

NIPPON
SHOKUBAI



Financial Section 2021

Consolidated Financial Statements

Consolidated Statement of Financial Position

	March 31, 2020	March 31, 2021
	(Millions of yen)	
Assets		
Current assets:		
Cash and cash equivalents (Note 6)	¥ 43,869	¥ 36,341
Trade receivables (Notes 7 and 28)	74,570	82,053
Inventories (Note 8)	60,762	57,612
Other financial assets (Notes 9 and 28)	9,894	9,661
Other current assets	5,663	6,140
Total current assets	194,759	191,806
Non-current assets:		
Property, plant and equipment (Notes 10, 12 and 29)	200,252	193,197
Goodwill (Notes 11 and 12)	4,303	—
Intangible assets (Notes 11 and 12)	10,239	5,989
Investments in affiliates and joint ventures accounted for using equity method (Note 13)	19,823	20,108
Other financial assets (Notes 9 and 28)	33,748	44,285
Net defined benefit assets (Note 19)	7,540	11,571
Deferred tax assets (Note 14)	3,179	3,093
Other non-current assets	1,796	1,568
Total non-current assets	280,881	279,811
Total assets	¥ 475,641	¥ 471,617

	March 31, 2020	March 31, 2021
	(Millions of yen)	
Liabilities and equity		
Liabilities		
Current liabilities:		
Trade payables (Notes 15 and 28)	¥ 44,741	¥ 45,912
Bonds and borrowings (Notes 16, 17 and 28)	17,177	23,981
Other financial liabilities (Notes 16, 17, 28 and 29)	8,289	8,671
Income taxes payable	2,370	1,422
Provisions (Note 18)	4,879	4,734
Other current liabilities	4,971	6,030
Total current liabilities	82,427	90,750
Non-current liabilities:		
Bonds and borrowings (Notes 16, 17 and 28)	38,854	28,887
Other financial liabilities (Notes 16, 17, 28 and 29)	7,110	8,023
Net defined benefit liability (Note 19)	14,509	14,162
Provisions (Note 18)	1,929	2,157
Deferred tax liabilities (Note 14)	4,704	3,914
Total non-current liabilities	67,105	57,142
Total liabilities	149,532	147,891
Equity:		
Share capital (Note 20)	25,038	25,038
Capital surplus (Note 20)	22,472	22,472
Treasury shares (Note 20)	(6,281)	(6,286)
Retained earnings (Note 20)	280,555	267,729
Other components of equity (Note 20)	(2,086)	8,420
Total equity attributable to owners of parent	319,699	317,373
Non-controlling interests	6,410	6,352
Total equity	326,108	323,725
Total liabilities and equity	¥ 475,641	¥ 471,617

See accompanying notes to consolidated financial statements.

Consolidated Statement of Income

	Years ended March 31,			
	2020		2021	
	(Millions of yen)			
Revenue (Notes 5 and 22)	¥	302,150	¥	273,163
Cost of sales		248,666		225,116
Gross profit		53,484		48,047
Selling, general and administrative expenses (Note 23)		41,903		41,486
Other operating income (Note 24)		3,080		2,297
Other operating expenses (Notes 12 and 24)		1,483		24,778
Operating profit (loss)		13,178		(15,921)
Finance income (Note 25)		1,741		1,922
Finance expenses (Note 25)		1,811		369
Share of profit of investments accounted for using equity method (Note 13)		2,640		1,441
Profit (loss) before income tax		15,748		(12,926)
Income tax expense (refund)(Note 14)		4,157		(2,635)
Profit (loss)	¥	11,590	¥	(10,291)
Profit (loss) attributable to:				
Owners of parent		11,094		(10,899)
Non-controlling interests		496		608
Profit (loss)	¥	11,590	¥	(10,291)
Earnings (loss) per share:				
Basic earnings (loss) per share (Yen) (Note 27)		278.21		(273.33)
Diluted earnings per share (Yen) (Note 27)		—		—

See accompanying notes to consolidated financial statements.

Consolidated Statement of Comprehensive Income

	Years ended March 31,			
	2020		2021	
	(Millions of yen)			
Profit (loss)	¥	11,590	¥	(10,291)
Other comprehensive income (loss)				
Items that will not be reclassified to profit or loss:				
Net changes in financial assets measured at fair value through other comprehensive income (Note 26)		(3,647)		7,827
Remeasurements of defined benefit plans (Notes 19 and 26)		(523)		3,186
Share of other comprehensive income (loss) of affiliates and joint ventures accounted for using equity method (Notes 13 and 26)		(7)		20
Subtotal of items that will not be reclassified to profit or loss		(4,178)		11,033
Items that may be reclassified to profit or loss:				
Exchange differences on translation of foreign operations (Note 26)		(2,476)		2,954
Share of other comprehensive income (loss) of affiliates and joint ventures accounted for using equity method (Notes 13 and 26)		(610)		41
Subtotal of items that may be reclassified to profit or loss		(3,086)		2,995
Total other comprehensive income (loss)		(7,264)		14,028
Comprehensive income	¥	4,327	¥	3,737
Comprehensive income attributable to:				
Owners of parent		3,875		3,064
Non-controlling interests		452		674
Comprehensive income	¥	4,327	¥	3,737

See accompanying notes to consolidated financial statements.

Consolidated Statement of Changes in Equity

FY2019 (April 1, 2019 to March 31, 2020)

	Share capital	Capital surplus	Treasury shares	Retained earnings	Other components of equity	
					Net changes in financial assets measured at fair value through other comprehensive (loss) income	Remeasurements of defined benefit plans
				(Millions of yen)		
Balance as of April 1, 2019	¥ 25,038	¥ 22,472	¥ (6,274)	¥ 276,934	¥ 3,942	¥ —
Profit	—	—	—	11,094	—	—
Other comprehensive income (Note 26)	—	—	—	—	(3,642)	(469)
Comprehensive income (loss):	—	—	—	11,094	(3,642)	(469)
Acquisition of treasury shares (Note 20)	—	—	(6)	—	—	—
Disposal of treasury shares (Note 20)	—	—	—	—	—	—
Cash dividends (Note 21)	—	—	—	(7,178)	—	—
Transfer from other components of equity to retained earnings	—	—	—	(296)	(173)	469
Total transactions with owners	—	—	(6)	(7,474)	(173)	469
Balance as of March 31, 2020	¥ 25,038	¥ 22,472	¥ (6,281)	¥ 280,555	¥ 126	¥ —

	Other components of equity					
	Exchange differences on translation of foreign operations	Total	Total equity attributable to owners of parent	Non-controlling interests	Total equity	
	(Millions of yen)					
Balance as of April 1, 2019	¥ 896	¥ 4,838	¥ 323,008	¥ 6,219	¥ 329,227	
Profit	—	—	11,094	496	11,590	
Other comprehensive income (Note 26)	(3,108)	(7,219)	(7,219)	(44)	(7,264)	
Comprehensive income (loss):	(3,108)	(7,219)	3,875	452	4,327	
Acquisition of treasury shares (Note 20)	—	—	(6)	—	(6)	
Disposal of treasury shares (Note 20)	—	—	—	—	—	
Cash dividends (Note 21)	—	—	(7,178)	(261)	(7,439)	
Transfer from other components of equity to retained earnings	—	296	—	—	—	
Total transactions with owners	—	296	(7,184)	(261)	(7,445)	
Balance as of March 31, 2020	¥ (2,212)	¥ (2,086)	¥ 319,699	¥ 6,410	¥ 326,108	

FY2020 (April 1, 2020 to March 31, 2021)

	Share capital	Capital surplus	Treasury shares	Retained earnings	Other components of equity	
					Net changes in financial assets measured at fair value through other comprehensive (loss) income	Remeasurements of defined benefit plans
				(Millions of yen)		
Balance as of April 1, 2020	¥ 25,038	¥ 22,472	¥ (6,281)	¥ 280,555	¥ 126	¥ —
Loss	—	—	—	(10,899)	—	—
Other comprehensive income (Note 26)	—	—	—	—	7,823	3,199
Comprehensive income (loss):	—	—	—	(10,899)	7,823	3,199
Acquisition of treasury shares (Note 20)	—	—	(6)	—	—	—
Disposal of treasury shares (Note 20)	—	(0)	0	—	—	—
Cash dividends (Note 21)	—	—	—	(5,383)	—	—
Transfer from other components of equity to retained earnings	—	—	—	3,457	(258)	(3,199)
Total transactions with owners	—	(0)	(6)	(1,926)	(258)	(3,199)
Balance as of March 31, 2021	¥ 25,038	¥ 22,472	¥ (6,286)	¥ 267,729	¥ 7,691	¥ —

	Other components of equity		Total equity attributable to owners of parent	Non-controlling interests	Total equity
	Exchange differences on translation of foreign operations	Total			
			(Millions of yen)		
Balance as of April 1, 2020	¥ (2,212)	¥ (2,086)	¥ 319,699	¥ 6,410	¥ 326,108
Loss	—	—	(10,899)	608	(10,291)
Other comprehensive income (Note 26)	2,942	13,963	13,963	65	14,028
Comprehensive income (loss):	2,942	13,963	3,064	674	3,737
Acquisition of treasury shares (Note 20)	—	—	(6)	—	(6)
Disposal of treasury shares (Note 20)	—	—	0	—	0
Cash dividends (Note 21)	—	—	(5,383)	(731)	(6,115)
Transfer from other components of equity to retained earnings	—	(3,457)	—	—	—
Total transactions with owners	—	(3,457)	(5,389)	(731)	(6,121)
Balance as of March 31, 2021	¥ 730	¥ 8,420	¥ 317,373	¥ 6,352	¥ 323,725

See accompanying notes to consolidated financial statements.

Consolidated Statement of Cash Flows

	Years ended March 31,	
	2020	2021
	(Millions of yen)	
Cash flows from operating activities:		
Profit (loss) before income tax	¥ 15,748	¥ (12,926)
Depreciation and amortization	28,653	29,470
Impairment losses (Note 12)	—	21,185
Decrease in net defined benefit asset	91	71
Increase in net defined benefit liability	180	145
Interest and dividend income	(1,736)	(1,385)
Interest expenses	573	340
Share of loss (profit) of affiliates and joint ventures accounted for using equity method	(2,640)	(1,441)
Decrease (increase) in trade receivables	6,056	(6,415)
(Increase) decrease in inventories	(2,063)	4,092
(Decrease) increase in trade payables	(6,741)	360
Other	224	3,503
Subtotal	38,343	36,999
Interest and dividends received	5,558	2,656
Interest paid	(432)	(424)
Income taxes paid	(5,970)	(3,954)
Net cash flows provided by operating activities	37,499	35,277
Cash flows from investing activities:		
Purchase of property, plant and equipment	(32,319)	(29,658)
Proceeds from sale of property, plant and equipment	2,517	9
Purchase of intangible assets	(1,710)	(1,728)
Purchase of investments	(158)	(525)
Proceeds from sale and redemption of investments	677	496
Acquisition of shares of subsidiaries and affiliates	(850)	(2)
Other	(962)	785
Net cash flows used in investing activities	(32,806)	(30,623)
Cash flows from financing activities:		
Net increase (decrease) in short-term borrowings (Note 17)	3,005	(6,834)
Proceeds from long-term borrowings (Note 17)	10,934	8,191
Repayments of long-term borrowings (Note 17)	(12,602)	(6,305)
Payments of lease liabilities (Note 17)	(1,751)	(1,682)
Acquisition of treasury shares	(6)	(6)
Dividends paid (Note 21)	(7,178)	(5,383)
Dividends paid to non-controlling interests	(261)	(731)
Other	—	0
Net cash flows used in financing activities	(7,859)	(12,750)
Effect of exchange rate changes on cash and cash equivalents	(399)	569
Net increase (decrease) in cash and cash equivalents	(3,564)	(7,529)
Cash and cash equivalents at the beginning of the year (Note 6)	47,434	43,869
Cash and cash equivalents at the end of the year (Note 6)	¥ 43,869	¥ 36,341

See accompanying notes to consolidated financial statements.

Notes to Consolidated Financial Statements

March 31, 2021

1. Reporting Entity

Nippon Shokubai Co., Ltd. (the "Company") is a company incorporated in Japan.

The registered addresses of the Company's head office and main offices are disclosed on the Company's website (URL <https://www.shokubai.co.jp/en/>). The consolidated financial statements comprise the Company and its subsidiaries (the "Group") and its affiliates. The Group's main business includes manufacturing and sales of products in the Basic chemicals, Functional chemicals, and Environment & catalysts businesses. The details of each business are described in Note "5. Segment Information."

2. Basis of Preparation

(1) Compliance with IFRS

The Group's consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS") issued by the International Accounting Standards Board ("IASB"). As the Company meets the requirements of a "Specified Company applying Designated International Financial Reporting Standards" pursuant to Article 1-2 of the "Ordinance on Terminology, Forms and Preparation Methods of Consolidated Financial Statements" (Ordinance of the Ministry of Finance of Japan No. 28 of 1976), it has adopted the provision of Article 93 of said ordinance. The consolidated financial statements were approved on June 22, 2021 by Yujiro Goto, President and Representative Director.

(2) Basis of measurement

The Group's consolidated financial statements have been prepared on a historical cost basis, except for certain financial instruments measured at fair value as described in Note "3. Significant Accounting Policies".

(3) Functional currency and presentation currency

The Group's consolidated financial statements are presented in Japanese yen, the Company's functional currency, and figures are rounded to the nearest million yen.

(4) New accounting standards and interpretations issued but not yet effective

There are no significant standards or interpretations that have been issued by the date of approval of the consolidated financial statements but have not been applied by the Group as of March 31, 2021.

3. Significant Accounting Policies

(1) Basis of consolidation

1) Subsidiaries

Subsidiaries are entities that are controlled by the Group.

The Group is deemed to control an entity when the Group is exposed or has rights to variable returns from its involvement in the entity and has the ability to affect those returns through its power over the entity.

The Group consolidates subsidiaries from the date on which it gains control until the date on which it loses control. If any accounting policies applied by a subsidiary differ from those applied by the Company, adjustments are made to financial statements of such consolidated subsidiaries where necessary. All intercompany balances, transactions and unrealized gains or losses arising from intragroup transactions are eliminated in preparation of consolidated financial statements.

Any additional acquisition of non-controlling interests after the acquisition of control is accounted for as an equity transaction. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of consideration paid or received is directly recognized in equity. Goodwill from such transactions is not recognized.

Any change in ownership interests in subsidiaries without a loss of control is accounted for as an equity transaction. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of consideration is directly recognized in equity. When control is lost, gains or losses arising from the loss of control are recognized in profit or loss.

2) Affiliates and joint ventures

Affiliates are entities over which the Group has significant influence in terms of their financial and operating policies but are not controlled by the Group. When the Group owns 20% or more but less than 50% of the voting power of another entity, the Group is deemed to have significant influence over such entity. When the Group determines that it has significant influence over another entity due to the dispatch of officers and significant transactions, even if it owns less than 20% of the voting rights, such entity shall be included in affiliates.

Joint ventures are entities that are jointly controlled by one or more parties, including the Group, in accordance with contractual agreements, and require unanimous consent of all parties in deciding policies for related activities.

The Group recognizes the ownership interests in affiliates and joint ventures at acquisition cost and accounts for its investments using the equity method until the date on which it loses significant influence or joint control.

If accounting policies applied by an affiliate or a joint venture differ from those applied by the Company, adjustments are made to the financial statements of affiliate or joint venture where necessary.

