(English translation and a part of summary of the Annual Securities Report for the twelve-month period ended March 31, 2019, pursuant to the Financial Instruments and Exchange act of Japan.)

Annual Financial Report

For the fiscal year ended March 31, 2019

Advantest Corporation

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As used in this annual financial report, the term “fiscal” preceding a year means the twelve-month period ended March 31 of the year subsequent to the year referred to. For example, “fiscal 2018” refers to the twelve-month period ended March 31, 2019. All other references to years refer to the applicable calendar year.

“¥” or “yen” means Japanese yen.

Unless otherwise noted, all references and discussions of the financial position of Advantest Corporation (the “Company”) and its consolidated subsidiaries (collectively, “Advantest”), results of operations and cash flows in this annual financial report are made with reference to Advantest’s consolidated financial statements prepared in accordance with the International Financial Reporting Standards (“IFRS”).

Cautionary Statement with Respect to Forward-Looking Statements

This annual financial report contains “forward-looking statements” that are based on Advantest’s current expectations, estimates and projections. These statements include, among other things, the discussion of Advantest’s business strategy, outlook and expectations as to market and business developments, production and capacity plans. Generally, these forward-looking statements can be identified by the use of forward-looking terminology such as “anticipate,” “believe,” “estimate,” “expect,” “intend,” “project,” “should” and similar expressions. Forward-looking statements are subject to known and unknown risks, uncertainties and other factors that may cause Advantest’s actual results, levels of activity, performance or achievements to be materially different from those expressed or implied by such forward-looking statements, including:

• changes in demand for the products and services produced and offered by Advantest’s customers, including semiconductors, communications services and electronic goods;

• circumstances relating to Advantest’s investment in technology, including its ability to timely develop products that meet the changing needs of semiconductor manufacturers and communications network equipment and components makers and service providers;

• the environment in which Advantest purchases materials, components and supplies for the production of its products, including the availability of necessary materials, components and supplies during a significant expansion in the market in which Advantest operates; and

• changes in economic conditions, competitive environment, currency exchange rates or political stability in the major markets where Advantest produces, distributes or sells its products.

These risks, uncertainties and other factors also include those identified in “Risk Factors” and set forth elsewhere in this annual financial report.

1. Consolidated Financial Statements

(1) Consolidated Statement of Financial Position

Millions of Yen

	Note	As of March 31, 2018	As of March 31, 2019
Assets			
Current assets			
Cash and cash equivalents	7, 30	103,973	119,943
Trade and other receivables	8, 30	37,929	51,786
Inventories	9	49,627	57,099
Other current assets		4,784	4,423
Subtotal		196,313	233,251
Assets held for sale	11	830	—
Total current assets		197,143	233,251
Non-current assets			
Property, plant and equipment, net	12	29,232	30,786
Goodwill and intangible assets, net	13	15,287	26,119
Other financial assets	10, 30	2,414	2,861
Deferred tax assets	16	10,127	11,209
Other non-current assets		356	354
Total non-current assets		57,416	71,329
Total assets	6	254,559	304,580
Liabilities and Equity			
Liabilities			
Current liabilities			
Trade and other payables	17, 30	43,258	43,942
Bonds	18, 30	29,872	—
Income tax payables		4,247	8,650
Provisions	19	3,042	2,886
Other financial liabilities	30	554	905
Other current liabilities		6,224	6,465
Total current liabilities		87,197	62,848
Non-current liabilities			
Retirement benefit liabilities	20	40,353	37,528
Deferred tax liabilities	16	1,099	1,680
Other non-current liabilities		1,300	3,793
Total non-current liabilities		42,752	43,001
Total liabilities		129,949	105,849
Equity			
Share capital	21	32,363	32,363
Share premium	21	43,466	43,018
Treasury shares	21	(77,724)	(6,262)
Retained earnings	21	125,204	125,927
Other components of equity	21	1,301	3,685
Total equity attributable to owners of the parent		124,610	198,731
Total equity		124,610	198,731
Total liabilities and equity		254,559	304,580

(2) Consolidated Statement of Profit or Loss and Consolidated Statement of Comprehensive Income

Consolidated Statement of Profit or Loss

Millions of Yen

	Note	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Net sales	6, 23	207,223	282,456
Cost of sales	12, 13, 20	(100,635)	(128,417)
Gross profit		106,588	154,039
Selling, general and administrative expenses	12, 13, 19, 20, 24, 25	(82,645)	(93,100)
Other income	27	621	3,818
Other expenses		(77)	(95)
Operating income	6	24,487	64,662
Financial income	26	975	1,626
Financial expenses	26	(1,180)	(77)
Income before income taxes		24,282	66,211
Income taxes	16	(6,179)	(9,218)
Net income		18,103	56,993
Net income attributable to:			
Owners of the parent		18,103	56,993
Earnings per share:	29		Yen
Basic		101.94	302.35
Diluted		92.69	287.37

Consolidated Statement of Comprehensive Income

Millions of Yen

	Note	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Net income		18,103	56,993
Other comprehensive income (loss), net of tax			
Items that will not be reclassified to profit or loss			
Remeasurements of defined benefit pension plan	20, 21, 28	1,024	(2,732)
Net change in fair value measurements of equity instruments at fair value through other comprehensive income	21, 28	—	175
Items that may be subsequently reclassified to profit or loss			
Exchange differences on translation of foreign operations	21, 28	(3,257)	2,209
Net change in fair values of available-for-sale financial assets	21, 28	(640)	—
Total other comprehensive income (loss)		(2,873)	(348)
Total comprehensive income for the year		15,230	56,645
Comprehensive income attributable to:			
Owners of the parent		15,230	56,645

(3) Consolidated Statement of Changes in Equity

Millions of Yen

	Note	Equity attributable to owners of the parent						
		Share capital	Share premium	Treasury shares	Retained earnings	Other components of equity	Total	Total Equity
Balance as of April 1, 2017		32,363	44,319	(86,039)	113,676	5,198	109,517	109,517
Net income					18,103		18,103	18,103
Other comprehensive income (loss), net of tax						(2,873)	(2,873)	(2,873)
Total comprehensive income for the year		—	—	—	18,103	(2,873)	15,230	15,230
Purchase of treasury shares	21			(2)			(2)	(2)
Disposal of treasury shares	21		(950)	8,317	(3,880)		3,487	3,487
Dividends	22				(3,719)		(3,719)	(3,719)
Share-based payments	25		85				85	85
Other			12				12	12
Transfer from other components of equity to retained earnings	21				1,024	(1,024)	—	—
Total transactions with the owners		—	(853)	8,315	(6,575)	(1,024)	(137)	(137)
Balance as of March 31, 2018		32,363	43,466	(77,724)	125,204	1,301	124,610	124,610
Impact of change in accounting policy					788		788	788
Beginning balance as of April 1, 2018 (restated)		32,363	43,466	(77,724)	125,992	1,301	125,398	125,398
Net income					56,993		56,993	56,993
Other comprehensive income (loss), net of tax						(348)	(348)	(348)
Total comprehensive income for the year		—	—	—	56,993	(348)	56,645	56,645
Purchase of treasury shares	21			(738)			(738)	(738)
Disposal of treasury shares	21		(211)	2,203	(1,187)		805	805
Conversion of convertible bonds			(717)	69,997	(39,333)		29,947	29,947
Dividends	22				(13,806)		(13,806)	(13,806)
Share-based payments	25		470				470	470
Other			10				10	10
Transfer from other components of equity to retained earnings	21				(2,732)	2,732	—	—
Total transactions with the owners		—	(448)	71,462	(57,058)	2,732	16,688	16,688
Balance as of March 31, 2019		32,363	43,018	(6,262)	125,927	3,685	198,731	198,731

(4) Consolidated Statement of Cash Flows

Millions of Yen

	Note	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Cash flows from operating activities:			
Income before income taxes		24,282	66,211
Adjustments to reconcile income before income taxes to net cash provided by (used in) operating activities:			
Depreciation and amortization		5,024	4,967
Shared-based payment expense		85	481
Gain on sales of available-for-sale financial assets		(519)	—
Changes in assets and liabilities:			
Trade and other receivables		(5,937)	(14,130)
Inventories		(10,479)	(6,901)
Trade and other payables		14,486	632
Warranty provisions		1,400	(155)
Retirement benefit liabilities		1,553	(4,828)
Other		1,233	2,255
Subtotal		31,128	48,532
Interest and dividends received		497	1,007
Interest paid		(48)	(3)
Income taxes paid		(3,323)	(4,744)
Net cash provided by (used in) operating activities		28,254	44,792
Cash flows from investing activities:			
Proceeds from sale of available-for-sale financial assets		883	—
Purchases of available-for-sale financial assets		(216)	—
Purchases of equity instruments		—	(384)
Proceeds from sale of property, plant and equipment		1,882	1,927
Purchases of property, plant and equipment		(4,121)	(5,891)
Purchases of intangible assets		(607)	(512)
Payments for acquisition of business	32	—	(11,098)
Other		(150)	43
Net cash provided by (used in) investing activities		(2,329)	(15,915)
Cash flows from financing activities:			
Proceeds from disposal of treasury shares		3,493	805
Purchases of treasury shares		(2)	(738)
Redemption of bonds	18	(15,000)	—
Dividends paid	22	(3,718)	(13,786)
Other		(10)	(5)
Net cash provided by (used in) financing activities		(15,237)	(13,724)
Net effect of exchange rate changes on cash and cash equivalents		(2,039)	817
Net change in cash and cash equivalents		8,649	15,970
Cash and cash equivalents at the beginning of year		95,324	103,973
Cash and cash equivalents at the end of year	7	103,973	119,943

Notes to the Consolidated Financial Statements

1. Reporting Entity

Advantest Corporation (the “Company”) is a public company located in Japan.

The Company’s consolidated financial statements consist of the Company and its subsidiaries (collectively, “Advantest”).

Advantest manufactures and sells semiconductor and component test system products and mechatronics-related products such as test handlers and device interfaces. Advantest also engages in research and development activities and provides maintenance and support services associated with these products.

2. Basis of Preparation

(1) Compliance with IFRS

Advantest prepares consolidated financial statements in accordance with the International Financial Reporting Standards (“IFRS”) issued by the International Accounting Standard Board. As Advantest meets the requirements of a “Specified Companies applying Designated IFRS” pursuant to Article 1-2 of the “Ordinance on Terminology, Forms, and Preparation Methods of Consolidated Financial Statements”, Advantest adopts Article 93 of the same ordinance.

The consolidated financial statements were approved on June 27, 2019 by Yoshiaki Yoshida, Representative Director, President and CEO and Atsushi Fujita, Chief Financial Officer of the Company.

(2) Basis of Measurement

The consolidated financial statements have been prepared on the historical cost basis except for certain financial instruments measured at their fair values, as included in Significant Accounting Policies (see note 3 for additional details).

(3) Functional Currency and Presentation Currency

The consolidated financial statements are presented in Japanese Yen, which is the Company’s functional currency.

(4) Changes in Accounting Policies

1) IFRS 9: Financial Instruments

Advantest has adopted IFRS 9 “Financial Instruments” from the fiscal year ended March 31, 2019. This new standard is the replacement of IAS 39 “Financial Instruments: Recognition and Measurement”. This standard addresses the classification, recognition and measurement (including impairment) of financial instruments and introduces new rules for hedge accounting.

The adoption of the standard had a minor impact on Advantest consolidated results of operations and financial condition for the fiscal year ended March 31, 2019.

Classification and measurement of financial instruments

Equity instruments and debt instruments, which were previously classified as available-for-sale under IAS 39, are classified as either financial assets measured at fair value through other comprehensive income (FVTOCI) or financial assets measured at fair value through profit or loss (FVTPL). Advantest chose not to restate its prior period comparatives.

Changes in fair value of financial assets measured at fair value through other comprehensive income are recognized in other comprehensive income. If Advantest derecognizes financial assets, the cumulative gain or loss previously recognized in other comprehensive income is reclassified to retained earnings.

Impairment of financial assets

Effective from April 1, 2018, Advantest changed the method for measurement of impairment of financial assets from the incurred credit loss model under IAS 39 to the expected credit loss model under IFRS 9. Advantest measures a loss allowance based on an expected credit loss model without restatement of prior periods in accordance with the transition requirement of IFRS 9.

2) IFRS 15: Revenue from Contracts with Customers

Advantest has adopted IFRS 15 “Revenue from Contracts with Customers” from the fiscal year ended March 31, 2019. The new standard replaces IAS 18 “Revenue” and IAS 11 “Construction Contracts”.

To apply IFRS 15, Advantest used the cumulative effect transition method which is recognizing the cumulative effect of applying the new standard at the beginning of the year of initial application.

In accordance with the adoption of IFRS 15, Advantest recognizes revenue based on the five-step model.

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

Step 2: Identify the performance obligations (accounting treatment for goods or services separately)

Step 3: Determine the transaction price (amount of consideration)

Step 4: Allocate the transaction price to the performance obligations

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

As a result of identifying the contracts with customers and the performance obligations in the contracts and calculating the value of the transactions based on the five-step model indicated above, revenue is recognized upon satisfaction of each performance obligation for those which product and installation are identified as a separate performance obligation compared to the revenue which had been recognized upon installation for the products which require installation based on the previous accounting standard. Consequently, the beginning balance of retained earnings for the fiscal year ended March 31, 2019 increased ¥1,076 million.

Additionally, there is a difference in identifying a performance obligation for services in accordance with the new standard compared with the previous accounting standard. As a result, the beginning balance of retained earnings for the fiscal year ended March 31, 2019 decreased ¥288 million.

As a result of adopting IFRS 15, trade and other receivables, other current liabilities and retained earnings increased by ¥7,244 million, ¥1,407 million and ¥2,945 million, respectively, and inventories and deferred tax assets decreased by ¥2,530 million and ¥359 million, respectively in the consolidated statement of financial position as of March 31, 2019. The adoption of IFRS 15 had a minor impact on the consolidated statement of profit or loss for the fiscal year ended March 31, 2019.

(5) Changes in Presentation

"Purchases of treasury shares", which was included in "Other" in the consolidated statement of cash flows from financing activities, was presented separately from the fiscal year ended Mar 31, 2019 due to the increase in materiality. To reflect these changes in presentation, a reclassification was performed on the consolidated financial statements for the fiscal year ended Mar 31, 2018.

As a result, ¥(12) million which was included in "Other" in the consolidated statement of cash flows for the fiscal year ended Mar 31, 2018, was reclassified ¥(2) million of "Purchases of treasury shares" and ¥(10) million of "Other".

3. Significant Accounting Policies

(1) Basis of Consolidation

Advantest’s consolidated financial statements include financial statements of the Company and its subsidiaries, all of which are wholly owned. Subsidiaries are entities controlled by the Company. Control is obtained when the Company has risks or rights to variable returns from its involvement with the entity and has the ability to use its power over the entity to affect the variable returns.

The Company consolidates all subsidiaries from the date on which the Company acquires control until the date on which the Company loses control.

Inter-company balances and transactions are eliminated in consolidation.

Subsidiaries’ financial statements are adjusted, if necessary, when their accounting policies differ from those of the Company. For subsidiaries with different reporting dates from that of the Company, the financial statements based on provisional settlement of accounts made as of the reporting date are used in the preparation of the consolidated financial statements. The reporting date of the subsidiaries is not more than 3 months earlier than that of the Company.

(2) Business combinations

Business combinations are accounted for using the acquisition method. Goodwill is measured as the excess of the total amount of the consideration transferred, the amount of any non-controlling interests in the acquiree and, if a business combination is achieved in stages, the amount of the fair value at the date of acquisition of acquirer's previously held equity interest in the acquiree over the net amounts recognized of the identifiable acquired assets and assumed liabilities (which is usually measured at fair value). If the initial accounting for a business combination is incomplete by the end of the reporting period in which the business combination occurs, the Company reports provisional amounts for the items for which the accounting is incomplete. During the measurement period, which does not exceed one year from the acquisition date, the Company retrospectively adjusts the provisional amounts recognized at the acquisition date. Acquisition-related costs are recognized as expenses in the period in which they are incurred.

(3) Foreign Currency Translation

1) Translation of Foreign Currency Transactions

Monetary assets and liabilities denominated in foreign currencies are converted into the functional currency of each entity using the exchange rate at the end of the reporting period. Foreign currency transactions are converted into the functional currency using the exchange rate prevailing at the transaction date. Foreign exchange gains and losses resulting from the currency conversion and settlement are recognized as financial income (expenses).

2) Translation of Foreign Operations

Assets and liabilities of foreign operations are translated into Japanese Yen using the exchange rate at the end of the reporting period, and revenue and expense items are translated using the average exchange rates during the period. Gains or losses derived from translating foreign operations' financial statements are recognized in other comprehensive income and presented in other components of equity.

(4) Financial Instruments

1) Non-derivative Financial Assets

Advantest classifies non-derivative financial assets into the following categories: financial assets measured at amortized cost, financial assets measured at fair value through other comprehensive income or financial assets measured at fair value through profit or loss.

Advantest initially recognizes financial assets measured at amortized cost on the date that they are originated. All other financial assets are recognized initially on the trade date, the date on which Advantest becomes party to the contractual provisions.

Advantest derecognizes a financial asset when contractual rights to the cash flows from the asset expire. In transferring contractual rights to the cash flows from a financial asset, Advantest will derecognize the financial asset if Advantest neither transfers nor retains substantially all the risks and rewards of ownership of the financial asset and does not retain control of the financial asset.

Financial assets and liabilities are offset and presented net in the consolidated statement of financial position only when Advantest has a legally enforceable right to offset the recognized amounts and intends to settle on a net basis or to realize the asset and settle the liability simultaneously.

Financial assets measured at amortized cost

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

・The financial asset is held within a business model with the objective of collecting 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, and the expected credit losses are recognized as allowance for doubtful accounts. The expected credit losses are calculated based on historical loss experience or future recoverable amounts.

Financial assets measured at fair value through other comprehensive income

Advantest holds certain instruments with the purpose of expanding its revenue base by maintaining and strengthening business relations with the investees. These equity instruments are classified as financial assets measured at fair value through other comprehensive income by designation. They are initially and subsequently measured at fair value, and the changes in fair value are recognized in other comprehensive income (OCI). The cumulative amount of OCI is recognized in equity as other components of equity. If Advantest derecognizes financial assets, the cumulative gain or loss recognized in other comprehensive income is reclassified from other components of equity to retained earnings. Dividends on financial assets measured at FVTOCI are recognized in profit or loss, except where they are considered to be return of the investment.

Financial assets measured at fair value through profit or loss

The other financial assets are classified as financial assets measured at fair value through profit or loss. These instruments are subsequently measured at fair value and the changes in fair value are recognized in profit or loss.

