【Notes for consolidated financial statements】

1. Reporting entity

NTT DATA Corporation (hereafter referred to as “NTT DATA”) is a company located in Japan. The consolidated financial statements comprise NTT DATA and its subsidiaries (hereafter referred to as “NTT DATA Group”). NTT DATA Group conducts business mainly in 5 segments: “Public & Social Infrastructure,” “Financial,” “Enterprise & Solutions,” “North America,” and “EMEA & LATAM.”

At the same time, NTT DATA Group belongs to the NTT Group whose ultimate parent company is NIPPON TELEGRAPH AND TELEPHONE CORPORATION.

2. Basis of preparation

(1) Matters regarding compliance with and first-time adoption of IFRS

The consolidated financial statements of NTT DATA Group meet the requirements of “Specified Companies Complying with Designated International Accounting Standards” pursuant to Article 1-2 of the “Regulation on the Terminology, Forms, and Preparation Methods of Consolidated Financial Statements” (Ordinance of Ministry of Finance No. 28 of 1976). Therefore, according to Article 93 of the Order on Consolidated Financial Statements, they are prepared in compliance with International Financial Reporting Standards (hereafter referred to as “IFRS”).

NTT DATA Group has adopted IFRS for the first time since the consolidated accounting period of the first quarter of the fiscal year ended March 31, 2019 starting from April 1, 2018, and the annual consolidated financial statements of the fiscal year ended March 31, 2019 are the first consolidated financial statements prepared in compliance with the IFRS. The date of transition to IFRS is April 1, 2017. The impact of the transition to IFRS on NTT DATA Group’s financial position, business results and cash flow situation on the transition date to IFRS and compared fiscal years is described in “36. First-time adoption of IFRS.”

NTT DATA Group’s accounting policy complies with IFRS effective as of March 31, 2019, excluding IFRS provisions not applied earlier and exemption provision approved by the provision of IFRS 1 “First-time Adoption of International Financial Reporting Standards” (hereafter referred to as “IFRS 1”).

This consolidated financial statement was approved by the Board of Directors on June 20, 2019.

(2) Basis for measurement

NTT DATA Group’s consolidated financial statements is prepared based on cost, excluding certain items such as financial instruments measured at fair value, and assets and liabilities recognized in relation to retirement benefit plans, as mentioned in “3. Significant accounting policies.”

(3) Functional currency and presentation currency

NTT DATA Group’s consolidated financial statements are presented in Japanese yen, which is the functional currency of NTT DATA, and amounts are rounded to the nearest million yen.

(4) Changes in accounting policies

From the beginning of the period (April 1, 2018), the NTT DATA Group has adopted IFRS 9 “Financial Instruments” issued in July 2014 (hereafter referred to as “IFRS 9”). In accordance with the application of exemption provision of IFRS 7 “Financial Instruments: Disclosures” (hereafter referred to as IFRS 7) based on IFRS 1 and IFRS 9, we do not restate past periods.

On the date of transition to IFRS and in the previous fiscal year, we have complied with an accounting standard which is generally accepted as fair and valid in Japan (hereafter referred to as “JGAAP”), and has processed the difference of carrying amounts as of the beginning of the current term under JGAAP and IFRS 9 as adjustments to retained earnings, other capital components and non-controlling interests.

Please refer to “3. Significant accounting policies, (4) Financial instruments” for important accounting policies under JGAAP on the date of transition and in the previous fiscal year as well as in the fiscal year ended March 31, 2019.

In applying IFRS 9, there are provisions of exemption or prohibition of retrospective application of IFRS 9. The main details of the provisions are as described below:

- ・Prohibition of retrospective judgment regarding classification of financial assets
- ・Exemption of retrospective application regarding specification of financial assets recognized in the past
- ・Prohibition of retrospective application of provisions regarding cancelation of recognition of financial assets and financial liabilities
- ・Cancelation of hedge accounting based on JGAAP and fulfillment of hedge requirements under IFRS 9 upon application date of IFRS 9

Impact from the changes in accounting policies

The changes in accounting policies are applied to financial assets/liabilities held by NTT DATA Group at the beginning of the current period.

Major cumulative impact amounts as of the beginning of the current period due to the application of IFRS 9 are as described below. Without these, the impact of the changes of accounting policies is minor. Also, the impact on "current net income" and "current net income per share" of the fiscal year under review is minor.

(Unit: million yen)

	Other financial assets	Deferred tax assets	Retained earnings	Other asset component
Hedge accounting	840	(77)	9	172
Fair value valuation of unlisted stocks	10,000	(3,083)	3,407	3,182
Total	10,840	(3,160)	3,416	3,354

3. Significant accounting policies

NTT DATA Group consistently applies the following accounting policies for the period stated in NTT DATA Group's consolidated financial statements (including consolidated statement of financial position on the date of transition), except for the accounting policies described in "(4) Financial instruments."

(1) Basis for consolidation

① Subsidiaries

Subsidiaries are companies over which NTT DATA Group has control. By "control," we mean that we have everything from power over investees to exposure or rights to variable returns arising from involvement with the investees, and the ability to affect those returns through power over investees.

Financial statements of the subsidiaries are included in NTT DATA Group's consolidated financial statements from the date of acquisition of control to the date of loss of control. In case accounting policies adopted by a subsidiary differ from those of NTT DATA Group, adjustments are made to financial statements of the subsidiary as required. Debt and credit balance and transactions within the group as well as unrealized gains and losses arising from transactions within the group are removed upon preparation of the financial statements.

Non-controlling interests consist of interests based on the acquisition-date fair value of identifiable assets and assumed liabilities of acquiree on the original date of acquisition of control (hereafter referred to as "identifiable net assets") and changes of non-controlling interests from the date of acquisition of control. Comprehensive income of subsidiaries is attributed to interests attributable to our shareholders and non-controlling interests, even if the balance of non-controlling interests is negative.

Changes of interests in subsidiaries over which control is not being lost are processed as capital transaction. NTT DATA Group's interests and the carrying amount of non-controlling interests are adjusted by reflecting the changes of interests in subsidiaries. Difference between the amount after adjusting non-controlling interests and fair value of consideration paid or consideration received are directly recognized as a capital and attributed to our shareholders.

In case NTT DATA Group loses control of a subsidiary, we stop recognizing the subsidiary's assets and liabilities, non-controlling interests related to the subsidiary and other items of owner's equity. Gains and losses occurring as a result, are recognized as profit or loss. In case of retaining interests in the former subsidiary, the interests are measured at fair value on the date of loss of control.

② Associates

Associates are companies that NTT DATA Group does not have control or joint control of though we have important influence on their financial and business policies. In case NTT DATA Group holds 20% to 50% of voting rights of other companies, we include these companies as associates in principle. Even if the voting rights held by NTT DATA Group is less than 20%, if we judge that we have important influence, such as by dispatching an officer, the company is included in associates.

Investments in associates are recognized as cost upon acquisition, and are processed using equity method from then on. In applying the equity method, we correct the amount of investment for NTT DATA Group's interests in profit or loss and other comprehensive income of the associates accounted for by the equity method after the original recognition until the day we lose important influence and include the amount in our consolidated financial statements. In case the loss of the associates accounted for by the equity method exceeds investment amount of NTT DATA Group for the companies, we reduce the amount of long-term investment, which practically is part of the net investment in the companies, to zero, and do not recognize further loss, except in cases in which NTT DATA Group assume legal obligation or constructive obligation for the companies, or make a payment in their places. Unrealized gains arising from transactions between NTT DATA Group and associates are deducted from investment with NTT DATA Group's interests as the upper limit. Unrealized losses are processed in the same way as unrealized gains unless there is no evidence of impairment occurring.

The amount of cost of investment amount for the associates exceeding NTT DATA Group's interests in identifiable net assets recognized on the date of acquisition is included in the carrying amount of investment in the associates. For the said exceeding amount, impairment test is conducted in case there is an objective evidence suggesting the possibility of impairment of investment.

③ Reporting date

In the consolidated financial statements, financial statements of subsidiaries whose account closing date differs from NTT DATA Group's because it is impossible in practice to set it on the same date as ours due to relations, etc. with other shareholders, and investment in associates accounted for by the equity method are included. Account closing date of such subsidiaries and associates accounted for by the equity method is basically at the end of December. Adjustments are made for important transactions or impact of events that have occurred between the account closing date of subsidiaries and associates accounted for by the equity method and our account closing date.

(2) Business combinations

Business combination is processed using acquisition methods on the date of acquisition of control.

Acquisition price of a business combination is measured as a total of the assets transferred in exchange for control of acquired company, assumed liabilities, and the fair value of an equity instrument issued by NTT DATA on the date of acquisition. In case the said acquisition price exceeds the net amount of identifiable net assets of the acquired company, the difference will be recognized as goodwill in the consolidated statements of financial position and gains in case of not exceeding are immediately recognized as profit or loss. Also, in case of a business combination achieved in phases, interests in acquired companies held by NTT DATA Group before are remeasured by the fair value on the date of acquisition, and gains or losses occurred are recognized as profit or loss.

NTT DATA Group selects whether to measure non-controlling interests by fair value or by proportional ratio of the non-controlling interests in identifiable net assets per individual business combination transactions.

In case accounting at the beginning of business combination is not completed by the end of a fiscal year, NTT DATA Group reports items that are not completed with a provisional amount. Regarding facts and situations that existed as of the date of acquisition, which are obtained later for the first time, provisional amount recognized on the date of acquisition is corrected retrospectively, as correction of measurement period, in case they are determined to have had an impact on the recognized amount of business combination should they have been known as of the date of acquisition.

The measurement period is one year at the longest from the date of acquisition.

Business combinations related to companies or businesses under common control (business combination in which all combined companies or businesses are ultimately controlled by the same parties, which is not temporary, before and after the business combination) are processed based on carrying amount.

NTT DATA applies the exemption provision of IFRS 1 and selects the method of applying IFRS 3 “Business Combinations” (hereafter referred to as IFRS 3) from the date of transition.

(3) Foreign currency translation

① Foreign currency denominated transactions

The financial statements of NTT DATA Group companies are prepared with the functional currency of the companies. Transactions in currencies other than the functional currencies (foreign currency) are converted using the exchange rate on the date of transaction.

Foreign currency monetary items are translated into the functional currency using the closing rate. Non-monetary items that are measured at fair value in a foreign currency are translated into the functional currency using the exchange rate at the date the fair value was measured.