Regarding some affiliates and joint ventures that cannot practically unify their fiscal year end with that of the Company due to relationships with other shareholders, etc., necessary adjustments are made for the effects of significant transactions that occur until the year end of the Company.

(2) Business combinations

The Group accounts for business combinations using the acquisition method. Consideration is measured as the net of the fair value of assets acquired and liabilities assumed in exchange for the control of an acquiree and equity instruments issued by the Company at the acquisition date. If the consideration exceeds the net of the fair value of identifiable assets acquired and liabilities assumed, the Group records it as goodwill in the consolidated statement of financial position. However, if the consideration is less than the net of the fair value of identifiable assets acquired and liabilities assumed, the Group immediately records it in income in the consolidated statement of income.

If the Group does not complete its initial accounting treatment by the end of the period in which the business combination occurs, it will account for the business combination using provisional amounts and revise the provisional amounts during the measurement period within one year from the acquisition date.

Acquisition-related costs incurred are accounted for as expenses.

In addition, any additional acquisition of non-controlling interests after the acquisition of control is accounted for as an equity transaction. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of consideration paid or received is directly recognized in equity. Goodwill from such transactions is not recognized.

(3) Foreign currency translation

1) Foreign currency transactions

The Group measures items included in the financial statements of each group company using the currency used in the main economic environment where each group company conducts its operating activities (functional currency).

Foreign currency transactions are converted into the functional currency using the exchange rates at the date of the transactions. When remeasuring items included in the financial statements, the Group converts them into the functional currency using the exchange rates at the date of the remeasurement. Exchange differences arising from the settlement of these transactions or the translation of monetary assets or liabilities in a foreign currency using the exchange rates at the date of the settlement are recognized in profit or loss. However, translation differences arising from equity financial instruments measured at fair value through other comprehensive income or cash flow hedges are recognized in other comprehensive income.

2) Foreign operations

Regarding foreign operations using a functional currency that differs from the presentation currency, assets and liabilities (including goodwill arising from the acquisition and revision of fair value) are translated to Japanese yen using the exchange rates at the end of the reporting period, while income and expenses are translated to Japanese yen at the average rate during the period unless the exchange rates fluctuate significantly during that period.

Exchange differences arising from the translation of financial statements of a foreign operation are recognized in other comprehensive income. When a foreign operation is disposed of, the cumulative translation differences related to the foregoing operation are recognized in profit or loss at the time of the disposal.

(4) Cash and cash equivalents

Cash and cash equivalents consist of cash on hand, demand deposits withdrawable at any time, and short-term investments with a maturity of three months or less from the acquisition date that are readily convertible to cash and are subject to insignificant risk of changes in value.

(5) Financial instruments

1) Non-derivative financial assets

(i) Initial recognition and measurement and subsequent measurement

The Group initially recognizes trade receivables and other receivables on the date of occurrence. All other non-derivative financial assets are recognized at the transaction date, on which the Group becomes a party to the contract.

(a) Financial assets measured at amortized cost

Financial assets are classified as "financial assets measured at amortized cost" if they meet the following two conditions:

- The financial assets are held with a business model of the Group whose objective is to collect contractual cash flows.
- The contractual terms of the financial asset provide cash flows on specified dates that are solely payments of principal and interest on the principal amount outstanding.

Financial assets measured at amortized cost are initially recognized at fair value (including transaction cost directly attributable to the acquisition of such financial assets). These financial assets are subsequently measured at amortized cost using the effective interest method.

(b) Financial assets measured at fair value through profit or loss or other comprehensive income

Financial assets that fail to meet either of the above two conditions are classified as “financial assets measured at fair value through profit or loss” or “financial assets measured at fair value through other comprehensive income”. In addition, the Group has made an irrevocable decision and changes in fair value of equity financial instruments, such as shares held with the purpose to maintain and strengthen business relationships with investees, are recognized through other comprehensive income instead of profit or loss.

Debt instruments are classified as “financial assets measured at fair value through other comprehensive income” when the following two conditions are met.

- The debt instruments are held with a business model of the Group whose objective is to both collect contractual cash flows and sell such instruments.
- The contractual terms of the financial asset provide cash flows on specified dates that are solely payments of principal and interest on the principal amount outstanding.

These financial assets are initially recognized at fair value. The Group includes in fair value any transaction costs directly attributable to the acquisition of such financial assets, with the exception of financial assets measured at fair value through profit or loss.

Regarding equity financial instruments measured at fair value through other comprehensive income, loss or gain attributable to changes in realized fair value is not reclassified to profit or loss. However, dividend income from such investments is recognized as “financial income” as a part of profit or loss, except in cases where it is clear that such dividends are the repayment of the investment principal.

(ii) Derecognition

When the rights to the cash flows from a financial asset expire or when a financial asset is transferred and substantially all of the risks and rewards of ownership of such financial asset are transferred, the Group derecognizes such financial asset.

(iii) Impairment of financial assets

When recognizing the impairment of financial assets measured at amortized cost, the Group evaluates whether or not credit risk associated with such financial assets has increased significantly since the initial recognition at the end of each reporting period.

When credit risk has increased significantly, the Group measures provisions for such financial assets at an amount equivalent to lifetime expected credit losses. When credit risk has not increased significantly, the Group measures provisions for such financial assets at an amount equivalent to the 12-month expected credit losses. However, the Group always measures provisions for trade receivables at an amount equivalent to lifetime expected credit losses. Furthermore, the Group measures expected credit losses of financial instruments by considering the time value of the difference between contractual cash flows and the expected cash flows and recognizes it in profit or loss.

The Group determines whether or not credit risk associated with such financial assets has increased significantly since the initial recognition by basing the judgment on changes in the risk of a default occurring. When determining such changes, the Group mainly considers past due information.

When measuring expected credit losses, the Group estimates in a way that reflects the following elements.

- (a) Unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes.
- (b) Time value of money.
- (c) Reasonable and supportable information that is available without undue cost or effort at the reporting date about past events, current conditions, and forecasts of future economic conditions.

2) Non-derivative financial liabilities

(i) Initial recognition and measurement and subsequent measurement

Non-derivative financial liabilities are classified as financial liabilities measured at amortized cost and are recognized at the transaction date, on which the Group becomes a party to the contract.

The Group holds borrowings and trade payables as financial liabilities other than derivatives and initially recognizes them at fair value after deducting transaction costs. After initial recognition, these financial liabilities are measured at amortized cost using the effective interest method.

(ii) Derecognition

When financial liabilities expire, in other words, contractual obligations have been executed or discharged or cancelled or have expired, the Group derecognizes financial liabilities.

3) Offsetting financial assets and liabilities

Financial assets and liabilities are offset and reported as net amounts in the consolidated statement of financial position, only when the Group currently holds legal and enforceable rights to set off the recognized amounts and intends to settle on a net basis or to realize the assets and settle the liabilities simultaneously.

4) Derivatives and hedge accounting

The Group designates certain derivative instruments as cash flow hedges to hedge foreign exchange risk, interest rate risk, or other risks.

At the inception of a transaction, the Group documents the relationship between the hedging instrument and hedged item and the risk management objectives and strategies for undertaking various hedge transactions. At the inception of the hedge and on an ongoing basis, the Group also documents its assessment of whether derivatives used for hedge transactions can be highly effective in offsetting changes in cash flows of the hedged item. Furthermore, the Group verifies that such forecast transactions are highly probable to apply cash flow hedge accounting.

Changes in fair value of derivative instruments are recognized in profit or loss. The effective portion of changes in fair value of derivative instruments that are designated as cash flow hedges and meet the qualifying criteria is recognized in other components of equity. The ineffective portion is recognized in profit or loss in the consolidated statement of income.

Any amount incurred with respect to hedging instruments that is recognized in other components of equity is reclassified to profit or loss in the period when hedged items affect profit or loss. When hedged forecast transactions result in the recognition of non-financial assets, any amount that has been recognized in other comprehensive income is reclassified and included in the initial carrying amount of such assets.

The Group discontinues hedge accounting prospectively when the hedging instrument expires or is sold, or the hedge no longer meets the criteria for hedge accounting. Any amount incurred with respect to hedging instruments that have already been recognized in other components of equity is further recognized until forecast transactions are eventually recognized in profit or loss. When forecast transactions are no longer expected to occur, any amount incurred with respect to hedging instruments that has been recognized in other components of equity is immediately recognized in profit or loss.

(6) Inventories

Inventories are measured at the lower of cost or net realizable value. The cost of inventories is principally calculated based on the moving-average method. In addition, net realizable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated selling costs.

(7) Property, plant and equipment

Property, plant and equipment are measured using the cost model and stated at cost less accumulated depreciation and accumulated impairment losses.

Cost includes cost directly attributable to the acquisition of assets, dismantling and removal costs, restoration costs, and borrowing costs that meet requirements for asset capitalization.

Each asset (excluding assets that are not subject to depreciation such as land) is depreciated using the straight-line method over its estimated useful life. The estimated useful lives of main asset items are as follows:

- Buildings and structures: 3 to 50 years
- Machinery and vehicles: 2 to 15 years

Estimated useful lives and the method of depreciation are reviewed at the end of each fiscal year. Any change in estimated useful lives and the depreciation method is accounted for on a prospective basis as a change in accounting estimate.

(8) Goodwill and intangible assets

1) Goodwill

The measurement of goodwill at the time of initial recognition is described in "(2) Business combinations."

The Group does not amortize goodwill but conducts impairment tests every fiscal year or whenever there is an indication of impairment. The impairment loss on goodwill is recognized in profit or loss and is not subsequently reversed.

Furthermore, goodwill is stated at cost less accumulated impairment losses in the consolidated statement of financial position.

2) Intangible assets

Intangible assets are stated at cost less accumulated amortization and accumulated impairment losses.

Individually acquired intangible assets are measured at a cost at the time of initial recognition, while intangible assets acquired through business combination are measured at fair value at the date of the acquisition.

Intangible assets are amortized using the straight-line method over their estimated useful lives. The estimated useful lives of main asset items are as follows:

- Technology-related assets: 15 years
- Software: 5 years

(9) Leases

Lease liabilities are measured at the discounted present value of the residual amount of the total lease payments at the lease commencement date. Right-of-use assets are measured at the amount of the initial measurement of the lease liabilities with adjustments for the initial direct costs and prepaid lease payments and other elements together with costs such as obligations of restoration to the original conditions required under the lease agreements. Right-of-use assets are depreciated systematically over the shorter of the estimated useful life or the lease term.

The discount rate that shall be used in calculating the discounted present value of the residual amount of total lease payments is the interest rate implicit in the lease, if the rate can be readily determined, and if not, the lessee's incremental borrowing rate is used.

Lease payments are allocated to finance costs and repayments of lease liabilities in order to produce a constant rate of interest on the remaining balance of lease liabilities. Finance costs are disclosed separately from the depreciation and amortization of right-of-use assets in the consolidated statement of income.

Whether or not an agreement is, or contains, a lease is determined based on the substance of an agreement, even when it does not take the legal form of a lease.

Lease payments for leases with a term of 12 months or less, or the leases where the underlying asset is of low value are expensed on either a straight-line method over the lease term or another systematic method.

(10) Impairment of non-financial assets

Every fiscal year, the Group assesses non-financial assets for any indications of impairment. In case there is an indication of impairment or in case the impairment tests are required every fiscal year, the recoverable amount of the asset is estimated. When the recoverable amount of an asset cannot be estimated, the recoverable amount of the cash-generating unit to which such assets are allocated is estimated. The Group conducts impairment tests of goodwill every fiscal year or whenever there is an indication of impairment. Goodwill is allocated to each cash-generating unit or a group of cash-generating units that are expected to benefit from the synergies of the business combination.

The Group measures the recoverable amount of an asset or a cash-generating unit as the higher of fair value less costs of disposal or value in use. When the carrying value of an asset or a cash-generating unit exceeds its recoverable amount, impairment is recognized and its carrying value is reduced to its recoverable amount. In the calculation of value in use, the estimated future cash flows are discounted to their present value by using the pretax discount rate that reflects the present market valuation related to the time value of money and risks inherent in such asset. In the calculation of fair value less costs of disposal, the Group uses an appropriate valuation model that is supported by available fair-value indicators.

For an asset other than goodwill, the Group evaluates whether or not there is an indication that an impairment loss recognized in the asset in prior years has decreased or may no longer exist when there is a change in the assumptions that were used for calculating the estimated recoverable amount. If there is any such indication, the recoverable amount of such asset or cash-generating unit is estimated. When the recoverable amount exceeds the carrying value of the asset or cash-generating unit, the impairment loss is reversed to the extent of the recoverable amount calculated or the carrying value that would have been recorded, net of depreciation or amortization, if impairment had not been recognized in prior years, whichever is lower.

(11) Employee benefits

1) Post-employment benefits

Defined benefit plans

The Company and some of its subsidiaries have defined benefit pension plans and severance lump-sum payment plans as defined benefit plans. Under the defined benefit plans, the net present value of defined benefit obligations less the fair value of plan assets is recognized in assets or liabilities in the consolidated statement of financial position. The present value of defined benefit obligations is calculated using the projected unit credit method.

The difference in the remeasurement of net defined benefit assets or obligations is recognized in other comprehensive income in the fiscal year as incurred. Furthermore, past service cost is recognized in profit or loss in the fiscal year it is incurred.

Defined contribution plans

Some of the Company's subsidiaries have defined contribution pension plans. Defined contribution pension plans are post-employment benefit plans, under which the employer pays a certain amount of contributions to another independent entity and will have no legal or constructive obligations to pay further contributions. Contributions to the defined contribution pension plans are expensed in the period in which employees render services.

2) Short-term employee benefits

Short-term employee benefits are measured on an undiscounted basis and are recognized as an expense when employees render the related services. For bonuses and compensated absences, estimated amounts are recognized as liabilities when the Company has legal or constructive obligations to make such payments and reliable estimates of the amounts can be made.

(12) Provisions

Provisions are recognized when the Group has present obligations (legal or constructive) as a result of past events, it is probable that the outflow of economic resources will be required to settle the obligations, and the amounts of the obligations can be reliably estimated.

When the time to settle an obligation is expected to be long, and thus the time value of money is significant, the amount of the provision is measured at the present value of the amount of expenditures expected to be required to settle the obligation. To calculate the present value, a pretax discount rate is used that reflects the time value of money and risks inherent in such asset.

(13) Revenue recognition

The Group recognizes revenue in accordance with the following five-step approach, except interest and dividend income under IFRS 9 "Financial Instruments".

Step 1: Identify the contract with the customer

Step 2: Identify the performance obligations in the contract

Step 3: Determine the transaction price

Step 4: Allocate the transaction price to the separate performance obligations in the contract

Step 5: Recognize revenue when, or as, the entity satisfies a performance obligation

The Group's main business includes manufacturing and sales of products in the Basic Chemicals, Functional Chemicals, and Environment and Catalysts businesses. The Group recognizes revenue from the sale of these products upon delivery of the products to the customer, since the performance obligation is fulfilled because the customer obtains control over such products upon delivery of the products. Revenue is measured at the amount obtained after deducting price reductions, rebates, and sales returns from the transaction price in the contract with the customer.

Regarding the sale of waste gas treatment equipment in the Environment and Catalysts business, the performance obligation is satisfied over time. In measuring the progress in satisfying the performance obligation, the Group applies the cost-to-cost method (a method calculates revenue based on the ratio of cumulative actual costs incurred to estimated total costs as of the end of the fiscal year).

