(Translation)

This document has been extracted and translated from the Japanese original for reference purpose and the translated document only includes Financial Information chapter. In the event of any discrepancy between the translated document and Japanese original, the original shall prevail.

Financial Information of Annual Securities Report

From January 1, 2020 to December 31, 2020

(The 102nd Business term)

Financial Information

1. Preparation of consolidated financial statements and non-consolidated financial statements

(1) The consolidated financial statements of Nissha Co., Ltd. (the "Company") have been prepared in accordance with International Financial Reporting Standards ("IFRS") pursuant to Article 93 of the "Ordinance on Terminology, Forms, and Preparation Methods of Consolidated Financial Statements" (Ordinance of the Ministry of Finance No. 28 of 1976; hereinafter referred to as the "Ordinance on Consolidated Financial Statements").

(2) The Company finalized the provisional accounting treatment pertaining to the business combination with Zonnebodo Pharmaceutical Co., Ltd. on November 25, 2019 in the fiscal year ended December 31, 2020. Accordingly, previous year-end amounts were retrospectively adjusted.

(3) The non-consolidated financial statements of the Company have been prepared in accordance with the "Ordinance on Terminology, Forms, and Preparation Methods of Financial Statements, etc." (Ordinance of the Ministry of Finance No. 59 of 1963; hereinafter referred to as the "Ordinance on Financial Statements, etc.").

The Company falls under a company which is permitted to submit non-consolidated financial statements prepared in accordance with special provisions, and prepares its non-consolidated financial statements pursuant to Article 127 of the Ordinance on Financial Statements, etc.

2. Audit certificate

The consolidated financial statements and non-consolidated financial statements of the Company for the fiscal year ended December 31, 2020 (from January 1, 2020 to December 31, 2020) have been audited by Deloitte Touche Tohmatsu LLC in accordance with Article 193-2, Paragraph 1 of the Financial Instruments and Exchange Act.

3. Special efforts to ensure fair presentation of consolidated financial statements, etc.

The Company has become a member of the Financial Accounting Standards Foundation and participates in seminars in order to develop a system capable of appropriately understanding the contents of the accounting standards and other rules.

4. Development of internal system to prepare consolidated financial statements, etc. fairly in accordance with IFRS

The Company obtains as necessary press releases and accounting standards published by the International Accounting Standards Board to keep up to date with the latest standards. In addition, the Company develops an internal system, including internal rules and manuals in compliance with IFRS, to prepare consolidated financial statements, etc. fairly in accordance with IFRS.

1 Consolidated Financial Statements, etc.

(1) Consolidated financial statements

1) Consolidated statements of financial position

(Million yen)

	Note	As of December 31, 2019	As of December 31, 2020
Assets			
Current assets			
Cash and cash equivalents	6,35	17,499	25,067
Trade and other receivables	7,35	34,177	37,614
Inventories	8	21,415	25,435
Other financial assets	16,35	564	222
Other current assets	9	4,713	4,194
Subtotal		78,371	92,534
Assets held for sale	10	4	90
Total current assets		78,375	92,625
Non-current assets			
Property, plant and equipment	11,14	45,325	46,293
Goodwill	12,14	18,499	18,327
Intangible assets	12,14	14,713	14,239
Right-of-use assets	13,14	8,041	8,161
Investments accounted for using equity method	15	0	567
Other financial assets	16,35	20,413	17,653
Retirement benefit asset	23	265	269
Deferred tax assets	17	879	1,336
Other non-current assets	9	247	250
Total non-current assets		108,386	107,100
Total assets		186,762	199,726

(Million yen)

	Note	As of December 31, 2019	As of December 31, 2020
Liabilities and equity			
Liabilities			
Current liabilities			
Trade and other payables	18,35	44,538	49,441
Bonds and borrowings	19,35	22,167	23,534
Other financial liabilities	20,35	1,073	789
Lease liabilities	13	1,562	1,589
Income taxes payable, etc.	17	447	2,218
Provisions	21	53	53
Other current liabilities	22	4,237	6,637
Total current liabilities		74,080	84,263
Non-current liabilities			
Bonds and borrowings	19,35	14,244	8,877
Other financial liabilities	20,35	442	1,191
Lease liabilities	13	7,926	8,311
Retirement benefit liability	23	4,913	5,884
Provisions	21	47	47
Deferred tax liabilities	17	9,773	8,738
Other non-current liabilities	22	331	329
Total non-current liabilities		37,679	33,380
Total liabilities		111,759	117,644
Equity			
Share capital	24	12,119	12,119
Capital surplus	24	14,931	14,856
Retained earnings	24	42,359	51,974
Treasury shares	24	(1,899)	(1,720)
Other components of equity	24	7,494	4,853
Total equity attributable to owners of parent		75,006	82,083
Non-controlling interests		(3)	(2)
Total equity		75,002	82,081
Total liabilities and equity		186,762	199,726

2) Consolidated statements of profit or loss and comprehensive income

Consolidated statements of profit or loss

(Million yen)

	Note	Fiscal Year ended December 31, 2019	Fiscal Year ended December 31, 2020
Net sales	26	174,035	180,006
Cost of sales	28	(149,900)	(143,195)
Gross profit		24,135	36,810
Selling, general and administrative expenses	27,28	(27,672)	(25,988)
Other income	29	6,200	1,725
Other expenses	29	(18,917)	(5,214)
Share of profit (loss) of investments accounted for using equity method	15	—	(42)
Operating profit (loss)		(16,253)	7,290
Finance income	30	1,056	891
Finance costs	30	(1,437)	(1,130)
Profit (loss) before tax		(16,634)	7,051
Income tax expense	17	(588)	18
Profit (loss)		(17,223)	7,070
Profit (loss) attributable to:			
Owners of parent		(17,183)	7,069
Non-controlling interests		(39)	0
Profit (loss)		(17,223)	7,070
Earnings (loss) per share attributable to owners of parent			
Basic earnings (loss) per share (Yen)	32	(344.27)	141.50
Diluted earnings (loss) per share (Yen)	32	(344.27)	137.94

Consolidated statements of comprehensive income

(Million yen)

	Note	Fiscal Year ended December 31, 2019	Fiscal Year ended December 31, 2020
Profit (loss)		(17,223)	7,070
Other comprehensive income			
Items that will not be reclassified to profit or loss			
Net change in fair value of financial assets measured through other comprehensive income	31	3,170	2,706
Remeasurements of defined benefit plans	31	(72)	47
Total of items that will not be reclassified to profit or loss		3,098	2,754
Items that may be reclassified to profit or loss			
Exchange differences on translation of foreign operations	31	(839)	(1,110)
Share of other comprehensive income of investments accounted for using equity method	31	—	9
Total of items that may be reclassified to profit or loss		(839)	(1,101)
Total other comprehensive income		2,258	1,653
Total comprehensive income		(14,965)	8,723
Comprehensive income attributable to:			
Owners of parent		(14,927)	8,722
Non-controlling interests		(37)	1
Total comprehensive income		(14,965)	8,723

3) Consolidated statements of changes in equity

(Million yen)

	Note	Equity attributable to owners of parent									Non-controlling interests	Total equity
						Other components of equity						
		Share capital	Capital surplus	Retained earnings	Treasury shares	Net change in fair value of financial assets measured through other comprehensive income	Remeasurements of defined benefit plans	Exchange differences on translation of foreign operations	Total other components of equity	Total equity attributable to owners of parent		
Balance at January 1, 2019		12,119	15,071	60,931	(1,900)	6,961	—	(1,619)	5,341	91,564	(17)	91,546
Profit (loss)		—	—	(17,183)	—	—	—	—	—	(17,183)	(39)	(17,223)
Other comprehensive income		—	—	—	—	3,170	(72)	(841)	2,256	2,256	2	2,258
Total comprehensive income		—	—	(17,183)	—	3,170	(72)	(841)	2,256	(14,927)	(37)	(14,965)
Purchase of treasury shares	24	—	—	—	(0)	—	—	—	—	(0)	—	(0)
Disposal of treasury shares	24	—	(1)	—	2	—	—	—	—	1	—	1
Dividends of surplus	25	—	—	(1,497)	—	—	—	—	—	(1,497)	—	(1,497)
Share-based payment transactions	34	—	16	—	—	—	—	—	—	16	—	16
Changes in ownership interest in subsidiaries	24	—	(981)	—	—	—	15	—	15	(965)	16	(949)
Loss of control of subsidiaries		—	—	(11)	—	—	—	—	—	(11)	35	24
Put options granted to non-controlling interests	24	—	826	—	—	—	—	—	—	826	—	826
Transfer from other components of equity to retained earnings		—	—	119	—	(176)	56	—	(119)	—	—	—
Total transactions with owners, etc.		—	(139)	(1,389)	1	(176)	72	—	(103)	(1,630)	51	(1,578)
Balance at December 31, 2019		12,119	14,931	42,359	(1,899)	9,955	—	(2,461)	7,494	75,006	(3)	75,002
Profit (loss)		—	—	7,069	—	—	—	—	—	7,069	0	7,070
Other comprehensive income		—	—	—	—	2,706	47	(1,101)	1,652	1,652	0	1,653
Total comprehensive income		—	—	7,069	—	2,706	47	(1,101)	1,652	8,722	1	8,723
Purchase of treasury shares	24	—	—	—	(0)	—	—	—	—	(0)	—	(0)
Disposal of treasury shares	24	—	(85)	—	178	—	—	—	—	93	—	93
Dividends of surplus	25	—	—	(1,747)	—	—	—	—	—	(1,747)	—	(1,747)
Share-based payment transactions	34	—	10	—	—	—	—	—	—	10	—	10
Changes in ownership interest in subsidiaries	24	—	—	—	—	—	—	—	—	—	—	—
Loss of control of subsidiaries		—	—	—	—	—	—	—	—	—	—	—
Put options granted to non-controlling interests	24	—	—	—	—	—	—	—	—	—	—	—
Transfer from other components of equity to retained earnings		—	—	4,293	—	(4,245)	(47)	—	(4,293)	—	—	—
Total transactions with owners, etc.		—	(75)	2,546	178	(4,245)	(47)	—	(4,293)	(1,644)	—	(1,644)
Balance at December 31, 2020		12,119	14,856	51,974	(1,720)	8,416	—	(3,562)	4,853	82,083	(2)	82,081

4) Consolidated statements of cash flows

(Million yen)

	Note	Fiscal Year ended December 31, 2019	Fiscal Year ended December 31, 2020
Cash flows from operating activities			
Profit (loss) before tax		(16,634)	7,051
Depreciation and amortization		10,074	8,430
Impairment losses		15,917	989
Gain on bargain purchase		—	(804)
Loss (gain) on sale and retirement of non-current assets		(4,267)	16
Gain on sale of shares of subsidiaries and associates		(878)	—
Business restructuring expenses		47	2,051
Share of loss (profit) of investments accounted for using equity method		—	42
Finance income	30	(1,056)	(891)
Finance costs	30	1,437	1,130
Decrease (increase) in trade and other receivables		4,976	(2,444)
Decrease (increase) in inventories		8,604	(2,760)
Increase (decrease) in trade and other payables		(16,362)	2,129
Increase (decrease) in provisions		(369)	(20)
Increase (decrease) in retirement benefit asset or liability		201	333
Other		3,784	490
Subtotal		5,475	15,743
Interest received		47	50
Dividends received		369	437
Payments for loss on liquidation of business	33	(1,402)	—
Interest paid		(1,094)	(834)
Income taxes paid		(1,954)	(1,023)
Income taxes refund		195	309
Net cash provided by (used in) operating activities		1,636	14,683
Cash flows from investing activities			
Purchase of property, plant and equipment		(7,226)	(5,297)
Payments for retirement of property, plant and equipment		(489)	(48)
Proceeds from sale of property, plant and equipment		6,068	389
Purchase of intangible assets		(730)	(484)
Proceeds from advance payment for finance lease contract		—	1,500
Purchase of investment securities		(996)	(101)
Proceeds from sale of investment securities		422	6,110
Payments for acquisition of subsidiaries or other businesses	5,33	(2,434)	(3,152)
Proceeds from sale of subsidiaries	5,33	698	—
Payments for sale of subsidiaries	33	(81)	—
Purchase of shares of subsidiaries and associates		—	(213)
Other		(180)	(97)
Net cash provided by (used in) investing activities		(4,948)	(1,394)

(Million yen)

	Note	Fiscal Year ended December 31, 2019	Fiscal Year ended December 31, 2020
Cash flows from financing activities			
Proceeds from short-term borrowings	33	20,484	11,864
Repayments of short-term borrowings	33	(10,495)	(15,190)
Repayments of lease liabilities	33	(1,766)	(1,734)
Proceeds from sale and lease back transactions		—	1,294
Proceeds from long-term borrowings	33	1,313	1,831
Repayments of long-term borrowings	33	(3,403)	(2,410)
Payments for acquisition of non-controlling interests		(950)	—
Purchase of treasury shares	24	(0)	(0)
Proceeds from sale of treasury shares	24	0	93
Dividends paid to owners of parent	25	(1,499)	(1,746)
Other		(1)	(0)
Net cash provided by (used in) financing activities		3,680	(5,997)
Effect of exchange rate changes on cash and cash equivalents		373	276
Net increase (decrease) in cash and cash equivalents		742	7,567
Cash and cash equivalents at beginning of period	6	16,757	17,499
Cash and cash equivalents at end of period	6	17,499	25,067

Notes to Consolidated Financial Statements

1. Reporting entity

Nissha Co., Ltd. (the “Company”) is a corporation domiciled in Japan, and the registered address of its headquarters is Nakagyo-ku, Kyoto, Japan.

The consolidated financial statements of the Company with the fiscal year-end date of December 31 are prepared by combining the financial statements of the Company and its subsidiaries (collectively, the “Group”) and the Group’s interest in its associates. The Group is engaged in the Industrial Materials business, the Devices business, the Medical Technologies business, the Information and Communication business, and other businesses incidental thereto. The details of the Group’s business and major activities are described in Note 4 “Operating segments.”

2. Basis of preparation

(1) Statement of compliance with IFRS

The Company meets the requirements for a “specified company complying with designated international accounting standards” as stipulated in the Ordinance on Consolidated Financial Statements. Therefore, the Group’s consolidated financial statements have been prepared in compliance with IFRS pursuant to the provisions set forth in Article 93 of the Ordinance.

(2) Basis of measurement

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

・Derivatives are measured at fair value.
・Financial instruments measured at fair value through profit or loss are measured at fair value.
・Financial instruments measured at fair value through other comprehensive income are measured at fair value.
・The net defined benefit liability (asset) is measured at the present value of defined benefit obligations less the fair value of plan assets.

(3) Functional currency and presentation currency

The Group’s consolidated financial statements are presented in Japanese yen, which is the Company’s functional currency. Unless otherwise noted, amounts are rounded down to the nearest million yen.

(4) Significant accounting judgements and estimates

In preparing the consolidated financial statements in compliance with IFRS, 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 on an ongoing basis. The effects of revisions to accounting estimates are recognized in the accounting period in which the estimates were revised and in any future accounting periods affected.

Accounting judgements that have significant effects on the consolidated financial statements for the fiscal year ended December 31, 2020 and accounting estimates subject to significant revisions in the consolidated financial statements for the subsequent fiscal year are as follows:

・Scope of consolidation – “(1) Basis of consolidation” in Note 3 “Significant accounting policies”
・Timing of sales recognition – “(17) Sales recognition” in Note 3 “Significant accounting policies”
・Impairment of non-financial assets – “(11) Impairment of non-financial assets” in Note 3 “Significant accounting policies,” Note 12 “Goodwill and intangible assets” and Note 14 “Impairment of non-financial assets”
・Recoverability of deferred tax assets – “(19) Income taxes” in Note 3 “Significant accounting policies” and Note 17 “Income taxes”
・Measurement of defined benefit obligations – “(13) Employee benefits” in Note 3 “Significant accounting policies” and Note 23 “Post-employment benefits”
・Fair value measurement of financial instruments – “(4) Financial instruments” in Note 3 “Significant accounting policies” and Note 35 “Financial instruments”

As for the impact of COVID-19 pandemic, it is still impossible to predict when the pandemic will be contained. Accordingly, accounting estimates for impairment of non-financial assets, etc. have been made on the assumption that the impact of the pandemic will continue over a certain period in and after the next fiscal year.

(5) Standards and interpretations issued but not yet applied

Of the standards and interpretations newly established or revised by the approval date of the consolidated financial statements, those that have been issued but not yet applied as of December 31, 2020 are mainly as follows. The impact of applying these new standards and revisions on the Group's financial position and operating results is immaterial.

IFRS	Title	Mandatory effective date (Fiscal years beginning on and after)	Timing of initial application by the Group	Summary of new standards and revisions
IFRS 9	Financial Instruments	January 1, 2021	Fiscal year ending December 31, 2021	Clarification on treatments when replacing old interest rate benchmarks with alternative benchmark rates as a result of the IBOR reform
IAS 39	Financial Instruments: Recognition and Measurement			
IFRS 7	Financial Instruments: Disclosures			
IFRS 4	Insurance Contracts			
IFRS 16	Leases			
IAS 16	Property, Plant and Equipment	January 1, 2022	Fiscal year ending December 31, 2022	Prohibition on an entity from deducting from the cost of property, plant and equipment any proceeds from the sale of items produced while the entity is preparing the asset for its intended use
IAS 37	Provisions, Contingent Liabilities and Contingent Assets	January 1, 2022	Fiscal year ending December 31, 2022	Clarification on what costs an entity considers in assessing whether a contract is onerous
IFRS 3	Business Combinations	January 1, 2022	Fiscal year ending December 31, 2022	Updating a reference to the Conceptual Framework for Financial Reporting
IFRS 9	Financial Instruments	January 1, 2022	Fiscal year ending December 31, 2022	Clarification on extent of fees an entity includes in assessing whether to derecognize a financial liability
IAS 1	Presentation of Financial Statements	January 1, 2023	Fiscal year ending December 31, 2023	・Clarification on how payables and other liabilities are classified as current or non-current ・Requirement to disclose an entity's material accounting policy information instead of its significant accounting policies
IAS 8	Accounting Policies, Changes in Accounting Estimates and Errors	January 1, 2023	Fiscal year ending December 31, 2023	Clarification on how to distinguish between changes in accounting policies and changes in accounting estimates
IFRS 17	Insurance Contracts	January 1, 2023	Fiscal year ending December 31, 2023	A comprehensive standard for insurance contracts

3. Significant accounting policies

(1) Basis of consolidation

1) Subsidiaries

A subsidiary is an entity over which the Group has control.

The Group controls an investee entity when the Group is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee.

The acquisition date of a subsidiary is the date on which the Group obtains control of the subsidiary, and the subsidiary is consolidated from the acquisition date until the date on which the Group loses control over the subsidiary. When accounting policies applied by a subsidiary differ from those applied by the Group, adjustments are made to the financial statements of the subsidiary.

Changes in the Group's ownership interest in a subsidiary that do not result in a loss of control are accounted for as equity transactions. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received is recognized directly as equity attributable to owners of parent in equity.

In preparing the consolidated financial statements, intragroup balances of receivables and payables, intragroup transactions, and unrealized gains and losses arising from intragroup transactions are eliminated.

The fiscal year-end of all subsidiaries is the same as that of the Company.

2) Associates

An associate is an entity in which the Group has significant influence, but not control, over financial and operating policies.

Assessing and deciding whether the Group has significant influence over an entity reflects a comprehensive consideration of various elements. Such elements include the holding of voting rights (if the Group holds, directly or indirectly, 20% to 50% of the voting rights of the investee company, it is presumed that the Group has significant influence over the investee company), the existence of potential voting rights that are substantively exercisable and the percentage of directors that have been seconded from the Group.

An associate is accounted for using the equity method from the date on which the Group obtains significant influence until the date on which the Group loses such influence. When the accounting policies of an associate differ from those of the Group, adjustments are made to bring them in conformity with the accounting policies of the Group. Under the equity method, the amount of an investment in an associate is initially measured at cost and subsequently increased or decreased in proportion to changes in the Group's share of net assets of the associate after the acquisition. The Group's share of the associate's profit or loss is recognized in the Group's profit or loss, and the Group's share of the associate's other comprehensive income is recognized in the Group's other comprehensive income. Profits resulting from significant transactions between the Group and the associate are eliminated to the extent of the Group's interest in the associate.

The fiscal year-end of all associates is the same as that of the Company.

(2) Business combinations

Business combinations are accounted for using the acquisition method.

The consideration transferred is measured at the sum of the acquisition-date fair values of the assets transferred, liabilities assumed, and equity interests issued in exchange for control over the acquiree.