The exchange differences resulting from the translation and settlement are recognized in profit or loss. However, equity instruments measured at fair value through other comprehensive income and exchange differences resulting from the hedge method of cash flow hedge within effective range are recognized in other comprehensive income.

② Foreign operation

In preparing the consolidated financial statements, assets and liabilities of a foreign operation (including goodwill and fair value adjustment arising from acquisition) are translated into Japanese yen using the closing rate.

For revenue, expenses, and cash flow, unless exchange rate during the period has not changed significantly, average exchange rate of the corresponding period is used to translate into Japanese yen. Exchange differences resulting from the translation of foreign operation’s financial statement are first recognized in other comprehensive income, after which they are accumulated in other items of owner’s equity. In case control of or important influence on a foreign operation is lost, accumulated exchange differences related to the foreign operation are reclassified in profit or loss in the reporting period of disposal as part of gains or losses related to the disposal. NTT DATA applies the exemption provision of IFRS 1, and reclassifies all accumulated exchange differences on the date of transition to retained earnings.

(4) Financial instruments

NTT DATA Group had applied JGAAP on the transition date to IFRS and in the fiscal year ended March 31, 2018 for accounting in relation to financial instruments pursuant to exemption provision under IFRS 1 relating to IFRS 9, and applies IFRS 9 in the fiscal year ended March 31, 2019.

① Accounting policies of the day of transition and fiscal year ended March 31, 2018

(a) Financial instruments

Financial instruments are initially recognized upon signing a contract that provides the contractual rights of financial assets.

Financial assets are derecognized upon execution of contractual rights, loss of rights or transfer of control of the rights. In case the financial assets have met the requirements of recognition, difference between the carrying amount and the payment amount as consideration for the assets is recognized in profit or loss.

<u>Receivables</u>

Trade receivables, loan receivables, and other financial assets are evaluated at a value after deducting allowance for doubtful accounts calculated based on estimated bad debt losses from cost. However, in case loan receivables are acquired at a value lower or higher than the loan receivable amount, and if the nature of difference between cost and loan receivable amount is acknowledged as interest rate adjustment, they are evaluated with an amount after deducting allowance for doubtful accounts calculated based on estimated bad debt losses from the value calculated based on amortized cost method.

Securities

Securities are classified as held-to-maturity securities and available-for-sale securities.

Held-to-maturity securities

Held-to-maturity securities are evaluated at a value calculated based on amortized cost method in case they are acquired at a value lower or higher than the securities amount.

Available-for-sale securities

Available-for-sale securities with market value are evaluated by market price at the end of the term, etc. and changes in valuation difference are recognized with an amount after tax effect in other comprehensive income on the consolidated statement of comprehensive income. Cost of sale is accounted for using moving-average method. In case market value declines significantly, except for cases in which recovery is expected, they are evaluated by the market value and loss of valuation difference is recognized in the consolidated statement of profit or loss. Available-for-sale securities whose market value is recognized as extremely difficult to grasp are evaluated at cost based on moving-average method. When actual values declined significantly due to deterioration of financial position of the issuing company, considerable reduction is made, and the loss of valuation difference is recognized on the consolidated statement of profit or loss.

(b) Allowance for doubtful accounts

In calculating estimated bad debt losses, loan receivables are classified into three categories: ordinary receivables, receivables with default possibility, and claims provable in bankruptcy, claims provable in rehabilitation and other, depending on financial position and business results.

For ordinary receivables, calculated amount according to historical credit loss ratios. For receivables with default possibility and claims provable in bankruptcy, claims provable in rehabilitation and other, recoverability is considered individually, and estimated uncollectible amount is recorded.

(c) Financial liabilities

Financial liabilities are initially recognized upon signing a contract which generates the contractual liability of the financial liabilities. They are derecognized upon fulfillment of contractual obligations, expiration of obligations, or exemption from the position of a party primarily liable of the financial liabilities.

Trade payables, corporate bonds and loans, as well as other financial liabilities are evaluated at payable amount. However, in case such as issuing corporate bonds at a lower or higher value than the corporate bond amount, when the amount based on income differs from payable amount, they are evaluated at a value calculated based on amortized cost method.

(d) Derivatives and hedge accounting

NTT DATA Group conducts derivative transactions for the purpose of avoiding future market price (foreign exchange/interest rate) fluctuation risks (market risk) and does not conduct transactions for trading purpose.

Hedging instrument and hedged item

As hedging instruments, we use forward exchange contracts, currency swaps, currency option swaps, and interest rate option swaps (or combination of these). The hedged items are assets or liabilities with risks of changing market price or future cash flow due to changes in market price such as foreign exchange rate/interest rate, etc.

Hedge policy

For assets and liabilities with foreign exchange risk, our basic policy is to hedge the risk using forward exchange contracts, currency swap, etc. For assets and liabilities with interest rate risk, we basically hedge interest rate risk using interest rate swap, etc.

Assessment method of hedging effectiveness

With regard to hedging instruments and hedged items, hedging effect is verified for each transaction every quarter (end of March, June, September, and December). However, this verification is omitted in case conditions such as principal, interest rate, and period are the same for assets or liabilities of hedged item and derivative transactions, as the hedging effect is extremely high.

Derivative transactions to which hedge accounting is applied

Deferred hedge accounting is used.

However, we use designated hedge accounting for monetary assets and liabilities in foreign currencies with forward exchange contract attached. Also, among interest rate swap transactions, for transactions subject to exceptional processing of interest rate swap, we use this exceptional accounting.

② Accounting policies for the fiscal year ended March 31, 2019

(a) Financial assets

Financial assets are classified as those measured at fair value through profit or loss at initial recognition and those that are measured with debt instruments measured at fair value through other comprehensive income and amortized cost. NTT DATA Group initially recognizes trade and other receivables measured at amortized cost on the day they occurred and on the day of transaction for other financial assets.

If the contractual rights to the cash flows of the financial asset expire, or if the contractual rights to receive the cash flows of the financial asset are transferred and substantially all the risks and rewards of ownership of the financial asset are thereby transferred, the financial asset is derecognized.

Financial assets measured at amortized cost

Financial assets that satisfy both of the following conditions are classified as financial assets measured at amortized cost:

・The financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows.
・The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

On initial recognition, these financial assets are measured at fair value plus any transaction costs directly attributable to the acquisition of the financial asset. After initial recognition, they are measured at amortized cost based on effective interest method. However, trade receivables that do not include significant financial elements are initially measured at their transaction price.

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

Financial assets that satisfy both of the following conditions are classified as debt instruments measured at fair value through other comprehensive income:

・The financial asset is held within a business model whose objective is achieved by both collecting and selling contractual cash flows.
・The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

At the time of initial recognition, these debt instruments are measured at fair value plus any transaction costs directly attributable to the acquisition of the debt instrument. After initial recognition, they are measured at fair value and any subsequent changes in the fair value are recognized in other comprehensive income. Cumulative gains or losses previously recognized in other comprehensive income are reclassified to profit or loss when the asset is derecognized. In the reporting year, there were no debt instruments measured at fair value through other comprehensive income.

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

Of financial assets that are not classified as those measured at amortized cost or at fair value through other comprehensive income and are measured at fair value through profit or loss, subsequent changes in the fair value of an investment in an equity instrument that is not held for trading can be irrevocably chosen to be presented in other comprehensive income. NTT DATA Group designates this for each financial instrument.

At the time of initial recognition, these equity instruments are measured at fair value plus any transaction costs directly attributable to the acquisition of the equity instrument. After initial recognition, they are measured at fair value and any subsequent changes in the fair value are recognized in other comprehensive income. Cumulative other comprehensive income is transferred to retained earnings and not to profit or loss, when these financial assets are derecognized. Dividends are recognized in profit or loss.

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

Financial assets other than those mentioned above are classified as financial assets measured at fair value through profit or loss.

At the time of initial recognition, these financial assets are measured at fair value, and any transaction cost directly attributable to the acquisition of the financial assets are recognized in profit or loss when incurred. After initial recognition, they are measured at fair value, with any subsequent changes in the fair value recognized in profit or loss.

“Net changes in fair value of financial assets of FVTPL” includes changes in fair value, interest income, dividend income, and foreign exchange translation gain or loss.

(b) Impairment of financial assets

NTT DATA Group determines the amount of impairment loss for financial assets measured at amortized cost, financial assets measured at fair value through other comprehensive income (excluding equity instruments), and contract assets, based on the expected credit losses.

In recognizing and measuring the expected credit losses, NTT DATA Group uses reasonable and supportable information available at the reporting date on past events, current situations and forecast on economic conditions in the future. NTT DATA Group examines the availability of objective evidence regarding existence of impairment by individual evaluation when it is individually important, and for other cases, by collective evaluation as credit characteristics are the same. Objective evidences indicating that the financial asset is being impaired include default and delinquency by the debtor, a sign, etc. of the debtor’s or the issuer’s bankruptcy.

If, at the end of the fiscal year, the credit risk on a financial instrument has not increased significantly since initial recognition, the loss allowance is measured using the amount of the expected credit losses from a possible default within 12 months after the reporting date (12-month expected credit losses). On the other hand, if, at the end of the fiscal year, the credit risk on a financial instrument has increased significantly since the initial recognition, the loss allowance is measured using the amount of the expected credit losses from all possible defaults over the expected life of the financial instrument (lifetime expected credit losses).

Notwithstanding the above, the amounts of loss allowance for trade and other receivables (lease receivables) and contract assets that do not include significant financial elements are always measured using the amount of the lifetime expected credit losses. The trade receivables, etc. including significant financial elements do not exist.

NTT DATA Group determines that the credit risk on a financial asset has increase significantly since initial recognition, in case the payment due date stipulated in the contract in principle is exceeded by 30 days, and in case it is exceeded by 90 days, determines that a default is occurring. In case of a default, or if an evidence of impairment such as significant financial difficulty of an issuer or a debtor exists, the Group determines that the credit is being impaired. When it is reasonably determined that the financial asset is uncollectible despite taking various recovery measures, the Group directly amortizes the carrying amount of the financial asset.

(c) Financial liabilities

Financial liabilities are classified as those that are measured at fair value through profit or loss at their initial recognition and those that are measured as amortized cost. NTT DATA Group initially recognizes financial liabilities measured at amortized cost on the date of issuance, and on the transaction date for other financial liabilities.

A financial liability is derecognized when it is extinguished, i.e., when obligation specified in the contract is discharged, canceled, or expired.