2) Non-derivative Financial Liabilities

Advantest recognizes debt securities on the day that they are issued. All other financial liabilities are initially recognized on the trade date, the date on which Advantest becomes party to contractual provisions. Other financial liabilities include loans and borrowings and trade and other payables.

Advantest derecognizes a financial liability when its contractual obligations are discharged, cancelled, or expire.

These financial liabilities are measured initially at fair value, less any directly attributable transaction costs and subsequently measured at amortized cost using the effective interest method. The amortization charge for each period is recognized as financial expenses in profit or loss.

3) Equity

Share capital

Share capital is included in equity. The direct issuance costs of share capital are deducted, net of tax, from share premium.

Treasury shares

Treasury shares are recognized at cost and deducted from equity. No gain or loss is recognized at purchase, sale and retirement of treasury shares.

4) Compound Financial Instruments

The compound financial instruments issued by Advantest include corporate bonds with subscription rights to new shares that can be converted to equity at the option of the holder and for which the number of new shares to be issued is not affected by changes in fair value. The liability element of a compound financial instrument is initially recognized at the fair value of a similar liability that does not have an equity conversion option. The equity element of a compound financial instrument is initially recognized at the difference between the fair value of the compound financial instrument as a whole and the fair value of the liability element. Any directly attributable transaction costs are allocated to each element in proportion to the initial carrying amounts. After initial recognition, the liability element of a compound financial instrument is measured at amortized cost using the effective interest method. The equity element of a compound financial instrument is not remeasured after initial recognition.

5) Derivative Financial Instruments

Advantest uses derivative instruments primarily to manage exposures to foreign currency. The primary objective in holding derivatives is to reduce the volatility of earnings and cash flows associated with changes in foreign currency. The instruments are not designated for trading or speculative purposes. Derivative financial instruments contain an element of risk in the event the counterparties are unable to meet the terms of the agreements. However, Advantest minimizes risk exposure by limiting the counterparties to major international banks and financial institutions meeting established credit guidelines. Management of the Company does not expect any counterparty to default on its obligations and, therefore, does not expect to incur any losses due to counterparty default on its obligations. Advantest generally does not require or provide collateral for these derivative financial instruments.

Derivative financial instruments are initially recognized at fair value and remeasured after initial recognition to their fair value. If the derivative instrument is not designated as a hedge, the gain or loss is recognized in earnings in the period of change.

The accounting for changes in the fair value (that are, gains or losses) of a derivative instrument depends on the objective for holding such instrument and whether it meets the criteria for designation as a cash flow hedge or a fair value hedge.

If certain conditions are met, Advantest may elect to designate a derivative instrument as a hedge of exposures to changes in fair values, cash flows, or a net investment in a foreign operation.

(5) Impairment

1) Non-derivative Financial Assets

Allowance for doubtful accounts against expected credit losses is recognized for financial assets that measured at amortized cost.

Advantest assesses at the end of each reporting period whether the credit risk that relates to financial assets has increased significantly or not since initial recognition. If the credit risk has not increased significantly, Advantest recognizes an amount equal to 12-month expected credit losses as allowance for doubtful accounts. If the credit risk has increased significantly, Advantest recognizes an amount equal to lifetime expected credit losses as allowance for doubtful accounts. Advantest determines whether the credit risk has increased significantly or not based on the change of default risk.

Advantest always recognizes an amount equal to lifetime expected credit losses for trade receivables as allowance for doubtful accounts. If there has been a significant decrease of impairment loss on financial assets after initial recognition, Advantest recognizes in profit or loss, as an impairment gain, the amount of reversal that is required to adjust the allowance for doubtful accounts.

2) Non-financial Assets

If there is any indication of impairment for non-financial assets other than inventories and deferred tax assets, the asset's recoverable amount is estimated, and the asset is tested for impairment. Goodwill is tested for impairment both annually and when there is any indication of impairment. An impairment loss is recognized if the recoverable amount of an asset, cash-generating unit (CGU) or CGU group is less than its carrying amount.

The recoverable amount of an asset, CGU or CGU group is the greater of its value in use and its fair value less costs to sell. In assessing value in use, the estimated future cash flows associated with the asset, CGU or CGU group are discounted to present value using a pre-tax discount rate which reflects current market assessments of the time value of money and any risks specific to the asset, CGU or CGU group. For impairment testing purposes, assets are grouped together into the smallest assets, CGU or CGU group that generates cash inflows independently of cash inflows of other assets, CGU or CGU group. Goodwill is grouped together so that the impairment is tested for the smallest group of units used for internal reporting purposes. Goodwill acquired in a business combination is allocated to CGU or CGU group that is expected to benefit from the synergies of the business combination.

Impairment losses are recognized in profit or loss. Impairment losses recognized in respect of CGU are allocated first to reduce the carrying amount of any goodwill allocated to that CGU or CGU group and then to reduce the carrying amounts of other assets in CGU or CGU group on a pro-rata basis.

Impairment losses on goodwill are not reversed. For all other assets, impairment losses are only reversed to the extent that the assets carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

(6) Cash and Cash Equivalents

Cash and cash equivalents include cash on hand, deposits at call with banks, and other short term highly liquid investments with maturities of three months or less from the date of acquisition that are readily convertible to known amounts of cash and which are subject to insignificant risk of changes in value.

(7) Inventories

The cost of inventories includes purchase costs, processing costs and all other costs incurred to bring inventories to their present location and condition.

Inventories are measured at the lower of cost or net realizable value. If net realizable value is less than the cost, that difference is accounted for as a write off and recognized as an expense. The weighted average method is used to calculate cost. Net realizable value represents the estimated selling price in the ordinary course of business, less all estimated costs of completion and estimated costs necessary to make the sale.

(8) Property, Plant and Equipment (except Lease Asset)

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

The cost includes any costs directly attributable to the acquisition of the asset and dismantlement, removal and restoration costs.

Except for assets that are not subject to depreciation such as land, assets are depreciated using the straight-line method over their estimated useful lives. The estimated useful lives of major asset items are as follows:

・Buildings：15 to 50 years

・Machinery and equipment：4 to 10 years

・Tool, furniture and fixture：2 to 5 years

The estimated useful lives, depreciation method and residual value are reviewed at each fiscal year end and if there are any changes made to the estimated useful lives, depreciation method and residual value, such changes are accounted for on a prospective basis as changes in estimate.

(9) Goodwill and Intangible Asset

1) Goodwill

Details on the measurement of goodwill at initial recognition are included in Business Combinations (see note (2) for additional details).

Goodwill is not amortized. It is allocated to CGU or group of CGUs that are identified according to types of business and regions and tested for impairment each fiscal year or when there is any indication of impairment. Impairment losses on goodwill are recognized in profit or loss, and no subsequent reversal is made.

After initial recognition, goodwill is presented at cost less accumulated impairment losses.

2) Intangible Assets (except Lease Asset)

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

Expenses on internally generated intangible assets are recognized as expense in the period when incurred, except for those that satisfy the criteria for recognition as assets. Internally generated intangible assets that satisfy the criteria for recognition as assets are stated at cost in the total amount of spending that is incurred after the assets first met recognition standards.

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

Intangible assets for which useful lives can be determined are amortized on a straight-line method over their estimated useful lives from the date the assets are available for use. These assets are also tested for impairment whenever there is any indication of impairment.

Estimated useful lives, residual values and amortization methods are reviewed at each fiscal year end and the effect of any changes in estimate are accounted for during the period in which the change occurred and on a prospective basis. The effect of any changes in estimate is recognized in the period in which the change occurs.

The estimated useful lives of major assets are as follows:

・Software：3 to 5 years

(10) Leases

The contract which should be subject to lease or including lease is defined based on the actual condition of the agreement at inception of lease. In the contract, the lease all risks and economic value accompany with possession of asset materially transfer to lessee is categorized as finance lease. The other leases are categorized as operating lease.

1) Leases-Lessor

Revenue from operating lease is recognized on the straight line basis over the leasing period.

2) Leases-Lessee

The lease payment amount on operating lease is recorded on a straight-line method over the leasing period.

(11) Post-Employment Benefits

The Company and certain of its subsidiaries have retirement and severance defined benefit plans covering substantially all of their employees. For each defined benefit plan, the present value of defined benefit obligations, related current service cost and past service cost are calculated using the projected unit credit method. The discount rates are the yields of high quality corporate bonds that have maturity terms approximating those of the obligations which the benefits are expected to be paid. Net defined benefit liability (asset) is measured at the present value of the defined benefit obligation less the fair value of plan assets. Remeasurements of net of liabilities or assets for defined benefit plans are recognized in full as other comprehensive income in the period when they are incurred and reclassified to retained earnings immediately. Past service costs are recognized immediately in profit or loss.

The Company and certain of its subsidiaries have retirement and severance defined contribution plans. Defined contribution plans are post-employment benefit plans in which the employer makes a certain amount of contributions to fund post-employment benefits and does not bear more legal and constructive obligations than the amount contributed. The contribution in defined contribution plans are recognized in profit or loss in the period during which services were provided by employees.

(12) Provisions

Provisions are recognized when Advantest has present legal or constructive obligations as a result of past events, it is probable that outflows of resources embodying economic benefits will be required to settle the obligations, and reliable estimates of the obligations can be made.

When the effect of the time value of money is material, provisions are measured at the present value of the expenditures expected to be required to settle the obligations.

1) Warranty Provisions

Advantest’s products are generally subject to warranty, and Advantest provides contractual product warranty services, when the performance of products sold does not meet expected product specifications. Estimated repair expenses over the warranty period are accrued based on the historical ratio of actual repair expenses to corresponding sales, when product revenue is recognized.

2) Asset Retirement Obligation

Estimated amounts for the costs of removing hazardous substances related to property, plant and equipment and restoring rented offices to the original condition are recorded in the provision for asset retirement obligation costs.

(13) Share-Based Compensation

Advantest applies the fair-valued-based method of accounting for share-based compensation and recognizes share-based compensation expenses in the consolidated statement of profit or loss. The cost of employee services received in exchange for an award of equity instruments is measured based on the grant-date fair value of the share options granted to employees. The cost is recognized on the straight line basis over the period during which an employee is required to provide service in exchange for the award. The Black Scholes pricing model is used to estimate the value of share options.

Expected dividend yield is determined by the Company’s dividend ratio of the past and other associated factors. Risk free interest rate is determined by Japanese government bond yield for the period corresponding to expected life. Expected volatility is determined by historical volatility and trend of the Company’s share prices, and other associated factors. Expected life is determined by the Company's option exercise history, post vesting employment termination behavior for similar grants, and other pertinent factors.

The cost of service received in performance-based stock remuneration plan is measured based on the grant-date fair value of the Company's shares or any liabilities generated. The cost is recognized over the applicable period.

(14) Revenue

Advantest has adopted IFRS 15 "Revenue from Contracts with Customers" from the fiscal year ended March 31, 2019, and recognizes revenue based on the five-step model.

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

Step 2: Identify the performance obligations (accounting treatment for goods or services separately)

Step 3: Determine the transaction price (amount of consideration)

Step 4: Allocate the transaction price to the performance obligations

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

Advantest sells test system products of semiconductor and mechatronics-related products such as test handlers that handling semiconductor devices, the revenue for these is recognized when control of such products is transferred to customers as the performance obligation is satisfied based on contractual terms. The timing at which control of such products transferred to customers is determined upon delivery or acceptance.

Additionally, Advantest has performance obligation towards customers on the service contracts. Revenue from such service contracts is recognized over the contract term on the straight-line basis.

(15) Financial Income and Expenses

Financial income mainly consists of dividend income, interest income, foreign exchange gains and changes in the fair value of financial instruments measured at fair value through profit or loss. Dividend income is recognized on the date when the right of Advantest to receive the dividend is established. Interest income is recognized using the effective interest method as incurred.

Financial expenses mainly consist of interest expenses and foreign exchange losses. Interest expenses are recognized using the effective interest method as incurred.

(16) Income Taxes

Current and deferred taxes are stated as income taxes in the consolidated statement of profit or loss except when they relate to business combinations or on items recognized in other comprehensive income or directly in equity.

Current and deferred taxes related to items recognized in other comprehensive income are recognized as other comprehensive income.

1) Current Taxes

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

2) Deferred Taxes

Deferred income taxes are calculated based on the temporary differences between the amounts used for tax purpose and the carrying amount for assets and liabilities at the fiscal year end. Deferred tax assets are recognized for deductible temporary differences, 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.

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

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

• taxable temporary differences on initially recognized goodwill

• temporary differences arising from 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 on investments in subsidiaries to the extent that the timing of the reversal of the temporary difference is controlled and that it is probable the temporary difference will not reverse in the foreseeable future
• deductible temporary differences on investments in subsidiaries to the extent that it is not probable the temporary differences will reverse in the foreseeable future

Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities and when they relate to income taxes levied by the same tax authority on the same taxable entity (including consolidated tax payments).

(17) Earnings per Share
Basic earnings per share is calculated by dividing net income or loss attributable to owners of the parent by the weighted average number of shares outstanding during the year. Diluted earnings per share reflects the maximum possible dilution from conversion, exercise, or contingent issuance of securities. All potentially dilutive securities are excluded from the calculation in a situation where there is a net loss attributable to owners of the parent.

4. Significant Accounting Judgments, Estimates and Assumptions

The preparation of the consolidated financial statements requires Advantest to make judgments, accounting estimates and assumptions that affect the application of policies and reported amounts of assets, liabilities, income and expenses. These estimates and assumptions are based on the best judgment of management in light of historical experience and various factors deemed to be reasonable according to the situation. Given their nature, however, actual results may differ from those estimates and assumptions.

The estimates and underlying assumptions are continuously reviewed. The effects of a change in these estimates and assumptions are recognized in the period of the change and subsequent periods.

The estimates and assumptions that could have a material effect on the amounts recognized in its consolidated financial statements are as follows:

(1) Inventories

Inventories are measured at the lower of cost or net realizable value. If net realizable value is less than the cost, that difference is accounted for as a write off and recognized as an expense. Advantest may experience substantial losses in cases where the net realizable value drops dramatically as a result of deterioration in the market environment against the forecast.

(2) Impairment of Property, Plant and Equipment, Goodwill and Intangible Assets

Advantest performs an impairment test for property, plant and equipment, goodwill and intangible assets when there is any indication that the recoverable amount is less than the carrying amount of the assets. Goodwill is tested for impairment both annually and when there is any indication of impairment.

The impairment test is performed by comparing the carrying amount and the recoverable amount of assets. If the recoverable amount is less than the carrying amount, impairment loss is recognized. The recoverable amount is mainly calculated based on the discounted cash flow model. Certain assumptions are made for the useful lives and the future cash flows of the assets, discount rate and long-term growth rate. These assumptions are based on the best estimates and judgments of management, but they could be affected by variable and uncertain future economic conditions. Any changes in these assumptions may have a material impact on the consolidated financial statements in future periods.

The method of calculating the recoverable amount of goodwill is included in Goodwill and Intangible Assets (see note 13 for additional details).

(3) Post-Employment Benefits

The Company and certain of its subsidiaries have retirement and severance plans, which are defined benefit and defined contribution plans covering substantially all of their employees. For defined benefit plans, the present value of defined benefit obligations on each of these plans and the service costs are calculated based on actuarial assumptions. These actuarial assumptions require estimates and judgments on variables such as discount rates.

The actuarial assumptions are determined based on the best estimates and judgments made by management; however, there is the possibility that these assumptions may be affected by changes in uncertain future economic conditions, which may have a material impact on the consolidated financial statements in future periods.

These actuarial assumptions and related sensitivity analysis are included in Post-Employment Benefits (see note 20 for additional details).

(4) Provisions

Advantest recognizes warranty provisions in the consolidated statement of financial position.

The provisions are recognized based on the best estimates of the expenditures required to settle the obligations, taking into account risks and uncertainty related to the obligations as of the fiscal year end date.

Expenditures necessary for settling the obligations are calculated by taking all possible future results into account; however, they may be affected by unexpected events or changes in conditions which may have a material impact on the consolidated financial statements in future periods.

The nature and amount of recognized provisions are included in Provisions (see note 19 for additional details).

(5) Income Taxes

Advantest, which conducts business around the world, makes reasonable estimates of income tax to be paid to local tax authorities in accordance with local laws and regulations, and recognizes income tax payable and current tax expense based on these estimates.

Calculating income tax payable and current tax expense requires estimates and judgments on various factors including the interpretation of tax regulations by taxable entities and the tax authority in the jurisdiction or experience of prior tax investigation.

Therefore, there may be differences between the amount recognized as income tax payable and current tax expense and the amount of actual income tax payable and current tax expense. These differences may have a material impact on the consolidated financial statements in future periods.

Additionally, deferred tax assets are recognized to the extent that it is probable that taxable income will be available against which deductible temporary differences can be utilized.

In recognizing the deferred tax assets, Advantest judges the possibility of future taxable income and reasonably estimate the timing and amount of future taxable income based on the business plan.

The timing and amount of taxable income may be affected by variable and uncertain future economic conditions, and changes may have a material impact on the consolidated financial statements in future periods.

The contents and amounts related to income taxes are included in the Income Taxes (see note 16 for additional details).

(6) Contingencies

With regard to contingencies, any items that may have a material impact on business in the future are disclosed in light of all the available evidence as of the fiscal year ended and by taking into account the probability of these contingencies and their impact on financial reporting.

5. New Accounting Standards and Interpretations Issued but not yet Applied

New or revised accounting standards and interpretations that were issued by the date of approval of the consolidated financial statements but have not yet been applied by Advantest as of March 31, 2019, are principally as follows:

Standards and Interpretations	Title	Date of mandatory application (fiscal year beginning on or after)	Reporting periods of application (end date of the reporting period)	Overview of new/revised Standards and Interpretations
IFRS 16	Leases	January 1, 2019	March 31, 2020	Amendments to accounting treatment for lease arrangements
IFRIC 23	Uncertainty over Income Tax Treatments	January 1, 2019	March 31, 2020	Clarification of the treatment of the application of IAS 12 if there is uncertainty over the tax treatment of income tax

IFRS 16 "Leases" will replace the current standard IAS 17 "Leases" and related application guidelines.

To adopt IFRS 16, Advantest will recognize the cumulative effect at the beginning of the application, which is an allowed transition method.

Advantest will newly recognize assets and liabilities for operating leases as lessee under IAS 17, except for some exceptions. Additionally, the current lease payments in expense will alter the nature to depreciation expense for licensed assets and interest expense related lease liabilities, however the impact is estimated immaterial.

The estimated impact of the adoption of IFRS 16 will be increases of assets and liabilities by approximately ¥10.3 billion as of April 1, 2019.

IFRIC 23 "Uncertainty over Income Tax Treatments" is a new accounting interpretation for uncertain tax position.

The estimated impact of the adoption of IFRIC 23 will be immaterial for consolidated financial statements for the following fiscal year.

