SK bioscience Co., Ltd.

Financial statements for the years ended December 31, 2020 and 2019 with the independent auditor's report



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Independent Auditor's Report

(English Translation of a Report Originally Issued in Korean)

To the Board of Directors and Shareholders of SK bioscience Co., Ltd.

Opinion

We have audited the accompanying financial statements of SK bioscience Co., Ltd. (the Company), which comprise the statement of financial position as at December 31, 2020, and the statement of comprehensive income, statement of changes in equity and statement of cash flows for the year then ended, and notes to the financial statement, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of SK bioscience Co., Ltd. as at December 31, 2020, and its financial performance and its 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 Financial Statements* section of our report. We are independent of the Company in accordance with the ethical requirements of the Republic of Korea that are relevant to our audit of the financial statements and we have fulfilled our other ethical responsibilities in accordance with the ethical requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Other Matters

The financial statements of the Company for the year ended December 31, 2019, were audited by another auditor who expressed an unqualified opinion on those statements on November 27, 2020.

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

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

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

In preparing the financial statements, management is responsible for assessing the Company'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 Company or to cease operations.

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

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the 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 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 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 Company'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 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 Company to cease to continue as a going concern.

• Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

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.

Seoul, Korea March 22, 2021

This report is effective as of March 22 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 financial statements and notes thereto. Accordingly, the readers of the audit report should understand that there is a possibility that the above audit report may have to be revised to reflect the impact of such subsequent events or circumstances, if any.

SK bioscience Co., Ltd.

Financial statements								
for the yea	rs ended Decei	mber 31, 20	20 and 2019					

"The accompanying financial statements, including all footnotes and disclosures, have been prepared by, and are the responsibility of, the Company."

Jae-Yong Ahn
Chief Executive Officers
SK bioscience Co., Ltd.

SK bioscience Co., Ltd. Statements of Financial Position December 31, 2020 and 2019

(in Korean won)	Notes	2020		2019
Assets				
Current assets				
Cash and cash equivalents	4	₩ 24,972,320,525	5 ₩	14,380,269,304
Short-term financial instruments	4,7,26	190,926,330,78		80,088,334,823
Trade and other receivables	4,5,17,19	45,837,781,062	2	32,429,407,875
Derivative assets	4,26	128,357,439)	-
Inventories	6	70,275,309,592	2	36,377,862,430
Contract assets	19	979,914,679)	-
Other current assets	4,8	782,143,190	<u> </u>	7,465,388,335
		333,902,157,268	<u> </u>	170,741,262,767
Non-current assets				
Long-term financial instruments	4,7		-	10,596,800,527
Deposits	4	455,228,200)	347,964,000
Property, plant and equipment	9	180,992,207,643	3	182,477,178,513
Right-of-use assets	10	8,486,731,592	2	8,292,843,789
Intangible assets	11	17,857,569,807	7	19,479,008,186
Other non-current assets	8	95,258,777	7	85,680,000
Derivative assets	4,26		-	64,870,035
Deferred tax assets	22	20,442,618,217	<u> </u>	11,894,501,846
		228,329,614,236		233,238,846,896
Total assets		₩ 562,231,771,504	₩	403,980,109,663
Liabilities				
Current liabilities				
Trade and other payables	4,12,17,25	₩ 39,153,321,767	7 ₩	31,613,417,961
Current portion of long-term liabilities	4,13,24,25	10,994,490,194		01,010,417,001
Current lease liabilities	10,24,25	1,613,599,49		1,350,756,026
Other current liabilities	4,14,25	28,639,938,233		7,780,772,370
Contract liabilities	19	94,899,123,570		4,686,704,748
Derivative liabilities	4,26	75,413,686		-
Current tax liabilities	1,20	5,263,607,972		77,748,419
Carronic tax mashinios		180,639,494,913		45,509,399,524
Non-current liabilities		100,000,101,010	<u> </u>	10,000,000,021
Bonds payable	4,13,24,25	80,473,018,458	3	93,472,368,366
Long-term borrowings	4,13,24,25	21,760,000,000		23,156,000,000
Non-current lease liabilities	10,24,25	7,125,959,07		7,093,024,565
Defined benefit liabilities	15	4,357,739,216		2,015,142,780
Derivative liabilities	4,26	3,617,387,249		_,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Other non-current liabilities	14	467,928,316		_
		117,802,032,310		125,736,535,711
Total liabilities		298,441,527,223		171,245,935,235
Equity				, -,,
Issued capital	1,18	30,600,000,000)	10,200,000,000
Capital surplus	18	180,518,033,363		201,219,488,323
Other equity	18	900,709,824		325,256,321
Accumulated other comprehensive loss	18	(1,464,749,534		(1,319,018,513)
Retained earnings	18	53,236,250,628		22,308,448,297
Total equity		263,790,244,28		232,734,174,428
Total liabilities and equity		₩ 562,231,771,504		403,980,109,663

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

SK bioscience Co., Ltd. Statements of Comprehensive Income Years Ended December 31, 2020 and 2019

(in Korean won)	Notes		2020		2019
Sales	17,19	₩	225,610,784,857	₩	183,937,702,390
Cost of sales	17,20		130,268,716,195		106,078,005,297
Gross profit			95,342,068,662		77,859,697,093
Selling and administrative expenses	20		57,631,621,422		55,063,177,634
Operating profit			37,710,447,240		22,796,519,459
Other income Other expenses Finance income Finance costs	17,21 17,21 21 21		3,742,467,366 1,909,152,299 7,902,996,428 10,153,505,952		143,926,541 1,933,834,300 5,184,640,896 7,705,979,772
Profit before income tax Income tax expense	22		37,293,252,783 4,403,540,826		18,485,272,824 3,807,868,054
Profit for the year		₩	32,889,711,957	₩	14,677,404,770
Other comprehensive income Items that may be subsequently reclassified to profit or loss Net loss on valuation of derivatives Items that will not be reclassified to profit or loss Remeasurements of net defined benefit liability	4,22 15,22		(145,731,021) (1,961,909,626)		(76,943,579) (1,412,162,222)
Other comprehensive income for the year, net of tax			(2,107,640,647)		(1,489,105,801)
Total comprehensive income for the year		₩	30,782,071,310	₩	13,188,298,969
Earnings per share					
Basic earnings per share	23	₩	537	₩	240
Diluted earnings per share	23	₩	533	₩	-

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

SK bioscience Co., Ltd. Statements of Changes in Equity Years Ended December 31, 2020 and 2019

(in Korean won)

(III Notean worl)	Issu	ed capital	c	Capital surplus		Other equity		Accumulated er comprehensive loss		Retained Earnings		Total Equity
As of January 1, 2019 (restated) Total comprehensive income: Profit for the period Remeasurement gain on defined benefit plans Net loss on valuation of derivatives	₩ 10	0,200,000,000 - - -	₩	201,219,488,323	₩	25,019,717 - - -	₩	(1,242,074,934) - - (76,943,579)	₩	9,043,205,749 14,677,404,770 (1,412,162,222)	₩	219,245,638,855 14,677,404,770 (1,412,162,222) (76,943,579)
Transactions with shareholders: Share-based payments		-		-		300,236,604		-		-		300,236,604
As of December 31, 2019 (restated)	₩ 10	0,200,000,000	₩	201,219,488,323	₩	325,256,321	₩	(1,319,018,513)	₩	22,308,448,297	₩	232,734,174,428
As of January 1, 2020 (restated) Total comprehensive income: Profit for the period Remeasurement gain on defined benefit plans Net loss on valuation of derivatives	₩ 10	0,200,000,000 - -	₩	201,219,488,323	₩	325,256,321 - -	₩	(1,319,018,513)	₩	22,308,448,297 32,889,711,957 (1,961,909,626)	₩	232,734,174,428 32,889,711,957 (1,961,909,626)
Transactions with shareholders: Share-based payments Issue of share capital without consideration	20	- 0,400,000,000		(20,701,454,960)		575,453,503 -		(145,731,021) - -		- -		(145,731,021) 575,453,503 (301,454,960)
As of December 31, 2020	₩ 30	0,600,000,000	₩	180,518,033,363	₩	900,709,824	₩	(1,464,749,534)	₩	53,236,250,628	₩	263,790,244,281

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

SK bioscience Co., Ltd. Statements of Cash Flows Years Ended December 31, 2020 and 2019

(in Korean won)	Notes		2020		2019
Cash flows from operating activities					
Profit for the year		₩	32,889,711,957	₩	14,677,404,770
Adjustments to reconcile profit for the year to net cash flows	24		25,139,242,470		25,131,001,684
Working capital adjustments	24		66,407,705,524		8,061,486,829
Interest received			90,642,113		191,716,363
Interest paid			(4,054,556,228)		(4,508,310,897)
Income taxes paid			(248,955,211)		(7,580,773,559)
Net cash inflow from operating activities			120,223,790,625		35,972,525,190
Cash flows from investing activities					
Decrease in deposits			175,896,000		54,000,000
Proceeds from sale of short-term financial instruments			-		20,631,943,985
Decrease in long-term loans			3,262,039,786		388,039,473
Proceeds from sale of intangible assets			468,767,273		5,940,179
Proceeds from sale of property, plant and equipment			454,545		99,921,621
Receipt of government grants			877,397,000		188,603,000
Purchase of short-term financial instruments			(102,396,742,157)		-
Increase in deposits			(283,160,200)		(46,000,000)
Payments for property, plant and equipment			(9,734,815,623)		(23,093,585,797)
Capitalized borrowing costs on purchase of property, plant and equipment			(191,371,334)		(604,254,538)
Purchase of intangible assets			(271,382,968)		(270,567,393)
Net cash outflow from investing activities			(108,092,917,678)		(2,645,959,470)
Cash flows from financing activities					
Repayment of current portion of long-term liabilities			-		(11,250,000,000)
Repayment of current lease liabilities			(1,237,366,766)		(935,486,267)
Repayment of long-term borrowings			-		(11,250,000,000)
Establishment cost			(301,454,960)		-
Net cash outflow from financing activities			(1,538,821,726)		(23,435,486,267)
Net increase (decrease) in cash and cash equivalents			10,592,051,221		9,891,079,453
Cash and cash equivalents at the beginning of the financial year			14,380,269,304		4,489,189,851
Cash and cash equivalents at the end of the year		₩	24,972,320,525	₩	14,380,269,304

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

1. Corporate Information

SK bioscience Co., Ltd. (the "Company") was incorporated on July 1, 2018 through physical division of vaccine business unit from SK Chemicals Co., Ltd. and is engaged in research and development, manufacturing, production and sales of vaccine and bio-medical products, and leasing of related intellectual property rights.

Details of the Company's major shareholders as of December 31, 2020 are as follows:

_	Common Stock					
	Number of shares	Percentage of ownership(%)				
SK Chemicals Co., Ltd.	60,000,000	98.04%				
Employee stock ownership association	811,990	1.33%				
Others	388,010	0.63%				
	61,200,000	100.00%				

2. Significant Accounting Policies

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

2.1 Basis of Preparation

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

Certain information attached to the Korean language financial statements, but not required for a fair presentation of the Company's financial position, financial performance or cash flows, is not presented in the accompanying financial statements.

The financial statements of the Company have been prepared in accordance with Korean IFRS. These are the standards, subsequent amendments and related interpretations issued by the International Accounting Standards Board (IASB) that have been adopted by the Republic of Korea.

The financial statements have been prepared on a historical cost basis, except for the following:

- · Certain financial assets and liabilities (including derivative instruments), certain classes of property, plant and equipment and investment property measured at fair value
- · assets held for sale measured at fair value less costs to sell, and
- · defined benefit pension plans plan assets measured at fair value

The preparation of financial statements requires the use of critical accounting estimates. Management also needs to exercise judgement in applying the Company's accounting policies. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the financial statements are disclosed in Note 3.

2.2 Changes in Accounting Policies and Disclosures

2.2.1 New and amended standards adopted by the Company

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

(a) 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.

(b) 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.

(c) 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 Company 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.

2.2.2 New standards and interpretations not yet adopted by the Company

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 Company.

(a) 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 Company does not expect that these amendments have a significant impact on the financial statements.

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

The amendments update a reference of definition of assets and liabilities 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 Company does not expect that these amendments have a significant impact on the financial statements.

(c) 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 Company is in review for the impact of these amendments on the financial statements.

(d) 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 Company does not expect that these amendments have a significant impact on the financial statements.

(e) 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 Company 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

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

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

(g) 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 Company does not expect that these amendments have a significant impact on the financial statements.

2.3 Foreign Currency Translation

(a) Functional and presentation currency

Items included in the financial statements of each of the Company's entities are measured using the currency of the primary economic environment in which each entity operates (the "functional currency"). The financial statements are presented in Korean won, which is the Company's functional and presentation currency.

(b) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation of monetary assets and liabilities denominated in foreign currencies at year end exchange rates are generally recognized in profit or loss. They are deferred in other comprehensive income if they relate to qualifying cash flow hedges and qualifying effective portion of net investment hedges, or are attributable to monetary part of the net investment in a foreign operation.

Foreign exchange gains and losses that relate to borrowings are presented in the statement of profit or loss, within finance costs. All other foreign exchange gains and losses are presented in the statement of profit or loss within 'other income or other expenses'.

Non-monetary items that are measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value was determined. Translation differences on assets and liabilities carried at fair value are reported as part of the fair value gain or loss. For example, translation differences on non-monetary assets and liabilities such as equities held at fair value through profit or loss are recognized in profit or loss as part of the fair value gain or loss and translation differences on non-monetary assets such as equities held at fair value through other comprehensive income are recognized in other comprehensive income.

2.4 Financial Assets

(a) Classification

The Company classifies its financial assets in the following measurement categories:

- those to be measured at fair value through profit or loss
- · those to be measured at fair value through other comprehensive income, and
- those to be measured at amortized cost

The classification depends on the Company's business model for managing the financial assets and the contractual terms of the cash flows.

For financial assets measured at fair value, gains and losses will either be recorded in profit or loss or other comprehensive income. For investments in debt instruments, this will depend on the business model in which the investment is held. The Company reclassifies debt investments when, and only when its business model for managing those assets changes.

For investments in equity instruments that are not held for trading, this will depend on whether the Company has made an irrevocable election at the time of initial recognition to account for the equity investment at fair value through other comprehensive income. Changes in fair value of non-designated equity investment are recognized in profit or loss.

(b) Measurement

At initial recognition, the Company 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 that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at fair value through profit or loss are expensed in profit or loss.

Financial assets with embedded derivatives are considered in their entirety when determining whether their cash flows are solely payment of principal and interest.