Financial liabilities measured at amortized cost

Non-derivative liabilities are classified as financial liabilities measure at amortized cost. At initial recognition, these financial liabilities are measured at fair value minus any transaction costs directly attributable to the issuance of the liability. After initial recognition, such liabilities are measure at amortized cost applying the effective interest rate method.

Financial liabilities measured at fair value through profit or loss

Financial liabilities measured at fair value through profit or loss are measured at fair value at the time of initial recognition. These financial liabilities are measured at fair value after initial recognition, with any subsequent changes recognized in profit or loss. In the reporting fiscal year, there are no corresponding non-derivative liabilities measured at fair value through profit or loss.

(d) Derivatives and hedge accounting

NTT DATA Group uses derivatives and non-derivative instruments such as foreign currency deposits, mainly for hedging foreign currency risk and interest rate risk. The Group does not conduct derivative transactions for purposes other than risk hedging, except for those individually determined according to objectives of the business.

At the inception of a hedging transaction, NTT DATA Group officially designates and documents the hedging relationship and hedging based on risk management policies. This documentation includes hedging instrument, the items being hedged, assessment method of hedging effectiveness, analysis of the cause of non-effective portion and determination method of hedging ratio, etc.

NTT DATA Group continuously evaluates whether the hedge relationship is effective for the future, when and after hedging designation. Specifically, the Group determines that the hedge is effective when all of the following conditions are satisfied.

・Economic relationship exists between hedged item and the hedging instrument
・The impact of credit risk is not significantly superior to value changes arising from the economic relationship
・Hedging ratio is same as the ratio arising from actual quantity of hedged item and hedging instrument

Derivatives are initially recognized at fair value. After initial recognition, they are measured at fair value and subsequent changes are accounted for as follows:

Cash flow hedges

With regard to hedges satisfying requirements regarding hedge accounting, the effective portions of the changes in the fair value of derivatives that are hedging instruments are recognized as other comprehensive income, and are accumulated in other components of equity. The cumulative amount recognized in other components of equity is transferred to profit or loss at the timing when the transaction for hedging impacts profit or loss, but is included in the measurement of the cost of non-financial asset for hedging, in case the hedged item is a forecast transaction. Spot-forward currency difference changes, etc. are accumulated in other components of equity as a hedge cost.

Derivatives not designated as hedging instruments

Changes in the fair value of derivatives are recognized in profit or loss.

(5) Cash and cash equivalents

Cash and cash equivalents consist of cash, deposits that can be withdrawn as required, and short-term investments that can be readily converted to cash and only have an insignificant risk of changes in value whose term to maturity falls within three months of the acquisition date.

(6) Inventories

Inventories consist of products, work in progress, and supplies, which are measured at the lower of cost and net realizable value. Work in progress is mainly attributable to purchase cost related to equipment sales, etc. and is determined by the specific identification method. The cost of products and supplies is mainly determined on a first-in, first-out basis.

Net realizable value is calculated by deducting estimated cost required until completion and that required for selling from estimated selling price in the ordinary course of business.

(7) Property, plant and equipment

Property, plant and equipment are measured using the cost model, which deducts accumulated depreciation and accumulated impairment losses from cost. The cost includes expenses directly attributable to the acquisition of an asset, cost of dismantling and removal of the asset and the cost of restitution, and the cost of borrowings to be capitalized.

Depreciation is calculated using the straight-line method over the estimated useful life of each component. The depreciable amount is calculated by deducting the residual value of an asset from the cost of the asset. Land and construction in progress are not depreciated.

The estimated useful lives of major items of property, plant and equipment are as follows:

Data communication facilities 3 to 8 years
Buildings and structures 10 to 60 years
Machinery and delivery equipment 3 to 15 years
Tools, instrument, and equipment 4 to 15 years

NTT DATA Group reviews the depreciation methods, estimated useful lives, and residual values on each reporting date. Any changes are adjusted as changes in accounting estimate on a prospective basis.

(8) Goodwill and intangible assets

① Goodwill

NTT DATA Group measures goodwill arising from acquisition of subsidiaries by deducting accumulated impairment losses from cost. Goodwill is not amortized, but tested for impairment whenever there is an indication of impairment in cash-generating units to which goodwill is allocated, and at the same time of each reporting period irrespective of whether there is any indication of impairment. Please refer to “3. Significant accounting policies, (2) Business combinations” for initial measurement of goodwill, and “3. Significant accounting policies, (11) Impairment” for impairment.

② Research and development expenses

Expenditures for research activities are recognized in profit or loss when they occur. Of expenditures for development activities, all those meeting requirements of asset recognition are measured as the sum of expenditures incurred from the date when requirements for asset recognition are met, to the date when development is completed and are recorded on the consolidated statement of financial position. NTT DATA Group primarily develops system operated software and computer software.

③ Other intangible assets

Intangible assets are measured using the cost model, which deducts the accumulated amortization and accumulated impairment losses from the cost.

Intangible assets individually acquired are measured at cost at initial recognition. Intangible assets acquired through business combinations are recognized separately from goodwill at the time of initial recognition and are measured at fair value as of the date when control is obtained.

Intangible assets whose estimated lives can be determined are mainly software for communication services based on contracts with specific clients and computer software for own use for providing services of NTT DATA Group. Software for data communication services is amortized using the straight-line method over the fee payment period based on the contract with a client, and computer software for own use are amortized using the straight-line method over the estimated useful life of the software.

Estimated useful lives of each intangible asset item are as follows:

Software 4 to 14 years

Other intangible assets 7 to 21 years

NTT DATA Group reviews the amortization method, useful lives, and residual values of the assets on every reporting date. Any changes are adjusted as changes in accounting estimates on a prospective basis.

(9) Leases

NTT DATA Group determines whether or not a contract constitutes a lease or contains a lease by considering the actual substance of the contract at the commencement date of the contract.

Lease transactions are classified as finance leases when they transfer to the lessee substantially all the risks and rewards incidental to ownership of the asset, while other lease transactions are classified as operating leases. Substantially all the risks and rewards incidental to ownership of the asset are deemed to have been transferred if the lease term accounts for the majority of the asset's economic life, or if the present value of the minimum lease payment is approximately equivalent to the full fair value of the asset. The lease term is set as the sum of the non-cancellable period and periods during which renewal option is considered reasonably certain to be exercised on the commencement date of the lease.

① As lessee

Lease assets and lease liabilities related to finance lease are initially recognized at the lower value of the fair value of the lease asset at the commencement date and the present value of the total minimum lease payments. After initial recognition, the accounting treatment for the asset will be based on the accounting policies applicable to the asset. Assets held under finance leases are depreciated over their estimated useful lives in case where transfer of ownership is certain by the end of the lease term, or over the shorter of the lease term and the estimated useful life of the lease asset in cases where transfer is not certain. Lease payments are allocated to finance costs and repayments of lease liabilities of each term so that they produce a constant periodic rate of interest on the remaining balance of the lease liability each term. The total lease payment payable over the term of the operating lease is recognized as an expense using the straight-line method over the lease term.

② As lessor

NTT DATA Group leases data communication facilities, etc. For finance lease, the net investment in the lease is recognized as a lease receivable (trade and other receivables), and the total lease payment receivable is divided into principal portion and portion equivalent to interest. The portion allocated to interest on the lease payment receivable is calculated using interest method. In case the purpose of a finance lease is mainly to sell a property, the lower of the fair value of the lease asset and the present value discounting total minimum lease payments incurred to lessor by market interest rate is recognized as net sales, and the amount resulting from deducting the present value of unguaranteed residual value from the cost of the lease asset (carrying amount in case it differs from the carrying amount) is recognized as sales cost.

The total lease payment receivable over the term of the operating lease is recognized as revenue using the straight-line method.

(10) Investment property

Investment property is real estate held to earn rentals, or capital gains, or both. It does not include property sold in the ordinary course of business, property used in the production or sales of goods or services, or property used for any other administrative purposes.

NTT DATA Group measures investment properties at cost upon initial recognition, and subsequently uses the cost model, which deducts accumulated depreciation and accumulated impairment losses from cost.

Investment properties are depreciated using the straight-line method over the estimated useful lives of the properties. The estimated useful lives are from 10 to 60 years. NTT DATA Group reviews the depreciation method, estimated useful lives, and residual values at every reporting date.

(11) Impairment

① Impairment of property, plant and equipment, intangible assets, and investment properties

NTT DATA Group determines whether there are any signs indicating the possibility of impairment of property, plant and equipment, intangible assets, and investment properties at the end of each year. If there are signs of impairment, the recoverable amounts are estimated. If the recoverable amount of individual assets cannot be estimated, an estimate is made of the recoverable amount for the cash-generating unit to which the asset belongs. A cash-generating unit is the smallest unit of an asset group that generates cash inflows that are largely independent of the cash inflows from other assets or asset groups. In NTT DATA Group, an asset group that functions together mainly as a system is deemed as a cash-generating unit.

The recoverable amount is calculated as the higher of either the fair value less disposal costs or the value in use. The value in use is calculated by discounting estimated future cash flows to present value using a discount rate that reflects the time value of money and the inherent risk of the asset.

In the event that the recoverable amount of the asset or the cash-generating unit falls below the carrying amount, the carrying amount is reduced to the recoverable amount and impairment loss is recognized as profit or loss.

At the end of each year, NTT DATA Group assesses whether there is any sign that an impairment loss recognized in prior years in assets other than goodwill may no longer exist or may have decreased. If any such sign exists, NTT DATA Group estimates the recoverable amount of the asset or cash-generating unit. In the event that the recoverable amount exceeds the carrying amount of the asset or the cash-generating unit, the impairment loss is reversed, and is recognized in profit or loss with the upper limit set at the lower of (i) the recoverable amount and (ii) the carrying amount net of amortization or depreciation that would have been determined if no impairment loss had been recognized in prior years.

② Impairment of goodwill

Goodwill is allocated to cash-generating units of groups of cash-generating units that are expected to enjoy the benefits resulting from the synergies of a business combination. Goodwill is tested for impairment whenever there is a sign of impairment in the cash-generating units, and at the same time every reporting period irrespective of whether there is any sign of impairment. At the end of each year, NTT DATA Group determines whether there is any sign indicating the possibility of impairment of goodwill. If the recoverable amount of the cash-generating unit is less than its carrying amount in the impairment test, the impairment loss is deducted from the carrying amount of goodwill allocated to the cash-generating units or groups of cash-generating units. It is then deducted from the carrying amount of each asset in proportion to the carrying amounts of other assets in the cash-generating unit or groups of cash-generating units.

