Hitachi High-Tech

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Financial Section

Annual Report 2018

Year ended March 31, 2018

Hitachi High-Technologies Corporation

Consolidated Financial Statements

Consolidated Statements of Financial Position

Millions of yen

	Notes	As of March 31, 2017	As of March 31, 2018
Assets			
Current assets			
Cash and cash equivalents	6,27,30	189,783	192,361
Trade receivables	7,27,30	146,566	159,338
Investments in securities and other financial assets	27,31	31,405	20,797
Inventories	8	100,851	116,526
Income taxes receivable		452	424
Other current assets		4,109	6,090
Total current assets		473,165	495,537
Non-current assets			
Property, plant and equipment	9	70,806	73,809
Intangible assets	10	7,897	16,951
Investments accounted for using the equity method	11	383	1,182
Trade receivables	7,27	994	896
Investments in securities and other financial assets	27,31	10,487	12,926
Deferred tax assets	12	22,805	20,749
Other non-current assets	15	1,213	1,286
Total non-current assets		114,585	127,798
Total assets		587,751	623,335

Millions of yen

	Notes	As of March 31, 2017	As of March 31, 2018
Liabilities			
Current liabilities			
Trade payables	13,27,30,31	121,342	132,091
Other financial liabilities	15,27	17,202	18,642
Income taxes payable		13,899	5,037
Accrued expenses		24,437	25,409
Advances received		18,549	20,960
Provisions	14	1,640	1,605
Other current liabilities		1,631	1,778
Total current liabilities		198,700	205,521
Non-current liabilities			
Other financial liabilities	15,27	3,478	420
Retirement and severance benefits	15	26,106	23,177
Provisions	14	1,488	2,059
Deferred tax liabilities	12	21	821
Other non-current liabilities		752	844
Total non-current liabilities		31,846	27,320
Total liabilities		230,546	232,841
Equity			
Hitachi High-Technologies Corporation stockholders' equity			
Common stock	16	7,938	7,938
Capital surplus	16	35,662	35,662
Retained earnings	16	303,136	334,931
Accumulated other comprehensive income	16	10,532	11,894
Treasury stock, at cost	16	(356)	(362)
Total Hitachi High-Technologies Corporation stockholders' equity		356,913	390,063
Non-controlling interests		292	431
Total equity		357,205	390,494
Total liabilities and equity		587,751	623,335

Consolidated Statements of Profit or Loss and Consolidated Statements of Comprehensive Income

Consolidated Statements of Profit or Loss

Years ended March 31, 2017 and 2018 Millions of yen

	Notes	2017	2018
Revenues	30	644,545	687,670
Cost of sales	19,20	(489,780)	(523,244)
Gross profit		154,765	164,426
Selling, general and administrative expenses	18,19,20	(97,493)	(108,907)
Other income	22	680	1,198
Other expenses	19,21,22	(4,845)	(764)
Operating profit		53,107	55,953
Financial income	23	664	163
Financial expenses	23	(276)	(1,103)
Share of profits (losses) of investments accounted for using the equity method		141	222
EBIT (Earnings before interest and taxes)		53,636	55,236
Interest income	23	326	416
Interest expenses	23	(43)	(64)
Income before income taxes		53,918	55,588
Income taxes	12	(13,755)	(14,509)
Net income		40,164	41,079
Net income attributable to:			
Hitachi High-Technologies Corporation stockholders		40,170	40,882
Non-controlling interests		(6)	196
Total		40,164	41,079
Earnings per share attributable to Hitachi High-Technologies Corporation stockholders	24		(Yen)
Basic and diluted earnings per share attributable to Hitachi High-Technologies Corporation stockholders		292.08	297.27

Consolidated Statements of Comprehensive Income

Years ended March 31, 2017 and 2018 — Millions of yen

	Notes	2017	2018
Net income		40,164	41,079
Other comprehensive income (OCI)			
Items not to be reclassified into net income			
Net changes in financial assets measured at fair value through OCI	25	2,684	1,523
Remeasurements of defined benefit plans	25	4,805	2,116
Total items not to be reclassified into net income		7,489	3,639
Items that can be reclassified into net income			
Foreign currency translation adjustments	25	(666)	126
Net changes in cash flow hedges	25	(562)	446
Share of OCI of investments accounted for using the equity method	25	—	(6)
Total items that can be reclassified into net income		(1,228)	567
Other comprehensive income (OCI)		6,260	4,206
Comprehensive income		46,424	45,285
Comprehensive income attributable to:			
Hitachi High-Technologies Corporation stockholders		46,444	45,067
Non-controlling interests		(20)	218
Total		46,424	45,285

Consolidated Statements of Changes in Equity

Millions of yen

	Notes	Common stock	Capital surplus	Retained earnings	Accumulated other comprehensive income		
					Net changes in financial assets measured at FVTOCI	Remeasurements of defined benefit plans	Foreign currency translation adjustments
As of April 1, 2016		7,938	35,662	267,903	6,375	(1,613)	4,379
Net income				40,170			
Other comprehensive income					2,684	4,805	(653)
Comprehensive income		—	—	40,170	2,684	4,805	(653)
Acquisition of treasury stock	16		(0)				
Dividends	17			(10,315)			
Acquisition (disposal) of non-controlling interests							
Reclassified into retained earnings				5,378	(5,378)		
Total transactions with the owners		—	(0)	(4,936)	(5,378)	—	—
As of March 31, 2017		7,938	35,662	303,136	3,681	3,191	3,726
Net income				40,882			
Other comprehensive income					1,523	2,116	99
Comprehensive income		—	—	40,882	1,523	2,116	99
Acquisition of treasury stock	16		(0)				
Disposal of treasury stock	16		0				
Dividends	17			(11,690)			
Transfer to non-financial assets							
Reclassified into retained earnings				2,603	(2,603)		
Total transactions with the owners		—	0	(9,087)	(2,603)	—	—
As of March 31, 2018		7,938	35,662	334,931	2,601	5,307	3,825

Millions of yen

	Notes	Accumulated other comprehensive income		Treasury stock, at cost	Total Hitachi High-Technologies Corporation stockholders' equity	Non-controlling interests	Total equity
		Net changes in cash flow hedges	Total accumulated other comprehensive income				
As of April 1, 2016		496	9,636	(349)	320,790	264	321,054
Net income			—		40,170	(6)	40,164
Other comprehensive income		(562)	6,274		6,274	(14)	6,260
Comprehensive income		(562)	6,274	—	46,444	(20)	46,424
Acquisition of treasury stock	16		—	(7)	(7)		(7)
Dividends	17		—		(10,315)	(20)	(10,335)
Acquisition (disposal) of non-controlling interests			—		—	68	68
Reclassified into retained earnings			(5,378)		—		—
Total transactions with the owners		—	(5,378)	(7)	(10,321)	48	(10,273)
As of March 31, 2017		(66)	10,532	(356)	356,913	292	357,205
Net income			—		40,882	196	41,079
Other comprehensive income		446	4,184		4,184	21	4,206
Comprehensive income		446	4,184	—	45,067	218	45,285
Acquisition of treasury stock	16		—	(7)	(7)		(7)
Disposal of treasury stock	16		—	0	0		0
Dividends	17		—		(11,690)	(79)	(11,769)
Transfer to non-financial assets		(220)	(220)		(220)		(220)
Reclassified into retained earnings			(2,603)		—		—
Total transactions with the owners		(220)	(2,822)	(7)	(11,916)	(79)	(11,995)
As of March 31, 2018		161	11,894	(362)	390,063	431	390,494

Consolidated Statements of Cash Flows

Years ended March 31, 2017 and 2018 | Millions of yen

	Notes	2017	2018
Cash flows from operating activities:			
Net income		40,164	41,079
Adjustments to reconcile net income to net cash provided by operating activities			
Depreciation and amortization	9,10	10,525	11,830
Impairment losses	21	4,119	320
Income taxes	12	13,755	14,509
Share of (profits) losses of investments accounted for using the equity method		(141)	(222)
Interest income	23	(326)	(416)
Dividends income	23	(329)	(156)
Interest expenses	23	43	64
Profits (losses) on sales of property, plant and equipment and intangible assets	22	327	(511)
Increase in trade receivables		(11,886)	(10,324)
Increase in inventories		(7,318)	(13,459)
Increase (decrease) in trade payables		11,923	9,287
Increase (decrease) in advances received		3,070	2,339
Decrease in retirement and severance benefits	15	(5,206)	(2,657)
Other		4,722	515
Subtotal		63,442	52,197
Interest received		292	401
Dividends received		408	416
Interest paid		(43)	(64)
Income taxes paid		(5,233)	(24,034)
Income taxes refund		1,653	305
Net cash provided by operating activities		60,519	29,221
Cash flows from investing activities:			
Payments into deposits and time deposits		(37,500)	(23,500)
Proceeds from withdrawal of deposits and time deposits		12,500	36,000
Purchase of property, plant and equipment	9	(10,011)	(13,016)
Purchase of intangible assets	10	(2,002)	(2,085)
Proceeds from sale of property, plant and equipment	9	616	1,086
Proceeds from sale of intangible assets	10	231	4
Purchase of investments in securities and other financial assets	27	(604)	(5,333)
Proceeds from sale and redemption of investments in securities and other financial assets	27	8,088	4,190
Purchase of investments in subsidiaries resulting in change in scope of consolidation		(94)	(10,209)
Other		(132)	(130)
Net cash provided by (used in) investing activities		(28,908)	(12,993)
Cash flows from financing activities:			
Proceeds from payments from non-controlling interests		68	—
Dividends paid to Hitachi High-Technologies Corporation stockholders	17	(10,306)	(11,686)
Dividends paid to non-controlling interests		(20)	(20)
Acquisition of common stock for treasury	16	(7)	(6)
Other		(199)	(1,030)
Net cash used in financing activities		(10,464)	(12,742)
Effect of exchange rate changes on cash and cash equivalents		(739)	(908)
Net increase in cash and cash equivalents		20,408	2,578
Cash and cash equivalents at beginning of year	6	169,375	189,783
Cash and cash equivalents at end of year	6	189,783	192,361

Notes to the Consolidated Financial Statements

1. Reporting Entity

Hitachi High-Technologies Corporation (the Company) is a corporation domiciled in Japan, whose shares are publicly listed. The registered address of its Head Office is 24-14, Nishi-shimbashi 1-chome, Minato-ku, Tokyo. The Company's consolidated financial statements for the year ended March 31, 2018, comprise those of the Company and its subsidiaries (the Group) and its interests in associates. The Group's businesses center on electronics and its reportable segments consist of Science & Medical Systems, Electronic Device Systems, Industrial Systems and Advanced Industrial Products.

2. Basis of Presentation

(1) Compliance with IFRS

As the Company meets the requirements of a "Specified Company applying Designated International Financial Reporting Standards" pursuant to Article 1-2 of the Ordinance on Terminology, Forms and Preparation Methods of Consolidated Financial Statements, the consolidated financial statements of the Group have been prepared in accordance with International Financial Reporting Standards (IFRS) issued by International Accounting Standards Board (IASB), as permitted by the provision of Article 93 of the Ordinance.

On June 22, 2018, Masahiro Miyazaki, Representative Executive Officer, President, and Chief Executive Officer, and Shunichi Uno, Chief Financial Officer, Senior Vice President, and Executive Officer approved these consolidated financial statements.

(2) Basis of Measurement

The Group's consolidated financial statements have been prepared on a historical cost basis, except for the financial instruments and the liabilities and assets associated with defined benefit plans stated in Note 3 *Summary of Significant Accounting Policies*.

(3) Presentation Currency

The consolidated financial statements are presented in Japanese yen as the Company's functional currency. The financial information in Japanese yen is rounded to the nearest million.

(4) Use of Estimates and Judgments

Management has made a number of judgments, estimates and assumptions relating to the application of accounting policies, reporting of revenues and expenses and assets and liabilities in the preparation of these IFRS-based consolidated financial statements. However, actual results could differ from those estimates.

Estimates and assumptions are continually evaluated. The effect of a revision in accounting estimates, is recognized in the reporting period in which the revision was made and in future periods.

The information regarding judgments used in applying accounting policies that could have a material effect on the Company's consolidated financial statements is included in the following notes:

- Note 3 (1) *Basis of Consolidation*
- Note 3 (5) *Financial Instruments* and Note 27 *Financial Instruments*
- Note 3 (16) *Revenue Recognition*

The information regarding uncertainties arising from assumptions and estimates that could result in material adjustments in the subsequent consolidated financial statements is included in the following notes:

- Note 3 (10) *Impairment of Non-financial Assets* and Note 21 *Impairment Losses*
- Note 3 (12) *Employee Benefits* and Note 15 *Retirement and Severance Benefits*
- Note 3 (13) *Provisions* and Note 14 *Provisions*
- Note 3 (14) *Contingencies* and Note 33 *Contingencies*
- Note 3 (17) *Income Taxes* and Note 12 *Deferred Taxes and Income Taxes*

3. Summary of Significant Accounting Policies

(1) Basis of Consolidation

(i) Subsidiaries

Subsidiaries are entities controlled by the Group. The Group has control over an entity if it has a power to investee, it is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. The Group consolidates subsidiaries from the date on which it acquires control until the date on which it loses control.

Changes in ownership interests in subsidiaries without a loss of control are accounted for as equity transactions. Changes in ownership interests in subsidiaries with a loss of control are accounted for by derecognizing assets and liabilities, non-controlling interests, equity and accumulated other comprehensive income attributable to the subsidiaries.

Subsidiaries' financial statements are adjusted, if necessary, when their accounting policies differ from those of the Group. All intergroup balances, transactions, unrealized gains and losses are eliminated on consolidation.

Comprehensive income for subsidiaries is attributed to Hitachi High-Technologies Corporation stockholders' equity and non-controlling interests even if this results in the non-controlling interests having a deficit balance.