6. Segment Information

(1)Overview of Reporting Segments

Advantest manufactures and sells semiconductor and component test system products and mechatronics-related products such as test handlers and device interfaces. Advantest also engages in research and development activities and provides maintenance and support services associated with these products. Advantest's organizational structure consists of three reportable operating segments, which are the design, manufacturing, and sale of semiconductor and component test systems, mechatronics systems and services, support and others. These reportable operating segments are determined based on the nature of the products and the markets. Segment information is prepared on the same basis that management reviews financial information for operational decision making purposes.

The semiconductor and component test system segment provides customers with test system products for the semiconductor industry and the electronic parts industry. Product lines provided in the semiconductor and component test system segment include test systems for SoC semiconductor devices and test systems for memory semiconductor devices.

The mechatronics system segment provides product lines such as test handlers, mechatronic-applied products, for handling semiconductor devices, device interfaces that serve as interfaces with the devices that are measured and operations related to nano-technology products.

The services, support and others segment consists of comprehensive customer solutions provided in connection with the above segments, test solutions of system level testing for such as SSD, support services, sales of used products, equipment lease business and others.

(2) Information of Reporting Segments

Accounting treatment applied to operating segments is the same as in the note "3. Significant Accounting Policies."

Advantest uses the operating income (loss) before share-based compensation expense for management's analysis of operating segment results.

Share-based compensation expense represents expenses for stock options and performance-based stock remuneration expense.

Segment income (loss) is presented on the basis of operating income (loss) before share-based compensation expense.

Inter-segment sales are based on market prices.

Fiscal year ended March 31, 2018 — Millions of Yen

	Semiconductor and Component Test System Business	Mechatronics System Business	Services, Support and Others	Elimination and Corporate	Consolidated
Net sales					
Net sales to unaffiliated customers	140,864	35,893	30,466	—	207,223
Inter-segment sales	66	—	—	(66)	—
Total	140,930	35,893	30,466	(66)	207,223
Segment income (loss) (operating income (loss) before share-based compensation expense)	28,917	(2,738)	4,197	(5,804)	24,572
Adjustment: Share-based compensation expense	—	—	—	—	(85)
Operating income	—	—	—	—	24,487
Financial income	—	—	—	—	975
Financial expenses	—	—	—	—	(1,180)
Income before income taxes	—	—	—	—	24,282
(Other profit and loss items)					
Depreciation and amortization	2,498	1,050	1,278	198	5,024

Fiscal year ended March 31, 2019 — Millions of Yen

	Semiconductor and Component Test System Business	Mechatronics System Business	Services, Support and Others	Elimination and Corporate	Consolidated
Net sales					
Net sales to unaffiliated customers	211,713	39,229	31,514	—	282,456
Inter-segment sales	4	—	—	(4)	—
Total	211,717	39,229	31,514	(4)	282,456
Segment income (loss) (operating income (loss) before share-based compensation expense)	65,058	(712)	4,242	(3,445)	65,143
Adjustment: Share-based compensation expense	—	—	—	—	(481)
Operating income	—	—	—	—	64,662
Financial income	—	—	—	—	1,626
Financial expenses	—	—	—	—	(77)
Income before income taxes	—	—	—	—	66,211
(Other profit and loss items)					
Depreciation and amortization	2,417	878	1,477	195	4,967

(Notes) Adjustments to segment income (loss) in Corporate principally represent corporate general and administrative expenses and research and development expenses related to fundamental research activities that are not allocated to operating segments. Moreover, due to the revision of post-employment benefits plan, ¥2,530 million income is included for the fiscal year ended March 31, 2019.

Advantest has adopted IFRS 15 “Revenue from Contracts with Customers” from the fiscal year ended March 31, 2019 as described in “3. Significant Accounting Policies”. Since the cumulative effect of the initial adoption is recognized as adjustment of retained earnings at the beginning of the fiscal year according to the transitional option, the amount for the fiscal year ended March 31, 2018 is not restated.

(3) Net Sales to Unaffiliated Customers by Segments of Products and Services

The segments of similar products and services are the same as the segments in the report.

(4) Net Sales to Unaffiliated Customers by Region

Millions of Yen

	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Japan	14,182	14,881
Americas	11,290	13,579
Europe	7,689	7,124
Asia	174,062	246,872
Total	207,223	282,456

Net sales to unaffiliated customers are based on customer’s location. Net sales indicated as Asia were mainly generated in Taiwan, Korea and China in the amount of ¥63,932 million, ¥54,363 million and ¥28,596 million for the fiscal year ended March 31, 2018 and ¥116,583 million, ¥64,311 million and ¥45,101 million for the fiscal year ended March 31, 2019, respectively. Substantially all net sales indicated as Americas were generated in the United States of America.

(5) Non-Current Assets（Property, Plant and Equipment, Goodwill and Intangible assets, Other Non-Current Assets）by Region

Millions of Yen

	As of March 31, 2018	As of March 31, 2019
Japan	31,149	32,360
Americas	2,624	13,538
Europe	2,719	3,025
Asia	8,383	8,336
Total	44,875	57,259

Non-current assets are those assets located in each geographic area.

Substantially all non-current assets indicated as Americas were located in the United States of America. Substantially all non-current assets indicated as Europe were located in Germany. Non-current assets in Asia were primarily located in Korea, Taiwan, China and Singapore.

(6) Information of Main Customers

There was one customer group that accounted for 10% or more of the net sales, mainly in the semiconductor and component system and the mechatronics system segment of Advantest for the fiscal year ended March 31, 2018. Net sales to this customer group was ¥29,558 million for the fiscal year ended March 31, 2018.

There was no customer group that accounted for 10% or more of the net sales for the fiscal year ended March 31, 2019.

7. Cash and Cash Equivalents

The breakdown of cash and cash equivalents was as follows:

Millions of Yen

	As of March 31, 2018	As of March 31, 2019
Cash and short-term deposits with maturities of three months or less	103,973	119,943

Cash and cash equivalents are classified as financial assets measured at amortized cost.

The balances of cash and cash equivalents on the consolidated statement of financial position agreed with the respective balances in consolidated statement of cash flows.

8. Trade and Other Receivables

The breakdown of trade and other receivables was as follows:

Millions of Yen

	As of March 31, 2018	As of March 31, 2019
Note Receivables	3,717	1,930
Trade Receivables	33,199	48,461
Other Receivables	1,018	1,405
Less allowance for doubtful accounts	(5)	(10)
Total	37,929	51,786

Trade and other receivables are presented net of the allowance for doubtful accounts in the consolidated statement of financial position.

Trade and other receivables are classified as financial assets measured at amortized cost.

9. Inventories

The breakdown of inventories was as follows:

Millions of Yen

	As of March 31, 2018	As of March 31, 2019
Finished goods	13,299	12,772
Work in process	16,913	20,903
Raw materials and supplies	19,415	23,424
Total	49,627	57,099

Inventory valuation losses recognized as an expense due to the decline in profitability for the fiscal years ended March 31, 2018 and 2019 were ¥6,382 million and ¥6,324 million, respectively.

10. Other Financial Assets

The breakdown of other financial assets was as follows:

Millions of Yen

	As of March 31, 2018	As of March 31, 2019
Financial assets that are measured at fair value through profit or loss		
Debt instruments	—	215
Financial assets that are measured at fair value through other comprehensive income		
Equity instruments	—	1,072
Available-for-sale financial assets	698	—
Financial assets measured at amortized cost	1,762	1,577
Less allowance for doubtful accounts	(46)	(3)
Total	2,414	2,861
Non-current assets	2,414	2,861
Total	2,414	2,861

11. Assets held for sale

The breakdown of assets held for sale was as follows:

Millions of Yen

	As of March 31, 2018	As of March 31, 2019
Assets held for sale	830	—

Advantest decided to sell a business location in the previous fiscal year and classified the land and buildings as assets held for sale. These assets were sold on September 12, 2018.

12. Property, Plant and Equipment, Net

(1) Increase or Decrease Table

Changes in carrying amount of property, plant and equipment were as follows:

Fiscal year ended March 31, 2018 Millions of Yen

	Land	Buildings	Others	Construction in progress	Total
Balance at beginning of year	10,933	10,439	8,430	113	29,915
Acquisition	—	277	4,314	238	4,829
Sales and disposals	(16)	(112)	(180)	—	(308)
Reclassification to assets held for sale	(718)	(112)	—	—	(830)
Depreciation	—	(828)	(3,626)	—	(4,454)
Exchange differences	13	(5)	65	7	80
Balance at end of year	10,212	9,659	9,003	358	29,232

Fiscal year ended March 31, 2019 Millions of Yen

	Land	Buildings	Others	Construction in progress	Total
Balance at beginning of year	10,212	9,659	9,003	358	29,232
Acquisition	—	226	5,673	180	6,079
Acquisition through business combinations	—	—	377	—	377
Sales and disposals	(7)	(2)	(178)	—	(187)
Depreciation	—	(762)	(3,796)	—	(4,558)
Exchange differences	(47)	(69)	(48)	7	(157)
Balance at end of year	10,158	9,052	11,031	545	30,786

Gross carrying amount, accumulated depreciation and impairment losses and carrying amount of property, plant and equipment were as follows:

Millions of Yen

	Land	Buildings	Others	Construction in progress	Total
As of March 31, 2018					
Gross carrying amount	11,163	29,564	46,098	358	87,183
Accumulated depreciation and impairment losses	951	19,905	37,095	—	57,951
Carrying amount	10,212	9,659	9,003	358	29,232
As of March 31, 2019					
Gross carrying amount	11,104	29,081	49,135	545	89,865
Accumulated depreciation and impairment losses	946	20,029	38,104	—	59,079
Carrying amount	10,158	9,052	11,031	545	30,786

Depreciation expense is included in cost of sales and selling, general and administrative expenses in the consolidated statement of profit or loss.

(2) Impairment Losses

No significant impairment losses were recorded on property, plant and equipment for the years ended March 31, 2018 and 2019, respectively.

(3) Commitments Related to Acquisition of Fixed Assets

Commitments related to acquisition of fixed assets were as follows:

Millions of Yen

	As of March 31, 2018	As of March 31, 2019
Acquisition of Fixed Assets	13	349

13. Goodwill and Intangible Assets

(1) Increase or Decrease Table

Changes in carrying amount of goodwill and intangible assets were as follows:

Fiscal year ended March 31, 2018 — Millions of Yen

	Goodwill	Software	Customer relationships	Others	Total
Balance at beginning of year	14,926	745	191	617	16,479
Acquisition	—	598	—	9	607
Sales and disposals	—	—	—	0	0
Amortization	—	(357)	(190)	(23)	(570)
Exchange differences	(792)	(17)	(1)	—	(810)
Others	—	—	—	(419)	(419)
Balance at end of year	14,134	969	—	184	15,287

Fiscal year ended March 31, 2019 — Millions of Yen

	Goodwill	Software	Others	Total
Balance at beginning of year	14,134	969	184	15,287
Acquisition	—	475	41	516
Acquisition through business combinations	10,080	—	—	10,080
Sales and disposals	—	—	(1)	(1)
Amortization	—	(386)	(23)	(409)
Exchange differences	633	12	1	646
Balance at end of year	24,847	1,070	202	26,119

Gross carrying amount, accumulated amortization and impairment losses and carrying amount of goodwill and intangible assets were as follows:

Millions of Yen

	Goodwill	Software	Others	Total
As of March 31, 2018				
Gross carrying amount	14,134	2,404	260	16,798
Accumulated amortization and impairment losses	―	1,435	76	1,511
Carrying amount	14,134	969	184	15,287
As of March 31, 2019				
Gross carrying amount	24,847	2,655	285	27,787
Accumulated amortization and impairment losses	―	1,585	83	1,668
Carrying amount	24,847	1,070	202	26,119

Amortization expense is included in cost of sales and selling, general and administrative expenses in the consolidated statement of profit or loss.

(2) Impairment Test for Goodwill

Carrying amount of goodwill allocated to CGU group was as follows:

Millions of Yen

CGU group	As of March 31, 2018	As of March 31, 2019
Semiconductor and component test system business		
-Japan	8,384	8,759
Services, support and others		
-Japan	5,750	6,007
-Advantest Test Solutions, Inc.*	―	10,081

The recoverable amount of CGU group is calculated by its value in use based on the business plan for 3 years approved by management and the growth rate. The business plan reflects the past experience using external and internal data, for the cash flows exceeding the period, its value in use is calculated by the growth rate that does not exceed the expected long-term growth rate of the market CGU group belongs to.

A pre-tax discount rate used for measuring its value in use for fiscal years ended March 31, 2018 and 2019 were 10.5% - 10.7% and 13.7% - 16.1%, respectively. Since the recoverable amount of CGU group is well above the carrying amount, the probability that the recoverable amount is less than the carrying amount is expected low even when the primary assumption of the goodwill changes to reasonable extent.

* Please see note 32 for Advantest Test Solutions, Inc.

(3) Research and Development Expenses

Research and development expenses included in selling, general and administrative expenses for fiscal years ended March 31, 2018 and 2019 were ¥ 33,540 million and ¥ 37,852 million, respectively.

14. Leases

(1) Leases- Lessor

Advantest provides leases that enable its customers to use its semiconductor test systems. All leases are classified as operating leases. Lease terms range from 1 year to 5 years, and certain of the lease agreements are cancelable.

Future minimum lease income under noncancelable operating leases was as follows:

Millions of Yen

	As of March 31, 2018	As of March 31, 2019
Not later than 1 year	116	41
Later than 1 year and not later than 5 years	12	18
Later than 5 years	—	—
Total	128	59

(2) Leases- Lessee

Advantest has several noncancelable operating leases, primarily for office space and office equipment. Rent expense, including rental payments for cancelable leases, for fiscal years ended March 31, 2018 and 2019 was ¥2,044 million and ¥2,079 million, respectively.

Future minimum lease payments under noncancelable operating leases were as follows:

Millions of Yen

	As of March 31, 2018	As of March 31, 2019
Not later than 1 year	1,111	1,042
Later than 1 year and not later than 5 years	2,433	2,198
Later than 5 years	59	204
Total	3,603	3,444

15. Subsidiaries

Major subsidiaries were as follows:

Name	Location	Principal business	Ownership interest Voting rights (%)
Advanfacilities Co., Ltd.	Saitama, Japan	Providing welfare services	100.0
Advantest Laboratories Ltd.	Miyagi, Japan	Research and development of measuring and testing technologies	100.0
Advantest Finance Inc.	Tokyo, Japan	Leasing of the Company’s products and sales of used products	100.0
Advantest Kyushu Systems Co., Ltd.	Fukuoka, Japan	Development, sales and support of the Company’s products	100.0
Advantest Component, Inc.	Miyagi, Japan	Development and manufacturing of the parts	100.0
Cloud Testing Service Inc.	Tokyo, Japan	Planning and sales of testing services by testing IP licensing	100.0
Advantest America, Inc.	California, U.S.A.	Development and sales of the Company’s products	100.0
Advantest Europe GmbH	Munich, Germany	Development and sales of the Company’s products	100.0
Advantest Taiwan Inc.	Hsinchu, Taiwan	Sales of the Company’s products	100.0
Advantest (Singapore) Pte. Ltd.	Singapore	Sales of the Company’s products	100.0
Advantest Korea Co., Ltd.	Cheonan, Korea	Support for sales of the Company’s products	100.0
Advantest (China) Co., Ltd.	Shanghai, China	Support for sales of the Company’s products	100.0
Advantest (M) Sdn. Bhd.	Penang, Malaysia	Manufacturing of the Company’s products	100.0

16. Income Taxes

(1) Deferred Tax Assets and Liabilities

The breakdown of deferred tax assets and liabilities was as follows.

Millions of Yen

	As of March 31, 2018	As of March 31, 2019
Deferred tax assets		
Inventories	1,163	1,403
Warranty provisions	455	428
Retirement benefit liabilities	4,125	4,664
Accrued expenses	929	1,321
Research and development expenses capitalized for tax purposes	1,131	1,117
Operating loss carryforwards	466	416
Property, plant and equipment	721	512
Tax credits	850	688
Others	637	839
Total deferred tax assets	10,477	11,388
Deferred tax liabilities		
Gains or losses on revaluation of available-for-sale financial assets to fair value	(88)	—
Net change in fair values of financial assets	—	(117)
Undistributed earnings of foreign subsidiaries	(1,361)	(1,742)
Total deferred tax liabilities	(1,449)	(1,859)
Net deferred tax assets	9,028	9,529

Net deferred tax assets were included in the following line items in the consolidated statement of financial position.

Millions of Yen

	As of March 31, 2018	As of March 31, 2019
Deferred tax assets	10,127	11,209
Deferred tax liabilities	1,099	1,680

Changes in net deferred tax assets were as follows:

Millions of Yen

	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Net deferred tax assets		
Balance at beginning of year	9,862	9,028
Recognized in profit or loss	(1,286)	593
Recognized in other comprehensive income	55	730
Others	397	(822)
Balance at end of year	9,028	9,529

Advantest recognizes deferred tax assets after taking into consideration taxable temporary differences, the forecasted future taxable profits and tax planning.

Deductible temporary differences, operating loss carryforwards and tax credits that are not recognized as deferred tax assets in the consolidated statement of financial position were as follows:

Millions of Yen

	As of March 31, 2018	As of March 31, 2019
Deductible temporary differences	96,320	103,412
Operating loss carryforwards	82,193	51,681
Tax credits	449	551

The expiration dates of operating loss carryforwards and tax credits that were not recognized as deferred tax assets in the consolidated statement of financial position were as follows:

Millions of Yen

	As of March 31, 2018	As of March 31, 2019
Operating loss carryforwards		
Not later than 1 year	24,012	1,258
Later than 1 year and not later than 5 years	57,966	50,223
Later than 5 years	215	200
Total	82,193	51,681
Tax credits		
Not later than 1 year	—	—
Later than 1 year and not later than 5 years	37	73
Later than 5 years	412	478
Total	449	551

The taxable temporary difference related to investments in subsidiaries for which deferred tax liabilities were not recognized for the fiscal years ended March 31, 2018 and March 31, 2019 were not material, respectively.

Deferred tax liabilities are not recognized for this difference for which Advantest can control timing of the reversal and that will unlikely reverse in the foreseeable future.

(2) Income Tax Expense

The breakdown of income tax expense was as follows:

Millions of Yen

	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Income tax expense		
Current income tax expense	4,893	9,811
Deferred income tax expense		
Origination and reversal of temporary differences	2,755	6,305
Changes in unrecognized deferred tax assets	(1,922)	(6,919)
Adjustments to deferred tax assets and liabilities due to changes in tax rate	453	21
Total	6,179	9,218

Current income tax expense includes tax benefit from operating loss carryforwards that were not recognized as deferred tax assets. The amounts of current income tax expense which were decreased by this for the years ended March 31, 2018 and 2019 were ¥ 4,228 million and ¥ 9,291 million, respectively.