Impairment losses for goodwill are recognized in profit or loss and are not reversible in the subsequent periods.

(12) Employee benefits

① Defined contribution plans

Contribution to the defined contribution plans are recognized as expenses in the period in which an employee provided a service. Unpaid contributions are recognized as liabilities.

② Defined benefit plans

Liabilities recognized in connection with the defined benefit plans (defined benefit liabilities) are determined by deducting the fair value of the plans assets from the present value of the defined benefit obligations as of the end of the fiscal year.

Defined benefit obligations are calculated by an independent pension actuary using the projected unit credit method. Defined benefit costs are composed of service costs, net interest on the net amount of defined benefit liabilities (assets) and remeasurements of the net amount of defined benefit liabilities (assets). Service costs and net interest are recognized in profit or loss. Net interest amounts are calculated by multiplying the net amount of defined benefit liabilities (assets) at the beginning of the year by a discount rate used to measure the defined benefit obligations at the beginning of the year.

Remeasurements of the net defined benefit liabilities (assets) are recognized in other components of equity, and are transferred directly from other components of equity to retained earnings without being recognized in profit or loss when incurred.

③ Short-term employee benefits

Short-term employee benefits are recognized as expenses upon provision of related services without discount calculation.

NTT DATA Group has contractual obligations to pay bonuses and paid leave expenses and recognizes the estimated amount of payment based on those plans as liability.

(13) Provisions

Provisions are recognized in cases where NTT DATA Group has present legal or constructive obligations as a result of past events, as well as where it is probable that the obligations will be required to be settled and when it is possible to reliably estimate the amount of the obligation.

Provisions are measured by discounting the estimated future cash flows to the present value using interest rate that reflects the time value of money and specific risks of the liability, taking into account the risks and uncertainties related to the obligation as of the fiscal year end.

NTT DATA Group mainly recognizes provision for loss on orders received in provision.

Provision for loss on orders received in provision

In order to prepare for the future loss related to contracts on orders received, an estimated amount of loss related to the contracts on orders received as of the fiscal year end is calculated individually, and recognized as provision for loss on orders received.

(14) Equity

① Common stock

Common stocks issued by NTT DATA are classified as equity, and the issue price is included in capital stock and capital surplus. Incidental costs related to issuance of common stocks are deducted from equity with an amount after deducting tax effect.

② Treasury shares

Treasury shares are recognized at cost and are also a deduction item of equity. In case treasury shares are sold, consideration received are recognized as increase of equity, and the difference between the carrying amount and consideration received is included in capital surplus.

(15) Revenues

With regard to transactions covered by IFRS 15 “Revenue from Contracts with Customers” (hereafter referred to as ”IFRS 15”), NTT DATA Group recognizes revenue at the amount which reflects the consideration to which NTT DATA Group expects to be entitled in exchange for transfer of goods or services to clients based on the following five-step approach.

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

Step 2: Identify the performance obligation in the contract.

Step 3: Determine the transaction price

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

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

With regard to the transaction concerned, NTT DATA Group determines at the start of a contract, whether the performance obligation is to be satisfied over time and performance obligations that are not to be satisfied over time are considered as those to be satisfied at a point in time.

Performance obligations to be satisfied over time are recognized in earnings over the same period of based on the progress concerning satisfaction of performance obligations measured at the end of a reporting period if their value of order or total cost incurred until completion can be reliably estimated. For measuring the progress, the input method based on cost incurred (cost-to-cost method) is used. If value of order or total cost incurred until completion cannot be reliably estimated, earnings are recognized at the same amount as portions of cost incurred that are deemed to be highly recoverable (cost recovery method).

As considerations for transactions are received within a year of satisfying performance obligations in principle, an easier method in practice is used, and important financial elements are not adjusted.]

(16) Finance income and finance costs

Finance income consists of interest income, dividend income, exchange gains, gains on changes in fair value of derivatives, and transfer of amounts recognized in the past in other comprehensive income based on hedge accounting, etc. Interest income is recognized by effective interest method when incurred. Dividend income is recognized on the day the entitlement of NTT DATA Group is determined.

Finance costs consist of interest expenses, interest cost on lease obligations, exchange losses, losses on changes of fair value of derivatives, and transfer of amounts recognized in the past in other comprehensive income based on hedge accounting, etc. Interest expenses are recognized by effective interest method when incurred.

(17) Income taxes

Income taxes consist of current taxes and deferred taxes. Income taxes are recognized in profit or loss, except for taxes arising from business combinations and those arising from items recognized in other comprehensive income or directly in equity.

① Current taxes

Current taxes are estimated income tax payable or refund tax receivable on taxable income or loss of current term adjusted with income tax payable and tax refund receivable until the previous year. Current taxes are measured as the amount expected to be paid to or recovered from, the tax authorities. Tax calculations use the tax rates and tax laws that have been enacted or substantially enacted by the end of the fiscal year.

② Deferred taxes

Deferred taxes consist of deferred tax assets and deferred tax liabilities. Deferred tax assets are recognized to the extent that it is probable that deductible temporary differences and the unused tax losses and unused tax credits can be utilized against the future taxable profit. Deferred tax liabilities are recognized for taxable temporary differences. A reassessment of the recoverability of deferred tax asset is conducted at the end of the fiscal year.

Deferred tax assets are not recognized for temporary differences arising from the initial recognition of an asset or a liability in a transaction that is not a business combination and that does not affect either accounting profit or taxable profit. Deferred tax liabilities are recognized for deductible temporary differences arising from investments in subsidiaries and associates only if it is probable that the temporary difference will reverse in the foreseeable future and taxable profit will be available against which the temporary difference can be utilized.

Deferred tax liabilities are generally recognized for taxable temporary differences, with the exception of the temporary differences listed below:

・temporary differences arising from the initial recognition of an asset or a liability in a transaction that is not a business combination and that does not affect wither accounting profit or taxable profit
・taxable temporary differences arising from the initial recognition of goodwill
・taxable temporary differences arising from investments in subsidiaries and associates for which the timing of the reversal of the temporary difference can be controlled and it is probable that the temporary difference will not be reversed in the foreseeable future

Deferred tax assets and liabilities are measured using the tax rate expected to be applied at the time the asset or the liability is settled, based on the law that has been enacted or substantially enacted by the end of the fiscal year. Deferred tax assets and liabilities are offset if NTT DATA Group has a legally enforceable right to offset current tax assets and liabilities and income taxes are imposed on the same taxpayer by the same taxation authority.

(18) Earnings per share

Basic earnings per share (“EPS”) is calculated by dividing with the average number of outstanding shares during the reporting period (excluding treasury shares). NTT DATA Group omits description of diluted EPS in each reporting period because it does not issue issuable shares with dilutive effect.

(19) Operating segments

An operating segment is a component of business activities that earn revenues and incur expenses including revenues and expenses relating to transactions with other operating segments. For the operating results of all operating segments, discrete financial information is available, and the operating results are regularly reviewed by NTT DATA Group’s Board of Directors to facilitate the allocation of management resources and the assessment of performance.

(20) Put options granted to non-controlling shareholders

Generally, short put options on subsidiary shares that NTT DATA Group has granted to non-controlling interest holders are initially recognized as other financial liabilities at the present value of the redemption amounts, with the same amount deducted from additional paid-in capital. After initial recognition, the options are measured at amortized cost using the effective interest rate method, while any subsequent changes in value are recognized as additional paid-in capital.

4. Significant accounting estimates and judgments involving estimates

In preparing the consolidated financial statements complying with IFRS, management makes judgments, estimates and assumptions that affect the application of accounting policies as well as the amounts reported for assets, liabilities, revenue, and expenses. These estimates and assumptions are based on management’s best judgments taking into account various factors that are considered reasonable as of the period end, based on past experience and currently available information. However, due to the nature of such judgments, the actual results in the future may differ from these estimates or assumptions.

Estimates and their underlying assumptions are continuously reviewed. The effect of revisions to accounting estimates is recognized in the consolidated accounting period in which the estimate is revised and in the future consolidated accounting periods.

The judgments, estimates, and assumptions that have a significant impact on NTT DATA Group's consolidated financial statements are as follows:

- Determination of the scope of subsidiaries and associates (Note "3. Significant accounting policies, (1) Basis of consolidation," Note "31. Major subsidiaries")
- Estimates of the fair value of assets and liabilities assumed in a business combination (Note "3. Significant accounting policies, (2) Business combinations")
- Fair value measurement of financial instruments (Note "3. Significant accounting policies, (4) Financial instruments," Note "30. Financial instruments, (5)")
- Impairment of non-financial assets (Note "3. Significant accounting policies, (11) Impairment," Note "13. Goodwill and intangible assets")
- Measurement of defined benefit obligations (Note "3. Significant accounting policies, (12) Employee benefits," Note "20. Employee benefits")
- Judgment and estimates for recognition and measurement of provisions (Note "3. Significant accounting policies, (13) Provisions," Note "21. Provisions")
- Recognition of revenue (Note "3. Significant accounting policies, (15) Revenue," Note "26. Revenue")
- Assessment of recoverability of deferred tax assets (Note "3. Significant accounting policies, (17) Income taxes," Note "16. Income taxes")

5. New standards not yet applied

Of the standards and interpretations that were newly issued or revised before the approval date of the consolidated financial statements, the following are those that have not been adopted early be NTT DATA Group and whose adoption may impact NTT DATA Group:

Standard/ title	Mandatory adoption (initial fiscal year)	NTT DATA Group's scheduled fiscal year of adoption	Outline of the new/revised standards	Potential impact on consolidated financial statements
IFRS 16 / Leases	January 1, 2019	Fiscal year ending March 31, 2020	IFRS 16 replaces part of the contents of the existing IAS 17 "Leases" and the main revisions are as follows: ・ Introduction of the concept of control into the concept of definition of leases ・ Revised accounting treatment for lessees	The significant impact of adopting this standard will be to record right-of-use assets and lease liabilities for leases of offices and other properties by the lessees'. NTT DATA Group uses a modified retrospective approach. As a result, the balance of assets and liabilities in the consolidated statement of financial position are expected to increase by approximately 130,000 million yen, respectively. However, the impact on the beginning balance of retained earnings and basic earnings will be immaterial.