Hitachi High-Technologies (Shanghai) Co., Ltd. and ten other subsidiaries have fiscal years ending on December 31. A provisional account closing of accounts for these subsidiaries is performed in accordance with annual settlement of accounts as of the Company's fiscal year end. The closing dates of other subsidiaries are same as that of the Company.

(ii) Associates

Associates are entities over which the Group have significant influence but do not have control over the financial and operating policies of such entities. Significant influence is presumed to exist when the Group hold 20% to 50% of the voting power of another entity. Investments in associates are accounted for under the equity method from the date on which the Group obtains significant influence through the date on which it loses such influence.

The financial statements of associates are adjusted, if necessary, when their accounting policies differ from those of the Group.

Giesecke & Devrient K.K. and two other associates have fiscal years ending on December 31. A provisional account closing of accounts for these associates is performed in accordance with annual settlement of accounts as of the Company's fiscal year end. The closing dates of the remaining one is same as that of the Company.

(2) Business Combinations

Business combinations are accounted for using the acquisition method. For each specific business combination, the Group chooses how to measure investments in which it has non-controlling interests at fair value or by the appropriate share of identifiable net assets of the acquiree. The related acquisition costs are recognized in the period in which they are incurred.

(3) Foreign Currency Translation

(i) Foreign Currency Transactions

Each Group company determines its own functional currency and measures its transactions in that functional currency.

Foreign currency transactions are converted into the functional currency using the exchange rate prevailing at the transaction date or a rate that approximates such a rate. Monetary assets and liabilities denominated in foreign currencies are converted into the functional currency using the exchange rate at the end of the fiscal year. Foreign exchange gains and losses resulting from the currency conversion and settlement are recognized in profit or loss, except where gains and losses on assets or liabilities are recognized in other comprehensive income, foreign exchange effects relating to such assets or liabilities are also recognized in other comprehensive income.

(ii) Foreign Operations

Assets and liabilities of foreign operations are translated into Japanese yen using the exchange rate at the end of the reporting period, while revenue and expense items are translated using the average exchange rates during the period as long as there are no dramatic fluctuations in foreign exchange rates during the period. Translation differences arising from translations of the financial statements of foreign entities are recognized as other comprehensive income. Upon the full disposal of foreign operations or a partial disposal resulting in a loss of significant influence, any related cumulative gain or loss relating to those foreign operations is recognized as profit or loss.

(4) Cash and Cash Equivalents

Cash and cash equivalents consist of cash on hand, demand deposits, and short-term investments that are readily convertible to known amounts of cash and subject to insignificant risk of change in value and due within three months from the date of acquisition.

(5) Financial Instruments

The Group adopts IFRS 9 "Financial Instruments" (IFRS 9) (issued in November 2009, amended in October 2010).

(i) Non-Derivative Financial Assets

The Group recognizes financial assets measured at amortized cost on the date they arise and recognizes other financial assets at the transaction when the Group becomes a party to the arrangement.

The classification and measurement model of non-derivative financial assets is summarized as follows:

<u>Financial Assets Measured at Amortized Cost</u>

Financial assets are subsequently measured at amortized cost when they meet the following requirements:

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

Financial assets measured at amortized cost are initially measured at fair value, including direct transaction costs. The carrying amount of financial assets measured at amortized cost is subsequently measured using the effective interest method.

<u>Impairment of Financial Assets Measured at Amortized Cost</u>

Impairment is deemed to have occurred when there is objective evidence of impairment resulting from one or more event after initial recognition and when it is reasonably foreseeable that the future cash flows of the financial assets will be affected.

Objective evidence of impairment includes historical credit loss experience, existence of overdue payments, extended payment terms, negative evaluation by third party credit rating agencies, and deteriorated financial position and operating results, such as a capital deficit.

Impairment losses are estimated based on estimated future cash flows discounted by the initial effective interest rate or the estimated fair value using the observable market price.

In addition to the above impairment losses, the Group evaluates the potential risks of debtors or regions, etc., with regard to the relevant financial assets and recognizes impairment losses based on credit loss ratios calculated taking into consideration historical experience or other factors or estimates of collectible amounts.

Impairment losses directly or through bad debt provisions reduce the carrying amount of the assets, and the losses are recognized in profit or loss. Thereafter, for trade receivables and other receivables, debt provisions are directly written off from the carrying amount where the relevant financial assets are deemed uncollectible.

<u>Financial Assets Measured at Fair Value through Profit or Loss (FVTPL Financial Assets)</u>

Financial assets not classified as financial assets measured at amortized cost and not designated as FVTOCI financial assets are classified as FVTPL financial assets.

FVTPL financial assets are measured at fair value when initially recognized and incurred transaction expenses are recognized in profit or loss. After initial recognition, these assets are measured at fair value and the subsequent changes in fair value are recognized in profit or loss.

<u>Financial Assets Measured at Fair Value through Other Comprehensive Income (FVTOCI Financial Assets)</u>

For equity instruments that the Group holds to maintain close business relations with investees, the Group chooses for each financial asset whether or not it can be irrevocably designated as a FVTOCI financial asset upon initial recognition.

FVTOCI financial assets are initially recognized at fair value, including transaction expenses. After initial recognition, they are measured at fair value, and subsequent changes in fair value are recognized as OCI. Amounts recognized as OCI that are derecognized as financial assets are transferred to retained earnings. Dividends are recognized in profit or loss.

<u>Derecognition of Financial Assets</u>

The Group derecognizes financial assets when contractual rights to cash flows from the financial assets expire or when the contractual rights to receive cash flows from the financial assets are transferred and the risks and economic rewards of owning the financial assets are almost all transferred.

(ii) Non-Derivative Financial Liabilities

The Group classifies all non-derivative financial liabilities as financial liabilities measured at amortized cost and initially recognizes them on the date they arise.

Financial liabilities measured at amortized cost are initially recognized at fair value, less transaction costs. They are subsequently measured at amortized cost based on the effective interest method.

Financial liabilities are derecognized when contractual obligations are redeemed, discharged, canceled, or expired.

(iii) Derivatives and Hedge Accounting

The Group uses forward exchange contracts to hedge changes in cash flow relating to future foreign currency denominated transactions. These contracts are designated as cash flow hedges where satisfying hedge accounting requirements and are initially recognized at fair value. They are subsequently measured at fair value and portions for which hedging is deemed effective against subsequent changes are recognized as OCI.

The Group documents risk management policies, including derivative usage objectives and strategies. In addition, a formal assessment is made at the hedge's inception and subsequently on a periodic basis, as to whether the derivative used in hedging activities is highly effective in offsetting changes in fair value or cash flows of the hedged items.

Hedge accounting is discontinued if a hedge does not meet hedge accounting requirements or the hedging instruments have expired, been sold, or terminated or if the hedge designation has been canceled. If an expected transaction is no longer likely to occur, amounts recognized as OCI are promptly transferred to profit or loss.

(iv) Offsetting Financial Assets and Liabilities

Financial assets and liabilities are offset and reported as a net amount when the Group currently has a legally enforceable right to set off the recognized amounts and intends to settle on a net basis or to realize the asset and settle the liability simultaneously.

(6) Inventories

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.

Inventories are measured at the lower of cost or net realizable value. Cost is mainly determined by the moving average method for finished goods and raw materials and by the specific identification method for work in process. Net realizable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to sell.

(7) Property, Plant and Equipment

The Group uses the cost model to measure property, plant and equipment. They are stated at cost, less accumulated depreciation and accumulated impairment losses.

Acquisition cost includes direct costs of acquisition, costs of dismantling, removing and restoration of the assets.

Except for land and other assets that are not depreciated, property, plant and equipment are depreciated using the straight-line method over the following estimated useful lives for major classes of assets:

• Buildings and structures	2 to 60 years
• Machinery, equipment and vehicles	2 to 17 years
• Tools, furniture and fixtures	2 to 20 years

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

(8) Intangible Assets

(i) Goodwill

Goodwill is stated at cost less any accumulated impairment losses, and is not amortized.

(ii) Intangible Assets

The Group applies the cost model to intangible assets and states such assets at cost less accumulated amortization and impairment losses.

Intangible assets acquired separately are measured at cost at initial recognition, and the costs of intangible assets acquired through business combinations are recognized at fair value at the acquisition date.

Intangible assets with finite useful lives are amortized generally using the straight-line method, while intangible assets with indefinite useful lives are not amortized. The estimated useful lives for major classes of assets are as follows:

• Software	2 to 5 years
• Other	3 to 20 years

Estimated useful lives and the method of amortization are reviewed at the fiscal year end. Changes in estimated useful lives or amortization method are accounted for on a prospective basis as a change in accounting estimate.

(9) Leases

(i) Lease Transactions

Whether an arrangement is or contains a lease is determined based on the nature of the arrangement. Leased assets are recognized when fulfillment of the contract is dependent on the use of certain assets or asset groups, with the arrangements providing rights to use the relevant assets.

(ii) Finance Leases

<u>As Lessee</u>

Leases for which all of the risks and economic rewards of ownership are transferred to the Group are classified as finance leases.

Lease assets and liabilities are initially recognized as the lower of the fair value or the present value of the minimum lease payments. After initial recognition, accounting is based on the accounting policies applied to the relevant assets and liabilities.

<u>As Lessor</u>

Leases for which all of the risks and economic value accompanying the asset ownership are transferred to the lessee are classified as finance leases.

Lease receivables are recognized at amounts equivalent to the net investments in the leased assets and included in trade receivables in the consolidated statements of financial position.

(iii) Operating Lease Transactions

Leases other than finance leases are classified as operating leases.

Operating lease payments are recognized in profit or loss on a straight-line basis throughout the lease terms.

(10) Impairment of Non-financial Assets

For each non-financial asset, the Group assesses whether there are any indications that assets may be impaired and tests for impairment when events or circumstances indicate such impairment. For goodwill and intangible assets with indefinite useful lives, the Group annually estimates recoverable amounts and tests for impairment regardless of whether or not there are indications of impairment.

The Group uses the higher of the fair value less costs of disposal or value in use as the recoverable amount of an asset or a cash generating unit. In estimating the value in use, estimated future cash flows are discounted to the present value, using pre-tax discount rates that reflect the time value of money and the inherent risks of the relevant assets and cash generating units. If the carrying amount of an asset or a cash generating unit exceeds the recoverable amount, the impairment loss of the asset is recognized in profit or loss.

For an asset other than goodwill, the recoverable amount is subsequently estimated when there is a significant change in facts and circumstances and there is an indication that an impairment loss previously recognized may no longer exist or has decreased. If the estimated recoverable amount exceeds the carrying amount, the impairment loss recognized previously is reversed to the extent of the carrying amount that would have been recorded, net of depreciation or amortization, if impairment had not been recognized previously.

(11) Assets Held for Sale

An asset or disposal group for which the value is expected to be recovered through a sale rather than through continuing use is classified as an asset or disposal group held for sale when the asset or disposal group could be sold immediately as is or it is highly probable that the asset or disposal group will soon be sold.

Assets held for sale are measured at the lower of the carrying amount or the fair value less costs to sell. There is no depreciation or amortization of assets after classification.

(12) Employee Benefits

(i) Retirement and Severance Benefits

Defined Benefit Plans

The Company and certain subsidiaries maintain defined benefit plans and / or severance lump-sum payment plans to provide retirement and severance benefits to employees.

For each plan, the Group uses the projected unit credit method to calculate the present value of defined benefit obligations and related retirement benefit costs. For a discount rate, a discount period is determined based on the period until the expected date of benefit payment in each fiscal year and the discount rate is determined by reference to market yields for the period corresponding to the discount period at the end of the fiscal year on high-quality corporate bonds.

Liabilities or assets for defined benefit plans are calculated by the present value of the defined benefit obligation, deducting the fair value of any plan assets.

Remeasurements of defined benefit plan liabilities or assets are recognized as other comprehensive income in the period in which incurred but are not subsequently transferred to profit or loss. Past service costs are recognized as profit or loss in the period when incurred.

Defined Contribution Plans

The Company and certain subsidiaries maintain defined contribution plans.

Under a defined contribution plan, the employer contributes certain amounts to another independent entity, and there is no legal or constructive obligation to pay more than the contributions.

Contributions to defined contribution plans are recognized in profit or loss during the periods in which employees provided the relevant service.

(ii) Short-Term Employee Benefits

Short-term employee benefits are recognized in profit or loss during the periods in which employees provided the relevant service.

When there is a legal and constructive obligation to pay bonuses and paid leave, and where it is possible to make reliable estimates, the payments based on such plans are recognized as estimated obligations.

(13) Provisions

The Company recognizes provisions when it has a present obligation (legal or constructive) as a result of past events, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and the amount of the obligation can be reliably estimated.

When the time to settle an obligation is expected to be long, and thus the time value of money is material, the amount of a provision is measured at the present value of the amount of expenditures expected to be required to settle the obligation. The present value is calculated by using pre-tax discount rates that reflect the time value of money and the inherent risks of the relevant obligations.

See Note 14 *Provisions* for a discussion about the nature of the provisions and the amounts recognized by the Group.

(14) Contingencies

(i) Contingent Liabilities

The Group discloses contingent liabilities in Note 33 *Contingencies* if it has possible obligations at the fiscal year end, whose existence cannot be confirmed at that date, or if obligations do not meet the recognition criteria for provisions described above in Note 3(13) *Provisions*, excluding those where the possibility of an outflow of resources embodying economic benefits is remote.

The Group has concluded financial guarantee agreements that require it to make repayments to compensate for a loss incurred if a specified debtor defaults on a payment on the due date based on the terms of a debt instrument.

(ii) Contingent Assets

The Group discloses contingent assets in Note 33 *Contingencies* if an inflow of resources embodying economic benefits is probable, but not virtually certain at the fiscal year end.

(15) Capital

(i) Common Stock and Capital Surplus

The issue prices of equity instruments that the Company issues are recorded in common stock and capital surplus. The direct issuance costs are deducted from capital surplus.

(ii) Treasury Stock

Acquired treasury stock is recognized at cost and deducted from equity, while the difference between the carrying value of treasury stock and its value at the time of sale is recognized in capital surplus.