A. Debt instruments

Subsequent measurement of debt instruments depends on the Company's business model for managing the asset and the cash flow characteristics of the asset. The Company classifies its debt instruments into one of the following three measurement categories:

- Amortized cost: Assets that are held for collection of contractual cash flows where those cash
 flows represent solely payments of principal and interest are measured at amortized cost. A
 gain or loss on a debt investment that is subsequently measured at amortized cost and is not
 part of a hedging relationship is recognized in profit or loss when the asset is derecognized
 or impaired. Interest income from these financial assets is included in 'finance income' using
 the effective interest rate method.
- Fair value through other comprehensive income: Assets that are held for collection of contractual cash flows and for selling the financial assets, where the assets' cash flows represent solely payments of principal and interest, are measured at fair value through other comprehensive income. Movements in the carrying amount are taken through other comprehensive income, except for the recognition of impairment loss (reversal of impairment loss), interest income and foreign exchange gains and losses which are recognized in profit or loss. When the financial asset is derecognized, the cumulative gain or loss previously recognized in other comprehensive income is reclassified from equity to profit or loss. Interest income from these financial assets is included in 'finance income' using the effective interest rate method. Foreign exchange gains and losses are presented in 'finance income or expenses' and impairment losses are presented in 'other expenses'.
- Fair value through profit or loss: Assets that do not meet the criteria for amortized cost or fair
 value through other comprehensive income are measured at fair value through profit or loss.
 A gain or loss on a debt investment that is subsequently measured at fair value through profit
 or loss and is not part of a hedging relationship is recognized in profit or loss and presented
 net in the statement of profit or loss within 'finance income or expenses' in the year in which it
 arises.

B. Equity instruments

The Company subsequently measures all equity investments at fair value. Where the Company's management has elected to present fair value gains and losses on equity investments, which held for long-term investment or strategic purpose, in other comprehensive income, there is no subsequent reclassification of fair value gains and losses to profit or loss following the derecognition of the investment. Dividend income from such investments continue to be recognized in profit or loss as

'finance income' when the right to receive payments is established.

Changes in the fair value of financial assets at fair value through profit or loss are recognized in 'finance income and expenses' in the statement of profit or loss as applicable. Impairment loss (reversal of impairment loss) on equity investments measured at fair value through other comprehensive income are not reported separately from other changes in fair value.

(c) Recognition and Derecognition

Regular way purchases and sales of financial assets are recognized or derecognized on trade-date, the date on which the Company commits to purchase or sell the asset. Financial assets are derecognized when the rights to receive cash flows from the financial assets have expired or have been transferred and the Company has transferred substantially all the risks and rewards of ownership.

If a transfer does not result in derecognition because the Company has retained substantially all the risks and rewards of ownership of the transferred asset, the Company continues to recognize the transferred asset in its entirety and recognizes a financial liability for the consideration received. The Company classified the financial liability as "borrowings" in the statement of financial position.

(d) Offsetting of financial instruments

Financial assets and liabilities are offset and the net amount reported in the statement of financial position where there is a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis or realize the assets and settle the liability simultaneously. The legally enforceable right must not be contingent on future events and must be enforceable in the normal course of business and in the event of default, insolvency or bankruptcy of the Company or the counterparty.

2.5 Derivative Instruments

Derivatives are initially recognized at fair value on the date when a derivative contract is entered into and are subsequently remeasured at their fair value at the end of each reporting period. Changes in the fair value of any derivative instrument that does not qualify for hedge accounting are recognized immediately in profit or loss within 'other non-operating income (expenses)' or 'finance income (costs)' based on the nature of transactions.

Derivatives are initially recognized at fair value on the date a derivative contract is entered into and are subsequently remeasured to their fair value at the end of each reporting period. The accounting for subsequent changes in fair value depends on whether the derivative is designated as a hedging instrument, and if so, the nature of the item being hedged. The Company has hedge relationships and designates certain derivatives as either:

- hedges of the fair value of recognized assets or liabilities or a firm commitment (fair value hedges)
- hedges of a particular risk associated with the cash flows of recognized assets and liabilities and highly probable forecast transactions (cash flow hedges), or
- hedges of a net investment in a foreign operation (net investment hedges)

At inception of the hedge relationship, the Company documents the economic relationship between hedging instruments and hedged items including whether changes in the cash flows of the hedging instruments are expected to offset changes in the cash flows of hedged items.

The fair values of derivative financial instruments designated in hedge relationships are disclosed in Note 26.

The full fair value of a hedging derivative is classified as a non-current asset or liability when the remaining maturity of the hedged item is more than 12 months; it is classified as a current asset or liability when the remaining maturity of the hedged item is less than 12 months. A non-derivative financial asset and a non-derivative financial liability is classified as a current or non-current based on its expected maturity and its settlement, respectively.

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognized in the cash flow hedge reserve within equity, limited to the cumulative change in fair value (present value) of the hedged item (the present value of the cumulative change in the future expected cash flows of the hedged item) from the inception of the hedge. The ineffective portion is recognized in 'finance income (costs)'.

When option contracts are used to hedge forecast transactions, the Company designates only the intrinsic value of the option contract as the hedging instrument. Gains or losses relating to the effective portion of the change in intrinsic value of the option contracts are recognized in the cash flow hedge reserve within equity. The changes in the time value of the option contracts that relate to the hedged item ('aligned time value') are recognized within the costs of hedging in other comprehensive income within equity.

When forward contracts are used to hedge forecast transactions, the Company generally designates only the change in fair value of the forward contract related to the spot element as the hedging instrument. Gains or losses relating to the effective portion of the change in the spot element of the forward contracts are recognized in the cash flow hedge reserve within equity. The change in the forward element of the contract that relates to the hedged item is recognized within other comprehensive income within equity. In some cases, the Company may designate the full change in fair value of the forward contract (including forward points) as the hedging instrument. In such cases, the gains or losses relating to the effective portion of the change in fair value of the entire forward contract are recognized in the cash flow hedge reserve within equity.

Amounts accumulated in equity are reclassified in the periods when the hedged item affects profit or loss, as follows:

- Where the hedged item subsequently results in the recognition of a non-financial asset (such
 as inventory), both the deferred hedging gains and losses and the deferred time value of the
 option contracts or deferred forward points, if any, are included within the initial cost of the
 asset. The deferred amounts are ultimately recognized in profit or loss as the hedged item
 affects profit or loss (for example through cost of sales).
- The gain or loss relating to the effective portion of the interest rate swaps hedging variable rate borrowings is recognized in profit or loss within 'finance cost' at the same time as the interest

expense on the hedged borrowings.

When a hedging instrument expires, or is sold, terminated, exercised, or when a hedge no longer meets the criteria for hedge accounting, any accumulated cash flow hedge reserve at that time remains in equity until the forecast transaction occurs, resulting in the recognition of a non-financial asset such as inventory. When the forecast transaction is no longer expected to occur, the cash flow hedge reserve and deferred costs of hedging that were reported in equity are immediately reclassified to profit or loss.

Changes in the fair value of derivatives that are designated as fair value hedging instruments are recorded in profit or loss, together with any changes in the fair value of the hedged asset or liability that are attributable to the hedged risk.

If the hedge no longer meets the criteria for hedge accounting, the adjustment to the carrying amount of a hedged item for which the effective interest method is used is amortized to profit or loss over the period to maturity using a recalculated effective interest rate.

2.6 Trade Receivables

Trade receivables are recognized initially at the amount of consideration that is unconditional, unless they contain significant financing components when they are recognized at fair value. Trade receivables are subsequently measured at amortized cost using the effective interest method, less loss allowance. See Note 5 for a description of the Company's accounting policy for impairment.

2.7 Inventories

Inventories are stated at the lower of cost and net realizable value. Cost is determined using the moving average method.

2.8 Property, Plant and Equipment

Property, plant and equipment are stated at historical cost less accumulated depreciation and accumulated impairment losses. Historical cost includes expenditure that is directly attributable to the acquisition of the items.

Depreciation of all property, plant and equipment, except for land, is calculated using the straight-line method to allocate their cost or revalued amounts, net of their residual values, over their estimated useful lives as follows:

Useful lives

Buildings	40 years
Structures	40
Machinery	10
Vehicles	5
Others	5 - 10

The assets' depreciation method, residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period.

2.9 Borrowing Costs

General and specific borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset are capitalized during the period of time that is required to complete and prepare the asset for its intended use or sale. Investment income earned on the temporary investment of specific borrowings on qualifying assets is deducted from the borrowing costs eligible for capitalization. Other borrowing costs are expensed in the period in which they are incurred.

2.10 Government Grants

Grants from the government are recognized at their fair value where there is a reasonable assurance that the grant will be received and the Company will comply with all attached conditions. Government grants related to assets are presented in the statement of financial position by deducting the grant in arriving at the carrying amount of the asset, and government grants related to income are deferred and later deducted from the related expense.

2.11 Intangible Assets

Intangible assets are initially recognized at its historical cost, and carried at cost less accumulated amortization and accumulated impairment losses.

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

	Usetui iives
Industrial property rights	5 - 10 years
Development costs	10
Software	5

Haaful livaa

(a) Internally Generated Development Cost

Research costs are expensed as incurred. Development expenditures on an individual project are recognized as an intangible asset when the Company can demonstrate:

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

New development project is processed through phases of discovering new drug candidate, preclinical trial, phase 1 clinical trial, phase 2 clinical trial, phase 3 clinical trial, request for the government approval, completion of government approval and sales of products. The Company generally recognizes expenditures incurred after the phase 3 clinical trials as intangible assets, and expenditures incurred before the phase are recognized as expenses within research and development expenses.

(b) Others

Membership rights that have an indefinite useful life are not subject to amortization because there is no foreseeable limit to the period over which the assets are expected to be utilized.

2.12 Impairment of Non-financial Assets

Intangible assets that have an indefinite useful life are not subject to amortization and are tested annually for impairment. Other assets are tested for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs of disposal and value in use. Non-financial assets other than goodwill that suffered an impairment are reviewed for possible reversal of the impairment at the end of each reporting period.

2.13 Trade and Other Payables

These amounts represent liabilities for goods and services provided to the Company prior to the end of reporting period which are unpaid. The amounts are unsecured and are usually paid within 30 days of recognition. Trade and other payables are presented as current liabilities, unless payment is not due within 12 months after the reporting period. They are recognized initially at their fair value and subsequently measured at amortized cost using the effective interest method.

2.14 Financial Liabilities

(a) Classification and measurement

The Company classifies non-derivative financial liabilities, except for financial liabilities at fair value through profit or loss, financial guarantee contracts and financial liabilities that arise when a transfer of financial assets does not qualify for derecognition, as financial liabilities carried at amortized cost and present as 'trade and other payables', 'borrowings' 'bonds payable' and 'other liabilities' in the statement of financial position.

(b) Derecognition

Financial liabilities are removed from the statement of financial position when it is extinguished; for example, when the obligation specified in the contract is discharged or cancelled or expired or when the terms of an existing financial liability are substantially modified. The difference between the carrying amount of a financial liability extinguished or transferred to another party and the consideration paid (including any non-cash assets transferred or liabilities assumed) is recognized in profit or loss.

2.15 Provisions

Provisions for service warranties, make good obligation, and legal claims are recognized when the Company has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required to settle the obligation and the amount can be reliably estimated. Provisions are measured at the present value of management's best estimate of the expenditure required to settle the present obligation at the end of the reporting period, and the increase in the provision due to the passage of time is recognized as interest expense.

2.16 Current and Deferred Tax

The tax expense for the period consists of current and deferred tax. Current and deferred tax is recognized in profit or loss, except to the extent that it relates to items recognized in other comprehensive income or directly in equity. In this case, the tax is also recognized in other comprehensive income or directly in equity, respectively.

The current income tax expense is measured at the amount expected to be paid to the taxation authorities, using the tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation, and considers whether it is probable that a taxation authority will accept an uncertain tax treatment. The Company measures its tax balances either based on the most likely amount or the expected value, depending on which method provides a better prediction of the resolution of the uncertainty.

Deferred income tax is provided in full, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the financial statements. However, deferred income tax is not accounted for if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting profit nor taxable profit or loss.

Deferred tax assets are recognized only if it is probable that future taxable amounts will be available to utilize those temporary differences and losses.

The Company recognizes a deferred tax liability all taxable temporary differences associated with investments in subsidiaries, associates, and interests in joint arrangements, except to the extent that the Company is able to control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. In addition, The Company recognizes a deferred tax asset for all deductible temporary differences arising from such investments to the extent that it is probable the temporary difference will reverse in the foreseeable future and taxable profit will be available against which the temporary difference can be utilized.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets and liabilities and when the deferred tax balances relate to the same taxation authority. Current tax assets and tax liabilities are offset when the Company has a legally enforceable right to offset and intends either to settle on a net basis, or to realize the assets and settle the liability simultaneously.

2.17 Employee Benefits

(a) Post-employment benefits

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

For defined contribution plans, the Company pays contribution to publicly or privately administered pension insurance plans on mandatory, contractual or voluntary basis. The contribution is recognized as employee benefit expense when they are due.

A defined benefit plan is a pension plan that is not a defined contribution plan. Generally, post-employment benefits are payable after the completion of employment, and the benefit amount depended on the employee's age, periods of service or salary levels. The liability recognized in the statement of financial position in respect of defined benefit pension plans is the present value of the defined benefit obligation at the end of the reporting period less the fair value of plan assets. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid, and that have terms approximating to the terms of the related obligation. Remeasurement gains and losses arising from experience adjustments and changes in actuarial assumptions are recognized in the period in which they occur, directly in other comprehensive income.

Changes in the present value of the defined benefit obligation resulting from plan amendments or curtailments are recognized immediately in profit or loss as past service costs.

(b) Share-based payments

Equity-settled share-based payment is recognized at fair value of equity instruments granted, and employee benefit expense is recognized over the vesting period. At the end of each period, the Company revises its estimates of the number of options that are expected to vest based on the non-market vesting and service conditions. It recognizes the impact of the revision to original estimates, if any, in profit or loss, with a corresponding adjustment to equity.

When the options are exercised, the Company issues new shares. The proceeds received, net of any directly attributable transaction costs, are recognized as share capital (nominal value) and share premium.

(c) Other long-term employee benefits

The Company 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 Company 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.

2.18 Revenue Recognition

The Company engages in the research and development, production, sales and related intellectual property lease of vaccines and biopharmaceuticals. Revenue from contracts with customers is recognized when control of the goods or services are transferred to the customer at an amount that reflects the consideration to which the Company expects to be entitled in exchange for those goods or services. The Company has generally concluded that it is the principal in its revenue arrangements because it typically controls the goods or services before transferring them to the customer.

The disclosures of significant accounting judgments, estimates and assumptions relating to revenue from contracts with customers are provided in Note 3.

(a) Sales of vaccines and biopharmaceuticals

Revenue from sale of vaccines and biopharmaceuticals is recognized at the point in time when control of the asset is transferred to the customer, generally on delivery of vaccines and biopharmaceuticals. The normal credit term is 90 to 180 days upon delivery. The Company considers whether there are other promises in the contract that are separate performance obligations to which a portion of the transaction price needs to be allocated. In determining the transaction price for the sale of vaccines and biopharmaceuticals, the Company considers the effects of variable consideration, the existence of significant financing components, noncash consideration, and consideration payable to the customer (if any).

(b) Contract development and manufacturing of vaccine and biopharmaceutical products

The Company renders services including contract development and manufacturing of vaccines and biopharmaceutical products, bioanalysis, etc. Goods manufactured by the Company do not have an alternative use to the Company, and it has an enforceable right to payment for performance completed to date. This is because that the Company produces bio-medical products at a quality that a customer requires and is entitled to reimbursement of the costs incurred to date, including a reasonable margin if a customer terminates a contract. Therefore, the Company recognizes revenue over time as it satisfies its performance obligation over a contract period.