The identifiable assets, liabilities and contingent liabilities in the acquiree are measured at their acquisition-date fair values, except that:

・Deferred tax assets (or deferred tax liabilities) and assets or liabilities related to employee benefit arrangements are recognized and measured in accordance with IAS 12 "Income Taxes" and IAS 19 "Employee Benefits," respectively.

・Liabilities or equity instruments that are related to the acquiree's share-based payment transactions or the replacement of the acquiree's share-based payment transactions with the acquirer's share-based payment transactions are recognized and measured in accordance with IFRS 2 "Share-based Payment."

・Non-current assets or disposal groups that are classified as held for sale at the acquisition date in accordance with IFRS 5 "Non-current Assets Held for Sale and Discontinued Operations" are measured in accordance with that IFRS.

Goodwill is measured as the excess, if any, of the consideration transferred over the net amount of identifiable assets and liabilities as of the acquisition date. If the difference is negative, it is immediately recognized in profit or loss.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the items for which the accounting is incomplete are measured at provisional amounts. In case new information obtained during the measurement period, which shall not exceed one year from the acquisition date, if known, would have affected the measurement of the amounts recognized as of the acquisition date, the provisional amounts recognized at the acquisition date are retrospectively adjusted.

Acquisition-related costs incurred to achieve a business combination are expensed as incurred. The acquisition of additional non-controlling interests is accounted for as an equity transaction without recognition of goodwill.

(3) Foreign currency translation

Transactions in foreign currencies are translated into the functional currency of each Group company using the exchange rate at the transaction date or a rate that approximates such rate. Monetary assets and liabilities denominated in foreign currencies are translated into the functional currency of each Group company using the exchange rate at the fiscal year-end. Exchange differences arising from the translation and settlement are recognized in profit or loss. However, exchange differences arising from the translation of investments in equity instruments measured at fair value through other comprehensive income and cash flow hedges are recognized in other comprehensive income.

The assets and liabilities of foreign operations are translated into Japanese yen using the exchange rate at the fiscal year-end, and the income and expenses of foreign operations are translated into Japanese yen using the average exchange rate for the fiscal year, except in cases where the exchange rate fluctuates significantly. Exchange differences arising from the translation are recognized in other comprehensive income. On the disposal of a foreign operation that results in a loss of control or significant influence over the foreign operation, the cumulative exchange differences relating to the foreign operation are recognized in profit or loss for the period of disposal.

(4) Financial instruments

1) Non-derivative financial assets

(i) Initial recognition and measurement

The Group initially recognizes trade and other receivables on the date of occurrence and all the other financial assets on the transaction date when the Group becomes a party to the contract.

At initial recognition, all financial assets are measured at fair value plus transaction costs that are directly attributable to the acquisition of the financial assets, except when they are classified as financial assets measured at fair value through profit or loss. Transaction costs of financial assets measured at fair value through profit or loss are recognized in profit or loss.

(ii) Classification and subsequent measurement

The Group classifies its financial assets as (a) financial assets measured at amortized cost, (b) debt instruments measured at fair value through other comprehensive income, (c) equity instruments measured at fair value through other comprehensive income or (d) financial assets measured at fair value through profit or loss. The classification is determined at initial recognition, and the financial assets are subsequently measured based on their classification as follows:

(a) Financial assets measured at amortized cost

A financial asset that meets both of the following conditions is classified as a financial asset measured at amortized cost:

・the financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows and

・the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

After initial recognition, financial assets measured at amortized cost are measured at amortized cost using the effective interest method, less impairment losses. Interest income based on the effective interest method is recognized as finance income in profit or loss.

(b) Debt instruments measured at fair value through other comprehensive income

A debt instrument that meets both of the following conditions is classified as a financial asset measured at fair value through other comprehensive income:

・the financial asset is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets and

・the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

After initial recognition, such debt instruments are measured at fair value. Subsequent changes in the fair value are recognized in other comprehensive income, except that foreign exchange gains or losses, impairment gains or losses, and interest income based on the effective interest method are recognized in profit or loss. When these debt instruments are derecognized, cumulative gains or losses recognized in other comprehensive income are reclassified from other components of equity to profit or loss as reclassification adjustments.

(c) Equity instruments measured at fair value through other comprehensive income

The Group has made an irrevocable election to present in other comprehensive income subsequent changes in the fair value of investments in equity instruments, which are classified as financial assets measured at fair value through other comprehensive income.

After initial recognition, such equity instruments are measured at fair value. Subsequent changes in the fair value are recognized in other comprehensive income. When these equity instruments are derecognized, cumulative gains or losses recognized in other comprehensive income are reclassified from other components of equity to retained earnings.

Dividends from financial assets measured at fair value through other comprehensive income are recognized as finance income in profit or loss unless the dividend clearly represents a return of the investment.

(d) Financial assets measured at fair value through profit or loss

Financial assets other than financial assets measured at amortized cost or at fair value through other comprehensive income as mentioned above are classified as financial assets measured at fair value through profit or loss.

There are no financial assets that the Group has elected to irrevocably designate as financial assets measured at fair value through profit or loss at initial recognition.

Financial assets measured at fair value through profit or loss are recognized at fair value at initial recognition, and the transaction costs are recognized in profit or loss as incurred.

After initial recognition, such financial assets are measured at fair value. Subsequent changes in the fair value, net of dividends and interest income, are recognized in profit or loss.

(iii) Impairment of financial assets

An allowance for doubtful accounts is recognized for expected credit losses on financial assets subject to impairment, including financial assets measured at amortized cost.

The Group assesses at each fiscal year-end whether the credit risk on financial instruments has increased significantly since initial recognition.

If the credit risk on a financial instrument has not increased significantly since initial recognition, the allowance for doubtful accounts for the financial instrument is measured at an amount equal to the 12-month expected credit losses. If the credit risk on a financial instrument has increased significantly since initial recognition, the allowance for doubtful accounts for the financial instrument is measured at an amount equal to the lifetime expected credit losses.

When contractual payments are more than 30 days past due, the Group determines in principle that there has been a significant increase in credit risk. In assessing whether credit risk has increased significantly, the Group considers reasonably available and supportable information as well as past due information on contractual payments.

For financial assets including trade receivables that do not contain a significant financing component, the allowance for doubtful accounts is always measured at an amount equal to lifetime expected credit losses irrespective of whether there has been a significant increase in credit risk since initial recognition.

The expected credit losses of a financial instrument are measured in a way that reflects:

・an unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes;
・the time value of money; and
・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.

A provision of allowance for doubtful accounts for financial assets is recognized in profit or loss. In the event that the recognized allowance for doubtful accounts is reduced, a reversal of allowance for doubtful accounts is recognized in profit or loss.

(iv) Derecognition of financial assets

The Group derecognizes a financial asset only when:

(a) the contractual rights to the cash flows from the financial asset expire, or
(b) it transfers the financial asset so that substantially all the risks and rewards of ownership of the financial asset are transferred.

2) Non-derivative financial liabilities

(i) Initial recognition and measurement

Financial liabilities are classified at initial recognition as (a) financial liabilities measured at amortized cost or (b) financial liabilities measured at fair value through profit or loss. Financial liabilities are initially recognized on the transaction date when the Group becomes a party to the contract. Financial liabilities measured at amortized cost are initially measured at fair value less transaction costs that are directly attributable to the financial liabilities, while financial liabilities measured at fair value through profit or loss are initially measured at fair value.

(ii) Classification and subsequent measurement

(a) Financial liabilities measured at amortized cost

After initial recognition, financial liabilities measured at amortized cost are measured at amortized cost using the effective interest method. Interest expenses based on the effective interest method are recognized as finance costs in profit or loss.

(b) Financial liabilities measured at fair value through profit or loss

After initial recognition, financial liabilities measured at fair value through profit or loss are measured at fair value. Subsequent changes in the fair value are recognized in profit or loss.

(iii) Derecognition of financial liabilities

The Group derecognizes a financial liability when it is extinguished, that is, when the obligation specified in the contract is discharged, cancelled or expires.

3) Presentation of financial assets and financial liabilities

Financial assets and financial liabilities are offset and presented on a net basis in the consolidated statements of financial position only when the Group has a legally enforceable right to set off the balances and intends either to settle on a net basis or to realize the asset and settle the liability simultaneously.

4) Derivative financial instruments

The Group utilizes forward exchange contracts and currency swaps to mitigate the risk of fluctuations in foreign exchange rates and utilizes interest rate swaps to mitigate the risk of fluctuations in interest rates. These derivatives are initially measured at the time when the contract is entered into, and are subsequently remeasured at fair value. Changes in the fair value of derivatives are all recognized in profit or loss.

Hedge accounting is not applied to the above derivatives. Accordingly, derivative financial instruments are classified as financial assets or financial liabilities measured at fair value through profit or loss.

5) Fair value of financial instruments

The fair value of financial instruments is determined using market information, including market prices, and appropriate valuation techniques.

Inputs used to measure fair value are categorized into the following three levels:

Level 1: Quoted prices in active markets for identical assets or liabilities.

Level 2: Inputs (i.e., prices themselves) other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.

Level 3: Inputs that are not based on observable market data (i.e., unobservable inputs) for the asset or liability.

(5) Cash and cash equivalents

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

(6) Inventories

Inventories are measured at the lower of cost and net realizable value.

The cost of inventories includes all costs of purchase, costs of conversion and other costs incurred in bringing the inventories to their present location and condition.

Net realizable value is determined as the estimated selling price in the ordinary course of business less the estimated costs of completion and estimated costs necessary to make the sale.

Valuation method for each inventory item is as follows:

1) Finished goods (excluding Decorative Film products, etc. of Industrial Materials) and work in process

Mainly by the specific identification method.

2) Finished goods (Decorative Film products, etc. of Industrial Materials)

By the moving average method.

3) Raw materials and supplies

Mainly by the periodic average method.

(7) Property, plant and equipment

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

Depreciable property, plant and equipment are depreciated using the straight-line method over their useful lives.

The useful lives used in determining depreciation are as follow:

Buildings and structures: 15 to 50 years

Machinery and vehicles: 5 to 10 years

Tools, furniture and fixtures: 2 to 10 years

The cost includes any costs directly attributable to the acquisition of the asset; the initial estimate of the costs of dismantling and removing the asset and restoring the site on which it is located; and borrowing costs eligible for capitalization.

The costs of the day-to-day servicing for the repairs and maintenance of property, plant and equipment are expensed as incurred.

When an item of property, plant and equipment consists of components with different useful lives, each component is recognized as a separate item of property, plant and equipment.

The gain or loss arising from the derecognition of property, plant and equipment is included in profit or loss when the asset is derecognized.

The depreciation method, useful life and residual value of an asset are reviewed at each fiscal year-end, and any changes are accounted for prospectively as changes in accounting estimates.

(8) Intangible assets

Intangible assets are measured using the cost model and are carried at cost less any accumulated amortization and any accumulated impairment losses.

Intangible assets with finite useful lives are amortized using the straight-line method over their useful lives.

The estimated useful lives of major intangible assets are as follows:

Software: 5 years

Customer-related assets: 8 to 17 years

Technical assets: 15 years

The useful lives and amortization method are reviewed at each fiscal year-end, and any changes are accounted for prospectively as changes in accounting estimates.

Intangible assets with indefinite useful lives and intangible assets not yet available for use are not amortized but tested for impairment individually or as part of the cash-generating unit to which the asset belongs, at least once a year or whenever there is an indication that the asset may be impaired.

The gain or loss arising from the derecognition of intangible assets is included in profit or loss when the asset is derecognized.

(9) Goodwill

The measurement of goodwill at initial recognition is as described in “(2) Business combinations.”

Goodwill is measured at cost less any accumulated impairment losses. Goodwill is not amortized but tested for impairment at least once a year or whenever there is an indication that the asset may be impaired.

(10) Leases

(Lessee)

The Group assesses whether a contract is, or contains, a lease by considering whether the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

For leases as lessee, in principle, right-of-use assets and the corresponding lease liabilities are recognized. For short-term leases (with a lease term of 12 months or less) and leases for which the underlying asset is of low value, the lease payments are recognized as expenses on a straight-line basis over the lease term or another systematic basis.

Right-of-use assets are measured at cost at the commencement date, and lease liabilities are measured at the present value of the lease payments that are not made as of the commencement date. If the interest rate implicit in the lease cannot be readily determined, the lease payments are discounted using the lessee's incremental borrowing rate, which is the rate of interest that the lessee would have to pay to borrow the funds necessary to obtain a similar asset over a similar term.

After the commencement date of the lease, the right-of-use assets are measured at cost less any accumulated depreciation and any accumulated impairment losses, and are depreciated from the commencement date to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term. Lease liabilities are measured by increasing the book value to reflect interest on the lease liability based on the effective interest method and reducing the book value to reflect the lease payments made.

In cases such as where there is a change in the lease term or a lease modification is not accounted for as a separate lease, the lease liability is remeasured with a corresponding adjustment to the right-of-use asset.

(11) Impairment of non-financial assets

Non-financial assets other than inventories and deferred tax assets are assessed at the end of each reporting period whether there is any indication of impairment. If any such indication exists, the recoverable amount of the asset or the cash-generating unit (or a group of cash-generating units) is estimated. Goodwill and intangible assets with indefinite useful lives or not yet available for use are tested for impairment at least annually, irrespective of whether there is any indication of impairment.

The recoverable amount of an asset or a cash-generating unit (or a group of cash-generating units) is the higher of its fair value less costs of disposal and its value in use. The value in use is determined by discounting the estimated future cash flows of the asset or the cash-generating unit (or a group of cash-generating units) to the present value at an after-tax discount rate that reflects the time value of money and risks specific to the asset. A cash-generating unit is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets. If the recoverable amount of an asset or a cash-generating unit is less than its book value, an impairment loss is recognized in profit or loss.

At the end of each reporting period, it is assessed whether there is an indication that impairment losses recognized previously for an asset may no longer exist or may have decreased. If any such indication exists, the recoverable amount of the asset is estimated. If the estimated recoverable amount exceeds the book value of the asset, impairment losses are reversed. The book value after the reversal is recognized to the extent that it does not exceed the book value (net of accumulated depreciation or amortization) that would have been determined had no impairment loss been recognized previously for the asset. The amount of reversal of impairment losses is recognized in profit or loss.

Impairment losses recognized for goodwill are not reversed.

(12) Provisions

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

A provision is recognized for the best estimate of the expenditure required to settle the present obligation at the fiscal year-end. Where the effect of the time value of money is material, a provision is measured at the present value of the expenditure discounted at a discount rate that reflects the risks specific to the liability. Where discounting is applied, an increase in the provision arising from the passage of time is recognized as finance costs.

(13) Employee benefits

1) Post-employment benefits

The Group has adopted defined benefit plans and defined contribution plans as post-employment benefit plans.

(i) Defined benefit plans

The present value of defined benefit obligations and the related current service cost and past service cost are determined using the projected unit credit method for each plan separately.

The discount rate is determined by reference to yields at the fiscal year-end on high quality corporate bonds with a term to maturity corresponding to the discount period, which is set based on the period until the expected maturity of benefit payments in each future fiscal year.

The present value of defined benefit obligations less the fair value of plan assets is recognized as a liability or an asset.

Current service cost, past service cost and net interest on the net defined benefit liability (asset) are recognized in profit or loss. Remeasurements of the net defined benefit liability (asset) are recognized collectively in other comprehensive income for the period in which they are incurred and immediately reclassified to retained earnings.

(ii) Defined contribution plans

Retirement benefit expenses of the defined contribution plans are recognized as expenses for the period in which employees render the related services.

2) Short-term employee benefits

Short-term employee benefits are not discounted but are expensed at the time when employees render the related services.

When the Group has a present legal or constructive obligation to make payments as a result of past service rendered by employees, and a reliable estimate can be made of the amount of the obligation, the estimated amount to be paid is recognized as a liability.

3) Other long-term employee benefits

Long-term employee benefits other than post-employment benefits are determined by discounting to the present value the future benefits that employees have earned in return for their services rendered in the current and prior fiscal years.

(14) Government grants

Government grants are recognized at fair value when there is reasonable assurance that the Group will comply with the conditions attaching to the grants and that the grants will be received.

Government grants related to income are recognized as income on a systematic basis over the periods in which the Group recognizes as expenses the related costs for which the grants are intended to compensate.

Government grants related to assets are presented by deducting the grant from the cost of the asset in arriving at the book value of the asset.

(15) Equity

1) Share capital and capital surplus

Equity instruments issued by the Company are recognized at issue value in share capital and capital surplus. Transaction costs directly attributable to the issuance are deducted from capital surplus.

2) Treasury shares

Any treasury shares acquired are recognized at cost and deducted from equity. Transaction costs directly attributable to the acquisition are deducted from equity.

Any treasury shares disposed of are recognized as an increase in equity at the consideration received, and the difference between the book value and the consideration received is included in capital surplus.

(16) Share-based payment plans

The Group has adopted equity-settled and cash-settled share-based payment plans for Directors of the Board (excluding Independent Outside Directors of the Board), Corporate Officers and employees of the Company and certain directors of the board and employees of the Company's subsidiaries.

1) Equity-settled

For equity-settled share-based payments, the consideration for the services received is measured at fair value of the equity instruments at grant date and recognized as an expense, with the corresponding increase in equity.

2) Cash-settled

For cash-settled share-based payments, the services received and the liability incurred are measured at the fair value of the liability and recognized as expenses over the vesting period with the corresponding increase recognized as a liability. Until the liability is settled, the fair value of the liability is remeasured at the end of each quarterly period and at the date of settlement with any changes in fair value recognized in profit or loss.

3) Share-based payment transactions with cash alternatives

A share-based payment transaction with cash alternatives is accounted for as a cash-settled payment transaction if, and to the extent that, the Group has incurred a liability to settle in cash or other assets, or as an equity-settled payment transaction if, and to the extent that, no such liability has been incurred.

(17) Sales recognition

Except for interest and dividend income and other income items under IFRS 9, the Group recognizes sales in an amount that reflects the consideration to which the Group expects to be entitled in exchange for the transfer of goods or services to customers, based on the following five-step approach:

Step 1: Identify the contract(s) with a customer.

Step 2: Identify the performance obligations in the contract.

Step 3: Determine the transaction price.

Step 4: Allocate the transaction price to each distinct performance obligation in the contract.

Step 5: Recognize sales when (or as) a performance obligation is satisfied.

For products (see Note 26 "Net sales") that the Group has promised to deliver to a customer, the performance obligation in the contract is satisfied at a point at which the customer is deemed to have obtained control of the product in light of contractual terms and conditions, and the Group recognizes net sales primarily upon delivery of the product to the customer or the customer's acceptance, or based on terms and conditions of trade. For performance obligations in service contracts and other contracts that meet the criteria for determining whether control of goods or services is transferred over time, net sales are recognized over time by measuring the progress based on input methods, such as costs incurred.

Sales are measured at the amount net of returned products, rebates and discounts.

The consideration in the sales contracts on goods is collected mainly within one year from the time when control of the goods has been transferred to the customer. Those contracts do not contain a significant financing component.

(18) Borrowing costs

Borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset (an asset that necessarily takes a substantial period of time to get ready for its intended use or sale) are included in the cost of the asset. All other borrowing costs are recognized in profit or loss for the period in which they are incurred.

(19) Income taxes

Income tax expense is presented as the aggregate amount of current and deferred tax, and recognized in profit or loss, except for those related to business combinations and items recognized in other comprehensive income or directly in equity.

Current tax is measured at the amount expected to be paid to or recovered from the taxation authorities, using the tax rates and tax laws that have been enacted or substantively enacted by the fiscal year-end.

Deferred tax is recognized primarily for temporary differences between the tax base and the accounting book value of an asset and liability at the fiscal year-end. Deferred tax assets are recognized for deductible temporary differences and the carryforward of unused tax losses and tax credits to the extent that it is probable that taxable profit will be available against which they can be utilized. Deferred tax liabilities are, in principle, recognized for all taxable temporary differences.

Deferred tax assets or liabilities are not recognized for the following temporary differences:

・Taxable temporary differences arising from the initial recognition of goodwill.

・Temporary differences arising from the initial recognition of an asset or liability in a transaction that is not a business combination and affects neither accounting profit (loss) nor taxable profit (tax loss).

・Deductible temporary differences associated with investments in subsidiaries and associates where it is probable that the temporary difference will not reverse in the foreseeable future, or taxable profit will not be available against which the temporary difference can be utilized.

・Taxable temporary differences associated with investments in subsidiaries and associates where it is probable that the Group is able to control the timing of the reversal of the temporary difference, and the temporary difference will not reverse in the foreseeable future.

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

(20) Earnings per share

Basic earnings per share are calculated by dividing profit or loss attributable to ordinary shareholders of the parent company by the basic weighted average number of common shares outstanding during the period, adjusted for the number of treasury shares. Diluted earnings per share are calculated by adjusting for the effects of all dilutive potential common shares.