(16) Revenue Recognition

Revenue is measured at the fair value of consideration received or receivable by the Group, less discounts, rebates or consumption or other taxes. If there is more than one identifiable component in a single transaction, the components of the transaction are split and the revenue recognized for each component. If the economic reality of multiple transactions cannot be presented without being seen as integral, the revenue of multiple transactions is recognized integrally. The Group's revenue recognition criteria and presentation policies are as follows:

(i) Revenue Recognition Standards

<u>Sale of Goods</u>

Revenue from the sale of goods is recognized when the significant risks and rewards of ownership of the goods have been transferred to the customer, the Group has neither continuing involvement nor effective control over the goods sold, the costs incurred in respect of the transaction and the amount of revenue can be measured reliably, and it is probable that the economic benefits associated with the transaction will flow to the Group. Specifically, revenue is recognized at such times as when goods are transferred to a customer, the date of shipment, or the date of acceptance by the customer.

<u>Rendering of Services</u>

Revenue from repairs and support services associated with the sale of products is recognized when services are provided. Revenue from maintenance or other fixed price service contracts is recognized evenly over the contractual period.

<u>Construction Contracts</u>

If the progress of construction can be reliably estimated, revenue is recognized using the percentage of completion method. Revenue under this method is calculated by the latest estimate of the total selling price multiplied by the ratio of the cost incurred to date to the estimated total cost of construction. Any anticipated losses on fixed-price contracts are expensed in profit or loss when such losses are estimated.

If it is impossible to reliably estimate the outcome of a construction contract, revenue is recognized using the cost recovery method. Revenue under the cost recovery method is recognized only to the extent that there is a high probability of cost recovery, and costs are recognized in the period in which they are incurred.

(ii) Revenue Presentation Policy

If the Group is a party to a transaction, all of the revenue received from the customer is presented. If the Group participates in a transaction as an agent for a third party, the commission paid by the customer, excluding the payment collected for the third party, is presented as revenue.

The determination of whether the Group is a party or agent depends on such factors as whether or not it has the primary responsibility for supplying the products and services and executing the order, whether it incurs inventory risks before or after the customer places an order, during shipment, or upon returns, or whether the Group has the right to directly or indirectly set prices.

(17) Income Taxes

Income taxes comprise current and deferred taxes that are recognized in profit or loss, except for taxes recognized in equity or directly in OCI and taxes related to business combinations.

Current income taxes are measured as amounts expected to be paid to or refunded from the taxation authorities. For the calculation of taxes, the Group uses the tax rates and tax laws that have been enacted or substantively enacted by the end of the fiscal year.

Deferred income taxes are calculated based on the temporary differences between the tax basis for assets and liabilities and the carrying amount at the fiscal year end. Deferred tax assets are recognized for deductible temporary differences, carryforward of unused tax credits and unused tax losses to the extent that it is probable that future taxable profit will be available against which they can be utilized. Deferred tax liabilities are recognized for taxable temporary differences.

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

- The initial recognition of goodwill
- The initial recognition of assets or liabilities in transactions that are not business combinations and at the time of transaction, affect neither accounting profit nor taxable profit or tax loss
- Taxable temporary differences arising from investments in subsidiaries and associates to the extent that the timing of the reversal of the temporary difference is controlled and that it is probable that the temporary difference will not reverse in the foreseeable future.
- Deductible temporary differences arising from investments in subsidiaries and associates to the extent that it is probable that the temporary difference will not reverse in the foreseeable future and that it is not probable that future taxable profits will be available against which they can be utilized

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the fiscal year when those temporary differences are reversed, based on tax rates that have been enacted or substantively enacted by the end of the fiscal year.

Deferred tax assets and deferred tax liabilities are offset if there is a legally enforceable right to offset deferred tax assets and liabilities with current tax assets and liabilities, and where the same taxation authority imposes the same income tax on the same taxable entity or even on a different taxable entity, where these taxable entities intend to settle current tax assets and liabilities on a net basis or plan to realize these tax assets and liabilities simultaneously.

(18) Consumption Tax

Consumption tax collected and remitted to the taxation authorities is excluded from revenues, cost of sales and expenses.

(19) Earnings per Share

Basic earnings per share are calculated by dividing net income attributable to Hitachi High-Technologies Corporation stockholders by the weighted average number of ordinary shares outstanding during the period, excluding treasury stock.

Basic and diluted earnings per share are the same, as there are no shares with dilutive potential.

(20) New Accounting Standards not yet adopted by the Group

The following table lists the principal new accounting standards and interpretations issued or amended prior to the approval date of the consolidated financial statements that have not been yet adopted as of the reporting date (March 31, 2018).

IFRSs	Title	Mandatory effective date (Fiscal year beginning on or after)	To be adopted by the Group	Description of new standards and amendments
IFRS 9	Financial Instruments	January 1, 2018	April 1, 2018	Amendments for hedge accounting (amended in November 2013) Amendments for the classification and measurement of financial instruments, and adoption of expected credit loss impairment model for financial assets (amended in July 2014)
IFRS 15	Revenue from Contracts with Customers	January 1, 2018	April 1, 2018	Revised accounting standard for revenue recognition and disclosure
IFRS 16	Leases	January 1, 2019	April 1, 2019	Changes in definitions and accounting treatment of leases

The new accounting standards to be adopted from the year ending March 31, 2019.

(1)IFRS 9 (Financial Instruments)

The company estimates that the adoption of IFRS 9 has insignificant impact on financial statements and the Group.

(2)IFRS 15 (Revenue from Contracts with Customers)

Changes in major accounting policies due to adoption of IFRS 15 and the impact on consolidated financial statements are as follows.

Regarding certain transactions of goods sales, the Company had previously decided that significant risks and rewards will be transferred to customers at the time of acceptance by customer, however at IFRS 15, the Company will accordingly implement sales recognition following the determination that control of a good or service has been transferred to the customer in accordance with the agreed-upon specifications in the contract at the time of installation completion.

If the Company performs by transferring goods or services to a customer before the customer pays consideration or before payment is due, the Company shall presents the contract as a contract asset, excluding any amounts presented as a receivable.

By applying IFRS 15, the Company adopts a method to recognize accumulated effects on the date of adoption which is admitted as progress measure.

The main impact on the Company's financial performance and position by adopting the method is that 75 million yen will be transferred to the beginning balance of retained earnings for the year ending March 31, 2019.

In addition, the Company estimates that the adoption of IFRS 15 has insignificant impact on Consolidated Statements of Profit or Loss and Consolidated Statements of Comprehensive Income for the year ending March 31, 2019.

The Group is currently evaluating the potential impact of adopting IFRS 16 and amendments on the Group, and is unable to estimate the impact at this time.

4. Segment Information

(1) Overview of Reportable Segments

The Group's reportable segments are components for which separate financial information is available and which the Management Committee evaluates regularly in deciding how to allocate resources and in assessing performance.

The Group maintains business divisions at the head office in accordance with the nature of its products and services. Each business division formulates comprehensive internal and external strategies and operates worldwide.

Business segments are now classified into the following four segments: "Science & Medical Systems," "Electronic Device Systems," "Industrial Systems" and "Advanced Industrial Products."

Please note that from the year ended March 31, 2018, under the business segment reorganization, some products in "Industrial Systems" were reclassified to "Advance Industrial Products".

Segment information for the year ended March 31, 2017, reflects this change in segment classification.

The main products and services of each segment are as follows:

Science & Medical Systems

Manufacture, sales, installation and maintenance services of various analytical instruments including spectrophotometers, chromatographs, fluorescent X-ray analysis and thermal analysis systems, and electron microscopes, biotechnology products and clinical analyzers.

Electronic Device Systems

Manufacture, sales, installation and maintenance services of semiconductor–related manufacturing equipment such as etching systems, CD-Measurement SEMs, and inspection systems.

Industrial Systems

Sales of automated assembly systems for LIBs and other products, power generation and transformation facilities, design and development solutions, videoconferencing systems, and telecommunications equipment. Manufacture, sales, installation and maintenance services of instruments and control systems, and related systems, railway inspection equipment, HD manufacturing equipment, factory automation equipment, and FPD manufacturing equipment.

Advanced Industrial Products

Sales of automated assembly systems in steel products, and non-ferrous metal products, components for circuits, plastics, cell materials and components, automotive components, silicon wafers, HDDs, optical telecommunications device materials and components, optical storage device materials and components, electronic components such as semiconductors, and oil products.

(2) Reportable Segment Information

The accounting methods applied to the business segments reported are generally the same as those described in Note 3 *Summary of Significant Accounting Policies*. Intersegment transactions are generally based on prevailing market prices. Segment income is measured by earnings before interest and taxes (EBIT).

Corporate property, plant and equipment and intangible assets cannot be allocated to particular reportable segments and are not included in the assets of those segments. The related depreciation and amortization are included in segment income because they constitute part of the corporate expenses allocated to each reportable segment.

Information relating to reportable segments is as follows:

Year ended March 31, 2017

Millions of yen

	Reportable segments					Others (Note 1)	Adjustment	Consolidated
	Science & Medical Systems	Electronic Device Systems	Industrial Systems	Advanced Industrial Products	Total			
Revenues								
External customers	185,415	124,214	75,803	259,890	645,322	969	(1,746)	644,545
Intersegment revenues	705	269	3,067	3,056	7,097	913	(8,010)	—
Total	186,120	124,483	78,870	262,946	652,419	1,882	(9,757)	644,545
Segment income (loss)								
EBIT	27,103	27,044	2,167	2,234	58,548	(1,101)	(3,811)	53,636
Interest income (Note 2)	373	—	—	—	373	—	(47)	326
Interest charges (Note 2)	—	(5)	(93)	(222)	(319)	(7)	283	(43)
Income before income taxes	27,476	27,039	2,074	2,012	58,602	(1,108)	(3,575)	53,918
Other income and expenses								
Depreciation and amortization	(4,465)	(4,125)	(976)	(920)	(10,487)	(39)	—	(10,525)
Impairment losses (Note 3)	(1,807)	(22)	—	(49)	(1,878)	—	(2,241)	(4,119)
Share of profits of investments accounted for using the equity method (Note 4)	—	—	2	206	208	—	(67)	141
Segment assets	88,172	75,344	42,523	107,983	314,022	910	272,819	587,751
Other assets								
Investments accounted for using the equity method (Note 5)	—	—	98	98	196	—	187	383
Capital expenditures (Note 3)	5,635	4,842	721	1,339	12,537	5	(528)	12,013
Segment liabilities	31,068	31,048	21,755	68,141	152,012	168	78,366	230,546

Notes:

1. Others represent businesses segments not included in the reportable segments, and they include indirect-support businesses.
2. Interest income and charges incurred at each business segment are interests of intracompany loans payable. These interest income and charges are offset, and the net amount represented as either interest income or charges in accordance with the net amount since it is recognized on a net basis for internal management purposes. The adjustments for interest income and interest charges are mainly for the head office, which are not attributable to any business segments, and reversal of interests on intracompany loans payable.
3. Impairment losses and capital expenditure in Adjustments are corporate amounts not attributable to any business segments.
4. For management purposes, share of profits of investments accounted for using the equity method is equivalent to the income before income taxes of equity method associates, and the difference between these amounts and the amounts shown on the consolidated financial statements is included in Adjustment.
5. For management purposes, investments accounted for using the equity method in each business segment are initial investments in equity method associates, and the difference between these amounts and the amounts shown on the consolidated financial statements is included in Adjustment.

Year ended March 31, 2018

Millions of yen

	Reportable segments					Others (Note 1)	Adjustment	Consolidated
	Science & Medical Systems	Electronic Device Systems	Industrial Systems	Advanced Industrial Products	Total			
Revenues								
External customers	187,569	135,452	73,453	289,361	685,835	813	1,022	687,670
Intersegment revenues	518	199	3,045	4,969	8,732	1,071	(9,802)	—
Total	188,087	135,651	76,498	294,330	694,566	1,884	(8,780)	687,670
Segment income (loss)								
EBIT	22,665	31,663	973	3,731	59,032	(1,059)	(2,738)	55,236
Interest income (Note 2)	251	—	—	—	251	—	165	416
Interest charges (Note 2)	—	(8)	(65)	(206)	(279)	(5)	221	(64)
Income before income taxes	22,916	31,656	908	3,525	59,005	(1,064)	(2,352)	55,588
Other income and expenses								
Depreciation and amortization	(5,450)	(4,376)	(1,168)	(815)	(11,808)	(22)	—	(11,830)
Impairment losses	—	—	(16)	(304)	(320)	—	—	(320)
Share of profits of investments accounted for using the equity method (Note 4)	(89)	—	31	420	362	(6)	(134)	222
Segment assets	109,496	86,478	46,146	117,771	359,890	792	262,654	623,335
Other assets								
Investments accounted for using the equity method (Note 5)	718	—	98	98	914	137	131	1,182
Capital expenditures (Note 3)	6,645	6,795	1,083	771	15,294	29	(222)	15,102
Segment liabilities	31,895	28,348	27,582	74,398	162,224	46	70,571	232,841

Notes:

1. Others represent businesses segments not included in the reportable segments, and they include indirect-support businesses.
2. Interest income and charges incurred at each business segment are interests of intracompany loans payable. These interest income and charges are offset, and the net amount represented as either interest income or charges in accordance with the net amount since it is recognized on a net basis for internal management purposes. The adjustments for interest income and interest charges are mainly for the head office, which are not attributable to any business segments, and reversal of interests on intracompany loans payable.
3. Capital expenditure in Adjustments are corporate amounts not attributable to any business segments.
4. For management purposes, share of profits of investments accounted for using the equity method is equivalent to the income before income taxes of equity method associates, and the difference between these amounts and the amounts shown on the consolidated financial statements is included in Adjustment.
5. For management purposes, investments accounted for using the equity method in each business segment are initial investments in equity method associates, and the difference between these amounts and the amounts shown on the consolidated financial statements is included in Adjustment.