6. Segment information

(1) Outline of the reporting segments

The reporting segments of NTT DATA Group submitting the consolidated financial statements are components of the Group for which separate financial information is available and are regularly reviewed by the Group's Board of Directors in order to facilitate the allocation of management resources and the assessment of performance for the segments.

While drastic changes in domestic market and development of IT technologies are anticipated, cross-sectoral collaboration and quick decision-making are required more than ever, in order to meet the diversifying needs of our clients and society. Given such background, NTT DATA has a structure in decision-makings regarding business execution are attempted on the Sector level to increase the flexibility of our organizations.

We have five reporting segments: "Public & Social Infrastructure," "Financial," "Enterprise & Solutions," "North America," and "EMEA & LATAM." Multiple Sectors are integrated in these reporting segments, based on the judgment that they share the economic characteristics from the similarity of the markets, etc. as units responsible for reviewing strategies and creating new businesses aiming for mid- to long-term business growth.

See the outline of each segment below.

For types of products and services, please see "26. Revenue, (1) Details of properties and services." Types of products and services of NTT DATA are same for each reporting segment.

(Public & Social Infrastructure)

Providing high-value-added IT services that play important roles in revitalizing social infrastructures such as government, healthcare, communication, and utility systems as well as community revitalization.

(Financial)

Providing high-value-added IT services for improving operational efficiency of financial institutions.

(Enterprise & Solutions)

Providing high-value-added IT services supporting business activities of manufacturing/retail and logistics, service, and other industries, as well as payment services and platform solutions for credit cards, etc. linked with IT services of each area.

(North America)

Providing high-value-added IT services taking into account the market characteristics of business in North America.

(EMEA & LATAM)

Providing high-value-added IT services taking into account the market characteristics of business in EMEA and LATAM regions.

(2) Calculation method of net sales and profit or amount of loss, assets, liabilities and other items of each reporting segment

The method of accounting treatments of the reported business segments of NTT DATA Group are same as those described in Note "3. Significant accounting policies."

Profits of the reporting segments are based on operating incomes.

Internal sales, etc. between segments are determined based on the amount calculated by adding appropriate profit to the cost.

(3) Information on reportable segments

For the year ended March 31, 2018 (from April 1, 2017 to March 31, 2018)

(Unit: million yen)

	Reportable segment						Other (Note 1)	Total	Adjustments (Note 2)	Consolidated financial statement amount (Note 3)
	Public & Social Infrastructure	Financial	Enterprise & Solutions	North America	EMEA & LATAM	Total				
Net sales										
Sales to outside clients	361,767	496,427	340,186	422,262	383,863	2,004,505	34,053	2,038,558	1,132	2,039,690
Intersegment sales and others	83,171	63,500	137,922	5,676	3,629	293,897	62,310	356,207	(356,207)	–
Total	444,938	559,927	478,107	427,938	387,492	2,298,403	96,362	2,394,765	(355,075)	2,039,690
Operating income or loss (the number shown in brackets)	38,279	51,434	40,525	(4,219)	4,860	130,880	2,099	132,979	(9,859)	123,120
									Financial income	5,867
									Financial costs	7,193
									Share of profit or loss of entities for using equity method	909
									Income before income taxes	122,704

(Unit: million yen)

	Reportable segment						Other (Note 1)	Total	Adjustments (Note 2)	Consolidated financial statement amount (Note 3)
	Public & Social Infrastructure	Financial	Enterprise & Solutions	North America	EMEA & LATAM	Total				
Depreciation and amortization	22,145	75,725	19,873	19,689	12,396	149,828	1,376	151,204	1,284	152,488
Investments in non-current assets	18,321	100,396	45,853	14,035	12,157	190,762	1,102	191,864	2,950	194,814

(Note) 1. Classification of "Other" includes China & APAC regions and subsidiaries that mainly engage in supporting the business of our head office departments.

2. (1) Adjustment of operating income or loss (the number shown in brackets) totaling (9,859) million yen mainly consists of intersegment transaction eliminations and companywide expenses not allocated to each segment.
(2) Adjustment of depreciation and amortization totaling 1,284 million yen mainly consists of intersegment transaction eliminations and companywide expenses not allocated to each segment.
(3) Adjustment of investments in non-current assets totaling 2,950 million yen mainly consists of intersegment transaction eliminations and companywide expenses not allocated to each segment.

3. Operating income or loss (the number shown in brackets) is adjusted with current operating income under consolidated income statements.

4. Investments in non-current assets do not include long-term prepaid expenses, financial instruments, deferred tax assets, assets related to retirement benefits, etc. that are not managed per segment.

For the year ended March 31, 2019 (from April 1, 2018 to March 31, 2019)

(Unit: million yen)

	Reportable segment						Other (Note 1)	Total	Adjustments (Note 2)	Consolidated financial statement amount (Note 3)
	Public & Social Infrastructure	Financial	Enterprise & Solutions	North America	EMEA & LATAM	Total				
Net sales										
Sales to outside clients	399,581	491,579	379,234	416,484	433,858	2,120,735	42,132	2,162,867	758	2,163,625
Intersegment sales and others	80,354	67,556	150,582	5,436	6,275	310,204	74,082	384,286	(384,286)	–
Total	479,935	559,135	529,816	421,920	440,133	2,430,939	116,214	2,547,153	(383,528)	2,163,625
Operating income or loss (the number shown in brackets)	43,872	52,930	48,514	3,489	7,895	156,700	2,436	159,136	(11,420)	147,716
								Financial income		6,848
								Financial costs		7,825
								Share of profit or loss of entities for using equity method		175
								Income before income taxes		146,914

(Unit: million yen)

	Reportable segment						Other (Note 1)	Total	Adjustments (Note 2)	Consolidated financial statement amount (Note 3)
	Public & Social Infrastructure	Financial	Enterprise & Solutions	North America	EMEA & LATAM	Total				
Depreciation and amortization	20,447	76,670	20,969	21,203	12,766	152,055	1,653	153,709	(493)	153,216
Investments in non-current assets	21,821	83,303	37,139	12,151	16,137	170,550	1,939	172,490	6,724	179,214

(Note) 1. Classification of “Other” includes China & APAC regions and subsidiaries that mainly engage in supporting the business of our head office departments.

2. (1) Adjustment of operating income or loss (the number shown in brackets) totaling (11,420) million yen mainly consists of intersegment transaction eliminations and companywide expenses not allocated to each segment.

(2) Adjustment of depreciation and amortization totaling (493) million yen mainly consists of intersegment transaction eliminations and companywide expenses not allocated to each segment.

(3) Adjustment of investments in non-current assets totaling 6,724 million yen mainly consists of intersegment transaction eliminations and companywide expenses not allocated to each segment.

3. Operating income or loss (the number shown in brackets) is adjusted with current operating income under consolidated income statements.

4. Investments in non-current assets do not include long-term prepaid expenses, financial instruments, deferred tax assets, assets related to retirement benefits, etc. that are not managed per segment.

(4) Information on the regions

① Net sales

(Unit: million yen)

Region	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Japan	1,211,568	1,287,260
North America	394,470	385,584
Europe	336,435	376,099
Other	97,217	114,682
Total	2,039,690	2,163,625

(Note) 1 Net sales is shown for each region based on the location of clients.

2 Main countries in each region are as follows:

North America: United States, Canada

Europe: Germany, Italy, United Kingdom, etc.

Other: Australia, Brazil, Chile, etc.

Net sales for outside clients in United States in the previous and current consolidated fiscal year are 390,517 million yen and 378,294 million yen respectively. There is no single country or a region of which the net sales for outside clients is significant, except for Japan and United States, in the previous and current consolidated fiscal year.

② Non-current assets

(Unit: million yen)

Region	Date of transition to IFRS (April 1, 2017)	As of March 31, 2018	As of March 31, 2019
Japan	521,649	565,059	594,797
North America	478,430	449,092	465,973
Europe	123,507	131,486	134,136
Other	22,280	26,372	24,260
Total	1,145,866	1,172,009	1,219,164

(Note) 1 Non-current assets are shown for each region based on the location of NTT DATA Group companies.

2 Main countries in each region are as follows:

North America: United States, Canada

Europe: Germany, Italy, United KIngdom, etc.

Other: Australia, Brazil, Chile, etc.

Non-current assets of North America on the date of transition, end of previous consolidated fiscal year and end of current consolidated fiscal year are 477,992 million yen, 448,519 million yen, and 460,834 million yen, respectively. There is no single country or a region of which the non-current assets are significant, except for Japan and United States, on the date of transition and at the end of the previous and current consolidated fiscal years.

3 Non-current assets do not include financial instruments, deferred tax assets, and assets related to retirement benefits.

(5) Information on key clients

Description is omitted because there is no outside client for which net sales accounts for 10% or more of consolidated net sales.

7. Cash and cash equivalents

(1) Relation between the balance of cash and cash equivalents and consolidated cash flow statement

The balance of cash and cash equivalents on the consolidated statement of financial position on the date of transition and at the end of previous and current consolidated fiscal years and on the consolidated cash flow statement are the same. NTT DATA Group has adopted JGAAP for cash and cash equivalents on the date of transition and at the end of previous consolidated fiscal year according to the exemption provision of IFRS 1 in association with the adoption of IFRS 9. It is classified as financial assets measured at amortized cost at the end of current consolidated fiscal year. It does not exist for significant non-fund transactions.

(2) Relation between expenditures from acquiring subsidiaries and acquired assets and liabilities

Details of assets and liabilities at the start of consolidation and relation between cost of shares and expenditures following the acquisitions (net amount)

(Unit: million yen)

	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Current assets	8,012	5,938
Non-current assets	4,546	2,196
Goodwill	3,120	8,467
Current liabilities	(5,459)	(3,145)
Non-current liabilities	(3,338)	(473)
Non-controlling interests	(1,288)	(2,010)
Other	-	(11)
Cost of shares	5,593	10,961
Valuation amount by equity method until the acquisition of control	(185)	-
Cash and cash equivalents	(576)	(1,704)
Subtraction: expenditure from acquisition of subsidiaries	4,832	9,257

8. Trade and other receivables

Details of trade and other receivables on the date of transition and at the end of previous and current consolidated fiscal years are as shown below.

Trade and other receivables (excluding lease receivables) on the date of transition and at the end of previous consolidated fiscal year are stated based on JGAAP according to the exemption provision of IFRS 1 in association with the adoption of IFRS 9. It is classified as financial assets measured at amortized cost at the end of current consolidated fiscal year.