(21) Segment information

An operating segment is a component of business activities from which the Group earns sales and incurs expenses, including transactions with other operating segments. The operating results of all operating segments, for which separate financial information is available, are regularly reviewed by the Company’s Board of Directors in order to decide the allocation of management resources to each segment and to assess its performance.

(22) Assets held for sale

A non-current asset (or a disposal group) is classified as held for sale if its book value will be recovered principally through a sale transaction rather than through continuing use.

An asset held for sale is measured at the lower of its “book value” and “fair value less costs to sell.” Property, plant and equipment and intangible assets are not depreciated or amortized once classified as held for sale.

4. Operating segments

(1) Description of reportable segments

The Group's reportable segments are those for which separate financial information is available and regular evaluation by the board of directors is being performed in order to decide the allocation of management resources and to review business results.

The Group sets up divisions by product or service. Each division draws up a plan for comprehensive strategies in Japan and overseas for the products and services it handles, and thereupon develops its business activities.

Accordingly, the Group consists of segments by product and service based on divisions, and the reportable segments are the Industrial Materials segment, Devices segment, Medical Technologies segment, and Information and Communication segment.

The Industrial Materials segment manufactures and sells decorative films, molds, molded plastic products, and metallized papers. The Devices segment manufactures and sells film-based Touch Sensors and gas sensors and others. The Medical Technologies segment manufactures and sells consumable medical products such as medical electrodes, medical chart paper and others and also provides contract development and manufacturing services for major medical device manufacturers. The Information and Communication segment manufactures and sells products in the fields of publication printing and art solution, and provides services related to commercial printing and sales promotion.

(2) Methods of measurement for the amounts of net sales, profit (loss), assets and other items for each reportable segment

The accounting method for each reportable segment is the same as that set forth in Note 3 "Significant accounting policies." Segment profit is based on operating profit, and inter-segment sales are based on current market prices.

(3) Information about sales, profit (loss), assets, and other items by reportable segment

The fiscal year ended December 31, 2019 (January 1, 2019 to December 31, 2019)

(Million yen)

	Reportable segment					Other (Note 1)	Total	Reconciliations (Note 2)	Consolidated (Note 3)
	Industrial Materials	Devices	Medical Technologies	Information and Communication	Sub-total				
Sales from external customers	46,279	96,196	24,077	6,950	173,503	532	174,035	—	174,035
Inter-segment sales	1,006	130	—	55	1,193	1,665	2,858	(2,858)	—
Total	47,285	96,327	24,077	7,005	174,696	2,198	176,894	(2,858)	174,035
Segment profit (loss)	(7,278)	(11,769)	918	5,463	(12,665)	17	(12,648)	(3,605)	(16,253)
Finance income	—	—	—	—	—	—	—	—	1,056
Finance costs	—	—	—	—	—	—	—	—	(1,437)
Profit (loss) before tax	—	—	—	—	—	—	—	—	(16,634)
Segment assets	45,165	46,044	33,614	2,715	127,539	5,352	132,892	53,870	186,762
Other items									
Depreciation and amortization	3,670	4,260	1,169	200	9,300	168	9,469	604	10,074
Share of profit (loss) of investments accounted for using equity method	—	—	—	—	—	—	—	—	—
Impairment losses (see Note 14)	5,246	10,671	—	—	15,917	—	15,917	—	15,917
Increase in property, plant and equipment, intangible assets and right-of-use assets	3,535	2,329	972	626	7,463	60	7,523	1,424	8,948
Investments accounted for using equity method	—	0	—	—	0	—	0	—	0

(Notes) 1. The “Other” category consists of an operating segment not included in the reportable segments and includes the landscaping business, etc.

2. Reconciliations are as follows:

(1) The negative ¥3,605 million of reconciliations in segment profit (loss) includes unallocated corporate expenses, etc. Corporate expenses mainly consist of general and administrative expenses not attributable to any reportable segment.

(2) The positive ¥53,870 million of reconciliations in segment assets consists of the positive ¥54,108 million in total of cash and cash equivalents, investment securities, corporate (R&D and administrative) property, plant and equipment, etc., not allocated to reportable segments and the negative ¥238 million of inter-segment elimination of receivables and payables.

(3) The positive ¥604 million of reconciliations in depreciation and amortization relates to corporate (R&D and administrative) property, plant and equipment, etc.

(4) The positive ¥1,424 million of reconciliations in increase in property, plant and equipment, intangible assets and right-of-use assets is the amount of corporate (R&D and administrative) capital investment.

3. Segment profit (loss) is reconciled with operating profit (loss) recorded in the consolidated statements of profit or loss.

The fiscal year ended December 31, 2020 (January 1, 2020 to December 31, 2020)

(Million yen)

	Reportable segment					Other (Note 1)	Total	Reconciliations (Note 2)	Consolidated (Note 3)
	Industrial Materials	Devices	Medical Technologies	Information and Communication	Sub-total				
Sales from external customers	48,858	102,708	20,568	6,233	178,369	1,636	180,006	—	180,006
Inter-segment sales	1,292	37	0	55	1,386	1,423	2,810	(2,810)	—
Total	50,151	102,746	20,568	6,289	179,756	3,060	182,816	(2,810)	180,006
Segment profit (loss)	869	10,131	989	(377)	11,613	(195)	11,417	(4,127)	7,290
Finance income	—	—	—	—	—	—	—	—	891
Finance costs	—	—	—	—	—	—	—	—	(1,130)
Profit (loss) before tax	—	—	—	—	—	—	—	—	7,051
Segment assets	49,047	51,647	34,416	2,677	137,788	7,234	145,023	54,702	199,726
Other items									
Depreciation and amortization	3,477	2,953	1,033	223	7,688	361	8,050	380	8,430
Share of profit (loss) of investments accounted for using equity method	—	—	—	—	—	(42)	(42)	—	(42)
Impairment losses (see Note 14)	—	612	329	—	942	47	989	—	989
Increase in property, plant and equipment, intangible assets and right-of-use assets	2,503	2,117	889	162	5,672	1,433	7,106	789	7,896
Investments accounted for using equity method	—	0	—	—	0	567	567	—	567

(Notes) 1. The “Other” category consists of an operating segment not included in the reportable segments and includes the prescription pharmaceutical manufacturing business, etc.

2. Reconciliations are as follows:

(1) The negative ¥4,127 million of reconciliations in segment profit (loss) includes unallocated corporate expenses, etc. Corporate expenses mainly consist of general and administrative expenses not attributable to any reportable segment.

(2) The positive ¥54,702 million of reconciliations in segment assets consists of the positive ¥54,860 million in total of cash and cash equivalents, investment securities, corporate (R&D and administrative) property, plant and equipment, etc., not allocated to reportable segments and the negative ¥157 million of inter-segment elimination of receivables and payables.

(3) The positive ¥380 million of reconciliations in depreciation and amortization relates to corporate (R&D and administrative) property, plant and equipment, etc.

(4) The positive ¥789 million of reconciliations in increase in property, plant and equipment, intangible assets and right-of-use assets is the amount of corporate (R&D and administrative) capital investment.

3. Segment profit (loss) is reconciled with operating profit (loss) recorded in the consolidated statements of profit or loss.

4. The Company finalized the provisional accounting treatment pertaining to business combinations in the fiscal year ended December 31, 2020, and retrospectively adjusted figures for the fiscal year ended December 31, 2019 due to the finalization of the provisional accounting treatment.

(4) Information about products and services

This information is omitted since the same information is disclosed in (3) Information about sales, profit (loss), assets, and other items by reportable segment.

(5) Information by region

The fiscal year ended December 31, 2019 (January 1, 2019 to December 31, 2019)

1) Sales from external customers

(Million yen)

Japan	Ireland	United States	Other	Total
25,840	71,039	32,115	45,039	174,035

(Notes) 1. Sales are categorized by country or region based on the locations of customers.
2. Sales from external customers in Ireland consists mainly of that from APPLE OPERATIONS LIMITED listed in (6) Information by major customer.

2) Non-current assets

(Million yen)

Japan	United States	Other	Total
38,488	27,492	20,846	86,828

(Notes) 1. Financial instruments, deferred tax assets, retirement benefit asset, and rights arising under insurance contracts are not included.
2. Non-current assets are categorized by country or region based on the locations of assets.

The fiscal year ended December 31, 2020 (January 1, 2020 to December 31, 2020)

1) Sales from external customers

(Million yen)

Japan	Ireland	United States	Other	Total
25,593	78,552	24,432	51,427	180,006

(Notes) 1. Sales are categorized by country or region based on the locations of customers.
2. Sales from external customers in Ireland consists mainly of that from APPLE OPERATIONS LIMITED listed in (6) Information by major customer.

2) Non-current assets

(Million yen)

Japan	United States	Other	Total
38,688	28,487	20,664	87,840

(Notes) 1. Financial instruments, deferred tax assets, retirement benefit asset, and rights arising under insurance contracts are not included.
2. Non-current assets are categorized by country or region based on the locations of assets.
3. The Company finalized the provisional accounting treatment pertaining to business combinations in the fiscal year ended December 31, 2020, and retrospectively adjusted figures for the fiscal year ended December 31, 2019 due to the finalization of the provisional accounting treatment.

(6) Information by major customer

Details of sales from a major customer are as follows:

(Million yen)

Customer	Related Segment	Fiscal year ended December 31, 2019	Fiscal year ended December 31, 2020
APPLE OPERATIONS LIMITED and its group companies	Devices, Industrial Materials, and Information and Communication	74,200	79,357

(Note) The sales are reported under Ireland, United States and Japan in 1) Sales from external customers under (5) Information by region.

5. Business combinations

The fiscal year ended December 31, 2019 (January 1, 2019 to December 31, 2019)

Acquisition of Zonnebodo Pharmaceutical Co., Ltd.

(1) Overview of the business combination

1. Name of the acquired company and details of the acquired business

Name of the acquired company	Zonnebodo Pharmaceutical Co., Ltd. (hereinafter, “Zonnebodo Pharmaceutical”)
Details of the acquired business	Manufacturing and marketing authorization holder of pharmaceuticals and quasi drugs

2. Major reason for the business combination

In the “medical” market*1, the Company has focused on Drug Delivery Systems*2 (DDS), and has been considering an entry to the pharmaceutical market. Specifically, Nissha has been developing film type of pharmaceuticals by use of our core technologies such as printing and coating that the Company has cultivated since it was founded. Film type of pharmaceuticals are expected to contribute to improvements in dosage compliance and quality of life (QOL) for patients. The market is forecast to expand as the form of dosage shifts away from traditional pills and injections.

Zonnebodo Pharmaceutical’s history stretches back eighty years, and it is engaged in manufacturing and marketing authorization holder of in-house developed prescription pharmaceuticals (brand-name drugs) and quasi drugs. It manages long-selling products such as tablets for mitigating tinnitus and “Renovigo” for the prevention of tooth decay, and these items are sold at pharmacies and drug stores nationwide. Zonnebodo Pharmaceutical also possesses sophisticated manufacturing technologies and quality control capabilities in relation to a variety of drug forms, such as tablets, liquids and powders, and is building a robust business foundation in the pharmaceutical market.

With this acquisition, the Company obtains the business foundation necessary to put film type of pharmaceuticals on the market, including business license, GMP compliant manufacturing facilities, quality control systems, and sales channels. By means of the core technologies it has cultivated since it was founded, as well as other innovations, the Company aims to make a corporate contribution to the pharmaceutical market, as it has in other markets, in such a way as to enrich people’s lives.

*1 The Company has been currently operating the Sixth Medium-term Business Plan (three-year plan) centering on the growth by reorganizing and optimizing its business portfolio. We have set the markets of mobility (automotive), medical devices and sustainable packaging materials as our focused markets, in addition to the mainstay consumer electronics (IT), and aim to develop well-balanced business bases and enhance our corporate value by implementing global based growth strategy.

*2 A dosing system designed to optimize operation so that the required volume of drugs is administered to the required part of the body for only the required length of time.

3. Acquisition date

November 25, 2019

4. Method by which the acquiring company obtained control of the acquired company

Acquisition of shares for cash consideration

5. Name of the company after the combination

The company name will remain unchanged.

(2) Consideration transferred

	(Million yen)
Cash	2,500
Total consideration transferred	2,500

(3) Acquisition-related costs

Acquisition-related costs of ¥12 million were recorded in selling, general and administrative expenses.

(4) Amount of goodwill incurred and reasons for the goodwill incurred

1. Amount of goodwill incurred

¥1,687 million

As the fair values of assets acquired and liabilities assumed have not been finalized, the amount of goodwill has been determined provisionally. There is no amount of goodwill expected to be deducted for tax purposes.

2. Reasons for the goodwill incurred

Goodwill was incurred from expected excess earnings power in the future arising from further business development.

(5) Ratio of voting equity interests acquired

100%

(6) Amounts recognized of assets acquired and liabilities assumed

	(Million yen)
Current assets	
Cash and cash equivalents	65
Trade and other receivables	505
Inventories	98
Other	124
Non-current assets	
Property, plant and equipment	340
Intangible assets	0
Other	116
Total assets (Note 1)	1,252
Current liabilities	262
Non-current liabilities	177
Total liabilities (Notes 1, 2)	439

(Notes) 1. As allocation of the cost has not been completed in the current fiscal year, the amounts of assets acquired and liabilities assumed are determined provisionally based on information available at the present time.

2. There are no contingent liabilities.

(7) Impact on the consolidated statements of profit or loss

1. The acquired company's operating results recognized in the consolidated statements of profit or loss on and after the acquisition date

	(Million yen)
Net sales	99
Profit (loss) attributable to owners of parent	26

2. The amount of the impact on the consolidated statements of profit or loss assuming that the business combination was conducted at the beginning of the fiscal year.

	(Million yen)
Net sales	958
Profit (loss) attributable to owners of parent	32

(Method of calculating the estimated amounts)

Net sales and operating results are determined assuming that the business combination has been completed at the beginning of the fiscal year.

This note has not been audited.

Acquisition of non-controlling interests

On June 28, 2019, the Group additionally acquired 2.87% of shares in Graphic Controls Holdings, Inc. held by non-controlling shareholders to further improve the corporate value of the Group. As a result, the ratio of the Group's voting rights in Graphic Controls Holdings, Inc. has increased from 97.13% to 100%.

Consideration for additional acquisition of ¥770 million was paid in cash to non-controlling shareholders, and the book value of non-controlling interests decreased by ¥107 million upon the additional acquisition. The difference between the two amounting to ¥663 million has been accounted for as a decrease in capital surplus.

Loss of control of a subsidiary

Nissha Printing Communications, Inc., a consolidated subsidiary of the Company in charge of Information and Communication business, executed an absorption-type split (summary form) of its business in the Tokyo area (market and business foundation, with exceptions, in the Tokyo area) into a newly established subsidiary (Kyodo Nissha Printing Co., Ltd.), and as of January 7, 2019, transferred 90% of the issued shares of such subsidiary to Kyodo Printing Co., Ltd.

(1) Overview of loss of control

1. Outline of the business resulting in loss of control

Information and Communication business operated by Nissha Printing Communications, Inc., a consolidated subsidiary of the Company, in the Tokyo area (market and business foundation, with exceptions, in the Tokyo area)

2. Main reason for the loss of control

The Japanese general printing market has been shrinking against a backdrop of stagnating demand and other factors triggered by the diversification of information media. In the light of this market environment, Nissha Printing Communications, Inc. and Kyodo Printing Co., Ltd. concluded the business alliance contract and the production consignment contract in March 2016, and have since worked toward constructing a collaborative relationship for the outsourcing of production from Nissha Printing Communications, Inc. to Kyodo Printing Co., Ltd., reorganizing their production system, establishing a quality control system, and streamlining and optimizing procurement activities and distribution operations.

The two companies moved to implement the transfer of the business based on their collaborative partnership and relationship of trust built from 2016 to the present. Nissha Printing Communications, Inc. will reduce its business in the Tokyo area and consolidate its business foundation in the Kansai area. The transfer seeks to appropriately allocate management resources to markets and business domains in which Nissha Printing Communications, Inc. may leverage its assets in the central field where it can maximize its strength in high-accuracy color reproduction, and thereby improve business sales.

3. Other matters pertaining to outline of transactions, including legal form

Transfer of shares with assets, including cash, as sole consideration

(2) Gain on the loss of control of a subsidiary

Gain recognized from the loss of control of a subsidiary was ¥701 million, which is recorded in "Other income" (see Note 29) in the consolidated statements of profit or loss.

The valuation gain or loss of the residual investment measured at fair value as of the date of loss of control is immaterial.

(3) Assets and liabilities involving loss of control (see Note 33)

	(Million yen)
Current assets	237
Non-current assets	23
Total assets	261
Current liabilities	17
Non-current liabilities	95
Total liabilities	112

(4) Cash flows arising from loss of control (see Note 33)

	(Million yen)
Consideration received	818
Cash and cash equivalents included in the assets at the time control was lost	(120)
Net proceeds from sale of subsidiaries	698

The fiscal year ended December 31, 2020 (January 1, 2020 to December 31, 2020)

Acquisition of Eurofoil Paper Coating GmbH

(1) Overview of the business combination

1. Name of the acquired company and details of the acquired business

Name of the acquired company	Eurofoil Paper Coating GmbH (hereinafter, "Eurofoil")
Details of the acquired business	Production and sale of metallized paper used in packaging for food and cigarettes

2. Major reason for the business combination

The Group has been currently operating the Sixth Medium-term Business Plan (three-year plan) centering on the growth by reorganizing and optimizing its business portfolio. We have set the markets of mobility (automotive and transport equipment), medical devices and sustainable packaging materials as our focused markets, in addition to the mainstay consumer electronics (IT), and aim to develop well-balanced business bases and enhance our corporate value by implementing global based growth strategy.

In August 2015, the Company acquired AR Metallizing Group (hereinafter, "ARM"), the world's largest supplier of metallized paper (special paper on the surface of which is formed a metal layer, which brings decorative effects or functional characteristics), and made it a subsidiary. ARM's metallized paper has superior printability and recyclability and is widely used in such applications as packaging for beverage, food and daily goods. The need for materials with reduced environmental impact to substitute for traditional plastic packaging materials is rising globally, and we expect to see further expansion in business opportunities going forward.

Like ARM, Eurofoil is a manufacturer of metallized paper. In addition to having sales channels and production capacity for food and cigarette packaging in the European region, its proprietary processing technology, in areas such as coating and lamination, complements that of ARM. In addition to increasing its share of the metallized paper market in the European region, this acquisition will allow ARM to expedite the development of new products by utilizing Eurofoil's processing technology.

3. Acquisition date

January 31, 2020

4. Method by which the acquiring company obtained control of the acquired company

Acquisition of shares for cash consideration

5. Name of the company after the combination

AR Metallizing GmbH (renamed from Eurofoil Paper Coating GmbH on April 30, 2020)

(2) Consideration transferred

	(Million yen)
Cash	1,251
Contingent consideration	177
Total consideration transferred	1,428

(Note) Contingent consideration is not finalized at the present time.

(3) Contingent consideration

Contingent consideration is included in the consideration transferred as part of the contract. The contingent consideration is an obligation to make additional payments of up to EUR 1.5 million (undiscounted) in accordance with the EBITDA achievement level of the acquired company over the three years following the business combination.

The contingent consideration was determined using the scenario-based method and categorized within Level 3 of the fair value hierarchy. The key assumptions considered were the probability of meeting the EBITDA target, the projected future operating results, and the discount rate.

The breakdown of changes in the contingent consideration, which is recorded in other financial liabilities (see Note 20), is as follows:

(Million yen)

Balance at January 1, 2020	—
Increase resulting from the business combination	177
Change in fair value	1
Effect of changes in exchange rates	9
Balance at December 31, 2020	188

(4) Acquisition-related costs

Acquisition-related costs of ¥69 million were recorded in selling, general and administrative expenses.

(5) Amount of negative goodwill incurred and reasons for the negative goodwill incurred

1. Amount of negative goodwill incurred

¥804 million

2. Reasons for the negative goodwill incurred

Negative goodwill was incurred because the net fair value of assets acquired and liabilities assumed exceeded the consideration transferred. Negative goodwill incurred is recorded in “Other income” (see Note 29) in the consolidated statements of profit or loss.

(6) Ratio of voting equity interests acquired

100%

(7) Amounts recognized of assets acquired and liabilities assumed

	(Million yen)
Current assets	
Cash and cash equivalents	132
Trade and other receivables (Note 1)	710
Inventories	515
Other	160
Non-current assets	
Property, plant and equipment	2,051
Intangible assets (Note 2)	185
Other	347
Total assets	4,102
Current liabilities	556
Non-current liabilities	1,312
Total liabilities (Note 3)	1,869

(Notes) 1. For the fair value of ¥710 million of the trade and other receivables acquired in this acquisition, the gross contractual amount receivable is ¥710 million.