(c) Licensing: right to use

In some contracts with customers, the Company licenses out to the customers through a technical transfer. The Company has no other goods or services transferred to the customers under the contracts other than a performance obligation for provision of licenses. The above license contract is a license that provides a right to use the entity's intellectual property as it exists at the point in time at which the license is granted. This means that the customer can direct the use of, and obtain substantially all of the remaining benefits from, the license at the point in time at which the license transfers. Consequently, the Company accounts for the license as a performance obligation satisfied at a point in time.

(d) Licensing: right to access

The Company provides licenses for pharmaceuticals to customers and receives consideration in return. The Company also provides research and other services to customers throughout the license period. The nature of the Company's promise to grant the license is to provide the customer with access to the entity's intellectual property as it exists throughout the license period. The Company accounts for the

promised license as a performance obligation satisfied over time. The Company measures the progress of performance obligation based on the license period.

(e) Collaborative arrangements

The Company enters into collaborative arrangements with the counterparty to share the risks and benefits derived from the activities and processes of jointly developing a product to be marketed. Costs incurred for collaborative arrangements are recognized as either intangible assets or expenses, depending whether the conditions of differentiability, regulation, and future economic benefits are met. The Company recognizes goods or services provided and related considerations as revenue in accordance with the performance obligation identified under the contracts. The obligation of sharing the resources invested in the activities and processes under the collaborative arrangements is not included in the performance obligation.

(1) Variable consideration

If the consideration in a contract includes a variable amount, the Company estimates the amount of consideration to which it will be entitled in exchange for transferring the goods to the customer. The variable consideration is estimated at contract inception and constrained until it is highly probable that a significant revenue reversal in the amount of cumulative revenue recognized will not occur when the associated uncertainty with the variable consideration is subsequently resolved. Some contracts for the sale of pharmaceuticals provide customers with a right of return. The right of return gives rise to variable consideration.

Right of return

Certain contracts provide a customer with a right to return the goods within a specified period. The Company uses the expected value method to estimate the goods that will not be returned because this method best predicts the amount of variable consideration to which the Company will be entitled. The requirements in KIFRS 1115 on constraining estimates of variable consideration are also applied in order to determine the amount of variable consideration that can be included in the transaction price. For goods that are expected to be returned, instead of revenue, the Company recognizes a refund liability. A right of return asset (and corresponding adjustment to cost of sales) is also recognized for the right to recover products from a customer.

(2) Contract balances

Contract assets

A contract asset is the right to consideration in exchange for goods or services transferred to the customer. If the Company performs by transferring goods or services to a customer before the customer pays consideration or before payment is due, a contract asset is recognized for the earned consideration that is conditional.

Contract liabilities

A contract liability is the obligation to transfer goods or services to a customer for which the Company

has received consideration (or an amount of consideration is due) from the customer. If a customer pays consideration before the Company transfers goods or services to the customer, a contract liability is recognized when the payment is made or the payment is due (whichever is earlier). Contract liabilities are recognized as revenue when the Company performs under the contract.

(3) Costs to fulfill a contract

Costs to fulfill a contract are costs incurred in fulfilling a contract with customer. If the costs are related directly to a contract or to an anticipated contract that the entity can specifically identify, generate or enhance resources of the entity that will be used in satisfying (or in continuing to satisfy) performance obligations in the future, and are expected to be recovered, the costs are recognized as assets. And the costs to fulfill a contract are recognized as cost of sales based on percentage of completion.

(4) Assets and liabilities arising from rights of return

Right of return assets

Right of return asset represents the Company's right to recover the goods expected to be returned by customers. However, due to the inherent nature of vaccines and biopharmaceuticals, the assets returned are discarded, so the Company does not recognize the right of return asset.

Refund liabilities

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 Company ultimately expects it will have to return to the customer. The Company updates its estimates of refund liabilities (and the corresponding change in the transaction price) at the end of each reporting period. Refer to above accounting policy on variable consideration.

2.19 Leases

(a) Lessor

Lease income from operating leases where the Company is a lessor is recognized in income on a straight-line basis over the lease term. Initial direct costs incurred in obtaining an operating lease are added to the carrying amount of the underlying asset and recognized as expense over the lease term on the same basis as lease income. The respective leased assets are included in the statement of financial position based on their nature.

(b) Lessee

The Company enters into lease contracts for various items of buildings, machinery, vehicles and other equipment used for business. Lease contracts are typically made for fixed periods of 3 to 10 years, but they may have extension options as described in (b) below.

Contracts may contain both lease and non-lease components. The Company allocates the consideration in the contract to the lease and non-lease components based on their relative stand-alone prices. However, for leases of real estate for which the Company is lessee, the Company applies the

practical expedient which has elected not to separate lease and non-lease components and instead accounts for these as a single lease component.

Lease terms are negotiated on an individual basis and contain a wide range of different terms and conditions. The lease agreements do not impose any covenants, but leased assets may not be used as security for borrowing purposes.

The Company determines the lease term as the non-cancellable period of a lease, together with both (a) periods covered by an option to extend the lease if the lessee is reasonably certain to exercise that option; and (b) periods covered by an option to terminate the lease if the lessee is reasonably certain not to exercise that option. When the lessee and the lessor each has the right to terminate the lease without permission from the other party, the Company should consider a termination penalty in determining the period for which the contract is enforceable.

Assets and liabilities arising from a lease are initially measured on a present value basis. Lease liabilities include the net present value of the following lease payments:

- Fixed payments (including in-substance fixed payments), less any lease incentives receivable
- Variable lease payment that are based on an index or a rate, initially measured using the index or rate as at the commencement date
- Amounts expected to be payable by the Company (the lessee) under residual value guarantees
- The exercise price of a purchase option if the Company (the lessee) is reasonably certain to exercise that option, and
- Payments of penalties for terminating the lease, if the lease term reflects the Company (the lessee) exercising that option

The lease payments are discounted using the interest rate implicit in the lease. If that rate cannot be determined, the lessee's incremental borrowing rate is used, being the rate that the lessee would have to pay to borrow the funds necessary to obtain an asset of similar value in a similar economic environment with similar terms and conditions.

To determine the incremental borrowing rate, the Company:

- where possible, uses recent third-party financing received by the individual lessee as a starting point, adjusted to reflect changes in financing conditions since third party financing was received
- uses a build-up approach that starts with a risk-free interest rate adjusted for credit risk for leases, which does not have recent third-party financing, and
- makes adjustments specific to the lease, for example term, country, currency and security.

If a readily observable amortizing loan rate is available to the individual lessee (through recent financing

or market data) which has a similar payment profile to the lease, then the Company uses that rate as a starting point to determine the incremental borrowing rate.

The Company is exposed to potential future increases in variable lease payments based on an index or rate, which are not included in the lease liability until they take effect. When adjustments to lease payments based on an index or rate take effect, the lease liability is reassessed and adjusted against the right-of-use asset.

Each lease payment is allocated between the liability and finance cost. The finance cost is charged to profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period.

Right-of-use assets are measured at cost comprising the following:

- the amount of the initial measurement of lease liability
- any lease payments made at or before the commencement date less any lease incentives received
- any initial direct costs, and
- restoration costs

The right-of-use asset is depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis. If the Company is reasonably certain to exercise a purchase option, the right-of-use asset is depreciated over the underlying asset's useful life. The Company elected not to apply that revaluation model to buildings held by the Company that are presented in the right-of-use assets.

Payments associated with short-term leases of certain machinery and leases of low-value assets are recognized on a straight-line basis as an expense in profit or loss. Short-term leases are leases with a lease term of 12 months or less without a purchase option. Low-value assets comprise IT-equipment and small items of office furniture.

(c) Extension and termination options

Extension and termination options are included in the real estate leases across the Company. These terms are used to maximize operational flexibility in terms of managing contracts. The majority of extension and termination options held are exercisable only by the Company and not by the respective lessor.

2.20 Segment Reporting

Information of each operating segment is reported in a manner consistent with the internal business segment reporting provided to the chief operating decision-maker. The chief operating decision-maker, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as the Board of Directors that makes strategic decisions.

2.21 Approval of Issuance of the Financial Statements

The financial statements 2020 were approved for issue by the Board of Directors on February 15, 2021 and are subject to change with the approval of shareholders at their Annual General Meeting.

3. Critical Accounting Estimates and Assumptions

The preparation of financial statements requires the Company to make estimates and assumptions concerning the future. Management also needs to exercise judgement in applying the Company's accounting policies. Estimates and assumptions are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. As the resulting accounting estimates will, by definition, seldom equal the related actual results, it can contain a significant risk of causing a material adjustment.

The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below. Additional information of significant judgement and assumptions of certain items are included in relevant notes.

(a) 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 Company.

Significant accounting estimates and assumptions applied in the preparation of the financial statements can be adjusted depending on changes in the uncertainty from COVID-19. Also, the ultimate effect of COVID-19 to the Company's business, financial position and financial performance cannot presently be determined.

(b) Income taxes

The Company's taxable income generated from these operations are subject to income taxes based on tax laws and interpretations of tax authorities in numerous jurisdictions. There are many transactions and calculations for which the ultimate tax determination is uncertain (Note 22).

If certain portion of the taxable income is not used for investments or increase in wages or dividends in accordance with the *Tax System for Recirculation of Corporate Income*, the Company is liable to pay additional income tax calculated based on the tax laws. Accordingly, the measurement of current and deferred income tax is affected by the tax effects from the new tax system. As the Company's income tax is dependent on the investments, increase in wages and dividends, there is an uncertainty measuring the final tax effects.

(c) Impairment of financial assets

The provisions for impairment for financial assets are based on assumptions about risk of default and expected loss rates. The Company uses judgement in making these assumptions and selecting the inputs to the impairment calculation based on the Company's past history, existing market conditions as

well as forward looking estimates at the end of each reporting period (Note 5).

(d) Net defined benefit liability

The present value of net defined benefit liability depends on a number of factors that are determined on an actuarial basis using a number of assumptions including the discount rate (Note 15).

(e) Revenue recognition

A refund liability and a right to the returned goods are recognized for the products expected to be returned once they are sold. Accumulated experience is used to estimate such returns at the time of sale at a portfolio level (expected value method), and the Company's revenue is affected by changes in expected return rate.

(f) Net realizable value of inventory

Inventory is recorded at the lower of its acquisition cost or net realizable value. Measurement of the net realizable value requires estimated selling price and selling expense, which are highly subject to management's judgement.

4. Financial Instruments

4.1 Financial Assets

Details of financial assets by category as of December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)	2020								
	Financial assets at fair value through profit or loss	Financial assets measured at amortized cost	Total						
Current assets									
Cash and cash equivalents	₩ -	₩ 24,972,321	₩ 24,972,321						
Short-term financial instruments	183,735,897	7,190,433	190,926,330						
Trade and other accounts receivable	-	45,837,781	45,837,781						
Other current assets (*1)	-	40,400	40,400						
Derivatives assets	128,357	-	128,357						
	183,864,254	78,040,935	261,905,189						
Non-current assets									
Deposits		455,228	455,228						
	-	455,228	455,228						
	₩ 183,864,254	₩ 78,496,163	₩ 262,360,417						

^(*1) Consists of guarantee deposits

(in thousands of Korean won)	n) 2019						
	Derivative designated hedging instrument	as	Financial assets at fair value through profit or loss	me	Financial assets easured at ortized cost		Total
Current assets							
Cash and cash equivalents	₩	-	₩ -	₩	14,380,269	₩	14,380,269
Short-term financial instruments		-	80,088,335		-		80,088,335
Trade and other receivables		-	-		32,429,408		32,429,408
Other current assets (*1)	-				43,115		43,115
			80,088,335		46,852,792		126,941,127
Non-current assets							
Long-term financial instruments		-	-		10,596,800		10,596,800
Deposits		-	-		347,964		347,964
Derivatives assets	64,8	70	-		-		64,870
	64,8	70	-		10,944,764		11,009,634
	₩ 64,8	70	₩ 80,088,335	₩	57,797,556	₩	137,950,761

^(*1) Consists of guarantee deposits

4.2 Financial Liabilities

Details of financial liabilities by category as of December 31, 2020 and 2019 are as follows:

Financial Derivatives	
measured at at fair value through hedging Total amortized profit or loss instruments cost	
Current liabilities	
Trade and other payables $\ensuremath{\forall}$ 39,153,322 $\ensuremath{\forall}$ - $\ensuremath{\forall}$ 39,153,322	322
Derivative financial liabilities - 75,414 - 75,4	414
Current portion of bonds payable 10,994,490 - 10,994,4	490
Other current liabilities (*1) 17,167,682 - 17,167,6	682
67,315,494 75,414 - 67,390,9	908
Non-current liabilities	
Bonds payable 80,473,018 - 80,473,0	018
Long-term borrowings 21,760,000 - 21,760,0	000
Derivative liabilities	387
102,233,018	405
<u>₩ 169,548,512</u> <u>₩ 75,414</u> <u>₩ 3,617,387</u> <u>₩ 173,241,3</u>	313

^(*1) Consists of guarantee deposits received

(in thousands of Korean won)	2019								
	Finan mo amo		Total						
Current liabilities									
Trade and other payables	₩	31,613,418	₩	31,613,418					
Other current liabilities (*1)		3,574,495		3,574,495					
		35,187,913		35,187,913					
Non-current liabilities									
Bonds payable		93,472,368		93,472,368					
Long-term borrowings		23,156,000		23,156,000					
		116,628,368		116,628,368					
	₩	151,816,281	₩	151,816,281					

^(*1) Consists of guarantee deposits received

(*1) Net of income tax effect

4.3 Gains or Losses from the Financial Instruments

Details of net gains or losses by financial instrument by category for the years ended December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)	2020											
		ancial asset easured at ortized cost	assets at			Derivatives esignated as hedging instruments	Financial liabilities measured at amortized cost	Total				
Profit or loss								,				
Interest income (expenses)	₩	469,593	₩	-	₩	-		₩ (3,681,101)				
Gain(loss) on		(275,412)		_		_	4,792,936	4,517,524				
foreign currency translation		(4.0.40.055)					(5.045)	(4.045.070)				
Loss on foreign currency transactions		(1,340,355)		-		-	(5,315)	(1,345,670)				
Gain(loss) on valuation of derivatives		-		52,944		(3,490,000)	-	(3,437,056)				
Gain on transactions of derivatives		-		444,973		-	-	444,973				
Reversal of allowance for doubtful accounts		69,371		-		-	-	69,371				
Gain on valuation of financial												
assets		-		148,370		-	-	148,370				
at fair value through profit or loss												
Gain on sale of financial												
assets at fair value through profit or loss		-		1,102,450		-	-	1,102,450				
		(1,076,803)		1,748,737	_	(3,490,000)	636,927	(2,181,139)				
Other comprehensive income(loss)												
Loss on valuation of derivatives(*1)		-		-		(145,731)		(145,731)				
	₩	(1,076,803)	₩	1,748,737	₩	(3,635,731)	₩ 636,927	₩ (2,326,870)				
(*1) Net of income tax effect												
(in thousands of Korean won)		2019										
	m	ancial asset easured at ortized cost		Financial assets at r value through profit or loss	d	Derivatives esignated as hedging instruments	Financial liabilities measured at amortized cost	Total				
Profit or loss				pront or 1000			umortized door					
Interest income (expenses)	₩	207,205	₩	_	₩	+ -	₩ (4,184,561)	₩ (3,977,356)				
Gain(loss) on							,	,				
foreign currency translation		119		-		-	(1,985,000)	(1,984,881)				
Gain(loss) on												
foreign currency transactions		497,341		-		-	(47,439)	449,902				
Gain on valuation of derivatives		-		-		1,985,000	_	1,985,000				
Loss on transactions of derivatives		-		(525,374)		-	_	(525,374)				
Reversal of allowance for doubtful accounts		516,992		-		-	-	516,992				
Loss on valuation of financial												
assets		_		(100,573)		_	_	(100,573)				
at fair value through profit or loss				(,,				(,,				
Gain on sale of financial												
assets at fair value through profit		_		1,631,944		-	_	1,631,944				
or loss			1,051,344									
		1,221,657		1,005,997	_	1,985,000	(6,217,000)	(2,004,346)				
Other comprehensive income(loss)							. ,	,				
Loss on valuation of derivatives(*1)		-			_	(76,944)		(76,944)				
	₩	1,221,657	₩	1,005,997	₩	1,908,056	₩ (6,217,000)	₩ (2,081,290)				

4.4 Derivatives

Derivatives as of December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)		202		2019	
		Assets	Li	iabilities	Assets
Derivative assets(liabilities): not designated as hedging instrument Currency forwards	₩	128,357	₩	75,414 ₩	-
Derivative assets(liabilities): designated as hedging instrument Currency swaps		-		3,617,387	64,870

Derivative instruments not designated as hedging instruments as of December 31, 2020 are as follows:

(in thousands of Korean won)

		2020						
Contract with		KEB Hana Bank						
Buy/Sell		Sell	Buy					
Contract amount		USD 25,990,000	USD 5,970,000					
Gain(loss) on valuation of derivatives	₩	32,351 ₩	20,593					

All derivate instruments as of December 31, 2019 have been designated as hedging instruments.

