwill and intangible assets with indefinite useful lives are tested for impairment annually, or when circumstances indicate that the carrying value may be impaired. Other non-financial assets are tested for impairment when circumstances indicate that its carrying amount may not be recoverable. In determining a value in use, management estimates future cash flows to be derived from the asset or CGU, and applies the appropriate discount rate to those future cash flows.

Deferred tax assets

Deferred tax assets are recognized for unused tax losses in the extent that it is probable that future taxable income will be available for tax losses. Management of the associate makes key judgments to determine the amount of deferred tax assets that are recognized based on the timing and level of future tax strategy and tax benefits.

2.26 Significant accounting judgments, estimates and assumptions (cont'd)

Net defined benefit liabilities

The cost of defined benefit pension plans and the present value of the pension obligation are determined using actuarial valuations. An actuarial valuation involves making various assumptions. These include the determination of the discount rate, future salary increases, mortality rates and future pension increases. Due to the complexity of the valuation, the underlying assumptions and its long-term nature, a defined benefit obligation is highly sensitive to changes in these assumptions. All assumptions are reviewed at each reporting date.

Fair value of financial instruments

When the fair values of financial assets and financial liabilities recorded in the statement of financial position cannot be measured based on quoted prices in active markets, their fair value is measured using valuation techniques including the DCF model. The inputs to these models are taken from observable markets where possible, but where this is not feasible, a degree of judgment is required in establishing fair values. Judgments include considerations of inputs such as liquidity risk, credit risk and volatility. Changes in assumptions about these factors could affect the reported fair value of financial instruments.

Impact of Coronavirus disease 2019 ("COVID-19")

During 2020, the spread of Coronavirus disease 2019 ("COVID-19") has a material impact on the global economy. It may have a negative impact; such as, decrease in productivity, decrease or delay in sales, collection of existing receivables and others. Accordingly, it may have a negative impact on the financial position and financial performance of the Group.

2.27 Approval of the financial statements

Approval of the consolidated financial statements of the Group for the year ended December 31, 2020 were approved by the Board of Directors' meeting on January 27, 2021 for submission to the general shareholders' meeting.

3. Operating segment information

The Group has three reportable operating segments, which are organized based on each segment's products and sales.

- > Component Solution: Chip components (MLCC, inductors, chip resisters and others)
- > Module Solution: Camera module, Network module
- > Printed Circuit Board Solution: Semiconductor PKG board, rigid flex printed circuit board

Sales to Samsung Electronics Co., Ltd. & its subsidiaries is more than 10% of its total sales, amounted to $\mathbb{W}2.765$ billion (2019: $\mathbb{W}3.422$ billion) for the year ended December 31, 2020.

The following table summarizes the results of financial performance of the Group by operating segment for the years ended December 31, 2020 and 2019 (Korean won in millions):

	2020							
	Component		Printed Circuit					
		Solution	Mo	dule Solution	Bo	ard Solution		Consolidated
Sales	₩	3,644,957	₩	2,802,452	₩	1,761,329	₩	8,208,738
Depreciation		440,534		182,772		161,518		784,824
Amortization		14,701		12,257		5,958		32,916
Depreciation of right-of use								
assets		12,138		6,860		1,070		20,068
Operating profit		557,683		171,342		100,106		829,131
	2019							
	(Component	t		Printed Circuit			
		Solution	Мо	dule Solution	Bo	ard Solution		Consolidated
Sales	₩	3,219,758	₩	3,028,253	₩	1,470,287	₩	7,718,298
Depreciation		419,603		176,205		231,444		827,252
Amortization Depreciation of right-of use		14,108		7,360		3,283		24,751
assets		9,865		4,490		1,033		15,388

504,861

Geographic information is as follows:

Operating profit

	Major products	Major customers			
Korea	Passive element, camera module, semiconductor package substrate, rigid flex printed circuit board and others	Samsung Electronics, Amkor Technology Korea, LG Display and others			
China and Southeast Asia	Passive element, camera module, rigid flex printed circuit board and others	Samsung Electronics, Samsung Display, Xiaomi and others			
Japan	Passive element, semiconductor package substrate	Shinko, SOMC and others			
America	Passive element, semiconductor package substrate	Intel, Future, Dell and others			
Europe	Passive element and others	Rutronik, Nokia Networks, Bosch and others			

221,508

14,555

740,924

3. Operating segment information (cont'd)

The results of financial performance of the Group by geographic segment for the years ended December 31, 2020 and 2019 (Korean won in millions) are as follows:

	2020																	
		Koı	rea						C	verseas								
	Do	omestic		Export		China		Southeast Asia		America		Europe		Japan	Adjustment		Consolidated	
Sales(*1)	₩	516,645	₩	2,043,031	₩	2,820,890	₩	2,080,382	₩	420,745	₩	207,575	₩	119,470	₩	-	₩	8,208,738
Non-current assets(*2)				2,039,097		1,439,751		1,241,043		262		2,414		1,165		(68,113)		4,655,619
						2019												
		Koı	rea						C	verseas								
	Do	omestic		Export		China	Sc	Southeast Asia		America		Europe		Japan	Ad	justment	Consolidated	
Sales(*1) Non-current assets(*2)	₩	625,564	₩	2,137,614 2,042,335	₩	2,167,428 1,186,997	₩	1,994,582 1,543,232	₩	377,568 149	₩	319,466 3,091	₩	96,076 673	₩	(42,072)	₩	7,718,298 4,734,404

^(*1) This amount excludes internal sales within the Group.

4. Cash and cash equivalents

Cash and cash equivalents as of December 31, 2020 and 2019 are as follows (Korean won in thousands):

		2020		2019	
Cash at banks and on hand	₩	25,245	₩	15,011	
Short-term deposits	1,47	79,742,172		803,795,417	
	₩ 1,47	79,767,417	₩	803,810,428	

5. Other assets and liabilities

Other assets and liabilities as of December 31, 2020 and 2019 are as follows (Korean won in thousands):

!	Non-current		
₩	20,772		
	98,385		
	-		
	-		
	14,813,128		
₩	14,932,285		
₩	-		
	-		
	11,075,315		
₩	11,075,315		
	₩ ₩		

^(*2) This amount excludes financial assets, deferred tax assets, investment in associates and others.

5. Financial assets and liabilities (cont'd)

Restricted deposits as of December 31, 2020 and 2019 consist of the following (Korean won in thousands):

	Financial institution		2020		2019	Description
Short-term financial instruments	Woori Bank	₩	39,000,000	₩	39,000,000	Financial support reserve for strategic alliances
Long-term financial instruments	Woori Bank and 6 other banks		19,080		20,772	Overdraft facilities
		₩	39,019,080	₩	39,020,772	

6. Trade and other receivables

Trade and other receivables as of December 31, 2020 and 2019 are as follows (Korean won in thousands):

		20	20		2019					
	Current			Non-current		Current	Non-current			
Trade receivables Allowance for doubtful	₩	943,793,120	₩	-	₩	976,076,541	₩	-		
accounts		-		-		(27,685)		-		
Other receivables Allowance for doubtful		52,127,868		530,396		124,446,697		5,661,445		
accounts		(299,972)		(530,396)		(4,818,968)		(615,418)		
	₩	995,621,016	₩	-	₩ ′	1,095,676,585	₩	5,046,027		

The changes in allowance for doubtful accounts for the years ended December 31, 2020 and 2019 are as follows (Korean won in thousands):

		2020		2019
As of January 1	₩	5,462,071	₩	6,608,967
Allowance (reversal) for doubtful accounts - trade		(27,685)		3,650
Allowance (reversal) for doubtful accounts - others		(255,012)		61,392
Write-off		(4,349,006)		(1,211,938)
As of December 31	W	830,368	₩	5,462,071

As of December 31, 2020 and 2019, the aging analysis of trade and other receivables are as follows (Korean won in thousands):

		2020	2019
Neither past due nor impaired	₩	974,386,109	₩ 1,062,944,745
Past due but not impaired:			
Within 30 days		17,309,194	25,302,938
31 ~ 180 days		3,288,435	15,172,632
181 ~ 365 days		73,329	1,381,048
> 365 days		1,394,317	1,383,320
		22,065,275	43,239,938
	₩	996,451,384	₩ 1,106,184,683

6. Trade and other receivables (Cont'd)

The Group disposed of its trade receivables in 2020 and 2019 in accordance with a factoring agreement entered into with various financial institutions. The Group did not derecognize the trade receivables, as the financial institutions hold recourse rights and the Group retains the related risk and rewards. The financial liability was recognized as short-term borrowings on the statements of financial position for the years ended December 31, 2020 and 2019 (Note 14).

Trade receivables factored with recourse as of December 31, 2020 and 2019 are as follows (Korean won in thousands):

		2020		2019
Book value of trade receivables disposed(*)	₩	368,120,835	₩	305,749,589
Book value of related borrowings		368,120,835		305,749,589

(*) Trade receivables disposed include inter-company trade-receivables.

7. Inventories

Inventories as of December 31, 2020 and 2019 are as follows (Korean won in thousands):

			2020		2019							
	Ac	equisition cost	Valuation allowance			Book value		Acquisition cost		Valuation allowance		Book value
Merchandise	₩	119,807,361	₩	(5,342,339)	₩	114,465,022	₩	151,256,459	₩	(11,168,501)	₩	140,087,958
Finished goods		455,111,186		(36,243,585)		418,867,601		435,286,803		(51,480,841)		383,805,962
Work-in-process		476,682,430		(12,400,047)		464,282,383		352,162,663		(16,844,214)		335,318,449
Components		-		-		-		75,771,888		-		75,771,888
Raw materials		224,173,137		(6,987,612)		217,185,525		252,667,504		(11,890,273)		240,777,231
Supplies		56,469,388		-		56,469,388		59,860,084		-		59,860,084
Materials in-transit		66,645,802				66,645,802		35,652,060				35,652,060
	₩	1,398,889,304	₩	(60,973,583)	₩	1,337,915,721	₩	1,362,657,461	₩	(91,383,829)	₩	1,271,273,632

Changes in inventories included in cost of sales and loss on valuation of inventories (reversal) included in cost of sales for the years ended December 31, 2020 and 2019 are as follows (Korean won in thousands):

		2020		2019
Inventories recognized as an expense(*)	₩	6,525,650,331	₩	6,326,659,187
Reversal of loss on valuation of inventories(*)		(51,175,309)		(16,462,317)
	₩	6,474,475,022	₩	6,310,196,870

(*) Includes profit (loss) for the year from discontinued operations.