2. The major component allocated to intangible assets is customer-related assets of ¥124 million.
3. There are no contingent liabilities.

(8) Cash flow information

The payments for the acquisition of subsidiaries are as follows (see Note 33):

	(Million yen)
Consideration paid	(1,428)
Contingent consideration included in consideration paid	177
Cash and cash equivalents that were held by acquired companies at the time of acquisition	132
Net payments for acquisition of subsidiaries	(1,118)

(9) Impact on the consolidated statements of profit or loss

1. The acquired company's operating results included in the consolidated statements of profit or loss on and after the acquisition date

	(Million yen)
Net sales	5,962
Profit attributable to owners of parent	878

2. Pro forma information assuming that the business combination was conducted at the beginning of the fiscal year

	(Million yen)
Net sales	180,491
Profit attributable to owners of parent	7,053

This note has not been audited by the audit firm.

Finalization of provisional accounting pertaining to business combinations

For the business combination with Zonnebodo Pharmaceutical Co., Ltd. conducted on November 25, 2019, the amounts of assets acquired and liabilities assumed were provisional as allocation of the cost was not completed in the fiscal year ended December 31, 2019. The amounts were finalized and adjusted as per the following table in the fiscal year ended December 31, 2020.

In line with the finalization, the consolidated financial statements for the fiscal year ended December 31, 2019 were retrospectively adjusted. As major changes resulting from the retrospective adjustments, property, plant and equipment, intangible assets and deferred tax liabilities for the fiscal year ended December 31, 2019 increased by ¥275 million, ¥1,370 million and ¥560 million, respectively, while goodwill decreased by ¥1,089 million.

The impact on profit or loss is negligible.

Amounts recognized of assets acquired and liabilities assumed

(Million yen)

Items	Provisional amount	Adjusted amount	Finalized amount
Current assets			
Cash and cash equivalents	65	—	65
Trade and other receivables (Note 1)	505	—	505
Inventories	98	—	98
Other	124	—	124
Non-current assets			
Property, plant and equipment	340	277	617
Intangible assets (Note 2)	0	1,375	1,375
Other	116	—	116
Total assets	1,252	1,652	2,904
Current liabilities	262	—	262
Non-current liabilities	177	563	740
Total liabilities (Note 3)	439	563	1,002

(Notes) 1. For the fair value of ¥505 million of the trade and other receivables acquired in this acquisition, the gross contractual amount receivable is ¥509 million.
2. The major component allocated to intangible assets is customer-related assets of ¥1,375 million.
3. There are no contingent liabilities.

Acquisition of Norwalk, Ohio medical manufacturing operation of Olympus Surgical Technologies America

(1) Overview of the business combination

1. Name of the counterparty and the acquired business outline

Name of the counterparty	Olympus Surgical Technologies America
Details of the acquired business	Manufacturing rigid scopes for urology and gynecology and components of therapeutic devices

2. Major reason for the business combination

The Group has been currently operating the Sixth Medium-term Business Plan (three-year plan) centering on the growth by reorganizing and optimizing its business portfolio. We have set the markets of mobility (automotive and transport equipment), medical devices and sustainable packaging materials as our focused markets, in addition to the mainstay consumer electronics (IT), and aim to develop well-balanced business bases and enhance our corporate value by implementing global based growth strategy.

The Medical Technologies business serves the medical device sector of the Group through three unique divisions; Design & Manufacturing for Medical Device contract manufacturing and development, Healthcare Solutions for direct to hospital patient monitoring supplies and surgical consumables, and Custom Labeled Products for large volume private labelling opportunities. The Design & Manufacturing division is the globally trusted partner in the Design and Manufacturing of single use medical technologies with a streamlined process combining decades of experience to deliver high quality medical products for OEMs like OSTA. The Medical Technologies business leverages innovative technologies across our global footprint of unique capabilities to efficiently meet our customer's demanding specifications and timelines.

This strategic acquisition provides value to all OEM customers of the Medical Technologies business through increased vertical integration for our global manufacturing services. This agreement further enhances the business's design services and manufacturing capabilities related to machined components, increased production capacity in North America to support the business's global growth and operations.

3. Acquisition date

November 2, 2020

4. Method by which the acquiring company obtained control of the acquired company

Transfer of business for cash consideration

5. Name of the company after the combination

Nissha Medical Technologies (Ohio), Inc.

(2) Consideration transferred

	(Million yen)
Cash (including payables)	3,080
Total consideration transferred	3,080

(3) Acquisition-related costs

Acquisition-related costs of ¥87 million were recorded in selling, general and administrative expenses.

(4) Amount of goodwill incurred and reasons for the goodwill incurred

1. Amount of goodwill incurred

¥527 million

As the fair values of assets acquired and liabilities assumed have not been finalized, the amount of goodwill has been determined provisionally. The goodwill is expected to be fully deducted for tax purposes.

2. Reasons for the goodwill incurred

Goodwill was incurred from expected excess earnings power in the future arising from further business development.

(5) Amounts recognized of assets acquired and liabilities assumed

	(Million yen)
Current assets	
Cash and cash equivalents	0
Inventories	877
Non-current assets	
Property, plant and equipment	1,188
Intangible assets	534
Total assets (Note 1)	2,600
Current liabilities	46
Total liabilities (Notes 1 and 2)	46

(Notes) 1. As allocation of the cost has not been completed in the current fiscal year, the amounts of assets acquired and liabilities assumed are determined provisionally based on information available at the present time.

2. There are no contingent liabilities.

(6) Cash flow information

The payments for the acquisition of businesses are as follows (see Note 33):

	(Million yen)
Consideration paid	(3,080)
Accounts payable-other	1,047
Cash and cash equivalents that were held by acquired companies at the time of acquisition	0
Net payments for acquisition of businesses	(2,033)

(7) Impact on the consolidated statements of profit or loss

1. The acquired company's operating results included in the consolidated statements of profit or loss on and after the acquisition date

	(Million yen)
Net sales	299
Profit attributable to owners of parent	1

2. Pro forma information assuming that the business combination was conducted at the beginning of the fiscal year

	(Million yen)
Net sales	182,092
Profit attributable to owners of parent	7,474

This note has not been audited by the audit firm.

6. Cash and cash equivalents

The breakdown of cash and cash equivalents is as follows. The balance of cash and cash equivalents in the consolidated statements of financial position matches the balance of cash and cash equivalents at end of period in the consolidated statements of cash flows.

(Million yen)

	As of December 31, 2019	As of December 31, 2020
(Cash and cash equivalents)		
Cash and deposits	14,056	21,666
Time deposits with maturities of three months or less	3,442	3,400
Cash and cash equivalents in the consolidated statements of financial position	17,499	25,067

7. Trade and other receivables

The breakdown of trade and other receivables is as follows:

(Million yen)

	As of December 31, 2019	As of December 31, 2020
Notes and accounts receivable-trade	34,200	37,147
Accounts receivable-other	339	818
Allowance for doubtful accounts	(362)	(352)
Total	34,177	37,614

(Notes) 1. Trade and other receivables are classified as financial assets measured at amortized cost.

2. Trade and other receivables are stated at net of allowance for doubtful accounts in the consolidated statements of financial position.

3. Credit risk management is described in Note 35 "Financial instruments."

8. Inventories

The breakdown of inventories is as follows:

(Million yen)

	As of December 31, 2019	As of December 31, 2020
Merchandise and finished goods	8,972	10,850
Work in process	5,853	6,762
Raw materials and supplies	6,589	7,821
Total	21,415	25,435

(Notes) 1. Inventories recognized as an expense in cost of sales for the fiscal years ended December 31, 2019 and December 31, 2020 were ¥149,158 million and ¥142,346 million, respectively.

2. As a result of valuing inventories at net realizable value, write-downs of ¥597 million and ¥728 million were recognized for the fiscal years ended December 31, 2019 and December 31, 2020, respectively.

3. There was no material reversal of write-downs recognized for the fiscal years ended December 31, 2019 and December 31, 2020.

9. Other assets

The breakdown of other current assets and other non-current assets is as follows:

(Million yen)

	As of December 31, 2019	As of December 31, 2020
(Other current assets)		
Advance payments-other and prepaid expenses	999	911
Consumption taxes receivable	3,019	2,957
Income taxes receivable, etc.	591	281
Other	103	44
Total	4,713	4,194
(Other non-current assets)		
Long-term prepaid expenses	124	115
Other	122	134
Total	247	250

10. Assets held for sale

The breakdown of assets held for sale is as follows:

(Million yen)

	As of December 31, 2019	As of December 31, 2020
(Assets held for sale)		
Property, plant and equipment	4	—
Other financial assets	—	90
Total	4	90

Nissha Printing Communications, Inc., the Company's consolidated subsidiary in the Information and Communication business, and Kyodo Printing Co., Ltd. have agreed to transfer the shares of a joint venture, Kyodo Nissha Printing Co., Ltd. (equity stake of the Company: 10%) to Kyodo Printing Co., Ltd on January 5, 2021. Assets held for sale as of December 31, 2020 consist of such shares, which are classified as held for sale.

11. Property, plant and equipment

Changes in cost, accumulated depreciation and accumulated impairment losses, and the book value of property, plant and equipment are as follows:

(Million yen)

Cost	Buildings and structures	Machinery and vehicles	Tools, furniture and fixtures	Land	Construction in progress	Total
As of January 1, 2019	60,078	53,956	11,039	7,385	2,624	135,083
Acquisitions	917	1,048	465	2	3,949	6,383
Business combinations (Note 3)	58	145	40	371	0	617
Reclassification to assets held for sale (Note 4)	(166)	(449)	(13)	—	—	(629)
Disposals	(1,954)	(3,022)	(515)	(51)	(284)	(5,827)
Transfers (Note 6)	1,546	3,576	198	—	(5,257)	63
Foreign currency translation differences	(105)	(517)	(67)	(5)	(10)	(705)
As of December 31, 2019	60,374	54,739	11,147	7,702	1,021	134,985
Acquisitions	976	936	816	3	3,125	5,859
Business combinations (Note 3)	610	1,960	176	300	190	3,239
Reclassification to assets held for sale (Note 4)	—	—	—	—	—	—
Disposals	(1,106)	(2,040)	(279)	(65)	(603)	(4,095)
Transfers (Note 6)	487	1,570	78	—	(1,875)	260
Foreign currency translation differences	(63)	(551)	10	5	(33)	(633)
As of December 31, 2020	61,279	56,614	11,950	7,945	1,825	139,615

(Million yen)

Accumulated depreciation and accumulated impairment losses	Buildings and structures	Machinery and vehicles	Tools, furniture and fixtures	Land	Construction in progress	Total
As of January 1, 2019	(25,291)	(41,982)	(7,633)	(961)	(246)	(76,116)
Reclassification to assets held for sale (Note 4)	165	449	8	—	—	623
Depreciation	(2,883)	(2,843)	(1,038)	—	—	(6,764)
Impairment losses	(8,375)	(2,859)	(478)	(1,164)	(50)	(12,928)
Disposals	1,694	2,812	454	—	246	5,208
Transfers (Note 6)	—	(38)	(58)	—	—	(97)
Foreign currency translation differences	38	320	55	—	(0)	414
As of December 31, 2019	(34,650)	(44,141)	(8,690)	(2,126)	(50)	(89,659)
Reclassification to assets held for sale (Note 4)	—	—	—	—	—	—
Depreciation	(2,142)	(2,622)	(866)	—	—	(5,631)
Impairment losses	(38)	(596)	(2)	—	—	(637)
Disposals	414	1,946	263	—	11	2,634
Transfers (Note 6)	(197)	(215)	37	—	18	(357)
Foreign currency translation differences	41	294	(7)	0	0	328
As of December 31, 2020	(36,572)	(45,335)	(9,267)	(2,126)	(20)	(93,322)

(Million yen)

Book value	Buildings and structures	Machinery and vehicles	Tools, furniture and fixtures	Land	Construction in progress	Total
As of January 1, 2019	34,787	11,973	3,406	6,423	2,377	58,967
As of December 31, 2019	25,723	10,597	2,457	5,575	971	45,325
As of December 31, 2020	24,707	11,278	2,683	5,819	1,804	46,293

(Notes) 1. Depreciation of property, plant and equipment is included in cost of sales and selling, general and administrative expenses in the consolidated statements of profit or loss.
2. Expenditures related to property, plant and equipment under construction are presented as construction in progress in the above tables.
3. Business combinations are described in Note 5 "Business combinations."
4. Assets held for sale are described in Note 10 "Assets held for sale."
5. Impairment losses are described in Note 14 "Impairment of non-financial assets."
6. Transfers principally represent transfers from construction in progress to the related accounts of property, plant and equipment.
7. The Company finalized the provisional accounting treatment pertaining to business combinations in the fiscal year ended December 31, 2020, and retrospectively adjusted figures for the fiscal year ended December 31, 2019 due to the finalization of the provisional accounting treatment.

12. Goodwill and intangible assets

(1) Reconciliations

Changes in cost, accumulated amortization and accumulated impairment losses, and the book value of goodwill and intangible assets are as follows:

(Million yen)

Cost	Goodwill	Trademark rights	Software	Technical assets	Customer-related assets	Other	Total
As of January 1, 2019	23,648	3,880	7,588	2,526	8,509	1,383	47,537
Additions from internal development	—	—	—	—	—	49	49
Acquisitions	—	0	234	—	—	434	670
Business combinations (Note 2)	598	—	0	—	1,375	0	1,973
Reclassification to assets held for sale (Note 3)	—	(0)	—	—	—	—	(0)
Transfers (Note 4)	—	—	272	—	—	(271)	0
Disposals	—	—	(289)	—	—	(13)	(303)
Foreign currency translation differences	(479)	(51)	(20)	(87)	(187)	(400)	(1,225)
As of December 31, 2019	23,766	3,829	7,785	2,439	9,697	1,183	48,702
Additions from internal development	—	—	—	—	—	—	—
Acquisitions	—	4	106	—	—	635	746
Business combinations (Note 2)	527	—	60	—	124	534	1,246
Reclassification to assets held for sale (Note 3)	—	—	—	—	—	—	—
Transfers (Note 4)	—	—	100	—	—	(101)	(1)
Disposals	—	—	(109)	—	—	(11)	(120)
Foreign currency translation differences	(537)	(193)	17	89	(273)	(38)	(937)
As of December 31, 2020	23,756	3,640	7,960	2,529	9,548	2,202	49,636

(Million yen)

Accumulated amortization and accumulated impairment losses	Goodwill	Trademark rights	Software	Technical assets	Customer-related assets	Other	Total
As of January 1, 2019	(3,776)	—	(6,580)	(561)	(1,738)	(449)	(13,107)
Transfers (Note 4)	—	—	(26)	—	—	—	(26)
Amortization	—	—	(400)	(162)	(719)	(143)	(1,425)
Impairment losses	(1,612)	—	(43)	—	(70)	(54)	(1,780)
Disposals	—	—	269	—	—	8	277
Foreign currency translation differences	122	—	12	18	27	393	574
As of December 31, 2019	(5,266)	—	(6,769)	(704)	(2,501)	(245)	(15,488)
Transfers (Note 4)	—	—	0	—	—	—	0
Amortization	—	—	(344)	(161)	(749)	(64)	(1,319)
Impairment losses	—	—	—	—	(329)	—	(329)
Disposals	—	—	62	—	—	—	62
Foreign currency translation differences	(161)	—	(6)	(32)	206	0	6
As of December 31, 2020	(5,428)	—	(7,057)	(899)	(3,373)	(309)	(17,068)

(Million yen)

Book value	Goodwill	Trademark rights	Software	Technical assets	Customer-related assets	Other	Total
As of January 1, 2019	19,871	3,880	1,007	1,965	6,770	934	34,429
As of December 31, 2019	18,499	3,829	1,015	1,734	7,196	938	33,213
As of December 31, 2020	18,327	3,640	902	1,629	6,174	1,892	32,567

(Notes) 1. Amortization of intangible assets is included in cost of sales and selling, general and administrative expenses in the consolidated statements of profit or loss.

2. Business combinations are described in Note 5 “Business combinations.”

3. Assets held for sale are described in Note 10 “Assets held for sale.”

4. Transfers principally represent transfers from software in progress included in other to the related accounts of intangible assets.

5. Research and development expenses that do not meet asset recognition criteria are recognized as expenses as incurred and are recorded as selling, general and administrative expenses (see Note 27). Research and development expenses recognized as expenses for the fiscal years ended December 31, 2019 and December 31, 2020 were ¥3,659 million and ¥2,869 million, respectively.

6. The Company finalized the provisional accounting treatment pertaining to business combinations in the fiscal year ended December 31, 2020, and retrospectively adjusted figures for the fiscal year ended December 31, 2019 due to the finalization of the provisional accounting treatment.

(2) Impairment test for goodwill and intangible assets with indefinite useful lives

The book values of goodwill and intangible assets with indefinite useful lives allocated to each cash-generating unit are principally as follows.

Those that were significant as of December 31, 2019 and 2020 are attributable to the acquisitions of AR Metallizing N.V. in August 2015 and Graphic Controls Holdings, Inc. in September 2016.

(Million yen)

Cash-generating unit	Segment	Account	As of December 31, 2019	As of December 31, 2020
			Book value	Book value
AR Metallizing N.V.	Industrial Materials	Goodwill	3,406	3,460
Graphic Controls Holdings, Inc.	Medical Technologies	Goodwill	13,989	13,762
		Trademark rights (Note)	3,671	3,472

(Note) Trademark rights are expected to exist as long as the business continues. Therefore, their useful lives are considered indefinite.

Information including major assumptions used for determining the recoverable amount of each cash-generating unit is as follows:

1. AR Metallizing N.V.

The recoverable amount is determined as the value in use. The value in use is calculated by discounting the estimated future cash flows to present value. Those cash flows reflect past experience and information from external sources, and are based on the three-year business plan approved by management.

In estimating the future cash flows, the growth rate is determined by reference to the long-term expected growth rate of the market which the cash-generating unit belongs to (2% as of December 31, 2019; 2% as of December 31, 2020).

The discount rate is determined based on the after-tax weighted average cost of capital (9.4% as of December 31, 2019; 8.8% as of December 31, 2020).

As a result of the impairment test, impairment losses of ¥1,612 million were recognized for the fiscal year ended December 31, 2019 in the Industrial Materials segment.

The recoverable amount exceeded the book value by ¥885 million as of December 31, 2020. It is estimated that a 0.5% decrease in the growth rate or a 0.4% increase in the discount rate would result in recognizing impairment losses.

The above presumption of thresholds for impairment losses is derived under the assumption that the decrease in the growth rate and the increase in the discount rate occur independently.

2. Graphic Controls Holdings, Inc.

The recoverable amount is determined as the value in use. The value in use is calculated by discounting the estimated future cash flows to present value. Those cash flows reflect past experience and information from external sources, and are based on the three-year business plan approved by management.

In estimating the future cash flows, the growth rate is determined by reference to the long-term expected growth rate of the market which the cash-generating unit belongs to (3% as of December 31, 2019; 3% as of December 31, 2020).

The discount rate is determined based on the after-tax weighted average cost of capital (8.4% as of December 31, 2019; 9.2% as of December 31, 2020).

The recoverable amount exceeded the book value by ¥4,739 million as of December 31, 2020. It is estimated that a 1.2% decrease in the growth rate or a 0.9% increase in the discount rate would result in recognizing impairment losses.

The above presumption of thresholds for impairment losses is derived under the assumption that the decrease in the growth rate and the increase in the discount rate occur independently.

(3) Significant intangible assets

Significant intangible assets recognized in the consolidated statements of financial position are as follows:

- “Customer-related assets” and “Technical assets” that were incurred from the acquisition of AR Metallizing N.V. in August 2015

  For customer-related assets, the book value was ¥2,089 million as of December 31, 2019 and ¥1,995 million as of December 31, 2020, and the remaining amortization period is 11 years. For technical assets, the book value was ¥1,734 million as of December 31, 2019 and ¥1,629 million as of December 31, 2020, and the remaining amortization period is 9 years.

- “Customer-related assets” that were incurred from the acquisition of Graphic Controls Holdings, Inc. in September 2016

  The book value was ¥2,119 million as of December 31, 2019 and ¥1,745 million as of December 31, 2020, and the remaining amortization period is 9 years.

- “Customer-related assets” that were incurred from the acquisition of Zonnebodo Pharmaceutical Co., Ltd. in November 2019

  The book value was ¥1,370 million as of December 31, 2019 and ¥1,321 million as of December 31, 2020, and the remaining amortization period is 27 years.