(3) Information about Differences between Totals of Reporting Segments and Consolidated Financial Statements and Main Details of Differences (Matters Relating to Adjustments)

Millions of yen

Revenues	For the year ended March 31, 2017	For the year ended March 31, 2018
Reportable segment total	652,419	694,566
Others (other business segment)	1,882	1,884
Intersegment transaction elimination	(8,010)	(9,802)
Other adjustments (see Note)	(1,746)	1,022
Consolidated financial statements	644,545	687,670

Note: Other adjustments are management accounting adjustments.

Millions of yen

Segment income (EBIT)	For the year ended March 31, 2017	For the year ended March 31, 2018
Reportable segment total	58,548	59,032
Others (other business segment)	(1,101)	(1,059)
Intersegment transaction elimination	(153)	104
Other adjustments (see Note)	(3,658)	(2,841)
Consolidated financial statements	53,636	55,236

Note: Other adjustments are mainly corporate profit or loss not attributable to any business segments.

Millions of yen

Assets	As of March 31, 2017	As of March 31, 2018
Reportable segment total	314,022	359,890
Others (other business segment)	910	792
Intersegment transaction elimination	(1,114)	(689)
Other adjustments (see Note)	273,933	263,343
Consolidated financial statements	587,751	623,335

Note: Other adjustments are mainly corporate assets not attributable to any business segments.

Millions of yen

Liabilities	As of March 31, 2017	As of March 31, 2018
Reportable segment total	152,012	162,224
Others (other business segment)	168	46
Intersegment transaction elimination	(924)	(603)
Other adjustments (see Note)	79,290	71,174
Consolidated financial statements	230,546	232,841

Note: Other adjustments are mainly corporate liabilities not attributable to any business segments.

(4) Product and Services Information

This is as disclosed in Note 4 (2) *Reportable Segment Information* and is not presented here.

(5) Geographical Information

(i) External Revenues

Millions of yen

	For the year ended March 31, 2017	For the year ended March 31, 2018
Japan	249,795	267,128
North America	54,615	53,653
Europe	87,823	83,506
Asia	227,433	256,504
(China)	84,125	88,895
Others	24,880	26,879
Total	644,545	687,670

Note: Revenue information is based on customer location and classified by country or region.

(ii) Non-Current Assets

Non-current asset information is not presented as such assets are mostly located in Japan.

(6) Information about Major Customers

For the year ended March 31, 2017, two customer groups accounted for more than 10% of the Group's net sales, with sales for all segments to those customers amounting to ¥200,060 million. For the year ended March 31, 2018, two customer groups accounted for more than 10% of the Group's net sales, with sales for all segments to those customers amounting to ¥206,046 million.

5. Business Combination

On April 26, 2017, the Group concluded an acquisition agreement with Oxford Instruments plc (hereinafter, “OI”) based in the U.K. to acquire shares of the subsidiaries of OI and take over the business of the subsidiaries relating to a part of the industrial measuring equipment business, atomic spectrometric products (X-ray fluorescence analyzers, magnetic induction measurement instruments (contact gauges), laser induced breakdown spectrometers, optical emission spectrometers; hereinafter “targeted business”), and completed the acquisition of shares of the subsidiaries of OI and the transfer of business from the subsidiaries of OI on July 3, 2017.

(1) Reasons for the Stock Purchase and Business Acquisition

The Group has embraced the following as its Corporate Vision: To consistently aim to be Global Top in high-tech solutions. Guided by this vision, the Company is pushing ahead with businesses with the mission to turn its customers into fast-moving, cutting-edge business. In April 2016, the Company formulated its Mid-Term Management Strategy running through fiscal 2018 with the basic policy of maintaining profits earned by its main business and promoting resource strengthening and investments. Concrete strategies and measures are being implemented to accelerate further growth toward 2020.

In the Scientific Systems Business, the Company’s core business, the Company has adopted the business vision of aiming to be global major player in scientific instruments markets based on its Mid-Term Management Strategy. With this in mind, the Company has been working to bolster its technologies, products and sales networks through alliances and M&A activities, in addition to in-house development.

OI is a global scientific analytical instruments company that was spun out from Oxford University. The Company has reached an agreement with OI to acquire the targeted business.

OI manufactures and markets an expansive lineup of atomic spectroscopy products, including both benchtop and handheld models. Notably, handheld models and other portable equipment are increasingly being used in a broad range of fields as on-site quality assurance tools. The Company’s Scientific Systems Business has strengths in benchtop atomic spectroscopy product models. Through the acquisition of the targeted business, the Company will bolster its lineup by bringing in OI’s handheld atomic spectroscopy product models, where OI is strong. This will enable the Company to address customer needs by supporting various sample types and measuring settings ranging from precision analysis in the laboratory to on-site analyses. In addition, The company will incorporate the sales network established by OI worldwide into its organization, enabling it to strengthen its sales network further.

(2)Name of the acquired companies

Country	Former company name	New company name
U.K.	Materials Analysis Limited	Hitachi High-Tech Analytical Science Ltd.
Germany	Oxford Instruments Analytical GmbH	Hitachi High-Tech Analytical Science GmbH
Finland	Oxford Instruments Industrial Analysis Oy	Hitachi High-Tech Analytical Science Finland Oy
China	Oxford Instruments (Shanghai) Co. Limited	Hitachi High-Tech Analytical Science Shanghai Co., Limited
U.S.A.	Baker Avenue Services Inc.	Hitachi High-Tech Analytical Science America, Inc.

(3)Fair value of the consideration paid

Millions of yen

	Amount
Fair value of the consideration paid	11,306

Notes:

1. There is no contingent consideration.
2. The consideration paid has been calculated by making price adjustments for such items as net interest-bearing debt and working capital to the business valuation amount.

(4)Payment for the acquisition of shares of subsidiaries and the business transfer Millions of yen

	Amount
Acquisition through cash and cash equivalents	10,988
Cash and cash equivalents of the acquired subsidiaries	(872)
Payment for the acquisition of shares of subsidiaries and the business transfer	10,116

(5)Fair values of assets acquired and liabilities assumed at the date of acquisition (Note 1) Millions of yen

Account	Amount
Current assets	
Cash and cash equivalents	872
Trade receivables (Note 2)	1,070
Inventories	1,880
Others	250
Non-current assets	
Property, plant and equipment	341
Intangible assets	5,274
Total assets	9,687
Current liabilities	
Trade payables	381
Others	1,837
Non-current liabilities	
Others	815
Total liabilities	3,033
Total net assets	6,654

Notes:

1. The fair values of assets acquired and liabilities assumed at the acquisition date have been measured based on due diligence conducted by professional firms and corporate valuations by financial advisors. The above amounts have been translated at the exchange rate as of the acquisition date.
2. The contracted amount of receivables acquired was JPY1,131 million and the fair value was JPY1,070 million. Fair value includes the estimated contracted cash flow of JPY60 million, which is not expected to be recovered.

(6)Goodwill arising from the acquisition Millions of yen

	Amount
Fair value of the consideration paid	11,306
Fair value of identifiable net assets acquired	6,654
Basis adjustment (Note 1)	(318)
Goodwill (Note 2)	4,334

Notes:

1. The Company uses forward exchange contracts to hedge against foreign exchange risks associated with the acquisition from OI, Hedge accounting has been applied to these forward exchange contracts as cash flow hedges, and the fair value of the hedging instrument at the date on which control was obtained of JPY318 million has been deducted from the initial recognition of goodwill arising in conjunction with this business combination.
2. The excess of the consideration transferred over the net amount of the identifiable assets acquired and liabilities assumed has been recognized as goodwill. Goodwill reflects the future excess earning power expected to be generated from business development going forward. This goodwill is not deductible for tax purposes.

(7)Acquisition-related costs

Acquisition-related costs of this business combination was JPY371 million, of which JPY182 million was recognized in the year ended March 31, 2017 and JPY189 million was recognized in the year ended March 31, 2018, respectively, under "selling, general and administrative expenses" in the Consolidated Statements of Profit or Loss.

(8)Impact on the Group's business performance

In the Consolidated Statements of Profit or Loss for the year ended March 31, 2018, revenues from the acquired companies and the business transferred on and after the date on which control was obtained was JPY6,283 million, and a net loss of JPY534 million was recognized. Net income includes the amortization of intangible assets recognized at the date on which control was obtained.

(9)Ownership ratio

100% of the shares of subsidiaries of OI involved in the Subject Operations was acquired.

(10)Revenues and net income if the business combination had been conducted at the beginning of the year ended March 31, 2018

Revenues and net income for the year ended March 31, 2018 assuming that the acquisition of shares of OI and the business transfer had occurred at the beginning of the year ended March 31, 2018 have been omitted, due to its immateriality.

6. Cash and Cash Equivalents

Cash and cash equivalents are as follows:

Millions of yen

	As of March 31, 2017	As of March 31, 2018
Bank deposits with cash and deposits with maturities of less than three months	27,464	43,468
Deposits with maturities of less than three months	162,319	148,893
Cash and cash equivalents	189,783	192,361

7. Trade Receivables

The components of trade receivables are as follows:

Millions of yen

	As of March 31, 2017	As of March 31, 2018
Accounts receivable	129,791	139,019
Notes receivable	16,330	19,925
Finance lease receivables	1,578	1,470
Less: Allowance for doubtful receivables	(139)	(180)
Total	147,560	160,234
Current assets	146,566	159,338
Non-current assets	994	896

Credit risk management and the fair value of trade receivables are stated in Note 27 *Financial Instruments*.

8. Inventories

The components of inventories are as follows:

Millions of yen

	As of March 31, 2017	As of March 31, 2018
Merchandise and finished goods	50,497	54,130
Work in progress	45,211	56,332
Raw materials	5,143	6,064
Total	100,851	116,526

Inventories included in the cost of sales and recognized as an expense totaled ¥487,909 million and ¥520,892 million in the years ended March 31, 2017 and 2018, respectively.

The write-downs of inventories recognized as an expense are as follows:

Millions of yen

	For the year ended March 31, 2017	For the year ended March 31, 2018
Inventory write-downs	1,872	2,351

9. Property, Plant and Equipment

Changes in acquisition cost, accumulated depreciation, accumulated impairment losses and carrying amount of property, plant and equipment are as follows:

(1) Acquisition cost

Millions of yen

	Buildings and structures	Machinery and vehicles	Tools, furniture and fixtures	Land	Construction in progress	Total
As of April 1, 2016	60,428	41,982	33,974	18,663	1,656	156,702
Acquisitions	288	313	451	27	10,715	11,794
Increase due to business combination	0	10	3	—	—	14
Sales or disposals	(422)	(2,133)	(2,761)	—	(0)	(5,317)
Transfers from construction in progress	2,650	3,105	3,530	321	(9,606)	—
Currency translation effect	(184)	(14)	(50)	(11)	(9)	(268)
Other	(172)	(315)	(1,244)	(3)	(678)	(2,411)
As of March 31, 2017	62,589	42,948	33,903	18,997	2,078	160,515
Acquisitions	501	152	835	—	11,327	12,815
Increase due to business combination	146	88	112	22	—	368
Sales or disposals	(676)	(2,974)	(1,173)	(4)	(52)	(4,878)
Transfers from construction in progress	1,494	4,789	4,118	111	(10,513)	—
Currency translation effect	108	(433)	(5)	15	(17)	(332)
Other	(21)	(403)	(32)	—	(395)	(852)
As of March 31, 2018	64,140	44,168	37,758	19,140	2,429	167,636

(2) Accumulated depreciation and accumulated impairment losses

Millions of yen

	Buildings and structures	Machinery and vehicles	Tools, furniture and fixtures	Land	Construction in progress	Total
As of April 1, 2016	29,385	31,210	25,354	—	—	85,950
Sales or disposals	(363)	(1,950)	(2,283)	—	—	(4,595)
Depreciation	2,110	3,177	2,883	—	—	8,171
Impairment losses	515	40	1	1,089	22	1,666
Currency translation effect	(42)	35	(34)	—	—	(41)
Other	(138)	(168)	(1,137)	—	—	(1,442)
As of March 31, 2017	31,468	32,344	24,785	1,089	22	89,708
Sales or disposals	(569)	(2,741)	(1,115)	—	(22)	(4,446)
Depreciation	2,235	3,554	3,254	—	—	9,043
Impairment losses	3	70	5	—	—	78
Currency translation effect	71	(316)	(10)	—	—	(255)
Other	(15)	(439)	18	134	—	(302)
As of March 31, 2018	33,194	32,473	26,937	1,223	—	93,827

(3) Carrying amount

Millions of yen

	Buildings and structures	Machinery and vehicles	Tools, furniture and fixtures	Land	Construction in progress	Total
As of March 31, 2017	31,121	10,603	9,119	17,908	2,056	70,806
As of March 31, 2018	30,947	11,695	10,821	17,918	2,429	73,809

There are no ownership restrictions on property, plant and equipment.

Amounts for property, plant and equipment under construction are presented in construction in progress.

Details on impairment losses are stated in Note 21 *Impairment Losses*.

Commitments relating to acquisitions of property, plant and equipment are presented in Note 32 *Commitments*.

Depreciation is recognized in cost of sales and in selling, general and administrative expenses.