Derivative instruments designated as hedging instruments as of December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)	2020							
Contract with	KEB Hana Bank	KEB Hana Bank						
Hedged item	Floating rate foreign currency	Floating rate						
Ü	privately placed corporate bond (Face value: USD 30,000,000)	foreign currency borrowing (Face value: USD 20,000,000)						
Contract period	2018.06.29~2023.06.29	2018.06.29~2023.06.29						
Buy/Sell	Buy	Buy						
Purpose	Hedge of foreign currency risk and interest rate fluctuation risk	Hedge of foreign currency risk and interest rate fluctuation risk						
Contract amount	₩ 33,645,000	₩ 22,434,000						
Fair value	2,180,220	1,437,168						
Gain(loss) on valuation in								
Reclassified to profit or loss		(3,490,000)						
Other comprehensive income (loss) (*1)		(145,731)						
(*1) Net of income tax effect								
(in thousands of Korean won)	2019							
Contract with	KEB Hana Bank	KEB Hana Bank						
Hedged item	Floating rate foreign currency privately placed corporate bond	Floating rate foreign currency borrowing						
	(Face value: USD 30,000,000)							
Contract period	2018.06.29~2023.06.29	2018.06.29~2023.06.29						
Buy/Sell	Buy	Buy						

(in thousands of Korean won)	2019							
Purpose		Hedge of foreign currency risk and interest rate fluctuation risk						
Contract amount	₩ 33,645,000	₩ 22,434,000						
Fair value	21,307	43,563						
Gain(loss) on valuation in								
Reclassified to profit or loss		1,985,000						
Other comprehensive income (loss) (*1)		(76,944)						

^(*1) Net of income tax effect

5. Trade and Other Receivables

Details of trade and other receivables as of December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)		2020	2019			
Trade receivable	₩	30,802,930	₩	32,603,295		
Less: allowance for doubtful accounts		(306,791)		(377,285)		
Other receivables		15,341,521		187,909		
Accrued income		121		15,489		
	₩	45,837,781	₩	32,429,408		

Changes in allowance for doubtful accounts for trade and other receivables for the years ended December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)		2020	2019			
Beginning Balance:	₩	377,285	₩	894,277		
Reversal Write off		(69,371) (1,123)		(516,992)		
Ending Balance:	₩	306,791	₩	377,285		

The Company applies the simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for trade receivables. To measure the expected credit losses, trade receivables have been grouped based on shared credit risk characteristics and the days past due.

On that basis, the loss allowance as at December 31, 2020 and 2019 was determined as follows for trade receivables:

(in thousands of Korean won)	;	Secured		ess than 3 months		ess than 6 months	Less than 9 months						Individual analysis(*1)		Total
December 31, 2020															
Expected loss rate															
Wholesale		-		-		-		-		-		-		100%	0.19%
Hospital		-		0.0%		0.1%		7.9%		81.7%		100.0%		100%	2.97%
Export/Others		-		-		-		-		-		-		-	-
Gross carrying amount – trade receivables															
Wholesale	₩	7,024,836	₩	89,624	₩	101,186	₩	-	₩	-	₩	-	₩	13,722 ₩	7,229,368
Hospital		1,354,727		6,111,444		2,090,148		8,022		2,622		237,585		48,987	9,853,515
Export/Others		3,627,440		10,092,525		82		-		-		-		-	13,720,047
Loss allowance provision															
Wholesale	₩	-	₩	-	₩	-	₩	-	₩	-	₩	-	₩	13,722 ₩	13,722
Hospital		-		1,230		2,495		629		2,143		237,585		48,987	293,069
Export/Others		-		-		-		-		-		-		-	
December 31, 2019															
Expected loss rate															
Wholesale		-		-		-		-		-		-		100%	0.14%
Hospital		-		0.2%		0.6%		7.8%		39%		100.0%		100%	1.83%
Export/Others		-		-		-		-		-		-		-	-
Gross carrying amount – trade receivables															
Wholesale	₩	9,550,471	₩	-	₩	-	₩	-	₩	-	₩	-	₩	13,722 ₩	9,564,193
Hospital		1,722,385		15,195,992		2,538,033		61,492		23,178		261,607		35,221	19,837,908
Export/Others		-		1,400,446		1,800,748		-		-		-		-	3,201,194
Loss allowance provision															
Wholesale	₩	-	₩	-	₩	-	₩	-	₩	-	₩	-	₩	13,721 ₩	13,721
Hospital		-		37,833		15,075		4,781		9,047		261,607		35,221	363,564
Export/Others		-		-		-		-		-		-		-	

^(*1) Allowances or provisions for receivables from related party transactions and bad debts are determined by individual analysis.

6. Inventories

Details of inventories as of December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)						
	Acq	uisition Cost	Va	aluation allowance		Book value
Merchandise	₩	1,691,140	₩	(15,241)	₩	1,675,899
Finished goods		2,480,475		(39,795)		2,440,680
Semi-finished goods		28,547,937		(1,230,575)		27,317,362
Work-in-progress		5,127,286		-		5,127,286
Raw materials		17,405,933		(15,203)		17,390,730
Supplies		16,363,978		(85,519)		16,278,459
Materials-in-transit		44,893		-		44,893
	₩	71,661,642	₩	(1,386,333)	₩	70,275,309

(in thousands of Korean won)				2019		
	Acq	uisition Cost	٧	/aluation allowance		Book value
Merchandise	₩	1,591,911	₩	(429)	₩	1,591,482
Finished goods		1,731,753		(70,644)		1,661,109
Semi-finished goods		21,342,280		(3,639,322)		17,702,958
Work-in-progress		2,810,671		-		2,810,671
Raw materials		7,180,881		-		7,180,881
Supplies		5,427,466		-		5,427,466
Materials-in-transit		3,295		-		3,295
	₩	40,088,257	₩	(3,710,395)	₩	36,377,862

Reversal of loss on valuation of inventories of KRW 2,324,062 thousand was recognized during the year ended December 31, 2020 (Loss on valuation of inventories of KRW 2,385,738 thousand was recognized during the year ended December 31, 2019).

7. Short-term and Long-term Financial Instruments

Short-term and long-term financial instruments as of December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)	2020		
	Detail		Amount
Short-term financial instruments:			
Short-term investments	MMW	₩	183,735,897
Short-term loans (*1)	Employee stock ownership association loan		7,190,433
		₩	190,926,330

^(*1) The loan is interest-free until June 30, 2021, thereafter interest is calculated using the weighted average borrowing rate of the Company each year. Discount on present value amounting to KRW 144,327 thousand was deducted as of December 31, 2020.

(in thousands of Korean won)	2019						
	Detail		Amount				
Short-term financial instruments: Short-term investments	MMW	₩	80,088,335				
Long term financial instruments: Long-term loans (*1)	Employee stock ownership association loan	₩	10,596,800				

^(*1) The loan is interest-free until June 30, 2021, thereafter interest is calculated using the weighted average borrowing rate of the Company each year.

8. Other Assets

Details of other assets as of December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)		2020	-	2019
Other current assets:				
Advance payments	₩	971	₩	1,021
Prepaid expenses		740,772		577,297
Prepaid taxes		-		6,843,955
Guarantee deposits		40,400		43,115
	₩	782,143	₩	7,465,388
Other non-current assets:				
Other investment assets	₩	85,680	₩	85,680
Long-term prepaid expenses		9,579		-
	₩	95,259	₩	85,680

9. Property, Plant and Equipment

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

(in thousands of Korean won)

(iii tiioacanac ci rtorcan won)				20								
		Beginning balance	Pı	urchases	Di	sposals	D	epreciation (*1)	C	Others (*2)		Ending balance
Land	₩	9,948,684	₩	-	₩	_	₩	-	₩	-	₩	9,948,684
Buildings		104,230,440		44,170		-		(3,219,306)		10,405,509		111,460,813
Structures		994,840		13,750		-		(24,594)		-		983,996
Machinery		37,940,899		3,849,565		-		(8,608,278)		14,139,809		47,321,995
Vehicles		22,099		-		-		(6,024)		-		16,075
Others		700,523		1,073,173		(1,021)		(376, 172)		261,025		1,657,528
Construction-in progress		28,054,737		7,940,354		-		-		(26,391,974)		9,603,117
Machinery-in-transit		584,957		-		-		-		(584,957)		-
	₩	182,477,179	₩ ′	12,921,012	₩	(1,021)	₩	(12,234,374)	₩	(2,170,588)	₩	180,992,208

^(*1) Depreciation expense consists of KRW 11,253,668 thousand included in cost of sales, KRW 164,493 thousand included in selling and administrative expenses, and KRW 816,213 thousand included in R&D expenses.

^(*2) Includes the amount receipts of the government subsidy and the reclassification from construction-in-progress.

(in thousands of Korean won)							2	019						
	E	Beginning balance	Recl	assification (*1)	Pur	chases	Di	sposals	De	epreciation (*2)	Oth	ners (*3)		Ending balance
Land	₩	9,948,684	₩	-	₩	-	₩	-	₩	-	₩	-	₩	9,948,684
Buildings		107,202,395		-		-		-		(2,971,955)		-		104,230,440
Structures		1,019,233		-		-		-		(24,393)		-		994,840
Machinery		43,623,922		-	1	,346,824		(82,184)		(7,094,613)		146,950		37,940,899
Vehicles		15,818		-		26,061		(2,044)		(17,736)		-		22,099
Others		1,979,144		(854,682)		195,853		(4,842)		(700,316)		85,366		700,523
Construction-in progress		8,729,882		-	19	,703,703		-		-	(378,848)		28,054,737
Machinery-in- transit		311,753		-		584,957		-		-	(311,753)		584,957
	₩	172,830,831	₩	(854,682)	₩ 21	,857,398	₩	(89,070)	₩ ((10,809,013)	₩ (458,285)	₩	182,477,179

Borrowing costs capitalized during the year ended December 31, 2020 amounted to KRW 191,372 thousand, and the rate used to determine the amount of borrowing costs eligible for capitalization was 3.45% (borrowing costs capitalized during the year ended December 31, 2019 amounted to KRW 604,254 thousand, and the rate used to determine the amount of borrowing costs eligible for capitalization was 3.41%).

^(*1) Certain other fixed assets are reclassified as the right of use assets, due to the implementation of KIFRS 1116 Lease. (*2) Depreciation expense consists of KRW 9,856,711 thousand included in cost of sales, KRW 110,728 thousand included in selling and administrative expenses, KRW 841,574 thousand included in R&D expense.

^(*3) Includes the amount receipts of the government subsidy and the reclassification from construction-in-progress.

10. Lease

Right-of-use assets

Changes in the book value of right-of-use assets for the years ended December 31, 2020 and 2019 are as follows:

(in thousands of Korean won) 2020

	Beginning balance	Purchases	Disposals	Depreciation(*1)	Ending balance
Building	₩ 7,109,522 ₩	1,221,744	₩ -	₩ (922,680)	₩ 7,408,586
Vehicles	471,087	341,156	(28,304)	(275,582)	508,357
Machinery	712,235	-	-	(142,447)	569,788
	₩ 8,292,844	1,562,900	₩ (28,304)	₩ (1,340,709)	₩ 8,486,731

^(*1) Depreciation expense consists of KRW 186,272 thousand included in cost of sales, KRW 806,947 thousand included in selling and administrative expenses, KRW 347,490 thousand included in R&D cost.

(in thousands of Korean won) 2019

riorcan won,										
	Beginning balance	Reclassi	fication(*1)		Changes in accounting principle(*2)	Purchases	Dep	reciation(*3)		Ending balance
Building	₩ -	· ₩	-	₩	6,419,101	₩ 1,379,554	₩	(689, 133)	₩	7,109,522
Vehicles	-		-		390,237	287,991		(207,141)		471,087
Machinery	-		854,681		-	-		(142,447)		712,235
	₩ -	₩	854,681	₩	6,809,338	₩ 1,667,545	₩	(1,038,721)	₩	8,292,844

^(*1) Certain other fixed assets are reclassified into the right of use assets, due to the implementation of KIFRS 1116 Lease.

As of December 31, 2020 and 2019, the details of lease liabilities are as follows:

(in thousands of Korean won)			202	20	2019				
		mum lease ayments		Present value		mum lease ayments	Present value		
Due in one year	₩	1,642,382	₩	1,613,599	₩	1,374,825	₩	1,350,756	
Due in two years		1,490,352		1,417,076		1,325,776		1,260,392	
Due in five years		3,822,432		3,406,152		3,492,895		3,113,796	
Due after five or more years		2,846,037		2,302,731		3,416,474		2,718,837	
	₩	9,801,203	₩	8,739,558	₩	9,609,970	₩	8,443,781	

^(*2) The Company newly recognized right-of-use assets in accordance with Korean IFRS 1116 Lease.

^(*3) Depreciation expense consists of KRW 178,968 thousand included in cost of sales, KRW 576,231 thousand included in selling and administrative expenses, KRW 283,522 thousand included in R&D cost.

Changes in the book value of lease liabilities for the years ended December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)		2020	2019		
Beginning balance	₩	8,443,781	₩	902,521	
Changes in accounting principles		-		6,809,338	
Increase		1,562,900		1,697,153	
Decrease		(29,756)		(29,745)	
Lease payment		(1,516,615)		(1,187,641)	
Interest expenses		279,248		252,155	
Ending balance	₩	8,739,558	₩	8,443,781	

Expenses incurred for the years ended December 31, 2020 and 2019 in relation to lease contracts are as follows:

(in thousands of Korean won)		2020	2019		
Other operating expenses including supplies expenses					
Short-term leases	₩	183,537	₩	196,665	
Leases of low value assets		76,742		64,592	
Depreciation and impairment					
Depreciation of right of use assets		1,340,709		1,038,720	
Net interest expenses					
Interest expenses in relation to lease liabilities		279,248		252,155	

The Company had a total cash outflow of KRW 1,776 million for leases in 2020 (the cash outflows of KRW 1,449 million during the year ended in December 31, 2019). The Company does not have lease contracts which include variable payments linked to the quantity of manufactured goods.