(14) Government grants

Government grants are recognized at fair value when there is a reasonable assurance that the Group will comply with their collateral conditions and will receive the grants.

In case that the government grants are related to expense items, they are recognized in profit or loss on a systematic basis over the period in which the related costs for which the grants are intended to compensate are recognized. With regard to government grants for assets, the total amount of the grants is deducted from the total acquisition cost of the assets.

(15) Income taxes

Income taxes, which consist of current taxes and deferred taxes, are recognized in profit or loss, except to the extent that they relate to items recognized in other comprehensive income or directly in equity.

Current income taxes are calculated by using the tax rates that have been enacted or substantially enacted at the end of the reporting period in countries where the Company and its subsidiaries operate businesses and generate taxable income.

Deferred tax assets and liabilities are recognized based on temporary differences between the tax base of assets and liabilities and their carrying values in the consolidated financial statements, using the asset-and-liability method. However, deferred tax assets and liabilities are not recognized for temporary differences in the following cases:

- Temporary differences arising from the initial recognition of goodwill
- Temporary differences arising from the initial recognition of assets or liabilities in transactions (except business combinations) that affect neither of accounting profit or loss nor taxable income (including tax loss)
- Taxable temporary differences associated with investments in subsidiaries and affiliates if the Company is able to control the timing of the reversal of the temporary differences and it is probable that the temporary differences will not reverse in the foreseeable future

In principle, deferred tax liabilities are recognized for all taxable temporary differences. Deferred tax assets are recognized for deductible temporary differences, and unused tax losses and tax credit carryforwards only to the extent that it is probable that they can be used for future taxable income.

The carrying amount of deferred tax assets is reviewed every fiscal year and reduced to the extent that it is no longer probable that sufficient future taxable income will be available to realize benefits from all or some of the assets. Unrecognized deferred tax assets are reassessed every fiscal year and are recognized to the extent that it has become probable that future taxable income will allow the deferred tax assets to be recovered.

Deferred tax assets and liabilities are measured using the tax rates that have been enacted or substantially enacted by the end of the reporting period and are expected to be applied in the fiscal year when the related deferred tax assets are realized, or deferred tax liabilities are settled.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities, and when deferred tax assets and liabilities are related to income taxes levied by the same taxation authority on either the same taxable entities or different taxable entities that intend to conduct the settlement on a net basis.

(16) Equity

1) Ordinary shares

With regard to ordinary shares issued by the Company, the issuance amount is recorded in share capital and capital surplus, and costs directly attributable to the issue of ordinary shares (net of tax effect) are deducted from share capital and capital surplus according to the ratio to the issuance amount.

2) Treasury shares

When treasury shares are acquired, consideration paid, including costs directly attributable to the transactions (net of tax effect), is recognized as a deduction from equity. When treasury shares are sold, consideration received is recognized as an increase in equity.

(17) Earnings per share

Basic earnings per share is calculated by dividing profit attributable to owners of parent by the average number of ordinary shares outstanding during the period.

4. Significant Accounting Estimates and Judgements

In preparation of the consolidated financial statements, the management makes judgements, estimates, and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income, and expenses. Actual results may differ from these estimates. Estimates and their underlying assumptions are reviewed continuously. The impact of revisions to accounting estimates is recognized in the accounting period in which the estimates are revised and in future accounting periods.

In the fiscal year ended March 31, 2021, the management has appropriately examined the effect of the uncertainties arising from the COVID-19 pandemic to the estimates and assumptions. Despite a certain degree of uncertainty, the Group has determined that there are little risk that material adjustments should be made to the carrying amount of the Group's assets or liabilities and associated revenue and costs during the next fiscal year.

The Group expects that although the spread of COVID-19 will continue to have a certain impact on the business performance in the next fiscal year, the situation will gradually normalize toward the end of the next fiscal year.

Significant items on which management makes its estimates and judgements are as follows:

(1) Impairment of non-financial assets

The Group conducts impairment tests of tangible assets such as property, plant and equipment and intangible assets when there is an indication that the recoverable amount of the asset or the cash-generating unit is less than its carrying amount. In measuring the recoverable amount for the impairment testing, the Group makes certain assumptions about future cash flows, pre-tax discount rates, long-term growth rates, etc. These assumptions are made based on the best estimates and judgements of the management but could result in different outcome due to the uncertain economic conditions or revisions to the business plans in the future. If revisions to the assumptions become necessary, it may have significant impacts on the amounts recognized in the consolidated financial statements in the following fiscal years.

In the fiscal year ended March 31, 2021, the Group recognized impairment losses on property, plant and equipment of NIPPON SHOKUBAI EUROPE N.V., a consolidated subsidiary of the Company in the Functional Chemicals segment. The details of impairment losses are described in Note 12 "Impairment Losses of Non-financial Assets".

(2) Measurement of defined benefit plan obligations

The Group has funded and unfunded defined benefit plans and defined contribution plans to provide for the payment of retirement benefits to employees. The present values of the defined benefit plan obligations and associated service cost, etc. are measured based on actuarial assumptions. In determining the actuarial assumptions require estimates and judgements on various variables such as discount rates, retirement rates, and mortality rates. The Group is advised by external actuaries on the appropriateness of the actuarial assumptions including these variables.

Actuarial assumptions are determined based on the best estimates and judgements of the management, but are subject to the fluctuations of uncertain economic conditions and amendment/promulgation of relevant laws in the future, and if revisions to the assumptions become necessary, they may have significant impacts on the amounts recognized in the consolidated financial statements in the following fiscal years.

The details of the actuarial assumptions and the results of sensitivity analysis on these assumptions are described in Note 19 "Employee Benefits".

5. Segment Information

(1) Outline of reportable segments

The 'Group's reportable segments are divisions of the Company for which separate financial information is available, and whose operating results are reviewed regularly by the Board of Directors of the Company in order to allocate management resources and assess performance of operations.

The Company's business lines are divided based on similarities of function and nature, and the Company prepares the comprehensive strategy and conducts the business activities corresponding to the products handled by each business line.

Accordingly, the Company is comprised of three operating segments classified by type of products based on divided business lines. The Company does not aggregate the operating segments, and as a result, Basic Chemicals, Functional Chemicals, and Environment and Catalysts are the reportable segments for the Company.

Basic Chemicals segment is engaged in manufacturing and sales of acrylic acids, acrylates, ethylene oxide, ethylene glycol, ethanolamine, secondary alcohol ethoxylates and glycol ether. Functional Chemicals segment is engaged in manufacturing and sales of superabsorbent polymers, special acrylates, pharmaceutical intermediates, polymers for concrete admixture, electronic information material, iodine, maleic anhydride, resins for adhesives and paints, and adhesive products. Environment and Catalysts segment is engaged in manufacturing and sales of automotive catalysts, De-NOx catalysts, dioxin decomposition catalysts, process catalysts, waste gas treatment catalysts and fuel cell materials.

(2) Calculation method of amounts of revenue, income or loss, assets, and other items

The accounting method for business segments reported is substantially the same as the accounting method adopted for preparing the consolidated financial statements. Inter-segment revenue and transfers are mainly based on market prices and manufacturing costs. The total of segment income after adjustment agreed with operating profit in the consolidated statement of income.

(3) Information about revenue, profit or loss, assets, and other items

FY2019 (April 1, 2019 to March 31, 2020)

	Reportable segments				Adjustment (Notes 1 and 2)	Total
	Basic Chemicals	Functional Chemicals	Environment & Catalysts	Total		
	(Millions of yen)					
Revenue						
(1) Revenue to third parties	¥ 120,068	¥ 170,389	¥ 11,693	¥ 302,150	¥ —	¥ 302,150
(2) Inter-segment revenue and transfers	33,394	5,787	1,550	40,730	(40,730)	—
Total	¥ 153,462	¥ 176,176	¥ 13,242	¥ 342,880	¥ (40,730)	¥ 302,150
Segment income	6,248	4,839	844	11,931	1,246	13,178
Finance income	—	—	—	—	—	1,741
Finance expenses	—	—	—	—	—	1,811
Share of profit of investments in associates and joint ventures accounted for using equity method	—	—	—	—	—	2,640
Profit before income tax	¥ —	¥ —	¥ —	¥ —	¥ —	¥ 15,748
Segment assets	151,149	249,813	32,596	433,559	42,082	475,641
Other items:						
Depreciation and amortization	10,923	16,493	1,236	28,653	—	28,653
Impairment losses	—	—	—	—	—	—
Increase in property, plant and equipment and intangible assets	16,900	17,111	1,967	35,978	—	35,978

Notes: 1. The "Segment income" adjustment of ¥1,246 million includes inter-segment transaction eliminations and corporate profit (loss) not allocated to reportable segments.
2. The "Segment assets" adjustment of ¥42,082 million includes short-term surplus funds (cash and deposits) and long-term surplus funds (investments in securities) held by the Company.

FY2020 (April 1, 2020 to March 31, 2021)

	Reportable segments				Adjustment (Notes 1 and 2)	Total
	Basic Chemicals	Functional Chemicals	Environment & Catalysts	Total		
	(Millions of yen)					
Revenue						
(1) Revenue to third parties	¥ 110,261	¥ 155,272	¥ 7,629	¥ 273,163	¥ —	¥ 273,163
(2) Inter-segment revenue and transfers	27,407	3,799	1,475	32,681	(32,681)	—
Total	¥ 137,669	¥ 159,071	¥ 9,104	¥ 305,844	¥ (32,681)	¥ 273,163
Segment income (loss)	4,535	(19,119)	203	(14,381)	(1,540)	(15,921)
Finance income	—	—	—	—	—	1,922
Finance expenses	—	—	—	—	—	369
Share of profit of investments in associates and joint ventures accounted for using equity method	—	—	—	—	—	1,441
Profit (loss) before income tax	¥ —	¥ —	¥ —	¥ —	¥ —	¥ (12,926)
Segment assets	156,642	236,934	35,145	428,721	42,896	471,617
Other items:						
Depreciation and amortization	10,813	17,459	1,198	29,470	—	29,470
Impairment losses	—	21,185	—	21,185	—	21,185
Increase in property, plant and equipment and intangible assets	14,795	17,247	689	32,731	—	32,731

Notes: 1. The "Segment income (loss)" adjustment of ¥ (1,540) million includes inter-segment transaction eliminations and corporate profit (loss) not allocated to reportable segments. ¥ (1,713) million out of profit (loss) represents business integration-related expenses incurred due to the cancellation of the business integration between the Company and Sanyo Chemical Industries, Ltd.
2. The "Segment assets" adjustment of ¥42,896 million includes short-term surplus funds (cash and deposits) and long-term surplus funds (investments in securities) held by the Company.

(4) Information about products and services

Please refer to "(3) Information about revenue, profit or loss, assets, and other items."

(5) Information about geographical areas

1) Revenue

FY2019 (April 1, 2019 to March 31, 2020)

	Japan	Asia	Europe	North America	Others	Total
	(Millions of yen)					
Basic Chemicals	¥ 75,482	¥ 39,638	¥ 1,271	¥ 2,284	¥ 1,393	¥ 120,068
Functional Chemicals	57,740	39,649	39,088	19,028	14,884	170,389
Environment & Catalysts	6,006	3,056	599	1,895	137	11,693
Total	¥ 139,228	¥ 82,343	¥ 40,959	¥ 23,206	¥ 16,414	¥ 302,150

FY2020 (April 1, 2020 to March 31, 2021)

	Japan	Asia	Europe	North America	Others	Total
	(Millions of yen)					
Basic chemicals	¥ 67,906	¥ 37,641	¥ 1,279	¥ 1,913	¥ 1,522	¥ 110,261
Functional chemicals	51,358	35,213	40,375	17,302	11,024	155,272
Environment & catalysts	3,342	1,802	603	1,881	—	7,629
Total	¥ 122,606	¥ 74,657	¥ 42,258	¥ 21,096	¥ 12,546	¥ 273,163

Notes: 1. Revenue is based on customer location and geographical segments are classified according to geographical proximity.
2. Specific countries of each area:
(1) Asia: East and South East Asian countries
(2) Europe: European countries
(3) North America: North American countries
(4) Others: Areas or countries except Asia, Europe, North America and Japan

2) Non-current assets

	March 31, 2020	March 31, 2021
	(Millions of yen)	
Japan	¥ 119,386	¥ 122,028
Indonesia	32,508	38,157
Other Asia	8,437	8,016
Belgium	39,785	26,232
North America	16,475	6,321
Total	¥ 216,591	¥ 200,754

Note: Non-current assets are based on asset location and do not include financial instruments, deferred tax assets and retirement benefit asset, etc.

(6) Information about major customers

There are no customers accounting for 10% or more of the revenue from external customers for the years ended March 31, 2020 and 2021, respectively.

6. Cash and Cash Equivalents

Cash and cash equivalents consist of cash and deposits. The balances of cash and cash equivalents in the consolidated statement of financial position as of March 31, 2020 and 2021 agreed with the respective balances in the consolidated statement of cash flows.

7. Trade Receivables

The details of trade receivables are as follows:

	March 31, 2020	March 31, 2021
	(Millions of yen)	
Notes and accounts receivable - trade	¥ 74,580	¥ 82,061
Allowance for doubtful accounts	(10)	(8)
Total	¥ 74,570	¥ 82,053

8. Inventories

The details of inventories are as follows:

	March 31, 2020	March 31, 2021
	(Millions of yen)	
Merchandise and finished goods	¥ 36,435	¥ 32,436
Work in process	6,008	5,885
Raw materials and supplies	18,320	19,290
Total	¥ 60,762	¥ 57,612

The amount of write-down of inventories recognized as an expense for the fiscal years ended March 31, 2020 and 2021 was ¥2,641 million and ¥1,356 million, respectively.

9. Other Financial Assets

(1) Details

	March 31, 2020	March 31, 2021
	(Millions of yen)	
Financial assets measured at amortized cost:		
Time deposits	¥ 7,020	¥ 6,616
Accounts receivable – other	2,057	2,078
Other	1,140	1,180
Allowance for doubtful accounts	(60)	(63)
Financial assets measured at fair value through profit or loss:		
Debt instruments	728	908
Derivatives	19	—
Other	412	568
Financial assets measured at fair value through other comprehensive income:		
Equity instruments	32,326	42,659
Other	1	1
Total	¥ 43,643	¥ 53,946
Current assets	9,894	9,661
Non-current assets	33,748	44,285
Total	¥ 43,643	¥ 53,946

(2) Financial assets measured at fair value through other comprehensive income

The Group has designated equity securities held for the purpose of maintaining and strengthening business relationships as financial assets measured at fair value through other comprehensive income.

The fair values of major equity securities are as follows:

	March 31, 2020	March 31, 2021
	(Millions of yen)	
Sanyo Chemical Industries, Ltd.	¥ 4,378	¥ 6,199
FUSO CHEMICAL CO., LTD.	3,601	4,823
Toyo Ink SC Holdings Co., Ltd.	3,397	3,374

The Group reviews the importance of holding the equity securities in accordance with the Group's policy, and sells the equity securities where the importance are weakened from the view of the efficiency of assets utilization.

Fair values and accumulated gains on sales of equity securities as of March 31, 2020 and 2021 are as follows. Accumulated gains on sales (net of tax effect) are transferred from other accumulated comprehensive income to retained earnings.