  The Company finalized the provisional accounting treatment pertaining to business combinations in the fiscal year ended December 31, 2020, and retrospectively adjusted figures for the fiscal year ended December 31, 2019 due to the finalization of the provisional accounting treatment.

13. Leases

(1) The balance of right-of-use assets as of each fiscal year-end is as follows:

(Million yen)

	Buildings and structures	Machinery and vehicles	Tools, furniture and fixtures	Land	Intangible assets	Total
As of December 31, 2019	7,199	632	116	87	5	8,041
As of December 31, 2020	6,825	1,085	115	131	4	8,161

Additions to right-of-use assets are described in Note 33 "Cash flow information."

Depreciation and amortization for right-of-use assets are as follows:

(Million yen)

	Buildings and structures	Machinery and vehicles	Tools, furniture and fixtures	Land	Intangible assets	Total
Fiscal year ended December 31, 2019	1,502	310	62	3	4	1,883
Fiscal year ended December 31, 2020	1,132	285	46	10	5	1,479

(2) The maturity analysis of lease liabilities is as follows:

(Million yen)

		As of December 31, 2019	As of December 31, 2020
Book value	Lease liabilities (current)	1,562	1,589
	Lease liabilities (non-current)	7,926	8,311
	Total lease liabilities	9,488	9,901
Contractual cash flows	Total	10,635	11,581
	1 year or less	1,701	1,774
	Over 1 year to 5 years	4,600	4,750
	Over 5 years	4,333	5,056

(3) Expenses and cash outflows relating to leases are as follows:

(Million yen)

	Fiscal year ended December 31, 2019	Fiscal year ended December 31, 2020
Repayments of lease liabilities	1,766	1,734
Interest expenses on lease liabilities	205	149
Expenses relating to short-term leases	472	415
Expenses relating to leases of low-value assets (excluding expenses relating to short-term leases of low-value assets)	187	171
Total cash outflow for leases	2,631	2,469
Gains arising from sale and lease back transactions (Note)	—	9

(Note) These were generated in the Medical Technologies segment at the time when a sale and lease back transaction of a U.S. plant was executed.

14. Impairment of non-financial assets

(1) Cash-generating unit

The Group carries out grouping by the smallest cash-generating unit that generates cash inflows that are largely independent of the cash inflows from other units. Assets to be disposed of (assets to be disposed of by disposal or sale, etc.) and idle assets are grouped on an individual basis.

(2) Impairment losses

The Group recognizes impairment losses if the recoverable amount of an asset or a group of assets has fallen below its book value. Impairment losses are included in other expenses in the consolidated statements of profit or loss (see Note 29 “Other income and other expenses”).

The amount incurred by each reportable segment is as described in Note 4 “Operating segments.”

The fiscal year ended December 31, 2019 (January 1, 2019 to December 31, 2019)

(Long-lived assets for business use)

For the long-lived assets for business use of the cash-generating units that belonged to the Industrial Materials segment and the Devices segment, as the recovery of investment was considered unlikely due to a decline in profitability resulting from a deteriorated business environment, the book value of those assets was reduced to their recoverable amount, and impairment losses were recognized.

The recoverable amount was measured at the value in use, and the discount rate was determined based on the after-tax weighted average cost of capital.

In measuring the recoverable amount of Nissha GSI Technologies, Inc. as a cash-generating unit, given that the future cash flows were expected to be negative, the value in use was assessed at zero.

Cash-generating unit	Segment	Discount rate	Type of assets	Amount (Million yen)
Industrial Materials (decoration)	Industrial Materials	10.9%	Buildings and structures	1,114
			Machinery and vehicles	410
			Tools, furniture and fixtures	78
			Land	420
			Right-of-use assets	126
			Other	31
			Subtotal	2,181
Nissha PMX Technologies, S.A. de C.V.	Industrial Materials	12.3%	Machinery and vehicles	433
			Right-of-use assets	146
			Other	94
			Subtotal	674
Nissha GSI Technologies, Inc.	Industrial Materials	—	Machinery and vehicles	163
			Right-of-use assets	78
			Other	42
			Subtotal	283
Devices (excluding gas sensors)	Devices	8.2%	Buildings and structures	7,056
			Machinery and vehicles	1,469
			Tools, furniture and fixtures	379
			Land	743
			Right-of-use assets	845
			Other	114
			Subtotal	10,608
Total				13,748

(Assets to be disposed of)

For assets including assets to be disposed of and idle assets not expected to be used in the future, the book value of those assets was reduced to their recoverable amount, and impairment losses were recognized.

The recoverable amount was determined primarily at fair value (Level 3) less costs of disposal.

Segment	Type of assets	Amount (Million yen)
Industrial Materials	Buildings and structures	98
	Machinery and vehicles	379
	Tools, furniture and fixtures	3
	Right-of-use assets	12
	Subtotal	494
Devices	Buildings and structures	59
	Machinery and vehicles	3
	Tools, furniture and fixtures	0
	Subtotal	62
Total		556

(Goodwill)

For goodwill allocated to AR Metallizing N.V. in the Industrial Materials segment as a cash-generating unit, as the goodwill was not likely to be profitable as initially expected, impairment losses of ¥1,612 million were recognized.

For information including the method and major assumptions used for determining the recoverable amount, see “(2) Impairment test for goodwill and intangible assets with indefinite useful lives” in Note 12 “Goodwill and intangible assets.”

The fiscal year ended December 31, 2020 (January 1, 2020 to December 31, 2020)

(Long-lived assets for business use)

For the long-lived assets for business use allocated to M crossing Co., Ltd. in the Other segment as a cash-generating unit, as the recovery of investment was considered unlikely due to a decline in profitability resulting from a deteriorated business environment, the book value of those assets was reduced to their recoverable amount, and impairment losses were recognized.

The recoverable amount was measured at the value in use, and given that the future cash flows were expected to be negative, the amount was assessed at zero.

Cash-generating unit	Segment	Discount rate	Type of assets	Amount (Million yen)
M crossing Co., Ltd.	Other	—	Buildings and structures	23
			Tools, furniture and fixtures	1
			Right-of-use assets	23
Total				47

(Assets to be disposed of)

For assets including idle assets not expected to be used in the future, the book value of those assets was reduced to their recoverable amount, and impairment losses were recognized.

The recoverable amount was evaluated at fair value (Level 3) less costs of disposal for buildings and structures, machinery and vehicles, tools, furniture and fixtures, and the amount was assessed at zero. For customer-related assets, the recoverable amount was measured at the value in use and assessed at zero.

Segment	Type of assets	Amount (Million yen)
Devices	Buildings and structures	15
	Machinery and vehicles	596
	Tools, furniture and fixtures	0
	Subtotal	612
Medical Technologies	Customer-related assets	329
Total		942

15. Investments accounted for using equity method

The book value of investments in associates that are not individually material is as follows:

(Million yen)

	As of December 31, 2019	As of December 31, 2020
Book value of investments accounted for using equity method	0	567

Financial information on associates that are not individually material is as follows:

(Million yen)

	Fiscal year ended December 31, 2019	Fiscal year ended December 31, 2020
Share of profit	—	(42)
Share of other comprehensive income	—	9
Share of total comprehensive income	—	(32)

The unrecognized share of loss on associates which the Group has stopped recognizing when applying the equity method is as follows:

(Million yen)

	Fiscal year ended December 31, 2019	Fiscal year ended December 31, 2020
Unrecognized share of loss	(938)	—
Unrecognized share of accumulated loss	(2,258)	(757)

16. Other financial assets

The breakdown of other financial assets is as follows:

(Million yen)

	As of December 31, 2019	As of December 31, 2020
(Current assets)		
Financial assets measured at amortized cost		
Time deposits with maturities of more than three months	127	128
Advances paid	423	40
Other	20	62
Allowance for doubtful accounts	(8)	(8)
Financial assets measured at fair value through profit or loss		
Derivatives	0	—
Total	564	222
(Non-current assets)		
Financial assets measured at amortized cost		
Guarantee deposits	308	296
Long-term loans receivable	265	263
Other	236	226
Allowance for doubtful accounts	(457)	(458)
Financial assets measured at fair value through profit or loss		
Debt instruments	869	779
Financial assets measured at fair value through other comprehensive income		
Equity instruments (Note)	19,191	16,547
Total	20,413	17,653

(Note) The individual issuer and fair value of equity instruments designated as measured at fair value through other comprehensive income are as described in Note 35 “Financial instruments.”

17. Income taxes

(1) Deferred taxes

The breakdown by major cause and changes in deferred tax assets and deferred tax liabilities are as follows.

The Company finalized the provisional accounting treatment pertaining to business combinations in the fiscal year ended December 31, 2020, and retrospectively adjusted figures for the fiscal year ended December 31, 2019 due to the finalization of the provisional accounting treatment.

The fiscal year ended December 31, 2019 (January 1, 2019 to December 31, 2019)

(Million yen)

	As of January 1, 2019	Amount recognized in profit or loss	Amount recognized in other comprehensive income	Business combinations	Foreign currency translation differences	As of December 31, 2019
Deferred tax assets:						
Inventories	339	(197)	—	11	(1)	151
Property, plant and equipment and intangible assets	499	(78)	—	—	(6)	413
Allowance for doubtful accounts	34	(12)	—	—	(0)	22
Accrued bonuses	315	(304)	—	12	(0)	22
Obligation for paid absences	57	3	—	9	(0)	68
Accounts payable-other and accrued expenses, etc.	234	(122)	—	5	(1)	116
Retirement benefit liability	61	(35)	—	21	(0)	47
Unused tax losses	137	90	—	—	(0)	227
Other	287	(123)	(0)	0	(7)	155
Total	1,966	(780)	(0)	60	(20)	1,226
Deferred tax liabilities:						
Financial assets measured at fair value through other comprehensive income	(3,532)	—	(1,564)	—	—	(5,097)
Property, plant and equipment and intangible assets	(1,742)	1,189	—	—	7	(544)
Assets identified in business combinations	(3,860)	294	—	(563)	96	(4,032)
Other	(201)	(248)	3	(0)	0	(445)
Total	(9,336)	1,235	(1,561)	(563)	104	(10,120)
Net deferred tax assets (liabilities)	(7,370)	455	(1,561)	(502)	84	(8,894)

The fiscal year ended December 31, 2020 (January 1, 2020 to December 31, 2020)

(Million yen)

	As of January 1, 2020	Amount recognized in profit or loss	Amount recognized in other comprehensive income	Business combinations	Foreign currency translation differences	As of December 31, 2020
Deferred tax assets:						
Inventories	151	61	—	—	(3)	209
Property, plant and equipment and intangible assets	413	(35)	—	—	(4)	374
Allowance for doubtful accounts	22	27	—	—	(1)	48
Accrued bonuses	22	173	—	—	(0)	195
Obligation for paid absences	68	5	—	—	(3)	70
Accounts payable-other and accrued expenses, etc.	116	(20)	—	—	(5)	90
Retirement benefit liability	47	8	—	—	(0)	55
Unused tax losses	227	233	—	—	(11)	449
Other	155	278	—	—	(8)	425
Total	1,226	732	—	—	(39)	1,919
Deferred tax liabilities:						
Financial assets measured at fair value through other comprehensive income	(5,097)	—	706	—	—	(4,390)
Property, plant and equipment and intangible assets	(544)	(98)	—	—	28	(614)
Assets identified in business combinations	(4,032)	347	—	(200)	106	(3,778)
Other	(445)	(70)	(25)	—	3	(538)
Total	(10,120)	178	681	(200)	139	(9,321)
Net deferred tax assets (liabilities)	(8,894)	911	681	(200)	99	(7,401)

Unused tax losses and deductible temporary differences for which deferred tax assets are not recognized

(Million yen)

	As of December 31, 2019	As of December 31, 2020
Unused tax losses (Note)	26,087	18,647
Unused tax credits	—	12
Deductible temporary differences	25,303	31,942

(Note) Amount by expiration period of unused tax losses for which deferred tax assets are not recognized

(Million yen)

	As of December 31, 2019	As of December 31, 2020
1st year	2,366	784
2nd year	1,122	1,289
3rd year	1,580	183
4th year	751	1,086
5th year	637	4,845
After 5th year	19,629	10,457
Total	26,087	18,647

Taxable temporary differences associated with investments in the Group's subsidiaries for which deferred tax liabilities were not recognized were ¥13,092 million as of December 31, 2019 and ¥17,323 million as of December 31, 2020.

This was because the Group was able to control the timing of the reversal of the temporary difference, and it is probable that the temporary difference would not reverse in the foreseeable future.

(2) Income tax expense

The breakdown of income tax expense is as follows.

The Company finalized the provisional accounting treatment pertaining to business combinations in the fiscal year ended December 31, 2020, and retrospectively adjusted figures for the fiscal year ended December 31, 2019 due to the finalization of the provisional accounting treatment.

(Million yen)

	Fiscal year ended December 31, 2019	Fiscal year ended December 31, 2020
Current tax expense	1,045	961
Tax expense for prior periods	(1)	(68)
Deferred tax expense	(455)	(911)
Total	588	(18)

(Notes) 1. The amount of the benefits arising from previously unrecognized tax losses, tax credits or temporary differences of prior periods that were used to reduce current tax expense for the fiscal years ended December 31, 2019 and December 31, 2020 were ¥403 million and ¥3,390 million, respectively.

2. The amount of the benefits arising from previously unrecognized tax losses, tax credits or temporary differences of prior periods that were used to reduce deferred tax expense for the fiscal years ended December 31, 2019 and December 31, 2020 were ¥30 million and ¥40 million, respectively.

3. Deferred tax expense includes expenses arising from write-downs, or reversal of previous write-downs, of deferred tax assets. This does not cause any material changes in deferred tax expense for the fiscal years ended December 31, 2019 and December 31, 2020.

The Company is mainly subject to income taxes, inhabitants' taxes, and tax deductible enterprise taxes, based on which the statutory effective tax rate is calculated. The Company's statutory effective tax rate was 30.5% for the fiscal years ended December 31, 2019 and December 31, 2020.

The foreign subsidiaries are subject to tax rates in the jurisdiction where they operate.

The difference between the statutory effective tax rate and the average actual effective tax rate consists of the following factors:

	Fiscal year ended December 31, 2019	Fiscal year ended December 31, 2020
Statutory effective tax rate	30.5 %	30.5 %
(Adjustments)		
Difference in tax rate of foreign subsidiaries	0.8 %	(0.8)%
Share of profit (loss) of investments accounted for using equity method	— %	0.2 %
Changes in recoverability of deferred tax assets	(35.3)%	(31.3)%
Permanent non-deductible expenses	(1.1)%	0.6 %
Tax credits	0.7 %	(1.7)%
Other	0.8 %	2.2 %
Actual effective tax rate	(3.6)%	(0.3)%

18. Trade and other payables

The breakdown of trade and other payables is as follows:

(Million yen)

	As of December 31, 2019	As of December 31, 2020
Notes and accounts payable-trade	32,413	36,455
Electronically recorded obligations-operating	4,548	4,625
Accounts payable-other and accrued expenses	5,017	5,372
Electronically recorded obligations-non-operating	1,640	1,969
Notes payable-facilities and accounts payable-facilities	919	1,018
Total	44,538	49,441

(Note) Trade and other payables are classified as financial liabilities measured at amortized cost.

19. Bonds and borrowings

(1) Bonds

Company name	Bond name	Date of issuance	As of December 31, 2019 (Million yen)	As of December 31, 2020 (Million yen)	Interest rate (%)	Collateral	Maturity date
Nissha Co., Ltd.	Zero Coupon Convertible Bonds due 2021 (bonds with stock acquisition rights)	March 7, 2016	2,817	2,840	0.82	None	March 8, 2021

(Note) The stock acquisition rights attached to Zero Coupon Convertible Bonds due 2021 (bonds with stock acquisition rights) are recognized as embedded derivatives. Accordingly, they are separated from the host contract, measured at fair value, and recorded as capital surplus after tax effects.

(2) Borrowings

	As of December 31, 2019 (Million yen)	As of December 31, 2020 (Million yen)	Average interest rate (Note 1) (%)	Repayment date (Note 2)
Short-term loans payable	20,803	17,549	0.75	—
Current portion of long-term loans payable	1,363	3,145	2.46	—
Long-term loans payable (excluding current portion)	11,427	8,877	3.49	2022 to 2032
Total	33,594	29,572	—	—

(Notes) 1. Average interest rate represents the weighted average interest rate on the balance as of December 31, 2020.
2. Repayment date represents the due date for the balance as of December 31, 2020.

The breakdown of assets pledged as collateral and corresponding liabilities is as follows:

(Million yen)

	As of December 31, 2019	As of December 31, 2020
Assets pledged as collateral		
Cash and cash equivalents	298	575
Trade and other receivables	2,742	2,455
Inventories	4,524	5,281
Other current assets	212	235
Property, plant and equipment	1,531	2,519
Intangible assets	4,001	2,725
Right-of-use assets	34	—
Other financial assets (non-current)	—	2
Other non-current assets	66	59
Total	13,411	13,856
Corresponding liabilities		
Bonds and borrowings (current)	2,139	5,692
Bonds and borrowings (non-current)	11,139	8,639
Total	13,278	14,331

(Note) Other than those listed above, there are assets pledged as collateral that were eliminated in the consolidated financial statements, including shares of subsidiaries and associates (¥23,992 million as of December 31, 2019; ¥24,095 million as of December 31, 2020) and notes and accounts receivable-trade (¥2,363 million as of December 31, 2019; ¥2,278 million as of December 31, 2020).

20. Other financial liabilities

The breakdown of other financial liabilities is as follows:

(Million yen)

	As of December 31, 2019	As of December 31, 2020
(Current liabilities)		
Financial liabilities measured at amortized cost		
Deposits received	704	568
Accounts payable-other and accrued expenses	65	27
Financial liabilities measured at fair value through profit or loss		
Contingent consideration (see Note 5)	303	193
Total	1,073	789
(Non-current liabilities)		
Financial liabilities measured at amortized cost		
Accounts payable-other and accrued expenses	22	1,056
Other	9	9
Financial liabilities measured at fair value through profit or loss		
Contingent consideration (see Note 5)	410	124
Total	442	1,191

21. Provisions

(1) Breakdown

The breakdown of provisions is as follows:

(Million yen)

	As of December 31, 2019	As of December 31, 2020
Asset retirement obligations	47	47
Restructuring provisions	17	14
Other	35	39
Total	100	100
Current liabilities	53	53
Non-current liabilities	47	47

(Note) Other mainly consists of provision for product warranties.

(2) Changes

Details of changes in provisions are as follows:

(Million yen)

	Asset retirement obligations	Restructuring provisions	Other	Total
As of January 1, 2019	35	218	208	463
Provision	—	17	35	53
Intended use	—	(214)	(78)	(293)
Reversal	—	—	(122)	(122)
Business combinations (see Note 5)	17	—	—	17
Foreign currency translation differences	—	(3)	(7)	(11)
Other	(6)	—	—	(6)
As of December 31, 2019	47	17	35	100
Provision	—	—	32	32
Intended use	—	(2)	(30)	(33)
Reversal	—	—	—	—
Business combinations (see Note 5)	—	—	—	—
Foreign currency translation differences	—	(0)	1	1
Other	0	—	—	0
As of December 31, 2020	47	14	39	100

The amount to be incurred for the restoration obligation of operating bases used by the Group are estimated based on historical experience and recognized as a provision for asset retirement obligations.

These costs are expected to be incurred principally after one year or more, but will be affected by the development of future business plans and other factors.

Restructuring provisions are provided for the restructuring of European production bases of the Group's consolidated subsidiaries in the Medical Technologies segment. The timing of an outflow of economic benefits is expected to be within one year from the end of the fiscal year, but will be affected by the progress status of restructuring plans.

22. Other liabilities

The breakdown of other current liabilities and other non-current liabilities is as follows:

(Million yen)

	As of December 31, 2019	As of December 31, 2020
(Other current liabilities)		
Accrued consumption taxes	109	957
Accrued bonuses	1,895	1,723
Accrued directors' bonuses	63	71
Cash-settled share-based payment expenses for directors (see Note 34)	266	263
Obligation for paid absences	950	996
Advances received and unearned revenue (see Note 26)	953	2,604
Other	0	20
Total	4,237	6,637
(Other non-current liabilities)		
Cash-settled share-based payment expenses (see Note 34)	—	15
Cash-settled share-based payment expenses for directors (see Note 34)	10	—
Other long-term employee benefit obligations	287	239
Other	32	74
Total	331	329

23. Post-employment benefits

(1) Outline of post-employment benefit plans

The Company and certain consolidated subsidiaries have adopted funded and unfunded defined benefit plans and defined contribution plans to provide for retirement benefits to their employees. The funded defined benefit plans are contract-type corporation pension plans under the Defined Benefit Corporation Pension Act, which provide lump-sum payments or pension benefits based on a point system. The contract-type corporation pension plans are implemented under the Constitution for Corporate Pension Plan with Defined Benefits agreed between labor and management by entrusting the administration and management of plan assets to investment managers.