(Unit: million yen)

	Date of transition to IFRS (April 1, 2017)	As of March 31, 2018	As of March 31, 2019
Notes and accounts receivables – trade	409,180	444,369	489,398
Accounts receivables	23,774	23,633	43,708
Other	17,127	17,361	16,020
Total	450,081	485,363	549,126

9. Inventories

Details of inventories on the date of transition and at the end of previous and current consolidated fiscal years are as follows:

(Unit: million yen)

	Date of transition to IFRS (April 1, 2017)	As of March 31, 2018	As of March 31, 2019
Merchandise and manufactured goods	582	2,495	3,094
Work in process	9,516	16,803	9,787
Raw materials and supplies	3,961	2,245	2,412
Total	14,059	21,543	15,294

10. Other financial assets

(1) Date of transition to IFRS and fiscal year ended March 31, 2018

Information on other financial assets on the date of transition to IFRS and as of March 31, 2018 are prepared in accordance with the JGAAP pursuant to the exemption from IFRS 9 as defined in IFRS 1.

Details of other financial assets on the date of transition to IFRS and as of March 31, 2018 are as follows:

(Unit: million yen)

	Date of transition to IFRS (April 1, 2017)	As of March 31, 2018
Term deposits	8,229	8,547
Stock	85,562	108,617
Derivative financial assets	730	621
Loans receivables	3,874	5,776
Leasehold and guarantee deposits	17,820	19,614
Other	4,056	6,941
Total	120,273	150,118
Current assets	13,588	11,895
Non-current assets	106,685	138,223
Total	120,273	150,118

(2) As of March 31, 2019

① Details of other financial assets

Details of other financial assets as of March 31, 2019 are as below:

(Unit: million yen)

	As of March 31, 2019
Financial assets measured at amortized cost	
Term deposits	8,403
Public and corporate bonds	3,917
Loans receivables	3,876
Leasehold and guarantee deposits	21,026
Other	8,005
Financial assets measured at fair value through net income/loss	
Derivative financial assets	1,978
Equity financial assets measured at fair value through other comprehensive income	
Stock	131,037
Total	178,244
Current assets	9,440
Non-current assets	168,803
Total	178,244

② Equity financial assets measured at fair value through other comprehensive income

NTT DATA Group designates investments held for the purpose of increasing mid- to long-term revenue by maintaining/strengthening business relationship with investee companies as financial instruments measured at fair value through other financial comprehensive income.

Major investments designated as equity financial assets measured at fair value through other comprehensive income are as follows:

(Unit: million yen)

	As of March 31, 2019
Recruit Holdings Co., Ltd.	99,572
Other	31,466
Total	131,037

③ Derecognition of equity financial assets measured at fair value through other comprehensive income

There are no significant equity financial assets measured at fair value through other comprehensive income derecognized mainly due to sales in line with revised business policies in the fiscal year ended March 31, 2019.

11. Other assets

Details of other current assets and other non-current assets on the date of transition to IFRS, at the end of the fiscal year ended March 31, 2018 and the end of the fiscal year ended March 31, 2019 are as follows:

(Unit: million yen)

	Date of transition to IFRS (April 1, 2017)	As of March 31, 2018	As of March 31, 2019
Prepaid expenses	58,589	66,534	77,574
Net defined benefit asset	5,604	6,932	8,834
Advance payments	2,560	1,690	2,033
Other	23,988	20,335	22,421
Total	90,741	95,490	110,862
Current assets	57,302	59,631	67,369
Non-current assets	33,439	35,860	43,493
Total	90,741	95,490	110,862

12. Property, plant and equipment

(1) Changes

Changes in costs, accumulated depreciation, and accumulated impairment losses and carrying amounts of property, plant and equipment are as follows:

① Costs

(Unit: million yen)

	Data communi-cation facility	Buildings and structures	Machinery and delivery equipment	Tools, instrument, and equipment	Land	Construction in progress	Other	Total
Date of transition to IFRS (April 1, 2017)	311,640	276,460	101,430	57,184	44,733	37,664	10,060	839,170
Acquisition (Note)	30,540	23,632	18,949	8,597	5	8,555	2,520	92,797
Acquisition in business combination	―	237	35	191	―	1	51	515
Sale or disposal	(38,008)	(4,665)	(8,243)	(4,904)	(44)	―	(477)	(56,340)
Foreign currency translation adjustment	0	(290)	(1,656)	373	(372)	(1)	374	(1,571)
Other	(365)	804	(2,782)	1,249	47	198	(1,137)	(1,987)
As of March 31, 2018	303,807	296,178	107,734	62,690	44,370	46,417	11,390	872,584
Acquisition (Note)	47,070	15,647	13,477	11,980	18	(17,471)	13,585	84,306
Acquisition in business combination	―	588	63	87	―	―	10	748
Sale or disposal	(74,098)	(14,016)	(6,024)	(5,443)	(2,099)	(36)	(778)	(102,494)
Foreign currency translation adjustment	3	(576)	(219)	(506)	(18)	82	(168)	(1,403)
Other	(89)	582	(177)	250	(7)	(1,073)	(187)	(700)
As of March 31, 2019	276,692	298,402	114,854	69,059	42,264	27,919	23,850	853,040

(Note) Acquisition is shown in net amount including transfer from construction in progress following completion in addition to costs from external purchase.

② Accumulated depreciation and accumulated impairment losses

(Unit: million yen)

	Data communi-cation facility	Buildings and structures	Machinery and delivery equipment	Tools, instrument, and equipment	Land	Construction in progress	Other	Total
Date of transition to IFRS (April 1, 2017)	(221,880)	(183,830)	(69,788)	(40,558)	(1,077)	—	(5,194)	(522,327)
Depreciation	(29,303)	(9,375)	(11,617)	(5,815)	—	—	(1,895)	(58,006)
Impairment losses	(29)	(268)	—	(65)	—	—	—	(361)
Sale or disposal	37,366	4,081	6,952	4,542	—	—	432	53,373
Foreign currency translation adjustment	(0)	(430)	767	(301)	—	—	(149)	(112)
Other	403	242	2,187	(266)	—	—	681	3,247
As of March 31, 2018	(213,443)	(189,580)	(71,499)	(42,462)	(1,077)	—	(6,125)	(524,186)
Depreciation	(30,411)	(8,565)	(12,290)	(6,323)	—	—	(3,195)	(60,783)
Impairment losses	—	(15)	—	(183)	—	—	—	(198)
Sale or disposal	73,204	3,640	5,798	5,179	—	—	741	88,561
Foreign currency translation adjustment	(0)	211	426	271	—	—	54	962
Other	(4)	(1,033)	(233)	(288)	—	—	(121)	(1,679)
As of March 31, 2019	(170,654)	(195,343)	(77,798)	(43,806)	(1,077)	—	(8,646)	(497,323)

(Note) 1 Depreciation is included in “cost of sales” and “selling general and administrative expenses” of the consolidated statement of profit or loss.

2 Impairment losses are included in “cost of sales” and “selling general and administrative expenses” of the consolidated statement of profit or loss.

③ Carrying amount

(Unit: million yen)

	Data communi-cation facility	Buildings and structures	Machinery and delivery equipment	Tools, instrument, and equipment	Land	Construction in progress	Other	Total
Date of transition to IFRS (April 1, 2017)	89,760	92,630	31,642	16,626	43,656	37,664	4,864	316,843
As of March 31, 2018	90,364	106,598	36,234	20,228	43,293	46,417	5,263	348,398
As of March 31, 2019	106,039	103,059	37,056	25,253	41,187	27,919	15,205	355,717

(2) Commitments

Please see Note “33. Commitments” for commitments regarding acquisition of property, plant and equipment.

(3) Property, plant and equipment pledged as collateral

Amount of property, plant and equipment pledged as collateral for liabilities on borrowings and others is stated in Note “17. Corporate bonds and loans.”

13. Goodwill and intangible assets

(1) Changes

Changes in costs, accumulated amortization, and accumulated impairment losses and carrying amounts of goodwill and intangible assets are as follows:

① Costs

(Unit: million yen)

	Goodwill	Software	Software in progress	Other	Total
Date of transition to IFRS (April 1, 2017)	402,037	1,009,805	61,756	175,035	1,648,633
Acquisition (Note)	—	85,186	19,685	882	105,753
Acquisition in business combination	2,436	205	35	2,456	5,131
Sale or disposal	—	(58,509)	(112)	(2,646)	(61,266)
Foreign currency translation adjustment	(8,840)	409	(102)	(5,501)	(14,034)
Other changes	(87)	9,004	(2,760)	(1,788)	4,369
As of March 31, 2018	395,546	1,046,100	78,502	168,438	1,688,587
Acquisition (Note)	—	104,472	1,176	831	106,479
Acquisition in business combination	12,883	936	229	41	14,089
Sale or disposal	(21)	(65,178)	(164)	(229)	(65,592)
Foreign currency translation adjustment	8,475	(398)	(98)	4,040	12,018
Other changes	(210)	(2,041)	(1,343)	1,305	(2,289)
As of March 31, 2019	416,673	1,083,890	78,302	174,427	1,753,291

(Note) Acquisition is shown in net amount including transfer from construction in progress following completion in addition to costs from external purchase.
Internal development cost of software in NTT DATA Group is shown together as it is basically the same as the total cost of software and software in progress.

② Accumulated amortization and accumulated impairment losses

(Unit: million yen)

	Goodwill	Software	Software in progress	Other	Total
Date of transition to IFRS (April 1, 2017)	(59,659)	(769,534)	—	(46,714)	(875,907)
Amortization	—	(85,190)	—	(13,558)	(98,748)
Impairment losses	—	(978)	—	(6)	(984)
Sale or disposal	—	57,041	—	1,266	58,307
Foreign currency translation adjustment	—	(350)	—	1,111	762
Other changes	—	(8,454)	—	3,736	(4,718)
As of March 31, 2018	(59,659)	(807,464)	—	(54,165)	(921,287)
Amortization	—	(84,096)	—	(12,516)	(96,612)
Impairment losses	—	(536)	—	—	(536)
Sale or disposal	—	64,363	—	193	64,556
Foreign currency translation adjustment	—	337	—	(418)	(80)
Other changes	—	1,983	—	143	2,126
As of March 31, 2019	(59,659)	(825,412)	—	(66,763)	(951,834)

(Note) 1 Amortization is included in “cost of sales” and “selling general and administrative expenses” of the consolidated statement of profit or loss.