	Years ended March 31,	
	2020	2021
	(Millions of yen)	
Fair values at the date of sales	¥ 678	¥ 497
Accumulated gains (losses) before tax effect	250	373
Accumulated gains (losses) after tax effect	173	258

10. Property, Plant and Equipment

Schedule of movements

Historical cost	Buildings and structures	Machinery and vehicles	Tools, furniture and fixtures	Land	Construction in progress	Total
(Millions of yen)						
Balance as of April 1, 2019	¥ 119,265	¥ 421,743	¥ 22,272	¥ 36,296	¥ 12,556	¥ 612,131
Effect of the adoption of IFRS 16	1,644	3,150	1	1,005	—	5,800
Acquisition	918	1,826	435	136	30,636	33,951
Transfer from construction in progress	3,081	14,203	1,665	105	(19,053)	—
Disposal	(2,412)	(6,652)	(880)	(1,944)	(0)	(11,889)
Effect of foreign exchange rate fluctuation	(675)	(3,833)	(43)	(9)	(62)	(4,622)
Other changes	22	(1,241)	(4)	—	(81)	(1,304)
Balance as of March 31, 2020	¥ 121,842	¥ 429,196	¥ 23,445	¥ 35,589	¥ 23,995	¥ 634,068
Acquisition	2,009	1,291	61	16	27,084	30,460
Transfer from construction in progress	5,025	16,798	1,672	251	(23,746)	—
Disposal	(1,293)	(16,551)	(840)	(16)	(22)	(18,721)
Effect of foreign exchange rate fluctuation	1,115	6,130	84	47	572	7,948
Other changes	(3)	(940)	(108)	—	482	(569)
Balance as of March 31, 2021	¥ 128,695	¥ 435,924	¥ 24,315	¥ 35,887	¥ 28,365	¥ 653,186

Accumulated depreciation and accumulated impairment losses	Buildings and structures	Machinery and vehicles	Tools, furniture and fixtures	Land	Construction in progress	Total
(Millions of yen)						
Balance as of April 1, 2019	¥ (72,936)	¥ (323,959)	¥ (18,556)	¥ (3,048)	¥ —	¥ (418,499)
Depreciation	(4,598)	(21,619)	(1,532)	(111)	—	(27,860)
Disposal	2,164	6,602	875	16	—	9,657
Effect of foreign exchange rate fluctuation	219	1,812	37	4	—	2,071
Other changes	(18)	824	9	—	—	815
Balance as of March 31, 2020	¥ (75,169)	¥ (336,340)	¥ (19,167)	¥ (3,140)	¥ —	¥ (433,815)
Depreciation	(4,611)	(22,320)	(1,630)	(112)	—	(28,673)
Impairment losses	(63)	(12,089)	(5)	—	(7)	(12,164)
Disposal	1,009	16,303	838	16	—	18,166
Effect of foreign exchange rate fluctuation	(566)	(3,788)	(66)	(11)	0	(4,431)
Other changes	(0)	827	102	—	—	929
Balance as of March 31, 2021	¥ (79,400)	¥ (357,407)	¥ (19,928)	¥ (3,247)	¥ (7)	¥ (459,989)

Carrying amount	Buildings and structures	Machinery and vehicles	Tools, furniture and fixtures	Land	Construction in progress	Total
(Millions of yen)						
As of April 1, 2019	¥ 46,329	¥ 97,783	¥ 3,716	¥ 33,248	¥ 12,556	¥ 193,632
As of March 31, 2020	46,674	92,856	4,278	32,449	23,995	200,252
As of March 31, 2021	49,295	78,517	4,388	32,640	28,358	193,197

Note: 1. Depreciation of property, plant and equipment is included in "cost of sales," "selling, general and administrative expenses," and "other operating expenses" in the consolidated statement of income.
2. The details of Impairment losses are described in Note "12. Impairment Losses of Non-financial Assets".
3. Expenditures for property, plant and equipment under construction are stated as "construction in progress".
4. The amount of borrowing cost capitalized were ¥256 million and ¥387 million for FY2019 and FY2020, respectively.
5. Right-of-use assets included in Property, carrying amount of Plant and Equipment are described in Note "29. Leases".

11. Goodwill and Intangible Assets

(1) Schedule of movements

Historical cost	Intangible assets									
	Goodwill	Technology-related assets		Software		Other	Total			
		(Millions of yen)								
Balance as of April 1, 2019	¥	4,360	¥	6,494	¥	2,048	¥	3,649	¥	12,190
Acquisition		—		—		78		1,634		1,711
Transfer		—		—		413		(163)		250
Disposal		—		—		(195)		(0)		(195)
Effect of foreign exchange rate fluctuation		(57)		(84)		1		(71)		(154)
Balance as of March 31, 2020	¥	4,303	¥	6,409	¥	2,345	¥	5,048	¥	13,802
Acquisition		—		—		132		1,597		1,729
Transfer		—		—		153		(148)		5
Disposal		—		—		(329)		(391)		(721)
Effect of foreign exchange rate fluctuation		(238)		(355)		3		60		(292)
Balance as of March 31, 2021	¥	4,065	¥	6,055	¥	2,304	¥	6,165	¥	14,523

Accumulated amortization and accumulated impairment losses	Intangible assets					
	Goodwill	Technology-related assets	Software		Other	Total
			(Millions of yen)			
Balance as of April 1, 2019	¥ —	¥ (866)	¥ (1,444)	¥ (680)	¥ (2,990)	
Amortization	—	(425)	(306)	(62)	(793)	
Disposal	—	—	195	—	195	
Effect of foreign exchange rate fluctuation	—	9	2	14	25	
Balance as of March 31, 2020	¥ —	¥ (1,282)	¥ (1,554)	¥ (727)	¥ (3,563)	
Amortization	—	(417)	(316)	(64)	(796)	
Impairment losses	(4,195)	(4,582)	—	(133)	(4,716)	
Disposal	—	—	329	—	329	
Effect of foreign exchange rate fluctuation	130	226	(2)	(13)	210	
Balance as of March 31, 2021	¥ (4,065)	¥ (6,055)	¥ (1,542)	¥ (938)	¥ (8,535)	

Carrying amount	Goodwill	Intangible assets						
		Technology-related assets		Software		Other		Total
		(Millions of yen)						
As of April 1, 2019	¥ 4,360	¥ 5,628	¥ 604	¥ 2,968	¥ 9,200			
As of March 31, 2020	4,303	5,127	791	4,320	10,239			
As of March 31, 2021	—	—	761	5,227	5,989			

Note: 1. Amortization of intangible assets is included in "cost of sales" and "selling, general and administrative expenses" in the consolidated statement of income.
2. The details of Impairment losses are described in Note "12. Impairment Losses of Non-financial Assets".

(2) Significant intangible assets

Major intangible assets recorded in the consolidated statement of financial position as of March 31, 2020 were technology-related assets. The technology-related assets were recognized through the acquisition of SIRRUS Inc., a consolidated subsidiary, and their remaining useful life was 12 years.

In the fiscal year ended March 31, 2021, the Company wrote down the carrying amount of the technology-related assets to memorandum value, and accordingly impairment losses in the amount of ¥4,582 million were recognized. The details of impairment losses are described in Note "12. Impairment of losses of non-financial assets".

(3) Other disclosures

The Group's expenditures for research and development activities that were recognized as expenses in FY2019 and FY2020 were ¥14,774 million and ¥14,603 million, respectively. The expenditures were included in "cost of sales" and "selling, general and administrative expenses" in the consolidated statement of income.

12. Impairment Losses of Non-financial Assets

(1) NIPPON SHOKUBAI EUROPE N.V.

The Group recognized an impairment loss on property, plant and equipment held by NIPPON SHOKUBAI EUROPE N.V. (hereinafter "NSE"), a consolidated subsidiary of the Company in the Functional Chemicals segment in FY2020.

Demand has been decreasing due to the impact of COVID-19 and there has been strong pressure for price reduction on the superabsorbent polymers manufacturers including NSE due to intensifying competition among disposable diaper manufacturers. The business environment for superabsorbent polymers in Europe, where NSE is located, has been deteriorating in particular since the fourth quarter of FY2020. Though there is no change in the view that the balance of demand and supply will improve over the medium to long term, this severe situation is expected to continue in the short term. Considering these circumstances, the Group reviewed NSE's business plan and examined the recoverability in the future of property, plant and equipment held by NSE. As a result, the Group reduced the carrying amount of machinery and vehicles to the recoverable amount in FY2020.

1) Amount recognized in the consolidated financial statements for FY2020

(i) Consolidated statement of financial position

The carrying amount of property, plant and equipment held by NSE after recognizing the impairment loss was ¥26,168 million.

(ii) Consolidated statement of profit or loss

An impairment loss on property, plant and equipment of ¥11,903 million was recognized under other operating expenses.

2) Measurement method

The recoverable amount was measured based on fair value less costs of disposal. The fair value less costs of disposal was measured by discounting future cash flows over 10 years based on the business plan reflecting past experiences and external information to the present value and terminal value was added to it. The fair value measurement is categorized Level 3 of the fair value hierarchy based on the inputs used in the valuation technique.

3) Significant assumptions

Significant assumptions used in the measurement of the fair value less costs of disposal were future sales volumes, sales prices, discount rate, and long-term growth rate. The discount rate of each cash-generating unit was calculated based on the weighted average cost of capital, which was set at 9.5% for FY2019 and 8.2% for FY2020, respectively. In addition, the long-term growth rate of the cash flows for the period beyond the business plan was set at 2.0% (the inflation rate in the European market) for both FY2019 and FY2020.

In case the balance of demand and supply of superabsorbent polymers fluctuates differently than expected, sales volumes and sales prices may fluctuate, which in turn may affect the fair value measurement.

(2) SIRRUS Inc.

Goodwill arising from a business combination is allocated to the cash-generating unit that benefits from the business combination at the date of acquisition. The carrying amount by segment is as follows:

	March 31, 2020	March 31, 2021
	(Millions of yen)	
Functional Chemicals	¥ 4,303	¥ —

FY2019 (April 1, 2019 to March 31, 2020)

An impairment loss on goodwill is recognized when the recoverable amount is less than the carrying amount. The carrying amount of the relevant goodwill is reduced to its recoverable amount. The recoverable amount is measured based on the fair value less costs of disposal. To measure the fair value less costs of disposal, 10-year future cash flows estimated based on the business plan reflecting past experience and external information are discounted to their present value, and the terminal value of the business is added to them. The fair value measurement is categorized as Level 3 of the fair value hierarchy based on the inputs used in the valuation technique.

The Group did not record an impairment loss since the recoverable amount of the cash-generating unit exceeded the carrying amount as a result of the impairment test.

The Group used the discount rate, which is based on the weighted average cost of capital by a cash-generating unit, in the impairment test of goodwill. The pre-tax discount rate used in the impairment test was 15.4%. In addition, the growth rate of the cash flows for the period that exceeds the period of the business plan was set at 2.2% (the inflation rate in the United States).

Since the fair value less costs of disposal significantly exceeds the carrying amount of the relevant cash-generating unit, the Group has determined that significant impairment is unlikely to occur, even if the major assumptions used in the measurement of the fair value less costs of disposal, namely, the future cash flows and the weighted average cost of capital, change within a reasonable range.

FY2020 (April 1, 2020 to March 31, 2021)

The Group recognized impairment losses of ¥9,282 million on goodwill and technology-related assets associated with SIRRUS Inc., a consolidated subsidiary of the Company in the Functional Chemicals segment in FY2020.

Taking into account the fact that there have been delays in process development and customer evaluation at SIRRUS Inc. and that the amount of capital investment is expected to be larger than initially anticipated, the Group reviewed the business plan and examined recoverability in the future. As a result, the Group reduced the carrying amount to memorandum value based on value in use. Impairment losses were recognized in the consolidated statement of profit or loss under other operating expenses. The assets on which impairment losses were recognized are as follows:

Segment	Type	Amount
	(Millions of yen)	
Functional Chemicals	Goodwill	¥ 4,195
	Technology-related assets	4,582
	Other	505
	Total	¥ 9,282

13. Investments Accounted for Using the Equity Method

The carrying amounts of investments in affiliates and joint ventures individually immaterial are as follows:

	March 31, 2020	March 31, 2021
	(Millions of yen)	
Total carrying amount	¥ 19,823	¥ 20,108

The Group's shares of comprehensive income of affiliates and joint ventures individually immaterial are as follows:

	Years ended March 31,	
	2020	2021
	(Millions of yen)	
Group's share of profit	¥ 2,640	¥ 1,441
Group's share of other comprehensive income (loss)	(617)	60
Group's share of comprehensive income	¥ 2,023	¥ 1,501

14. Income Taxes

(1) Schedule of movements

The breakdown of deferred tax assets and liabilities and its movements are as follows:

FY2019 (April 1, 2019 to March 31, 2020)

	Beginning balance	Recognized through profit or loss	Recognized through other comprehensive income (loss)	Other	Ending balance
	(Millions of yen)				
Deferred tax assets:					
Depreciation (including impairment losses)	¥ 1,973	¥ (251)	¥ —	¥ (14)	¥ 1,708
Accrued bonuses	1,005	(104)	—	(0)	900
Net defined benefit liability	1,631	46	211	(0)	1,887
Unrealized income	265	5	—	—	270
Loss carried forward	1,034	331	—	(19)	1,345
Other	909	(105)	—	(2)	802
Total deferred tax assets	¥ 6,816	¥ (78)	¥ 211	¥ (36)	¥ 6,912
Deferred tax liabilities:					
Depreciation (overseas subsidiaries)	(719)	154	—	15	(550)
Intangible assets	(1,182)	89	—	16	(1,077)
Financial assets measured at fair value through other comprehensive income	(4,055)	—	1,148	—	(2,907)
Retained income of affiliates	(3,148)	153	82	—	(2,912)
Other	(972)	(24)	—	4	(992)
Total deferred tax liabilities	¥ (10,075)	¥ 372	¥ 1,230	¥ 35	¥ (8,437)
Net deferred tax assets (liabilities)	¥ (3,258)	¥ 294	¥ 1,440	¥ (1)	¥ (1,525)

FY2020 (April 1, 2020 to March 31, 2021)

	Beginning balance	Recognized through profit or loss	Recognized through other comprehensive income (loss)	Other	Ending balance
			(Millions of yen)		
Deferred tax assets:					
Depreciation (including impairment losses)	¥ 1,708	¥ 33	¥ —	¥ 17	¥ 1,758
Accrued bonuses	900	(48)	—	0	852
Net defined benefit liability	1,887	51	(1,437)	5	506
Unrealized income	270	40	—	—	310
Loss carried forward	1,345	(417)	—	5	933
Subsidiary investment	—	3,634	—	—	3,634
Other	802	339	—	(0)	1,141
Total deferred tax assets	¥ 6,912	¥ 3,632	¥ (1,437)	¥ 27	¥ 9,134
Deferred tax liabilities:					
Depreciation (overseas subsidiaries)	(550)	226	—	(1)	(325)
Intangible assets	(1,077)	1,050	—	27	—
Financial assets measured at fair value through other comprehensive income (loss)	(2,907)	—	(2,882)	—	(5,789)
Retained income of affiliates	(2,912)	(50)	(51)	—	(3,014)
Other	(992)	169	—	(5)	(827)
Total deferred tax liabilities	¥ (8,437)	¥ 1,395	¥ (2,934)	¥ 21	¥ (9,955)
Net deferred tax assets (liabilities)	¥ (1,525)	¥ 5,027	¥ (4,371)	¥ 48	¥ (821)

(2) Supplemental remarks to the note “(1) Schedule of movements”

Loss carried forward and deductible temporary differences for which deferred tax assets are not recognized are as follows:

	March 31, 2020	March 31, 2021
	(Millions of yen)	
Deductible temporary differences	¥ 6,911	¥ 19,933
Loss carried forward	18,288	21,106

In evaluating recoverability of deferred tax assets, the Group considers the scheduled reversal of deferred tax liabilities, projected future taxable income, and tax planning. As a result of the evaluation of recoverability, it does not recognize deferred tax assets for certain deductible temporary differences and loss carried forward.