The carrying amounts of lease assets included in property, plant and equipment are as follows:

Millions of yen

	Machinery and vehicles	Tools, furniture and fixtures
As of March 31, 2017	177	109
As of March 31, 2018	89	218

10. Intangible Assets

Changes in acquisition cost, accumulated amortization, accumulated impairment losses and carrying amount of intangible assets are as follows:

(1) Acquisition cost Millions of yen

	Goodwill	Software	Other	Total
As of April 1, 2016	4,226	22,183	6,682	33,091
Purchases	—	872	8	880
Internal development	—	1,122	—	1,122
Increase due to business combination	265	1	14	281
Sales or disposals	—	(946)	(33)	(979)
Currency translation effect	—	(25)	(3)	(28)
Other	—	(2)	—	(2)
As of March 31, 2017	4,491	23,205	6,668	34,364
Purchases	—	757	176	933
Internal development	—	1,153	—	1,153
Increase due to business combination	5,149	—	4,683	9,832
Sales or disposals	—	(332)	(1)	(333)
Currency translation effect	120	23	150	292
Other	—	(1)	—	(1)
As of March 31, 2018	9,760	24,805	11,674	46,239

(2) Accumulated amortization and accumulated impairment losses Millions of yen

	Goodwill	Software	Other	Total
As of April 1, 2016	1,540	16,952	4,269	22,761
Sales or disposals	—	(913)	(30)	(943)
Amortization	—	1,992	363	2,355
Impairment losses	2,310	—	8	2,318
Currency translation effect	—	(22)	(1)	(23)
Other	—	(0)	—	(0)
As of March 31, 2017	3,850	18,008	4,609	26,467
Sales or disposals	—	(295)	(0)	(295)
Amortization	—	1,963	823	2,787
Impairment losses	93	148	—	241
Currency translation effect	—	24	65	88
Other	—	—	—	—
As of March 31, 2018	3,943	19,849	5,497	29,288

(3) Carrying amount Millions of yen

	Goodwill	Software	Other	Total
As of March 31, 2017	641	5,197	2,059	7,897
As of March 31, 2018	5,817	4,956	6,178	16,951

There are no ownership restrictions on intangible assets.

Details on impairment losses are stated in Note 21 *Impairment Losses*.

Amortization is recognized in the cost of sales and in selling, general and administrative expenses.

There are no significant intangible assets whose useful lives cannot be estimated.

The carrying amounts of internally generated intangible assets as of March 31, 2017 and 2018 were ¥2,135 million and ¥2,939 million, respectively, and recognized in the software account.

(4) Significant Intangible Assets

Among intangible assets of ¥16,951million significant intangible assets resulted from the acquisition of shares of the subsidiaries of Oxford Instruments plc and taking over the business of the subsidiaries.

The carrying amounts of goodwill as of March 31, 2018 were ¥5,021 million.

The intangible assets related to such factors as technologies and customer relationship identified through the business combination, and the carrying amounts as of March 31, 2018 were ¥3,785 million.

Intangible assets are amortized using the straight-line method, and the remaining useful life is mainly nine years.

(5) Tests for Impairment of Cash Generating Units including Goodwill

All significant goodwill in the Group is allocated to the Analytical Systems business of the Science & Medical Systems segment. The carrying amounts as of March 31, 2018 were ¥5,021 million.

Every year or when there are indications of impairment, the Company conducts the following impairment tests of cash generating units to which goodwill is allocated.

The recoverable amount for the Analytical Systems business, a cash generating unit, is calculated by the value in use, with the estimated future cash flows discounted to the present value, based on a three-year business plan that was prepared by reflecting past experiences and external information approved by management. Management assumes a future cash flow growth rate of zero beyond the three-year business plan. The discount rate before taxes is based on the weighted average cost of capital of other companies in the same industry, and this rate as of March 31, 2018 was 13.0%.

For goodwill, since the recoverable amount of cash generating unit is well above the carrying amount, even if key assumption is changed within a reasonable range, it is unlikely that the recoverable value of cash generating unit will be less than the carrying amount.

11. Investments Accounted for Using the Equity Method

The Group uses the equity method to account for its investments in the following associates.

Company name	Principal business	Segment	Ownership percentage (%)	
			As of March 31, 2017	As of March 31, 2018
Giesecke & Devrient K.K.	Selling and developing IC cards and other Giesecke & Devrient products in the Japanese market	Advanced Industrial Products	49.0	49.0
Chorus Call Asia Corporation	Providing video and audio conferencing services	Industrial Systems	49.0	49.0
NeU Corporation	Industrial application business of brain science	Other	—	38.1
MagArray,Inc.	Cancer diagnostic scan service using high sensitivity measurement technology	Science&Medical Systems	—	20.0

Note: Summary financial information is not presented because it is insignificant.

12. Deferred Taxes and Income Taxes

(1) Details of the main components and changes in deferred tax assets and deferred tax liabilities are as follows:

Millions of yen

	As of March 31, 2016	Recognized in profit or loss	Recognized in other comprehensive income	Change in scope of consolidation (see Note 1)	As of March 31, 2017
Deferred tax assets					
Inventories	3,209	451	—	0	3,660
Depreciation and amortization	2,053	876	—	1	2,931
Accrued expenses	4,521	861	—	(1)	5,380
Retirement and severance benefits (see Note 2)	14,577	(1,404)	(2,052)	2	11,124
Carryforward of unused tax losses	8	17	—	(0)	25
Other	2,054	747	29	(2)	2,828
Total deferred tax assets	26,421	1,548	(2,023)	1	25,948
Deferred tax liabilities					
Deferred profit on sale of properties	(586)	41	—	—	(545)
FVTOCI financial assets	(2,805)	—	1,183	1	(1,621)
Other	(1,357)	140	223	(4)	(999)
Total deferred tax liabilities	(4,747)	181	1,406	(3)	(3,164)

Notes: 1. Changes in foreign currency translation differences are included in the change in the scope of consolidation.

2. In the transition to defined contribution pension plans, the asset to be transitioned is recognized in retirement and severance benefits.

Millions of yen

	As of March 31, 2017	Recognized in profit or loss	Recognized in other comprehensive income	Change in scope of consolidation (see Note 1)	As of March 31, 2018
Deferred tax assets					
Inventories	3,660	226	—	(22)	3,863
Depreciation and amortization	2,931	459	—	10	3,399
Accrued expenses	5,380	132	—	(10)	5,502
Retirement and severance benefits (see Note 2)	11,124	(692)	(1,398)	(32)	9,002
Carryforward of unused tax losses	25	34	—	0	59
Other	2,828	(970)	(124)	(12)	1,723
Total deferred tax assets	25,948	(812)	(1,521)	(66)	23,548
Deferred tax liabilities					
Deferred profit on sale of properties	(545)	33	—	—	(512)
FVTOCI financial assets	(1,621)	—	536	2	(1,083)
Other	(999)	(221)	23	(829)	(2,025)
Total deferred tax liabilities	(3,164)	(188)	560	(827)	(3,620)

Notes: 1. Changes in foreign currency translation differences are included in the change in the scope of consolidation.

2. In the transition to defined contribution pension plans, the asset to be transitioned is recognized in retirement and severance benefits.

In recognizing deferred tax assets, the Group considers whether it can use all or part of future deductible temporary differences or carryforward unused tax losses with respect to future taxable income. In evaluating the recoverability of deferred tax assets, the Group considers the planned reversal of deferred tax liabilities, expected future taxable income, and tax planning. For recognized deferred tax assets, the Group has determined that there is a high probability of materializing tax benefits based on historical taxable income levels and on future taxable income projections for the period in which it can recognize deferred tax assets. However, they would similarly be a decrease in deferred tax assets that the Group considers recognizable if future projected taxable income declines during the period in which deductions are possible.

Deferred tax assets and deferred tax liabilities in the consolidated statements of financial position are as follows:

Millions of yen

	As of March 31, 2017	As of March 31, 2018
Deferred tax assets	22,805	20,749
Deferred tax liabilities	(21)	(821)

(2) Future Deductible Temporary Differences and Carryforward of Unused Tax Losses for Unrecognized Deferred Tax Assets

Future deductible temporary differences and carryforward of unused tax losses for unrecognized deferred tax assets are as follows:

Millions of yen

	As of March 31, 2017	As of March 31, 2018
Future deductible temporary differences	11,267	10,930
Carryforward of unused tax losses	4,551	4,078
Total	15,818	15,008

The carryforward of unused tax losses for unrecognized deferred tax assets will expire as follows:

Millions of yen

	As of March 31, 2017	As of March 31, 2018
First year	—	—
Second year	—	—
Third year	—	18
Fourth year	45	418
Fifth and subsequent years	4,506	3,642
Total	4,551	4,078

(3) Temporary Differences Relating to Investments in Subsidiaries for Unrecognized Deferred Tax Liabilities

On March 31, 2017 and 2018, future taxable temporary differences relating to investments in subsidiaries with unrecognized deferred tax liabilities totaled ¥41,285 million and ¥45,900 million, respectively. Deferred tax liabilities are unrecognized because the Group can control the timing of temporary difference reversals and because there is a high possibility that temporary differences will not be eliminated in the foreseeable future.

(4) Income Taxes

Details of income taxes are as follows:

Millions of yen

	For the year ended March 31, 2017	For the year ended March 31, 2018
Current tax expense	15,483	13,510
Deferred tax expense		
Temporary differences and eliminations	(2,355)	1,147
Recoverability of deferred tax assets	626	(147)
Total deferred tax expenses	(1,728)	1,000
Income taxes	13,755	14,509

(5) Reconciliation of Effective Statutory Tax Rate

The reconciliation of the effective statutory tax rate with the actual tax rate is as follows:

	For the year ended March 31, 2017	For the year ended March 31, 2018
Effective statutory tax rate	30.9 %	30.9 %
Non-deductible costs	0.9 %	0.7 %
Tax credit	(7.9) %	(6.7) %
Different tax rates applied to foreign subsidiaries	(0.7) %	(0.4) %
Change in recoverable deferred tax assets	1.2 %	(0.3) %
Other	1.2 %	1.8 %
Actual tax rate	25.5 %	26.1 %

The Company is subject mainly to corporate, inhabitant, and enterprise taxes. The effective statutory tax rates calculated based on these taxes were 30.9% and 30.9% for the years ended March 31, 2017 and 2018, respectively. Foreign subsidiaries are subject to income taxes at their locations, while the Company and domestic subsidiaries have adopted the consolidated taxation system.

13. Trade Payables

Details of trade payables are as follows:

Millions of yen

	As of March 31, 2017	As of March 31, 2018
Accounts payable	111,387	119,332
Notes payable	9,955	12,760
Total	121,342	132,091

Liquidity risk management and the fair value of trade payables are stated in Note 27 *Financial Instruments*.

14. Provisions

Changes in the balance and components of provisions are as follows:

Millions of yen

	Asset retirement obligations	Product warranty provisions	Total
As of March 31, 2017	878	2,250	3,128
Additions	395	1,651	2,047
Business Combination	―	102	102
Provisions used	(18)	(1,511)	(1,529)
Provisions reversed	(4)	(2)	(6)
Interest cost for discount	19	―	19
Currency translation effects	(9)	(89)	(98)
As of March 31, 2018	1,261	2,402	3,663
Current liabilities	3	1,601	1,605
Non-current liabilities	1,258	801	2,059

(i) Asset Retirement Obligations

To settle the obligation of restoring and removing hazardous substances from plant facilities and premises that the Group uses, the Group recognizes the estimated amount based on the estimated future expenditures calculated based on estimates from third parties. These expenses are expected to be paid after one year or more, however, they may be affected by future business plans.

(ii) Product Warranty Provisions

To provide for the costs of after-sales service for the Group's products, the Group recognizes estimated service costs within the warranty period based on historical experience. These expenses are used over the warranty period (principally within three years).

15. Retirement and Severance Benefits

The Company and certain domestic subsidiaries have maintained defined benefit pension plans and severance lump-sum payment plans as defined benefit corporate pension plans and transitioned in part to a defined contribution pension plan on October 1, 2015. Some foreign subsidiaries have defined benefit pension plans, while some have defined contribution plans. Certain defined benefit corporate pension plans adopt cash-balance plans.

In the transition to defined contribution pension plans, the asset is scheduled to be transitioned for four years and the asset to be transitioned is recognized in other current liabilities and in other non-current liabilities in the consolidated statements of financial position.

In the consolidated statement of cash flows, the net amount of the decrease in retirement benefit and the increase or decrease in other financial liabilities related to the asset to be transitioned is recognized in decrease in retirement and severance benefits.

The benefits of defined benefit plans are predetermined based on conditions, such as points employees have gained in compensation for each year of service, the payment rate in retirement, years of service and average salaries in their final years of service before retirement. Some employees receive additional severance payments at the time of retirement.

Funded defined benefit plans are administrated by the fund that is a separate legal entity from the Company under the law. The pension fund board and trustee of the plan are required by law to act in the best interests of the plan participants, and are responsible for managing plan assets in accordance with the designated investment strategy.

Pursuant to the Japanese Defined Benefit Corporate Pension Plan Act, the Company endeavors to maintain the pension financing balance for future benefits by regularly reviewing the financial condition of the pension plan and recalculating contributions.

The Company has future obligations to make contributions as defined by the fund. The contribution amount is periodically reviewed to the extent legally allowed.

Severance lump-sum payment plans provide a lump-sum payment at the time of retirement, and the Company has an obligation to pay benefits directly to beneficiaries.

These defined benefit plans expose the Group to actuarial risks.

The Group plans to allocate ¥1,899 million in contributions for the fiscal year ending March 31, 2019.

Defined contribution plans require a fixed amount of contribution over a participation period and plan participants themselves are responsible for the management of plan assets. Benefits are paid by the trustees, and the Company's responsibility is limited to making contributions.