(3) Reconciliation between Applicable Tax Rate and Effective Tax Rate

Reconciliation between the applicable tax rate and the effective tax rate was as follows:

	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Applicable tax rate	30.7%	30.5%
Differences in statutory tax rate of foreign subsidiaries	(0.7)	(1.7)
Tax credits	(5.6)	(5.5)
Non-deductible expenses	0.3	0.4
Undistributed earnings of foreign subsidiaries	6.2	1.3
Changes in unrecognized deferred tax assets	(7.9)	(10.4)
Effect of tax rate changes	1.9	0.0
Others	0.5	(0.7)
Effective tax rate	25.4%	13.9%

The Company and its domestic subsidiaries are primarily affected by the corporation tax, resident tax and business tax. The statutory income tax rate calculated based on these rates for the fiscal years ended March 31, 2018 and 2019 were 30.7% and 30.5%, respectively.

Its foreign subsidiaries are affected by the corporation tax and other taxes at the domicile of each subsidiary.

17. Trade and Other Payables

The breakdown of trade and other payables was as follows:

Millions of Yen

	As of March 31, 2018	As of March 31, 2019
Accounts payables	29,077	24,729
Accrued expenses	11,880	15,391
Other payables	2,301	3,822
Total	43,258	43,942

18. Bonds

(1) Breakdown Table

The breakdown of bonds was as follows:

Millions of Yen

	As of March 31, 2018	As of March 31, 2019
Current portion of bonds	29,872	—
Total	29,872	—

(2) The Conditions of Bond Issuance

The summary of the conditions of bond issuance was as follows:

Millions of Yen

Company	Name	Issue date	As of March 31, 2018	As of March 31, 2019	Interest rate (%)	Mortgage	Redemption date
Advantest	Zero Coupon Convertible Bonds due 2019	March 14, 2014	29,872	—	0.000	—	March 14, 2019
Total	—	—	29,872	—	—	—	—

(1) Reconciliation of changes in liabilities relating to cash flows arising from financing activities

Fiscal year ended March 31, 2018

Millions of Yen

	Liabilities
	Bonds
Balance at beginning of year	44,745
Changes from non-cash activities	
Redemption of bonds	(15,000)
Changes from financing cash flows	(15,000)
Interest expenses	127
Balance at end of year	29,872

Fiscal year ended March 31, 2019

Millions of Yen

	Liabilities
	Bonds
Balance at beginning of year	29,872
Changes from non-cash activities	
Conversion of convertible bonds	(29,947)
Changes from financing cash flows	—
Interest expenses	75
Balance at end of year	—

19. Provisions

The change in warranty provisions for the year ended March 31, 2019 was summarized as follows:

Millions of Yen

	Warranty Provisions
Balance at beginning of year	3,042
Increase during the year	3,857
Decrease due to intended use	(4,011)
Reversal during the year	—
Exchange differences	(2)
Balance at end of year	2,886
Current liabilities	2,886
Total	2,886

Advantest's products are generally subject to warranty, and Advantest provides contractual product warranty services, when the performance of products sold does not meet expected product specifications. Estimated repair expenses over the warranty period are accrued based on the historical ratio of actual repair expenses to corresponding sales, when product revenue is recognized. Most of these expenses are expected to be incurred in the next fiscal year.

20. Post-Employment Benefits

Advantest has post-employment plans as follows:

(Defined benefit corporate pension plan and retirement and severance plans for Japan)

The Company and its domestic subsidiaries have a defined benefit corporate pension plan and unfunded retirement and severance plans (point-based benefits system) covering substantially all employees. The company shifted a part of defined benefit corporate pension plan to defined contribution plan on October 1, 2018.

The assets due to the shift to defined contribution plan will be transitioned for four years. Outstanding amount to be transitioned are included in trade and other payables and other non-current liabilities in the consolidated statement of financial position, respectively. The shift resulted in the gain on the revision of post-employment benefits plan, which is included in other income in the consolidated statement of profit or loss in the fiscal year ended March 31, 2019. The Company and its subsidiaries adopted earlier the amendments to IAS 19 "Employee Benefits", which clarifies accounting treatments for plan amendment, curtailment or settlement in the middle of fiscal year, and service cost, interest cost and interest income from October 1, 2018 to March 31, 2019 are measured based on the revised actuarial assumptions.

The benefits for both defined benefit corporate pension plan and retirement and severance plans (point-based benefits system) are calculated based on accumulated points allocated to employees each year according to their job classification and their performance.

In defined benefit corporate pension plan, in accordance with the Defined-Benefit Corporate Pension Act of Japan, the Company has an obligation to make contributions to Advantest Pension Fund (the Fund) which manages the corporate pension plans. The directors of the Fund are responsible for faithfully executing operations in compliance with laws and regulations, and any orders issued by the Minister of Health, Labor and Welfare, and the Director-General of Regional Bureaus of Health and Welfare based on laws and regulations, as well as the rules of the Fund and the resolution of the Board of Representatives. And the directors are jointly and severally liable for responsible if they fail to manage and operate the Fund. The actual management of the contributions is conducted by trustees in accordance with rules approved by the Board of Representatives.

The Company is required to make contributions to the Fund and obligated to make contributions in the amount stipulated by the Fund. Contributions are also regularly reviewed and adjusted as necessary to the extent permitted by laws and regulations.

Plan assets are managed on the basis of soundness. However, financial instruments have inherent investment risks. Discount rates and other aspects of defined benefit plan obligations are based on pension actuarial assumptions. There is a risk when these pension actuarial assumptions are changed.

The company has retirement benefit trusts for payment of benefits though retirement and severance plans (point-based system) are principally unfunded.

(Defined benefit pension plans for foreign subsidiaries)

Certain foreign subsidiaries also have defined benefit pension plans covering substantially all of their employees. Benefits payable under the plans are based on employee compensation levels and years of service.

(Defined contribution plan)

In defined contribution plan, the Company pays fixed contributions over entitlement period, and employees manage the contributed funds by themselves. Benefit is paid by a trustee organization, and the Company's obligation is limited to the contribution.

(1) Defined Benefit Obligations and Plan Assets

The changes in present value of defined benefit obligations and fair value of plan assets of the Company and certain of its consolidated subsidiaries were as follows:

Japanese Plans

Millions of Yen

	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Defined benefit obligations:		
Balance at the beginning of year	57,464	59,426
Service cost	1,812	1,551
Interest cost	503	414
Remeasurements:		
Actuarial (gain) or loss – Changes in demographic assumptions	(156)	(494)
Actuarial (gain) or loss – Changes in financial assumptions	896	744
Benefits paid	(1,093)	(1,257)
Decrease of defined benefit obligations due to the shift to the defined contribution plan	—	(10,569)
Balance at the end of year	59,426	49,815
Plan assets:		
Balance at the beginning of year	32,754	34,769
Interest income	287	256
Remeasurements:		
Actual return on plan assets, excluding interest income	1,456	(514)
Employer contributions	806	702
Benefits paid	(778)	(903)
Contributions to retirement benefit trust	244	—
The transfer due to the shift to the defined contribution plan	—	(3,916)
Balance at the end of year	34,769	30,394
Effects of asset ceiling	—	—
Net liability amount recognized in the consolidated statement of financial position	24,657	19,421

Non-Japanese Plans

Millions of Yen

	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Defined benefit obligations:		
Balance at the beginning of year	21,042	23,390
Service cost	568	636
Interest cost	434	513
Remeasurements:		
Actuarial (gain) or loss – Changes in demographic assumptions	269	712
Actuarial (gain) or loss – Changes in financial assumptions	(894)	1,708
Benefits paid	(130)	(222)
Exchange differences	1,924	(1,164)
Other	177	1,080
Balance at the end of year	23,390	26,653
Plan assets:		
Balance at the beginning of year	6,887	7,694
Interest income	144	193
Remeasurements:		
Actual return on plan assets, excluding interest income	(195)	(335)
Employer contributions	103	445
Plan participants’ contributions	177	179
Benefits paid	(50)	(133)
Exchange differences	628	(360)
Other	—	863
Balance at the end of year	7,694	8,546
Effects of asset ceiling	—	—
Net liability amount recognized in the consolidated statement of financial position	15,696	18,107

(2) Plan Assets

The fair value of pension plan assets by asset category was as follows:

Japanese Plans

Millions of Yen

	As of March 31, 2018			As of March 31, 2019		
	With quoted market price in an active market	With no quoted market price in an active market	Total	With quoted market price in an active market	With no quoted market price in an active market	Total
Cash and cash equivalents	861	—	861	748	—	748
Equity securities:						
Japanese companies	1,307	—	1,307	991	—	991
Pooled funds	—	12,549	12,549	—	10,474	10,474
Debt securities:						
Pooled funds	—	7,440	7,440	—	5,797	5,797
Hedge funds	—	10,073	10,073	—	9,893	9,893
Life insurance company general accounts	—	2,539	2,539	—	2,491	2,491
Total	2,168	32,601	34,769	1,739	28,655	30,394

Non-Japanese Plans

Millions of Yen

	As of March 31, 2018			As of March 31, 2019		
	With quoted market price in an active market	With no quoted market price in an active market	Total	With quoted market price in an active market	With no quoted market price in an active market	Total
Cash and cash equivalents	3,307	—	3,307	3,683	—	3,683
Equity securities:						
Pooled funds	—	2,678	2,678	—	3,306	3,306
Debt securities:						
Pooled funds	—	1,435	1,435	—	1,326	1,326
Commodities	—	274	274	—	231	231
Total	3,307	4,387	7,694	3,683	4,863	8,546

Investment policies of Advantest are designed to ensure adequate plan assets are available to provide future payments of pension benefits to eligible participants by attaining necessary long-term total returns on plan assets. Taking into consideration the expected returns, associated risks and correlations of returns between asset categories in plan assets, Advantest determines an optimal combination of equity, debt securities and other investments as Policy Asset Allocation (“PAA”). Plan assets are invested in accordance with PAA with mid-term to long-term viewpoint, which is revised periodically to the extent considered necessary to achieve the expected long-term rate of return on plan assets.

The Company and certain of its subsidiaries expect to contribute ¥723 million to defined benefit plans during the following fiscal year.

(3) Actuarial Assumptions

The significant actuarial assumptions used to determine the present value of defined benefit obligations were as follows:

Japanese Plans

	As of March 31, 2018	As of March 31, 2019
Discount rate (%)	0.8	0.5
Rate of compensation increase (%)	2.6	2.3

Non-Japanese Plans

	As of March 31, 2018	As of March 31, 2019
Discount rate (%)	2.1	1.7
Rate of compensation increase (%)	2.6	2.6

The effects on defined benefit obligations of 0.5% increase or decrease in the discount rate were as follows.

The sensitivity analysis is based on an assumption that all other variables other than the one analyzed are held constant. In reality, changes in other assumptions may impact the analysis.

Japanese Plans

Millions of Yen

	Changes in actuarial assumptions	As of March 31, 2018	As of March 31, 2019
Discount rate	0.5% increase	(5,048)	(3,178)
	0.5% decrease	5,789	3,512

Non-Japanese Plans

Millions of Yen

	Changes in actuarial assumptions	As of March 31, 2018	As of March 31, 2019
Discount rate	0.5% increase	(2,150)	(2,371)
	0.5% decrease	2,502	2,767

The weighted average duration of defined benefit obligations was as follows:

Japanese Plans

	As of March 31, 2018	As of March 31, 2019
Weighted average duration (Years)	17	13

Non-Japanese Plans

	As of March 31, 2018	As of March 31, 2019
Weighted average duration (Years)	22	22

(4) Employee Benefit Expenses

The total amount of employee benefit expenses in the consolidated statement of profit or loss for the ended March 31, 2018 and 2019 were ¥60,942 million and ¥70,407 million, respectively.

21. Equity and Other Equity Items

(1) Share Capital

1) Authorized Shares

The number of authorized shares as of March 31, 2018 and 2019 were 440,000,000 ordinary shares.

2) Fully Paid Issued Shares

The movement of the number of issued shares was as follows:

	Number of ordinary issued shares
As of April 1, 2017	199,566,770
Increase (decrease)	—
As of March 31, 2018	199,566,770
Increase (decrease)	—
As of March 31, 2019	199,566,770

The shares issued by the Company are non-par value ordinary shares that have no restriction of rights.

(2) Treasury Shares

The movement of treasury shares was as follows:

	Number of shares
As of March 31, 2018	20,539,246
As of March 31, 2019	1,732,515

(Note) Advantest’s share (— shares as of March 31, 2018, 272,446 shares as of March 31, 2019), which is being kept as performance-based stock remuneration in trust account, is included in the number of treasury share at the end of each fiscal period.

(3) Surplus

1) Share Premium

Under the Companies Act of Japan, at least 50% of the proceeds of certain issues of common shares shall be credited to share capital. The remainder of the proceeds shall be credited to additional paid-in capital within share premium.

2) Retained Earnings

The Companies Act provides that a 10% dividend of retained earnings shall be appropriated as additional paid-in capital or as a legal reserve until the aggregate amount of the additional paid-in capital and the legal reserve within retained earnings equals 25% of share capital.

(4) Other Components of Equity

Millions of Yen

	Remeasurements of defined benefit pension plan (Note 1)	Exchange differences on translation of foreign operations (Note 2)	Net change in fair values of available-for-sale financial assets (Note 3)	Net change in fair value measurements of equity instruments at fair value through other comprehensive income (Note 4)	Total
As of April 1, 2017	—	4,291	907	—	5,198
Increase (decrease)	1,024	(3,257)	(640)	—	(2,873)
Transfer to retained earnings	(1,024)	—	—	—	(1,024)
As of March 31, 2018	—	1,034	267	—	1,301
Impact of change in accounting policy	—	—	(267)	267	—
Beginning balance as of April 1, 2018 (restated)	—	1,034	—	267	1,301
Increase (decrease)	(2,732)	2,209	—	175	(348)
Transfer to retained earnings	2,732	—	—	—	2,732
As of March 31, 2019	—	3,243	—	442	3,685

(Note) 1. Remeasurements of defined benefit pension plan include differences in return on plan assets and interest income on plan assets and differences between actuarial assumptions and actual results.

2. Exchange differences on translation of foreign operations are exchange differences resulting from the translation of financial statements of foreign operations.

3. Net change in fair values of available-for-sale financial assets is cumulative in nature.

4. Net change in fair value measurements of equity instruments at fair value through other comprehensive income is cumulative in nature.

22. Dividends

(1) Dividends Paid

Fiscal year ended March 31, 2018

Resolution	Class of shares	Amount of dividend (Millions of Yen)	Dividend per share (Yen)	Record date	Effective date
Board of Directors' meeting held on May 22, 2017	Ordinary shares	2,122	12	March 31, 2017	June 2, 2017
Board of Directors' meeting held on October 25, 2017	Ordinary shares	1,597	9	September 30, 2017	December 1, 2017

Fiscal year ended March 31, 2019

Resolution	Class of shares	Amount of dividend (Millions of Yen)	Dividend per share (Yen)	Record date	Effective date
Board of Directors' meeting held on May 22, 2018	Ordinary shares	4,118	23	March 31, 2018	June 4, 2018
Board of Directors' meeting held on October 30, 2018	Ordinary shares	9,702	50	September 30, 2018	December 3, 2018

(Note) Dividend of ¥14 million to treasury shares for the BIP Trust and the ESOP Trust is included in the amount of dividend which was resolved at the Board of Directors' meeting held on October 30, 2018.

(2) Dividends Whose Record Date is in the Fiscal Year under Review but Whose Effective Date is in the Following Fiscal Year

Resolution	Class of shares	Amount of dividend (Millions of Yen)	Dividend per share (Yen)	Record date	Effective date
Board of Directors' meeting held on May 22, 2019	Ordinary shares	8,320	42	March 31, 2019	June 4, 2019

(Note) Dividend of ¥11 million to treasury shares for the BIP Trust and the ESOP Trust is included in the amount of dividend.

23. Revenue

(1) Disaggregation of revenue

As disclosed in note 6, Advantest has three reportable operating segments: “semiconductor and component test system business”, “mechatronics system business” and “services, support and others”. Net sales disaggregated by region and segment were as follows:

Fiscal year ended March 31, 2019 Millions of Yen

	Semiconductor and Component Test System Business	Mechatronics System Business	Services, Support and Others	Elimination and Corporate	Consolidated
Main regions					
Japan	7,285	2,921	4,679	(4)	14,881
Americas	5,778	2,884	4,917	—	13,579
Europe	4,730	344	2,050	—	7,124
Asia	193,924	33,080	19,868	—	246,872
Total	211,717	39,229	31,514	(4)	282,456

The breakdown of semiconductor and component test system business was as follows:

Fiscal year ended March 31, 2019 Millions of Yen

	SoC	Memory	Total
Semiconductor and Component Test System Business	148,635	63,082	211,717

Revenue is accounted for in accordance with the account policy described in the note 3 "Significant Accounting Policies." The transaction price is measured based on the amount promised in the contracts with customers and includes no significant financing components because there are no contracts with long payment terms from the satisfaction of performance obligation to payment of transaction price. Additionally, there are no significant revenue including variable consideration.

In case there are multiple performance obligations in the contract, transaction price is allocated to each individual performance obligation based on the standalone selling price which is calculated from reasonably available information including prices of similar transactions.

(2) Contract balances

Receivables and liabilities from contracts with customers were as follows:

Fiscal year ended March 31, 2019 Millions of Yen

	The date of initial application (as of April 1, 2018)	As of March 31, 2019
Receivables from contracts with customers		
- Note and trade receivables	40,495	50,391
Contract liabilities		
- Advance receipt	6,408	5,576

Advance receipt is included in "Other current liabilities" in the consolidated statement of financial position. There are no significant amounts of revenue from the balance of contract liabilities as of April 1, 2018, the beginning of the fiscal year under review, that Advantest will recognize in the following fiscal year onward.

(3) Transaction price allocated to the remaining performance obligations

Advantest applies the practical expedients for exemption on disclosure of information on remaining performance obligations because it has no significant transactions with performance obligation terms exceeding one year.

24. Selling, General and Administrative Expenses

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

Millions of Yen

	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Employee benefit expenses	50,917	57,856
Depreciation and amortization	4,099	3,872
Others	27,629	31,372
Total	82,645	93,100

25. Share-Based Compensation

(1) Share Option

Advantest has share-based compensation plans using share options as incentive plans for directors (excluding directors who are audit and supervisory committee members and outside directors), executive officers and executive employees. Share options have been issued to directors, executive officers and certain employees of the Company and its subsidiaries under share option plans approved by the Board of Directors. Options were generally granted with an exercise prices of per share that were equal to the higher of (1) 1.05 times the average price of the Company's common shares of the preceding month on the date of grant and (2) the closing price of the Company's common shares traded on the Tokyo Stock Exchange on the date of grant. The options have an exercise period of 4 years for No.12 and 13, 3 years for No.14 and 15, respectively.