The contract requires recalculation of contributions at least every five years in accordance with the Defined Benefit Corporation Pension Act in order to maintain balanced finance into the future.

The unfunded defined benefit plans are retirement lump-sum payment plans, which provide lump-sum payments based on a point system or based on salary and service period.

The Company and certain consolidated subsidiaries are exposed to actuarial risks, including investment risk, interest rate risk and longevity risk, through the defined benefit plans.

(2) Defined benefit plans

Amounts related to defined benefit plans in the consolidated statements of financial position are as follows:

1) Amounts related to defined benefit plans in the consolidated statements of financial position

(Million yen)

	As of December 31, 2019	As of December 31, 2020
Present value of funded defined benefit obligations	2,046	2,744
Fair value of plan assets	(2,280)	(2,278)
Subtotal	(233)	466
Present value of unfunded defined benefit obligations	4,881	5,148
Total	4,648	5,614
Amounts in the consolidated statements of financial position		
Retirement benefit liability	4,913	5,884
Retirement benefit asset	(265)	(269)
Net of liability and asset recorded in the consolidated statements of financial position	4,648	5,614

2) Changes in present value of defined benefit obligations

(Million yen)

	Fiscal year ended December 31, 2019	Fiscal year ended December 31, 2020
Beginning balance of present value of defined benefit obligations	6,505	6,928
Current service cost	524	571
Interest expenses	39	37
Remeasurements		
Actuarial gains and losses arising from changes in demographic assumptions	(89)	402
Actuarial gains and losses arising from changes in financial assumptions	119	(96)
Other	69	(385)
Benefit payments	(280)	(1,005)
Foreign currency translation differences	(19)	68
Past service cost	—	442
Obligations assumed in business combinations (see Note 5)	61	930
Other	(2)	—
Ending balance of present value of defined benefit obligations	6,928	7,893

The weighted average duration of defined benefit obligations as of December 31, 2019 and December 31, 2020 was 10.5 years and 11.7 years, respectively.

3) Changes in fair value of plan assets

(Million yen)

	Fiscal year ended December 31, 2019	Fiscal year ended December 31, 2020
Beginning balance of fair value of plan assets	2,182	2,280
Interest income	13	11
Remeasurements		
Return on plan assets, excluding interest income	66	4
Contributions by employers	131	105
Benefit payments	(112)	(394)
Foreign currency translation differences	—	15
Assets acquired in business combinations (see Note 5)	—	254
Other	(0)	—
Ending balance of fair value of plan assets	2,280	2,278

The contributions for the following fiscal year are expected to be ¥99 million.

4) Changes in the effect of the asset ceiling

Not applicable

5) Fair value of plan assets

(Million yen)

	As of December 31, 2019		As of December 31, 2020	
	With market prices in active markets	No market prices in active markets	With market prices in active markets	No market prices in active markets
Equity instruments				
Foreign equities	77	—	70	—
Japanese equities	204	—	147	—
Debt instruments				
Japanese bonds	511	—	461	—
Foreign bonds	77	—	68	—
General accounts of life insurance companies (Note 1)	—	1,397	—	1,240
Other (Note 2)	5	5	13	275
Total plan assets	876	1,403	762	1,515

(Notes) 1. General accounts of life insurance companies represent the investment of plan assets through general accounts for which the life insurance companies mainly guarantee both principal and interest.

2. The major item is plan assets in Germany and consists of insurance contracts, etc.

The investment of plan assets is aimed at maximizing total returns in the long-term within acceptable risk levels in order to ensure future payments of benefits. To achieve this investment objective, the return is targeted at the expected rate of return from the plan assets with the asset allocation (the “policy asset mix”) that should be maintained in the long-term. The policy asset mix is set from a medium- to long-term perspective of more than three to five years, reviewed annually, and revised as necessary if there are any changes in the underlying conditions.

The basic policy for risk management of the investment is to diversify the portfolio into asset classes with different risk-return profile and other characteristics. The status of the investment is monitored, including through the quarterly reports from the investment managers on the investment of the plan assets and the quantitative and qualitative assessment of the investment managers.

6) Significant actuarial assumption

The significant actuarial assumption (weighted average value) used to measure the fair value of defined benefit obligations is as follows:

	As of December 31, 2019 (%)	As of December 31, 2020 (%)
Discount rate	0.4	0.6

7) Sensitivity analysis of the significant actuarial assumptions

The sensitivity analysis of the significant actuarial assumptions is as follows:

(Million yen)

	Change in underlying rate	As of December 31, 2019	As of December 31, 2020
Discount rate	0.5% increase	(330)	(410)
	0.5% decrease	309	450

This analysis assumes that other variables are constant.

There are correlations between some assumptions, and it is rare for each assumption to change independently. Accordingly, the sensitivity analysis above may not necessarily show the actual change in defined benefit obligations. In addition, in the sensitivity analysis above, the present value of defined benefit obligations is determined as of the end of the reporting period using the projected unit credit method, as is the case with determining retirement benefit liability (asset) recognized in the consolidated statements of financial position.

(3) Defined contribution plans

For contributions to the defined contribution plans, the Company and certain consolidated subsidiaries recognized expenses of ¥2,132 million and ¥2,170 million for the fiscal years ended December 31, 2019 and December 31, 2020, respectively.

The above amounts include contributions to public plans recognized as expenses.

24. Share capital and other equity items

(1) Share capital and capital surplus

1) Number of shares authorized

Class	Number of shares authorized (Shares)
Common stock	180,000,000

(Note) This represents the number of shares authorized as of December 31, 2019 and December 31, 2020.

2) Number of shares issued and fully paid

Changes in the number of common shares issued and the balances of share capital and capital surplus are as follows:

	Number of common shares issued (Thousand shares)	Share capital (Million yen)	Capital surplus (Million yen)
Balance at January 1, 2019	50,855	12,119	15,071
Changes during the period	—	—	(139)
Balance at December 31, 2019	50,855	12,119	14,931
Changes during the period	—	—	(75)
Balance at December 31, 2020	50,855	12,119	14,856

(Notes) 1. The shares issued by the Company are common shares with no par value that have no restrictions on any rights.
2. Changes in capital surplus during the period for the fiscal year ended December 31, 2019 are mainly due to additions to non-controlling interests (see Note 5) and expiration of written put options held by non-controlling shareholders.
3. Changes in capital surplus during the period for the fiscal year ended December 31, 2020 are mainly due to sales of treasury shares to the shareholding association.

(2) Treasury shares

Changes in the number of treasury shares and balance thereof are as follows:

	Number of shares (Thousand shares)	Amount (Million yen)
Balance at January 1, 2019	943	1,900
Changes during the period	(0)	(1)
Balance at December 31, 2019	942	1,899
Changes during the period	(88)	(178)
Balance at December 31, 2020	853	1,720

(Note) Changes in treasury shares during the period for the fiscal year ended December 31, 2020 are mainly due to sales to the shareholding association.

(3) Capital surplus

Capital surplus consists of amounts arising from equity transactions that are not included in share capital. Changes in ownership interest in subsidiaries that do not result in a loss of control are accounted for as equity transactions.

1) Legal capital surplus

Under the Companies Act, more than one-half of the paid-in capital or contributed capital upon issuance of shares shall be credited to share capital, and the remainder shall be credited to legal capital surplus included in capital surplus. Legal capital surplus may be transferred to share capital by resolution of the General Meeting of Shareholders.

2) Written put options held by non-controlling shareholders

For written put options on shares of subsidiaries granted by the Group to owners of non-controlling interests, a financial liability is recognized initially at the present value of the redemption amount and is reclassified from capital surplus, and subsequent changes in fair value are recognized in profit or loss. Since the put options expired in the fiscal year ended December 31, 2019, the book value of the financial liability at expiration has been reclassified to capital surplus.

(4) Retained earnings

Retained earnings consist of earnings recognized in profit or loss for the current and prior fiscal years and earnings reclassified from other comprehensive income.

Under the Companies Act, one-tenth of the amount to be paid as dividends of surplus shall be accumulated as legal capital surplus or legal retained earnings until the total amount of legal capital surplus and legal retained earnings reaches one-fourth of share capital. The accumulated legal retained earnings may be used to eliminate or reduce a deficit, and the legal retained earnings may also be reversed by resolution of the General Meeting of Shareholders.

(5) Other components of equity

1) Net change in fair value of financial assets measured through other comprehensive income

Net change in fair value of financial assets measured through other comprehensive income represents valuation differences in fair value of financial assets measured through other comprehensive income.

2) Remeasurements of defined benefit plans

Remeasurements of defined benefit plans consist mainly of the effect of changes in actuarial assumptions, the effect of adjustment to the actual results, and return on plan assets (excluding the amount included in net interest expenses). These are recognized in other comprehensive income as incurred, and immediately transferred from other components of equity to retained earnings.

3) Exchange differences on translation of foreign operations

Exchange differences on translation of foreign operations are translation differences arising when consolidating the financial statements of foreign operations prepared in foreign currencies.

25. Dividends

Dividends paid are as follows:

The fiscal year ended December 31, 2019 (January 1, 2019 to December 31, 2019)

Resolution	Type of stock	Total amount of dividends (Million yen)	Dividend per share (Yen)	Record date	Effective date
Meeting of the Board of Directors held on February 14, 2019	Common shares	749	15.00	December 31, 2018	March 4, 2019
Meeting of the Board of Directors held on August 6, 2019	Common shares	749	15.00	June 30, 2019	September 2, 2019

(Notes) 1. The total amount of dividends based on a resolution of the meeting of the Board of Directors held on February 14, 2019 includes ¥1 million paid to Custody Bank of Japan, Ltd. (Trust E Account) as dividends on Company shares it holds.
2. The total amount of dividends based on a resolution of the meeting of the Board of Directors held on August 6, 2019 includes ¥1 million paid to Custody Bank of Japan, Ltd. (Trust E Account) as dividends on Company shares it holds.

The fiscal year ended December 31, 2020 (January 1, 2020 to December 31, 2020)

Resolution	Type of stock	Total amount of dividends (Million yen)	Dividend per share (Yen)	Record date	Effective date
Meeting of the Board of Directors held on February 14, 2020	Common shares	1,006	20.00	December 31, 2019	March 4, 2020
Meeting of the Board of Directors held on August 6, 2020	Common shares	755	15.00	June 30, 2020	September 1, 2020

(Notes) 1. The total amount of dividends based on a resolution of the meeting of the Board of Directors held on February 14, 2020 includes ¥8 million paid to Custody Bank of Japan, Ltd. (Trust E Account) as dividends on Company shares it holds.
2. The dividend per share based on a resolution of the meeting of the Board of Directors held on February 14, 2020 includes commemorative dividend of ¥5 in recognition of the 90th anniversary of the Company's foundation.
3. The total amount of dividends based on a resolution of the meeting of the Board of Directors held on August 6, 2020 includes ¥5 million paid to Custody Bank of Japan, Ltd. (Trust E Account) as dividends on Company shares it holds.

Dividends that take effect in the following fiscal year are as follows:

The fiscal year ended December 31, 2019 (January 1, 2019 to December 31, 2019)

Resolution	Type of stock	Dividend resource	Total amount of dividends (Million yen)	Dividend per share (Yen)	Record date	Effective date
Meeting of the Board of Directors held on February 14, 2020	Common shares	Retained earnings	1,006	20.00	December 31, 2019	March 4, 2020

(Notes) 1. The total amount of dividends based on a resolution of the meeting of the Board of Directors held on February 14, 2020 includes ¥8 million paid to Custody Bank of Japan, Ltd. (Trust E Account) as dividends on Company shares it holds.
2. The dividend per share based on a resolution of the meeting of the Board of Directors held on February 14, 2020 includes commemorative dividend of ¥5 in recognition of the 90th anniversary of the Company's foundation.

The fiscal year ended December 31, 2020 (January 1, 2020 to December 31, 2020)

Resolution	Type of stock	Dividend resource	Total amount of dividends (Million yen)	Dividend per share (Yen)	Record date	Effective date
Meeting of the Board of Directors held on February 12, 2021	Common shares	Retained earnings	755	15.00	December 31, 2020	March 1, 2021

(Note) The total amount of dividends based on a resolution of the meeting of the Board of Directors held on February 12, 2021 includes ¥5 million paid to Custody Bank of Japan, Ltd. (Trust E Account) as dividends on Company shares it holds.

26. Net sales

(1) Disaggregation of sales

As described in Note 4 "Operating segments," the Group has four reportable segments, which are the Industrial Materials segment, Devices segment, Medical Technologies segment, and Information and Communication segment. Net sales are disaggregated by product group. The following table shows how the disaggregated net sales ties in with the net sales of each reportable segment.

(Million yen)

Segment	Product lineups	Fiscal year ended December 31, 2019	Fiscal year ended December 31, 2020
Industrial Materials	Decoration (mobility (automotive and transport equipment) field)	18,309	17,506
	Decoration (other fields)	12,375	11,848
	Sustainable materials (metallized paper)	15,595	19,503
Devices	For smartphones, tablets, etc.	75,970	80,311
	For game players, industrial equipment (logistics related) and mobility (automotive and transport equipment) components, gas sensors, etc.	20,225	22,396
Medical Technologies	Medical devices (contract development and manufacturing)	11,842	9,244
	Medical devices (own brand)	4,938	6,450
	Business media	7,295	4,873
Information and Communication	Publication field	1,440	1,409
	Commercial field	5,322	4,297
	Others	186	527
Other		532	1,636
Total		174,035	180,006

1) Industrial Materials

In the Industrial Materials segment, we mainly offer proprietary technologies that enable to create added value on the surfaces of various materials. IMD, IML, and IME, which facilitate simultaneous in-mold decoration, design and function adding of plastic products, are extensively adopted in mobility components and home appliances in global markets. Also, our metallized paper, which unites the properties of metallic luster and printing friendliness, has the largest market share in the industry as sustainable materials for beverages and foods on a global basis.

2) Devices

In the Devices segment, we produce components and module products that pursue precision and functionality. Our main products, film-based Touch Sensors are widely adopted mainly in smartphones, tablets, portable game players, industrial equipment (logistics related), mobility components, etc. in global markets. In addition, we offer gas sensors that can detect gas conditions, along with other products.

3) Medical Technologies

The Medical Technologies segment is a business segment that offers high-quality and value-added products in medical devices and other related markets to contribute to healthy and affluent life. The segment currently provides contract development and manufacturing services for major medical device manufacturers on a global basis with products such as surgical instruments for minimal invasive treatments and medical wearable sensors used for a wide range of conditions, primarily heart disease. In addition to this, the segment manufactures and sells its own brand products to medical institutions.

4) Information and Communication

In the Information and Communication segment, we focus on the fields such as publication printing and art solution, where we can make the most of our high-definition and high-quality tone reproduction capabilities, and also offer commercial printing and services related to sales promotion.

These are accounted for in accordance with policies stated in Note 3 “Significant accounting policies.” The consideration for performance obligations is collected within one year after the performance obligations are satisfied and, therefore, is accounted for as not having a significant financing component. The amount of assets recognized from the costs to obtain or fulfill contracts with customers for the fiscal years ended December 31, 2019 and December 31, 2020 was not material. By applying the practical expedient, the incremental costs of obtaining contracts are recognized as expenses as incurred if the amortization period of the assets that would otherwise have been recognized is one year or less.

(2) Contract balances

The breakdown of contract balances is as follows. Receivables from contracts with customers are notes and accounts receivable-trade included in trade and other receivables (see Note 7). The amount of contract assets is not material. Contract liabilities are advances received from customers in sale transactions of the Group’s products before the time when the customers obtain control of the products, such as upon customer acceptance.

(Million yen)

	As of December 31, 2019	As of December 31, 2020
Contract liabilities		
Advances received (see Note 22)	953	1,089

(Notes) 1. Sales recognized for the fiscal year ended December 31, 2019 that was included in the opening balance of contract liability was ¥1,283 million.

2. Sales recognized for the fiscal year ended December 31, 2020 that was included in the opening balance of contract liability was ¥438 million.

(3) Transaction price allocated to the remaining performance obligations

The Group applies the practical expedient of omitting the disclosure of information on the remaining performance obligations because it has no significant transaction with individual expected contractual terms exceeding one year. In addition, there is no significant consideration from contracts with customers that is not included in transaction prices.

27. Selling, general and administrative expenses

The breakdown of selling, general and administrative expenses is as follows:

(Million yen)

	Fiscal year ended December 31, 2019	Fiscal year ended December 31, 2020
Personnel expenses	11,231	10,701
Research and development expenses (see Note 12)	3,659	2,869
Packing and transportation costs	2,734	2,941
Depreciation and amortization	2,620	2,503
Other	7,426	6,972
Total	27,672	25,988

(Note) The Company finalized the provisional accounting treatment pertaining to business combinations in the fiscal year ended December 31, 2020, and retrospectively adjusted figures for the fiscal year ended December 31, 2019 due to the finalization of the provisional accounting treatment.

28. Employee benefit expenses

Employee benefit expenses were ¥32,811 million for the fiscal year ended December 31, 2019 and ¥33,619 million for the fiscal year ended December 31, 2020.

Employee benefit expenses include salaries, bonuses, retirement benefit expenses, legal welfare expenses and non-legal welfare expenses, and are recorded in cost of sales, selling, general and administrative expenses and other expenses in the consolidated statements of profit or loss.

The above employee benefit expenses also include remuneration for key management personnel. Remuneration for key management personnel is described in Note 36 "Related parties."

29. Other income and other expenses

The breakdown of other income and other expenses is as follows:

(Million yen)

	Fiscal year ended December 31, 2019	Fiscal year ended December 31, 2020
(Other income)		
Gain on sale of non-current assets (Note 1)	5,041	304
Gain on sale of shares of subsidiaries and associates (Note 2)	878	—
Government grants (Note 3)	83	(57)
Compensation income	—	114
Change in fair value of contingent considerations (Note 4)	—	471
Gain on bargain purchase (Note 5)	—	804
Other	196	87
Total	6,200	1,725
(Other expenses)		
Loss on sale and retirement of non-current assets	774	321
Foreign exchange loss	165	1,119
Impairment losses (Note 6)	15,917	989
Loss on closing of plants (Note 7)	263	210
Business restructuring expenses (Note 8)	47	2,051
Business establishment transfer cost (Note 9)	25	—
Loss on liquidation of business (Note 10)	1,402	—
Loss on revision of retirement benefit plan	—	442
Other	322	80
Total	18,917	5,214

(Notes) 1. Gain on sale of non-current assets

The fiscal year ended December 31, 2019 (January 1, 2019 to December 31, 2019)

This is mainly related to sale of land owned by the Company (Yachiyo City, Chiba Pref.).

2. Gain on sale of shares of subsidiaries and associates

The fiscal year ended December 31, 2019 (January 1, 2019 to December 31, 2019)

This is mainly related to sale of shares in NCI Tokyo, Inc. (newly established subsidiary: Kyodo Nissha Printing Co., Ltd.), which was a consolidated subsidiary of the Company. See Note 5 "Business combinations."

3. Government grants

The fiscal year ended December 31, 2020 (January 1, 2020 to December 31, 2020)

These mainly consist of ¥67 million related to subsidies for employment adjustment associated with the impact of COVID-19, etc. and ¥(157) million related to subsidy repayment in line with suspension of operations of domestic production bases whose operation rate is low.

4. Change in fair value of contingent considerations

The fiscal year ended December 31, 2020 (January 1, 2020 to December 31, 2020)

This is mainly related to the acquisition of Sequel Special Products, LLC. Of the change in fair value of contingent considerations, the portion based on changes in time value is recorded in “Finance costs” while the portion based on changes in items other than time value is recorded in “Other income” or “Other expenses.”

5. Gain on bargain purchase

The fiscal year ended December 31, 2020 (January 1, 2020 to December 31, 2020)

See Note 5 “Business combinations.”

6. Impairment losses

See Note 14 “Impairment of non-financial assets.”

7. Loss on closing of plants

The fiscal year ended December 31, 2019 (January 1, 2019 to December 31, 2019)

This is related to European production base integration of the Company’s consolidated subsidiaries in the Medical Technologies segment.

The fiscal year ended December 31, 2020 (January 1, 2020 to December 31, 2020)

This consists of ¥161 million related to closing of a U.S. plant of the Company’s consolidated subsidiary in the Industrial Materials segment and ¥49 million related to European production base integration of the Company’s consolidated subsidiaries in the Medical Technologies segment.

8. Business restructuring expenses

The fiscal year ended December 31, 2019 (January 1, 2019 to December 31, 2019)

These are related to business restructuring of the Company’s consolidated subsidiaries in the Information and Communication segment.