8. Investment in associates

Investment in associates as of December 31, 2020 and 2019 are as follows (Korean won in thousands):

		Stemco	Co.,	Ltd.	S	amsung Economi	c Re	search Institute
		2020	2019			2020		2019
Number of shares		1,440,000		1,440,000		2,856,000		2,856,000
Equity interest		30.00%		30.00%		23.80%		23.80%
Acquisition cost	₩	7,200,000	₩	7,200,000	₩	14,280,000	₩	14,280,000
Shareholder portion	₩	53,329,825	₩	49,089,141	₩	19,131,175	₩	19,170,739
Book value	₩	53,329,825	₩	49,089,141	₩	19,131,175	₩	19,170,739
Domicile		Korea		Korea		Korea		Korea
Fiscal year end		December 31		December 31		December 31		December 31
Principal activities		Manufacturing and trading of semiconductor parts		Manufacturing and trading of semiconductor parts		Research and development, human resource development		Research and development, human resource development

The following table summarizes the financial position of associates as of December 31, 2020 and 2019, and the results of their financial performance for the years then ended December 31, 2020 and 2019 (Korean won in thousands):

		Stemco	Co., l	Ltd.	Samsung Economic Research Institute					
		2020		2019		2020		2019		
Current assets	₩	99,993,643	₩	118,540,930	₩	88,346,473	₩	75,570,478		
Non-current assets		156,203,898		166,652,007		55,537,797		52,702,631		
Total assets	₩	256,197,541	₩	285,192,937	₩	143,884,270	₩	128,273,109		
Current liabilities	₩	69,259,119	₩	95,307,117	₩	47,590,664	₩	33,855,945		
Non-current liabilities		9,172,337		26,255,017		15,910,517		13,867,841		
Total liabilities	₩	78,431,456	₩	121,562,134	₩	63,501,181	₩	47,723,786		
Total equity	₩	177,766,085	₩	163,630,803	₩	80,383,089	₩	80,549,323		
		Stemco	Co., L	.td.	Saı	msung Economi	c Research Institute			
		2020		2019		2020	2019			
Sales	₩	330,100,574	₩	326,450,134	₩	164,358,099	₩	176,004,388		
Profit for the year		33,080,701		39,325,792		79,023		526,366		
Other comprehensive income (expense)		360,580		(396,219)		(245,257)		(6,621,952)		
Total comprehensive income (expense)		33,441,281		38,929,573		(166,234)		(6,095,586)		

Details of changes in the carrying amount of equity method investments (Korean won in thousands):

		Jan. 1, 2020		are of profit or	o	ity adjustments f investment n associates	Divi	dends income	D	ec. 31, 2020
Stemco Co., Ltd.	₩	49,089,141	₩	9,924,210	₩	108,174	₩	(5,791,700)	₩	53,329,825
Samsung Economic										
Research Institute		19,170,739		18,807		(58,371)		-		19,131,175
	₩	68,259,880	₩	9,943,017	₩	49,803	₩	(5,791,700)	₩	72,461,000
		Jan. 1, 2019		are of profit or	0	ity adjustments f investment n associates	Divi	dends income	D	ec. 31, 2019
Stemco Co., Ltd.	₩	39,592,269	₩	11,797,738	₩	(118,866)	₩	(2,182,000)	₩	49,089,141
Samsung Economic										
Research Institute		20,621,489		125,275		(1,576,025)		-		19,170,739
	₩	60,213,758	₩	11,923,013	₩	(1,694,891)	₩	(2,182,000)	₩	68,259,880

8. Investment in associates (Cont'd)

Details of changes in the book value of investment in associates based on their net assets as of December 31, 2020 and 2019 are as follows (Korean won in thousands):

	2020											
			Shareholder									
	Net assets (A)	Ownership (B)	portion (A*B)	Book value								
Stemco Co., Ltd. Samsung Economic	₩ 177,766,085	30.00%	₩ 53,329,825	₩ 53,329,825								
Research Institute	80,383,089	23.80%	19,131,175	19,131,175								
	₩ 258,149,174		₩ 72,461,000	₩ 72,461,000								
				-								
		20)19									
			Shareholder	_								
	Net assets (A)	Ownership (B)	portion (A*B)	Book value								
Stemco Co., Ltd. Samsung Economic	₩ 163,630,803	30.00%	₩ 49,089,141	₩ 49,089,141								
Research Institute	80,549,323	23.80%	19,170,739	19,170,739								
	₩ 244,180,126		₩ 68,259,880	₩ 68,259,880								

9. Financial assets measured at fair value

Details of financial assets measured at fair value as of December 31, 2020 and 2019 are as follows (Korea won in thousands):

		20		2019		
	Ac	quisition cost		Book value		Book value
Marketable securities	₩	88,617,199	₩	101,361,219	₩	105,515,627
Non-marketable securities		25,160,067		99,593,923		67,832,674
	₩	113,777,266	₩	200,955,142	₩	173,348,301

Marketable securities

Marketable securities as of December 31, 2020 and 2019 are as follows (Korea won in thousands):

		20		2019					
	Number of shares	Equity interest	Ac	quisition cost		Book value		Book value	Domicile
Samsung Heavy Industries Co., Ltd. iMarketkorea Inc.	13,636,562 613,252	2.16% 1.73%	₩	88,310,573 306,626	₩	96,001,397 5,359,822	₩	99,137,806 6,377,821	Korea Korea
			₩	88,617,199	₩	101,361,219	₩	105,515,627	

9. Financial assets measured at fair value (cont'd)

Non-marketable securities

Non-marketable securities as of December 31, 2020 and 2019 are as follows (Korean won in thousands):

			2020					2019
	Number of shares	Equity interest (%)	٨٥٥	uisition cost		Book value		Book value
Financial assets measured at	UI SHAIRS	(70)	Acq	uisition cost		book value		book value
fair value through OCI								
Samsung Venture								
Investment Co., Ltd.(*)	1,020,000	17.00	₩	5,100,000	₩	22,960,200	₩	13,274,280
SOLUM Co., Ltd. (*)	4,650,000	11.64		2,325,000		62,189,100		40,389,900
KMAC fund	8,000	1.00		40,000		40,000		40,000
IMA(*)	347,696	8.69		4,028,477		7,884,703		8,804,010
Inkel Co., Ltd.	40	0.00		200		200		200
Posco Social								
Corporation Fund	4	1.67		40,000		40,000		40,000
SEMCNS Co., Ltd.(*)	-	-						1,872,000
				11,533,677		93,114,203		64,420,390
Financial assets measured at fair						_		
value								
through profit or loss								
Intellectual Discovery	7,212	0.22		250.004		_		_
Korea Orbcom Ltd.	16,000	3.42		600,000		_		_
Cosmolink Co.,Ltd.	•	2.18		,		-		-
•	58,067			6,451,253		-		-
Optis Co., Ltd.	10,963	0.05		54,816		-		-
DS Asia Holdings	3,208,399	1.80		16,276		- 470 700		-
Others	-	-		6,254,041		6,479,720		3,412,284
				13,626,390		6,479,720		3,412,284
			₩	25,160,067	₩	99,593,923	₩	67,832,674

^(*) Valuations on the non-marketable securities were performed by an independent professional appraiser, using fair values calculated using the discounted future cash flows method, guideline public company method, various financial ratios and other relevant information.

9. Financial assets measured at fair value (cont'd)

Details of changes in accumulated other comprehensive income arising from valuation of financial instruments measured at fair value for the years ended December 31, 2020 and 2019 are as follows (Korean won in thousands):

		20)20	
	_	Increase	Current year	
	January 1	(decrease)	tax effect	December 31
Marketable securities	₩ 12,809,008	₩ (4,154,408)	₩ 1,005,367	₩ 9,659,967
Non-marketable securities	39,766,133	30,693,812	(7,427,903)	63,032,042
	₩ 52,575,141	₩ 26,539,404	₩ (6,422,536)	₩ 72,692,009
		20)19	
			Current year	
	January 1	Increase	tax effect	December 31
Marketable securities	₩ 12,638,459	₩ 224,998	₩ (54,449)	₩ 12,809,008
Non-marketable securities	18,719,070	27,755,176	(6,708,113)	39,766,133
	₩ 31,357,529	₩ 27,980,174	₩ (6,762,562)	₩ 52,575,141

10. Property, plant and equipment

Property, plant and equipment as of December 31, 2020 and 2019 are as follows (Korean won in thousands):

				2020			2019						
	Acquisition cost		Accumulated depreciation(*)		Book value		Acquisition cost		Accumulated depreciation(*)			Book value	
Land	₩	206,186,873	₩	-	₩	206,186,873	₩	210,770,683	₩	-	₩	210,770,683	
Buildings		2,046,151,631		(620,286,655)		1,425,864,976		1,924,748,691		(569,273,909)		1,355,474,782	
Structures		121,890,161		(64,113,717)		57,776,444		129,641,357		(63,901,569)		65,739,788	
Machinery		6,418,455,887		(4,494,788,639)		1,923,667,248		6,494,661,971		(4,664,454,552)		1,830,207,419	
Vehicles		4,738,302		(3,444,372)		1,293,930		4,738,388		(3,314,698)		1,423,690	
Equipment		355,125,492		(248,337,660)		106,787,832		332,828,701		(245,181,543)		87,647,158	
Construction-in-progress		677,978,337		-		677,978,337		925,338,587		-		925,338,587	
Machinery-in-transit	24,806,648 -			24,806,648		37,908,041				37,908,041			
	₩	9,855,333,331	₩	(5,430,971,043)	₩	4,424,362,288	₩	10,060,636,419	₩	(5,546,126,271)	₩	4,514,510,148	

(*) Accumulated impairment losses are included.

Changes in the book value of property, plant and equipment for the years ended December 31, 2020 and 2019 are as follows (Korean won in thousands):

		2020														
	Já	anuary 1		Additions		Disposals and scrap		Transfers		Depreciation	Others (*)		Classified as held for sale			December 31
Land	₩ 2	210,770,683	₩	-	₩	-	₩	-	₩	-	₩	(344,895)	₩	(4,238,915)	₩	206,186,873
Buildings	1,3	355,474,782		1,990,457		(845,327)		158,862,317		(55,446,685)	(33,375,031)		(795,537)		1,425,864,976
Structures		65,739,788		65,018		-		1,978,416		(5,524,545)		(857,800)		(3,624,433)		57,776,444
Machinery	1,8	830,207,419		125,245,999	(10	,677,588)		712,832,662		(689,632,446)	(40,791,033)		(3,517,765)		1,923,667,248
Vehicles		1,423,690		210,138		(7,957)		325,814		(583,364)		(26,094)		(48,297)		1,293,930
Equipment		87,647,158		25,885,359		(255,372)		34,691,043		(36,227,163)		(1,976,590)		(2,976,603)		106,787,832
Construction-in-progress	9	925,338,587		469,613,032		-		(777,729,687)		-		60,822,901		(66,496)		677,978,337
Machinery-in-transit		37,908,041		118,920,816				(130,960,565)		-		(815,436)		(246,208)		24,806,648
	₩ 4,	514,510,148	₩	741,930,819	₩ (11	,786,244)	₩		₩	(787,414,203)	₩ (17,363,978)	₩	(15,514,254)	₩	4,424,362,288

					2019				
	January 1	Additions	Disposals and scrap	Disposals by business transfer	Transfers	Depreciation	Others (*)	Classified as held for sale	December 31
Land	₩ 209,466,811	₩ -	₩ -	₩ -	₩ -	₩ -	₩ 1,303,872	₩ -	₩ 210,770,683
Buildings	1,532,761,372	1,260,667	(1,203,882)	-	47,492,619	(65,729,849)	(27,985,556)	(131,120,589)	1,355,474,782
Structures	83,643,540	307,137	(12,953)	(14,585,461)	5,059,981	(6,170,699)	1,025,416	(3,527,173)	65,739,788
Machinery	2,140,585,380	41,601,824	(27,341,747)	(314,260,881)	760,513,432	(716,582,510)	(57,838,160)	3,530,081	1,830,207,419
Vehicles	1,502,259	561,818	(22,770)	-	120,076	(758,471)	38,507	(17,729)	1,423,690
Equipment	88,840,639	22,125,085	507,190	(1,083,194)	21,503,082	(39,865,300)	1,248,898	(5,629,242)	87,647,158
Construction-in-progress	469,114,927	1,109,547,494	(7,069,840)	-	(577,770,742)	-	(68,483,252)	-	925,338,587
Machinery-in-transit	32,095,255	338,447,135	(871,533)		(256,918,448)		(74,844,368)		37,908,041
	₩ 4,558,010,183	₩ 1,513,851,160	₩ (36,015,535)	₩ (329,929,536)	₩ -	₩ (829,106,829)	₩ (225,534,643)	₩ (136,764,652)	₩ 4,514,510,148

^(*) Others represent transfer to another account foreign exchange rate adjustments and others.