(1) Defined Benefit Plans

(i) Net Liabilities (Assets) of Defined Benefit Plans

Amounts recognized in the consolidated statements of financial position are as follows and the amounts recognized as defined benefit pension plans are presented in other non-current liabilities in the consolidated statements of financial position:

Millions of yen

	Present value of defined benefit plan obligations	Fair value of plan assets	Net defined benefit plan obligations (assets)
As of April 1, 2016	121,282	(88,299)	32,983
Amounts recognized in profit or loss			
Service cost	4,070	—	4,070
Interest cost (income)	751	(591)	160
Total	4,821	(591)	4,230
Amounts recognized in OCI			
Remeasurement			
Actuarial gains and losses arising from changes in demographic assumptions	181	—	181
Actuarial gains and losses arising from changes in financial assumptions	(1,459)	—	(1,459)
Actuarial gains and losses arising from actual adjustments	(1,394)	—	(1,394)
Return on plan assets (excluding interest income)	—	(4,184)	(4,184)
Total	(2,672)	(4,184)	(6,856)
Other			
Contributions by the employer	—	(3,093)	(3,093)
Benefits paid	(4,736)	3,448	(1,288)
Currency translation effects	36	(59)	(23)
Other	(30)	—	(30)
Total	(4,729)	295	(4,434)
As of March 31, 2017	118,701	(92,778)	25,923
Amounts recognized in profit or loss			
Service cost	4,011	—	4,011
Interest cost (income)	888	(741)	147
Total	4,899	(741)	4,158
Amounts recognized in OCI			
Remeasurement			
Actuarial gains and losses arising from changes in demographic assumptions	220	—	220
Actuarial gains and losses arising from changes in financial assumptions	1,247	—	1,247
Actuarial gains and losses arising from actual adjustments	(160)	—	(160)
Return on plan assets (excluding interest income)	—	(4,820)	(4,820)
Total	1,307	(4,820)	(3,513)
Other			
Contributions by the employer	—	(1,757)	(1,757)
Benefits paid	(5,416)	3,663	(1,753)
Currency translation effects	(488)	402	(85)
Other	(0)	2	2
Total	(5,904)	2,311	(3,594)
As of March 31, 2018	119,002	(96,029)	22,973

The Company's funding takes into account such factors as limits on tax deductions, the fund status of plan assets, and actuarial assumptions. Contributions to plan assets are intended to cover future benefits as well as those for service that has already been provided. In addition, the Company may contribute cash to a retirement allowance trust as a reserve for shortfalls in funding for benefit obligations at the end of the fiscal year.

Management of the Company's plan assets aims to secure the payment of benefits to beneficiaries (including future pension beneficiaries) and optimize the value of plan assets within acceptable range of risks. The Company's management of plan assets factors in risks and returns for investment assets and includes formulating a policy asset mix that is optimal for the future, selecting trustees, and monitoring asset allocation.

The Company periodically reviews the policy asset mix to accommodate changes in the market environment from initial assumptions and changes in the funded status.

The Company targets an asset allocation mix of 19% for equities, 38% for bonds, and 43% for other instruments.

(ii) Main Plan Asset Components

Details of the major components of plan assets are as follows:

Millions of yen

	As of March 31, 2017		
	With quoted market price in an active market	With no quoted market price in an active market	Total
Cash and cash equivalents	2,040	―	2,040
Equities	3,428	―	3,428
Bonds	1,219	1,966	3,186
Hedge funds	―	29,994	29,994
Private assets	―	10,276	10,276
Securitization products	―	1,256	1,256
Life insurance general accounts	―	1,622	1,622
Comingled funds (see Note)	―	39,683	39,683
Other	43	1,251	1,294
Total	6,730	86,048	92,778

Note: Commingled funds comprised 44% in listed equities, 18% in national government bonds, 23% in other bonds, and 15% in other assets.

Millions of yen

	As of March 31, 2018		
	With quoted market price in an active market	With no quoted market price in an active market	Total
Cash and cash equivalents	1,710	―	1,710
Equities	3,770	―	3,770
Bonds	1,206	1,945	3,151
Hedge funds	―	32,781	32,781
Private assets	―	12,795	12,795
Securitization products	―	1,071	1,071
Life insurance general accounts	―	1,643	1,643
Comingled funds (see Note)	―	37,789	37,789
Other	47	1,270	1,317
Total	6,734	89,295	96,029

Note: Commingled funds comprised 50% in listed equities, 20% in national government bonds, 14% in other bonds, and 16% in other assets.

(iii) Actuarial Assumptions

The major actuarial assumptions at the end of reporting periods are as follows:

	For the year ended March 31, 2017	For the year ended March 31, 2018
Discount rates	0.8%	0.7%

The weighted average duration of defined benefit plan obligations for the years ended March 31, 2017 and 2018 were 13.9 years and 13.8 years, respectively.

(iv) Sensitivity Analysis for Defined Benefit Plan Obligations

Based on the assumption that all other variables were held constant, the impacts on defined benefit plan obligations of a 0.5 percentage point increase or decrease in the discount rate as March 31, 2017 and 2018 are as follows. In reality, changes in other assumptions may affect the outcome of the analysis.

Millions of yen

	For the year ended March 31, 2017		For the year ended March 31, 2018	
	0.5 percentage point increase	0.5 percentage point decrease	0.5 percentage point increase	0.5 percentage point decrease
Effects of changes in discount rate	(7,748)	8,548	(8,080)	7,553

(2) Defined Contribution Plans

The Company has recognized expenses (continuing operations) on defined contribution plans of ¥1,409 million and ¥1,566 million for the years ended March 31, 2017 and 2018, respectively.

16. Equity and Other Capital Items

(1) Changes in Total Number of Authorized Shares, Shares Issued, and Treasury Stock

Number of shares

	For the year ended March 31, 2017	For the year ended March 31, 2018
Number of authorized shares		
Balance at beginning of year	350,000,000	350,000,000
Changes	―	―
Balance at end of year	350,000,000	350,000,000
Total number of issued shares		
Balance at beginning of year	137,738,730	137,738,730
Changes	―	―
Balance at end of year	137,738,730	137,738,730
Number of treasury stock		
Balance at beginning of year	208,212	209,841
Changes (Note 3)	1,629	1,376
Balance at end of year	209,841	211,217

Notes:

1. The shares that the Company issues are ordinary shares with non-par value.
2. Issued shares are fully paid.
3. For the year ended March 31, 2017, the number of shares increased by 1,629, which consisted of purchase of 1,629 shares. For the year ended March 31, 2018, the number of shares increases by 1,376, which consists of purchase of 1,426 shares and the sale of 50 shares.

(2) Capital Surplus

The main component of capital surplus is legal reserve.

Legal Reserve

The Japanese Company Law (JCL) requires that at least half of paid-in capital be appropriated as common stock and the rest be appropriated as a legal reserve within capital surplus. Under the JCL, The legal reserve can be incorporated in common stock by resolution at a shareholders' meeting.

(3) Retained Earnings

Retained earnings comprise the following categories:

(i) Earned Reserves

The JCL requires that 10% of the retained earnings appropriated for dividends be retained until the total amount of earned reserves included in legal reserve and earned reserves reaches a quarter of the nominal value of common stock. The accumulated earned reserves can be appropriated for deficit disposition. In addition, earned reserves may be available for dividends by resolution at the shareholders' meeting.

(ii) Other Retained Earnings

Other retained earnings are earned and undistributed by the Group.

(4) Accumulated Other Comprehensive Income

(i) Net Changes in Financial Assets Measured at Fair Value through OCI

These are the differences between the acquisition cost and fair value of FVTOCI financial assets.

(ii) Remeasurement of Defined Benefit Plans

Actuarial gains and losses are the effects of differences between actuarial assumptions at the beginning of the year and what has actually occurred, and the effects of changes in actuarial assumptions.

(iii) Foreign Currency Translation Adjustments

These adjustments result from converting the financial statements of foreign operations into the Group's presentation currency.

(iv) Net Changes in Cash Flow Hedges

These are the portions deemed effective of net changes in the fair value of derivative financial instruments designated as cash flow hedges.

17. Dividends

(1) Dividend Payments

Decision	Share class	Appropriation from	Cash dividends (Millions of yen)	Cash dividends per share (Yen)	Record date	Effective date
The Board of Directors on May 25, 2016	Common stock	Retained earnings	5,501	40.00	March 31, 2016	June 3, 2016
The Board of Directors on October 27, 2016	Common stock	Retained earnings	4,814	35.00	September 30, 2016	November 30, 2016
The Board of Directors on May 24, 2017	Common stock	Retained earnings	6,189	45.00	March 31, 2017	June 2, 2017
The Board of Directors on October 25, 2017	Common stock	Retained earnings	5,501	40.00	September 30, 2017	November 30, 2017

(2) Dividends on common stock for which the record date falls in the fiscal year ended March 31, 2018, and the effective date falls in the following fiscal year are as follows:

Decision	Share class	Appropriation from	Cash dividends (Millions of yen)	Cash dividends per share (Yen)	Record date	Effective date
The Board of Directors on May 23, 2018	Common stock	Retained earnings	6,189	45.00	March 31, 2018	June 1, 2018

18. Selling, General and Administrative Expenses

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

Millions of yen

	For the year ended March 31, 2017	For the year ended March 31, 2018
Personnel expenses	(42,041)	(46,405)
Research and development expenses	(19,287)	(21,362)
Depreciation and amortization	(4,199)	(4,458)
Other	(31,966)	(36,683)
Total	(97,493)	(108,907)

19. Personnel Expenses

Details of personnel expenses are as follows:

Millions of yen

	For the year ended March 31, 2017	For the year ended March 31, 2018
Salaries	(61,106)	(65,328)
Employees' bonuses	(22,043)	(23,209)
Retirement benefit expenses	(5,639)	(5,724)
Legal and employee benefits expense	(12,223)	(12,914)
Extra retirement payments	(620)	(688)
Total	(101,630)	(107,863)

Note: Personnel expenses are included in cost of sales, selling, general and administrative expenses, and other expenses.

20. Research and Development Expenses

Research and development expenses are as follows:

Millions of yen

	For the year ended March 31, 2017	For the year ended March 31, 2018
Research and development expenses	(23,581)	(26,693)

Note: Research and development expenses are included in cost of sales and in selling, general and administrative expenses.

21. Impairment Losses

The components of impairment losses by asset category are as follows:

Millions of yen

	For the year ended March 31, 2017	For the year ended March 31, 2018
Property, plant and equipment	(1,666)	(78)
Intangible assets	(2,318)	(241)
Other	(134)	—
Total	(4,119)	(320)

Impairment losses are included in other expenses.

The component of impairment losses by reportable segment is described in Note 4 *Segment Information*.

Information on main impairment losses recognized for the fiscal years ended March 31, 2017 and 2018 is as follows:

For the year ended March 31, 2017, the difference between recoverable amounts and book values of buildings, land and other assets held by the Group which did not belong to any segment was recognized as impairment loss, as their usage is outside the scope of the previously intended usage due to the decision to sell these assets and consequently recovery of the investment is no longer expected. The recoverable amounts of these assets were based on the appraisal values provided by a licensed real estate appraiser and were measured at the fair value after deducting estimated disposal costs.

The Company does not conclude that the profit as projected for the goodwill allocated to the Analytical Systems business in the Science & Medical Systems segments is expected. The Company therefore recognized impairment loss. The recoverable amount of these assets was measured at the value in use. The value in use was calculated by discounting the estimated future cash flows by 6.0%.

For the year ended March 31, 2018, for the goodwill allocated to industrial materials that belong to the Advanced Industrial Products Segment, impairment loss was recognized, as revenue that was originally projected is no longer expected. The recoverable amount of this asset was measured at the value in use. The value in use was calculated by discounting the estimated future cash flows by 16.0%.

22. Other Income and Expenses

The components of other income are as follows:

Millions of yen

	For the year ended March 31, 2017	For the year ended March 31, 2018
Reversal of allowance for doubtful receivables	66	14
Gain on sale of property, plant and equipment, intangible assets	349	805
Other	264	379
Total	680	1,198

The components of other expenses are as follows:

Millions of yen

	For the year ended March 31, 2017	For the year ended March 31, 2018
Impairment losses (Note)	(4,119)	(320)
Loss on sale and disposal of property, plant and equipment, and intangible assets	(677)	(294)
Other	(49)	(150)
Total	(4,845)	(764)

Note: Details of impairment losses are described in Note 21 *Impairment Losses.*

23. Financial Income and Expenses

Interest income and interest charges are related to financial assets and liabilities measured at amortized cost.
The components of financial income, except interest income, are as follows:

Millions of yen

	For the year ended March 31, 2017	For the year ended March 31, 2018
Dividends income		
FVTOCI financial assets	329	156
Gain on sale of financial instruments		
FVTPL financial assets	2	7
Foreign exchange gains	333	—
Total	664	163

The components of financial expenses, except interest charges, are as follows:

Millions of yen

	For the year ended March 31, 2017	For the year ended March 31, 2018
Loss on valuation of financial instruments		
FVTPL financial assets	(30)	(30)
Foreign exchange losses	—	(735)
Other	(246)	(337)
Total	(276)	(1,103)

24. Earnings per Share

Basic earnings per share attributable to Hitachi High-Technologies Corporation stockholders is calculated based on the following information:

	For the year ended March 31, 2017	For the year ended March 31, 2018
Net income attributable to Hitachi High-Technologies Corporation stockholders (millions of yen)	40,170	40,882
Basic weighted average number of ordinary shares	137,529,777	137,528,268
Basic earnings per share attributable to Hitachi High-Technologies Corporation stockholders (yen)	292.08	297.27

Note: Basic and diluted earnings per share attributable to Hitachi High-Technologies Corporation stockholders are the same, as there were no dilutive potential ordinary shares.

25. Other Comprehensive Income

Amounts arising, reclassification adjustment, and tax effect for each component of OCI for the years ended March 31, 2017 and 2018 are as follows:

Millions of yen

	For the year ended March 31, 2017	For the year ended March 31, 2018
Items not to be reclassified into net income		
Net changes in financial assets measured at FVTOCI		
Amounts arising	3,902	2,148
Before tax effect adjustment	3,902	2,148
Tax effect	(1,217)	(625)
Net changes in financial assets measured at FVTOCI	2,684	1,523
Remeasurements of defined benefit plans		
Amounts arising	6,856	3,513
Before tax effect adjustment	6,856	3,513
Tax effect	(2,052)	(1,398)
Remeasurements of defined benefit plans	4,805	2,116
Total items not to be reclassified into net income	7,489	3,639
Items that can be reclassified into net income		
Foreign currency translation adjustments		
Amounts arising	(666)	126
Net changes in cash flow hedges		
Amounts arising	1,372	(40)
Reclassification adjustment	(2,185)	685
Before tax effect adjustment	(814)	645
Tax effect	252	(198)
Net changes in cash flow hedges	(562)	446
Share of OCI of investments accounted for using the equity method		
Amounts arising	—	(6)
Total items that can be reclassified into net income	(1,228)	567
OCI	6,260	4,206

26. Non-Cash Transactions

Details of significant non-cash transactions are as follows:

Millions of yen

	For the year ended March 31, 2017	For the year ended March 31, 2018
Property, plant and equipment acquired under finance leases	40	179

27. Financial Instruments

(1) Financial Risk Management Policy

The Group is exposed to financial risks (credit, liquidity, and market risks) in the course of business, and manages risks based on a specific policy to avoid or reduce such risks.