The fiscal year ended December 31, 2020 (January 1, 2020 to December 31, 2020)

These include additional retirement payment and re-employment support program fees incurred as a result of calling voluntary retirement in line with the implementation of “Measures to Strengthen Profitability.”

9. Business establishment transfer cost

The fiscal year ended December 31, 2019 (January 1, 2019 to December 31, 2019)

This is related to the business establishment transfer of Nissha GSI Technologies, Inc. (former trade name: Nissha Si-Cal Technologies, Inc.), a consolidated subsidiary of the Company.

10. Loss on liquidation of business

The fiscal year ended December 31, 2019 (January 1, 2019 to December 31, 2019)

This is related to the termination of a joint venture relationship in Nissha and Lens Technologies (Changsha) Company Limited, the Company’s associated company accounted for by the equity method, which was a joint venture company with Lens Technology Co., Ltd., a Chinese glass processing manufacturer, and its subsidiary, Lens International (HK) Limited.

30. Finance income and finance costs

The breakdown of finance income and finance costs is as follows:

(Million yen)

	Fiscal year ended December 31, 2019	Fiscal year ended December 31, 2020
(Finance income)		
Interest income		
Financial assets measured at amortized cost	48	28
Dividend income		
Financial assets measured at fair value through other comprehensive income	370	437
Gain on valuation of financial assets and financial liabilities measured at fair value through profit or loss	76	224
Foreign exchange gain	559	175
Other	—	24
Total	1,056	891
(Finance costs)		
Interest expenses		
Financial liabilities measured at amortized cost	1,173	864
Loss on valuation of financial assets and financial liabilities measured at fair value through profit or loss	210	260
Other	52	4
Total	1,437	1,130

31. Other comprehensive income

Amounts arising during the year, reclassification adjustments to profit or loss and tax effects (including non-controlling interests) for each item of other comprehensive income are as follows:

The fiscal year ended December 31, 2019 (January 1, 2019 to December 31, 2019)

(Million yen)

	Amount arising during the year	Reclassification adjustment	Before tax effects	Tax effects	Net of tax effects
(Items that will not be reclassified to profit or loss)					
Net change in fair value of financial assets measured through other comprehensive income	4,731	—	4,731	(1,561)	3,170
Remeasurements of defined benefit plans	(72)	—	(72)	—	(72)
Share of other comprehensive income of investments accounted for using equity method	—	—	—	—	—
Total of items that will not be reclassified to profit or loss	4,659	—	4,659	(1,561)	3,098
(Items that may be reclassified to profit or loss)					
Exchange differences on translation of foreign operations	(818)	(21)	(839)	—	(839)
Share of other comprehensive income of investments accounted for using equity method	—	—	—	—	—
Total of items that may be reclassified to profit or loss	(818)	(21)	(839)	—	(839)
Total other comprehensive income	3,841	(21)	3,819	(1,561)	2,258

The fiscal year ended December 31, 2020 (January 1, 2020 to December 31, 2020)

(Million yen)

	Amount arising during the year	Reclassification adjustment	Before tax effects	Tax effects	Net of tax effects
(Items that will not be reclassified to profit or loss)					
Net change in fair value of financial assets measured through other comprehensive income	3,869	—	3,869	(1,163)	2,706
Remeasurements of defined benefit plans	70	—	70	(22)	47
Share of other comprehensive income of investments accounted for using equity method	—	—	—	—	—
Total of items that will not be reclassified to profit or loss	3,940	—	3,940	(1,185)	2,754
(Items that may be reclassified to profit or loss)					
Exchange differences on translation of foreign operations	(1,110)	—	(1,110)	—	(1,110)
Share of other comprehensive income of investments accounted for using equity method	4	5	9	—	9
Total of items that may be reclassified to profit or loss	(1,106)	5	(1,101)	—	(1,101)
Total other comprehensive income	2,833	5	2,838	(1,185)	1,653

32. Earnings per share

Basic earnings (loss) per share, diluted earnings (loss) per share and the basis for their calculation are as follows:

	Fiscal year ended December 31, 2019	Fiscal year ended December 31, 2020
Profit (loss) attributable to ordinary shareholders of the parent company (Million yen)	(17,183)	7,069
Adjustment to profit (loss) used to calculate diluted earnings per share (Million yen)	—	—
Profit (loss) used to calculate diluted earnings per share (Million yen)	(17,183)	7,069
Basic weighted average number of common shares outstanding (Thousand shares)	49,912	49,959
Adjustment to number of shares due to convertible bonds (bonds with stock acquisition rights) (Thousand shares)	—	1,291
Weighted average number of common shares outstanding used to calculate diluted earnings (loss) per share (Thousand shares)	49,912	51,250
Basic earnings (loss) per share (Yen)	(344.27)	141.50
Diluted earnings (loss) per share (Yen)	(344.27)	137.94

(Notes) 1. For diluted earnings (loss) per share for the fiscal year ended December 31, 2019, as the conversion of convertible bonds (bonds with stock acquisition rights) would reduce the amount of loss per share, the potential shares did not have dilutive effects.

2. The Company finalized the provisional accounting treatment pertaining to business combinations in the fiscal year ended December 31, 2020, and retrospectively adjusted figures for the fiscal year ended December 31, 2019 due to the finalization of the provisional accounting treatment.

33. Cash flow information

(1) Significant non-cash transactions

Significant non-cash transactions (investing and financing transactions that do not require the use of cash or cash equivalents) are as follows:

(Million yen)

	Fiscal year ended December 31, 2019	Fiscal year ended December 31, 2020
Acquisition of right-of-use assets by means of a lease (see Note 13)	1,848	2,823

(2) Reconciliation of liabilities arising from financing activities

Changes in main liabilities arising from financing activities are as follows:

(Million yen)

	Short-term borrowings	Long-term borrowings (Note)	Bonds	Lease liabilities
As of January 1, 2019	10,858	15,241	2,794	9,604
Changes due to cash flows from financing activities	9,988	(2,090)	—	(1,766)
Non-cash changes				
Acquisition of right-of-use assets	—	—	—	1,848
Foreign currency translation differences	(45)	(276)	—	(84)
Business combinations (see Note 5)	—	105	—	22
Other	2	(189)	22	(137)
As of December 31, 2019	20,803	12,791	2,817	9,488
Changes due to cash flows from financing activities	(3,325)	(579)	—	(1,734)
Non-cash changes				
Acquisition of right-of-use assets	—	—	—	2,888
Foreign currency translation differences	71	(405)	—	(247)
Business combinations (see Note 5)	—	208	—	123
Other	—	7	22	(618)
As of December 31, 2020	17,549	12,022	2,840	9,901

(Note) Current portion of long-term borrowings is included.

(Change in presentation methods)

"Business combinations," which was included in "Other" in the fiscal year ended December 31, 2019, is separately presented from the fiscal year ended December 31, 2020 as its materiality increased. In order to reflect this change in presentation method, notes for the fiscal year ended December 31, 2019 have been modified. As a result, "Long-term borrowings" of ¥105 million and "Lease liabilities" of ¥22 million, which were presented under "Other" in the fiscal year ended December 31, 2019, were reclassified to "Business combinations," respectively.

(3) Payments for acquisition of subsidiaries or other businesses

The breakdown of main assets and liabilities of acquired subsidiaries through purchase of shares or acquired businesses at the time control was obtained, as well as the relationship between consideration paid and payments for the acquisition, are as follows (see Note 5 “Business combinations”).

The Company finalized the provisional accounting treatment pertaining to business combinations in the fiscal year ended December 31, 2020, and retrospectively adjusted figures for the fiscal year ended December 31, 2019 due to the finalization of the provisional accounting treatment.

(Million yen)

	As of December 31, 2019	As of December 31, 2020
Breakdown of assets at the time control was obtained		
Current assets	794	2,395
Non-current assets	2,109	4,307
Breakdown of liabilities at the time control was obtained		
Current liabilities	262	602
Non-current liabilities	740	1,312
Goodwill	598	527
Negative goodwill	—	(804)

(Million yen)

	Fiscal year ended December 31, 2019	Fiscal year ended December 31, 2020
Consideration paid	(2,500)	(4,509)
Contingent consideration included in consideration paid	—	177
Amount payable included in consideration paid	—	1,047
Cash and cash equivalents that were held by acquired companies at the time of acquisition	65	132
Net payments for acquisition of subsidiaries or other businesses	(2,434)	(3,152)

(4) Proceeds from sale of subsidiaries

The breakdown of main assets and liabilities of subsidiaries for which control was lost through sale of shares, as well as the relationship between consideration received and proceeds from the sale, are as follows (see Note 5 "Business combinations"):

(Million yen)

	As of December 31, 2019	As of December 31, 2020
Breakdown of assets at the time control was lost		
Current assets	237	—
Non-current assets	23	—
Breakdown of liabilities at the time control was lost		
Current liabilities	17	—
Non-current liabilities	95	—

(Million yen)

	Fiscal year ended December 31, 2019	Fiscal year ended December 31, 2020
Consideration received	818	—
Cash and cash equivalents included in the assets at the time control was lost	(120)	—
Net proceeds from sale of subsidiaries	698	—

(5) Payments for sale of subsidiaries

The breakdown of main assets and liabilities of subsidiaries for which control was lost through sale of shares, as well as the relationship between consideration received and payments for the sale, are as follows:

(Million yen)

	As of December 31, 2019	As of December 31, 2020
Breakdown of assets at the time control was lost		
Current assets	273	—
Non-current assets	12	—
Breakdown of liabilities at the time control was lost		
Current liabilities	191	—
Non-current liabilities	198	—

(Million yen)

	Fiscal year ended December 31, 2019	Fiscal year ended December 31, 2020
Consideration received	20	—
Cash and cash equivalents included in the assets at the time control was lost	(101)	—
Net payments for sale of subsidiaries	(81)	—

(6) Payments for loss on liquidation of business

The fiscal year ended December 31, 2019 (January 1, 2019 to December 31, 2019)

This is due to a portion of costs (including capital investment) incurred to date related to the launch of a manufacturing facility upon the termination of a joint venture relationship in Nissha and Lens Technologies (Changsha) Company Limited, the Company's associated company accounted for by the equity method, which was a joint venture company with Lens Technology Co., Ltd., a Chinese glass processing manufacturer, and its subsidiary, Lens International (HK) Limited.

34. Share-based payment

The Group has introduced a Stock Benefit Trust (BBT: Board Benefit Trust) Plan, a Stock Benefit Trust (J-ESOP) Plan, a Stock Benefit Trust (Employee Shareholding Association Purchase-type) Plan, and a stock option plan as share-based payment plans.

The share-based payment plans are accounted for as equity-settled share-based payments or cash-settled share-based payments. Amounts recognized for share-based payment expenses and liabilities arising from share-based payments are as follows:

Share-based payment expenses

(Million yen)

	Fiscal year ended December 31, 2019	Fiscal year ended December 31, 2020
Equity-settled	16	10
Cash-settled	85	19

(Note) Share-based payment expenses are included in cost of sales and selling, general and administrative expenses.

Liabilities arising from share-based payments

(Million yen)

	As of December 31, 2019	As of December 31, 2020
Book value of liabilities (see Note 22)	277	278
Vested portion thereof	262	218

(1) Stock Benefit Trust (BBT) Plan

The Company has adopted a share-based payment plan comprising both an equity-settled plan and a cash-settled plan (the "Plan") for Directors of the Board (excluding Independent Outside Directors of the Board), Corporate Officers and certain directors of the board of the Company's subsidiaries (collectively, the "Directors").

1) Overview of the Plan

The Plan is a share-based payment plan where shares in the Company and cash equivalents of such shares at their fair value (collectively, "Company Shares") are paid by the Stock Benefit Trust (BBT) to the Directors pursuant to the policy on directors' stock benefits established by the Company and its subsidiaries. The shares in the Company are acquired by the trust using funds contributed by the Company. For each fiscal year, points are determined according to the policy on directors' stock benefits and awarded to the Directors. The time when the Directors receive Company Shares shall in principle be the date set out in the policy, that is, on or after the earlier of the date the designated beneficiary confirmation procedures set out in the policy are carried out within the three fiscal years set out in the policy or the date the Directors retire.

2) The Company's own shares in the trust

The Company's own shares in the trust are recorded as treasury shares in equity. The number of such treasury shares was 78,000 shares as of December 31, 2020.

3) Changes in the number of points during the period

(Points)

	Fiscal year ended December 31, 2019	Fiscal year ended December 31, 2020
Beginning balance of points	13,421	32,762
Increase due to points awarded	20,500	24,031
Decrease due to points exercised	(1,159)	(1,431)
Decrease due to points expired	—	—
Ending balance of points	32,762	55,362
Ending balance of exercisable points	—	—

4) Fair value of points awarded

The weighted average fair value of points awarded for the fiscal years ended December 31, 2019 and December 31, 2020 was ¥1,162 and ¥1,082, respectively. The fair value of points awarded is determined using the share price at grant date, which approximates the fair value of points granted.

(2) Stock option plan

Certain subsidiaries of the Company have adopted a share-based payment plan for their employees. The plan grants to employees stock options to purchase common shares in the subsidiaries as well as put options for the subsidiaries to purchase the shares issued through the exercise of the stock options. Consequently, the difference between the exercise price of the stock options and the share price at exercise date is paid in cash to the employees. Under the share-based payment plan, one plan granted rights for 4 years from December 2016 and another granted rights in December 2020. The rights granted have a vesting period of 3 years and an exercise period of 10 years as of grant date.

1) Changes in number of rights and weighted average exercise price

	Fiscal year ended December 31, 2019		Fiscal year ended December 31, 2020	
	Number of rights (Shares)	Weighted average exercise price (Yen)	Number of rights (Shares)	Weighted average exercise price (Yen)
Beginning balance	7,835	122,347	10,406	119,876
Granted	2,647	116,990	2,668	88,833
Exercised	—	—	(86)	113,523
Expired	(76)	119,442	(67)	110,921
Ending balance	10,406	119,876	12,921	108,238
Ending balance of exercisable rights	5,226	120,249	7,639	113,473

(Notes) 1. The weighted average remaining period of the share-based payment plan as of December 31, 2019 and December 31, 2020 was 8.5 years and 8 years, respectively.

2. The weighted average share price at exercise date of stock options exercised during the period cannot be identified because the shares granted were unlisted.

2) Fair value of stock options granted during the period and underlying assumptions

The weighted average fair value at measurement date of stock options granted during the fiscal years ended December 31, 2019 and December 31, 2020 was ¥58,298 and ¥41,961, respectively.

The fair value at measurement date of stock options granted during the period is evaluated using the Black-Scholes model under the following assumptions:

	Fiscal year ended December 31, 2019	Fiscal year ended December 31, 2020
Main underlying variables and estimation method thereof:		
Valuation of shares at measurement date	116,990 yen	88,833 yen
Exercise price	116,990 yen	88,833 yen
Expected volatility (Note)	37.37 %	37.49 %
Expected remaining period	10 years	10 years
Expected dividend yield	0 %	0 %
Risk free rate	1.88 %	0.92 %

(Note) The expected volatility is determined based on historical share prices during the period corresponding to the expected remaining period.

(3) Stock Benefit Trust (J-ESOP) Plan

The Company has adopted an equity-settled share-based payment plan (the "Plan") for employees of the Company and some of its subsidiaries ("Eligible Employees") who satisfy the set requirements.

1) Overview of the Plan

The Plan is an incentive plan that grants the Company's shares to Eligible Employees who satisfy the set requirements pursuant to the policy on stock benefits prescribed in advance by the Company.

The Company awards points to Eligible Employees principally based on their individual degree of contribution, and grants the Company's shares equivalent to the awarded points when set terms and conditions are met and vested rights are granted. The shares granted to Eligible Employees, including future shares, are acquired using cash funds contributed in advance to the trust E account established at Custody Bank of Japan, Ltd., and are managed separately as trust assets.

2) The Company's own shares in the trust

The Company's own shares in the trust are recorded as treasury shares in equity. The number of such treasury shares was 120,700 shares as of December 31, 2020.

3) Changes in the number of points during the period

(Points)

	Fiscal year ended December 31, 2019	Fiscal year ended December 31, 2020
Beginning balance of points	—	—
Increase due to points awarded	—	18,129
Decrease due to points exercised	—	—
Decrease due to points expired	—	—
Ending balance of points	—	18,129
Ending balance of exercisable points	—	—

4) Fair value of points awarded

The weighted average fair value of points awarded for the fiscal year ended December 31, 2020 was ¥1,143. The fair value of points awarded is determined using the share price at the date on which the eligible employee becomes a planned recipient, which approximates the fair value of points granted.

(4) Stock Benefit Trust (Employee Shareholding Association Purchase-type) Plan

The Company has adopted a Stock Benefit Trust (Employee Shareholding Association Purchase-type) (the "Plan") as an incentive plan for employees.

1) Overview of the Plan

The Plan is an incentive plan that returns the merits from price increases in the Company's shares to all employees enrolled in the NISSHA Employees Shareholding Association (the "Shareholding Association").

Custody Bank of Japan, Ltd. will be entitled to collectively acquire to the Trust E Account in advance the number of the Company's shares equivalent to the number of shares anticipated to be purchased by the Shareholding Association in the future, and then sell the Company's shares when the shares are purchased by the Shareholding Association. If proceeds from the sale of shares are accumulated in the trust assets up through the time of the ending of the trust through the sale of the Company's shares from Trust E Account to the Shareholding Association, this cash shall be distributed as residual assets to the members of the Shareholding Association who satisfy the beneficiary eligibility requirements.

Such cash distribution is accounted for as a cash-settled transaction. The fair value of the liability is measured at the end of each period by discounting the estimated cash flows at the conclusion of the trust term to the present value after considering the terms of the trust agreement.

2) The Company’s own shares in the trust

The Company’s own shares in the trust are recorded as treasury shares in equity. The number of such treasury shares was 142,400 shares as of December 31, 2020.

3) Amount of liabilities

The amount of the liabilities related to the Plan was ¥15 million as of December 31, 2020. The fair value of the liabilities is estimated using the Monte Carlo simulation under the following assumptions:

	Fiscal year ended December 31, 2020
Main underlying variables and estimation method thereof:	
Valuation of shares at measurement date	1,498 yen
Expected volatility (Note)	45.0 %
Expected remaining period	2 years
Expected dividend yield	2.0 %

(Note) The expected volatility is determined based on historical share prices during the period corresponding to the expected remaining period.

35. Financial instruments

(1) Capital management

The Group's capital management policy is to establish and maintain a stable financial foundation in order to improve corporate value through sustainable growth.

The Group primarily uses the following indicators for capital management.

The Group is not subject to any significant regulatory capital requirements.

(Million yen)

	As of December 31, 2019	As of December 31, 2020
Total liabilities	111,759	117,644
Cash and cash equivalents	17,499	25,067
Equity (equity attributable to owners of parent)	75,006	82,083
Equity ratio (%)	40.2	41.1

(Notes) 1. Equity ratio: Equity (equity attributable to owners of parent)/Total liabilities and equity

2. The Company finalized the provisional accounting treatment pertaining to business combinations in the fiscal year ended December 31, 2020, and retrospectively adjusted figures for the fiscal year ended December 31, 2019 due to the finalization of the provisional accounting treatment.

(2) Financial risk management

Risk management policy

The Group's business activities are affected by the business and financial market environments. In the course of the business activities, financial instruments held by the Group are exposed to specific risks.

Such risks primarily include 1) market risk ((a) foreign exchange risk, (b) price risk, (c) interest rate risk), 2) credit risk and 3) liquidity risk. In order to mitigate these risks, risk management is conducted.

The Group focuses on highly safe financial assets in its fund management, and procures funds mainly through loans from banks and issuance of bonds. It carries out optimum fund procurements at each time while giving full consideration to the management environment. The Group uses derivative transactions to hedge foreign exchange risk, and does not enter into derivative transactions for speculative purposes. Derivative transactions are executed and managed with approval from the authorized persons in accordance with the internal rules that stipulate transaction authority, limits, and other matters.

1) Market risk

(a) Foreign exchange risk

Trade receivables and payables denominated in foreign currencies, which arise from the Group's global business development, are exposed to the risk of foreign exchange fluctuations. Part of such risk is hedged using forward exchange contracts. These derivative transactions, for which hedge accounting is not applied, are considered to effectively offset the effects of foreign exchange fluctuations.

The exposure of trade receivables and payables, excluding the part substantively fixed in Japanese yen by forward exchange contracts, to the risk of foreign exchange fluctuations in the US dollar was ¥24,513 million as of December 31, 2020 (¥17,200 million as of December 31, 2019). There was no significant exposure to the risk of foreign exchange fluctuations in currencies other than the US dollar.