Line items including depreciation in the statements of comprehensive income for the years ended December 31, 2020 and 2019 are as follows (Korean won in thousands):

		2020		2019
Cost of sales	₩	729,156,976	₩	755,429,580
Selling and administrative expenses		58,257,227		73,677,249
Total amount	₩	787,414,203	₩	829,106,829

10. Property, plant and equipment (cont'd)

If a tangible asset is acquired at a price less than its fair value due to government subsidies, the acquisition cost of the tangible asset is the fair value at the acquisition date. Government subsidies are recognized unearned income and are depreciated over the useful life of the asset. The amount offset by depreciation is W6.104.502 thousand (2019: W5.333.967 thousand).

Borrowing costs incurred amounting to \$14,770,941 thousand (2019: \$4,326,702 thousand) for the year ended December 31, 2020, which were directly attributable to the acquisition and construction of qualifying property, plant and equipment, are capitalized as part of the cost of those assets.

The Group revalued certain property, plant and equipment in accordance with the *Korean Asset Revaluation Act* on January 1, 1981 and July 1, 1998. The revalued amounts are recorded as deemed cost at the revaluation date in accordance with Korean IFRS 1101. The difference between the revaluation amount and book value prior to revaluation is recorded as revaluation surplus in retained earnings and may not be utilized for cash dividends.

Property, plant and equipment are insured against fire and other casualty losses for up to \$9,188,026,580 thousand and \$10,859,003,833 thousand as of December 31, 2020 and 2019, respectively.

11. Intangible assets

Intangible assets as of December 31, 2020 and 2019 are as follows (Korean won in thousands):

				2020			2019						
	Ac	Accumulated Acquisition cost amortization(*)				Book value	Acquisition cost		Accumulated amortization(*)			Book value	
Patent/industrial													
proprietary rights	₩	51,431,263	₩	(21,120,954)	₩	30,310,309	₩	39,309,458	₩	(15,253,945)	₩	24,055,513	
Software and others		215,341,235		(135,325,407)		80,015,828		200,348,815		(111,373,437)		88,975,378	
Membership	-	30,641,351		(2,716,593)		27,924,758		29,250,042		(1,130,032)		28,120,010	
	₩	297,413,849	₩	(159,162,954)	₩	138,250,895	₩	268,908,315	₩	(127,757,414)	₩	141,150,901	

(*) Accumulated impairment losses are included.

Changes in the book value of intangible assets for the years ended December 31, 2020 and 2019 are as follows (Korean won in thousands):

				2020			
	January 1	Additions	Disposals and scrap	Classified as held for sale	Amortization	Others (*)	December 31
Patent/industrial proprietary rights Software and others Membership	W 24,055,513 88,975,378 28,120,010	W 12,333,558 11,096,039 1,404,228	₩ (80,238) (1,001,445)	₩ - (559,421)	₩ (5,998,524) (27,675,591)	₩ - 9,180,868 (1,599,480)	₩ 30,310,309 80,015,828 27,924,758
Membership	₩ 141,150,901	₩ 24,833,825	₩ (1,081,683)	₩ (559,421)	₩ (33,674,115)	₩ 7,581,388	₩ 138,250,895
				2019			
	January 1	Additions	Disposals and scrap	Disposals by business transfer	Amortization	Others (*)	December 31
Patent/industrial proprietary rights Land usage rights	₩ 22,833,412 5,855,759	₩ 14,356,252	₩ (4,391,004)	₩ (3,868,084)	₩ (4,875,063)	₩ - (5,855,759)	₩ 24,055,513
Development cost Software and others Membership	66,699,673 37,961,175 29,110,589	1,357,742 24,592,902	(104,307) (730,666)	(64,022,896) (16,929,431)	(4,034,519) (16,620,439)	60,075,478 (259,913)	88,975,378 28,120,010
	₩ 162,460,608	₩ 40,306,896	₩ (5,225,977)	₩ (84,820,411)	₩ (25,530,021)	₩ 53,959,806	₩ 141,150,901

(*) Others represent transfer to another account foreign exchange rate adjustments and others.

Details of expensed research and development costs incurred in 2020 and 2019 are as follows (Korean won in thousands):

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		2020		2019
Cost of Sales(*)	₩	49,600,155	₩	64,859,562
Selling and administrative expenses(*)		460,076,901		498,165,939
	₩	509,677,056	₩	563,025,501

(*) Includes expenses for the year from discontinued operations.

Impairment tests for intangible assets with indefinite useful lives

The Group conducted impairment tests on membership and on intangible assets with indefinite useful lives and recognized impairment loss of \$1,586,561 thousand.

The recoverable amount of membership is the higher of a membership's fair value costs of disposal and its value in use. The Group uses net fair value if it is available. If it is not available, the Group estimates value in use and determines recoverable amounts.

12. Leases

Changes in book value of right-of-use assets and lease liabilities for the years ended December 31, 2020 and 2019 (Korean Won in thousands).

						2020				
				Right-of-u	ıse a	ssets				_
		Land and		ehicles and ansportation						
		Buildings		equipment	Oth	er equipment		Total	L	ease Liability
As of January 1, 2020	₩	60,898,228	₩	17,641,876	₩	201,730	₩	78,741,834	₩	48,671,224
New and renewal of contract		42,526,516		1,280,808		2,414,819		46,222,143		45,640,362
Write-off due to early termination of contract		(81,786)		(3,710,836)		(1,652,291)		(5,444,913)		(5,620,591)
Changes of contract Others(*)		(4,219,799) (2,297,215)		311,643		6,096		(4,219,799) (1,979,476)		(7,080,048) (844,185)
Depreciation Interest cost		(12,510,415)		(6,944,939)		(633,719)		(20,089,073)		1.637.220
Payment		_		-		-		-		(19,576,493)
Transfer to assets held for sale		_		(224,634)		_		(224,634)		(229,583)
As of December 31,	***	04045500	117	, , , ,	117	222.225	***		***	<u>.</u>
2020	₩	84,315,529	₩	8,353,918	₩	336,635	₩	93,006,082	₩	62,597,906
						2019				
				Right-of-u	ıse a	ssets				_
		Land and		ehicles and						
		Buildings		ansportation equipment	Oth	er equipment		Total	L	ease Liability
As of January 1, 2019			-							
(restated) New and renewal of	₩	33,577,237	₩	11,760,779	₩	390,914	₩	45,728,930	₩	28,219,471
contract		42,750,251		12,289,955		-		55,040,206		53,905,985
Liquidation, etc.(*)		(1,039,223)		(258,090)		(3,151)		(1,300,464)		(1,058,865)
Depreciation Interest cost		(9,053,189)		(6,150,768)		(186,033)		(15,389,990)		1,111,420
Payment		-		-		-		-		(33,506,787)
Transfer to assets held for sale		(5,336,848)		_		_		(5,336,848)		_
As of December 31, 2019	₩	60,898,228	₩	17,641,876	₩	201,730	₩	78,741,834	₩	48,671,224
20.0	<u> </u>	30,000,220	<u> </u>	17,011,070		201,700	<u> </u>	. 0,7 11,004		10,011,224

^(*) Including effect of foreign currency transition and translation.

In 2020, the Group recognized $\mathbb{\psi}7,932,590$ thousand (2019: $\mathbb{\psi}19,707,201$ thousand) and $\mathbb{\psi}2,249,421$ thousand (2019: $\mathbb{\psi}1,278,188$ thousand) from short-term leases and leases of low-value assets, respectively.

The total cash outflow for leases in 2020 was ₩29,758,504 thousand (2019: ₩ 54,492,176 thousand).

13. Trade and other payables

Trade and other payables as of December 31, 2020 and 2019 are as follows (Korean won in thousands):

		2020				2019			
		Current		Non-current		Current		Non-current	
Trade payables	₩	434,514,202	₩	-	₩	263,006,724	₩	-	
Other payables		317,878,670		2,024,857		242,476,159		2,036,929	
Accrued expenses		349,091,174		78,542,155		386,088,786		89,172,283	
Dividends payables		24,788,765		-		10,383			
	₩	1,126,272,811	₩	80,567,012	₩	891,582,052	₩	91,209,212	

14. Borrowings

Short-term borrowings as of December 31, 2020 and 2019 consist of the following (Korean won in thousands):

Financial institution	Description	Annual interest rate (%) as of Dec. 31, 2020		2020		2019
	Discount of					
	commercial	LIBOR +				
Woori Bank and 4 other banks	paper	0.50~0.72	₩	368,120,835	₩	305,749,589
	General					
KB Kookmin Bank	borrowings	LIBOR +1.45		38,080,000		263,440,059
			₩	406,200,835	₩	569,189,648

The Group entered into factoring agreements with recourse for its trade receivables with Woori Bank and others. Factored receivables not overdue as of December 31, 2020 are accounted for as short-term borrowings (Note 6).

Long-term borrowings as of December 31, 2020 and 2019 are as follows (Korean won in thousands):

Financial institution	Description	Annual interest rate (%) as of Dec. 31, 2020		2020	2019
Fillancial ilistitution	General	LIBOR +		2020	2019
			***		***
Mizuho bank and 6 other banks	borrowings	0.85~1.65	₩	854,267,546	₩ 1,063,102,213
	General				
BoA	borrowings	4.88		116,873,267	116,018,067
	General			-,, -	-,,-
ICBC bank	borrowings	PBOC *0.95(*1)		56,098,560	55.854.380
Citi bank and 2 other	General	LPR -0.35 ~		,,	,,
banks	borrowings	+0.87(*2)		410,650,643	158,588,816
				1,437,890,016	1,393,563,476
Less current portion of					
borrowings				(204,681,307)	(173,835,740)
			₩	1,233,208,709	₩ 1,219,727,736
			<u> </u>	1,200,200,700	1,210,121,100

^(*1) PBOC refers to the benchmark interest rate of the People's Bank of China.

^(*2) LPR refers to the Loan Prime Rate informed by the People's Bank of China.

15. Refund liabilities and Right of return assets

Details of refund liabilities and right of return assets are follows (Korean won in thousands):

		2020		2019
Refund liabilities	₩	23,400,025	₩	19,531,121
Right of return assets		17,784,713		14,246,213

Refund liabilities are estimated obligation to refund some or all of consideration received from customers and are measured at the amount the Group estimates. Rights of return assets show the right of the Group to receive return assets as customers exercise their rights.

16. Defined benefit liabilities

The Group has a defined benefit pension plan for its employees, for which the present value of defined benefits liabilities is calculated using the projected unit credit method by an independent actuary firm.

Details of net defined benefit liabilities recognized in the statements of financial position as of December 31, 2020 and 2019 are as follows (Korean won in thousands):

	2020	2019
Present value of funded defined benefit obligations	₩ 678,505,335	₩ 619,283,872
Fair value of plan assets (*)	(647,937,765)	(580,321,642)
Net defined benefit liabilities	₩ 30,567,570	₩ 38,962,230

(*) The contributions to the National Pension Fund of $\uppi287,001$ thousand are included in the fair value of plan assets as of December 31, 2020 (2019: $\uppi2829,313$ thousand).

Changes in defined benefit liabilities (assets) for the years ended December 31, 2020 and 2019 are as follows (Korean won in thousands):

	2020			2019
Changes in defined benefit liabilities(assets):				
At January 1	₩	38,962,230	₩	26,141,991
Contributions by employer		(80,027,992)		(90,058,224)
Retirement benefits paid		(13,700,160)		(9,084,370)
Pension cost charged to profit or loss		59,913,807		57,116,100
Succession of defined benefit liabilities		3,894,892		(2,520,588)
Re-measurement losses in OCI		25,303,842		56,757,434
Exchange differences		(404,829)		609,887
Classified as held for sale		(3,374,220)		-
At December 31		30,567,570		38,962,230
Defined benefit liabilities (assets) in the statement of financial position:				
Present value of defined benefit obligation		678,505,335		619,283,872
Fair value of plan assets		(647,937,765)		(580,321,642)
	₩	30,567,570	₩	38,962,230

Re-measurement gains on defined benefit plans (net of tax) of \$20,328,932 thousand (2019: \$44,193,312 thousand) was recognized as other comprehensive income.