2 Impairment losses are included in “cost of sales” and “selling general and administrative expenses” of the consolidated statement of profit or loss.

③ Carrying amount

(Unit: million yen)

	Goodwill	Software	Software in progress	Other	Total
Date of transition to IFRS (April 1, 2017)	342,378	240,271	61,756	128,321	772,726
As of March 31, 2018	335,887	238,636	78,502	114,274	767,299
As of March 31, 2019	357,014	258,478	78,302	107,664	801,457

Carrying amount of internally generated intangible assets related to software on the date of transition to IFRS, as of March 31, 2018 and March 31, 2019 is 229,999 million yen, 228,136 million yen and 245,037 million yen, respectively.

(2) Intangible assets with indefinite useful lives

There is no significant intangible assets with indefinite useful lives.

(3) Impairment test of goodwill

NTT DATA Group conducts impairment tests for goodwill each fiscal year and as required when there is a sign of impairment. The recoverable amount in the impairment tests is calculated at the higher of either the value in use or the fair value less disposal costs.

The value in use is calculated by discounting estimated amount of cash flow based on the business plan and growth rate approved by management to present value. Business plan is created using external and internal information based on evaluation of management regarding forecast of the business and past performance.

Growth rate is determined by considering the long-term average growth rate of the market in the region that the cash-generating unit belongs. Discount rate is calculated based on weighted average cost of capital before tax of the cash-generating unit.

① Details of carrying amount of goodwill by segment

Goodwill generated by a business combination is allocated to cash-generating units (or their group) that benefit from the business combination on the date of acquisition. The details of the carrying amount of goodwill by segment are as follows. There are no cash-generating units that belong to more than one segment.

(Unit: million yen)

	Date of transition to IFRS (April 1, 2017)	As of March 31, 2018	As of March 31, 2019
Enterprise & Solutions	1,155	1,986	8,435
North America	284,416	271,437	285,872
EMEA & LATAM	53,637	59,095	59,642
Other	3,170	3,370	3,064
Total	342,378	335,887	357,014

② Cash-generating units containing significant goodwill

The cash-generating unit containing significant goodwill is related NTT DATA Services which belongs to North America Segment.

The carrying amount of goodwill is as follows:

(Unit: million yen)

Name of cash-generating unit	Segment	Date of transition to IFRS (April 1, 2017)	As of March 31, 2018	As of March 31, 2019
NTTDATA Services	North America	284,416	271,437	285,872

The recoverable amounts of NTTDATA Services is calculated based on the fair value less disposal costs.

The fair value less disposal costs is calculated using discounted cash flow method and comparable company method. With discounted cash flow method, an estimated amount of 8 years' worth cash flow based on business plan approved by management is discounted to present value, and permanent growth rate is calculated as 3.1% and weighted average cost of capital before tax is calculated as 10.1%. With the comparable company method, the value is calculated by multiplying EBITDA based on current performance with the ratio to the corporate value of other listed companies in the industry. The measurement of fair value is classified as Level 3 based on the significant assumptions (inputs) in the evaluation methods used.

The recoverable amounts of NTT DATA Services exceeded the carrying amounts by 72,589 million yen as of March 31, 2019. However, in case the weighted average cost of capital before tax increases by 1.0%, there would be a possibility of an impairment loss.

(4) Commitments

See Note "33. Commitments" for commitments regarding acquisition of intangible assets.

14. Investment property

(1) Changes

Changes in costs, accumulated depreciation and accumulated impairment losses and carrying amounts/fair value of investment property in the fiscal year ended March 31, 2018 and the fiscal year ended March 31, 2019 are as follows:

① Costs

	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
		(Unit: million yen)
At the beginning of the year	47,741	47,742
Acquisition	355	318
Acquisition in business combination	—	—
Sale or disposal	(149)	(77)
Transfer between accounts	(200)	844
Foreign currency translation adjustments	(5)	(2)
Other changes	1	(6)
Balance at the end of the year	47,742	48,820

② Accumulated depreciation and accumulated impairment losses

	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
		(Unit: million yen)
Balance at the beginning of the year	(19,279)	(20,358)
Depreciation	(1,301)	(642)
Impairment losses	—	—
Sale or disposal	126	63
Transfer between accounts	94	(566)
Foreign currency translation adjustments	—	—
Other changes	2	13
Balance at the end of the year	(20,358)	(21,489)

(Note) Depreciation is included in “cost of sales” of the consolidated statement of profit or loss. (See Note “27. Cost of sales and selling general and administrative expenses”)

③ Carrying amount and fair value

(Unit: million yen)

	Date of transition to IFRS (April 1, 2017)	As of March 31, 2018	As of March 31, 2019
Carrying amount	28,462	27,384	27,331
Fair value	66,355	72,518	76,730

Fair value of investment property is mainly an amount calculated based on market prices based on evaluation by an independent external appraisal expert. The measurement applies to Level 3 of fair value hierarchy.

(2) Revenues and expenses from investment property

(Unit: million yen)

	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Rental income	4,207	4,328
Direct operating expenses from which rental income was generated	4,078	3,959

The amount of revenue related to investment property and following direct operating expenses is included in "net sales" and "cost of sales" respectively on the consolidated statement of profit or loss.

(3) Investment property pledged as collateral

The amount of investment property pledged as collateral for liabilities on borrowings and others is described in Note "17. Corporate bonds and loans."

15. Investments accounted for using the equity method

The carrying amount of NTT DATA Group's share in individually non-significant associates is as follows:

(Unit: million yen)

	Date of transition to IFRS (April 1, 2017)	As of March 31, 2018	As of March 31, 2019
Associates	6,591	6,831	6,573
Total	6,591	6,831	6,573

Shares in net income/loss, other comprehensive income, and comprehensive income total from continued operations of individually non-significant associates are as follows:

Associates

(Unit: million yen)

	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
NTT DATA Group's share		
Net income/loss from continued operations	909	175
Other comprehensive income	193	(213)
Comprehensive income	1,102	(38)

16. Income taxes

(1) Deferred tax assets and deferred tax liabilities

Details and changes of deferred tax assets and deferred tax liabilities by major factor on the date of transition to IFRS, in the years ended March 31, 2018 and 2019 are as follows:

(Unit: million yen)

	Date of transition to IFRS (April 1, 2017)	As of March 31, 2018	As of March 31, 2019
Deferred tax assets			
Defined benefit liabilities	67,916	66,868	66,088
Overdepreciation	25,983	16,588	14,287
Unused tax losses	8,023	6,700	17,545
Deferred revenues	12,392	15,075	21,016
Unpaid bonus	7,510	8,063	8,455
Accrued vacation payable	10,958	11,635	12,374
Other	34,625	40,288	38,684
Total	167,408	165,217	178,449
Offset to deferred tax liabilities	(81,157)	(77,170)	(85,761)
Net deferred tax assets	86,251	88,047	92,688
Deferred tax liabilities			
Net changes in fair value of financial assets measured at fair value through other comprehensive income (Note 1)	(17,868)	(25,736)	(34,256)
Intangible assets identified from business combination	(24,296)	(11,425)	(13,824)
Difference of investment book value for associates following business restructuring	(3,400)	(3,400)	(3,400)
Property, plant and equipment	(10,212)	(12,379)	(14,074)
Other	(25,381)	(24,229)	(20,206)
Total	(81,157)	(77,170)	(85,761)
Offset to deferred tax assets	167,408	165,217	178,449
Net deferred liabilities	86,251	88,047	92,688

(Note 1) Disclosed as valuation difference on available-for-sale securities before the year ended March 31, 2018.

Changes in net deferred tax assets are as follows:

(Unit: million yen)

	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Balance at the beginning of the year	86,251	88,047
Recognized as net income/loss	9,525	13,432
Recognized as other comprehensive income	(8,802)	(5,917)
Acquisition in business combination	1,226	333
Recognized as direct capital	―	(3,160)
Other (Note)	(152)	(47)
Balance at the end of the year	88,047	92,688

(Note) Other include foreign currency translation adjustments.

Deductible temporary differences, unused tax losses and unused tax credits for which no deferred tax assets are recognized on the date of transition to IFRS, as of March 31, 2018 and March 31, 2019 are as follows. The deductible temporary differences, unused tax losses and unused tax credits are presented on tax basis.

(Unit: million yen)

	Date of transition to IFRS (April 1, 2017)	As of March 31, 2018	As of March 31, 2019
Deductible temporary differences	1,376	1,751	2,637
Unused tax losses			
Expiration date within 5 years	2,616	1,980	3,186
Expiration date over 5 years and within 20 years	1,548	1,191	1,042
Indefinite periods	3,579	4,626	3,997
Unused tax credits	-	―	―
Total	9,118	9,548	10,862

The probability of realizing deferred tax assets will depend on whether taxable profit will be available during the periods in which deductible temporary differences will reverse or unused tax losses and unused tax credits can be utilized. In this assessment, NTT DATA considers the expected level of future taxable profit, tax planning opportunities, and the expected timing of the reversal of deferred tax liabilities. The probability of realizing deferred tax assets depends mainly on the future taxable profit, and NTT DATA considers that sufficient taxable profit will be available on an ongoing basis. However, when the estimated future taxable profit for the deferrable period is reduced, the net amount of deferred tax assets expected to be realized may be reduced.

There is no significance in the temporary differences in which deferred tax liabilities related to investments in consolidated subsidiaries and associates on the date of transition to IFRS, as of March 31, 2018 and March 31, 2019.

(2) Income tax expenses

Details of income tax expenses recognized in net income/loss in the fiscal year ended March 31, 2018 and fiscal year ended March 31, 2019 are as follows:

(Unit: million yen)

	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Current tax expenses	46,538	62,643
Deferred tax expenses		
Origination and reversal of temporary differences	(7,450)	(12,658)
Recognition of deductible temporary differences not recognized in the past (derecognition of recognized deductible temporary differences)	1,725	(345)
Recognition of tax loss which was not recognized in the past	(212)	(424)
Changes in tax rates	(3,587)	(5)
Total deferred tax expenses	(9,525)	(13,432)
Total income tax expenses	37,013	49,210

Please see Note “24. Equity and other components of equity” for income taxes recognized in other comprehensive income.

Following the enactment of U.S. tax reform law “The Tax Cuts and Jobs Act” on December 22, 2017, the federal corporate income tax rate applied to U.S. subsidiaries of NTT DATA, the submitting company of the consolidated statements, was changed from 35% to 21%, starting January 1, 2018.