Sensitivity analysis of foreign exchange rates

With regard to financial instruments held by the Group, the table below shows the impact on profit before tax in the consolidated statements of profit or loss that would result from a 1% appreciation of the functional currency (Japanese yen) against the US dollar, assuming that all other variables remain constant. The impact of financial instruments denominated in the functional currency and the translation of the assets and liabilities of foreign operations into Japanese yen is not included in this analysis.

(Million yen)

	As of December 31, 2019	As of December 31, 2020
Profit before tax	(172)	(245)

(b) Price risk

As the Group owns listed shares in companies with which the Group has business relationships, it is exposed to the risk of price fluctuations in equity instruments. The Group regularly assesses the fair values and financial condition of issuers (business partners) and continually reviews the holding status.

The exposure of listed shares to the risk of price fluctuations was ¥16,090 million as of December 31, 2020 (¥18,476 million as of December 31, 2019).

Sensitivity analysis of equity instruments

The sensitivity analysis of listed shares held by the Group to the risk of price fluctuations is as follows. This analysis shows the impact on other comprehensive income (before tax effects) in the consolidated statements of comprehensive income that would result from a 10% decline in the price of listed shares, assuming that all other variables remain constant.

(Million yen)

	As of December 31, 2019	As of December 31, 2020
Other comprehensive income	(1,847)	(1,609)

(c) Interest rate risk

Of the Group's interest-bearing liabilities, those with floating rates are exposed to the risk of interest rate fluctuations.

To mitigate the risk of interest rate fluctuations, the Group continually monitors interest rate fluctuations for interest-bearing liabilities with floating rates.

The exposure of interest-bearing liabilities to the risk of interest rate fluctuations was ¥30,821 million as of December 31, 2020 (¥33,917 million as of December 31, 2019).

Sensitivity analysis of interest rates

With regard to financial instruments held by the Group, the table below shows the impact on profit before tax in the consolidated statements of profit or loss that would result from a 1% increase in interest rates.

The scope of the analysis is financial instruments subject to interest rate fluctuations, and other factors including the impact of foreign exchange fluctuations are assumed to remain constant.

(Million yen)

	As of December 31, 2019	As of December 31, 2020
Profit before tax	(339)	(308)

2) Credit risk

The Group's trade and other receivables and other financial assets are exposed to credit risk. Credit risk is the risk of financial loss of the Group in the event that a customer or a counterparty (including financial institutions) fails to meet its contractual obligations.

The Group sets up lines of credit in accordance with Credit Management Regulations by business and country or region. In addition, the sales division and the finance division regularly monitor the credit status of counterparties of trade receivables, and manage the due dates and outstanding balances by counterparty to identify at an early stage and mitigate recoverability concerns, such as due to deterioration of a counterparty's financial condition. Derivative transactions are entered into only with highly creditworthy financial institutions in order to mitigate credit risk, and therefore the credit risk is considered to be extremely low.

The allowance for doubtful accounts for trade receivables is always measured at an amount equal to the lifetime expected credit losses. For receivables other than trade receivables and other financial assets, the allowance for doubtful accounts is measured at an amount equal to the 12-month expected credit losses if the credit risk has not increased significantly since initial recognition, and at an amount equal to the lifetime expected credit losses if the credit risk has increased significantly since initial recognition, such as upon a past due event.

When measuring the expected credit losses for trade receivables, in principle, the receivables are grouped depending on the level of credit risk, provision rates are calculated for each group by reflecting forward-looking information in historical credit loss experience, and the expected credit losses for trade receivables are determined by multiplying the outstanding balance of the assets by a corresponding provision rate. For receivables other than trade receivables and other financial assets whose credit risk has not increased significantly since initial recognition, provision rates are calculated for each group of similar assets by reflecting forward-looking information in historical credit loss experience, and the expected credit losses are determined by multiplying the outstanding balance of the assets by a corresponding provision rate. For receivables other than trade receivables and other financial assets whose credit risk has increased significantly since initial recognition as well as credit-impaired assets, the expected credit losses are determined as a difference between the book value and the present value of expected future cash flows to be received from the assets, discounted using the effective interest rate at initial recognition. If all or a portion of trade and other receivables and other financial assets are considered not to be recovered or extremely difficult to be recovered, they are determined to be credit-impaired.

The book value after impairment of financial assets stated in the consolidated statements of financial position represents the Group's maximum exposure to the credit risk of financial assets. Except for trade receivables of ¥13,165 million as of December 31, 2020 (¥11,637 million as of December 31, 2019) from APPLE OPERATIONS LIMITED and its group companies, which are the Group's major customers, the Group is not exposed to credit risk concentrated excessively in any single counterparty or group to which the party belongs.

Changes in trade and other receivables (before deducting allowance for doubtful accounts) and allowance for doubtful accounts are as follows:

The fiscal year ended December 31, 2019 (January 1, 2019 to December 31, 2019)

(Million yen)

Trade and other receivables (before deducting allowance for doubtful accounts)	Financial assets measured at an amount equal to 12-month expected credit losses	Financial assets always measured at an amount equal to lifetime expected credit losses	Credit-impaired financial assets	Total
Balance at January 1, 2019	1,500	37,458	284	39,242
Changes during the period	(1,236)	(3,746)	(36)	(5,018)
Reclassification to credit-impaired financial assets	—	(65)	65	—
Business combinations (see Note 5)	75	433	—	509
Foreign currency translation differences	(3)	(202)	12	(193)
Balance at December 31, 2019	336	33,877	325	34,540

Grouping depending on the level of credit risk is almost the same for receivables measured at an amount equal to 12-month expected credit losses and receivables always measured at an amount equal to lifetime expected credit losses.

(Million yen)

Allowance for doubtful accounts	Financial assets measured at an amount equal to 12-month expected credit losses	Financial assets always measured at an amount equal to lifetime expected credit losses	Credit-impaired financial assets	Total
Balance at January 1, 2019	0	38	230	268
Increase	—	17	125	143
Decrease (intended use)	—	—	(35)	(35)
Decrease (reversal)	(0)	(7)	—	(7)
Reclassification to credit-impaired financial assets	—	—	—	—
Business combinations (see Note 5)	—	—	—	—
Foreign currency translation differences	(0)	(0)	(6)	(6)
Balance at December 31, 2019	0	48	314	362

The fiscal year ended December 31, 2020 (January 1, 2020 to December 31, 2020)

(Million yen)

Trade and other receivables (before deducting allowance for doubtful accounts)	Financial assets measured at an amount equal to 12-month expected credit losses	Financial assets always measured at an amount equal to lifetime expected credit losses	Credit-impaired financial assets	Total
Balance at January 1, 2020	336	33,877	325	34,540
Changes during the period	468	2,399	(31)	2,835
Reclassification to credit-impaired financial assets	—	—	—	—
Business combinations (see Note 5)	11	698	—	710
Foreign currency translation differences	(0)	(114)	(5)	(119)
Balance at December 31, 2020	815	36,861	288	37,966

Grouping depending on the level of credit risk is almost the same for receivables measured at an amount equal to 12-month expected credit losses and receivables always measured at an amount equal to lifetime expected credit losses.

(Million yen)

Allowance for doubtful accounts	Financial assets measured at an amount equal to 12-month expected credit losses	Financial assets always measured at an amount equal to lifetime expected credit losses	Credit-impaired financial assets	Total
Balance at January 1, 2020	0	48	314	362
Increase	0	16	43	59
Decrease (intended use)	—	—	(52)	(52)
Decrease (reversal)	(0)	(1)	(0)	(2)
Reclassification to credit-impaired financial assets	—	—	—	—
Business combinations (see Note 5)	—	—	—	—
Foreign currency translation differences	0	(0)	(14)	(15)
Balance at December 31, 2020	0	63	288	352

3) Liquidity risk

The Group is exposed to liquidity risk that the Group is unable to fulfill its repayment obligations for financial liabilities.

To manage the liquidity risk, the finance division take measures such as preparing and updating fund management plans in a timely manner, and consolidating fund flows to the Company through the cash management system (CMS) introduced across the Group companies in Japan.

The maturity analysis of financial liabilities (including derivative financial instruments) is as follows. The maturity analysis of lease liabilities is provided in Note 13 “Leases.”

(Million yen)

	As of December 31, 2019				
	Book value	Contractual cash flows	1 year or less	Over 1 year to 5 years	Over 5 years
Non-derivative financial liabilities					
Trade and other payables	44,538	44,538	44,538	—	—
Short-term borrowings	20,803	20,817	20,817	—	—
Long-term-borrowings	12,791	14,681	1,852	12,691	137
Bonds	2,817	2,840	—	2,840	—
Total	80,950	82,877	67,208	15,531	137

(Million yen)

	As of December 31, 2020				
	Book value	Contractual cash flows	1 year or less	Over 1 year to 5 years	Over 5 years
Non-derivative financial liabilities					
Trade and other payables	49,441	49,441	49,441	—	—
Short-term borrowings	17,549	17,572	17,572	—	—
Long-term-borrowings	12,022	13,233	3,516	9,557	160
Bonds	2,840	2,840	2,840	—	—
Total	81,853	83,087	73,369	9,557	160

(3) Fair value of financial instruments

Estimation of fair value

1) Measurement of fair value of financial instruments

The Group determines the fair value of major financial assets and financial liabilities as follows. The fair value of financial instruments is estimated using available market prices, or is measured by appropriate valuation techniques when market prices are not available.

(Cash and cash equivalents, trade and other receivables, trade and other payables, short-term borrowings)

Since these are settled within a short period, the fair value approximates the book value. Therefore, the fair value is based on the relevant book value.

(Other financial assets and other financial liabilities)

The fair value of marketable equity instruments (listed shares) is measured based on market prices at the fiscal year-end. The fair value of equity instruments (unlisted shares) with no available market prices and debt instruments (preference shares, etc.) classified as financial assets measured at fair value through profit or loss is measured using valuation techniques, primarily based on discounted future cash flows, market prices of similar companies or net asset values. Since other financial assets and financial liabilities are settled within a short period, the fair value approximates the book value. One of the main unobservable inputs used to measure the fair value of these financial instruments with no available market prices was valuation multiple derived from the comparable peer company analysis. The fair value increases (decreases) as the valuation multiple rises (declines).

(Derivative assets and liabilities)

The fair value of derivative assets and liabilities is measured at the market quotation of derivative transactions under the same terms and conditions as of the fiscal year-end.

(Contingent consideration)

Contingent consideration in a business combination is measured at fair value as of the acquisition date of the business combination. Contingent consideration that meets the definition of a financial liability is remeasured at fair value at each subsequent reporting date. The fair value is determined on the basis of the scenario-based method or Monte Carlo simulation model, where the key assumptions considered are the probability of meeting each performance target, the projected future operating results, and the discount rate. The fair value decreases (increases) as the discount rate rises (declines).

(Long-term borrowings)

The fair value of long-term borrowings is measured by discounting the principal and interest at an interest rate that would be applied to a new similar borrowing.

(Bonds)

The fair value of bonds is measured at the present value of the principal discounted at a rate that reflects the remaining term and credit risk of the bonds.

2) Book value and fair value of financial instruments measured at amortized cost

The book value and fair value of financial instruments measured at amortized cost, which are categorized within Level 2 of the fair value hierarchy, are as follows. Financial instruments whose book value approximates the fair value are not disclosed.

(Million yen)

	As of December 31, 2019		As of December 31, 2020	
	Book value	Fair value	Book value	Fair value
Financial liabilities				
Financial liabilities measured at amortized cost				
Long-term borrowings	12,791	12,404	12,022	12,378
Bonds	2,817	2,813	2,840	2,835

3) Financial instruments measured at fair value and hierarchy thereof

The table below shows an analysis on the hierarchy of financial instruments measured at fair value. Each level of the hierarchy is described in Note 3 “Significant accounting policies.” Transfers between the levels are recognized on the date of the event or change in circumstances that caused the transfer.

(Million yen)

As of December 31, 2019	Level 1	Level 2	Level 3	Total
Financial assets				
Financial assets measured at fair value through profit or loss				
Derivatives for which hedge accounting is not applied	—	0	—	0
Debt instruments	—	—	869	869
Financial assets measured at fair value through other comprehensive income				
Equity instruments	18,476	—	714	19,191
Total	18,476	0	1,583	20,061
Financial liabilities				
Financial liabilities measured at fair value through profit or loss				
Derivatives for which hedge accounting is not applied	—	—	—	—
Contingent consideration	—	—	714	714
Total	—	—	714	714

The above financial assets and financial liabilities are included in “Other financial assets (current),” “Other financial assets (non-current),” “Other financial liabilities (current)” and “Other financial liabilities (non-current)” in the consolidated statements of financial position.

(Million yen)

As of December 31, 2020	Level 1	Level 2	Level 3	Total
Financial assets				
Financial assets measured at fair value through profit or loss				
Derivatives for which hedge accounting is not applied	—	—	—	—
Debt instruments	—	—	779	779
Financial assets measured at fair value through other comprehensive income				
Equity instruments	16,090	—	457	16,547
Total	16,090	—	1,236	17,326
Financial liabilities				
Financial liabilities measured at fair value through profit or loss				
Derivatives for which hedge accounting is not applied	—	—	—	—
Contingent consideration	—	—	318	318
Total	—	—	318	318

The above financial assets and financial liabilities are included in “Other financial assets (current),” “Other financial assets (non-current),” “Other financial liabilities (current)” and “Other financial liabilities (non-current)” in the consolidated statements of financial position.

4) Reconciliation of financial instruments categorized within Level 3

Financial instruments categorized within Level 3 are evaluated and the evaluation results are analyzed by the Company's CFO in accordance with the evaluation policies and procedures established by the Group.

The following table shows a reconciliation of the opening balance to the closing balance of financial assets whose fair value measurement is categorized within Level 3.

(Million yen)

	Fiscal year ended December 31, 2019		Fiscal year ended December 31, 2020	
	Equity instruments measured at fair value through other comprehensive income	Financial assets measured at fair value through profit or loss	Equity instruments measured at fair value through other comprehensive income	Financial assets measured at fair value through profit or loss
Beginning balance	382	1,007	714	869
Total gain and loss				
Profit or loss (Note 1)	—	(163)	—	26
Other comprehensive income (Note 2)	(539)	—	66	—
Purchase	871	121	—	100
Sale	—	—	—	—
Reclassification in line with application of equity method	—	—	(333)	—
Transfer to Level 1 due to listing	—	—	—	—
Reclassification to assets held for sale (see Note 10)	—	—	—	(90)
Other (Note 3)	—	(95)	10	(127)
Ending balance	714	869	457	779

(Notes) 1. Profit or loss contained in total gain and loss is included in "Finance income" and "Finance costs." Of profit or loss contained in total gain and loss, the amount attributable to changes in unrealized gain or loss related to financial assets measured at fair value through profit or loss held as of the fiscal year-end was ¥(163) million and ¥26 million for the fiscal years ended December 31, 2019 and December 31, 2020, respectively.

2. Other comprehensive income contained in total gain and loss is related to financial assets measured at fair value through other comprehensive income as of the fiscal year-end. These gain and loss, net of tax effects, are included in "Net change in fair value of financial assets measured through other comprehensive income."

3. Other consists mainly of redemption and foreign currency translation differences.

The following table shows a reconciliation of the opening balance to the closing balance of financial liabilities whose fair value measurement is categorized within Level 3.

(Million yen)

	Fiscal year ended December 31, 2019	Fiscal year ended December 31, 2020
	Financial liabilities measured at fair value through profit or loss	Financial liabilities measured at fair value through profit or loss
Beginning balance	819	714
Total gain and loss		
Profit or loss (Note 1)	(2)	(373)
Issuance	—	177
Settlement	(91)	(184)
Other (Note 2)	(11)	(15)
Ending balance	714	318

(Notes) 1. Of profit or loss contained in total gain and loss, the portion based on changes in time value is recorded in "Finance costs" while the portion based on changes in items other than time value is recorded in "Other income" or "Other expenses." Of profit or loss contained in total gain and loss, the amount attributable to changes in unrealized gain or loss related to financial liabilities measured at fair value through profit or loss held as of the fiscal year-end was ¥(5) million and ¥40 million for the fiscal years ended December 31, 2019 and December 31, 2020, respectively.

2. Other consists mainly of foreign currency translation differences.

(4) Equity instruments measured at fair value through other comprehensive income

The Group designates investments in equity instruments held for the purpose of maintaining and strengthening relationships with business partners as equity instruments measured at fair value through other comprehensive income in light of the holding purpose.

1) Fair value by issuer

The fair value by major issuer of investments in equity instruments designated as financial assets measured at fair value through other comprehensive income

As of December 31, 2019

(Million yen)

Issuer	Amount
Nintendo Co., Ltd.	12,493
NIDEC CORPORATION	1,689
HORIBA, Ltd.	874
Nissin Electric Co., Ltd.	461
Wacoal Holdings Corp.	427
Nippon Shinyaku Co., Ltd.	400
SCREEN Holdings Co., Ltd.	383
SPARSHA PHARMA USA, INC.	325
The Bank of Kyoto, Ltd.	320
HISAMITSU PHARMACEUTICAL CO., INC.	262

As of December 31, 2020

(Million yen)

Issuer	Amount
Nintendo Co., Ltd.	9,356
NIDEC CORPORATION	2,923
HORIBA, Ltd.	721
Nissin Electric Co., Ltd.	415
SCREEN Holdings Co., Ltd.	388
The Bank of Kyoto, Ltd.	365
Wacoal Holdings Corp.	302
HISAMITSU PHARMACEUTICAL CO., INC.	300
Nippon Shinyaku Co., Ltd.	285
Shimadzu Corporation	252

2) Dividend income

(Million yen)

	Fiscal year ended December 31, 2019	Fiscal year ended December 31, 2020
Investments derecognized during the period	5	116
Investments held as of the fiscal year-end	364	321
Total	370	437

3) Equity instruments measured at fair value through other comprehensive income that were derecognized during the period

(Million yen)

	Fiscal year ended December 31, 2019	Fiscal year ended December 31, 2020
Fair value at derecognition	422	6,258
Accumulated gain (loss) at derecognition	176	4,245

(Note) The Group has disposed of, through sale, and derecognized equity instruments measured at fair value through other comprehensive income mainly for the purpose of reviewing relationships with business partners.

4) Transfer to retained earnings

The Group transfers accumulated gain or loss due to changes in the fair value of equity instruments measured through other comprehensive income to retained earnings in such cases as when the investment is disposed of.

The accumulated gain or loss (net of tax) of other comprehensive income that was transferred to retained earnings was ¥176 million and ¥4,245 million for the fiscal years ended December 31, 2019 and December 31, 2020, respectively. This was mainly due to derecognition of securities classified as equity instruments measured at fair value through other comprehensive income by way of sale for the purpose of reviewing business relationships.

(5) Offsetting of financial assets and financial liabilities

Information on offsetting of financial assets and financial liabilities recognized for the same counterparties is as follows:

(Million yen)

	As of December 31, 2019	As of December 31, 2020
Financial assets		
Trade and other receivables	15,024	20,379
Amount offset in accordance with the requirements for offsetting financial assets and financial liabilities	(1,874)	(1,929)
Net amount presented in the consolidated statements of financial position	13,149	18,449
Financial liabilities		
Trade and other payables	15,227	16,971
Amount offset in accordance with the requirements for offsetting financial assets and financial liabilities	(1,874)	(1,929)
Net amount presented in the consolidated statements of financial position	13,353	15,042

(Note) There are no material amounts that are not offset even though they are covered by an enforceable master netting arrangement or similar agreement because they do not meet part or all of the requirements for offsetting financial assets and financial liabilities.

36. Related parties

(1) Related party transactions

Related party transactions are priced, taking into account market prices, on terms and conditions equivalent to those that prevail in arm's length transactions. There are no significant transactions (excluding transactions eliminated in the consolidated financial statements).

(2) Remuneration for key management personnel

Remuneration for key management personnel is as follows:

(Million yen)

	Fiscal year ended December 31, 2019	Fiscal year ended December 31, 2020
Base remuneration and bonuses	262	235
Share-based payment expense	25	19
Total	288	254

37. Significant subsidiaries

There are no subsidiaries that have non-controlling interests that are individually material to the Company.

38. Commitments

Commitments for the acquisition of property, plant and equipment and intangible assets are as follows:

(Million yen)

	As of December 31, 2019	As of December 31, 2020
Acquisition of property, plant and equipment and intangible assets	588	1,348

39. Contingent liabilities

Not applicable

40. Subsequent events

Not applicable

41. Approval of consolidated financial statements

The consolidated financial statements for the fiscal year ended December 31, 2020 were approved on March 18, 2021 by Junya Suzuki, Chairman of the Board, President and CEO of the Company and Hayato Nishihara, Senior Executive Vice President, CFO, Director of the Board of the Company.