The exercisable share option plans were as follows:

No.	Number of shares to be issued/ delivered	Grant date	Exercise Period	Settlement Method	Vesting Conditions
12	2,763,000	July 12, 2013	From April 1, 2014 to March 31, 2018	Quotient Clearance	The persons who are director, auditor, executive officer, employee, adviser, part-time worker or any other similar position of the Company or its subsidiaries after grant date (July 12, 2013) to vesting date (March 31, 2014) are entitled.
13	1,924,000	August 16, 2016	From April 1, 2017 to March 31, 2021	Quotient Clearance	The persons who are director (excluding directors who are audit and supervisory committee members and outside directors), executive officer, employee, adviser, part-time worker or any other similar position of the Company or its subsidiaries after grant date (August 16, 2016) to vesting date (March 31, 2017) are entitled.
14	898,000	December 15, 2017	From April 1, 2019 to March 31, 2022	Quotient Clearance	The persons who are director (excluding directors who are audit and supervisory committee members and outside directors), executive officer, employee, adviser, part-time worker or any other similar position of the Company or its subsidiaries after grant date (December 15, 2017) to vesting date (March 31, 2019) are entitled.
15	418,000	August 10, 2018	From August 11, 2020 to August 10, 2023	Quotient Clearance	The persons who are director (excluding directors who are audit and supervisory committee members and outside directors), executive officer, employee, adviser, part-time worker or any other similar position of the Company or its subsidiaries after grant date (August 10, 2018) to vesting date (August 10, 2020) are entitled.

The exercise price of the share options is subject to adjustment, if there is a share split or consolidation of shares, or if new shares are issued or treasury shares are sold at a price that is less than the market price.

Share option activity was as follows:

	Fiscal year ended March 31, 2018		Fiscal year ended March 31, 2019	
	Number of shares	Weighted average exercise price (Yen)	Number of shares	Weighted average exercise price (Yen)
Outstanding at beginning of year	3,448,000	1,513	2,145,000	1,871
Granted	898,000	2,549	418,000	2,540
Exercised	(2,198,000)	1,587	(582,000)	1,382
Expired	(3,000)	1,669	—	—
Forfeited	—	—	(3,000)	2,549
Outstanding at end of year	2,145,000	1,871	1,978,000	2,155
Exercisable at end of year	1,247,000	1,382	665,000	1,382

Weighted-average share price as of exercised date was ¥2,259 and ¥2,692 for share option plans exercised during fiscal years ended March 31, 2018 and 2019, respectively.

The outstanding share options were as follows:

As of March 31, 2018

Exercise Price	Outstanding		Exercisable	
	Number of shares	Weighted average remaining contractual life (Years)	Number of shares	Weighted average remaining contractual life (Years)
1,382	1,247,000	3.0	1,247,000	3.0
2,549	898,000	3.0	—	—

As of March 31, 2019

Exercise Price	Outstanding		Exercisable	
	Number of shares	Weighted average remaining contractual life (Years)	Number of shares	Weighted average remaining contractual life (Years)
1,382	665,000	2.0	665,000	2.0
2,540	418,000	4.4	—	—
2,549	895,000	3.0	—	—

The fair value of share option was estimated using the Black Scholes pricing model with the following assumptions:

No.	14	15
Expected life (year)	3.52	3.51
Risk-free rate (%)	(0.13)	(0.09)
Expected volatility (%)	35.28	36.15
Expected dividend yield (%)	0.94	1.01

Share-based compensation expense was ¥85 million and ¥336 million for fiscal years ended March 31, 2018 and 2019, respectively.

(2) Performance-Based Stock Remuneration Plan

1) Outline of the performance-based stock remuneration plan

Advantest has performance-based stock remuneration plan (the “Plan”) for directors (excluding directors who are audit and supervisory committee members and outside directors), executive officer and employees as an incentive.

In the Plan, Advantest contributes funding to the share delivery trust (the “Trust”) whose trust period is approximately 3 years set by itself. The Trust uses the fund to purchase the Company’s shares, and it will give the shares to the members of the Plan depending on the achievement of the designated performance indicators for designated periods after the end of three-consecutive fiscal years started from April 1, 2018.

Eligibility for the Plan are director (excluding directors who are audit and supervisory committee members and outside directors), executive officers or employees over the designated periods.

The number of granted points which are base of the number of shares are calculated by average of performance achievement of designated performance indicators, the consolidated financial results of net sales, net income, operating ratio and ROE for designated periods.

The Plan is booked as share-settled type share-based compensation. The Plan does not have exercise price because deliver the shares as remuneration.

2) Number of estimated granted points and fair value

The fair value of the Plan granted in the fiscal year ended March 31, 2019 was ¥2,509. The fair value was calculated based on the market price of the Company’s share at the grant date and expected dividends.

As described in 1), the number of granted points are calculated based on the payment rate between 0% and 150% depending on the achievement of the designated performance indicators for three-consecutive fiscal years, and they will be distributed in a lump. 100% is defined as basic points.

3) Share-based compensation expense

Share-based compensation expense from the Plan was ¥134 million for the fiscal year ended March 31, 2019.

4) Basic points activity

Basic points activity for the fiscal year ended March 31, 2019 was as follows:

	Fiscal year ended March 31, 2019	
	Number of basic points	Weighted average exercise price (Yen)
Outstanding at beginning of year	—	—
Granted	204,923	2,509
Exercised	(154)	2,509
Expired	—	—
Forfeited	(688)	2,509
Outstanding at end of year	204,081	2,509
Exercisable at end of year	—	—

26. Financial Income and Expenses

(1) Financial Income

The breakdown of financial income was as follows:

Millions of Yen

	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Interest income	445	1,025
Dividend income	10	1
Foreign exchange gain	—	584
Gains on sales of available-for-sale financial assets	519	—
Others	1	16
Total	975	1,626

(Note) Interest income is generated mainly from financial assets measured at amortized cost. Dividend income is generated mainly from financial assets measured at fair value through other comprehensive income.

(2) Financial Expenses

The breakdown of financial expenses was as follows:

Millions of Yen

	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Interest expense	144	77
Foreign exchange loss	1,023	—
Others	13	—
Total	1,180	77

(Note) Interest expense is generated mainly from financial liabilities measured at amortized cost.

27. Other Income

The breakdown of other income was as follows:

Millions of Yen

	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Gain on the revision of post-employment benefits plan(Note 1)	—	2,530
Gain on sale of property, plant and equipment(Note 2)	313	945
Others	308	343
Total	621	3,818

(Note) 1. Content of gain on the revision of post-employment benefits plan is described in note 20.
2. Gain on sale of property, plant and equipment includes gain on sale of assets held for sale.

28. Other Comprehensive Income

Each component of other comprehensive income, reclassification adjustments to net income and tax effects were as follows:

Millions of Yen

	Fiscal year ended March 31, 2018			Fiscal year ended March 31, 2019		
	Pretax amount	Tax (expense) or benefit	Net of tax amount	Pretax amount	Tax (expense) or benefit	Net of tax amount
Remeasurements of defined benefit pension plan						
Gains (losses) during the year	1,120	(96)	1,024	(3,491)	759	(2,732)
Reclassification adjustments to Net income	—	—	—	—	—	—
Net change during the year	1,120	(96)	1,024	(3,491)	759	(2,732)
Net change in fair value measurements of equity instruments at fair value through other comprehensive income						
Gains (losses) during the year	—	—	—	204	(29)	175
Reclassification adjustments to Net income	—	—	—	—	—	—
Net change during the year	—	—	—	204	(29)	175
Exchange differences on translation of foreign operations						
Gains (losses) during the year	(3,257)	—	(3,257)	2,209	—	2,209
Reclassification adjustments to Net income	—	—	—	—	—	—
Net change during the year	(3,257)	—	(3,257)	2,209	—	2,209
Net change in fair values of available-for-sale financial assets						
Gains (losses) during the year	(273)	(8)	(281)	—	—	—
Reclassification adjustments to Net income	(518)	159	(359)	—	—	—
Net change during the year	(791)	151	(640)	—	—	—
Total other comprehensive income	(2,928)	55	(2,873)	(1,078)	730	(348)

29. Earnings per Share

The basis of calculation of basic earnings per share and diluted earnings per share were as follows:

	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Net income attributable to owners of the parent (Millions of Yen)	18,103	56,993
Net income not attributable to owners of the parent (Millions of Yen)	—	—
Net income to calculate basic earnings per share (Millions of Yen)	18,103	56,993
Dilutive effect of convertible bonds (Millions of Yen)	127	74
Net income to calculate diluted earnings per share (Millions of Yen)	18,230	57,067
Weighted average number of ordinary shares—basic	177,580,557	188,501,951
Dilutive effect of stock options	803,645	450,684
Dilutive effect of convertible bonds	18,304,961	9,625,514
Dilutive effect of performance-based stock remuneration	—	9,078
Weighted average number of ordinary shares—diluted	196,689,163	198,587,227
Basic earnings per share (Yen)	101.94	302.35
Diluted earnings per share (Yen)	92.69	287.37
Financial Instruments not included in the calculation of diluted earnings per share because they have anti-dilutive effect	Certain stock options	Certain stock options

30. Financial Instruments

(1) Capital Management

Advantest seeks out the most appropriate methods to enhance capital efficiency considering safety and liquidity for the sake of securing the fund.

Advantest raises fund through bonds. Derivative transactions for speculation purposes is prohibited by Advantest's policy, and limited to transactions to avoid the risks discussed later.

Advantest manages net interest-bearing debt, where cash and cash equivalents are deducted from interest-bearing debt, and capital. The amounts as of each fiscal year end were as follows:

Millions of Yen

	As of March 31, 2018	As of March 31, 2019
Interest-bearing debt	29,872	—
Cash and cash equivalents	(103,973)	(119,943)
Net interest-bearing debt(Note)	(74,101)	(119,943)
Capital (equity attributable to owners of the parent company)	124,610	198,731

(Note) The figure represents the net amount of cash and cash equivalents after deducting interest-bearing debt.

Advantest monitors financial indicators in order to maintain a well-balanced capital structure that ensures an appropriate return on equity and a stable and flexible financial condition for future investment.

Advantest monitors credit ratings for a financial stability and flexibility, and ROE (return on equity) for profitability, while focusing on changes in the domestic and overseas environment.

(2) Basic Policy on Financial Risk Management

Advantest is exposed to financial risks (credit risks, liquidity risks, foreign exchange risks, and market price fluctuation risks) in the process of its management activities and it manages risks based on a specific policy in order to avoid or reduce said risks. The results of risk management are regularly reported by the Accounting Department to management.

Advantest's policy limits derivatives to transactions for the purpose of mitigating risks from transactions based on actual demand. Therefore, Advantest does not transact derivatives for speculation purposes or trading purposes.

(3) Credit Risk

Receivables such as notes and trade receivables, resulting from operating activities of Advantest are exposed to customers' credit risks.

Equity securities held for strategic purposes are exposed to the issuer's credit risks.

Additionally, derivative transactions in order to hedge foreign exchange fluctuation risks are exposed to credit risks of counter party financial institutions.

Advantest strives to mitigate collection risk in accordance with credit management standards and procedures in selling goods and services.

Advantest assesses the credit standing of customers and manages collection date and outstanding balance for each customer to ensure smooth collection of trade receivables.

Advantest minimizes risk exposure by limiting the counterparties to major international banks and financial institutions meeting established credit guidelines.

Any maximum exposure to credit risk in financial assets is stated in the carrying amounts presented in the consolidated statement of financial position.

Aging of Trade and other receivables that are past due but not impaired as of March 31, 2018 was as follows:

Millions of Yen

	As of March 31, 2018
Within 90 days	3,529
Over 90 days, within 180 days	191
Over 180 days	161
Total	3,881

Aging of Trade and other receivables as of March 31, 2019 was as follows:

Millions of Yen

	As of March 31, 2019				
	Financial assets that are measured at an amount equal to 12-month expected credit losses	Financial assets that are measured at an amount equal to lifetime expected credit losses			Total
		Trade and other receivables	Financial assets whose credit risk has increased significantly	Financial assets whose credit is impaired	
Before due date	1,403	47,120	—	—	48,523
Within 90 days	2	2,731	—	—	2,733
Over 90 days, within 180 days	—	379	—	—	379
Over 180 days	0	161	—	90	251
Total	1,405	50,391	—	90	51,886

Impairment is accounted for using the allowance for doubtful accounts, not directly reducing the carrying amount of financial assets.

The allowance for doubtful accounts against the financial assets is included in “Trade and other receivables” and “Other financial assets” in the consolidated statement of financial position.

The change in the allowance for doubtful accounts was as follows:

Millions of Yen

	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Balance at the beginning of year	497	51
Increase during the year	1	10
Decrease due to intended use	–	(22)
Reversal during the year	(444)	(26)
Exchange differences	(3)	0
Balance at the end of year	51	13
Current	5	10
Non-current	46	3
Total	51	13

Allowance for doubtful accounts of the financial assets for which credit losses were occurred individually at March 31, 2018 and 2019 were ¥46 million and ¥3 million, respectively. Allowance for doubtful accounts which are other than the mentioned above were mostly lifetime expected credit losses of Trade and other receivables.

(4) Liquidity Risk

Advantest establishes a financing plan based on the annual business plan and the Accounting Department monitors and collects information on the balance of liquidity-on-hand and interest-bearing debt and reports it to management.

In addition, Advantest manages liquidity risks with the balance of liquidity-on-hand maintained at a proper level by working out the financing plan on a timely basis, and by taking into consideration the financial environment.

The financial liability balance by maturity was as follows:

As of March 31, 2018

Millions of Yen

	Carrying amount	Contractual cash flow	Due within 1 year	Due after 1 year through 2 years	Due after 2 years through 3 years	Due after 3 years through 4 years	Due after 4 years through 5 years	Due after 5 years
Non-derivative financial liabilities								
Trade and other payables	43,258	43,258	43,258	—	—	—	—	—
Bonds	29,872	30,000	30,000	—	—	—	—	—
Other financial liabilities	554	554	554	—	—	—	—	—
Total	73,684	73,812	73,812	—	—	—	—	—

As of March 31, 2019

Millions of Yen

	Carrying amount	Contractual cash flow	Due within 1 year	Due after 1 year through 2 years	Due after 2 years through 3 years	Due after 3 years through 4 years	Due after 4 years through 5 years	Due after 5 years
Non-derivative financial liabilities								
Trade and other payables	43,942	43,942	43,942	—	—	—	—	—
Bonds	—	—	—	—	—	—	—	—
Other financial liabilities	916	917	906	8	3	—	—	—
Total	44,858	44,859	44,848	8	3	—	—	—

(5) Foreign Exchange Risk

1) Foreign Exchange Risk Management

As part of developing its global business, Advantest has foreign currency receivables and payables, which are subject to foreign exchange fluctuation risk.

To manage this risk, Advantest determines its foreign exchange fluctuation risk in each currency every month and, in principle, hedges this risk by using forward exchange transactions.

Depending on foreign exchange market conditions, Advantest may also enter into forward exchange contracts on foreign currency receivables and payables for expected transactions it deems certain to occur.

2) Foreign Exchange Sensitivity Analysis

The table below shows the impact on income before income taxes of a 1% increase in value of the functional currency included U.S. Dollar and the Euro, due to its holdings of financial instruments at the end of each fiscal year, assumed no changes in currencies other than those used.

The impact from the translation of functional currency-denominated financial instruments, assets and liabilities of foreign operations into presentation currency is not included.

Millions of Yen

	Currency	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Impact on income before income taxes	U.S. Dollar	(31)	(158)
	Euro	(29)	(37)

(6) Carrying Amounts and Fair Value of Financial Instruments

The carrying amounts and the fair values of the financial instruments were as follows:

Millions of Yen

	As of March 31, 2018		As of March 31, 2019	
	Carrying amount	Fair Value	Carrying amount	Fair Value
Financial liabilities measured at amortized cost				
Bonds(Note)	29,872	29,969	–	–

(Note)Bonds include balances redeemable or repayable within one year.

(Bonds)

Fair values of convertible bonds are calculated based on resembling bonds without the option to convert to stocks.

(Other)

Financial instruments other than above mentioned are settled mainly on a short-term basis, and their fair values approximate their carrying amounts.

(7) Fair Value Hierarchy of Financial Instruments

Financial instruments measured at fair value on a recurring basis after the initial recognition are classified into three levels of the fair value hierarchy based on the measurement inputs' observability and materiality as follows:

Level 1: Fair value measured at quoted prices for identical assets or liabilities in active markets
Level 2: Fair value measured by direct or indirect observable inputs other than Level 1
Level 3: Fair value 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.

The transfers between levels in the fair value hierarchy are deemed at the beginning of each quarter period.

There were no transfers of financial instruments between Level during the fiscal years ended March 31, 2018 and 2019.

The assets measured at fair value on a recurring basis were classified by hierarchy as follows:

As of March 31, 2018

Millions of Yen

	Level 1	Level 2	Level 3	Total
Financial assets				
Available-for-sale financial assets	–	–	698	698
Total	–	–	698	698

As of April 1, 2018

Millions of Yen

	Level 1	Level 2	Level 3	Total
Financial assets that are measured at fair value through profit or loss				
Debt instruments	–	–	219	219
Financial assets that are measured at fair value through other comprehensive income(Note)				
Equity instruments	–	–	479	479
Total	–	–	698	698

As of March 31, 2019

Millions of Yen

	Level 1	Level 2	Level 3	Total
Financial assets that are measured at fair value through profit or loss				
Debt instruments	–	–	215	215
Financial assets that are measured at fair value through other comprehensive income(Note)				
Equity instruments	–	–	1,072	1,072
Total	–	–	1,287	1,287

(Note) The Company holds equity investments to accomplish expansion of revenue base by maintaining and enforcing relationships with investees. These equity investments are designated as financial assets measured at FVTOCI. The fair value of each financial assets measured at FVTOCI as of April 1, 2018 and March 31, 2019 was not material.

The movement of financial instruments categorized within Level 3 of the fair value hierarchy was as follows:

Millions of Yen

	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Balance at beginning of year	399	698
Gains or losses		
Other comprehensive income(Note)	27	204
Purchase	281	384
Sales	(8)	(0)
Other	(1)	1
Balance at end of year	698	1,287

(Note) Gains or losses recognized in other comprehensive income that were presented in net change in fair values of available-for-sale financial assets of the consolidated statement of comprehensive income in the fiscal year ended March 31, 2018, are now presented in net change in fair value measurements of equity instruments at fair value through other comprehensive income of the consolidated statement of comprehensive income in the fiscal year ended March 31, 2019.