16. Defined benefit liabilities (cont'd)

Expenses recorded in relation to the defined benefit pension plan for the years ended December 31, 2020 and 2019 are as follows (Korean won in thousands):

		2020		2019
Current service cost	₩	58,542,358	₩	54,567,362
Past service cost		-		796,346
Interest cost on benefit obligation		13,889,954		16,580,415
Expected return on plan assets		(12,518,505)		(14,828,023)
	₩	59,913,807	₩	57,116,100

Changes in the present value of the defined benefit obligation for the years ended December 31, 2020 and 2019 are as follows (Korean won in thousands):

		2020		2019
At January 1	₩	619,283,872	₩	551,262,563
Benefits paid		(37,509,003)		(31,150,712)
Current service cost		58,542,358		54,567,362
Interest cost		13,889,954		16,580,415
Succession of defined benefit obligation		3,894,892		(24,996,915)
Past service cost		-		796,346
Re-measurement losses (gains)				
based on changes of demographic assumptions		1,208,907		(1,753)
Re-measurement losses (gains)				
based on changes of financial assumptions		(3,716,337)		26,129,869
Re-measurement losses				
based on changes of experience adjustments		26,694,381		25,473,473
Held for sale		(3,374,220)		-
Exchange differences		(409,469)		623,224
At December 31	₩	678,505,335	₩	619,283,872

The weighted average duration of the defined benefit obligation is 7.25 years (2019: 7.04 years).

Changes in the fair value of plan assets for the years ended December 31, 2020 and 2019 are as follows (Korean won in thousands):

	2020			2019
At January 1	₩	580,321,642	₩	525,120,572
Contributions by employer		80,027,992		90,058,224
Benefits paid		(23,808,843)		(22,066,342)
Effect of succession of defined benefit obligation		-		(22,476,327)
Expected return on plan assets		12,518,505		14,828,023
Re-measurement losses		(1,116,891)		(5,155,845)
Exchange differences		(4,640)		13,337
At December 31	₩	647,937,765	₩	580,321,642

The Group has funded 95% of its defined benefit obligation with Samsung Life Insurance Co., Ltd as of December 31, 2020. The Group's employees are individually nominated as the vested beneficiaries of the defined benefit plan assets. Contributions related to the defined benefit obligation are expected to be \$80,028 million for the next fiscal year.

16. Defined benefit liabilities(cont'd)

The major categories of the fair value of total plan assets as of December 31, 2020 and 2019 are as follows (Korean won in thousands):

		2020		2019
Cash and cash equivalents	₩	647,265,041	₩	579,675,698
Others		672,724		645,944
	₩	647,937,765	₩	580,321,642

The principal assumptions used in actuarial calculation as of December 31, 2020 and 2019 are as follows:

	2020	2019
Discount rate	0.30% ~ 5.10%	0.30% ~ 6.55%
Future salary increases	2.81% ~ 8.00%	2.99% ~ 8.00%

The following table demonstrates a sensitivity analysis on the effect of changes in the principal assumptions used in actuarial calculation on the present value of defined benefit obligation as of December 31, 2020 and 2019, respectively (Korean won in thousands):

Effect of changes in the discount rate (Korean won in thousands):

		2020				2019			
	1%	1% point decrease		1% point increase		1% point decrease		1% point increase	
Impact on									
defined benefit liabilities	₩	50,843,405	₩	(44,544,955)	₩	45,223,592	₩	(39,752,924)	

Effect of changes in future salary increases. (Korean won in thousands):

		2020				2019			
	1%	1% point decrease		1% point increase		1% point decrease		1% point increase	
Impact on									
defined benefit liabilities	₩	(44,895,240)	₩	50,257,066	₩	(39,969,050)	₩	44,568,432	

The Group also operates a defined contribution pension plan for its employees. The Group's liabilities consist of fixed contributions to be made to a separate pension fund. Future retirement benefits are based on the contributions of the Group and investment gains from plan assets. Plan assets are managed in a separate fund by independent trustees. For the years ended December 31, 2020 and 2019, defined contribution pension plan expenses amounted to $\mathbb{W}10,110,768$ thousand and $\mathbb{W}8,193,548$ thousand, respectively.

17. Provisions

Details of provisions for the years ended December 31, 2020 and 2019 are as follows (Korean won in thousands):

		2020		2019
Provisions for product warranties	₩	1,704,886	₩	3,083,208
Emission liabilities		67,965		1,901,000
	₩	1,772,851	₩	4,984,208

Provisions for product warranties

Provisions for warranty-related costs are recognized when the product is sold to the customers. Initial recognition is based on past experience on the level of repairs and returns. It is expected that most of these costs will be incurred in the next financial year.

Emission liabilities

Details of annual quantity of allocated emission allowances as of December 31, 2020 are as follows (KAU):

	2019	2020	2021	2019-2021 Total
Allocated emission allowance	394,344	394,344	471,976	1,260,664

Changes in emission liabilities for the years ended December 31, 2020 and 2019 are as follows (Korean won in thousands)

	2020			2019
Beginning	₩	1,901,000	₩	-
Addition (reversal)		(994,437)		1,901,000
Submission		(838,598)		<u>-</u> _
Ending	₩	67,965	₩	1,901,000

A liability (emission obligation) is recognized only where actual emissions exceed the allocated emission allowances, and the cost of emissions is recognized as debt. Estimated emissions of the Group during 2020 are expected as 421,831KAU.

18. Commitments and contingencies

Significant lines of credit

Significant lines of credit with financial institutions as of December 31, 2020 are as follows (Korean won in thousands and U.S. dollar):

	Credit line (US\$)	Credit line (₩)	Description		
Woori Bank and 4 other banks	US\$ 595,975,000 (Equivalent to \text{\tint{\text{\tin}\text{\tint{\text{\te}\tint{\texi}\text{\text{\text{\text{\text{\text{\text{\texit{\texi{\tex{\texit{\texi{\texi{\texi{\texi{\texi\tin\tin\tin{\text{\texi{\texi{\texi{\texi{\texi{\texi{\texi{\texi{\texi{\texi{\texi{\texi{\	₩ 80,000,000	Overdraft		
Shinhan Bank and 1 other banks	US\$ 7,000,000 (Equivalent to ₩7,616,000)	-	Import letter of credit		
KEB Hana Bank	-	₩ 1,000,000	Local letter of credit		
Woori Bank and 7 other banks	US\$ 655,000,000 (Equivalent to ₩712,640,000)	₩ 100,000,000	Receivables factoring		

The Group provided security deposits for its bank overdraft facilities (Note 5).

In addition, the Group has loan facilities with accounts receivable pledged as collateral related to purchase payments with Woori Bank of Korea and 2 other banks (up to $\forall \forall 151,800,000$ thousand).

Litigation

As of December 31, 2020, the Group is a defendant in a class action lawsuit filed by Cygnus and other entities in Canada in connection with alleged price-fixing for capacitors. Total claims against the Group are currently undeterminable. In addition, the Company and its affiliates in Samsung Group are being investigated by the Fair Trade Commission for violations of the Monopoly Regulation and Fair Trade Act of the Republic of Korea. The outcome of the proceedings cannot be reasonably estimated at the end of the reporting period.

Contractual obligations to purchase property, plant and equipment as of December 31, 2020 are $\mbox{$W$}171,213,014$ thousand.

19. Issued capital

The Company is authorized to issue 200,000 thousand ordinary shares with a par value per share of \$5,000. As of December 31, 2020, the Company holds 77,600,680 ordinary shares (including 2,906,984 preferred shares) amounting to \$388,003,400 thousand, which were issued through a series of stock issuances since the Company's incorporation in 1973.

Under the Articles of Incorporation, the Company is authorized to issue 20 million shares of non-voting preferred shares. The Company may issue cumulative, participating and non-voting preferred shares with a dividend rate of more than 1% of par value of ordinary shares. As of December 31, 2020, 2,906,984 of non-cumulative and non-voting preferred shares have been issued and outstanding.

The Company's share premium of December 31, 2020 and 2019 are as follows (Korean won in thousands):

		2020		2019
Paid-in capital in excess of par value	₩	931,477,700	₩	931,477,700
Consideration for stock warrants		12,160,470		12,160,470
Gains on disposal of treasury stock		16,769,322		16,769,322
Exercise of stock option		1,201,580		1,201,580
Others		83,592,127		83,592,127
	₩	1,045,201,199	₩	1,045,201,199

19. Issued capital (cont'd)

Other components of equity as of December 31, 2020 and 2019 consist solely of treasury stock.

As of December 31, 2020, the Group's treasury stock comprising 2,000,000 ordinary shares and 53,430 preferred shares were repurchased by the Company to stabilize its stock price, which are expected to dispose depending on the stock price.

Accumulated other comprehensive income as of December 31, 2020 and 2019 are as follows (Korean won in thousands):

		2020		2019
Equity adjustments of investment in associates	₩	1,125,396	₩	1,087,645
Fair value loss and gain on financial assets measured at FVOCI		72,692,009		52,575,141
Disposal loss and gain on financial assets measured at FVOCI		455,940,710		455,764,277
Exchange differences on translations of foreign operations		(117,238,777)		(83,761,775)
	₩	412,519,338	₩	425,665,288

Other capital reserves of the Company as of December 31, 2020 and 2019 are as follows (Korean won in thousands):

		2020	2019
Legal reserve (*)	₩	111,920,491	₩ 103,620,491
Business rationalization reserve		31,537,766	31,537,766
Capital expenditure reserve		7,895,000	7,895,000
Others		2,329,912,000	2,015,912,000
	₩ 2	2,481,265,257	₩ 2,158,965,257

(*) In accordance with the Korean Commercial Code, an amount equal to at least 10% of cash dividends is required to be appropriated as a legal reserve until the reserve equals 50% of Issued Capital. The legal reserve may not be utilized for cash dividends but may only be used to offset a deficit, if any, or be transferred to capital.

Details of dividends declared for the years ended December 31, 2020 and 2019 are as follows (Korean won in thousands):

		2020		2019
Attributable to ordinary shares (2020: ₩1,400 per share, 2019: ₩1,100 per share)	₩	101,771,175	₩	79,963,066
Attributable to preferred shares				
(2020: ₩1,450 per share, 2019: ₩1,150 per share)		4,137,653		3,281,587
	₩	105,908,828	₩	83,244,653

20. Operating profit

Revenue from contracts with customers

Details of revenue from contracts with customers are as follows (Korean won in millions):

		2020						
	(Component				inted Circuit		
		Solution	IVIO	dule Solution	B0	ard Solution	. ——	Total
Sales of Goods	₩	3,603,390	₩	2,733,288	₩	1,722,334	₩	8,059,012
Royalty revenue		41,567		69,164		38,995		149,726
Totally revenue from contracts with customers	₩	3,644,957	₩	2,802,452	₩	1,761,329	₩	8,208,738
	2019							
	(Component	Printed Circuit					
		Solution	Mod	dule Solution	Bo	ard Solution		Total
Sales of Goods	₩	3,156,649	₩	2,930,148	₩	1,426,474	₩	7,513,271
Royalty revenue		63,109		98,105		43,813		205,027
Total revenue from contracts with customers	₩	3,219,758	₩	3,028,253	₩	1,470,287	₩	7,718,298

Details of cost of sales and operating expenses for the years ended December 31, 2020 and 2019 by nature of expense are as follows (Korean won in thousands):

	2020	2019
Changes in inventories, etc.	₩ (138,402,637)	₩ (59,971,355)
Use of raw materials and supplies	3,337,986,588	3,146,732,867
Employee benefit expense	1,719,836,501	1,697,985,852
Depreciation and amortization(*)	841,177,391	870,026,840
Outsourcing expenses	284,836,898	230,251,243
Commissions	143,916,867	165,101,358
Other expenses	1,478,703,831	1,626,451,286
Less: classified as profit (loss) from discontinued operation	(288,447,809)	(699,204,158)
	₩ 7,379,607,630	₩ 6,977,373,933

^(*) Includes depreciation of right-of-use assets.