The amount of loss carried forward for which deferred tax assets are not recognized and the expiration of carryforward are as follows:

	March 31, 2020	March 31, 2021
	(Millions of yen)	
Loss carried forward:		
Within 5 years	¥ 3,005	¥ 2,930
Beyond 5 years	15,283	18,177
Total	¥ 18,288	¥ 21,106

(3) Income tax expenses

The breakdown of income tax expenses are as follows:

	Years ended March 31,	
	2020	2021
	(Millions of yen)	
Current tax expenses	¥ 4,451	¥ 2,392
Deferred tax expenses:		
Temporary differences originated and reversed	(62)	(5,035)
Effect of tax changes	222	—
Changes in unrecognized deferred tax assets	(454)	8
Total deferred tax expenses	(294)	(5,027)
Total	¥ 4,157	¥ (2,635)

Current tax expenses include the amount of benefits arising from loss carryforwards and temporary differences recognized in prior periods, for which deferred tax assets were not recognized in prior periods. These effects decreased current income taxes by ¥29 million and ¥23 million for FY2019 and FY2020, respectively.

Deferred tax expenses include the amount of benefits arising from loss carryforwards and temporary differences for prior periods, for which deferred tax assets were not recognized in prior periods. These effects decreased deferred income taxes by ¥454 million and none for FY2019 and FY2020, respectively.

Adjustments between the effective statutory tax rate and the effective tax rate are as follows:

	Years ended March 31,	
	2020	2021
Effective statutory tax rate	30.6 %	30.6 %
Changes in unrecognized deferred tax assets	3.8 %	(27.1 %)
Difference between effective statutory tax rate and consolidated subsidiary's tax rate	(0.2 %)	(8.0 %)
Taxable temporary differences on investments in subsidiaries	— %	18.2 %
Share of profit of investments accounted for using equity method	(5.1 %)	3.4 %
Tax credits for research and development expenses	(5.3 %)	2.3 %
Change in tax rate	1.4 %	— %
Other	1.3 %	1.0 %
Effective tax rate	26.4 %	20.4 %

The Group is mainly subject to income tax, inhabitant tax, and enterprise tax. The effective statutory tax rate calculated based on these taxes was 30.6% for FY2019 and FY2020. However, foreign subsidiaries are subject to the tax rates at their locations.

15. Trade Payables

The breakdown of trade payables are as follows:

	March 31, 2020	March 31, 2021
	(Millions of yen)	
Notes and accounts payable – trade	¥ 44,741	¥ 45,912
Total	¥ 44,741	¥ 45,912

16. Interest-Bearing Debt

(1) Bonds and Borrowings

	March 31, 2020	March 31, 2021	Average interest rate	Maturity
	(Millions of yen)			
Short-term borrowings	¥ 10,956	¥ 4,323	0.50%	
Current portion of long-term borrowings	6,221	9,659	1.07%	
Current portion of bonds	—	10,000	0.11%	
Bonds	10,000	—	—	
Long-term borrowings	28,854	28,887	1.22%	2022 to 2026
Total	¥ 56,030	¥ 52,868	—	
Current liabilities	17,177	23,981	—	
Non-current liabilities	38,854	28,887	—	

Note: The average interest rates and due date are for the balances at the end of FY2020.

Details of bonds

	Currency	Maturity	Carrying value		Nominal interest rate (average)
			March 31, 2020	March 31, 2021	
	(Millions of yen)				
Unsecured straight bond No.8	Japanese yen	June 2021	¥ 10,000	¥ 10,000	0.11%
Total			¥ 10,000	¥ 10,000	

(2) Lease liabilities

	March 31, 2020	March 31, 2021	Average interest rate
	(Millions of yen)		
Lease liabilities	¥ 7,344	¥ 8,704	1.56%
Current liabilities	968	1,414	—
Non-current liabilities	6,376	7,291	—

Note: 1. The average interest rate is applicable for FY2020.
2. Lease liabilities are included in "other financial liabilities" in the consolidated statement of financial position.

(3) Pledged assets

Assets pledged as collateral and secured debt are as follows:

Assets pledged as collateral

	March 31, 2020	March 31, 2021
	(Millions of yen)	
Property, plant and equipment	¥ 280	¥ 280
Other financial assets	8	8
Total	288	288
Secured debt		
	March 31, 2020	March 31, 2021
	(Millions of yen)	
Trade payables	¥ 12	¥ 9
Short-term borrowings	350	470
Total	362	479

17. Reconciliation of Liabilities Arising from Financing Activities

FY2019 (April 1, 2019 to March 31, 2020)

Item	Beginning balance	Changes in cash flows	Non-cash changes						Ending balance	
			Acquisition	Effect of adoption of IFRS 16	Foreign exchange fluctuations	Other				
(Millions of yen)										
Short-term borrowings	¥ 8,091	¥ 3,005	¥ —	¥ —	¥ (141)	¥ —	¥ 10,956			
Long-term borrowings	37,662	(1,668)	—	—	(919)	—	35,075			
Bonds	10,000	—	—	—	—	—	10,000			
Lease obligations	879	(1,751)	2,567	5,789	(106)	(33)	7,344			
Total	¥ 56,633	¥ (414)	¥ 2,567	¥ 5,789	¥ (1,167)	¥ (33)	¥ 63,375			

FY2020 (April 1, 2020 to March 31, 2021)

Item	Beginning balance	Changes in cash flows	Non-cash changes			Ending balance
			Acquisition	Foreign exchange fluctuations	Other	
				(Millions of yen)		
Short-term borrowings	¥ 10,956	¥ (6,834)	¥ —	¥ 201	¥ —	¥ 4,323
Long-term borrowings	35,075	1,886	—	1,585	—	38,545
Bonds	10,000	—	—	—	—	10,000
Lease liabilities	7,344	(1,682)	3,277	134	(369)	8,704
Total	¥ 63,375	¥ (6,630)	¥ 3,277	¥ 1,919	¥ (369)	¥ 61,572

18. Provisions

The breakdown and movements in provisions are as follows:

FY2019 (April 1, 2019 to March 31, 2020)

	Provision for bonuses	Asset retirement obligations	Other provisions	Total
(Millions of yen)				
Beginning balance	¥ 3,676	¥ 1,896	¥ 1,502	¥ 7,074
Increases during the period	8,384	110	1,422	9,916
Provision utilized	(8,682)	—	(1,407)	(10,090)
Other	(15)	(77)	(0)	(92)
Ending balance:	¥ 3,362	¥ 1,929	¥ 1,517	¥ 6,808
Current liabilities	3,362	—	1,517	4,879
Non-current liabilities	—	1,929	—	1,929

FY2020 (April 1, 2020 to March 31, 2021)

	Provision for bonuses	Asset retirement obligations	Other provisions	Total
(Millions of yen)				
Beginning balance	¥ 3,362	¥ 1,929	¥ 1,517	¥ 6,808
Increases during the period	7,841	63	1,369	9,273
Provision utilized	(7,969)	—	(1,417)	(9,386)
Other	30	165	(0)	195
Ending balance:	¥ 3,265	¥ 2,157	¥ 1,469	¥ 6,891
Current liabilities	3,265	—	1,469	4,734
Non-current liabilities	—	2,157	—	2,157

Provision for bonuses

To provide for payment of bonuses to employees, provision for bonuses was recorded in FY 2020 based on an estimate of the amount to be paid.

Asset retirement obligations

To provide for obligations to restore plant and equipment and premises that the Group uses and removal of hazardous materials, the Group records asset retirement obligations based on estimated amounts to be paid in the future based on past results. Although these expenses are estimated to be mainly paid after one year or more, they may be affected by future business plans.

19. Employee Benefits

(1) Outline of post-employment benefit system

The Company and its major subsidiaries operate both funded and unfunded defined benefit plans and defined contribution plans to cover payment of net defined benefits to employees.

Under the defined benefit corporate pension plans (funded plans), lump-sums or pensions are paid in accordance with employees' salaries and service years. Under the lump-sums retirement benefit plans (unfunded plans), lump-sums are paid as defined benefit based on employees' salaries and service years. The Company introduces a cash balance plan for the defined benefit pension plan and lump-sums retirement benefit plan. Under the cash balance plan, a hypothetical account that is equivalent to amounts credited and pension fund is prepared for each eligible employee. Primarily, interest credits based on market interest trends and contribution credits based on employees' salary levels are accumulated in the hypothetical account.

These pension plans are exposed to investment risk, interest rate risk, inflation risk, and the like.

(2) Defined benefit plans

1) Reconciliation of present value of defined benefit plan obligations

Changes in the present value of defined benefit plan obligations are as follows:

	Years ended March 31,	
	2020	2021
	<i>(Millions of yen)</i>	
Beginning balance of the present value of defined benefit plan obligations:	¥ 42,650	¥ 43,203
Service cost	1,901	1,991
Interest cost	301	319
Remeasurements of defined benefit plans:		
Actuarial gains and losses arising from changes in demographic assumptions	0	105
Actuarial gains and losses arising from changes in financial assumptions	(78)	(1,839)
Other	194	(74)
Benefits paid	(1,696)	(2,060)
Other	(69)	107
Ending balance of the present value of defined benefit plan obligations	¥ 43,203	¥ 41,753

Note: The weighted average durations of defined benefit plan obligations are 17.7 years and 17.4 years as of March 31, 2020 and 2021, respectively.

2) Changes in the fair value of plan assets

Changes in the fair value of plan assets are as follows:

	Years ended March 31,	
	2020	2021
	(Millions of yen)	
Beginning balance of the fair value of plan assets:	¥ 36,680	¥ 36,235
Interest income	223	230
Remeasurements of defined benefit plans:		
Return on plan assets	(618)	2,816
Employer contributions	959	1,038
Benefits paid	(1,010)	(1,187)
Other	0	32
Ending balance of the fair value of plan assets	¥ 36,235	¥ 39,162

Note: The employer contributions for FY2021 are expected to be ¥1,083 million.

3) Reconciliation of the ending balances of defined benefit obligations and plan assets and amounts reported in the consolidated statement of financial position

Amounts reported in the consolidated statement of financial position are as follows:

	March 31, 2020		March 31, 2021	
	(Millions of yen)			
Present value of defined benefit obligations	¥	(43,203)	¥	(41,753)
Fair value of plan assets		36,235		39,162
Net amount of liabilities and assets reported in the consolidated statement of financial position	¥	(6,969)	¥	(2,591)
Amounts reported in the consolidated statement of financial position:				
Net defined benefit liability	¥	(14,509)	¥	(14,162)
Net defined benefit asset		7,540		11,571
Net amount of liabilities and assets reported in the consolidated statement of financial position	¥	(6,969)	¥	(2,591)

4) Breakdown of plan assets

The composition of fair value of plan assets for each fiscal year is as follows:

FY2019 (As of March 31, 2020)

	With quoted market price in an active market		With no quoted market price in an active market		Total
			(Millions of yen)		
Debt instruments	¥	—	¥	27,569	¥ 27,569
Equity instruments		61		5,752	5,813
General account		—		176	176
Cash and deposits		739		—	739
Other		—		1,937	1,937
Total	¥	800	¥	35,434	¥ 36,235

Note: 1. Debt instruments include alternative investments whose risk level is equivalent to that of bonds.
2. Debt instruments are mainly composed of bonds in Japan.
3. The total of plan assets includes 0.3% of employee pension trust set up for the corporate pension plan.

FY2020 (As of March 31, 2021)

	With quoted price in an active market	With no quoted price in an active market	Total
		(Millions of yen)	
Debt instruments	¥ —	¥ 28,972	¥ 28,972
Equity instruments	73	6,875	6,948
General account	—	184	184
Cash and deposits	439	—	439
Other	—	2,619	2,619
Total	¥ 512	¥ 38,650	¥ 39,162

Note: 1. Debt instruments include alternative investments whose risk level is equivalent to that of bonds.
2. Debt instruments are mainly composed of bonds in Japan.
3. The total of plan assets includes 0.3% of employee pension trust set up for the corporate pension plan.

To ensure the payment pension benefits and lump-sums in the future, the plan assets are managed to secure necessary aggregate return over the long term considering the medium-term downside risks.

To achieve the objective, the asset portfolio is determined after considering basic factors, such as the expected return, risk, and correlation coefficient, and the target asset allocation based on safety and efficiency from a medium- to long-term diversified investment viewpoint and is reviewed as necessary.

5) Significant actuarial assumptions

Main actuarial assumptions used for calculating the present value of defined benefit plan obligations are as follows:

	March 31, 2020	March 31, 2021
Discount rate	0.63%	0.71%

6) Sensitivity analysis of defined benefit obligations

The sensitivity analysis of defined benefit obligations pertaining to changes in the weighted average of significant actuarial assumptions is as follows:

		March 31, 2020	March 31, 2021
		(Millions of yen)	
Discount rate	0.5% increase	¥ (2,940)	¥ (2,804)
	0.5% decrease	3,351	3,185

The above sensitivity analysis assumes that all other assumptions other than the one analyzed remain unchanged. In reality, any change in assumptions may occur interrelatedly.

In calculating the sensitivity of defined benefit obligations to the significant actuarial assumptions, the same method that is used to calculate defined benefit obligations recognized in the consolidated statement of financial position (the present value of defined benefit plan obligations calculated by the projected unit credit method at the end of the reporting period) is applied.

(3) Defined contribution plan

The expenses reported with regard to the defined contribution pension plans (including public pension plans in countries where the Group's companies are located) was ¥202 million for FY2019 and ¥122 million for FY2020.

(4) Employee benefit expenses

The employee benefit expenses other than net defined benefits included in the consolidated statement of income was ¥39,494 million for FY2019 and ¥38,572 million for FY2020.

Employee benefit expenses are mainly composed of salaries, bonuses, and expenses for paid leave, and are included in "cost of sales" and "selling, general and administrative expenses" in the consolidated statement of income.

20. Equity and Other Equity Items

(1) Share capital and treasury shares

The number of shares authorized, class of shares issued, total number of shares issued, and class and number of treasury shares are as follows:

	Years ended March 31,	
	2020	2021
	Common stock	Common stock
Number of shares authorized (Thousands of shares)	127,200	127,200
Shares issued:		
Number of shares at beginning of period (Thousands of shares)	40,800	40,800
Changes in number of shares during the period (Thousands of shares)	—	—
Number of shares at end of period (Thousands of shares)	40,800	40,800
Treasury shares:		
Number of shares at beginning of period (Thousands shares)	922	923
Changes in number of shares during the period (Thousands of shares)	0	1
Number of shares at end of period (Thousand shares)	923	924

Note: Changes in the number of treasury shares represent the increase due to the acquisition of shares less than one unit.

(2) Surplus

1) Capital surplus

The Companies Act of Japan ("Companies Act") provides that at least one-half of paid-in or contribution for the issuance of shares shall be credited to share capital and the rest be appropriated as capital reserve within capital surplus.

Capital reserves can be appropriated as share capital by resolution at the shareholders' meeting.