(8) Derivatives and Hedge Accounting

There were no derivatives designated as hedging instruments at March 31, 2018 and 2019.

31. Related Party Disclosures

Management personnel compensation was as follows:

Millions of Yen

	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Fixed-compensation	257	245
Performance-based bonus	100	128
Share-based compensation expense	9	62
Total	366	435

32. Business Combinations

Fiscal year ended March 31, 2018
Not applicable.

Fiscal year ended March 31, 2019
(Business combination through acquisition)

(1) Overview of Acquired Business

Name of Company: Astronics Corporation
Description of acquired business: commercial Semiconductor System Level Test business (“Test Systems”)

(2) Overview of Business Combination

Advantest purchased Test Systems from Astronics Corporation. Test Systems is now a fully owned subsidiary of Advantest's U.S. subsidiary, Advantest America, Inc., and is now operating under a newly created entity, Advantest Test Solutions, Inc. Test Systems is highly complementary to Advantest's existing suite of leading-edge automated test equipment solutions and broadens Advantest's position in system level test, an increasingly critical test modality to large consumer electronics manufacturers.

(3) Acquisition Date

February 14, 2019

(4) Legal Form of Business Combination

Business acquisition

(5) Consideration Paid

Millions of Yen

	Amount
Cash and cash equivalents	11,098

Contingent consideration represents an earn-out payment of up to USD35 million based on certain performance milestones. The evaluation process for calculating fair value of the contingent consideration has not been completed.

(6) Acquisition-related Expense

Acquisition-related expense of ¥496 million is included in Selling, general and administrative expenses in the consolidated statement of profit or loss for the fiscal year ended March 31, 2019.

(7) Fair Value of Assets Acquired as of the Acquisition Date

Millions of Yen

	Amount
Fair value of assets acquired	
Inventories	641
Property, plant and equipment	377
Fair value of assets acquired	1,018
Goodwill	10,080

Goodwill generated from this business combination was attributable to the Services, Support and Others segment and was deductible for tax purposes. Goodwill primarily represented a synergy effect with existing businesses and the excess earning power expected from the acquisition. The assets acquired were provisional as of March 31, 2019 because the allocation of consideration had not been completed. The provisional amount was calculated based on currently available information.

(8) Impact on the Business Performance

Disclosure of profit and loss information from the acquisition date and pro forma profit and loss information assuming the business combination was conducted at the beginning of the year ended March 31, 2019 (unaudited information) was omitted because of its immateriality for the consolidated statement of profit or loss.

TRANSLATION
This is an English translation of the original Independent Auditors Report filed under the Financial Instruments and Exchange Act of Japan, prepared in Japanese language. This report is presented merely as supplemental information. Ernst & Young ShinNihon LLC have not audited English language version of the consolidated financial statements of Advantest Corporation (the "Company") applicable to the fiscal year from April 1, 2018 through March 31, 2019.

Independent Auditor's Report

June 27, 2019

The Board of Directors
Advantest Corporation

Ernst & Young ShinNihon LLC

Certified Public Accountant
Designated and Engagement Partner Makoto Usui

Certified Public Accountant
Designated and Engagement Partner Kaeko Kitamoto

Certified Public Accountant
Designated and Engagement Partner Keiichi Wakimoto

Pursuant to Article 193-2, Paragraph 1 of the Financial Instruments and Exchange Act, we have audited the accompanying consolidated financial statements included in the Financial Section, which comprise the consolidated statement of financial position, the consolidated statement of profit or loss, the consolidated statement of comprehensive income, the consolidated statement of changes in equity, the consolidated statement of cash flows and the notes to the consolidated financial statements of Advantest Corporation (the "Company") applicable to the fiscal year from April 1, 2018 through March 31, 2019.

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 pursuant to the provision of Article 93 of the Regulation for Terminology, Forms and Preparation of Consolidated Financial Statements, 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 financial position of Advantest Corporation, which consisted of the Company and consolidated subsidiaries, as at March 31, 2019, and the results of their operations and their cash flows for the year then ended March 31, 2019 in conformity with International Financial Reporting Standards.

2. Management Policy, Business Environment and Issues to be Addressed etc.

Future expectations included in this section are as of March 31, 2019.

*Foreign exchange assumptions for forecasts of future performance indicators under this mid- to long-term management policy are 1USD = 110 yen and 1 EUR = 135 yen.

(1) Advantest's Basic Management Policy

Advantest has established a corporate vision of “Technology Support on the Leading Edge”, and its corporate mission of “Quest for the Essence”. Guided by these principles, Advantest respects each of its stakeholders, strives to maintain harmony with society, and aims for the sustained development of the Company and the improvement of corporate value while contributing to the goal of a sustainable society.

(2) Management Strategy and others

Embodying Advantest’s management philosophy of "enabling the leading-edge technology," the Company has formulated a high-level roadmap starting in fiscal 2018, which laid out the next decade of Advantest’s growth policies. It consists of a Grand Design (10 years) and Mid-Term Management Plan (3 years). Within these guidelines, the Company will strive to create customer value and further enhance corporate value.

1. Grand Design (10 years) FY2018 – FY2027

<Vision Statement>
Adding Customer Value in an Evolving Semiconductor Value Chain

<Strategy>
Advantest’s business today focuses on the development and sales of systems for semiconductor production test. In the future, the Company will aim to expand its business and expand corporate value by broadening its business domain to include related markets such as semiconductor design and evaluation processes and product/system level test processes, which are carried out before and after semiconductor production processes, respectively.

Toward the achievement of this long-term vision, Advantest will work on four strategic issues: reinforcing core businesses and investing strategically; seeking operational excellence; exploring value to reach the next level; and pioneering new business fields.

<Long-Term Management Goals>
¥300B - ¥400B in annual sales

<Cost / Profit Structure>
Advantest aims to balance sales growth with cost efficiency. Under the new plan, the Company aims for a cost of sales ratio of 46%, a SG&A rate of 32%, and an operating income margin of 22% when annual sales are at the 300 billion yen level.

2. Mid-Term Plan（3 years）FY2018 – FY2020

<Management Metrics>

The new plan focuses on enhancing corporate value while remaining aware of both improvement of profit and loss and efficient utilization of capital. Based on these priorities, Advantest has determined key management metrics during the mid-term management plan period: sales, operating margin, return on equity (ROE) and earnings per share (EPS). The Company's targets for the three-year average of each metric from FY2018 to FY2020 are as follows.

	FY2018–FY2020 average Conservative case	FY2018–FY2020 average Base scenario
Semiconductor Test Equipment Market Growth Rate	0%	4%
Sales	¥230B	¥250B
Operating Margin	15%	17%
Return on Equity (ROE)	15%	18%
Earnings per share (EPS)	¥135	¥170

<Key Measures>

・Semiconductor and component test system business
- Meet the wave of test demand for more complicated next generation devices such as those used in HPC (High-Performance Computing) and 5G communications
- Maintain our robust business lead in DRAM and NVM (non-volatile memory)

・Mechatronics business
- Expand sales opportunities by providing integrated test cell solutions and responding to advanced environment test demand

・Services business
- Increase post sales revenue by responding to factory automation needs, expand sales of SSD testers, pursue M&A in closely related markets

・Reinforce business management
- Introduce internal business management and evaluation tools based on ROIC (return on invested capital) to strengthen our business management structure.

<Financial Policy & Shareholder Returns>

In order to strengthen its business growth infrastructure and maintain a sound financial status, Advantest aims to create a cumulative free cash flow of 85 to 100 billion yen over the period of the new mid-term management plan. The Company believes that cash holdings of 50 to 60 billion yen are appropriate to ensure stable business activities. Regarding the use of excess funds, Advantest will prioritize business investments for growth such as M&A, R&D, facility enhancements, etc. Specifically, the Company will set 100 billion yen as its cumulative total M&A investment frame for the mid-term management plan period.

Regarding shareholder returns, Advantest will continue its policy of improving dividend levels through the growth of earnings per share, based on a semi-annual consolidated payout ratio of 30%. However, if residuals are retained for a long time, the Company will consider flexibly reviewing its dividend payout ratio and improving total shareholder returns by, for instance, repurchasing stock, taking into consideration our projected growth investments.

<ESG (Environment Social Governance) Challenges>

Semiconductors will play an increasingly important role in the future in solutions for global social issues. Through semiconductor test, Advantest will contribute to a safer, more secure, more comfortable, and more sustainable future.

In addition, by training global human resources and entrepreneurship and promoting innovative work styles, the Company aims to form a foundation for achieving its long-term strategic goals and business expansion. Furthermore, in order to make effective use of human capital, Advantest will try to shape its organizational structure into a posture of natural compliance with its business environment and management strategy.

In terms of governance, five of ten members of Advantest’s Board of Directors are composed of outside directors as of June 26, 2019. Also, out of the ten directors, two non-Japanese and one female are appointed to ensure the diversity of the directors.

(3) Business Environment and Important Measures for FY2019

In FY2019, amid the heightened sense of a slowdown and uncertainty in the global economy, semiconductor manufacturers are expected to continue to adjust their inventories for the time being and, therefore, we anticipate a year-on-year contraction in the semiconductor tester market in 2019.

Nevertheless, the current slowdown in demand still does not change our long-term market forecast. We believe that the market for semiconductor test equipment will grow over the medium to long term as the semiconductor market expands, despite repeated short-term fluctuations in demand. A recent trend that drove business results in FY2018, namely, the growing social demand for greater performance and higher reliability of semiconductors, has emphasized the importance of semiconductor testing. No change in the demand structure of the semiconductor test equipment market is evident at present. Based on this structure, the market for semiconductor test equipment is expected to enter a growth trajectory again from 2020, triggered by the expansion of commercial 5G communication services.

While the current business environment is difficult, based on the long-term outlook, we will adhere to the goals set forth in “Grand Design,” our Long-term Management Policy and our Mid-term Plan launched in FY2018. To achieve these goals, we will work on establishing and maintaining a foundation for growth, improving periodic profitability and using capital efficiently.

< Important Measures for FY2019>

- Enhance engagement with most important industry-leading customers
- Maintain and expand market share
- Reinforce personnel and develop human resources for medium-to long-term growth
  - Reinforce R&D engineering staff and marketing / sales / SE / service staff in priority regions
- Improve business efficiency for operational excellence
- Maximize utilization of ROIC in business operations

3. Risk Factors

Risks Related to Advantest's Business

The risks related to Advantest's business that may have a significant impact on investor decisions are as follows. However, these are not exhaustive of all risks related to Advantest.

Forward-looking statements in the text are based on the judgments of the Company as of the end of the fiscal year ended March 31, 2019.

a. Advantest's business and results of operations are subject to significant demand volatility in the semiconductor industry

Advantest's business depends largely upon the capital expenditures of semiconductor industrial, design and manufacturing companies, fabless semiconductor companies, foundries and test houses. These companies, in turn, determine their capital expenditure and investment levels largely based on current and anticipated market demand for semiconductors and products incorporating semiconductors. Such demand is influenced significantly by the overall condition of the global economy. Historically, the percentage reduction in capital expenditures by semiconductor manufacturers during downturns in the semiconductor industry, including investment in semiconductor test systems, has typically been much greater than the percentage reduction in worldwide sales of semiconductors. The semiconductor industry has been highly cyclical with recurring periods of excess inventory, which often have had a severe effect on the semiconductor industry's demand for semiconductor test systems, including those of Advantest.

The worldwide semiconductor market in 2016, the semiconductor market increased by 1.1% compared to 2015, due to the improving functionality and increasing sales volumes of smartphones and others. In 2017, the semiconductor market increased by 21.6% compared to 2016, due to vigorous growth in demand for a wide range of electronic equipment. In 2018, the semiconductor market increased by 13.7% compared to 2017, due to a continued high growth of the previous year despite a sense that it was running out of steam in the second half of the year.

Worldwide sales of SoC semiconductors in 2016, worldwide sales of SoC semiconductors increased by 1.3% compared to 2015 due to the increasing of capital investment in smartphone-related production and others. In 2017, worldwide sales of SoC semiconductors increased by 9.6%, due to solid growth in demand for automotive semiconductor and data center amid the development of advances in automotive electronics. In 2018, worldwide sales of SoC semiconductors increased by 7.3% compared to 2017, due to a strong demand from investments in further functional advancement of smartphones from fiscal 2017.

In 2016, worldwide sales of memory semiconductors decreased by 0.6% compared to 2015, although demand for smartphones and high-speed servers increased since the summer. In 2017, worldwide sales of memory semiconductors increased by 61.5% compared to 2016, due to vigorous growth in demand for data center-related semiconductors, causing actively capital investment in memory semiconductor manufactures. In 2018, worldwide sales of memory semiconductors increased by 27.4% compared to 2017, due to demand from continuously investment in data center from 2017.

The significant volatility in demand for semiconductors is affected by various factors such as:

- the overall state of the global economy;

- trends in the semiconductor industry.

- levels of investment in communications infrastructure and trends of demand in communication devices such as smartphones and wearable devices;

- demand in personal computer and data server industries;

• consumer demand for digital consumer products such as TVs, game devices, VR (Virtual Reality) / AR (Augmented Reality) devices;

• trends in industrial equipment market such as automobile, robotics and medical equipment; and

In fiscal 2016, Advantest sought to improve performance, with a focus on capturing new demand from the memory sector, where customers are now highly motivated to invest. As a result, Advantest's net sales in fiscal 2016 decreased by 3.8%, as compared to fiscal 2015, to ¥155,916 million in spite of appreciation of the yen. Net income attributable to owners of the parent was ¥14,201 million, mainly due to a more profitable sales mix and an increase of deferred tax assets in comparison to the previous fiscal year. Advantest worked to capture demand for test equipment for memory semiconductors and automotive semiconductors, both of which have shown remarkable growth, as well as to boost sales of peripheral devices for semiconductor testing. Advantest also took steps to increase production capacity in order to keep up with the steep increase in demand. As a result, Advantest's net sales in fiscal 2017 increased by 32.9%, as compared to fiscal 2016, to ¥207,223 million. Gross margin was below that of the last fiscal year due to factors such as a lower proportion of highly profitable products in our product mix, and the recording of write-down to inventories in nanotechnology. Nonetheless, Net income attributable to owners of the parent was ¥18,103 million due to our efforts to improve operational efficiency. Advantest expanded its market share by demonstrating its strength as a manufacturer with the most comprehensive product portfolio in the semiconductor test equipment industry and capturing demand for new products from a broad range of customers. As a result, Advantest's net sales in fiscal 2018 increased by 36.3%, as compared to fiscal 2017, to ¥282,456 million. Net income attributable to owners of the parent was ¥56,993 million due to a one-off profit of ¥3.5 billion including ¥2,530 million associated with the transfer of a portion of the defined benefit pension plan for the employees of Advantest Corporation and its subsidiaries in Japan to a defined contribution pension plan.

Advantest believes that its results are significantly affected by the significant volatility in demand in the semiconductor industry. If there is a significant downturn in the semiconductor industry, Advantest's financial condition and results of operations will be adversely affected.

b. Advantest's business is subject to economic, political and other risks associated with international operations and sales

Advantest's business is subject to risks associated with conducting business internationally because it manufactures and sells its products, and purchases parts and components from, around the world. In fiscal 2018, 87.4% of Advantest's total net sales came from Asia (excluding Japan), a majority of which consisted of sales in Taiwan, the People's Republic of China ("China") and Korea, 4.8% from the Americas and 2.5% from Europe. Advantest anticipates that net sales from international operations will continue to represent a substantial portion of its total net sales. In addition, some of the Company's distribution and support subsidiaries are located in the Americas, Europe, and Asian countries, including Taiwan, Singapore, Korea and China, and some of Advantest's suppliers and factories are also located overseas, such as Korea and Malaysia. Accordingly, Advantest's future results could be harmed by a variety of factors, including:

・ political and economic instability, including economic and political disruptions, disputes, natural calamities, epidemics or other risks related to countries where Advantest procures its components and parts or manufactures and sells its products;

・ risks with respect to social and political crises and issues resulting from, deterioration in the political, economic relationships, struggle for supremacy, terrorism, war or others between countries;

・ trade protection measures and import or export licensing requirements;

・ potentially negative consequences from changes in tax laws;

・ risks with respect to international taxation, including transfer pricing regulations;

· difficulty in staffing and managing widespread operations;

· differing protection of intellectual property;

· difficulties in collecting accounts receivable because of distance and different legal rules;

· risks with respect to decline in the quality of procurement and manufacturing where Advantest's suppliers or manufacturing facilities are located in countries that do not have developed infrastructures in mechanical processing and assembly; and

· risks with respect to increases in cost, delays in delivery or expenses in repairing products where low quality and counterfeit products are mixed into the supply chain.

c. If Advantest does not introduce new products meeting its customers' technical requirements in a timely manner and at competitive prices, its products may become obsolete and its financial condition and results of operations may suffer

Advantest sells its products to several industries that are characterized by rapid technological changes, frequent introduction of new products and services, varying and unpredictable product lifecycles and evolving industry standards. Advantest anticipates that future demand for its products will be driven, in large part, by technological innovation in semiconductor technology, which creates new testing requirements that are not adequately addressed by currently installed semiconductor test systems. Customer needs in response to these technological innovations, and their need for greater cost-effectiveness and efficiency to respond to the market environment, include:

- test solutions of SoC semiconductors that incorporate more advanced memory semiconductors, logic and analog circuits;

- test solutions of power semiconductors that control small and large motor drives;

- solutions for complexed IC incorporating RF, logic and memory chips in a single package in order to achieve IC with advanced 3D integration as well as downsizing and technical advantages, through TSV(Through-Silicon Via) technology;

- mechatronics-related products which transport devices faster, more accurately and more stably;

- test solutions of testing technologies that employ self-test circuit designs incorporated into semiconductor chips;

- test solutions of testing technologies that employ test circuit designs for device under test (DUT);

- test solutions of system level testing that guarantees performance of the final products;

- test solutions of testing temperatures for dynamic and delicate control of test environment;

- prompt response and quick repair in the event of failure;

- total solutions that allow customers to reduce their testing costs;

- solution by electron-beam metrology to enable reliable pattern critical dimension measurement or defect review on a leading-edge photomask; and

- solution by electron-beam lithography to reduce turnaround time (TAT) of IC prototyping, and to enable small-volume production of high valued devices.

Advantest also believes demand for its products, including semiconductor and component test systems, is affected by the level of demand for personal computers, high-speed wireless and wireline data services, digital consumer products, advanced driver assistance system (ADAS) and communication devices, such as smartphones and wearable devices, and data servers. It is likely that advances in technologies used in those products and services will require new testing systems. Without the timely introduction of semiconductor test systems capable of effectively testing and measuring equipment that use these new technologies, Advantest's products and services may become technologically obsolete over time.