11. Intangible Assets

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

(in thousands of Korean won)	2020									
	Beginning balance	Acquisition	Disposals	Amortization(*1)	Others(*2)	Ending balance				
Industrial property rights	₩ 518,132	₩ 9,221	₩ -	₩ (63,793)	₩ 54,677	₩ 518,237				
Development costs	17,534,884	-	-	(2,313,498)	-	15,221,386				
Software	1,192,335	262,162	-	(575,063)	1,238,512	2,117,946				
Membership	233,657	-	(233,657)	-	-	-				
	₩ 19,479,008	₩ 271,383	₩ (233,657)	₩ (2,952,354)	₩ 1,293,189	₩ 17,857,569				

^(*1) Amortization expense consists of KRW 2,386,679 thousand included in cost of sales, KRW 386,854 thousand included in selling and administrative expenses, KRW 178,821 thousand included in R&D cost. (*2) Includes reclassification from construction-in-progress.

(in thousands of Korean won)		2019										
	Beginning balance	Aco	quisition	Di	isposals	Ar	mortization(*1)	Otl	hers(*2)		Ending balance	
Industrial property rights	₩ 413,704	₩	88,525	₩	-	₩	(51,172)	₩	67,075	₩	518,132	
Development costs	19,848,381		-		-		(2,313,497)		-		17,534,884	
Software	1,343,761		181,602		(5,400)		(330,836)		3,208		1,192,335	
Membership	233,217		440				<u>-</u>				233,657	
	₩ 21,839,063	₩	270,567	₩	(5,400)	₩	(2,695,505)	₩	70,283	₩	19,479,008	

^(*1) Amortization expense consists of KRW 2,376,460 thousand included in cost of sales, KRW 261,205 thousand included in selling and administrative expenses, KRW 57,840 thousand included in R&D cost.

Details of development costs as of December 31, 2020 and December 31, 2019 are as follows:

(in thousan	ds of Korean	2020									
,				research and o		elopment		Research	and developm	ent costs	
		Name	Phase3	Sales approved		Total		Book value	Accumulated impairment loss	Residual amortization period	
Develop- ment	Genetic recombination	NBP601(*1)	₩ -	₩ 5,100,000	₩	5,100,000	₩	3,060,000	₩ -	6 years	
Completed	Vaccine	NBP607(*2)	4,354,658	-		4,354,658		2,433,809		5 years	
	Vaccine	NBP608 shingles(*3)	10,199,115	-		10,199,115		7,054,387	-	7 years	
	Vaccine	NBP608 chickenpox(*4)	3,486,768	-		3,486,768		2,673,190	-	· 8 years	
			₩ 18,040,541	₩ 5,100,000	₩	23,140,541	₩	15,221,386	₩ -	- •	
(in thousar won)	ds of Korean					20	19				
				research and o sts (cumulativ		elopment		Research and development costs			
		Name	Phase3	Sales approved		Total		Book value	Accumulated impairment loss	Residual amortisation period	
Develop- ment	Genetic recombination	NBP601(*1)	₩ -	₩ 5,100,000	₩	5,100,000	₩	3,570,000	₩ -	· 7 years	
Completed	Vaccine	NBP607(*2)	4,354,658	-		4,354,658		2,868,718		6 years	
	Vaccine	NBP608 shingles(*3)	10,199,115	-		10,199,115		8,074,300	-	8 years	
	Vaccine	NBP608 chickenpox(*4)	3,486,768	-		3,486,768		3,021,866	-	9 years	

₩ 18,040,541 ₩ 5,100,000 ₩ 23,140,541 ₩ 17,534,884 ₩

chickenpox(*4)

^(*2) Includes reclassification from construction-in-progress.

^(*1) NBP601 is a therapeutic agent for hemophilia and is currently on sale after approval for sale was obtained in Europe and America.

^(*2) NBP 607 is an anti-influenza vaccine product and is currently on sale after approval for sale was obtained in 2015.

^(*3) It is an anti-herpes vaccine product for adults. It is currently on sale after approval for sale was obtained in 2017.

^(*4) It is a vaccine for chickenpox for infants and children, it is currently on sale after approval for sale was obtained in 2018.

Changes in the book value of development costs for the years ended December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)	•					2020				
		NBP601		NBP607		NBF	P608	3		Total
	1451 001			HDI OO7		Shingles		Chickenpox		Total
Beginning balance	₩	3,570,000	₩	2,868,718	₩	8,074,300	₩	3,021,866	₩	17,534,884
Amortization		(510,000)		(434,909)		(1,019,913)		(348,676)		(2,313,498)
Ending balance	₩	3,060,000	₩	2,433,809	₩	7,054,387	₩	2,673,190	₩	15,221,386
(in thousands of Korean won)						2019				
		NBP601		NDD607		NBF	2608	3		Total
		NBP601		NBP607		Shingles		Chickenpox		iotai
Beginning balance	₩	4,080,000	₩	3,303,627	₩	9,094,213	₩	3,370,541	₩	19,848,381
Amortization		(510,000)		(434,909)		(1,019,913)		(348,675)		(2,313,497)
Ending balance	₩	3,570,000	₩	2,868,718	₩	8,074,300	₩	3,021,866	₩	17,534,884

R&D costs recognized as expenses for the years ended December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)		2020	2019			
Selling and administrative expenses Government subsidies, etc.	₩	32,483,408 (6,496,308)	₩	30,295,126 (2,575,463)		
Government subsidies, etc.	₩	25,987,100	₩	27,719,663		

12. Trade and Other Payables

Trade and other payables as of December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)		2020	2019			
Trade payables	₩	17,505,191	₩	18,372,076		
Other payables		10,128,062		6,146,904		
Accrued expenses		11,520,069		7,094,438		
	₩	39,153,322	₩	31,613,418		

13. Bond Payables and Borrowings

Bond payables and borrowings as of December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)		2020	2019			
Current portion of long-term liabilities:						
Current portion of long-term borrowings	₩	10,994,490	₩	-		
Bond payables		80,473,018		93,472,368		
Long-term borrowings		21,760,000		23,156,000		
	₩	113,227,508	₩	116,628,368		

Details of bonds payable as of December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)

Classification	Maturity date	Annual interest rates (%)	2020			2019
1-2 nd public bonds	2021.07.27	3.36	₩	11,000,000	₩	11,000,000
2-2 nd public bonds	2022.07.26	3.34		48,000,000		48,000,000
Foreign bonds	2023.06.29	US 3M Libor + 1.88		32,640,000		34,734,000
-				91,640,000		93,734,000
Less: discount on bonds payal	ole			(172,492)		(261,632)
Less: current portion				(10,994,490)		-
·			₩	80,473,018	₩	93,472,368

Details of long-term borrowings as of December 31, 2020 and 2019 consist of the following:

(in thousands of Korean won)

Financial institution	Classification	Maturity date	Annual Interest rates (%)	2020		2019
KEB Hana Bank	Common loans- overseas	2023.06.29	US 3M Libor + 2.00	₩ 21,760,000	₩	23,156,000
				21,760,000		23,156,000
Less: current portion	n of long-term borro	owings		-		-
				₩ 21,760,000	₩	23,156,000

14. Other Liabilities

Details of other liabilities as of December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)		2020					
		Current		Non-current		Current	
Advances	₩	10,767,625	₩	-	₩	1,903,180	
Withholdings		704,631		-		2,303,097	
Guarantee deposits received		17,167,682		-		3,574,495	
Long-term employee benefits		-		467,928			
	₩	28,639,938	₩	467,928	₩	7,780,772	

15. Employee Benefit Liabilities

The Company operates defined benefit pension plans and defined contribution plans for its employees, and the present value of the pension obligation is determined using the projected unit credit method based on actuarial assumptions and on a discount basis by an independent actuary firm.

Changes in the carrying amounts of defined benefit liabilities for the years ended December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)		2020		2019
Changes in defined benefit liabilities:				
Beginning balance	₩	2,015,143	₩	1,773,509
Retirement benefits paid		99,148		943,184
Provision during the period		4,050,181		2,772,872
Re-measurement loss		2,588,271		1,863,011
Contributions to defined benefit plans		(4,500,000)		(4,900,000)
Transfer to affiliated company and other accounts		104,997		(437,433)
Ending balance	₩	4,357,740	₩	2,015,143
Defined benefit liabilities in the statement of financial position:				
Present value of defined benefit obligation	₩	28,688,137	₩	19,660,070
Fair value of plan assets		(24,330,397)		(17,644,927)
	₩	4,357,740	₩	2,015,143

Expenses incurred for the years ended December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)		2020		2019			
Current service costs	₩	3,984,691	₩	2,732,216			
Interest expenses		394,250		353,756			
Expected return on plan assets		(328,760)		(313,100)			
	₩	4,050,181	₩	2,772,872			

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

(in thousands of Korean won)		2020		2019	
Beginning balance	₩	19,660,070	₩	16,072,049	
Current service costs		3,984,691		2,732,216	
Interest expenses		394,250		353,756	
Re-measurement loss		2,545,470		1,739,119	
Retirement benefits paid		(590,087)		(671,531)	
Transfer to affiliates		2,693,743		(565,539)	
Ending balance	₩	28,688,137	₩	19,660,070	

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

(in thousands of Korean won)		2020	2019		
Beginning balance	₩	17,644,927	₩	14,298,540	
Expected return on plan assets		328,760		313,100	
Re-measurement loss		(42,801)		(123,892)	
Contributions to defined benefit plans		4,500,000		4,900,000	
Retirement benefits paid		(689,236)		(1,614,715)	
Transfer to affiliates		2,588,747		(128,106)	
Ending balance	₩	24,330,397	₩	17,644,927	

As of December 31, 2020 and 2019, plan assets consist of time deposits and others.

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

		2019
Discount rate Expected rate of return on plan assets	2.09% 2.09%	1.97% 1.97%
Future salary increase	5.47%	4.56%

Details of re-measurement losses (gains) as of December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)	2020			2019		
Financial assumptions	₩	1,352,546	₩	584,316		
Experience adjustments		(100,393)		1,154,803		
Demographic assumptions		1,293,317		-		
Re-measurement loss on plan assets		42,801		123,892		
	₩	2,588,271	₩	1,863,011		

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:

(in thousands of Korean won)				20	20			
		Effect of changes in the discount rate			Effect of changes in the future salaries			
		ncrease by 1% point		rease by % point	I	ncrease by 1% point	[Decrease by 1% point
Defined benefit obligation	₩	(3.413.601)	₩	4.113.002	₩	4,074,773	₩	(3,448,259)

(in thousands of Korean won)		20	119	
,	Effect of changes in the discount rate			f changes ure salaries
	Increase by 1% point	Decrease by 1% point	Increase by 1% point	Decrease by 1% point
Defined benefit obligation	₩ (1,765,116)	₩ 2,071,945	₩ 2,051,063	₩ (1,781,862)

Plan assets as of December 31, 2020 and 2019, consist of:

(in thousands of Korean won)		202	20	2019		
		Amount	Composition (%)		Amount	Composition (%)
Deposits	₩	24,328,183	99.99	₩	17,642,713	99.99
National Pension Fund		2,214	0.01		2,214	0.01
	₩	24,330,397	100.00	₩	17,644,927	100.00

The weighted average duration of the defined benefit obligation is 13.3 years. The expected maturity analysis of undiscounted pension benefits is as follows:

(in thousands of	Less than	Between	Between	Between	Between	Over	Total
Korean won)	1 year	1-2 years	2-5 years	5-10 years	10-20 years	20 years	
Pension benefits	₩ 852,425	₩ 931,542	₩ 4,404,794	₩ 5,218,879	₩ 15,871,041	₩ 11,328,917	₩ 38,607,598

Expected contributions to post-employment benefit plans for the year ending December 31, 2021, are KRW 4,716,739 thousand.

Expenses recognized in profit or loss in relation to the defined contribution plan during the year ended December 31, 2020 is KRW 17,395 thousand (2019 : KRW 7,064 thousand).

16. Commitments and Contingencies

Details of significant litigation related to the Company as of December 31, 2020 are as follows:

	Plaintiff	Defendant	Contents	Litigation amount	Remark
Patent infringement claims	Wyeth LLC, Pharmaceuticals Ltd.	Pfizer The Company Korea	Application for injunction against pneumococcus vaccine patent right infringement	KRW 100 million	Second trial in progress
Patent infringement claims	Wyeth LLC, Pharmaceuticals Ltd.	Pfizer The Company Korea	Application for injunction against pneumococcus vaccine patent right infringement and claim for damages of KRW 100 million.	KRW 300 million	First trial in progress
Application for indirect compulsory performance	Wyeth LLC, Pharmaceuticals Ltd.	Pfizer The Company Korea	Application for injunction against pneumococcus vaccine patent right infringement	-	Citation of the plaintiff application

As the outcome of above cases cannot be reasonably estimated, the Company does not recognize any provisions.

Commitments with the financial institutions as of December 31, 2020 are as follows:

Financial institution	Category	Limit	Amount
	Korean won payment guarantee – Contract execution	KRW 280 million	KRW 280 million
KEB Hana Bank	Foreign currency payment guarantee – Contract execution	USD 30,000,000	USD 30,000,000
NED Haria Barin	Secured loan of credit sales	KRW 4,000 million	-
	Foreign currency working capital loan	USD 20,000,000	USD 20,000,000
	Derivative deposit exemption arrangement	USD 23,500,000	USD 14,019,098
Shinhan Bank	Secured loan of credit sales	KRW 3,000 million	-

Details of insurance commitments as of December 31, 2020 and 2019 are as follows:

1	'in	millions	of	Korean	won)
ı			٠,	, to, our,	** ** /

Financial institution	Category	2020	2019	
Seoul Guarantee Insurance Co., Ltd.	Performance guarantee insurance etc.	₩ 290	₩ 588	
Samsung Fire Marine Insurance Co., Ltd	Comprehensive property insurance	309,523	255,473	
Hyundai Marine & Fire Insurance Co., Ltd	Comprehensive property insurance	37,457	34,380	

Technology transfer agreement and joint development

On February 12, 2018, the Company signed an agreement with Sanofi Pasteur Inc. located in United States to transfer the technology for producing cell-grown high efficiency influenza vaccines, which is worth of USD 155,000,000. Part of this contract amount will be recognized as revenue in installments following by clinical entry and authorization until the end of the contract term. The Company may receive sales commission based on terms and conditions.

In addition, on March 19, 2014, the Company signed an agreement with Sanofi Pasteur Inc. for joint development and sale of next generation's pneumonia-bacterial conjugate vaccines, which is worth of USD 45,000,000, considering initial technical fees and milestones for each stages of development. Part of this contract amount is recognized as revenue in installments when the right to receive considerations is fulfilled at each stage.

CMO/CDMO agreement

On July 3, 2020, the Company signed an agreement with AstraZeneca UK Limited to provide contract manufacturing service of COVID-19 vaccine. The consideration will be recognized as revenue throughout the period until the contract obligation is satisfied.