2) Retained earnings

The Companies Act requires that one-tenth of retained earnings appropriated for dividends be retained as capital reserve or earned legal reserve until the total amount of earned legal reserve included in capital reserve and retained earnings reaches a quarter of share capital. Earned legal reserves may be revised by resolution at the shareholders' meeting.

(3) Other components of equity

1) Net changes in financial assets measured at fair value through other comprehensive income

It represents the difference between the historical cost and fair value of equity financial instruments measured at fair value through other comprehensive income. When disposing of equity financial instruments measured at fair value through other comprehensive income, the Group transfers the difference between the historical cost and fair value from other components of equity to retained earnings.

2) Remeasurement of defined benefit plans

It represents changes in the present value of defined benefit plan obligations arising from the change of actuarial assumptions and actual results and the difference between projected and actual return of the plan assets. These are recognized as other comprehensive income as incurred and are immediately transferred from other components of equity to retained earnings.

3) Exchange differences on translation of foreign operations

It represents foreign exchange translation differences that occur when translating financial statements of foreign operations prepared in foreign currencies into Japanese yen, the Group's functional currency.

21. Dividends

FY2019 (April 1, 2019 to March 31, 2020)

(1) Dividends paid

Resolution	Class of shares	Total dividends (millions of yen)	Dividends per share (yen)	Record date	Effective date
Ordinary General Meeting of Shareholders held on June 20, 2019	Common stock	3,589	90.00	March 31, 2019	June 21, 2019
Board of Directors meeting held on November 6, 2019	Common stock	3,589	90.00	September 30, 2019	December 5, 2019

(2) Dividends whose record date falls in FY2019 and the effective date falls in FY2020

Resolution	Class of shares	Source of dividends	Total dividends (millions of yen)	Dividends per share (yen)	Record date	Effective date
Ordinary General Meeting of Shareholders held on June 19, 2020	Common stock	Retained earnings	3,589	90.00	March 31, 2020	June 22, 2020

FY2020 (April 1, 2020 to March 31, 2021)

(1) Dividends paid

Resolution	Class of shares	Total dividends (millions of yen)	Dividends per share (yen)	Record date	Effective date
Ordinary General Meeting of Shareholders held on June 19, 2020	Common stock	3,589	90.00	March 31, 2020	June 22, 2020
Board of Directors meeting held on November 6, 2020	Common stock	1,794	45.00	September 30, 2020	December 7, 2020

(2) Dividends whose record date falls in FY2020 and the effective date falls in FY2021

Resolution	Class of shares	Source of dividends	Total dividends (millions of yen)	Dividends per share (yen)	Record date	Effective date
Ordinary General Meeting of Shareholders held on June 22, 2021	Common stock	Retained earnings	1,794	45.00	March 31, 2021	June 23, 2021

22. Revenue

(1) Breakdown of revenue

The Group's operations principally consist of the Basic Chemicals, Functional Chemicals, and Environment and Catalysts businesses. Revenue reported by these businesses is presented and is monitored by the Company's Board of Directors regularly to determine the allocation of management resources and to evaluate business performance. Revenue is classified by region based on the location of customers. The relationship between the revenue classified by region and that by reporting segment is described in Note "5. Segment Information".

1) Basic Chemicals business

The Basic Chemicals business is engaged in sales of chemical products, including acrylic acids, acrylic ester, ethylene oxides, and their inducing substances. Main customers are users of finished goods.

In the Basic Chemicals business, the Group recognizes revenue from the sales of the products when control over such products is transferred to the customer or equivalently, upon delivery of the products to the customer, since the legal title to the products and physical possession of the products, and significant risks and rewards of ownership of the products, are transferred to the customer and the Group obtains rights to receive payments from the customer. Revenue from the sales of these products is measured at the transaction prices fixed in the contract with the customer. The Group receives a consideration for a transaction within one year after fulfilling the performance obligations, and the consideration does not include a significant financing component.

2) Functional Chemicals business

The Functional Chemicals business is engaged in sales of chemical products, including superabsorbent polymers, polymers for concrete admixture, and electronic and information materials. Main customers are users of finished goods.

In the Functional Chemicals business, the Group recognizes revenue from the sales of the products when control over such products is transferred to the customer or equivalently, upon delivery of the products to the customer, since the legal title to the products and physical possession of the products, and significant risks and rewards of ownership of the products, are transferred to the customer and it obtains rights to receive payments from the customer. Revenue from the sales of these products is measured at the transaction prices fixed in the contract with the customer. The Group receives a consideration for a transaction within one year after fulfilling the performance obligations, and the consideration does not include a significant financing component.

3) Environment and Catalysts business

The Environment and Catalysts business is engaged in sales of process catalysts, De-NOx catalysts, dioxin decomposition catalysts, and fuel cell materials. Main customers are users of finished goods.

In the Environment and Catalysts business, the Group recognizes revenue from the sales of the products mainly when control over such products is transferred to the customer or equivalently, upon delivery of the products to the customer, since the legal title to the products and physical possession of the products, and significant risks and rewards of ownership of the products, are transferred to the customer and it obtains rights to receive payments from the customer. Regarding the sale of waste gas treatment equipment in the Environment and Catalysts business, the performance obligation is satisfied over time. In measuring the progress in satisfying the performance obligation, the Group applies the cost-to-cost method (a method calculates revenue based on the ratio of cumulative actual costs incurred to estimated total costs as of the end of the fiscal year). Regardless of the difference of the methods on recognizing revenue, revenue from the sales of these products is measured based on the transaction prices fixed in the contract with the customer. The Group receives a consideration for a transaction mainly within one year after fulfilling the performance obligations, and the consideration does not include a significant financing component.

(2) Balance of outstanding contracts

	March 31, 2020		March 31, 2021	
	(Millions of yen)			
Trade receivables arising from contracts with customers				
Notes and accounts receivable – trade	¥	74,580	¥	82,061
Contractual liabilities		98		177

In FY2019 and FY2020, the amounts of revenue recognized from performance obligations fulfilled in the past periods were immaterial.

23. Selling, General and Administrative Expenses

Breakdown of selling, general and administrative expenses are as follows:

		Years ended March 31,		
		2020		2021
		(Millions of yen)		
Transportation and warehousing expenses	¥	12,835	¥	13,312
Employee benefit expenses		8,817		8,736
Research and development expenses		13,399		13,217
Other		6,852		6,222
Total	¥	41,903	¥	41,486

24. Other Operating Income and Other Operating Expenses

Breakdown of other operating income are as follows:

	Years ended March 31,			
	2020		2021	
	(Millions of yen)			
Real estate rent	¥	1,250	¥	1,141
Technical support fee		387		390
Insurance claim income		348		155
Gain on sales of fixed assets		381		6
Other		714		606
Total	¥	3,080	¥	2,297

Breakdown of other operating expenses are as follows:

	Years ended March 31,			
	2020		2021	
	(Millions of yen)			
Impairment losses	¥	—	¥	21,185
Business integration related expenses		—		1,713
Expenses for removing non-current assets		414		653
Losses on disposal of property, plant and equipment		—		277
Taxes and dues		276		273
Depreciation		197		157
Other		596		520
Total	¥	1,483	¥	24,778

Note: The Company and Sanyo Chemical Industries, Ltd. cancelled the business integration and revoked the final agreement concerning the business integration. The Company recorded those expenses incurred due to the cancellation of the business integration as business integration-related expenses.

25. Finance Income and Finance Expenses

The breakdown of finance income are as follows:

	Years ended March 31,			
	2020		2021	
	(Millions of yen)			
Interest income				
Financial assets measured at amortized cost	¥	263	¥	205
Dividend income				
Financial assets measured at fair value through other comprehensive income		1,472		1,180
Foreign exchange gains, net		—		525
Other		5		13
Total	¥	1,741	¥	1,922

Note: 1. Dividend income is mainly from dividends on corporate equities continuously held.
2. Gain or loss arising from valuation of forward exchange contracts that were not designated as hedges were included in Foreign exchange gains, net.

The breakdown of finance expenses are as follows:

	Years ended March 31,			
	2020		2021	
	(Millions of yen)			
Interest expenses				
Financial liabilities measured at amortized cost	¥	573	¥	340
Foreign exchange losses, net		1,190		—
Other		48		29
Total	¥	1,811	¥	369

Note: Gain or loss arising from valuation of forward exchange contracts that were not designated as hedges were included in Foreign exchange losses, net.

26. Other Comprehensive Income

Breakdown of other comprehensive income is as follows:

	Years ended March 31,			
	2020		2021	
	(Millions of yen)			
Items that will not be reclassified to profit or loss				
Net changes in financial assets measured at fair value through other comprehensive income (loss):				
Amount arising during period	¥	(4,795)	¥	10,710
Amount of tax effect		1,148		(2,882)
Net amount		(3,647)		7,827
Remeasurement of defined benefit plans:				
Amount arising during period		(734)		4,623
Tax effects		211		(1,437)
Net of tax effect	¥	(523)	¥	3,186
Share of other comprehensive income (loss) of investments in affiliates and joint ventures accounted for using equity method:				
Amount arising during period		(7)		20
Total of items that will not be reclassified to profit or loss	¥	(4,178)	¥	11,033
Items that may be reclassified to profit or loss				
Exchange differences on translation of foreign operations:				
Amount arising during period		(2,513)		2,997
Reclassification adjustments		—		—
Before tax effect		(2,513)		2,997
Tax effects		37		(43)
Net of tax effect	¥	(2,476)	¥	2,954
Share of other comprehensive income (loss) of investments in affiliates and joint ventures accounted for using equity method:				
Amount arising during period		(610)		41
Total of items that may be reclassified to profit or loss	¥	(3,086)	¥	2,995
Other comprehensive income (loss)	¥	(7,264)	¥	14,028

27. Earnings Per Share

Earnings per share and the basis for its calculation are as follows. Diluted earnings per share are not shown since there are no diluted shares outstanding.

	Years ended March 31,			
	2020		2021	
Profit (loss) attributable to owners of parent (Millions of yen)	¥	11,094	¥	(10,899)
Average number of shares of common stock during the period (Thousands of shares)		39,877		39,876
Basic earnings (loss) per share(Yen)	¥	278.21	¥	(273.33)

28. Financial Instruments

(1) Capital management

The Group aims at achieving a sustainable growth of its businesses by securing financial stability through the strengthening of capital position and reduction of financial risk. To accomplish that, the Group monitors the financial condition using the indices, such as shareholders' equity ratio, the total debt to total assets ratio, and D/E ratio.

	March 31, 2020	March 31, 2021
Shareholders' equity ratio (%)	67.2	67.3
Total debt to total asset ratio (%)	13.3	13.1
D/E ratio (times)	0.20	0.19

Note: Shareholders' equity ratio = Equity attributable to owners of parent/Total assets

Total debt to total assets ratio = Interest-bearing debt/Total assets

D/E ratio = Interest-bearing debt/ Equity attributable to owners of parent

(2) Financial risk management

The Group's business activities may be affected by various risks, including market risk, credit risk, and liquidity risk. While recognizing the possibility of occurrence of such risks, the Group makes every possible effort to prevent their occurrence and to manage them if they occur. Furthermore, the Company's Board of Directors implements company-wide measures as appropriate in response to the Company's exposure to various risks.

(3) Market risk

1) Foreign exchange risk

As the Group operates its business globally, it owns trade receivables and payables denominated in foreign currencies. These trade receivables and payables are exposed to the risk of fluctuations of foreign exchange rates. The Group enters into forward exchange contracts to hedge the risk of the trade receivables and the payables denominated in foreign currencies.

With regard to financial instruments denominated in foreign currencies that the Group owned as of March 31, 2020 and 2021, the table below shows the impact on profit before income tax in the Group's consolidated statement of income (foreign exchange sensitivity) in case the Japanese yen appreciates by 1.0% against the US dollar and Euro (The sensitivity analysis assumes that all other variables remain unchanged).

	Years ended March 31,			
	2020		2021	
		(Millions of yen)		
US dollar	¥	(22)	¥	(34)
Euro		(80)		(9)

2) Interest rate risk

The Group covers working capital and capital expenditures using its own capital, bonds, and borrowings. As certain interest rates on its borrowings are floating rates, the Group is exposed to the risk of changes in interest rates. The Group enters into interest rate swap contracts to reduce such risk as necessary.

The effect of changes in market interest rates on the Group's operating profit is immaterial.

3) Share price fluctuation risk

As the Group owns shares of business partners for reinforcing business collaboration or capital tie-ups, it is exposed to the risk of market price fluctuations. To reduce such risk, the Group periodically assesses the market value and financial condition of issuers (business partners) and continually reviews the holding purpose by considering its relationships with business partners.

The table below shows the impact on other comprehensive income (net of tax effects) with regard to the equity financial instruments that the Group owned as of March 31, 2020 and March 31, 2021, in case the market price fluctuates by 10% (The analysis assumes that all other variables remain unchanged).

	March 31, 2020		March 31, 2021	
		(Millions of yen)		
10% change in market price	¥	2,023	¥	2,761

4) Derivative transactions

The Group enters into forward exchange contracts to hedge the risk of fluctuation in foreign exchange rates pertaining to trade receivables and payables denominated in foreign currencies, and interest rate swap contracts to hedge the risk of fluctuation in interest rates related to borrowings. The Finance & Accounting Division, etc. is responsible for managing derivative contracts and report the status of such transactions to directors in charge every month.

Transactions for which hedge accounting was applied

There are no derivative transactions as of March 31, 2020 and March 31, 2021 for which hedge accounting was applied.

Transactions for which hedge accounting was not applied

	March 31, 2020			March 31, 2021		
	Contract amount	Beyond 1 year	Fair value	Contract amount	Beyond 1 year	Fair value
			(Millions of yen)			
Forward exchange contracts						
Selling position	¥ 9,512	¥ —	¥ 11	¥12,213	¥ —	¥(368)
Buying position	13	—	(0)	39	—	(0)

(4) Credit risk

Credit risk is the risk of incurring losses where an obligor, an issuer of financial assets owned by the Group, fails to honor its obligations. With regard to trade receivables, each business division regularly monitors the condition of major business partners, manages due dates and balances for each business partner, and assesses the credit condition of major business partners every six months. The consolidated subsidiaries also manage their credit risk in accordance with the above-mentioned procedures.

With regard to derivative transactions, the Group judges that credit risk is minimal since the counterparties are financial institutions with high credit ratings. There is no excessive concentration of the credit risk that requires special management.

The carrying amount of financial assets after deducting provisions for doubtful accounts in the consolidated statement of financial position is the maximum exposure to the credit risk of the Company's financial assets that does not take into account collateral held and other credit enhancements. In addition, the maximum exposure to the credit risk of the debt guarantee is the amount stated in Note "33. Contingencies".

The Group recognizes expected credit losses for trade receivables and other financial assets as provisions for doubtful accounts.

As trade receivables do not include significant financial components, the Group always measures provisions for doubtful accounts at an amount equivalent to lifetime expected credit losses. With regard to other financial assets, when credit risk has increased significantly, the Group measures provisions for such financial assets at an amount equivalent to lifetime expected credit losses; when credit risk has not increased significantly, the Group measures provisions for such financial assets at an amount equivalent to the 12-month expected credit losses.

The Group judges whether or not credit risk has increased significantly based on changes in risk of the occurrence of a default. When judging such changes, the Group mainly considers past due information. The Group judges that credit risk has increased when a payment is overdue. However, it judges that credit risk has not increased significantly taking into consideration the reasons for the overdue payment and relevant information on the financial condition of a business partner. In principle, when the number of days past due exceeds one year, the Group judges that a default has occurred.