Details of employee benefit expenses for the years ended December 31, 2020 and 2019 are as follows (Korean won in thousands):

	2020	2019
Salaries expenses	₩ 1,362,317,581	₩ 1,174,927,835
Pension costs	70,809,348	92,573,885
Employee welfare benefits	286,709,572	430,484,132
	₩ 1,719,836,501	₩ 1,697,985,852

^(*) Includes profit (loss) for the year from discontinued operation.

20. Operating profit (cont'd)

Depreciation of property, plant and equipment and amortization of intangible assets for the years ended December 31, 2020 and 2019 are as follows (Korean won in thousands):

	2020			2019
Depreciation (*1)(*2) Amortization (*2)	₩	807,503,276 33,674,115	₩	844,496,819 25,530,021
	₩	841,177,391	₩	870,026,840

^(*1) Includes depreciation of right-of-use assets.

Details of selling and administrative expenses for the years ended December 31, 2020 and 2019 are as follows (Korean won in thousands):

	2020			2019
Salaries and payroll expenses	₩	204,571,310	₩	221,474,307
Bonuses and other benefits		46,415,096		34,339,139
Pension costs		19,357,396		24,723,533
Employee welfare benefits		92,883,434		114,148,236
Commissions		54,672,464		47,420,039
Supplies expenses		32,505,194		47,865,145
Repairs expenses		27,082,109		47,961,736
Allowance (reversal) for doubtful accounts – trade		(27,752)		7,223
Depreciation(*) and amortization		48,255,003		58,300,140
Sample expenses		4,871,684		4,639,094
Travel expenses		3,382,970		12,558,554
Research and development expense		433,932,838		463,479,956
IT expenses		32,270,337		50,165,660
Other expenses		110,437,346		120,271,452
	₩	1,110,609,429	₩ ′	1,247,354,214

^(*) Includes depreciation of right-of-use assets.

^(*2) Includes profit (loss) for the year from discontinued operation.

21. Non-operating profit and expenses

21.1 Finance income

Finance income consists solely of interest income and details for the years ended December 31, 2020 and 2019 are as follows (Korean won in thousands):

		2020		2019
Financial assets at amortized cost:				_
Cash and cash equivalents	₩	7,611,716	₩	17,312,428
Other financial assets		2,212,031		1,212,618
Financial assets measured at FVPL:				
Short-term financial instruments		455,219		608,881
	₩	10,278,966	₩	19,133,927

21.2 Finance costs

Finance costs consist solely of interest costs and details for the years ended December 31, 2020 and 2019 are as follows (Korean won in thousands):

		2020		2019	
Financial liabilities at amortized cost:		_		_	
Borrowings	₩	42,563,431	₩	69,420,357	
Other financial liabilities:					
Borrowings		3,588,799		7,003,003	
Lease liabilities		1,637,220		1,271,926	
	₩	47,789,450	₩	77,695,286	

21.3 Share of profit in associates

Details of share of profit in associates for the years ended December 31, 2020 and 2019 are as follows (Korean won in thousands):

	2020			2019
Share of profit in associates	₩	9,943,018	₩	11,923,013

21.4 Other income

Details of other income for the years ended December 31, 2020 and 2019 are as follows (Korean won in thousands):

	2020			2019
Dividend income	₩	368,931	₩	494,468
Gain on disposal of financial assets at fair value through PL		343,794		23,232
Gain on valuation of financial assets at fair value through PL		416,558		-
Commission income		74,578		52,025
Gain on disposal of property, plant and equipment		1,646,364		3,927,246
Gain on disposal of intangible assets		28,855		9,725,807
Reversal of allowance for other doubtful accounts		414,610		826,032
Gain on foreign currency translation		35,213,506		9,253,189
Gain on foreign currency transactions		201,701,396		131,352,554
Others		20,776,386		36,527,715
Gain on disposal of other investments		-		918
	₩	260,984,978	₩	192,183,186

21. Non-operating profit and expenses (cont'd)

21.5 Other expenses

Details of other expenses for the years ended December 31, 2020 and 2019 are as follows (Korean won in thousands):

	2020			2019
Loss on disposal of property, plant and equipment	₩	10,382,696	₩	4,818,845
Impairment loss on property, plant and equipment		-		239,047
Loss on disposal of intangible assets		1,021,027		592,094
Impairment loss on intangible assets		1,536,693		-
Loss on valuation of financial assets at fair value through PL		110,083		170,741
Loss on disposal of trade receivables		6,982,303		265,765
Allowance for doubtful accounts - others		173,027		894,347
Loss on foreign currency translation		32,450,165		17,225,238
Loss on foreign currency transaction		209,908,880		138,179,457
Donations		4,223,729		2,697,048
Others		12,828,052		25,290,702
	₩	279,616,655	₩	190,373,284

22. Income tax expenses

The major components of income tax expense for the years ended December 31, 2020 and 2019 are as follows (Korean won in thousands):

		2020		2019
Current income tax	₩	117,268,483	₩	229,409,556
Adjustments in respect of prior years		(20,831,846)		3,463,698
Deferred income tax from temporary differences and tax credits		62,442,488		(64,951,254)
Deferred income tax charged directly to equity		(56,328)		<u>-</u>
Income tax expense	₩	158,822,797	₩	167,922,000
Income tax expense from continuing operations	₩	167,159,983	₩	71,125,625
Income tax expense (benefit) from discontinued operations		(8,337,186)		96,796,375

The tax effect relating to components of other comprehensive income (expenses) for the years ended December 31, 2020 and 2019 is as follows (Korean won in thousands):

	2020						2019						
	Before tax		Before tax Tax effect		After tax		Before tax			Tax effect		After tax	
Financial asset measured at fair value through OCI	₩ 26,53	9,404	₩	(6,422,536)	₩	20,116,868	₩	27,980,174	₩	(6,762,563)	₩	21,217,611	
Re-measurement losses (gain) on net defined benefit plans	(25,303	2 942)		4.974.910		(20,328,932)		(56,757,434)		12.564.122		(44,193,312)	
Capital changes in equity method	,	9.803		(12,052)	,	37,751		(1,694,890)		410,163		(1,284,727)	
Foreign currency translation		.,		(, ,		,		,		,		(, , , ,	
adjustments	(52,385 ₩ (51,102		₩	18,910,766 17,451,088		(33,477,002) (33,651,315)	₩	54,346,514 23,874,364	₩	(8,239,472) (2,027,750)	₩	46,107,042 21,846,614	

22. Income tax expenses (cont'd)

Details of deferred income taxes charged directly to equity as of December 31, 2020 and 2019 are as follows (Korean won in thousands):

		2020		2019
Current income tax:				
Gain or loss on disposal of financial asset at fair value through OCI	₩	(56,328)	₩	-
Deferred income tax:				
Gain or loss on valuation of financial asset at fair value through OCI		(6,422,536)		(6,762,563)
Re-measurement losses on net defined benefit plans		4,974,910		12,564,122
Equity adjustments of investment in associates		(12,052)		410,163
Exchange differences on translation of foreign operations		18,910,766		(8,239,472)

A reconciliation of profit before tax at the Korea statutory tax rate to income tax expenses at the effective tax rate of the Group are summarized as follows (Korean won in thousands):

	2020			2019
Profit before tax	₩	782,633,975	₩	695,970,551
Tax at domestic tax rates applicable to profits in the respective countries		191,212,207		191,391,902
Adjustments:				
Income not taxable for tax purposes		(6,125,220)		(13,920,125)
Expenses not deductible for tax purposes		11,421,277		27,484,564
Effect of deferred income tax arising from				
temporary difference not recognized		17,820,990		26,805,773
Tax effects of investment in subsidiaries and associates		15,231,332		6,044,678
Tax credits		(31,256,516)		(75,649,258)
Adjustment in respect of prior years		(20,831,846)		3,463,698
Others		(18,649,427)		2,300,768
Income tax expenses	₩	158,822,797	₩	167,922,000
Effective income tax rate		20.29%		24.13%

22. Income tax expenses (cont'd)

Significant changes in tax credit carryforwards, cumulative temporary differences and deferred income tax assets and liabilities for the years ended December 31, 2020 and 2019 are as follows (Korean won in thousands):

	2020									
		January 1	Recognized to income		Recognized directly to equity		Effects of exchange rate changes			ecember 31
Loss on valuation of inventories Property, plant and	₩	28,519,651	₩	(3,098,745)	₩	-	₩	110,587	₩	25,531,493
equipment		19,637,009		(2,582,053)		-		(83,588)		16,971,368
Defined benefit liabilities		3,517,355		(4,289,249)		4,974,910		(2,373)		4,200,643
Accrual expenses		39,846,066		3,595,774		-		(99,717)		43,342,123
Investment securities Unused tax credit carry		(14,119,275)		(19,360)		(6,422,536)		-		(20,561,171)
forwards from prior years Investment in subsidiaries		75,527,428		(14,494,397)		-		-		61,033,031
and associates		(18,823,556)		(33,985,442)		18,898,714		-		(33,910,284)
Others		8,534,037		(7,569,016)		-		(45,491)		919,530
	₩	142,638,715	₩	(62,442,488)	₩	17,451,088	₩	(120,582)	₩	97,526,733

		2019								
				Recognized		Recognized				
		January 1		to income		directly to equity		December 31		
Loss on valuation of inventories	₩	17,870,872	₩	10,648,779	₩	-	₩	28,519,651		
Property, plant and equipment		52,530,263		(32,893,254)		-		19,637,009		
Defined benefit liabilities		(1,217,009)		(7,829,758)		12,564,122		3,517,355		
Accrual expenses		45,733,749		(5,887,683)		-		39,846,066		
Investment securities		(7,003,579)		(353,133)		(6,762,563)		(14,119,275)		
Unused tax credit										
carryforwards from prior years		88,183,449		(12,656,021)		-		75,527,428		
Investment in subsidiaries and										
associates	(116,181,430)		105,187,183		(7,829,309)		(18,823,556)		
Others		(201,104)		8,735,141		-		8,534,037		
	₩	79,715,211	₩	64,951,254	₩	(2,027,750)	₩	142,638,715		

Deferred tax assets and liabilities are measured using the enacted tax rates and laws that will be in effect when the temporary differences are expected to reverse.

Based on the Group's assessment of future taxable income, the Group's management concluded that it is probable that the recognized deferred tax assets will be realized in future periods.

The analysis of deferred tax assets and liabilities as of December 31, 2020 and 2019 are as follows (Korean won in thousands):

		2020		2019
Deferred tax assets				_
Deferred tax asset to be recovered after more than 12 months	₩	272,417,372	₩	350,399,673
Deferred tax asset to be recovered within 12 months		157,225,799		103,662,428
		429,643,171		454,062,101
Deferred tax liabilities				
Deferred tax liability to be recovered after more than 12 months		(331,915,269)		(311,154,134)
Deferred tax liability to be recovered within 12 months		(201,169)		(269,251)
		(332,116,438)		(311,423,385)
Deferred tax assets, net	₩	97,526,733	₩	142,638,715

23. Earnings per share

Earnings per share was calculated by dividing net profit by the number of ordinary shares, and diluted earnings per share was calculated by dividing net profit by the weighted average number of dilutive potential ordinary shares. Preferred shares are participating preferred shares, having right to participate in division of profits, therefore their earning per share were computed as well. No dilutive features exist for the years ended December 31, 2020 and 2019 thus basic earnings per share is equivalent to diluted earnings per share.