On August 11, 2020, the Company signed an agreement with Novavax, Inc. to provide contract development and manufacturing service of COVID-19 vaccine. The consideration will be recognized as revenue throughout the period until the contract obligation is satisfied.

17. Related Party Transactions

Details of the Company's related parties as of December 31, 2020 are as follows:

Relationship	Companies
Parent company	SK Chemicals Co., Ltd.
	SK Discovery Co., Ltd., SK Gas Co., Ltd., SK Networks Co., Ltd.,
Others	SK Telecom Co., Ltd., SK Holdings Co., Ltd., Happynarae Co., Ltd.,
Others	SK Broadband Co., Ltd., SK Infosec Co., Ltd., SK Plasma Co., Ltd.,
	SK Hynix Co., Ltd., SK MN service Co., Ltd., SK Hystec Co., Ltd.,
	SK Group affiliated company (*1)

(*1) The Company classified the large scale enterprise designated by the Fair Trade Commission according to the specialized relationships established in paragraph 10 of Korean IFRS 1024.

Significant transactions with related parties for the years ended December 31, 2020 and 2019 are as follows:

(in thousand	s of Korean won)	2020								
		Revenue		F	Purchase	Other expenses		Other income		chase of d assets
Parent company	SK Chemicals Co., Ltd.	₩	218,133	₩	1,892,801	₩ 5,045,476	₩	107,638	₩	-
Others	SK Gas Co., Ltd.		-		-	456,787		-		-
	SK Plasma Co., Ltd.		938,662		7,936,713	21,944		396		-
	SK Holdings Co., Ltd.		-		-	613,337		-		120,750
	SK Innovation Co., Ltd.		-		-	61,289		-		-
	SK Telecom Co., Ltd.		-		-	242,965		-		20,568
	SK Networks Co., Ltd.		-		-	32,699		-		-
	SK Magic Co., Ltd.		-		-	7,753		-		-
	Happynarae Co., Ltd.		-		180,243	1,732,110		-		31,992
	SK Broadband Co., Ltd.		-		-	4,181		-		-
	SK Telink Co., Ltd.		-		-	1,257		-		-
	SK Hynix Co., Ltd.		79,107		-	-		-		-
	SK Hystec Co., Ltd.		218,898		-	-		-		-
	SK PINX Co.,Ltd.		-		-	22,000				-
	SK MN service Co., Ltd.		-		-	87,155		-		-
	ADT Caps Co., Ltd.		-		-	4,269		-		-
	SK Energy Co., Ltd.		-		-	98,245		-		
	SK Infosec Co., Ltd.		-		-	68,699		-		13,125
	SK RENT A CAR Co.,Ltd.		-		-	9,655		-		-
	SK FOREST Co.,Ltd.					2,400				
		₩ 1	1,454,800	₩	10,009,757	₩ 8,512,221	₩	108,034	₩	186,435

(in thousands	(in thousands of Korean won)		2019							
`	,	R	evenue	Purchase	C	Other expenses		chase of d assets		posals of ed assets
Parent company	SK Chemicals Co., Ltd.	₩	510,742	₩ 2,808,077	٧	∀ 5,648,598	₩	71,444	₩	66,210
Others	SK Gas Co., Ltd.		-	-		863,449		-		-
	SK Plasma Co., Ltd.		605,888	-		59,268		-		30,140
	SK Holdings Co., Ltd.		-	-		171,648		4,231		-
	SK Energy Co., Ltd.		-	-		3,000		-		-
	SK Telecom Co., Ltd.		-	-		221,103		-		-
	SK Networks Co., Ltd.		-	-		9,980		-		-
	SK Magic Co., Ltd.		-	-		4,184		-		-
	Happynarae Co., Ltd.		-	1,110,253		2,752,683		103,357		-
	SK Broadband Co., Ltd.		-	-		4,700		-		-
	SK Infosec Co., Ltd.		-	-		24,389		-		-
	SK FOREST Co.,Ltd.		-	-		1,900		-		-
	SK Telink Co., Ltd.		-	-		1,142		-		-
	SK Hynix Co., Ltd.		67,683	-		-		-		-
	SK Hystec Co., Ltd.		213,533	-		-		-		-
	SK MN service Co., Ltd.		-	-		85,656		-		-
	ADT Caps Co., Ltd.		-	-		9,920		2,900		-
	Incross Co.,Ltd.					300,000		-		-
		₩ ′	1,397,846	₩ 3,918,330	∀	∀ 10,161,620	₩	181,932	₩	96,350

Account balances with related parties as of December 31, 2020 and 2019 are as follows:

(in thousands of K	2020								
•	•		Receiv	/ables		Payables			
		Trad receiva	-	Other receivables		Trade payables	ра	Other yables(*1)	
Parent company	SK Chemicals Co., Ltd.	₩	-	₩ 107,6	38 ₩	256,573	₩	4,880,917	
Others	SK Gas Co., Ltd.		-	215,8	32	-		2,775,134	
	SK Telecom Co., Ltd.		-		-	-		12,159	
	Happynarae Co., Ltd.		-		-	2,574		189,432	
	SK Hynix Co., Ltd.		-		-	-		2,797	
	SK Hystec Co., Ltd.		17,650		-	-		-	
	SK Innovation Co., Ltd.		-		-	-		38,018	
	SK Energy Co., Ltd.		-		-	-		367	
	SK Infosec Co., Ltd.		-		-	-		52,766	
	SK Holdings Co., Ltd.		-		-	_		175,533	
	SK RENT A CAR Co.,Ltd.		-		-	-		2,855	
	SK Plasma Co., Ltd.					1,283,097		2,310	
		₩	17,650	₩ 323,4	70 ₩	1,542,244	₩	8,132,288	

^(*1) Other liabilities include lease liabilities.

(in thousands of Korean won)		2019								
•	,		Recei	vab	les		Payables			
			Trade ceivables	ı	Other receivables	ŗ	Trade payables	ра	Other yables(*1)	
Parent company	SK Chemicals Co., Ltd.	₩	-	₩	-	₩	547,827	₩	5,716,125	
Others	SK Gas Co., Ltd.		-		210,568		-		1,887,981	
	SK Telecom Co., Ltd.		-		-		-		12,159	
	SK Networks Co., Ltd.		-		-		_		547	
	Happynarae Co., Ltd.		-		-		12,562		164,421	
	SK Hystec Co., Ltd.		19,644		-		-		-	
	SK MN service Co., Ltd.		-		-		_		2,717	
	ADT Caps Co., Ltd.		_		<u>-</u>		-		3,190	
		₩	19,644	₩	210,568	₩	560,389	₩	7,787,140	

^(*1) Other liabilities include lease liabilities.

Key management personnel compensation for the years ended December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)		2020	2019		
Short-term employee benefits	₩	1,242,691	₩	1,051,610	
Retirement benefits		362,793		310,645	
Share-based compensation expenses		345,291		180,152	
	₩	1,950,775	₩	1,542,407	

The Company's key management personnel include registered directors and internal auditor.

18. Equity

Details of issued capital as of December 31, 2020 and 2019 are as follows:

		2020		2019
		Common Stock		Common Stock
Number of shares authorized (in share)		300,000,000		10,000,000
Par value per share (in Korean won)	₩	500	₩	5,000
Number of shares issued (in share)		61,200,000		2,040,000
Issued capital (Korean won in thousands)	₩	30,600,000	₩	10,200,000

The Company issued 4,080,000 shares of common stock without consideration, as approved by the Board of Directors on October 5, 2020. As a result, the shares of common stock increased from 2,040,000 to 6,120,000. In addition, the Company declared stock split based on the resolution of annual shareholder's meeting dated October 29, 2020. As a result of the stock split, the shares of common stock increased from 6,120,000 to 61,200,000. The earnings per shares for the years ended December 31, 2020 and 2019 are recalculated based on the changed number of shares (Note 23).

Details of capital surplus as of December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)		2020		2019
Share premium	₩	180,518,033	₩	201,219,488

Details of other equity as of December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)		2020	2019		
Stock options	₩	900,710	₩ 325,	256	

Details of stock options as of December 31, 2020, are as follows:

(in Korean won and in shares)

Grant date	Number of shares authorized	Exercise Period	Exercise Price per share	Fair value per share at grant date			
2018.12.11	546,270	2021.12.12~2028.12.11	₩ 9,154	₩ 1,649			
(*1) As a result of increase of capital stock without consideration and stock split, number of shares							
authorized was adjusted to 546,270 from 18,209, exercise price was adjusted to KRW 9,154 from KRW							
274,621 and fair value at grant date was adjusted to KRW 1,649 from KRW 49,465.							

Fair value of stock options was measured using the binomial option pricing model, and input variables are as follows:

(in Korean won) Grant date: 2018.12.11

Market price per share on grant date	₩	9,154
Exercise price per share		9,154
Expected fluctuation		11.90%
Risk-free interest rate		1.94%

(*1) As a result of increase of capital stock without consideration and stock split, the market price per share on grant date and exercise price per share were adjusted from KRW 274,621 per share to KRW 9,154 per share.

Details of changes in share options for the years ended December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)

		20	20					
	Number shares authors	-	Fair value					
Grant date	Granted	Ending balance	Beginning balance		Δ	Addition	Endin baland	
2018.12.11	546,270	546,270	₩	325,256	₩	575,454	₩	900,710

(in thousands	of Korean	won)
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	Number of shares authorized (*1)				Fair va	lue	
Grant date	Granted	Ending balance	Begin balar		Addi	tion	Ending balance
2018.12.11	546,270	546,270	₩	25,020	₩ ;	300,236	₩ 325,256
(*1) As a result of in authorized increased	•		conside	ration ar	id stock s	split, nui	mber of shares
Details of accumulate follows:	ted other compre	hensive income	e(loss) as	of Dece	ember 31,	2020 a	nd 2019 are as
(in thousands of Kor	rean won)			20	20		2019
Net loss on valuation	n of derivative as	sets	₩	₩ (1,464,750)			(1,319,018)
Details of retained e	arnings as of De	cember 31, 202	0 and 20	19 are as	s follows:		
(in thousands of Kor	rean won)			20	20		2019
Unappropriated reta	ined earnings		₩	į	53,236,25	0 ₩	22,308,448
Details of appropriat follows:	ion of retained e	arnings for the y	years end	ded Dece	ember 31,	2020 a	nd 2019 are as
(in thousands of Kor	rean won)			2020			2019
				opriatio arch 31,			priation date: ch 24, 2020
Retained earnings b Unappropriated re	tained earnings		₩	22.	308,448	₩	9,043,206
from the prior ye Profit for the year	ear				889,712		14,677,404
Re-measurement	loss of defined b	enefit plans			961,910)		(1,412,162)
		·		•	236,250		23,308,448
Appropriations							_
Unappropriated re	tained earnings	to be carried	₩	E2	236,250	744	22,308,448

2019

19. Segment Information

Revenue from Contracts with Customers

Disaggregated revenue information

Set out below is the disaggregation of the Company's revenue from contracts with customers for the years ended December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)		2020		2019		
Type of goods or services:						
Sale of finished goods	₩	146,656,981	₩	82,685,144		
Sale of semi-finished goods		1,543,969		-		
Sale of merchandise		60,909,888		54,762,716		
Sales of services and others		16,499,947		46,489,842		
Total revenue from contracts with customers	₩	225,610,785	₩	183,937,702		
Geographical markets:						
Domestic	₩	200,575,873	₩	138,580,023		
America		5,643,493		37,202,199		
Europe		13,964,805		6,736,251		
Asia		5,426,614		1,419,229		
Total revenue from contracts with customers	₩	225,610,785	₩	183,937,702		
Timing of revenue recognition						
Goods transferred at a point in time	₩	216,353,699	₩	182,584,202		
Services transferred overtime		9,257,086		1,353,500		
Total revenue from contracts with customers	₩	225,610,785	₩	183,937,702		

Contract balance

Details of the changes in the Company's contract balance as of December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)		2020	2019		
Trade receivables (*1) Contract assets	₩	30,802,930 ∀ 979.915	₩ 32,603,295		
Contract liabilities		94,899,124	4,686,705		

(*1) Trade receivables are interest-free and the normal payment terms are 90 to 180 days. The Company recognized a reversal of allowance for doubtful accounts of KRW 69,371 thousand for the year ended December 31, 2020 (2019: KRW 516,992).

Details of changes in contract assets and liabilities for the years ended December 31, 2020 and 2019 are as follows:

		2020		
Contr	act assets	Co	ntract liabiliti	es
Contract costs (*1)	Due from customers(*2)	Unearned revenues (*3)	Advances from customers	Refund liabilities (*4)
₩ -	• •	• •	• •	₩ 4,686,705
324,164	655,751	86,658,439	2,528,545	1,025,435
₩ 324,164	₩ 655,751	₩ 86,658,439	₩ 2,528,545	₩ 5,712,140
₩ 324,164	₩ 655,751	₩ 86,658,439	₩ 2,528,545	₩ 5,712,140
	Contract costs (*1) ₩ - 324,164 ₩ 324,164	costs (*1) customers(*2) ₩ - 324,164 655,751 ₩ 324,164 ₩ 655,751 ₩ 655,751	Contract costs (*1) Due from customers(*2) Unearned revenues (*3) ₩ - ₩ - ₩ - 324,164 ₩ 655,751 86,658,439 ₩ 86,658,439	Contract assets Contract liabilities Contract costs (*1) Due from customers(*2) Contract revenues (*3) Advances from customers ₩ - ₩ - ₩ - ₩ -

- (*1) Costs incurred in fulfilling a contract include costs for technology transfer and trial batches production in order to manufacture products that customers request. Such activities do not include transferring goods or services to a customer but are prerequisite for production of goods ordered. Accordingly, they do not consist as part of a performance obligation but are recognized as contract assets.
- (*2) Unbilled contract assets were recognized due to a difference between the extent of the Company's satisfaction of its performance obligation satisfied over time and the consideration billed to the customer.
- (*3) The Company recognizes advance consideration received from a customer in relation to technology transfer and engineering batch production of CMO/CDMO as contract liabilities.
- (*4) A provision is recognized for expected warranty claims on products sold during the period, based on past experience of the level of repairs and returns. Assumptions used to calculate the provision for warranties were based on current sales levels and current information available about returns based on the warranty period for all products sold.

(in thousands of Korean we	on)	2019						
	,	Contract liabilities						
		Unearned revenues (*1)		Refund liabilities (*2)				
Beginning balance	₩	1,353,500	₩	3,929,502				
Increase		-		4,686,705				
Decrease		(1,353,500)		(3,929,502)				
Ending balance	₩	-	₩	4,686,705				
Current portion Non-current portion	₩	- -	₩	4,686,705				

- (*1) Unearned revenues in relation to the sales of the use and access rights of licenses.
- (*2) A provision is recognized for expected warranty claims on products sold during the period, based on past experience of the level of repairs and returns. Assumptions used to calculate the provision for warranties were based on current sales levels and current information available about returns based on the warranty period for all products sold.

For management purposes, the Company is organized into business units based on its products and services and has one reportable segment. Therefore, the Company has not disclosed details of the profit or loss for each operating segment.

There was one single customer accounted for more than 10% of sales revenue for the fiscal year of 2020. The sales to that customer amounted to KRW 27,277,352 thousand for the year ended December 31, 2020 (KRW 37,202,200 thousand for the year ended December 31, 2019).