The Group uses derivative transactions to avoid the risk of cash flow fluctuations resulting from fluctuations in foreign exchange markets, and does not transact derivatives for speculative purposes.

(2) Credit Risk

The Group is exposed to customer credit risk for trade receivables acquired in the course of business. Investments in debt securities held for managing cash surplus and equity securities held for strategic purposes are exposed to credit risk of the issuers. Forward exchange contracts that the Group enters into to hedge against foreign-exchange market fluctuation risks are exposed to credit risk of the counterparty financial institutions.

In accordance with our business criteria, the Company decides whether or not to engage in transactions and determines credit limits and terms and conditions. The Company also undertakes conservation measures that include acquiring collateral. After receivables are recognized, operating and administrative divisions share information on the status of transactions in managing payments by due dates. The Company conducts periodic credit checks and reviews whether or not to continue transactions or assesses whether credit limits and terms and conditions are adequate. In principle, the Company limits investments of cash surpluses to bonds with issuer credit ratings of at least investment grade and to deposits with financial institutions. In principle, forward exchange contracts are entered into only with internationally recognized financial institutions with at least an A rating. The Company prevents a significant concentration of credit risk by engaging in transactions with multiple financial institutions. The Company periodically confirms its reasons for holding equities and other instruments held for policy purposes and evaluates issuers and their financial positions.

Except for guaranty obligations, the Group's maximum exposure to credit risk if collateral held and other credit enhancements are not included is equal to the financial assets' carrying amount after impairment in the consolidated statements of financial position. The maximum exposure to the credit risk from guaranty obligations is the guaranteed debt described in Note 33 *Contingencies*.

At March 31, 2017 and 2018, the Group considers that unimpaired financial assets were all collectible.

The analyses of the aging of trade receivables that are past due but not impaired as of March 31, 2017 and 2018 are as follows. The financial assets include amounts considered recoverable through credit insurance and collateral.

Millions of yen

	As of March 31, 2017	As of March 31, 2018
Past due within 30 days	2,383	7,305
Past due between 31 and 90 days	221	2,423
Past due between 91 days and 1 year	69	555
Past due over 1 year	19	2
Total	2,693	10,285

Security deposits accepted as credit enhancements for trade receivables amounted to ¥2,560 million and ¥2,373 million as of March 31, 2017 and 2018, respectively.

The Group reviews the collectability of trade receivables according to the credit positions of customers and recognizes an allowance for doubtful receivables. Changes in the allowance for the years ended March 31, 2017 and 2018 are as follows:

Millions of yen

	For the year ended March 31, 2017	For the year ended March 31, 2018
Balance at beginning of year	213	139
Addition	70	47
Business combination	—	60
Provisions used	(3)	(6)
Provisions reversed	(136)	(61)
Currency translation effects	(4)	0
Balance at end of year	139	180

Trade receivables individually impaired after taking into account of customer financial positions, payment delays, and other factors amounted to ¥156 million and ¥184 million as of March 31, 2017 and 2018, respectively. The allowance for doubtful receivables was ¥110 million and ¥167 million as of March 31, 2017 and 2018, respectively.

(3) Liquidity Risk Management

Maintaining appropriate liquidity levels and efficiently and flexibly securing adequate funds for current and future business operations are important financial objectives for the Group's management. By efficiently managing working capital, the Group endeavors to optimize the effective use of capital in operations while improving Group cash management by centralizing such management within the Company.

(i) Non-Derivative Financial Liabilities

Details of the maturities of non-derivative financial liabilities are as follows:

As of March 31, 2017

Millions of yen

	Carrying amount	Contractual rights to cash flows	Due within 1 year	Due after 1 year and not later than 5 years	Due after 5 years
Trade payables	121,342	121,342	121,276	66	—
Other financial liabilities	20,319	20,319	16,841	3,478	—
Total	141,661	141,661	138,117	3,544	—

As of March 31, 2018

Millions of yen

	Carrying amount	Contractual rights to cash flows	Due within 1 year	Due after 1 year and not later than 5 years	Due after 5 years
Trade payables	132,091	132,091	132,091	—	—
Other financial liabilities	18,852	18,852	18,433	412	8
Total	150,944	150,944	150,524	412	8

Guarantee obligations not included in the above tables were ¥87 million and ¥53 million as of March 31, 2017 and 2018, respectively.

(ii) Derivatives

Details of the maturities derivatives are as follows:

As of March 31, 2017

Millions of yen

		Due within 1 year	Due after 1 year and not later than 5 years	Due after 5 years	Total
Forward exchange contracts	In	25	—	—	25
	Out	361	—	—	361
Option contracts	In	—	—	—	—
	Out	—	—	—	—

As of March 31, 2018

Millions of yen

		Due within 1 year	Due after 1 year and not later than 5 years	Due after 5 years	Total
Forward exchange contracts	In	588	—	—	588
	Out	209	—	—	209
Option contracts	In	—	1,699	—	1,699
	Out	—	—	—	—

(4) Market Risk Management

(i) Foreign Currency Fluctuation Risk

The Group holds assets and liabilities denominated in foreign currencies, and it is exposed to foreign currency fluctuation risk. The Group addresses this risk by appropriately measuring the net future cash flows per currency and entering into forward exchange contracts within that scope to fix future cash flows arising from assets, liabilities, commitments, and forecasted transactions denominated in foreign currencies. The terms of forward exchange contracts are largely within one year.

The Company enters into forward exchange contracts based on its risk management policy and other internal management rules. The chief financial officer receives periodic reports on forward exchange contract transactions, foreign currency denominated assets and liabilities, and commitment and forecasted transaction positions.

The Company's subsidiaries similarly enter into forward exchange contracts based on the risk management policy and other internal management rules. The Company's finance department receives periodic reports on the positions of these transactions, and checks that they are undertaken in keeping with internal management rules.

Foreign Exchange Sensitivity Analysis

The sensitivity analysis for currency exchange rates indicates the impact on income from continuing operations, before income taxes, and on other comprehensive income (before tax effect adjustment) of the Japanese yen appreciating 1% against other currencies as of March 31, 2017 and 2018, while all other variables are held constant, as follows:

Millions of yen

	For the year ended March 31, 2017	For the year ended March 31, 2018
Income before income taxes		
US dollar	2	(9)
Euro	9	(3)
RMB	(11)	(21)
Other	33	19
Other comprehensive income		
US dollar	39	81
Euro	1	10
RMB	(1)	8
Other	25	21

(ii) Share Price Fluctuation Risk

The Group holds equity instruments (including shares and investment) to develop its business, and is exposed to share price fluctuation risks. Management periodically confirms the market values of these equity instruments and the financial positions of their issuers.

Share Price Sensitivity Analysis

The sensitivity analysis for the Group's holdings of marketable equity instruments indicates the impact on other comprehensive income (before tax effect adjustment) of share prices rising 10%, while all other variables are held constant, as follows:

Millions of yen

	For the year ended March 31, 2017	For the year ended March 31, 2018
Other comprehensive income	693	665

(5) Fair Value

(i) Carrying Amounts and Fair Value of Financial Assets and Financial Liabilities

The carrying amounts and fair values of financial assets and financial liabilities are as follows:

Millions of yen

	As of March 31, 2017		As of March 31, 2018	
	Carrying amount	Fair value	Carrying amount	Fair value
Assets measured at amortized cost				
Current assets				
Cash and cash equivalents	189,783	189,783	192,361	192,361
Trade receivables	146,566	146,566	159,338	159,338
Investments in securities and other financial assets	31,380	31,380	20,209	20,209
Bank deposits with maturities exceeding three months	25,000	25,000	12,500	12,500
Other receivables	6,279	6,279	7,601	7,601
Loans	100	100	108	108
Non-current assets				
Trade receivables	994	994	896	896
Investments in securities and other financial assets	2,350	2,350	2,805	2,805
Investments in securities and other investments	1,947	1,947	2,331	2,331
Loans	404	404	474	474
Assets measured at fair value				
FVTPL financial assets				
Current assets				
Investments in securities and other financial assets	25	25	588	588
Other financial assets (derivatives)	25	25	588	588
Non-current assets				
Investments in securities and other financial assets	882	882	2,831	2,831
Other investments	882	882	1,132	1,132
Other financial assets (derivatives)	—	—	1,699	1,699
FVTOCI financial assets				
Non-current assets				
Investments in securities and other financial assets	7,254	7,254	7,291	7,291
Securities	7,254	7,254	7,291	7,291
Liabilities measures at amortized cost				
Current liabilities				
Trade payables	121,342	121,342	132,091	132,091
Other financial liabilities	16,841	16,841	18,433	18,433
Lease payables	140	140	118	118
Deposits	3,281	3,281	5,535	5,535
Other payables	13,420	13,420	12,780	12,780
Non-current liabilities				
Other financial liabilities	3,478	3,478	420	420
Lease payables	156	156	211	211
Other payables	3,322	3,322	209	209
Liabilities measured at fair value				
FVTPL financial liabilities				
Current liabilities				
Other financial liabilities (derivatives)	361	361	209	209

(ii) Fair Value Measurements

The following methods and assumptions are used to measure the fair value of financial assets and liabilities. In measuring the fair value of financial instruments, quoted market prices are used if available. If these prices are unavailable, management uses the discounted future cash flow method or other appropriate evaluation methods.

a) Cash and Cash Equivalents

The carrying amount approximates the fair value because of the short maturities of these instruments.

b) Trade Receivables and Payables

The carrying amount approximates the fair value because of the short settlement periods of these instruments.

c) Investments in Securities and Other Financial Assets and Other Financial Liabilities Measured at Amortized Cost

The carrying amounts of bank deposits with maturities exceeding three months, other receivables, deposits, other payables, and short-term loans approximate the fair value because of the short maturities of these instruments.

For securities, long-term loans, lease payables, long-term other payables, and other investments, the Company measures future cash flow at a discounted rate on the assumption that the contracts are newly executed.

d) Investments in Securities and Other Financial Assets Measured at Fair Value

These are described in (iii) Fair Value Hierarchy below.

(iii) Fair Value Hierarchy

Financial instruments are classified into the following fair value hierarchy:

Level 1: Quoted prices (unadjusted) for identical assets or liabilities in active markets
Level 2: Valuations measured by direct or indirect observable inputs other than Level 1
Level 3: Valuations measured by significant unobservable inputs

When several inputs are used for a fair value measurement, the level is determined based on the input with the lowest level in the fair value measurement as a whole. Transfers between fair value hierarchy levels are deemed arising at the beginning of each quarter.

Equity Securities

Equity securities are classified as Level 1 financial instruments, as they can be measured at fair market value. Equity securities classified as Level 1 are listed shares. If the significant indicators for measuring the fair value of unlisted shares and other similar financial instruments are unobservable, they are classified as Level 3 investments. The Group measures fair value by using price information supplied by financial institutions and other parties, similar company comparisons, the discounted cash flow method, the valuation models based on net assets, and other methods.

Derivatives

FVTPL financial assets and liabilities are measured based on forward exchange rates at the end of the fiscal year.
The Group classifies these instruments as Level 2, as it enters into foreign exchange contracts.

Derivative transactions except for foreign exchange contracts are classified as Level 3. The Group measures the fair value by discounted cash flow method.

Financial Assets and Liabilities Measured at Amortized Cost

The financial assets and liabilities measured at amortized cost are mainly classified as Level 2.

The financial assets and liabilities measured at fair value and classified by level are as follows:

As of March 31, 2017

Millions of yen

	Level 1	Level 2	Level 3	Total
FVTPL financial assets				
Investments in securities and other financial assets				
Other investments	—	—	882	882
Other financial assets (derivatives)	—	25	—	25
FVTOCI financial assets				
Investments in securities and other financial assets				
Securities	6,927	—	328	7,254
Total assets	6,927	25	1,210	8,161
FVTPL financial liabilities				
Other financial liabilities (derivatives)	—	361	—	361
Total liabilities	—	361	—	361

As of March 31, 2018

Millions of yen

	Level 1	Level 2	Level 3	Total
FVTPL financial assets				
Investments in securities and other financial assets				
Other investments	—	—	1,132	1,132
Other financial assets (derivatives)	—	588	1,699	2,288
FVTOCI financial assets				
Investments in securities and other financial assets				
Securities	6,655	—	636	7,291
Total assets	6,655	588	3,467	10,710
FVTPL financial liabilities				
Other financial liabilities (derivatives)	—	209	—	209
Total liabilities	—	209	—	209

Changes in Level 3 financial assets are as follows:

Millions of yen

	For the year ended March 31, 2017			For the year ended March 31, 2018		
	Investments in securities and other financial assets			Investments in securities and other financial assets		
	FVTPL financial assets	FVTOCI financial assets	Total	FVTPL financial assets	FVTOCI financial assets	Total
Balance at beginning of year	914	157	1,071	882	328	1,210
Total gain (loss) in profit or loss	(30)	(260)	(290)	(30)	(560)	(591)
Net profit or loss	(30)	—	(30)	(30)	—	(30)
OCI	—	(260)	(260)	—	(560)	(560)
Acquisitions	116	428	543	2,159	1,010	3,169
Sales or disposals	(118)	—	(118)	(178)	—	(178)
Currency translation effects	1	3	4	(1)	(26)	(27)
Other	(0)	—	(0)	—	(116)	(116)
Balance at end of year	882	328	1,210	2,831	636	3,467

The gain or loss recognized in net profit or loss is included in financial income or financial expenses in the consolidated statements of profit or loss. For the total gain (loss) in net profit or loss, losses of financial assets held at year-end were ¥30 million and ¥30 million in the years ended March 31, 2017 and 2018, respectively

The gain or loss recognized in other comprehensive income is included in net changes from financial assets measured at fair value through other comprehensive income in the consolidated statements of comprehensive income.