The Company's basic (diluted) earnings per share for the years ended December 31, 2020 and 2019 are computed as follows (Korean won in thousands, except per share amounts):

		2020				
			Profit for the			
			year from			
		Net profit	continuing			
		or the year	operations			
Profit for the year attributable to equity holders of the parent	₩	603,961,889	₩ 595,937,512			
Preferred shares dividend		(4,137,653)	(4,137,653)			
Additional dividends attributable to preferred shares Profit for the year attributable to ordinary equity holders		(18,812,350)	(18,509,255)			
of the parent		581,011,886	573,290,604			
Weighted-average number of shares of ordinary shares						
outstanding (*)		72,693,696	72,693,696			
Basic (diluted) earnings per share	₩	7,993	₩ 7,886			
, 31						
		20	19			
		20	19 Profit for the			
		20				
		20 Net profit	Profit for the			
	f		Profit for the year from			
Profit for the year attributable to equity holders of the parent	f ₩	Net profit	Profit for the year from continuing			
		Net profit or the year	Profit for the year from continuing operations			
Profit for the year attributable to equity holders of the parent Preferred shares dividend Additional dividends attributable to preferred shares		Net profit or the year 514,296,121	Profit for the year from continuing operations 609,844,100			
Profit for the year attributable to equity holders of the parent Preferred shares dividend Additional dividends attributable to preferred shares Profit for the year attributable to ordinary equity holders		Net profit or the year 514,296,121 (3,281,587) (16,281,581)	Profit for the year from continuing operations 609,844,100 (3,281,587) (19,890,598)			
Profit for the year attributable to equity holders of the parent Preferred shares dividend Additional dividends attributable to preferred shares		Net profit or the year 514,296,121 (3,281,587)	Profit for the year from continuing operations 609,844,100 (3,281,587)			
Profit for the year attributable to equity holders of the parent Preferred shares dividend Additional dividends attributable to preferred shares Profit for the year attributable to ordinary equity holders of the parent		Net profit or the year 514,296,121 (3,281,587) (16,281,581)	Profit for the year from continuing operations 609,844,100 (3,281,587) (19,890,598)			

^(*) There is no change in the number of shares.

23. Earnings per share (cont'd)

The Company's basic (diluted) earnings per share attributable to preferred shares for the years ended December 31, 2020 and 2019 are computed as follows (Korean won in thousands, except per share amounts):

	2020				
				rofit for the year from	
	Net profit for the year			continuing operations	
Profit for the year attributable to preferred shares holders of the parent	₩	22,950,003	₩	22,646,908	
Weighted-average number of shares of ordinary shares	VV	22,930,003	VV	22,040,900	
outstanding (*)		2,853,554		2,853,554	
Basic (diluted) earnings per share	₩	8,043	₩	7,936	
(*) There is no change in the number of shares.					
		20	19		
			Р	rofit for the	
				year from	
		Net profit		continuing	
Due fit few the group attribute ble to wante was a bank and believe		or the year		operations	
Profit for the year attributable to preferred shares holders of the parent	₩	19,563,168	₩	23,172,185	
Weighted-average number of shares of ordinary shares outstanding (*)		2,853,554		2,853,554	
Basic (diluted) earnings per share	₩	6,856	₩	8,120	

^(*) There is no change in the number of shares.

24. Related party transactions

Samsung Electronics Co., Ltd. has significant influence on the Company. Related parties of the Company as of December 31, 2020 are as follows:

Related party	Category
Samsung Electronics Co., Ltd.	Company with significant influence
Samsung Economic Research Institute	Associate
Stemco Co., Ltd.	Associate
Samsung Electronics Vietnam THAINGUYEN Co., Ltd.	Others
Samsung Electronics Vietnam Co., Ltd.	Others
Samsung C&T Corporation	Others
Samsung Engineering Co., Ltd.	
Samsung SDS Co., Ltd.	Others
Samsung Welstory Inc.	
Samsung Display Vietnam Co., Ltd.	Others
Samsung Engineering Construction(Shanghai)Co., Ltd	Others
Samsung Life Insurance Co., Ltd. and other affiliates (*)	Others

^(*) Includes subsidiaries and associates of Samsung Electronics Co., Ltd.

Outstanding balances resulted from the transactions among the Company and its related parties as of December 31, 2020 and 2019 are as follows (Korean won in thousands):

	2020					2019					
	Receiv	ables	F	Payables (*)		Receivables	Р	ayables (*)			
Company with significant influence:											
Samsung Electronics Co., Ltd.	₩ 75,3	36,507	₩	86,833,381	₩	160,313,380	₩	27,460,996			
Associate: Samsung Economic Research Institute		_		267,958		_		1,957,434			
Others: Samsung Electronics Vietnam	400.7	70.055		10.400.004		42.050.000		4.055.707			
THAINGUYEN Co., Ltd. Samsung Electronics Vietnam		70,355		19,160,021		43,652,028		1,355,767			
Co., Ltd.	45,0	57,953		14,249		48,981,694		-			
Samsung C&T Corporation Samsung Engineering Co.,	19,0	87,409		230,440		19,087,849		265,099			
Ltd.		-		8,800,000		-		13,896,493			
Samsung SDS Co., Ltd.		520		7,570,633		218		10,368,528			
Samsung Welstory Inc. Samsung Display Vietnam		22		3,469,181		110		3,086,399			
Co., Ltd. Samsung Engineering Construction(Shanghai)Co.,	43,6	13,374		-		15,739,612		-			
Ltd		-		-		-		9,894,356			
Others	24,3	78,408		61,501,500		23,384,793		18,911,680			
	₩ 314,2	44,548	₩	187,847,363	₩	311,159,684	₩	87,196,752			

^(*) Includes lease liabilities.

The Group operated defined benefit plan with Samsung Life Insurance Co., Ltd. The fair value of the plan as of December 31, 2020 amounts to 327,329 million (2019: 344,833 million); and interest income recognized amounts to 10,517 million for the year ended December 31, 2020 (2019: 9,192 million).

24. Related party transactions (cont'd)

Significant transactions among the Company and its related parties for the years ended December 31, 2020 and 2019 are as follows (Korean won in thousands):

					2020				
						Α	cquisition of		
	Sales	Dis	posal of assets		Purchases		assets	Cas	h dividends
Company with significant influence:									
Samsung Electronics Co., Ltd. Associate:	₩ 1,105,861,399	₩	11,592	₩	546,232,423	₩	-	₩	-
Samsung Economic Research Institute	_				5,513,945				
Stemco Co., Ltd.	-		_		5,515,945		-		5,791,700
Others:									
Samsung Electronics Vietnam THAINGUYEN Co., Ltd.	966,338,864		_		6,099,034		_		_
Samsung Electronics Vietnam									
Co., Ltd.	653,113,568		-		518,036		-		-
Samsung C&T Corporation	12,607				2,765,557		133,700		-
Samsung Engineering Co., Ltd.	2,280		-		4,716,280		53,544,701		-
Samsung SDS Co., Ltd.	9,228		-		71,076,374		7,499,275		-
Samsung Welstory Inc.	240				35,645,677		20,710		-
Samsung Display Vietnam Co., Ltd.	289,200,379		-		-		-		-
Samsung Engineering Construction(Shanghai) Co., Ltd					18,946,220		165,070,190		
Others	279,008,091		681,324		239,343,145		23,519,059		-
	₩ 3,275,546,656	₩	692,916	₩	930,856,691	₩	249,787,635	₩	5,791,700
					2019				
					2019	Δ	cquisition of		
	Sales	Dis	posal of assets		Purchases	^	assets	Cas	h dividends
Company with significant influence:							4000.0		
Samsung Electronics Co., Ltd.	₩ 1,387,532,194	₩	785.000.000	₩	434.369.979	₩	_	₩	_
Associate:	.,,,		, ,		,,				
Samsung Economic Research					0.700.500				
Institute Stemco Co., Ltd.	-		-		6,799,506		-		2,182,000
Others:	-		-		-		-		2, 102,000
Samsung Electronics Vietnam									
THAINGUYEN Co., Ltd. Samsung Electronics Vietnam	983,614,335		-		2,005,930		-		-
Co., Ltd.	828,909,754		_		466,432		_		_
Samsung C&T Corporation	13,007		_		2,336,764		_		_
Samsung Engineering Co., Ltd.	6,919		_		25,407,835		143,539,081		_
Samsung SDS Co., Ltd.	6,117		_		70,738,363		14,337,826		_
Samsung Welstory Inc.	420		_		33,601,403		- 1,001,020		_
Samsung Display Vietnam Co., Ltd.	237,712,559		_				_		_
Samsung Engineering	- ,,								
Construction(Shanghai) Co., Ltd	-		-		109,197,537		171,894,413		-
Others	557,463,193				243,750,261		10,530,157		
	₩ 3,995,258,498	₩	785,000,000	₩	928,674,010	₩	340,301,477	₩	2,182,000

Dividend paid to Samsung Electronics Co., Ltd amounts to $\mbox{$\mathbb{W}$}19,462$ million (2019: $\mbox{$\mathbb{W}$}17,693$ million).

The Group has no collateral or guarantees provided to or received from related parties as of December 31, 2020.

In accordance with a lease agreements entered with related parties, the Group has recognized rights-of-use assets and lease liabilities of \$28,577 million, respectively. The repayment of lease liabilities paid to related parties amounts to \$4,238 million and interest expense recognized amounts to \$412 million for the year ended December 31, 2020.

In relation to key management compensation of the Group for the year ended December 31, 2020, the Group recognized expenses for short-term benefits, including short-term incentives of \$3,283 million and long-term benefits, including other long-term employee benefits and pension benefits of \$2,257 million.

25. Supplementary consolidated cash flow information

Cash flows from operating activities for the years ended December 31, 2020 and 2019 are as follows (Korean won in thousands):

		2020	2019
Profit for the year	₩	623,811,178	528,048,551
Adjustments to reconcile profit before tax to net cash flows:			
Valuation of inventories		(51,175,309)	(16,462,317)
Loss on scrap of inventories		129,597,724	138,598,864
(Reversal of) loss on valuation of return assets		1,067,602	(704,495)
Pension costs		59,913,807	57,116,100
Long-term employee benefits		10,512,964	8,469,512
Depreciation		787,414,203	829,106,829
Depreciation of right-of-use assets		20,089,073	15,389,990
Amortization of intangible assets		33,674,115	25,530,021
Provision for product warranties		337,987	-
Gain on foreign exchange translation		(35,306,065)	(9,390,486)
Gain on disposal of financial asset at FV through PL		(343,794)	(23,232)
Loss(Gain) on disposal of financial asset at FV through PL		(306,475)	170,741
Allowance (reversal) for doubtful accounts - trade receivables		(27,685)	3,650
Loss on disposal of trade receivables		6,967,302	696,259
Allowance (reversal) for doubtful accounts - other receivables		(255,012)	61,392
Gain on disposal of property, plant and equipment		(19,376,203)	(5,146,062)
Gain on disposal of intangible assets		(30,827)	(10,169,352)
Loss on foreign currency translation		36,295,046	20,649,172
Loss on disposal of property, plant and equipment		10,625,609	4,934,305
Loss on disposal of intangible assets		1,070,978	623,145
Finance costs		48,139,204	89,055,761
Finance income		(12,344,881)	(22,065,400)
Gain on disposal of discontinued operations		-	(362,489,357)
Dividend income		(383,951)	(505,533)
Share of profit in associates		(9,943,017)	(11,923,013)
Income tax expense		158,822,797	167,922,000
Reversal of refund liabilities		(737,198)	(464,407)
(Reversal of) provision for emission liabilities		(994,437)	1,901,000
Gain on disposal of other investments		-	(11,667)
Loss on disposal of other investments		-	118
Impairment loss on property, plant and equipment		-	154,713,904
Impairment loss on intangible assets		1,586,561	508,811
Others		(67,140)	-
		1,174,822,978	1,076,096,253