20. Operating Expenses

Details of cost of sales and selling and administrative expenses by nature for the years ended December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)		2020	2019	
Changes in inventories	₩	(12,710,590) ₩	(4,208,174)	
Raw materials used		37,694,901	23,673,084	
Cost of merchandise sold		57,418,739	50,914,551	
Depreciation and amortization (*1)		16,527,436	14,543,239	
Salaries and wages		47,287,228	28,313,394	
Logistics expenses		2,016,103	1,897,061	
Rental fees and services		17,516,538	10,080,665	
Marketing fees		2,420,081	4,111,218	
Taxes and dues		620,429	502,206	
Consignment services		7,338,283	13,668,147	
Others		11,771,190	17,645,792	
	₩	187,900,338 ₩	161,141,183	

^(*1) Depreciation of right-of-use assets is included.

Details of selling and administrative expenses for the years ended December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)	2020			2019	
Salaries	₩	13,086,523	₩	10,165,588	
Provision for pension benefits		1,495,646		1,213,937	
Employee welfare benefits		1,955,219		1,365,125	
Travel		1,079,657		1,218,265	
Communication		108,188		115,339	
Taxes and dues		235,159		215,002	
Rents		37,376		145,437	
Depreciation		971,440		686,959	
Insurance		157,560		127,483	
Entertainment		163,245		134,868	
Repairs		1,927		1,000	
Office supplies		105,691		53,958	
Vehicle maintenance		137,895		145,774	
Training		570,578		497,066	
Printing		9,598		26,566	
Service fees and other fees		6,573,141		5,371,848	
Research		25,987,100		27,719,663	
Advertising and marketing		2,417,701		4,108,616	
Sales commission		1,465,346		1,390,556	

(in thousands of Korean won)		2020	201	9
Samples		2,379		2,602
Packaging		-		93,013
Reversal of allowance for doubtful accounts		(69,371)	(5	16,992)
Conference fees		177,315		220,063
Amortization		386,854		261,205
Share-based compensation expenses		575,454		300,237
	₩	57,631,621	₩ 55,	063,178

21. Other Income and Expenses

Details of other income and expenses for the years ended December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)	2020			2019
Other income:				
Gain on disposal of property, plant and equipment	₩	-	₩	12,234
Gain on sales of intangible assets		235,110		540
Gain on disposal of right-of-use assets		1,452		-
Miscellaneous income		3,505,905		131,152
	₩	3,742,467	₩	143,926
Other expenses:				
Loss on disposal of property, plant and equipment	₩	567	₩	1,382
Donations		1,247,850		1,479,552
Miscellaneous expenses		660,735		202,745
Loss on disposal of inventories		-		250,155
	₩	1,909,152	₩	1,933,834

Details of finance income and costs for the years ended December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)	2020			2019	
Finance income:					
Interest income	₩	469,592	₩	207,205	
Gain on foreign currency transactions		520,508		1,198,843	
Gain on foreign currency translations		4,884,621		119	
Gain on valuation of derivatives		128,358		1,985,000	
Gain on derivatives transactions		644,398		161,530	
Gain on valuation of financial assets at fair value through profit or loss		153,069		-	
Gain on sale of financial assets at fair value through profit or loss		1,102,450		1,631,944	
·	₩	7,902,996	₩	5,184,641	
Finance costs:					
Interest expenses	₩	3,871,446	₩	3,932,406	
Interest expenses relating to leases		279,248		252,155	
Loss on foreign currency transactions		1,866,178		748,941	
Loss on foreign currency translations		367,096		1,985,000	
Loss on valuation of financial assets at fair value through profit or loss		4,698		100,573	

(in thousands of Korean won)	2020	2	2019
Loss on derivatives transactions	199,426		686,904
Loss on valuation of derivatives	3,565,414		-
	₩ 10,153,506	₩	7,705,979

22. Corporate Income Taxes

Details of corporate income tax for the years ended December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)		2020	2019
Current income tax	₩	5,437,026 ∀	₩ 1,783,812
Adjustment of prior period income tax recognized in current period		(47,650)	271,510
Changes in deferred income taxes relating to temporary differences		(1,658,723)	1,277,132
Income tax reflected directly to equity		672,888	475,414
Income tax expense	₩	4,403,541 ∀	₩ 3,807,868

Details of income tax reflected directly to equity for the years ended December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)		2020		2019
Re-measurement on defined benefit plans	₩	626,362	₩	450,849
Loss on valuation of derivatives		46,526		24,565
	₩	672,888	₩	475,414

A reconciliation between income tax expense at the effective tax rate and accounting profit before income tax at the Korea statutory rate for the years ended December 31, 2020 and 2019 is as follows:

(in thousands of Korean won)		2020		2019
Profit before income tax	₩	37,293,253	₩	18,485,273
Tax at the statutory income tax rate (*1)		8,562,967		4,044,760
Adjustments:				
Non-deductible expenses		134,429		176,303
Non-taxable income		(2,394)		-
Tax credit		(5,053,810)		(2,788,634)
Changes in carried forward tax credits which were not recognized as deferred tax assets and others		870,007		2,614,613
Others		(107,658)		(239,174)
Income tax expense	₩	4,403,541	₩	3,807,868
Effective tax rate (Income tax expense/Profit before income tax)		11.81%		20.60%

(*1) The income tax rate includes corporate income tax rate (10% on taxable income of less than $\mbox{$\mathbb{W}$}200$ million, 20% on taxable income of more than $\mbox{$\mathbb{W}$}200$ million and less than $\mbox{$\mathbb{W}$}20,000$ million, 22% on taxable income of more than $\mbox{$\mathbb{W}$}20,000$ million and less than $\mbox{$\mathbb{W}$}300,000$ million, 25% on taxable income of more than $\mbox{$\mathbb{W}$}300,000$ million) and resident surtax (10% of corporate income tax).

Changes in deferred tax assets(liabilities) for the years ended December 31, 2020 and 2019 are as

follo	ows:
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(in thousands of Korean won)			2020		
	Beginning balance	Recognized in profit or loss	Recognized directly in equity	Others	Ending balance
Loans	₩ -	₩ 34,927	₩ - ₩	≠ -	₩ 34,927
Defined benefit obligation	4,426,370	967,622	626,362	-	6,020,354
Plan assets	(4,269,537)	(1,617,883)	, -	-	(5,887,420)
Investments	24,397	(60,303)	-	-	(35,906)
Accrued income	(3,748)	3,719	-	-	(29)
Refund liabilities	1,134,183	248,155	-	-	1,382,338
Contract liabilities	(2,888,425)	1,050,337	-	-	(1,838,088)
Valuation allowance on inventories	897,916	(562,423)	-	-	335,493
Accrued expenses	1,546,332	1,067,823	-	-	2,614,155
Derivative liabilities	(15,699)	844,580	46,526	-	875,407
Property, plant and equipment	(15,241,293)	1,675,972	-	-	(13,565,321)
Intangible assets	17,313,777	(3,121,449)	-	-	14,192,328
Long-term employee benefits	-	113,239		-	113,239
Stock options	78,712	139,260	-	-	217,972
Right-of-use assets	(1,834,507)	(81,394)	-	-	(1,915,901)
Lease liabilities	1,858,933	106,471	-	-	1,965,404
Tax credit carried forward, etc.	8,867,091	177,182		6,889,393	15,933,666
Net deferred tax assets	₩ 11,894,502	₩ 985,835	₩ 672,888 ∀	₹ 6,889,393	₩ 20,442,618

(in thousands of Korean won)	2019				
	Beginning balance	Recognized in profit or loss	Recognized directly in equity	Ending balance	
Allowance for doubtful accounts	₩ 82,503	₩ (82,503)	₩ -	₩ -	
Defined benefit obligation	3,628,628	346,893	450,849	4,426,370	
Plan assets	(3,459,711)	(809,826)	-	(4,269,537)	
Investments	-	24,397	-	24,397	
Accrued income	(45,716)	41,968	-	(3,748)	
Refund liabilities	950,940	183,243	-	1,134,183	
Contract liabilities	(2,717,613)	(170,812)	-	(2,888,425)	
Valuation allowance on inventories	320,567	577,349	-	897,916	
Accrued expenses	861,806	684,526	-	1,546,332	
Derivative liabilities	440,106	(480,370)	24,565	(15,699)	
Property, plant and equipment	(17,112,826)	1,871,533	-	(15,241,293)	
Intangible assets	20,439,616	(3,125,839)	-	17,313,777	
Stock options	6,055	72,657	-	78,712	
Right-of-use assets	-	(1,834,507)	-	(1,834,507)	
Lease liabilities	-	1,858,933	-	1,858,933	
Tax credit carried forward	9,777,279	(910,188)		8,867,091	
Net deferred tax assets	₩ 13,171,634	₩ (1,752,546)	₩ 475,414	₩ 11,894,502	

Significant management judgment is required to determine the amount of deferred tax assets that can be recognized, based upon the likely timing and the level of future taxable profits, overall economic condition, and industrial outlook. The Company reviews these factors on a regular basis. Deferred tax assets are recognized for deductible temporary differences as it is probable that taxable profit will be

available against which the temporary differences can be utilized.

The Company did not have carryforward tax credit not recognized as the deferred tax assets in relation to tax credit and others, as of December 31, 2020 (2019: KRW 2,614,613 thousand).

The analysis of deferred tax assets and liabilities as of December 31, 2020 and 2019, is as follows:

(in thousands of Korean won)	2020		2020		2020 2019	
Deferred tax assets						
Deferred tax asset to be recovered after more than 12 months	₩	43,296,319	₩	36,357,647		
Deferred tax asset to be recovered within 12 months		4,366,913		3,602,827		
		47,663,232		39,960,473		
Deferred tax liabilities						
Deferred tax liability to be recovered after more than						
12 months		(27,184,679)		(28,062,223)		
Deferred tax liability to be recovered within 12 months		(35,935)		(3,748)		
		(27,220,614)		(28,065,971)		
Deferred tax assets (liabilities), net	₩	20,442,618	₩	11,894,502		

23. Earnings per share

The following table reflects the income and share data used in the basic earnings per share computations for the years ended December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)		2020		2019
Net profit for the year Net profit attributable to ordinary share holders	₩	32,889,712 32,889,712	₩	14,677,405 14,677,405
Weighted average number of ordinary shares outstanding during the year (shares)		61,200,000		61,200,000
Basic earnings per share (in Korean won)	₩	537	₩	240

Diluted earnings per share is calculated by adjusting the weighted average number of ordinary shares outstanding to assume conversion of all dilutive potential ordinary shares. The Company has only one category of dilutive potential ordinary shares: stock options. Calculation is done to determine the number of shares that could have been acquired at fair value based on the monetary value of the subscription rights attached to outstanding stock options. The number of shares calculated as above is compared with the number of shares that would have been issued assuming the stock options are exercised.

(in thousands of Korean won)		2020		2019
Net profit for the year	₩	32,889,712	₩	14,677,405
Weighted average number of ordinary shares outstanding during the year (shares)		61,200,000		61,200,000
Potential ordinary shares related to stock options Weighted average number of ordinary shares outstanding for calculation of diluted earnings per share (shares)		469,338 61,669,338		61,200,000
Diluted earnings per share (in Korean won)	₩	533	₩	

24. Cash Flow Statement

Adjustments to cash flows generated from the operating activities for the years ended December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)	2020			2019
Income tax expenses Interest expenses Interest income	₩	4,403,541 4,150,694 (469,592)	₩	3,807,868 4,184,561
Loss on valuation of financial assets at fair value through profit or loss		4,698		(207,205) 100,573
Gain on valuation of financial assets at fair value through profit or loss		(153,069)		-
Gain on sale of financial assets at fair value through profit or loss		(1,102,450)		(1,631,944)
Gain(loss) on valuation of inventories(reversal)		(2,324,062)		2,385,738
Loss on disposal of property, plant and equipment		567		1,382
Gain on disposal of property, plant and equipment		-		(12,234)
Gain on disposal of intangible assets		(235,110)		(540)
Gain on disposal of right-of-use assets		(1,452)		-
Depreciation of property, plant and equipment		12,234,374		10,809,013
Depreciation of right-of-use assets		1,340,708		1,038,720
Amortization of intangible assets		2,952,354		2,695,505
Gain on valuation of derivatives		(128,357)		(1,985,000)
Reversal of allowance for doubtful accounts		(69,371)		(516,992)
Share-based compensation expenses		575,454		300,237
Loss on valuation of derivatives		3,565,414		_
Gain on foreign currency translations		(4,884,621)		(119)
Loss on foreign currency translations		367,096		1,985,000
Pension benefits		4,050,181		2,772,872
Changes in contract liabilities		-		(596,297)
Others		862,245		(136)
	₩	25,139,242	₩	25,131,002

Details of working capital adjustments for the years ended December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)		2020 2		2019	
Trade receivables	₩	1,669,058	₩	11,843,254	
Contract assets		(979,915)		-	
Other receivables		(15,298,840)		411,718	
Inventories		(31,573,385)		(6,887,871)	
Other current assets		(29,713)		(207,736)	
Trade payables		(866,886)		7,295,049	
Other payables		5,319,657		1,300,777	
Other current liabilities		22,160,036		(394,043)	
Pension benefits paid		190,279		(14,950)	
Transfer from or to affiliates		104,996		(437,433)	
Contributions to plan assets		(4,500,000)		(4,900,000)	
Transaction settlements of derivatives		-		52,722	
Changes in contract liabilities		90,212,419		-	
	₩	66,407,706	₩	8,061,487	

Significant non-cash transactions for the years ended December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)	2020		2019	
Changes in accounting policies (Korean IFRS 1116 <i>Leases</i>)	₩	-	₩	6,809,338
Acquisition of lease assets		1,562,900		1,667,545
Reclassification of construction-in-process to property, plant and equipment and intangible assets		26,391,974		482,326
Reclassification of long-term liabilities to current portion		12,608,090		-
Changes in other payables relating to acquisition property, plant and equipment		2,994,825		(1,840,442)
Changes in other payables relating to pension benefits		(91,131)		(958,134)

Changes in liabilities arising from financing activities for the years ended December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)	2020										
	Beginning balance	Cash flows from financing activities	Foreign exchange translations	Others (*1)	Ending balance						
Long-term borrowings	23,156,000	-	(1,396,000)	-	21,760,000						
Current portion of bonds payable	-	-	-	10,994,490	10,994,490						
Bonds payable	93,472,368	-	(2,094,000)	(10,905,350)	80,473,018						
Current lease liabilities	1,350,756	(1,237,367)	-	1,500,210	1,613,599						
Non-current lease liabilities	7,093,025	-	-	32,935	7,125,960						

^(*1) The amount includes the reclassifications, interest expenses and others.

(in thousands of Korean won)	2019										
,	Beginning balance	Cash flows from financing activities	Foreign exchange translations	Others (*1)	Ending balance						
Current portion of long-term borrowings	₩ 11,250,000	₩ (11,250,000)	₩ -	₩ -	₩ -						
Long-term borrowings	33,612,000	(11,250,000)	794,000	-	23,156,000						
Bonds payable	92,195,986	-	1,191,000	85,382	93,472,368						
Current lease liabilities	160,935	(935,486)	-	2,125,307	1,350,756						
Non-current lease liabilities	741,586	-	-	6,351,439	7,093,025						

^(*1) The amount includes the reclassifications, interest expenses and others.