A failure by Advantest to meet its customers' technical requirements at competitive prices or to deliver conforming equipment in a timely manner may result in its products being replaced by those of a competitor or an alternative technology solution. Furthermore, Advantest's inability to secure sufficient personnel appropriate for the business during a period of recovery or its inability to provide a product that meets requested performance criteria at an acceptable price when required by its customers would severely damage its reputation with such customers and may adversely affect future sales efforts with respect to such customers.

d. Advantest's dependence on a sole source or a limited number of suppliers for its components and parts may prevent it from delivering its products on a timely basis or its failure to meet the demand for its products upon a sudden expansion of the markets may adversely affect its future market share and financial results

Advantest relies on suppliers to perform some of the assembly requirements for its products. In addition, many of the components used in Advantest's semiconductor and component test systems and mechatronics systems are produced by suppliers based on Advantest's specifications. Advantest's reliance on these suppliers gives it less control over the manufacturing process and exposes it to significant risks, especially inadequate manufacturing capacity, late delivery, substandard quality, lack of labor availability and high costs. In addition, Advantest depends on a sole source or a limited number of suppliers for a portion of its components and parts. Advantest does not maintain long-term supply agreements with most of its suppliers, and it purchases most of its components and parts through individual purchase orders. If a supplier becomes unable to provide components or parts in the volumes needed and at acceptable prices, or if a supplier withdraws from business thereby stopping production or sales of custom or general components and parts that Advantest uses or will use in the future, or a large scale natural disaster or electricity shortage occurs, Advantest would have to identify and procure acceptable replacements. Advantest may lose its capacity to supply test systems if it becomes unable to procure acceptable replacements. Suppliers have typically adjusted their production capacity through the reduction of production lines and personnel. Therefore, if the market for semiconductor and component test systems and mechatronics systems were to suddenly expand, Advantest would require significant increases in production capabilities including personnel, as well as materials, components and supplies from suppliers, in order to fully capitalize on such expansion. Furthermore, the markets for semiconductors and other specialized components had, in the past, experienced periods of inadequate supply to meet demand. Moreover, there may be a shortage of components if a large scale natural disaster or electricity shortage occurs. The process of selecting suppliers and of identifying suitable replacement components and parts is lengthy and may result in Advantest being unable to deliver products meeting customer requirements in a timely manner. Advantest has, in the past, been unable to deliver its products according to production schedules primarily due to the inability of suppliers to supply components and parts based on Advantest's specifications and by other shortages in components and parts. Moreover, a deterioration in the financial position of Advantest's suppliers reflecting the decline in the economic environment or the failure of Advantest to adjust to large increases in demand for its products during the period of recovery in demand could result in Advantest losing one or more of its existing large-volume customers or losing the opportunity to establish a strong relationship with potential large-volume customers with which it currently does little or no business. Such failure may adversely affect Advantest's future market share and its financial results.

e. Advantest faces substantial competition in its businesses and, if Advantest does not maintain or expand its market share, its business may be harmed

Advantest faces substantial competition throughout the world. Advantest's primary competitors in the semiconductor and component test system market include, among others, Teradyne, Inc., Cohu, Inc., YIK Corp., UniTest Inc. and EXICON Ltd. In the mechatronics system related market, Advantest also competes with Cohu, Inc., TechWing, Inc., and Hon. Technologies, Inc. in test handler devices, and with TSE Co., Ltd., Semes Co., Ltd., SL-link Co., Ltd. and TechWing, Inc. in device interfaces. Some of Advantest's competitors have greater financial and other resources than Advantest.

Advantest faces many challenges in its businesses, including increased pressure from customers to produce semiconductor and component test systems and mechatronics systems that reduce testing costs or from customers who have developed internal test solutions. For device interfaces, acquisition of vendors that supply core technical components by Advantest's competitors, or leakage of the manufacturing technology of printed circuit boards, may result in reduced testing costs by customers or difficulty by Advantest to realize its products' full performance.

To compete effectively and maintain and expand its market share, Advantest must continue to enhance its business processes to lower the cost of its products or introduce enhancements that lower overall testing costs. Advantest also expects its competitors to continue to introduce new products with improvements in price and performance, as well as increasing their customer service and support offerings, and Advantest expects new market participants to launch low-price testers. Significant increases in competition may weaken Advantest's earnings.

f. Advantest may not be able to meet the targets set in its strategies and mid/long-term management goals

The attainment of goals such as those in mid/long-term management goals are subject to various internal and external factors, including the general economic and market conditions in which Advantest and its customers operate, the level of competition, the level of corporate capital expenditure, the level of demand for Advantest's products and fluctuations in exchange rates. As a result, any strategies and mid/long-term management goals and targets (as amended from time to time) should not be treated as forecasts of future results. There can be no assurance that Advantest's strategies to accomplish mid/long-term management plans and implementation of such strategies will be successful, that the implementation of its strategies will have the intended effects, that the mid/long-term management goals or other targets (whether quantitative or qualitative, and as amended from time to time) will be met, or that such goals, targets and aims will not be changed in the future by Advantest's management.

g. Advantest's largest customers currently account for a significant part of its net sales and, in addition to the risk of Advantest's business being harmed by the loss of one or more of these customers or changes in their capital expenditures, Advantest may not be able to recover its accounts receivables if its largest customers experience a deterioration in their financial position

Advantest's success depends on its continued ability to develop and manage relationships with its major customers. A small number of such major customers currently account for a significant portion of its net sales. Sales to Advantest's five largest customers accounted for approximately 37% in fiscal 2017 and approximately 37% in fiscal 2018. The loss of one or more of these major customers, changes in their capital expenditures or failure of their main products could materially harm Advantest's business. Furthermore, if Advantest's major customers experience deterioration in their financial position and are unable to fulfill their payment obligations to Advantest in accordance with the applicable terms, Advantest's business, results of operations and financial position may be adversely affected.

h. Advantest's product lines are facing significant price pressure

Price pressure on Advantest's businesses is adversely affecting Advantest's operating margins. Irrespective of the trend in the demand for semiconductors, there is ongoing price pressure on semiconductors, which puts continuous pressure on the market price for products in the Semiconductor and Component Test System

Segment and Mechatronics System Segment. During periods when there is rapid decrease in semiconductor prices, semiconductor manufacturers, foundries and test houses, which are Advantest's customers, seek to increase their production capacities while minimizing their capital expenditures. In addition, increased competition in the market for digital consumer products, personal computers, mobile devices such as smartphones and wearable devices, data servers and automotive semiconductors have driven down prices of these goods, subsequently creating significant price pressure on Advantest's product lines. If prices of semiconductors continue to decline, customers may postpone capital expenditures on new equipment by remodeling or adapting the usage of existing equipment. If price pressure further increases in the future, Advantest's financial condition and results of operations may be adversely affected.

i. Fluctuations in exchange rates could reduce Advantest's profitability

The majority of Advantest's net sales are derived from products sold to customers located outside of Japan. Of Advantest's fiscal 2018 net sales, 94.7% were from products sold to overseas customers. Approximately 58% of Advantest's net sales in fiscal 2018 were derived from currencies other than the Japanese yen, predominantly the U.S. dollar. If the Japanese yen becomes strong relative to foreign currencies (mostly the U.S. dollar), it may adversely affect Advantest's sales because it cannot necessarily pass on product price.

With respect to the Euro, if the Japanese yen weakens, there may be a negative impact on Advantest's profitability since there are currently more costs incurred in Euro than net sales derived in Euro.

In addition, significant fluctuations in the exchange rate between the Japanese yen and foreign currencies, especially the U.S. dollar, could require Advantest to lower its prices with respect to foreign sales of its products that are priced in Japanese yen, and reduce the Japanese yen equivalent amounts of its foreign sales for products that are based in U.S. dollars or other foreign currencies, thereby reducing its profitability overall. These fluctuations could also cause prospective customers to push out or delay orders because of the increased relative cost of Advantest's products. In the past, there have been significant fluctuations in the exchange rate between the Japanese yen and the foreign currencies in which Advantest's sales are denominated.

Furthermore, Advantest's consolidated financial statements for a particular period or for a particular date will be affected by changes in the prevailing exchange rates of the currencies in which subsidiaries of Advantest prepare their financial statements against the Japanese yen. Foreign exchange rate fluctuations may have an effect on those amounts not denominated in yen which are translated into yen for Advantest's consolidated financial statements, and depending on the direction of the foreign exchange fluctuation, it may have an adverse effect on Advantest's reported financial position, results of operations and net assets.

j. Advantest may not recoup costs incurred in the development of new products

Enhancements to existing products and the development of new generations of products are, in most cases, costly processes. Furthermore, because the decision to purchase semiconductor and component test systems products and mechatronics systems generally involves a significant commitment of capital, the sale of this equipment typically involves a lengthy sales period and requires Advantest to expend substantial funds and sales efforts to secure the sale. Advantest's enhancements or new generations of products may not generate net sales in excess of development and sales costs if, for example, these new enhancements or products are quickly rendered obsolete by changing customer preferences, the introduction by Advantest's competitors of products embodying new technologies or features, the introduction by Advantest's customers of new products that require different testing functions or the failure of the market for Advantest's customer's products to grow at the rate, or to the levels, anticipated by Advantest. In some cases, Advantest must anticipate industry trends and develop products in advance of the commercialization of its customers' products. This requires Advantest to make significant investments in product development well before it determines the commercial viability of these innovations. If Advantest's customers fail to introduce their devices in a timely manner or the market rejects their devices, Advantest may not recover its investments in product development through sales in significant volume.

k. The market for Advantest's major products is highly concentrated, and Advantest may not be able to increase sales of its products because of limited opportunities

The market for test systems for memory semiconductors in the Semiconductor and Component Test System Segment is highly concentrated, with a small number of large semiconductor manufacturers, foundries and test houses accounting for a large portion of total sales in the semiconductor and component test system industry. Advantest believes that this market concentration could become even more severe in the future as larger semiconductor device manufacturers, foundries and test houses acquire semiconductor market participants, and as corporate restructuring, such as elimination and consolidation of businesses, progresses. Advantest's ability to increase sales will depend in large part upon its ability to obtain or increase orders from large-volume customers. Furthermore, in the event there is an over-supply of semiconductor and component test system products on the second-hand market reflecting, among others, restructuring within the industry, or delay to meet the specific needs of Advantest's customers, Advantest faces an additional risk of losing its sales opportunities.

l. Goodwill and intangible assets resulting from Advantest business acquisitions could have a material adverse effect on Advantest's financial condition and results of operations due to significant impairment charge

If there is any indication of impairment for property, plant and equipment, goodwill and intangible assets, the assets are tested for impairment. Goodwill is tested for impairment both annually and when there is any indication of impairment. An impairment loss is recognized if the recoverable amount of an asset, cash-generating unit (CGU) or CGU group is less than its carrying amount. Especially, if goodwill and intangible assets resulting from acquisitions do not have the expected synergy effects, Advantest may be required to record a significant impairment charge, which could have a material adverse effect on Advantest's financial condition and results of operations.

m. If Advantest's main facilities for research and development, production or information technology systems for its businesses, or the facilities of its subcontractors and suppliers, were to experience catastrophic loss, its results of operations would be seriously harmed

Advantest's main facilities for research and development for its Semiconductor and Component Test Systems and Mechatronics System Segments production, as well as Advantest's service bases, are located in Gunma Prefecture, Saitama Prefecture and Miyagi Prefecture in Japan. In addition, the main system server and the network hub are maintained in system centers approved by the Information System Management System, or ISMS, and local network servers are located in certain operations offices in Japan.

Japan is a region that is susceptible to frequent earthquakes. If Advantest's facilities, particularly its semiconductor and component test system manufacturing factories, were to experience a catastrophic loss from, but not limited to, earthquakes, it would materially disrupt Advantest's operations, delay production, shipments and revenue, and result in large expenses to repair or replace the facilities. Advantest has insurance to cover most potential losses at its manufacturing facilities, other than those that result from earthquakes. However, this insurance may not be adequate to cover all possible losses. Similar disruptions to Advantest's business may occur if the facilities of Advantest's subcontractors and suppliers or if the facilities of Advantest's information system network were to experience a catastrophic loss.

Advantest has prepared itself for crises such as large-scale natural disasters, and each department of Advantest has documented its own disaster-response procedures and manuals. Furthermore, in order to prevent any disruption of its core businesses, or in case of suspension, to re-start the suspended businesses, including the recovery of important facilities, in the shortest possible time, Advantest formulated and implemented a "Business Continuity Plan." However, if such Business Continuity Plan is not effective, Advantest's core businesses could be disrupted at a time of crisis, such as large-scale natural disasters, and could take a substantial amount of time to recover.

n. Advantest may not be able to recover its capital expenditures

Advantest continues to make capital expenditures. From fiscal 2012 through fiscal 2013, Advantest built a new factory in South Korea in order to increase its share of sales to major Korean customers. The factory began operating in May 2013. Advantest may not be able to recover the capital expenditures for such projects within the assumed timeframe, or at all, if it cannot achieve the assumed volume of sales due to customers cutting back on capital expenditures or if intense competition with competitors results in a reduction in unit prices. In such event, the asset would be subject to impairment, which may have an adverse impact on Advantest's profitability.

o. Advantest's business may be negatively affected by factors relating to its marketing and sales capabilities and its branding

Advantest's business may be negatively affected by factors relating to its marketing and sales capabilities and its branding, including:

- the long selling process involved in the sale of semiconductor and component test systems and mechatronics system;
- the relatively small number of total units sold in the semiconductor and component test system and mechatronics system market;
- order cancellations or postponement of capital expenditures by customers;
- delays in collection of accounts receivable, increases in losses resulting from bad debt or increases in provisions for doubtful receivables, reflecting the financial condition of customers;
- increases in product warranty costs and write-downs of inventory; and
- any real or perceived decrease in performance and reliability of Advantest products, which could lead to a decline in Advantest's reputation.

p. Chemicals used by Advantest may become subject to more stringent regulations, and Advantest may be required to incur significant costs in adapting to new requirements

Advantest uses chemicals in the manufacturing of its products, the manufacture, processing and distribution of which are subject to environmental related laws, regulations and rules of Japanese governmental agencies, as well as by various industry organizations and other regulatory bodies in other countries. These regulatory bodies may strengthen existing regulations governing chemicals used by Advantest and may also begin to regulate other chemicals used by Advantest. While Advantest is taking measures to eliminate toxic substances included in parts used to manufacture its products, Advantest uses solder, which contains lead for mounting electronic parts and components for its products except for some of them, in order to ensure the reliability of its products as a matter of priority. Further, as a method to cool some of its semiconductor and component test systems and mechatronics systems, Advantest uses fluorinated liquid which use is not currently regulated by laws. Advantest believes that it is in compliance with regulations with respect to the use of chemicals by promoting environmental policies for its products with the focus on ensuring the safety and the reliability of its products; however, Advantest must be prepared to adapt to regulatory requirements in all relevant countries as requirements change. Advantest may be required to incur significant cost in adapting to new requirements. Any failure by Advantest to comply with applicable government or industry regulations could result in restrictions on its ability to carry on with or expand sales of its products.

q. Advantest could suffer significant liabilities, litigation costs or licensing expenses or be prevented from

selling its products if it is infringing on the intellectual property of third parties

Advantest may be unknowingly infringing on the intellectual property rights of third parties and may be held responsible for that infringement. To date, Advantest has not been the subject of a material intellectual property claim. However, any future litigation regarding patents or other intellectual property infringement could be costly and time consuming and divert management and key personnel from Advantest's business operations. If Advantest loses a claim, it may be forced to pay significant damages, pay license fees, modify its products or processes, stop making products or stop using processes. A license could be very expensive to obtain or may not be available at all. Changing Advantest's products or processes to avoid infringing on the rights of third parties may be costly or impractical.

r. Advantest may be unable to protect its proprietary rights due to the difficulty of Advantest gaining access to, and investigating, the products believed to infringe on Advantest's intellectual property rights

Advantest relies on patents, utility model rights, design rights, trademarks and copyrights obtained in various countries to actively protect its proprietary rights. For instance, with respect to the device interface market, Advantest has taken legal action based on its patent and utility model rights against manufacturers that sell replicas of Advantest's products and, in some instances, has obtained injunctions against sales of such replicas. Advantest's business could have a material adverse effect upon Advantest's market share and business results if Advantest is unable to protect its proprietary rights.

While, in general, it is difficult for Advantest to gain access to, and investigate, the products believed to infringe on its intellectual property rights. Therefore, Advantest cannot ensure that its intellectual property rights will provide meaningful protection of its proprietary rights.

Nevertheless, Advantest is focused on protecting its intellectual property rights from third party infringement and will continue to monitor and enforce its rights.

s. The labor market is very competitive, and Advantest's business could have a material adverse effect upon Advantest's business operations and business results if Advantest is unable to hire and retain diverse technical experts and important staff for operations

In order to develop business in the rapidly changing electronics industry, Advantest needs to secure a diverse range of human resources who are familiar with R&D, manufacturing, marketing, sales and maintenance services and other technical experts. In addition, we believe it is important to continuously develop and maintain human resources with management capabilities such as business strategy and organizational management.

Therefore, in addition to hiring new graduates, we employ and secure a wide range of experienced personnel on a global basis, continuously review personnel systems and conduct employee education, and strive to establish and develop employees.

However, the competition for continuously hiring and retaining the necessary personnel is fierce, and if we do not proceed as planned or if the wages of employees in the US, Europe, and other Asian countries increase, Advantest's business could have a material adverse effect upon Advantest's business operations and business results.

t. If Advantest is unable to speedily proceed with Digital Transformation of IT systems, Advantest's business results could have a material adverse effect

Digital Transformation, an initiative to increase the competitiveness of companies with data and digital technologies, will realize the sharing economy, innovate manufacturing sites through data utilization using IoT and artificial intelligence, create new value through data sharing between production facilities and logistics Expectations and become popular in a wide range of fields.