25. Supplementary consolidated cash flow information (cont'd)

	2020			2019
Working capital adjustments:				
Other financial assets	₩	36,149	₩	59,554
Trade and other receivables		33,367,201		(21,338,900)
Advance payments		4,181,910		27,707,297
Prepaid expenses		(756,681)		(8,432,256)
Inventories		(284,211,259)		(260,676,821)
Long-term advance payments and prepaid expenses		(209,618)		(11,056,237)
Short-term and long-term loans		268,915		(4,979,931)
Trade and other payables		256,589,078		63,519,938
Advances received		7,868,673		11,926,538
Other financial liabilities		14,479,858		(10,800,023)
Long-term other payables		6,767,915		(3,342,096)
Net defined benefit liabilities		(89,833,260)		(101,663,181)
		(51,451,119)		(319,076,118)
Net cash flows from operating activities	₩	1,747,183,037	₩	1,285,068,686

Significant transactions not involving cash flows for the years ended December 31, 2020 and 2019 are as follows (Korean won in thousands):

	<u></u>	2020		2019
Reclassification of construction-in-progress	₩	777,729,687	₩	577,770,742
Reclassification of machinery-in-transit		130,960,565		256,918,448
Transfer of current portion of long-term borrowings		570,410,491		92,789,740
Acquisition of PPE with account payables		57,854,060		34,120,526

25. Supplementary consolidated cash flow information (cont'd)

Changes in liability arising from financial activities as of December 31, 2020 (Korean won in thousands):

		2020										
				cash flows from								
		January 1	tina	financing activities Others				December 31				
Short-term borrowings Current portion of long-term	₩	569,189,648	₩	(159,894,356)	₩	(3,094,457)	₩	406,200,835				
borrowings		173,835,740		(530,298,773)		561,144,340		204,681,307				
Long-term borrowings		1,219,727,736		630,847,815		(617,366,842)		1,233,208,709				
Lease liability		48,671,224		(19,576,493)		33,503,175		62,597,906				
Dividend payables		10,383		(83,242,156)		108,020,538		24,788,766				
	₩	2,011,434,731	₩	(162,163,963)	₩	82,206,754	₩	1,931,477,522				

Changes in debt arising from financial activities as of December 31, 2019 (Korean won in thousands):

		2019											
		January 1		cash flows from ancing activities	Others			December 31					
Short-term borrowings	₩	961,955,861	₩	(282,013,526)	₩	(110,752,687)	₩	569,189,648					
Current portion of long-term													
borrowings		432,049,753		(362,490,729)		104,276,716		173,835,740					
Long-term borrowings		1,060,133,398		223,687,413		(64,093,075)		1,219,727,736					
Lease liability		28,219,472		(33,506,787)		53,958,539		48,671,224					
Dividend payables		5,248,764		(75,983,779)		70,745,398		10,383					
	₩	2,487,607,248	₩	(530,307,408)	₩	54,134,891	₩	2,011,434,731					

26. Financial risk management objectives and policies

The Group's principal financial liabilities, comprise borrowings, trade and other payables, and lease liabilities and other liabilities. The main purpose of these financial liabilities is to finance the Group's operations and to provide guarantees to support its operations. Also, the Group has various financial assets including trade receivables, cash and short-term deposits that arrive directly from its operations.

The Group is exposed to market risk, credit risk and liquidity risk. The Group's senior management oversees the management of these risks. It is the Group's policy that no trading in derivatives for speculative purposes shall be undertaken.

26.1 Market risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market prices comprise three types of risk: interest rate risk, currency risk and other price risk, such as equity price risk.

The sensitivity analyses in the following sections are related to the position as of December 31, 2020 and 2019.

26.1.1 Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Group's exposure to the risk of changes in market interest rates relates primarily to the Group's long-term debt obligations with floating interest rates. The Group manages its interest rate risk by having a balanced portfolio of fixed and variable rate loans and borrowings.

Borrowings with floating interest rates amounts to \$1,359,096,749 thousand (2019: \$1,346,601,038 thousand) as of December 31, 2020. The following table demonstrates a sensitivity analysis to a reasonably possible change in interest rates on that portion of borrowings. With all other variables held constant, the effect of changes in interest rates of floating rate borrowings on profit before tax is as follows (Korean won in thousands):

	20)20	2019			
	100bp increase	100bp decrease	100bp increase	100bp decrease		
Impact on interest costs	₩ (13,590,967)	₩ 13,590,967	₩ (13,466,010)	₩ 13,466,010		

26.1.2 Foreign currency risk

Foreign currency risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. The Group's exposure to the risk of changes in foreign exchange rates relates primarily to the Group's operating activities and the Group's net investments in foreign subsidiaries. The book values of monetary assets and liabilities which are not presented in functional currency as of December 31, 2020 and 2019 are as follows (Korean won in thousands):

	20)20	2019				
	Assets	Liabilities	Assets	Liabilities			
USD	₩ 1,830,858,647	₩ 1,818,228,410	₩ 1,236,238,850	₩ 1,479,183,702			
EUR	31,747,946	23,617,926	48,833,278	20,033,803			
JPY	1,063,783	39,495,316	893,113	30,774,508			
PHP	11,407,443	38,594,921	11,033,533	26,661,721			
VND	1,835,337	31,857,734	1,466,335	17,428,552			
SGD	473,983	1,548,130	555,744	1,070,846			
Others	70,491,116	100,765	271,171	244,166			
	₩ 1,947,878,255	₩ 1,953,443,202	₩ 1,299,292,024	₩ 1,575,397,298			

The Group manages its foreign currency risk periodically. The following table demonstrates a sensitivity analysis of a reasonably possible change in the foreign currency exchange rates, with all other variables held constant, on the Group's profit before tax as of December 31, 2020 and 2019. (Korean won in thousands):

		20)20			2019				
	5	5% increase		% decrease	5	5% increase	5	% decrease		
USD	₩	631,511	₩	(631,511)	₩	(12,147,243)	₩	12,147,243		
EUR		406,501		(406,501)		1,439,973		(1,439,973)		
JPY		(1,921,577)		1,921,577		(1,494,069)		1,494,069		
PHP		(1,359,374)		1,359,374		(781,409)		781,409		
VND		(1,501,120)		1,501,120		(798,111)		798,111		
SGD		(53,708)		53,708		(25,755)		25,755		
Others		3,519,518		(3,519,518)		1,351		(1,351)		
	₩	(278,249)	₩	278,249	₩	(13,805,263)	₩	13,805,263		

The sensitivity analyses were conducted on monetary assets and liabilities which are presented in foreign currency other than functional currency as of the reporting date.

26.1.3 Other price risk

The Group's marketable equity securities are susceptible to market price risk arising from the fluctuation in the price of the securities. The following table demonstrates a sensitivity analysis of a reasonably possible change in the price of marketable equity securities on the financial statements of the Group as of December 31, 2020 (Korean won in thousands):

	5	% increase	5	√ decrease	
Other comprehensive income before tax	₩	5,068,061	₩	(5,068,061)	
Income tax effect		(1,226,471)		1,226,471	
Other comprehensive income after tax	₩	3,841,590	₩	(3,841,590)	

26.2 Credit risk

Credit risk is the risk that a counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss of the Group. The Group is exposed to credit risk from its operating activities (primarily for trade receivables) and from its financing activities.

26.2.1 Trade receivables and other receivables

Customer credit risk is managed by each business unit subject to the Group's established policy, procedures and control related to customer credit risk management. Credit quality of the customer is assessed based on an extensive credit rating scorecard and individual credit limits are defined in accordance with this assessment. Outstanding customer receivables are regularly monitored. The maximum exposure to credit risk at the reporting date is as follows (Korean won in thousands):

	2020		2019
Trade receivables	₩ 943,793,120	₩	976,048,856
Other receivables	51,827,896		119,627,729
Long-term other receivables	-		5,046,027

The Group assesses the expected credit losses at the end of every reporting period based on a forward-looking information. The impairment methodology applied depends on whether there has been a significant increase in credit risk. For trade receivables and other receivables, the Group applies the simplified approach, which requires expected lifetime credit losses to be recognized from initial recognition of the receivables. In addition, the Group entered into guarantee insurance contracts with Korea Trade Insurance Corporation and other insurance corporations for the credit risk of foreign customers.

26.2.2 Other assets

Credit risks associated with the Group's other assets which consist of cash, short-term deposits and short-term and long-term loans arise from the default by the counterparties. Maximum exposure to credit risks will be the book value of the related assets. The Group deposits its surplus funds in Woori Bank and other financial institutions whose credit ratings are high, therefore credit risk related to financial institutions is considered limited.

26.3 Liquidity risk

Liquidity risk refers to the risk that the Group may default on the contractual obligations that become due. The Group manages its risk to a shortage of funds using a recurring liquidity planning tool. The Group matches the financial liabilities with the financial assets taking into account the maturity dates and cash flow from operating activities of those financial assets.

The table below summarises the maturity profile of the Group's financial liabilities based on contractual undiscounted payments (Korean won in thousands):

26.3 Liquidity risk (cont'd)

The future cash flows of financial liabilities are nominal amounts but not discounted. The remaining maturities indicate the earliest timing when the creditors can request repayments.

						2020				
	Less than 3 months	3 t	o 12 months		1 to 5 years	Over 5 years			Total	
Trade and other payables	₩	892,192,824	₩	4,456,802	₩	4,446	₩		₩	896,654,072
Short-term borrowings Current portion of		368,281,080		38,218,879		, <u>-</u>		-		406,499,959
long-term borrowings		22,901,161		185,500,978		_		-		208,402,139
Long-term borrowings		8,824,378		26,963,376		1,297,620,904		-		1,333,408,658
Other financial liabilities		3,993,993		11,268,180		34,657,026		15,601,308		65,520,507
Lease liability		<u> </u>		2,676,642		<u>-</u>		<u> </u>		2,676,642
	₩	1,296,193,436	₩	269,084,857	₩	1,332,282,376	₩	15,601,308	₩	2,913,161,977

	2019												
		Less than 3 months	3	to 12 months	1 to 5 years		Total						
Trade and other payables	₩	716,465,311	₩	12,156,486	₩ 7,298	₩	728,629,095						
Short-term borrowings Current portion of long-term		466,219,081		104,587,343	-		570,806,424						
borrowings		82,182,784		94,586,657	-		176,769,441						
Long-term borrowings		11,429,951		34,541,059	1,285,192,850		1,331,163,860						
Other financial liabilities		4,838,167		12,844,833	34,958,277		52,641,277						
Lease liability		-		4,732,392			4,732,392						
	₩.	1,281,135,294	₩	263,448,770	₩ 1,320,158,425	₩	2,864,742,489						

26.4 Capital management

The primary objective of the Group's capital management is to ensure that it maintains a strong credit rating and healthy capital ratios in order to support its business and maximize shareholder value.

The Group manages its capital structure and makes adjustments to it in light of changes in economic conditions. To maintain the sound capital structure, the Group may adjust the dividend payment to shareholders, reduce capital stock, or issue new shares.

No changes were made in the objectives, policies or processes for managing capital during the years ended December 31, 2020 and 2019.

The Group monitors a gearing ratio, which is net debt divided by total capital (sum of total equity and net debt). Net debt refers to trade and other payables, borrowings and other liabilities, less cash and cash equivalents.