The Group classifies financial assets as credit-impaired financial assets if a business partner faces serious financial difficulty or there is an increase in possibility that a business partner will go bankrupt or commence debt consolidation proceedings.

With regard to all or part of financial assets, for any non-recoverable amount in the future, the total carrying amount of such financial assets is directly written-off accordingly.

The changes in provisions for doubtful accounts are as follows.

FY2019 (April 1, 2019 to March 31, 2020)

	Trade receivables (financial assets whose provisions for doubtful accounts are always measured at an amount equal to the lifetime expected credit losses)		Other financial assets		Total	
			Financial assets measured at an amount equal to the 12-month expected credit losses	Financial assets measured at an amount equal to the lifetime expected credit losses		
			(Millions of yen)			
Beginning balance	¥	10	¥	63	¥	73
Increase during period		3		10		13
Utilized		(0)		(13)		(13)
Reversal		(3)		—	(0)	(3)
Other (note)		0		—		0
Ending balance	¥	10	¥	60	¥	70

Note: "Other" includes mainly the impact of foreign exchange translation.

FY2020 (April 1, 2020 to March 31, 2021)

	Trade receivables (financial assets whose provisions for doubtful accounts are always measured at an amount equal to the lifetime expected credit losses)		Other financial assets		Total	
			Financial assets measured at an amount equal to the 12-month expected credit losses	Financial assets measured at an amount equal to the lifetime expected credit losses		
	(Millions of yen)					
Beginning balance	¥	10	¥	60	¥	70
Increase during period		3		14		17
Utilized		(2)		(10)		(12)
Reversal		(3)		(1)	(0)	(4)
Other (note)		0		—	—	0
Ending balance	¥	8	¥	62	¥	70

Note: "Other" includes mainly the impact of foreign exchange translation.

Information on trade receivables and other financial assets past due as of March 31, 2020 and March 31, 2021 is as follows:

FY2019(As of March 31, 2020)

Number of days past due	Trade receivables (financial assets whose provisions for doubtful accounts are always measured at an amount equal to the lifetime expected credit losses)	Other financial assets		Total
		Financial assets measured at an amount equal to the 12-month expected credit losses	Financial assets measured at an amount equal to the lifetime expected credit losses	
		(Millions of yen)		
Not past due	¥ 73,227	¥ 3,196	¥ —	¥ 76,423
Past due within 6 months	1,260	—	—	1,260
Past due over 6 months within 12 months	89	—	—	89
Past due over 12 months	4	—	0	4
Total	¥ 74,580	¥ 3,196	¥ 0	¥ 77,776

FY2020(As of March 31, 2021)

Number of days past due	Trade receivables (financial assets whose provisions for doubtful accounts are always measured at an amount equal to the lifetime expected credit losses)	Other financial assets		Total
		Financial assets measured at an amount equal to the 12-month expected credit losses	Financial assets measured at an amount equal to the lifetime expected credit losses	
		(Millions of yen)		
Not past due	¥ 80,293	¥ 3,258	¥ —	¥ 83,550
Past due within 6 months	1,748	—	—	1,748
Past due over 6 months within 12 months	19	—	—	19
Past due over 12 months	1	—	0	1
Total	¥ 82,061	¥ 3,258	¥ 0	¥ 85,319

(5) Liquidity risk

Liquidity risk is the risk that the Group will be unable to perform its repayment obligations for financial liabilities on the due date. Each group company manages liquidity risk by preparing their funding plans in a timely manner.

Contractual maturities of major financial liabilities are as follows:

Financial guarantee contracts are not included in the tables below since the Group is obliged when a demand for execution is made.

FY2019 (As of March 31, 2020)

	Contract amount	Within 1 year	Over 1 year within 2 years	Over 2 years within 3 years	Over 3 years within 4 years	Over 4 years within 5 years	Over 5 years
(Millions of yen)							
Non-derivative financial liabilities							
Trade payables	¥ 44,741	¥ 44,741	¥ —	¥ —	¥ —	¥ —	¥ —
Bonds	10,000	—	10,000	—	—	—	—
Short-term borrowings	10,956	10,956	—	—	—	—	—
Long-term borrowings	35,075	6,221	9,030	9,726	6,583	2,781	735
Lease liabilities	7,344	968	907	726	1,664	473	2,606
Total	¥ 108,115	¥ 62,885	¥ 19,937	¥ 10,452	¥ 8,247	¥ 3,254	¥ 3,340
Derivative financial liabilities							
Interest rate derivatives	8	8	—	—	—	—	—
Total	¥ 8	¥ 8	¥ —	¥ —	¥ —	¥ —	¥ —

FY2020 (As of March 31, 2021)

	Contract amount	Within 1 year	Over 1 year within 2 years	Over 2 years within 3 years	Over 3 years within 4 years	Over 4 years within 5 years	Over 5 years
(Millions of yen)							
Non-derivative financial liabilities							
Trade payables	¥ 45,912	¥ 45,912	¥ —	¥ —	¥ —	¥ —	¥ —
Bonds	10,000	10,000	—	—	—	—	—
Short-term borrowings	4,323	4,323	—	—	—	—	—
Long-term borrowings	38,545	9,659	12,109	9,918	5,958	902	—
Lease liabilities	8,704	1,414	1,323	1,968	830	745	2,425
Total	¥ 107,484	¥ 71,307	¥ 13,431	¥ 11,886	¥ 6,788	¥ 1,647	¥ 2,425
Derivative financial liabilities							
Interest rate derivatives	368	368	—	—	—	—	—
Total	¥ 368	¥ 368	¥ —	¥ —	¥ —	¥ —	¥ —

(6) Fair value of financial instruments

1) Fair value and carrying amount

The carrying amount and fair value of financial assets and liabilities measured at amortized cost are as follows:

Financial assets whose carrying values approximate their fair values are not included in the table below.

	March 31, 2020		March 31, 2021	
	Carrying amount	Fair value	Carrying amount	Fair value
(Millions of yen)				
Financial liabilities measured at amortized cost				
Bonds and long-term borrowings	¥ 45,075	¥ 45,634	¥ 48,545	¥ 48,832
Total financial liabilities	¥ 45,075	¥ 45,634	¥ 48,545	¥ 48,832

2) Calculation methods of fair value

The fair values of financial assets and liabilities are determined by the following methods. When estimating fair values of financial instruments, market prices are used when available. The fair value of financial instruments without market prices is estimated by discounting the future cash flows or using other appropriate valuation techniques.

(i) Long-term borrowings

The fair value of long-term borrowings is calculated by discounting the total amounts of principal and interest to the present value using the incremental borrowing rate.

(ii) Bonds

The fair value of bonds is determined based on their market prices.

3) Fair value hierarchy

The table below shows the analysis on financial instruments reported by fair values. Each level is defined as follows:

Level 1: Fair values measured at quoted prices (unadjusted) for identical assets or liabilities in active markets

Level 2: Fair values measured using direct or indirect observable inputs other than Level 1

Level 3: Fair values measured using unobservable inputs

FY2019 (As of March 31, 2020)

	Level 1		Level 2		Level 3		Total	
(Millions of yen)								
Financial assets measured at fair value through profit or loss								
Debt instruments	¥	728	¥	—	¥	—	¥	728
Derivative assets		—		19		—		19
Other		—		59		353		412
Financial assets measured at fair value through other comprehensive income								
Equity instruments		29,148		—		3,179		32,326
Other		—		—		1		1
Total assets	¥	29,876	¥	78	¥	3,532	¥	33,486
Financial liabilities measured at fair value through profit or loss								
Derivative liabilities		—		8		—		8
Total liabilities	¥	—	¥	8	¥	—	¥	8

FY2020 (As of March 31, 2021)

	Level 1	Level 2	Level 3	Total
	(Millions of yen)			
Financial assets measured at fair value through profit or loss				
Debt instruments	¥ 576	¥ —	¥ 332	¥ 908
Derivative assets	—	—	—	—
Other	—	59	509	568
Financial assets measured at fair value through other comprehensive income				
Equity instruments	39,789	—	2,870	42,659
Other	—	—	1	1
Total assets	¥ 40,364	¥ 59	¥ 3,712	¥ 44,135
Financial liabilities measured at fair value through profit or loss				
Derivative liabilities	—	368	—	368
Total liabilities	¥ —	¥ 368	¥ —	¥ 368

Listed shares are classified as Level 1 in the fair value hierarchy since their fair values are measured using quoted prices in the stock exchange.

Derivative transactions are classified as Level 2 in the fair value hierarchy since their fair values are measured using assessed valuations calculated using observable inputs, including foreign exchange rates provided by correspondent financial institutions.

Unlisted stocks are classified as Level 3 in the fair value hierarchy since their fair values are measured at the value calculated based on net asset value, etc. The rationality of the evaluation is verified by the Accounting Division and approved by the manager of the Division. Significant changes in fair values caused by changes in unobservable inputs are not expected.

In FY2019 and FY2020, there are no significant transfers between Level 1 and Level 2.

The table below shows the reconciliation from the beginning balance to the ending balance for fair value measurement categorized as Level 3 in the fair value hierarchy.

FY2019 (April 1, 2019 to March 31, 2020)

	Financial assets measured at fair value through other comprehensive income (loss)	Financial assets measured at fair value through profit or loss	Total
	(Millions of yen)		
Beginning balance	¥ 2,863	¥ 253	¥ 3,117
Purchase	850	150	1,000
Profit (loss)	—	(48)	(48)
Other comprehensive income	(456)	—	(456)
Sales	(78)	—	(78)
Other	—	(2)	(2)
Ending balance	¥ 3,179	¥ 353	¥ 3,532

FY2020 (April 1, 2020 to March 31, 2021)

	Financial assets measured at fair value through other comprehensive income (loss)	Financial assets measured at fair value through profit or loss	Total
		(Millions of yen)	
Beginning balance	¥ 3,179	¥ 353	¥ 3,532
Purchase	2	523	524
Profit (loss)	—	(19)	(19)
Other comprehensive income	(310)	—	(310)
Sales	—	—	—
Other	—	(15)	(15)
Ending balance	¥ 2,871	¥ 841	¥ 3,712

Profit or loss pertaining to the above financial assets is included in "Finance income" and "Finance expenses" in the consolidated statement of income, while other comprehensive income is included in "Net changes in financial assets measured at fair value through other comprehensive income" in the consolidated statement of comprehensive income.

29. Leases

The Group, as a lessee leases machinery and equipment for manufacturing facilities, buildings for offices, etc. Certain lease agreements include extension options and termination options. There are no restrictions or covenants imposed by leases.

(1) Expenses related to leases

Expenses and cash outflows related to leases are as follows.

	Year ended March 31, 2020	Year ended March 31, 2021
	(Millions of yen)	
Expenses related to leases		
Interest expense related to lease liabilities	¥ 137	¥ 125
Expense related to short-term leases	216	160
Expense related to low-value assets	779	828
Total of Cash outflow related to leases	¥ 2,882	¥ 2,795

Maturity analysis of lease liabilities is described in Note "28. Financial Instruments (5) Liquidity risk".

(2) Right of Use Assets

Details of the increase, depreciation charge and the carrying amount of right of use assets are as follows.

	Years ended March 31, 2020				Years ended March 31, 2021			
	Buildings and structures	Machinery and vehicles	Other	Total	Buildings and structures	Machinery and vehicles	Other	Total
	(Millions of yen)							
Increase	¥ 902	¥ 1,693	¥ 45	¥ 2,640	¥ 1,982	¥ 1,275	¥ 20	¥ 3,277
Depreciation	1,032	771	116	1,919	987	827	123	1,936

	Years ended March 31, 2020				Years ended March 31, 2021			
	Buildings and structures	Machinery and vehicles	Other	Total	Buildings and structures	Machinery and vehicles	Other	Total
	(Millions of yen)							
Carrying amount	¥ 2,664	¥ 5,145	¥ 885	¥ 8,693	¥ 3,297	¥ 5,688	¥ 797	¥ 9,782

30. Significant Subsidiaries

The Company's significant subsidiaries are described in the table below.

Company name (Subsidiaries)	Share Capital	Location	Principal business (Note 1)	Ratio of voting rights (Note2) (%)
Nippoh Chemicals Co., Ltd.	¥ 517 million	Chuo-ku, Tokyo	Functional Chemicals	84.4
Nisshoku Butsuryu Co., Ltd.	¥ 100 million	Chuo-ku, Osaka	Basic Chemicals Functional Chemicals Environment & Catalysts	100.0
Tokyo Fine Chemical Co., Ltd.	¥ 80 million	Minato-ku, Tokyo	Functional Chemicals	89.5
Chugoku Kako Co., Ltd.	¥ 75 million	Kurashiki-shi, Okayama	Functional Chemicals	93.3
Nippon Shokubai Trading Co., Ltd.	¥ 40 million	Chuo-ku, Tokyo	Basic Chemicals Functional Chemicals Environment & Catalysts	100.0
Nisshoku Techno Fine Chemical Co., Ltd.	¥ 90 million	Ichikawa-shi, Chiba	Functional Chemicals	96.8
Nihon Nyukazai Co., Ltd.	¥ 1,000 million	Chuo-ku, Tokyo	Basic Chemicals	100.0
Nihon Polymer Industries Co., Ltd.	¥ 100 million	Himeji-shi, Hyogo	Functional Chemicals	60.0
Nippon Shokubai America Industries, Inc.	\$ 100,000 thousand	Texas, USA	Functional Chemicals	100.0
Nippon Shokubai (Asia) Co., Ltd.	\$ 4,175 thousand	Singapore	Basic Chemicals Functional Chemicals	100.0
PT. Nippon Shokubai Indonesia	\$ 120,000 thousand	Banten, Indonesia	Basic Chemicals Functional Chemicals	99.9
Nippon Shokubai Europe N.V.	€ 243,000 thousand	Zwijndrecht, Belgium	Functional Chemicals	100.0
Singapore Acrylic Pte Ltd.	\$ 27,007 thousand	Singapore	Basic Chemicals	79.4
Nisshoku Chemical Industry (Zhang Jia Gang) Co., Ltd.	\$ 52,820 thousand	Jiangsu, China	Functional Chemicals	100.0
SINO-JAPAN CHEMICAL CO., LTD.	NT\$ 144,732 thousand	Taipei, Taiwan	Basic Chemicals	52.0 (3.4)
SIRRUS Inc.	\$ 113,957 thousand	Ohio, USA	Functional Chemicals	100.0

Other 11 subsidiaries

Note: 1. The column "Principal business" indicates the segment stated in Note "5. Segment Information."
2. A number in the parenthesis represents the ratio of indirect voting rights, which is a part of the ratio of voting rights.

31. Related Party Transactions

(1) Transactions with related parties

Significant transactions between the Group and related parties are as follows:

FY2019 (April 1, 2019 to March 31, 2020)

Type	Name of the related party	Relationship with related party	Details of transactions	Transaction amounts	Ending balance
(Millions of yen)					
Affiliate	Umicore Shokubai Japan Co., Ltd.	Supply of finished goods (catalysts for automobiles) and incidental transactions	Sales of catalysts for automobiles	¥ 16,845	¥ 7,879
			Purchase of raw materials	16,274	5,088

Note: 1. Transaction amounts do not include consumption taxes, but the ending balance includes consumption taxes.
2. Transaction conditions and policies on transaction conditions, etc.
Sales of products and purchase of raw materials are determined after price negotiations in consideration of market prices and costs.