(6) FVTOCI Financial Assets

The Group classifies equity instruments held to maintain and strengthen business relations FVTOCI financial assets, in view of the holding purpose.

(i) Fair Values of Principal Equity Instruments

The fair values of principal FVTOCI financial assets are as follows:

As of March 31, 2017

Millions of yen

Principal FVTOCI financial assets	Fair value
Horiba, Ltd.	3,077
Shin-Etsu Chemical Co., Ltd.	1,342
Komatsu Ltd.	1,166
Aica Kogyo Co., Ltd.	542
Dexerials Corporation	481
Sanyo Special Steel Co., Ltd.	125
PT.SKY ENERGY INDONESIA	123
Enplas Corporation	101

As of March 31, 2018

Millions of yen

Principal FVTOCI financial assets	Fair value
Shin-Etsu Chemical Co., Ltd.	1,531
Precision System Science Co., Ltd.	1,520
Komatsu Ltd.	1,426
Aica Kogyo Co., Ltd.	729
PT. SKY ENERGY INDONESIA	615
Dexerials Corporation	483
Enplas Corporation	117
Sanyo Special Steel Co., Ltd.	113

(ii) Derecognition of FVTOCI Financial Assets

The Group sold some FVTOCI financial assets following reviews of business relationships or for other reasons. The FVTOCI financial assets that were derecognized for the years ended March 31, 2017 and 2018 are as follows:

Millions of yen

	For the year ended March 31, 2017	For the year ended March 31, 2018
Fair value at time of sale	7,907	4,057
Accumulated gains at time of the recognition	7,779	3,764

Accordingly, the accumulated gains transferred from accumulated other comprehensive income to retained earnings were ¥5,378 million and ¥2,603 million in the years ended March 31, 2017 and 2018, respectively.

(iii) Dividend Income

Millions of yen

	For the year ended March 31, 2017	For the year ended March 31, 2018
Investments derecognized during year	198	60
Investments held at year-end	131	97
Total	329	156

(7) Derivatives and Hedge Accounting

(i) Cash Flow Hedges

The Group uses forward exchange contracts to hedge cash flow fluctuations for forward exchange commitments and forecasted transactions, designating derivatives that satisfy hedge accounting requirements as cash flow hedges. Effective portions of fair value fluctuations of forward exchange contracts designated as cash flow hedges are recognized as OCI, while ineffective portions are recognized in profit or loss.

No amounts were recognized in profit or loss in the years ended March 31, 2017 and 2018, as the effects of hedges were either not effective or were excluded from the assessment of hedge effectiveness.

(ii) Derivatives Not Designated as Hedges

The Group uses forward exchange contracts to hedge against currency exchange risks associated with foreign currency denominated assets and liabilities. Hedge accounting is not adopted for these contracts, and all fair value changes are recognized in profit and loss.

(iii) Fair Value of Derivatives Designated as Hedging Instruments

The fair values of derivatives designated as hedging instruments as of March 31, 2017 and 2018 are as follows:

Millions of yen

	As of March 31, 2017			As of March 31, 2018		
	Contract amount	Over 1 year	Fair value	Contract amount	Over 1 year	Fair value
Forward exchange contracts						
Selling						
US dollar	4,135	－	(13)	8,480	－	261
Euro	172	－	2	1,191	－	15
Other	2,810	－	(81)	3,770	－	(73)
Buying						
US dollar	229	－	(1)	84	－	3
Euro	64	－	0	133	－	(3)
Other	578	－	(4)	911	－	27
Total	7,987	－	(97)	14,569	－	230

(8) Capital Management

The Group manages its capital under the policy of maintaining appropriate levels of assets, liabilities and equity for current and future business operations, as well as optimizing the capital in its operations.

The Company uses the total Hitachi High-Technologies stockholders' equity ratio as an important indicator in capital management, sets targets in its medium-term management plan, and regularly monitors them. The total Hitachi High-Technologies stockholders' equity ratios at March 31, 2017 and 2018 were 60.7% and 62.6%, respectively.

The Group is not subject to any capital requirements except for general rules, such as JCL.

28. Leases

(1) Lessee

The Company and certain subsidiaries use leased tools, furniture and fixtures under finance leases.

The following table shows the undiscounted amounts and present value of minimum lease payments under finance leases as of March 31, 2017 and 2018.

Millions of yen

	Future minimum lease payments		Present value of future minimum lease payments	
	As of March 31, 2017	As of March 31, 2018	As of March 31, 2017	As of March 31, 2018
Within 1 year	143	122	140	118
After 1 year and not later than 5 years	159	218	156	210
More than 5 years	―	0	―	0
Total	303	341	296	328
Finance charges	(7)	(12)	―	―
Present value of future minimum lease payments	296	328	296	328

The Company and certain subsidiaries use leased buildings and structures, machinery and vehicles under operating leases.

The following table shows the future minimum lease payments for non-cancelable operating leases as of March 31, 2017 and 2018.

Millions of yen

	As of March 31, 2017	As of March 31, 2018
Within 1 year	1,101	909
After 1 year and not later than 5 years	1,821	1,830
More than 5 years	333	481
Total	3,255	3,220

Minimum lease payments for operating leases recognized as expenses in the years ended March 31, 2017 and 2018are as follows:

Millions of yen

	For the year ended March 31, 2017	For the year ended March 31, 2018
Minimum lease payments	5,186	5,582

Minimum lease payments are posted in cost of sales and selling, general and administrative expenses.

(2) Lessor

The Company and certain subsidiaries lease tools, furniture, and equipment under finance lease contracts.

The following table shows the future minimum lease payments receivable for finance leases as of March 31, 2017 and 2018.

Millions of yen

	As of March 31, 2017	As of March 31, 2018
Within 1 year	584	574
After 1 year and not later than 5 years	935	865
More than 5 years	59	31
Total	1,578	1,470

29. Major Subsidiaries

The Group's consolidated financial statements include the financial statements of the following principal subsidiaries.

Company name	Location	Principal businesses	Ownership (%)	
			As of March 31, 2017	As of March 31, 2018
Hitachi High-Tech Solutions Corporation	Chuo-ku, Tokyo	Industrial Systems	100.0	100.0
Hitachi High-Tech Materials Corporation	Minato-ku, Tokyo	Advanced Industrial Products	100.0	100.0
Hitachi High-Tech Fielding Corporation	Shinjuku-ku, Tokyo	Science & Medical Systems, Electronic Device Systems, and Industrial Systems	100.0	100.0
Hitachi High-Tech Fine Systems Corporation	Kamisato, Kodama-gun, Saitama Prefecture	Industrial Systems	100.0	100.0
Hitachi High-Tech Manufacturing & Service Corp.	Hitachinaka City, Ibaraki Prefecture	Science & Medical Systems and Electronic Device Systems	100.0	100.0
Hitachi High-Tech Science Corporation	Minato-ku, Tokyo	Science & Medical Systems	100.0	100.0
Hitachi High Technologies America, Inc.	U.S.A.	Science & Medical Systems, Electronic Device Systems, Industrial Systems, and Advanced Industrial Products	100.0	100.0
Hitachi High-Technologies Europe GmbH	Germany	Science & Medical Systems, Electronic Device Systems, Industrial Systems, and Advanced Industrial Products	100.0	100.0
Hitachi High-Technologies (Singapore) Pte. Ltd.	Singapore	Science & Medical Systems, Electronic Device Systems, Industrial Systems, and Advanced Industrial Products	100.0	100.0
Hitachi High-Technologies (Thailand) Ltd. (Note)	Thailand	Industrial Systems and Advanced Industrial Products	100.0	100.0
Hitachi High-Technologies (Shanghai) Co., Ltd.	China	Science & Medical Systems, Electronic Device Systems, Industrial Systems, and Advanced Industrial Products	100.0	100.0
Hitachi High-Technologies Hong Kong Limited	China	Industrial Systems and Advanced Industrial Products	100.0	100.0

Note: Hitachi High-Technologies (Thailand) Ltd. is a wholly owned subsidiary of Hitachi High-Technologies (Singapore) Pte. Ltd.

30. Related Party

(1) Parent Company

Company name	Principal business	Location	Ownership (%)	
			As of March 31, 2017	As of March 31, 2018
Hitachi, Ltd.	Manufacturing and sales of electrical machinery and equipment	Chiyoda-ku, Tokyo	51.8	51.8

(2) Related Party Transactions

The Group's significant transactions (excluding those eliminated from the consolidated financial statements) with related parties are as follows:

(i) For the year ended March 31, 2017

Millions of yen

Category	Company name	Details of related party transactions	Transaction amount	Outstanding balances	
Parent company	Hitachi, Ltd.	Sales of railway related parts, information equipment and power-related parts, etc.	17,763	Trade receivables	12,173
				Advances received	399
		Deposits of funds	42,181	Deposits (including for more than three months)	178,632
		Sale of securities	7,907	—	—
Entities with same parent company	Hitachi Europe Ltd.	Proceeds of funds	773	Deposits	6,919

Notes:

1. Transaction amounts do not include consumption taxes. Outstanding balances include consumption taxes.
2. Deposits of funds and refunds are conducted daily. Transaction amounts represent amounts subtracted from the end of the previous fiscal year.
3. The securities are classified as FVTOCI financial assets. The sale price of securities is determined in accordance with the Share Transfer Agreement with Hitachi Ltd.

(ii) For the year ended March 31, 2018

Millions of yen

Category	Company name	Details of related party transactions	Transaction amount	Outstanding balances	
Parent company	Hitachi, Ltd.	Sales of railway related parts, information equipment and power-related parts, etc.	18,080	Trade receivables	9,024
				Advances received	487
		Proceeds of funds	20,847	Deposits (including for more than three months)	157,785

Notes:

1. Transaction amounts do not include consumption taxes. Outstanding balances include consumption taxes.
2. Deposits of funds and refunds are conducted daily. Transaction amounts represent amounts subtracted from the end of the previous fiscal year.

(3) Compensation for Directors and Executive Officers

The compensation for directors and executive officers for the years ended March 31, 2017 and 2018 are as follows:

Millions of yen

	For the year ended March 31, 2017	For the year ended March 31, 2018
Short-term employee benefits	687	645

31. Collateral

Assets pledged as collateral and the secured liabilities are as follows:

Millions of yen

	As of March 31, 2017	As of March 31, 2018
Assets pledged as collateral		
Investments in securities and other financial assets	384	390
Secured liabilities		
Trade payables	121	141

Notes:

1. Assets pledged as collateral do not give assignees the right to sell or repledge the collateral.
2. Under assets pledged as collateral as at March 31, 2017, ¥347 million of investments in securities and other financial assets is measured at fair value and ¥421 million is the maximum guaranteed amount.
   Under assets pledged as collateral as at March 31, 2018, ¥334 million of investments in securities and other financial assets is measured at fair value and ¥419 million is the maximum guaranteed amount.

32. Commitments

Commitments related to the acquisition of assets subsequent to March 31, 2017 and 2018 are as follows:

Millions of yen

	As of March 31, 2017	As of March 31, 2018
Purchase of property, plant and equipment	1,594	2,118

33. Contingencies

(1) Contingent Liabilities

The Group provides the following guarantees to financial institutions with respect to the home loans of Group employees and the operationally contracted guarantees for the office lease of a subsidiary:

Millions of yen

	As of March 31, 2017	As of March 31, 2018
Employee guarantees	87	53
Total	87	53

(2) Contingent Assets

None

(3) Litigation

In November 2017, Mitsui Fudosan Residential Co., Ltd., allegedly having incurred the rebuilding costs, etc. of a condominium located in Yokohama(hereinafter referred to as the "Condominium") due to concerns about some defects regarding piling work for the Condominium which the Company undertook as a primary subcontractor, filed a lawsuit against three companies, i.e., the contractor of the Condominium, the Company and the secondary subcontractor of said piling work, claiming compensation for damages amounting to approximately 45.9 billion yen.

In connection with this lawsuit, in April 2018, Sumitomo Mitsui Construction Co., Ltd., the contractor of the Condominium, filed a lawsuit against two companies, i.e., the Company and the secondary subcontractor of said piling work, claiming compensation for damages amounting to approximately 49.6 billion yen.

The Company, while intending to advocate our views over said claim, has no assurance that the Company will not incur any payment obligation.

34. Subsequent Events

Please refer to Note 33 *Contingencies (3)Litigation*.

Ernst & Young ShinNihon LLC
Hibiya Mitsui Tower, Tokyo Midtown Hibiya
1-1-2 Yurakucho, Chiyoda-ku
Tokyo 100-0006, Japan

Tel: +81 3 3503 1100
Fax: +81 3 3503 1197
ey.com

Independent Auditor's Report

The Board of Directors
Hitachi High-Technologies Corporation

We have audited the accompanying consolidated financial statements of Hitachi High-Technologies Corporation and its consolidated subsidiaries, which comprise the consolidated statements of financial position as at March 31, 2018, and the consolidated statements of profit or loss, comprehensive income, changes in equity, and cash flows for the year then ended and notes to the consolidated financial statements.

Management's Responsibility for the Consolidated Financial Statements

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

Auditor's Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in Japan. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. The purpose of an audit of the consolidated financial statements is not to express an opinion on the effectiveness of the entity's internal control, but in making these risk assessments the auditor considers internal controls relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Hitachi High-Technologies Corporation and its consolidated subsidiaries as at March 31, 2018, and their consolidated financial performance and cash flows for the year then ended in conformity with International Financial Reporting Standards.

Ernst & Young ShinNihon LLC

June 22, 2018
Tokyo, Japan