The gearing ratios as of the reporting date are computed as follows (Korean won in thousands):

		2020		2019
Trade and other payables	f W	1,206,839,823	₩	982,791,264
Borrowings		1,844,090,851		1,962,753,124
Other liabilities		53,658,804		44,387,774
Less: Cash and cash equivalent		(1,479,767,417)		(803,810,428)
Net debt		1,624,822,061		2,186,121,734
Total equity		5,910,395,939		5,430,096,886
Total capital (Net debt and shareholder's equity)	₩	7,535,218,000	₩	7,616,218,620
Gearing ratio		21.56%		28.70%

27. Fair value

27.1 Fair value of financial instruments

Details of book values and fair values of financial assets and liabilities as of December 31, 2020 and 2019 are as follows (Korean won in thousands):

		20)20			2019				
		Book value		Fair value		Book value		Fair value		
Financial assets:										
Financial assets at amortized cost										
Cash and cash equivalents	₩	1,479,767,417		(*)	₩	803,810,428		(*)		
Trade and other receivables		979,997,652		(*)		1,062,815,804		(*)		
Short-term and long-term loans		2,544,920		(*)		2,823,443		(*)		
Other financial assets Financial assets measured at FVOCI		33,975,075		(*)		32,135,537		(*)		
Listed equity investments		101,361,219	₩	101,361,219		105,515,627	₩	105,515,627		
Non-listed equity investments Financial assets measured at FVPL		93,114,203		93,114,203		64,420,390		64,420,390		
Short-term financial instruments and others		45,479,720		45,479,720		42,412,284		42,412,284		
Total financial assets	₩	2,736,240,206	į		₩	2,113,933,513				
Financial liabilities:										
Financial liabilities at amortized cos	st:									
Trade and other payables	₩	896,654,072		(*)	₩	728,629,095		(*)		
Other liabilities		2,676,642		(*)		4,732,392		(*)		
Short-term borrowings Current portion of long-term		38,080,000		(*)		263,440,059		(*)		
borrowings		204,681,307		(*)		173,835,740		(*)		
Long-term borrowings		1,233,208,709		(*)		1,219,727,736		(*)		
Other financial liabilities:										
Borrowings		368,120,835		(*)		305,749,589		(*)		
Lease liability		62,597,906		(*)		48,671,224		(*)		
Total financial liabilities	₩	2,806,019,471	į		₩	2,744,785,835				

^(*) Book value is a reasonable approximation of fair value are excluded from the fair value disclosures.

27.2 Fair value measurement

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorized within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

- ➤ Level 1 Quoted (unadjusted) market prices in active markets for identical assets or liabilities
- ➤ Level 2 Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
- ➤ Level 3 Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

There have been no significant transfers between Level 1, Level 2 and Level 3.

27.3 Fair value on the statement of financial position:

As of December 31, 2020 and 2019, the Group held the following assets and liabilities carried at fair value on the statement of financial position (Korean won in thousands):

					20	20					
		Level 1		Level 2		Level 3			Total		
Financial assets measured at FVOC) I										
Listed equity investment	₩	101,361,219	₩		-	₩	-	₩	101,361,219		
Non-listed equity investment		-			-		93,114,203		93,114,203		
Financial assets measured at FVPL Short-term financial instruments and others		-			-		45,479,720		45,479,720		
					20	19					
		Level 1		Level 2			Level 3		Total		
Financial assets measured at FVOC	Cl										
Listed equity investment	₩	105,515,627	₩		-	₩	-	₩	105,515,627		
Non-listed equity investment		-			-		64,420,390		64,420,390		
Financial assets measured at FVPL Short-term financial instruments and others		-			_		42,412,284		42,412,284		

27.4 Valuation Techniques and the Inputs

- (1) The Group is using cash flow discount model as valuation methods for the assets and liabilities classified as level 2.
- (2) The valuation method, input variables in assets and liabilities classified as level 3 are as follows (Korean won in thousands)

Classification	Fair value	Valuation Input variables method		Range of Input variables (weighted average)
Financial assets measured at	FVOCI			
Samsung Venture Investment		Discounted Cash	Growth rate	-1.00%~1.00% (0%)
Co., Ltd.	₩ 22,960,200	flow model	Discount rate(WACC)	18.69%~20.69% (19.69%)
		Discounted Cash	Growth rate	-1.00%~1.00% (0%)
Solu-M Co., Ltd.	62,189,100	flow model	Discount rate(WACC)	13.90%~15.90% (14.90%)
		Discounted Cash	Growth rate	-1.00%~1.00% (0%)
IMA	7,884,703	flow model	Discount rate(WACC)	10.02%~12.02% (11.02%)

(3) Changes in financial instruments classified as level 3 are as follows (Korean won in thousands):

	2020					
		Beginning		Valuation		Ending
Financial assets measured at FVOCI						
Samsung Venture Investment Co., Ltd.	₩	13,274,280	₩	9,685,920	₩	22,960,200
Solu-M Co., Ltd.		40,389,900		21,799,200		62,189,100
IMA		8,804,010		(919,307)		7,884,703
				2019		
	<u></u>	Beginning		Valuation		Ending
Financial assets measured at FVOCI						
Samsung Venture Investment Co., Ltd.	₩	7,495,980	₩	5,778,300	₩	13,274,280
Solu-M Co., Ltd.		15,331,050		25,058,850		40,389,900
IMA		9,569,985		(765,975)		8,804,010

27.5 Sensitivity analysis of fair value measurement classified as level 3 of the fair value hierarchy

Sensitivity analysis of financial instrument is based on changes in financial instrument's value accordance with changes in unobservable input variables derived from statistical method

Impact of changes in unobservable input variables are as follows (Korean won in thousands):

		Favorable changes			Unfavorable changes		
	gain an	d loss	Equity	gain and	loss		Equity
Financial assets measured at				- '-			
FVOCI(*1)	₩	-	10,350,896	₩	-	₩	(7,972,575)

^(*1) Fair value changes were measured by increasing or decreasing of correlation between two main unobservable input variables, growth rate and interest rate.

27.6 Detals of gain and losses by categories

Details of gains and losses arising from financial instruments by categories for the year ended December 31, 2020 are as follows (Korean won in thousands):

	Financial assets at amortized cost	Financial assets measured at FVOCI	Financial assets measured at FVPL	Financial liabilities at amortized cost	Other financial liabilities	Total
Interest income	₩ 9,823,747	₩ -	₩ 455,219	₩ -	₩ -	₩ 10,278,966
Dividend income	-	368,931	-	-	-	368,931
Foreign exchange gains and						
losses	(88,749,247)	-	-	78,995,829	4,309,275	(5,444,143)
Interest expenses	=	-	-	(42,563,431)	(5,226,019)	(47,789,450)
Loss on disposal of trade						
receivables	(6,982,303)	-	-	-	-	(6,982,303)
Reversal of allowance for						
doubtful accounts - trade	27,752	-	-	-	-	27,752
Reversal of allowance for						
other doubtful accounts-						
others	241,583	-	-	-	-	241,583
Gain/loss on financial assets						
measured at fair value		00 440 000				00 440 000
through OCI	-	20,116,868	-	-	-	20,116,868
Gain/loss on disposal of						
financial assets measured at FVOCI		176 422				176 422
Gain or loss on valuation of	-	176,433	-	-	-	176,433
FVPL			306,475			306,475
Gain or loss on disposal of	-	-	300,473	-	-	300,473
FVPL	-	-	343,794	-	-	343,794

Details of gains and losses arising from financial instruments by categories for the year ended December 31, 2019 are as follows (Korean won in thousands):

	Financial assets at amortized cost	Financial assets measured at FVOCI	Financial assets measured at FVPL	Financial liabilities at amortized cost	Other financial	Total
Interest income		•	· 			
	₩ 18,525,046	₩ -	₩ 608,881	₩ -	₩ -	₩ 19,133,927
Dividend income	-	280,898	213,570	-	-	494,468
Foreign exchange gains						
and losses	(4,535,276)	-	-	(10,263,676)	=	(14,798,952)
Interest expenses	=	-	-	(69,420,357)	(8,274,929)	(77,695,286)
Loss on disposal of trade						
receivables	(265,765)	=	=	=	=	(265,765)
Allowance for doubtful						
accounts - trade	(7,223)	=	-	-	-	(7,223)
Allowance for other						
doubtful accounts-						
others	(68,315)	-	-	-	-	(68,315)
Gain/loss on financial						
assets measured at fair						
value through OCI	-	21,217,611	-	-	-	21,217,611
Gain/loss on disposal of						
financial assets						
measured at FVOCI	-	4,424,547		-	-	4,424,547
Gain or loss on valuation						
of FVPL			(170,741)			(170,741)
Gain or loss on disposal						
of FVPL	-	-	23,232	-	-	23,232

28. Discontinued operations

As of December 31, 2020, management of the Group is in the process of transferring the Wi-Fi network module business including Samsung Electro-Mechanics (Thailand) Co., Ltd. Accordingly, related assets and liabilities are classified as held for sale, and related gains or losses are classified as profit (loss) from discontinued operation. On January 27, 2021, the Company entered into a contract with Wits Co., Ltd. to transfer the Wi-Fi network module business including its shares of Samsung Electro-Mechanics (Thailand) Co., Ltd..

The Board of Directors of the parent company decided to dispose of the assets of the PLP business on April 30, 2019. On December 12, 2019, Kunshan Samsung Electro-Mechanics Co., Ltd. decided to discontinue its operations.

The comparative statement of comprehensive income was rewritten to show the discontinued operations from continuing operations.

The consolidated statements of profit or loss for the years ended December 31, 2020 and 2019, included in the comprehensive income statement, are as follows (Korean won in thousands):

		2020		2019
Sales	₩	263,745,370	₩	511,981,748
Cost of sales		205,476,822		580,177,151
Gross profit (loss)		58,268,548		(68,195,403)
Selling and administrative expenses		82,970,987		119,027,007
Operating loss		(24,702,439)		(187,222,410)
Non-operating income		24,404,879		187,097,608
Loss before tax		(297,560)		(124,802)
Income tax expense (benefit)		(8,337,186)		96,796,375
Profit (loss) for the year from discontinued operation after tax	₩	8,039,626	₩	(96,921,177)
Basic and diluted, profit (loss) for the year from discontinued operations attributable to ordinary shareholders of the parent Basic and diluted, profit (loss) for the year from discontinued operations	₩	106	₩	(1,283)
attributable to preferred shareholders of the parent		106		(1,283)

28. Discontinued operations (cont'd)

Assets held for sale and liabilities directly associated with the assets held for sale as of December 31, 2020 and 2019 are as follows (Korean won in thousands):

		2020		2019
Current assets				
Cash and cash equivalents	₩	5,686,675	₩	51,678,363
Trade and other receivables		752,627		1,391,363
Other current assets		812,729		1,573,276
Inventories, net		35,539,206		(337,857)
Non-current assets				
Property, plant and equipment		149,597,324		136,764,653
Other non-current assets		6,283,036		5,615,073
Deferred tax assets		324,533		16,248
Assets held for sale	₩	198,996,130	₩	196,701,119
Current liabilities				
Other current liabilities	₩	31,350,459	₩	18,874,866
Non-current liabilities		3,462,889		
Liabilities directly associated with the assets held for sale	₩	34,813,348	₩	18,874,866
Net assets classified as held for sale	₩	164,182,782	₩	177,826,253

Cashflows from discontinued operations are as follows (Korean won in thousands):

	2020			2019
Net cash flows from operating activities	₩	453,344	₩	(128,920,743)
Net cash flows from investing activities		13,462,599		770,300,413
Net cash flows from financing activities		(20,058,766)		(544,789,693)
Effects of exchange rate changes on cash and cash equivalents		1,119,158		(32,684,202)
Net increase (decrease) in cash and cash equivalents		(5,023,665)		63,905,775

In accordance with the decision to liquidate all remaining assets of Kunshan Samsung Electro-Mechanics Co., Ltd., the Group recognized impairment of inventory and tangible and intangible assets during the prior period, and its recoverable amount is the fair value less disposal costs. (Korean won in millions)

	Impa	airment loss
Printed Circuit Board Solution	₩	203.817