However, as proceeding with Digital Transformation if Advantest is unable to make full use of date due to the aging, complexity, and black-boxing of existing IT systems, or to keep resources for IT investment that utilizes new digital technology due to funds and human resources are dedicated the maintenance of existing systems, it loses competitiveness, the maintenance cost of the old system becomes high, or system problems and data loss occur by the retirement of system maintenance operation person in charge or the aging of the population, Advantest's business results could have a material adverse effect.

u. Damage, interference or interruption to Advantest's information technology networks and systems could hinder business continuity and lead to substantial costs or harm Advantest's reputation

Advantest relies on various information technology networks and systems, some of which are managed by third parties, to process, transmit and store electronic information, including confidential data, personal information and to carry out and support a variety of business activities, including manufacturing, research and development, supply chain management, sales and accounting. Advantest has the Information Security Committee to create policies on information security measures. The IT section builds and operates the information and technology network and system based on the above-mentioned policies. However, attacks by hackers or computer viruses, wrongful use of the information security system, careless use, accidents or disasters could undermine the defenses established by Advantest and disrupt business continuity, which could not only risk leakage or tampering of information but could also result in a legal claim, litigation, damages liability or an obligation to pay fines. If this were to occur, Advantest's reputation could be harmed, Advantest could incur substantial costs, and it may have a material adverse effect upon Advantest's financial condition and results of operation.

v. Product defects and any damages stemming from Advantest's product liability could harm Advantest's reputation among existing and potential customers and could have a material adverse effect upon Advantest's business results and financial condition

Advantest manufactures its products in accordance with internationally accepted quality control standards such as ISO 9001. However, Advantest cannot guarantee that there are no defects in its products. Advantest maintains product liability insurance but cannot guarantee that such insurance will sufficiently cover the ultimate amount of damages with respect to Advantest's liabilities. Therefore, shipping stoppage and delivery delay due to quality defects of parts or manufacturing defects of products, large scale accidents due to product defects or any discovery of defects in its products could harm Advantest's reputation for not adequately addressing defects, could cause Advantest to incur higher costs, could result in claims for damages and could have a material adverse effect upon Advantest's business results and financial condition.

4. Management's Discussion and Analysis

(1) Important Accounting Policies and Estimates

Advantest prepares consolidated financial statements in accordance with the IFRS issued by the International Accounting Standard Board.

The preparation of the consolidated financial statements requires Advantest to make judgments, accounting estimates and assumptions that affect the application of policies and reported amounts of assets, liabilities, income and expenses. These estimates and assumptions are based on the best judgment of management in light of historical experience and various factors deemed to be reasonable according to the situation. However, given their nature, actual results may differ from those estimates and assumptions.

Advantest's important accounting policies and estimates are described in "note 3 and note 4" under "Notes to Consolidated Financial Statements" in "1. Consolidated Financial Statements".

(2) Analysis of Results of Operations

1) Statement of Operations

	Fiscal year ended March 31, 2018 (Millions of Yen)	Fiscal year ended March 31, 2019 (Millions of Yen)	Change (Millions of Yen)	Change (%)
Net sales	207,223	282,456	75,233	36.3
Cost of sales	(100,635)	(128,417)	(27,782)	27.6
Selling, general and administrative expenses	(82,645)	(93,100)	(10,455)	12.7
Other income (expenses), net	544	3,723	3,179	6.8 times
Operating income	24,487	64,662	40,175	2.6 times
Operating income ratio	11.8%	22.9%	11.1%	—
Financial income (expenses), net	(205)	1,549	1,754	—
Income before income taxes	24,282	66,211	41,929	2.7 times
Income taxes	(6,179)	(9,218)	(3,039)	49.2
Net income	18,103	56,993	38,890	3.1 times
Net income attributable to: Owners of the parent	18,103	56,993	38,890	3.1 times

During Advantest's FY2018, the global economy has continued to maintain its growth trajectory overall mainly due to steady economic growth in the United States. Nevertheless, concerns about the future of the global economy have grown since the autumn of 2018 mainly due to the expansion of protectionist trade policies and the slowdown in growth in China.

Amid these trends in the global economy, the sense of a slowdown in data center investment and in the smartphone market, that have led growth in semiconductors and related industries for the last few years, has intensified. As a result, a slackness in supply and demand across the entire semiconductor market has become clearly evident with major semiconductor manufacturers cutting back on their capital investment plans and moving towards substantial inventory adjustments since the second half of 2018. On the other hand, demand for performance improvements in electronic devices such as data servers, smartphones, displays, and car electronics has remained steady, promoting improved performance and an increase in quantity of semiconductors, which are incorporated into such electronic devices. Semiconductor manufacturers have responded by making active efforts to strengthen their testing capabilities for handling more complex testing and enhancing the reliability of semiconductors, which is directly related to improved performance of the end products. As a result, the demand for semiconductor test equipment has remained robust.

Average currency exchange rates in the current fiscal year were 1 USD to 110 JPY (111 JPY in the previous fiscal year) and 1 EUR to 129 JPY (129 JPY in the previous fiscal year).

Net sales

Advantest expanded its market share by demonstrating its strength as a manufacturer with the most comprehensive product portfolio in the semiconductor test equipment industry and capturing demand for new products from a broad range of customers.

As a result, Advantest's net sales increased by ¥75,233 million, or 36.3%, compared to fiscal 2017 to ¥282,456 million in fiscal 2018.

Cost of sales

In fiscal 2018, cost of sales increased by ¥27,782 million, or 27.6%, compared to fiscal 2017 to ¥128,417 million. This increase was mainly due to increase largely in net sales. Cost of sales to net sales ratio was 45.5%, a decrease of 3.1 percentage points from fiscal 2017 because of a higher proportion of profitable products in our product mix.

Selling, general and administrative expenses

In fiscal 2018, selling, general and administrative expenses only increased by ¥10,455 million, or 12.7%, compared to fiscal 2017 to ¥93,100 million in spite of large increase of net sales.

Other income (expenses), net

In fiscal 2018, other income increased by ¥3,179 million, or 6.8 times, compared to fiscal 2017 to ¥3,723 million due to a one-off profit of ¥3.5 billion including ¥2,530 million associated with the transfer of a portion of the defined benefit pension plan for the employees of the Company and its subsidiaries in Japan to a defined contribution pension plan.

Operating income

As a result of the above, in fiscal 2018, Advantest's operating income increased by ¥40,175 million, or 2.6 times, compared to fiscal 2017, resulting in operating income of ¥64,662 million. Operating income to net sales ratio was 22.9%, an increase of 11.1 percentage points from fiscal 2017.

Financial income (expenses), net

In fiscal 2018, net financial income improved by ¥1,754 million compared to fiscal 2017 to a gain of ¥1,549 million. This was mainly due to the foreign exchange loss in US dollar-denominated assets as the end of fiscal 2017 was lower than the end of fiscal 2016, but the foreign exchange gain at the end of the fiscal 2018 rate was due to the fall of the euro against the dollar.

Income before income taxes

As a result of the above, income before income taxes increased by ¥41,929 million, or 2.7 times, compared to fiscal 2017 to ¥66,211 million in fiscal 2018.

Income taxes

In fiscal 2018, Advantest's effective tax rate was 13.9%, while the effective income tax rate for fiscal 2017 was 25.4%. For more details on income taxes of Advantest in fiscal 2018 and fiscal 2017, see note 16 under "Notes to Consolidated Financial Statements" in "1. Consolidated Financial Statements".

Net income attributable to owners of the parent

As a result of the above, in fiscal 2018, Advantest's net income attributable to owners of the parent increased by ¥38,890 million, or 3.1 times, compared to fiscal 2017, resulting in an income of ¥56,993million. Net income attributable to owners of the parent to net sales ratio was 20.2%, an increase of 11.5 percentage points from fiscal 2017.

2) Result of Production, Orders received and Sales

a. Production results

Advantest manufacturing is principally based on customer orders, and since the production results are similar to sales results, production results are not listed.

b. Orders received and Backlog by Segment

The results of orders received for the fiscal year ended March 31, 2019 by segment are as follows.

	Orders received (Millions of Yen)	Change (%)	Backlog (Millions of Yen)	Change (%)
Semiconductor and Component Test System Segment	206,757	21.8	45,264	(15.1)
Mechatronics System Segment	37,746	(14.2)	12,766	(13.5)
Services, Support and Others Segment	30,679	(10.0)	16,831	14.7
Elimination	(4)	—	—	—
Total	275,178	11.1	74,861	(9.5)

(Note) Amounts are excluding consumption tax and others, including inter-segment internal transfer sales.

c. Sales results

The results of sales for the fiscal year ended March 31, 2019 by segment are as follows.

	Amount (Millions of Yen)	Change (%)
Semiconductor and Component Test System Segment	211,717	50.2
Mechatronics System Segment	39,229	9.3
Services, Support and Others Segment	31,514	3.4
Elimination	(4)	—
Total	282,456	36.3

(Note) 1. Amounts are excluding consumption tax and others, including inter-segment internal transfer sales.

2. Sales by major counterparties and total sales ratio are as follows.

Customer	Fiscal year ended March 31, 2018		Fiscal year ended March 31, 2019	
	(Millions of Yen)	%	(Millions of Yen)	%
Samsung Electronics Co., Ltd.	29,558	14.3	—	—

3) Operations by Segment

Semiconductor and Component Test System Segment

In fiscal 2018, net sales of Advantest's Semiconductor and Component Test System Segment was accounted for 75.0% of total net sales.

In the Semiconductor & Component Test System segment, demand for SoC test systems remained at a high level due to progress in performance improvement of application processors, which are key components for smartphones, and the trend towards enhanced testing capabilities in line with improvements in the functionality of display driver ICs including touch sensor integration. As a result, both orders received and sales significantly outperformed results of the previous fiscal year. In the memory test business, although orders received declined from the third quarter onwards due to inventory adjustments for memory semiconductors, sales increased year on year, supported by progress in increasing capacity of DRAM and NAND flash memory.

As a result, net sales of Advantest's Semiconductor and Component Test System Segment for fiscal 2018 increased by ¥70,787 million, or 50.2%, compared to fiscal 2017 to ¥211,717 million, and segment income increased by ¥36,141 million, or 2.2 times, compared to fiscal 2017 to ¥65,058 million.

Mechatronics System Segment

In fiscal 2018, net sales of Advantest's Mechatronics System Segment accounted for 13.9% of total net sales.

In the Mechatronics System Segment, sales of device interface products, which are closely linked to our memory test business, were strong, buoyed by a high level of investment in test equipment by memory semiconductor manufacturers.

As a result, net sales of Advantest's Mechatronics System Segment for fiscal 2018 increased by ¥3,336 million, or 9.3%, compared to fiscal 2017 to ¥39,229 million, and segment loss improved by ¥2,026 million compared to a loss of ¥2,738 million for fiscal 2017 to a loss of ¥712 million.

Services, Support and Others Segment

In fiscal 2018, net sales of Advantest's Services, Support and Others Segment accounted for 11.1% of total net sales.

In the Services, Support and Others Segment, despite the trend towards inventory adjustments in the semiconductor market, semiconductor manufacturers maintained production at a high level resulting demand for our maintenance services remained stable.

As a result, net sales of the Services, Support and Others Segment increased by ¥1,048 million, or 3.4%, compared to fiscal 2017 to ¥31,514 million, and segment income increased by ¥45 million, or 1.1%, compared to fiscal 2017 to ¥4,242 million.

4) Sales by Geographic Markets

Advantest's overseas sales as a percentage of total sales was 94.7% for fiscal 2018 (93.2% in fiscal 2017).

Japan

Net sales in Japan increased by ¥699 million, or 4.9%, compared to fiscal 2017 to ¥14,881 million in fiscal 2018.

Asia (excluding Japan)

Net sales in Asia (excluding Japan) increased by ¥72,810 million, or 41.8%, compared to fiscal 2017 to ¥246,872 million in fiscal 2018. This increase was mainly due to a strong demand of SoC test systems for semiconductors used in smartphones such as application processors, and memory test systems for DRAM in Taiwan, of SoC test systems for display driver ICs, and memory test systems for DRAM in Korea, and of SoC test systems for display driver ICs in China.

Americas

Net sales in the Americas increased by ¥2,289 million, or 20.3%, compared to fiscal 2017 to ¥13,579 million in fiscal 2018.

Europe

Net sales in Europe decreased by ¥565 million, or 7.3%, compared to fiscal 2017 to ¥7,124 million in fiscal 2018.

(3) Analysis of Financial Condition and Cash Flows

1) Liquidity and Capital Resources

In accordance with Advantest's funding and treasury policy, which is overseen and controlled by its Accounting Department, Advantest funds its cash needs through cash from operating activities and cash and cash equivalents on hand, and is able to procure funds as necessary through issuance of debt and equity securities in domestic and foreign capital markets and through obtainment of bank loans.

If conditions in the semiconductor industry, and thus the semiconductor and component test system industry, experience a downturn in the medium term, Advantest may need to fund future capital expenditures and other working capital needs through the incurrence of issuance of debt or dilutive issuances of equity securities.

Advantest issued ¥25.0 billion in corporate bonds in Japan on May 25, 2012, of which ¥10.0 billion was repaid in May 2015 and ¥15.0 billion was repaid in May 2017.

Advantest issued Zero Coupon Convertible Bonds (Euroyen bonds with stock acquisition rights) in the aggregate principal amount of ¥30.0 billion on March 14, 2014. These were exercised by February 28, 2019 and no Bonds remain outstanding.

2) Cash Flows

Advantest's cash and cash equivalents balance increased by ¥15,970 million to ¥119,943 million as of March 31, 2019.

Cash flows from operating activities

Net cash provided by operating activities was ¥44,792 million, as a result of ¥66,211 million in income before income taxes, increase of ¥14,130 million in trade and other receivables and increase of ¥6,901 million in inventories, and an adjustment of noncash items such as depreciation. Net cash provided by operating activities increased by ¥16,538 million in fiscal 2018 compared to ¥28,254 million in fiscal 2017. The main reason for the increase in fiscal 2018 was increase income before income taxes.

Cash flows from investing activities

Net cash used in investing activities was ¥15,915 million in fiscal 2018, of which payments for acquisition of business was accounted for ¥11,098 million and purchases of property, plant and equipment was accounted for ¥5,891 million and others. The increase by ¥13,586 million compared to ¥2,329 million in fiscal 2017 was primarily due to the payments for acquisition of business in fiscal 2018.

Cash flows from financing activities

Net cash used in financing activities was ¥13,724 million in fiscal 2018, of which dividends paid was accounted for ¥13,786 million and others. The decrease by ¥1,513 million in fiscal 2018, compared to net cash used by financing activities in the amount of ¥15,237 million in fiscal 2017, which was the redemption of bonds of ¥15,000 million.

3) Assets, Liabilities and Equity

Total assets as of March 31, 2019 amounted to ¥304,580 million, an increase of ¥50,021 million compared to March 31, 2018, primarily due to an increase of ¥15,970 million in cash and cash equivalents, ¥13,857 million in trade and other receivables because of increase of sales and increase of ¥10,832 million in goodwill and intangible assets due to payments for acquisition of business and others.

The amount of total liabilities as of March 31, 2019 was ¥105,849 million, a decrease of ¥24,100 million compared to March 31, 2018, primarily due to decrease of ¥29,872 million in corporate bonds upon conversion to shares.

The amount of total equity or equity attributable to owners of the parent as of March 31, 2019 was ¥198,731 million, an increase of ¥74,121 million compared to March 31, 2018 primarily due to a decrease of ¥71,462 million in treasury shares upon conversion of corporate bonds and others.

Equity attributable to owners of the parent to assets ratio was 65.2% as of March 31, 2019, an increase of 16.2 percentage points from March 31, 2018.

(4) Progress of Mid-Term Plan

In fiscal 2018, the first year of the medium-term business plan, all KPIs in the base scenario exceeded the target value due to the expansion of the tester market and our significant share gains.

	FY2018	Mid-Term Plan (FY2018-FY2020 Average)	
		Conservative	Base
Sales	¥282.5B	¥230.0B	¥250.0B
Operating Margin	22.9%	15%	17%
Return on Equity (ROE)	35.3%	15%	18%
Earnings per share (EPS)	¥302	¥135	¥170

(5) Factors materially affecting Advantest's business results and financial condition

Factors materially affecting Advantest's business results and financial condition refer to "3. Risk Factors".

5. Material contracts

Not applicable.

6. Research and Development

In order to support technology on the leading-edge, Advantest undertakes research and development initiatives to develop products which play a central role in the area of measuring technologies to support electronics, information and communications, and semiconductor manufacturing. Advantest's research and development focuses on the development of new products and the improvement of existing products. In particular, in the Semiconductor and Component Test System Segment, a large and ongoing investment in research and development is necessary in order to maintain market competitiveness and to provide many types of products that meet the various needs of the customers. Advantest also conducts research of basic technologies. Advantest's expenditures for research and development were approximately ¥33.5 billion in fiscal 2017 and approximately ¥37.9 billion in fiscal 2018. Advantest employs over 1,000 engineers and other personnel in its research and development division.

The contents and achievements for fiscal 2018 of Advantest's research and development activities include:

Basic Technology

• development of constituent technologies in the field of terahertz waves;

• development of constituent technologies, including ASIC, high speed, energy-saving micro switches and high speed samplers used in semiconductor and component test systems and millimeter wave measuring instruments;

• development of test methods corresponding to next generation protocol and methods to detect timing jitters in high bit-rate signals; and

• development of compound semiconductor, including less-distortion or high-voltage large-current devices used for semiconductor and component test systems.

Semiconductor and Component Test System Segment

• development of semiconductor and component test systems that enable testing of super high speed memory semiconductors at actual motion speed;

• development of semiconductor and component test systems that enhance the functionality of testing of DRAM semiconductors and flash memory semiconductors and require less floor space;

• development of high speed memory burn in system to enable reliability and functionality testing on high parallel memory devices;

• development of semiconductor and component test systems that have the capacity to simultaneously test multiple complex SoC semiconductors with large pin counts and require less floor space;

• development of semiconductor and component test systems with specialized applications;

• development of semiconductor and component test systems for devices that operate at extremely high frequencies and for networks that carry extremely high density transmissions;

• development of high speed transmission technologies for high speed large pin counts and high speed transmission signal contact technologies;

• development of application software for interface between the semiconductor designing environment and semiconductor and component test systems, as well as development of software to analyze defective semiconductors; and

• development of systems that impress the physical stimulus on each sensor.

Mechatronics System Segment

• development of test handlers for memory semiconductors enabling measuring of multiple semiconductors with high throughput testing;

• development of test handlers for SoC semiconductors that respond to diversified device types and packages;

• development of real Active Thermal Control technology with high speed response and high reliability for high power devices;

• development of core technology; vision alignment for fine pitch and small package by high density device;

• development of the device interface (substrate/circuit technology) to measure high speed device;

• development of conveyance technology and the device interface which supports miniaturization and fine pitches of semiconductors;

• development of probe card for testing memory devices on wafer;

• development of advanced electron-beam metrology systems for leading-edge photomask to measure pattern critical dimension, and to review, analyze defects found on a sample; and

• development of advanced electron-beam lithography system enabling high-resolution/accuracy patterning on a wide variety of substrate.

Services, Support and Others Segment

• development of system level testing technologies and methods to test semiconductor components and modules to ensure compliance of the device in its final integrated product environment.

Advantest has research and development facilities in Japan, Europe, the U.S. and China.

Advantest promotes joint development efforts between its various research facilities to capitalize on the capabilities of its researchers worldwide. Advantest's research and development team for semiconductor and component test systems in Japan works closely with Advantest research and development teams in Europe and the U.S. for the development of hardware and software.

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Corporate Governance is posted on the Company's website.
URL: https://www.advantest.com/en/investors/management-policy/corporate-governance