FY2020 (April 1, 2020 to March 31, 2021)

Type	Name of the related party	Relationship with related party	Details of transactions	Transaction amounts	Ending balance
(Millions of yen)					
Affiliate	Umicore Shokubai Japan Co., Ltd.	Supply of finished goods (catalysts for automobiles) and incidental transactions	Sales of catalysts for automobiles	¥ 16,459	¥ 9,601
			Purchase of raw materials	14,873	5,701

Note: 1. Transaction amounts do not include consumption taxes, but the ending balance includes consumption taxes.
2. Transaction conditions and policies on transaction conditions, etc.
Sales of products and purchase of raw materials are determined after price negotiations in consideration of market prices and costs.

(2) Remuneration for key management personnel

Remuneration for key management personnel is as follows:

	Years ended March 31,	
	2020	2021
(Millions of yen)		
Remuneration and bonuses	¥ 432	¥ 296

32. Commitments

Commitment regarding the acquisition of property, plant and equipment is as follows:

	March 31, 2020	March 31, 2021
(Millions of yen)		
Acquisition of property, plant and equipment	¥ 6,483	¥ 4,472

33. Contingencies

The Group guarantees bonds issued by a company other than consolidated subsidiaries as follows:

	March 31, 2020	March 31, 2021
(Millions of yen)		
American Acryl L.P.	¥ 1,320	¥ 1,343
	(660)	(672)

Note: The amounts in the parentheses indicate the debt guarantee balance guaranteed by Arkema Delaware Inc.



Independent Auditor's Report

The Board of Directors
Nippon Shokubai Co., Ltd.

Opinion

We have audited the accompanying consolidated financial statements of Nippon Shokubai Co., Ltd. and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at March 31, 2021, and the consolidated statements of income, comprehensive income, changes in equity, and cash flows for the year then ended, and notes to the consolidated financial statements.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at March 31, 2021, and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRSs).

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in Japan. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in Japan, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

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

Impairment of property, plant and equipment of NIPPON SHOKUBAI EUROPE N.V.	
Description of Key Audit Matter	Auditor's Response
<p>As described in Note 12 to the consolidated financial statements, "Impairment Losses on Non-financial assets", NIPPON SHOKUBAI EUROPE N.V. (hereinafter "NSE"), a consolidated subsidiary of the Company has been facing a decrease in demand due to the COVID-19 pandemic and strong pressure for price reduction on the superabsorbent polymers manufacturers including NSE due to intensifying competition among disposable diaper manufacturers, etc., and such severe business environment has continued longer than expected.</p> <p>Under these circumstances, the Company determined that the profitability of property, plant and equipment held by NSE has declined and its carrying amount would not be recoverable, accordingly recognized an impairment loss on property, plant and equipment of ¥11,903 million for the year ended March 31, 2021. The carrying amount of property, plant and equipment held by NSE after recognizing the impairment loss was ¥26,168 million.</p> <p>The Company measured the recoverable amount of corresponding cash-generating unit used for impairment testing based on fair value less costs of disposal. The fair value less costs of disposal was estimated as the present value of estimated future cash flows whose significant assumptions were future sales volumes, sales prices of superabsorbent polymers, long-term growth rate and discount rate underlying the estimated future cash flows and discount calculation.</p> <p>The carrying amount of property, plant and equipment held by NSE is quantitatively significant to the consolidated statement of financial position. In addition, the impairment test is complex given the uncertainty in estimating the future sales</p>	<p>The audit procedures we performed to assess the impairment of property, plant and equipment held by NSE included the following, among others:</p> <ul style="list-style-type: none"> • We involved the component auditor to evaluate the methodologies used by the management of NSE to make accounting estimates, and underlying data. • To evaluate the effectiveness of management's estimation process to estimate future cash flows, we compared the estimated sales volumes and sales prices of superabsorbent polymers used in previous years with actual results. • We inquired of the management for the rationale of the future sales volumes and sales prices of superabsorbent polymers and evaluated that the underlying market growth rate and the supply of superabsorbent polymer were consistent with publicly available data • We involved the valuation specialist of our network firm to assist in evaluating the valuation model, discount rate, and long-term growth rate applied by the management of NSE.

<p>volumes, sales prices and long-term growth rate which are the significant assumptions used for the impairment test and the requirements of highly specialized expertise in determining the discount rate. Consequently, we determined the issue as a key audit matter.</p>	
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Responsibilities of Management, the Corporate Auditor and the Board of Corporate Auditors for the Consolidated Financial Statements

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

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern and disclosing, as required by IFRSs, 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, or has no realistic alternative but to do so.

The Corporate Auditor and the Board of Corporate Auditors are responsible for overseeing the Group's financial reporting process.

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

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with auditing standards generally accepted in Japan, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion.
- Consider internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances for our risk assessments, while the purpose of the audit of the consolidated financial statements is not expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

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

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

We also provide the Corporate Auditor and the Board of Corporate Auditors with a statement that we have complied with the ethical requirements regarding independence that are relevant to our audit of the financial statements in Japan, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

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


Interest Required to Be Disclosed by the Certified Public Accountants Act of Japan

Our firm and its designated engagement partners do not have any interest in the Group which is required to be disclosed pursuant to the provisions of the Certified Public Accountants Act of Japan.



Ernst & Young ShinNihon LLC
Osaka, Japan

June 22, 2021

梅原、隆 

Takashi Umehara
Designated Engagement Partner
Certified Public Accountant

小山 晃平 

Kohei Koyama
Designated Engagement Partner
Certified Public Accountant

Corporate Data

NIPPON SHOKUBAI CO., LTD. (As of March 31, 2021)

Established: August 21, 1941

Common Stock (Paid in Capital): 25,038 million yen

Number of Shares Issued: 40,800,000 shares

Number of Shares Authorized: 127,200,000 shares

Number of Employees: 4,555 (Consolidated)
2,391 (Non-consolidated)

Markets listed: Tokyo Stock Exchange; Securities Code:
4114;

Fiscal Year Ends: March 31

Auditors: Ernst & Young Shin Nihon LLC

Lead Managers (Securities): Nomura Securities Co., Ltd.,
Mizuho Securities Co., Ltd.

Stock Transfer Agency: Mitsubishi UFJ Trust and Banking
Corporation

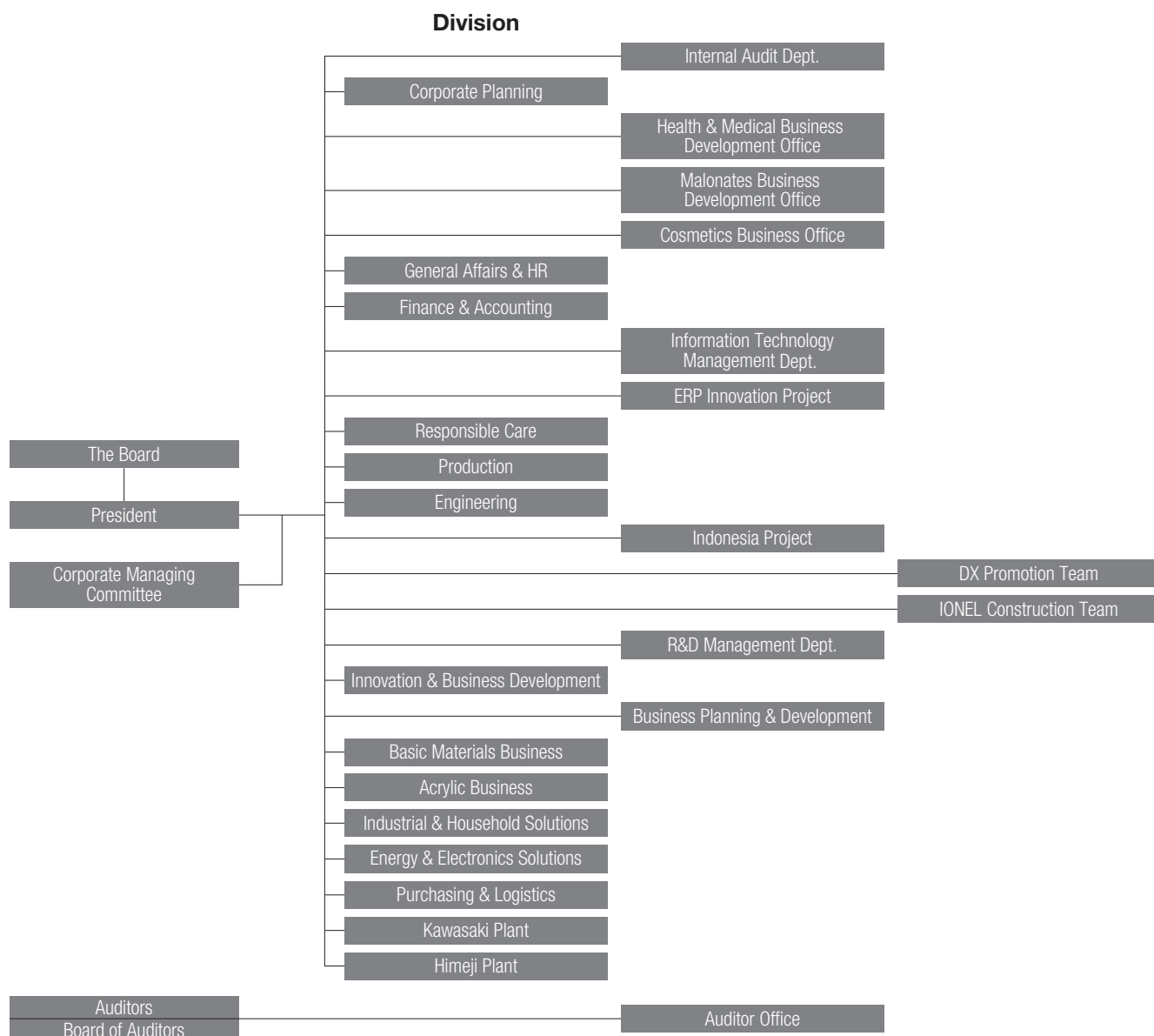
Banks: Resona Bank, Limited.

Mizuho Bank, Ltd.

MUFG Bank, Ltd.

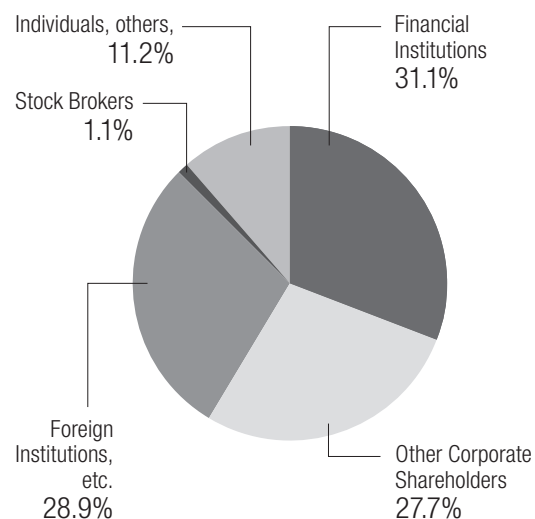
Number of shareholders: 9,453

Organization Chart (As of June 22, 2021)



Major Shareholders (As of March 31, 2021)

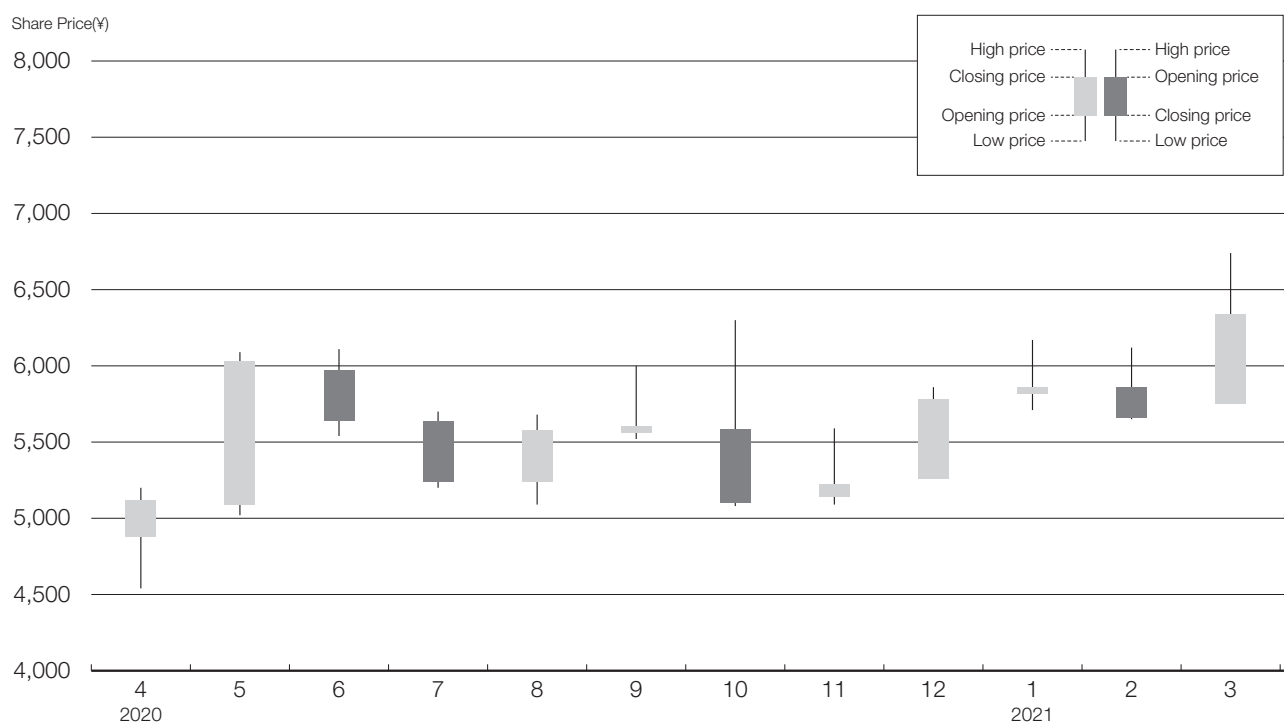
Name	Number of Shares Owned (thousand shares)	Ratio of capital Contribution (%)
Sumitomo Chemical Company, Limited	2,727	6.84
The Master Trust Bank of Japan, Ltd. (Trust Account)	2,440	6.11
ENEOS Holdings, Inc.	2,129	5.33
NORTHERN TRUST CO. (AVFC) RE SILCHESTER INTERNATIONAL INVESTORS INTERNATIONAL VALUE EQUITY TRUST	2,018	5.06
Custody Bank of Japan, Ltd. (Trust Account)	1,460	3.66
Resona Bank, Limited.	1,373	3.44
Sanyo Chemical Industries, Ltd.	1,267	3.17
NORTHERN TRUST CO. (AVFC) RE U.S. TAX EXEMPTED PENSION FUNDS	1,222	3.06
Mizuho Bank, Ltd.	948	2.37
TOYO INK SC HOLDINGS CO., LTD.	904	2.26



* Treasury stock is included in "Individuals, others."

Notes: 1. Other than the above, the Company holds 924 thousand shares as treasury stock.
2. Treasury stock is excluded from the calculation for "Shareholding Ratio of the Total Shares Outstanding" above.
3. Figures in "Number of Shares Owned" and "Shareholding Ratio of the Total Shares Outstanding" are truncated.

Share Price and Turnover (April 2020 - March 2021)





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Securities Code 4114

Website: <https://www.shokubai.co.jp/en/>