25. Financial Risk Management Objectives and Policies

The Company's principal financial liabilities besides derivatives include trade and other payables, borrowings and bonds payables. The main purpose of these financial liabilities is to finance the Company's operations. Also, the Company has various financial assets including cash and cash equivalents, trade and other receivables, loans, and other financial assets including long-term and short-term financial instruments.

The Company is exposed to market risk, credit risk and liquidity risk. The Company's key management oversees the management of these risks in accordance with the Company's risk policies which are reviewed regularly, and details are provided below. Furthermore, it is the Company's policy that no trading in derivatives for speculative purposes shall be undertaken.

25.1 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 risks comprise three types of risk: interest rate risk, foreign currency risk and other price risk.

(1) Interest rate risk

The Company's exposure to the risk of changes in market interest rates relates primarily to the Company's borrowings with floating interest rates. The Company measures its interest rate risk by the fluctuation of interest rate of 1% point of floating rate borrowings.

Details of borrowings with floating rates as of December 31, 2020 and 2019 are as follows:

₩	21,760,000	₩	23,156,000
	32,640,000		34,734,000
₩	54,400,000	₩	57,890,000
		32,640,000	32,640,000

With all other variables remain constant, the effect of interest rate changes on profit before income tax is as follows:

(in thousands of Korean won)		20	20		2019						
	1% point incre	ease	1% point	decrease	1% p	oint increase	1% poi	nt decrease			
Long-term borrowings	₩ (217	,600)	₩	217,600	₩	(231,560)	₩	231,560			
Bonds payables	(326	,400)		326,400		(347,340)		347,340			
	₩ (544	,000)	₩	544,000	₩	(578,900)	₩	578,900			

(2) Foreign currency risk

Foreign currency risk is the risk in fair value or future cashflows of financial instruments that may result from changes in foreign exchange rates. Details of monetary assets and liabilities not presented in functional currency as of December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)

		20	20		2019					
		Assets		Liabilities		Assets		Liabilities		
USD	₩	34,963,923	₩	67,733,593	₩	2,137,993	₩	58,130,385		
EUR		41		-		75,430		-		
	₩	34,963,964	₩	67,733,593	₩	2,213,423	₩	58,130,385		

The Company manages its foreign currency risk periodically. The impact on the Company's profit before income tax due to 5% change in foreign exchange rate for the years ended December 31, 2020 and 2019 is as follows.

The Company measures its foreign currency risk on regular basis and effectively manages the risk through currency futures, thereby mitigating the impact of the risk on the Company's profit and loss.

(in thousands of Korean won)

•		20	020		2019					
	5% p	oint increase	5%	point decrease	5%	% point increase	5%	% point decrease		
USD	₩	(1,638,483)	₩	1,638,483	₩	(2,799,619)	₩	2,799,619		
EUR		2		(2)		3,771		(3,771)		
	₩	(1,638,481)	₩	1,638,481	₩	(2,795,848)	₩	2,795,848		

(3) Other price risk

Other price risk is the risk that the fair value or the future cash flows of a financial instrument will fluctuate because of changes in market prices. As the Company holds no quoted equity investments, changes in the price of quoted equity investments will not affect the Company's profit or loss as of December 31, 2020.

25.2 Credit Risk

Credit risk is the risk that counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss of the Company.

(1) Trade receivables and other receivables

Customer credit risk is managed by each business unit subject to the Company's established policy, procedures and control relating 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 and any shipments to major customers are generally covered by letters of credit or other forms of credit insurance. The Company evaluates the impairment of trade receivables and other receivables at every reporting date. In addition, in case of a large number of receivables in low value are included in a group of financial assets with similar credit risk and are collectively considered for impairment.

(2) Other assets

Credit risks associated with the Company'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 other assets. The Company deposits its surplus funds with Woori Bank and other financial institutions whose credit ratings are high. Accordingly, credit risk related to financial institutions is considered low.

25.3 Liquidity Risk

Liquidity risk refers to the risk that the Company may default on the contractual obligations that become due.

The Company maintains a short-term and long-term capital management plans to monitor its risk to a shortage of funds. The objective is to maintain continuity between budgeted cash outflows with actual outflows, and uses a liquidity planning tool to match the maturity profile for its financial liabilities and assets.

The maturity profile of the Company's financial liabilities based on contractual undiscounted payments as of December 31, 2020 and 2019 is as follows:

(in thousands of Korean won)	2020										
		Less than 1 year		1 year ~ 2 years		2 years ~ 5 years		Over 5 years		Total	
Trade and other payables	₩	39,153,322	₩	_	₩	-	₩	-	₩	39,153,322	
Other current liabilities (*1)		17,167,682		-		-		-		17,167,682	
Current lease liabilities		1,642,382		-		-		-		1,642,382	
Bonds payable (*2)		14,064,389		50,386,344		33,232,152		-		97,682,885	
Long-term borrowings (*2)		807,624		807,624		22,163,812		-		23,779,060	
Non-current lease liabilities		-		1,490,352		3,822,432		2,846,037		8,158,821	
	₩	72,835,399	₩	52,684,320	₩	59,218,396	₩	2,846,037	₩	187,584,152	

^(*1) The amount includes guarantee deposits received

^(*2) The amount includes interest expenses

(in thousands of Korean won)						2019				
	L	ess than 1 year		1 year ~ 2 years		2 years ~ 5 years		Over 5 years		Total
Trade and other payables	₩	31,613,418	₩	_	₩	_	₩	-	₩	31,613,418
Other current liabilities (*1)		3,574,495		-		-		-		3,574,495
Current lease liabilities		1,374,825		-		-		-		1,374,825
Bonds payable (*2)		3,156,844		14,064,389		85,712,496		-		102,933,729
Long-term borrowings (*2)		809,837		807,624		24,367,436		-		25,984,897
Non-current lease liabilities		-		1,325,776		3,492,895		3,416,473		8,235,144
	₩	40,529,419	₩	16,197,789	₩	113,572,827	₩	3,416,473	₩	173,716,508

^(*1) The amount includes deposits received

25.4 Capital Management

The primary objective of the Company's capital management is to ensure that the Company continues as a going concern and minimizes the cost of raising capital in order to support its business and maximize the shareholder value. The Company manages and adjusts its capital structure according to changes in economic conditions. To maintain the sound capital structure, the Company may adjust the dividend payment to shareholders, return capital to shareholders, or issue new shares. No changes were made in the objectives, policies or processes for managing capital for the year ended December 31, 2020.

Details of the Company's debt-to-equity ratio as of December 31, 2020 and 2019 are as follows:

(in thousands of Korean won)		2020		2019
Total liabilities	₩	298,441,527	₩	171,245,935
Adjustment: cash and cash equivalent		(24,972,321)		(14,380,269)
Adjusted liabilities	₩	273,469,206	₩	156,865,666
Total equity	₩	263,790,244	₩	232,734,174
Debt-to-equity ratio		103.67%		67.40%

^(*2) The amount includes interest expenses

25.5 Risk Management Activity

(1) Fair value hedges of foreign exchange risk

As of December 31, 2020, the Company has currency swap contracts designated as hedging instruments to hedge foreign currency risk on foreign currency borrowings and foreign currency denominated bonds. The final maturity of foreign currency borrowings and foreign currency bonds is expected to arrive in June 2023. The terms of the above currency swap agreements were concluded to match the repayment schedule of foreign currency borrowings and foreign currency bonds. The parties to the agreement have entered into currency swap agreements with cash as collateral, which effectively reduces the credit risk associated with the contract (counterparty and our credit risk). As a result, risk aversion has been highly evaluated.

(2) Cash flow hedges on interest rate risk

The Company borrows funds at fixed and variable interest rates and is therefore exposed to interest rate risk. In order to manage interest rate risk, the Company maintains an appropriate balance between fixed rate borrowings and floating rate borrowings and enters into interest rate swap contracts. The Company enters into interest rate swap contracts in accordance with the interest rate swap contract. The Company exchanges the difference calculated by applying the difference of fixed interest rate and variable interest rate to a predetermined nominal amount of principal. These agreements enable the Company to mitigate the risk of cash flow fluctuations on variable interest liabilities due to changes in interest rates. Risk aversion activities are periodically assessed to properly adjust the interest rate trends and defined risk aversion, and the optimal hedging strategy is applied.

(3) Other risk management activities

The Company is exposed to foreign currency risk for some of its sales and purchases in accordance with international transactions. In order to reduce this risk, the Company regularly monitors net exposure to key currencies (dollar, euro, and yen) based on expected sales and purchases over the next 12 months. The Company also enters into foreign currency forward contract to avoid such exposure.

26. Fair Value

26.1 Fair Value Hierarchy

The Company uses the following hierarchy for determining and disclosure of the fair value of financial instruments by valuation technique:

- Level 1: Quoted (unadjusted) 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

The level of fair value measurements as of December 31, 2020 and 2019 is as follow:

(in thousands of Korean won)	2020										
•	Leve	el 1		Level 2	Leve	el 3		Total			
Financial assets:											
Short-term financial instruments	₩	-	₩ 1	83,735,897	₩	-	₩	183,735,897			
Derivatives assets		-		128,357		-		128,357			
	₩		₩ 1	83,864,254	₩	-	₩	183,864,254			
Financial liabilities:											
Derivatives liabilities	₩	-	₩	3,692,801	₩	-	₩	3,692,801			
	₩	-	₩	3,692,801	₩	-	₩	3,692,801			
(in thousands of Korean won)				20)19						
	Leve	el 1		Level 2	Leve	el 3		Total			
Financial assets:											
Short-term financial instruments	₩	-	₩	80,088,335	₩	-	₩	80,088,335			
Derivatives assets		-		64,870		-		64,870			
	₩	_	₩	80,153,205	₩	_	₩	80,153,205			

26.2 Valuation Techniques and the Inputs

Valuation techniques and inputs used in the fair value measurements categorized within Level 2 of the fair value hierarchy as of December 31, 2020 and 2019, are as follows:

(in thousands of Korean won)		2020										
		Fair value	Level	Valuation techniques	Inputs							
Financial instruments at fair value through profit or loss												
Short-term financial instruments	₩	183,735,897	2	Present value technique	Credit risk adjusted discount rate							
Derivatives assets	₩	128,357	2	Present value technique	Discount rate and forward exchange rate							

(in thousands of Korean won)				2020	
		Fair value	Level	Valuation techniques	Inputs
Financial liabilities at fair value through profit or loss					
Derivative liabilities	₩	3,692,801	2	Present value technique	Discount rate and forward exchange rate
(in thousands of Korean won)				2019	
		Fair value	Level	Valuation techniques	Inputs
Financial assets at fair value through profit or loss					
Short-term financial instruments	₩	80,088,335	2	Present value technique	Credit risk adjusted discount rate
Derivative assets	₩	64,870	2	Present value technique	Discount rate and forward exchange rate

27. Restatement of the Financial Statements

The Company restated the comparative financial statements for the year ended December 31, 2019 to reflect the adjustments due to the change in the timing of revenue recognition.

28. Events After the Reporting Period

The Company declared to issue new shares as approved by the Board of Directors on February 5, 2021 and the Company was listed on securities market on March 18, 2021.

The Company signed an agreement with Novavax, Inc., an U.S. company, on February 12, 2021, to have exclusive rights of the development, production and sale of the COVID-19 vaccine developed by Novavax, Inc. in certain area specified under the terms of the agreement.

Report on Independent Auditor's Review of Internal Control over Financial Reporting

(English Translation of a Report Originally Issued in Korean)

To the Shareholders, Board of Directors of SK bioscience Co., Ltd.

We have reviewed the accompanying management's report on the effectiveness of the Internal Control over Financial Reporting ("ICFR") of SK bioscience Co., Ltd. (the "Company") as at December 31, 2020. The Company's management is responsible for designing and operating ICFR and for its assessment of the effectiveness of ICFR. Our responsibility is to review the management's report on the effectiveness of the ICFR and issue a report based on our review. The management's report on the effectiveness of the ICFR of the Company states that "Based on the assessment results, Chief Executive Officer and ICFR Officer believe that no material weakness has been identified as at December 31, 2020, in all material respects, in conformity with the Conceptual Framework for Designing and Operating ICFR."

Our review was conducted in accordance with the ICFR review standards established by the Korean Institute of Certified Public Accountants. Those standards require that we plan and perform, in all material respects, the review of management's report on the effectiveness of the ICFR to obtain a lower level of assurance than an audit. A review is to obtain an understanding of a company's ICFR and consists principally of inquiries of management and, when deemed necessary, a limited inspection of underlying documents, which is substantially less in scope than an audit. However, in accordance with Chapter 5, 'Application to small & medium sized companies' of the Best Practice Guideline, the design, operation and assessment of its ICFR are limited compared with those of public large sized companies as the Company is a non-public large sized company. As such, we performed our review in accordance with Chapter 14, 'Review standards for small & medium sized companies'

A company's ICFR is a system to monitor and operate those policies and procedures designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with International Financial Reporting Standards as adopted by the Republic of Korea [or Accounting Standards for Non-Public Entities in the Republic of Korea]. Because of its inherent limitations, ICFR may not prevent or detect a material misstatement of the financial statements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Based on our review, nothing has come to our attention that causes us to believe that management's report on the effectiveness of the ICFR, referred to above, is not presented fairly, in all material respects, in accordance with Chapter 5, 'Application to small & medium sized companies', of the Best Practice Guideline.

Our review is based on the Company's ICFR as at December 31, 2020, and we did not review management's assessment of its ICFR subsequent to December 31, 2020. This report has been prepared pursuant to the Acts on External Audit for Stock Companies, etc. in Korea and may not be appropriate for other purposes or for other users.

Samil PricewaterhouseCoopers March 22, 2021

Report on the effectiveness of internal control over financial reporting

(English translation of a report originally issued in Korean)

To the Shareholders, Board of Directors and Auditor of SK bioscience Co., Ltd.

We, as the Chief Executive Officer (CEO) and the Internal Control over Financial Reporting Officer of SK bioscience Co., Ltd. (the "Company"), assessed the effectiveness of the design and operation of the Company's Internal Control over Financial Reporting (ICFR) for the year ended December 31, 2020.

The Company's management, including ourselves, is responsible for designing and operating ICFR. We assessed the design and operating effectiveness of ICFR in the prevention and detection of an error or fraud which may cause material misstatements in the preparation and disclosure of reliable financial statements. We designed and operated ICFR in accordance with Conceptual Framework for Designing and Operating Internal Control over Financial Reporting established by the Operating Committee of Internal Control over Financial Reporting in Korea (the ICFR Committee). And, we conducted an evaluation of ICFR based on Best Practice Guideline for Evaluating and Reporting Effectiveness of Internal Control over Financial Reporting established by the ICFR Committee.

Based on the assessment results, we believe that the Company's ICFR, as of December 31, 2020, is designed and operating effectively, in all material respects, in accordance with Conceptual Framework for Designing and Operating Internal Control over Financial Reporting.

We certify that this report does not contain any untrue statement of a fact, or omit to state a fact necessary to be presented herein. We also certify that this report does not contain or present any statement which cause material misunderstandings, and we have reviewed and verified this report with sufficient due care.

February 15, 2021

Yong-Sung Choi, Internal Control over Financial Reporting Officer

Jae-Yong Ahn, Chief Executive Officer