As a result, in the fiscal year ended March 31, 2018, the amount of deferred tax liabilities (deducted amount of deferred tax assets) decreased by 3,440 million yen, foreign currency translation adjustment decreased by 147 million yen, and deferred tax expenses decreased by 3,587 million yen, respectively.

(3) Details of differences between applicable tax rate and average actual tax rate

Details of differences between the applicable tax rate and average actual tax rate in the fiscal year ended March 31, 2018 and the fiscal year ended March 31, 2019 are as follows:

	Ratio against income before income taxes	
	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Applicable tax rate	30.86 %	30.62 %
Difference between applicable tax rate of overseas subsidiaries	(0.39 %)	(0.04 %)
Items permanently not included in tax loss	1.04 %	2.11 %
Effect of reassessment of recoverability of deferred tax assets	1.04 %	0.20 %
Tax credit by R&D tax reduction	(0.64 %)	(0.49 %)
Change in tax rates	(2.92 %)	0.00 %
Other	1.17 %	1.10 %
Average actual tax rate	30.16 %	33.50 %

Almost all the income before income taxes and tax expenses of NTT DATA Group were recorded in Japan. For the fiscal years ended March 31, 2018 and 2019, NTT DATA was subject to national corporate tax of 23.40%, local corporate inhabitant tax of approximately 16.30%, and local deductible corporate enterprise tax of approximately 3.78%. NTT DATA’s domestic subsidiaries were subject to national corporate tax of 23.20%, local corporate inhabitant tax of approximately 16.30%, and local deductible corporate enterprise tax of approximately 3.78%. The statutory effective tax rates were approximately 30.86% and 30.62%, respectively. The rates of corporate inhabitant tax and corporate enterprise tax differ depending on the municipality. Foreign subsidiaries are subject to local corporate taxes.

17. Corporate bonds and loans

(1) Details of corporate bonds, short-term borrowings and long-term borrowings

For corporate bonds, short-term borrowings and long-term borrowing, on the date of transition to IFRS and as of March 31, 2018, JGAAP was applied according to exemption provision of IFRS 1 for the application of IFRS 9. As of March 31, 2019, they were classified as financial assets measured at amortized cost.

Details of corporate bonds, short-term borrowings and long-term borrowings on the date of transition to IFRS, as of March 31, 2018 and March 31, 2019 are as follows:

(Unit: million yen)

	Date of transition to IFRS (April 1, 2017)	As of March 31, 2018	As of March 31, 2019
Short-term borrowings	214,804	46,846	73,771
Long-term borrowings (incl. those scheduled for repayment within one year)	221,969	359,346	397,164
Corporate bonds (incl. current portion)	210,072	160,081	110,087
Total	646,845	566,274	581,023
Current liabilities	318,254	97,413	134,586
Non-current liabilities	328,591	468,860	446,437
Total	646,845	566,274	581,023

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

(Unit: million yen)

	Short-term borrowings	Commercial paper	Corporate bonds and long-term borrowings	Derivative (assets) liabilities held for hedging liabilities
Balance on April 1, 2017	214,804	―	432,041	―
Total amount of changes from cash flows from financing activities	(169,620)	20,000	83,929	―
Total amount of liability changes without cash flow	1,662	―	3,458	―
Business combinations	1,411	―	1,071	―
Foreign currency translation differences	251	―	2,377	―
Fair value changes	―	―	―	―
Other	―	―	10	―
Balance on March 31, 2018	46,846	20,000	519,428	―
Cumulative effect of adopting IFRS 9	―	―	(7,350)	6,495
Total amount of changes from cash flows from financing activities	27,674	4,000	(10,909)	―
Total amount of liability changes without cash flow	(749)	―	6,083	(6,330)
Business combinations	24	―	451	―
Foreign currency translation differences	(773)	―	5,626	―
Fair value changes	―	―	―	(6,330)
Other	―	―	6	―
Balance on March 31, 2019	73,771	24,000	507,252	164

The above reconciliation includes only changes in the balances of liabilities arising from financing activities and does not include changes in the balances of capital arising from financing activities.

(3) Assets pledged as collateral

Corporate bonds and assets pledged as collateral are as follows:

(Unit: million yen)

	Date of transition to IFRS (April 1, 2017)	As of March 31, 2018	As of March 31, 2019
Cash and deposits	—	—	57
Trade receivables	1,339	1,339	1,245
Buildings, etc. (Note)	12,128	11,155	10,390
Machinery and delivery equipment	557	682	612
Tools, instrument, and equipment	52	73	70
Land	36	26	25
Software	0	—	—
Stocks	270	270	270
Long-term borrowings	540	540	540
Total	14,922	14,085	13,210

(Note) The item includes investment property.

Corresponding liabilities are as follows:

(Unit: million yen)

	Date of transition to IFRS (April 1, 2017)	As of March 31, 2018	As of March 31, 2019
Corporate bonds	100	100	100
Short-term borrowings	—	—	99
Long-term borrowings (incl. those scheduled for repayment within one year)	2,437	2,521	2,039
Total	2,537	2,621	2,239

18. Trade and other payables

For trade and other payables, on the date of transition to IFRS and as of March 31, 2018, JGAAP was applied according to exemption provision of IFRS 1 for the application of IFRS 9. As of March 31, 2019, they are classified as financial liabilities measured at amortized cost, except for accrued vacation payable.

Details of trade and other payables on the date of transition to IFRS, as of March 31, 2018 and March 31, 2019 are as follows:

(Unit: million yen)

	Date of transition to IFRS (April 1, 2017)	As of March 31, 2018	As of March 31, 2019
Notes and accounts payable - trade	141,319	145,373	144,862
Accrued expenses	46,655	48,947	60,718
Accrued vacation payable	42,949	46,758	50,488
Accounts payable - other	32,639	37,155	40,586
Deposits received	9,979	9,839	35,991
Other	19,238	19,811	26,368
Total	292,779	307,885	359,013

19. Leases

(1) As lessor

Finance lease transactions

NTT DATA Group leases communication devices, servers, etc. which is classified as finance lease transaction. The total future minimum lease payment receivable and present value of future minimum lease payment receivable based on lease finance and their adjustments on the date of transition to IFRS, as of March 31, 2018 and March 31, 2019 are as follows:

(Unit: million yen)

	Total future minimum lease payment receivable			Present value of future minimum lease payment receivable		
	Date of transition to IFRS (April 1, 2017)	As of March 31, 2018 (March 31, 2018)	As of March 31, 2019 (March 31, 2019)	Date of transition to IFRS (April 1, 2017)	As of March 31, 2018 (March 31, 2018)	As of March 31, 2019 (March 31, 2019)
Within 1 year	6,986	8,407	8,797	6,608	8,052	8,545
Over 1 year and within 5 years	13,393	12,797	7,594	13,041	12,527	7,410
Over 5 years	–	0	66	–	0	66
Total lease payment receivable	20,379	21,205	16,457	19,649	20,579	16,020
Deduction: charge for future financial income	(729)	(626)	(437)			
Present value of minimum lease payment receivable	19,649	20,579	16,020			

(2) As lessee

① Operating lease transactions

NTT DATA Group leases real estate such as office buildings, communication equipment, office appliances, etc. by operating lease transactions.

The future minimum lease payment payable based on non-cancellable operating leases on the date of transition to IFRS, as of March 31, 2018 and March 31, 2019 are as follows:

(Unit: million yen)

	Date of transition to IFRS (April 1, 2017)	As of March 31, 2018	As of March 31, 2019
Within 1 year	8,957	10,818	13,151
Over 1 year and within 5 years	15,593	19,784	31,361
Over 5 years	5,299	6,241	17,222
Total	29,848	36,842	61,734

Lease payment payable related to operating lease transactions in the fiscal years ended March 31, 2018 and 2019 are 11,230 million yen and 12,225 million yen respectively.

② Finance lease transactions

NTT DATA Group leases data center equipment, etc. which is classified as finance lease transaction. The future minimum lease payment payable, present value of future minimum lease payment payable and their adjustments on the date of transition to IFRS, as of March 31, 2018 and March 31, 2019 are as follows:

(Unit: million yen)

	Future minimum lease payment payable			Present value of future minimum lease payment payable		
	Date of transition to IFRS (April 1, 2017)	As of March 31, 2018 (March 31, 2018)	As of March 31, 2019 (March 31, 2019)	Date of transition to IFRS (April 1, 2017)	As of March 31, 2018 (March 31, 2018)	As of March 31, 2019 (March 31, 2019)
Within 1 year	2,257	2,362	4,015	2,184	2,234	3,367
Over 1 year and within 5 years	3,232	3,594	7,418	3,135	3,464	5,994
Over 5 years	123	33	7,306	122	32	6,145
Total lease payment payable	5,612	5,989	18,739	5,441	5,730	15,506
Deduction: future financial expenses	(171)	(259)	(3,233)			
Present value of future minimum lease payment payable	5,441	5,730	15,506			

20. Employee benefits

(1) Defined benefit plans

① Lump-sum payments on retirement and contract-type corporate pension plans

The employees of NTT DATA Group are generally entitled to lump-sum payments on retirement determined by reference to the employee’s basic rate of pay, length of service, and other conditions.

NTT DATA and certain subsidiaries sponsor non-contributory contract-type corporate pension plans, which provide pensions from funds equivalent to 28% of the lump-sum payments on retirement. The employees have an option to receive the benefit in a lump-sum payment.

NTT DATA Group has transferred from the contract-type corporate pension plans to a defined contribution pension plan regarding the future contributions made on or after April 1, 2014. The Group’s contract-type corporate pension plan continues to remain for the contributions made until March 31, 2014.

② NTT Kigyou-Nenkin-Kikin (NTT Corporate Defined Benefit Pension Plan (“NTT CDBP”)) (former NTT Welfare Pension Plan) and NTT Special Accounting Fund for NTT CDBP (former NTT Special Accounting Fund for NTT Welfare Pension Plan)

(i) NTT CDBP (former NTT Welfare Pension Plan)

NTT CDBP is a pension plan to which both NTT Group and its employees make contributions, to add employees’ own additional benefits to the basic pension and the welfare pension under the public pension scheme.

(ii) NTT Special Accounting Fund for NTT CDBP (former NTT Special Accounting Fund for NTT Welfare Pension Plan)

NTT Special Accounting Fund for the NTT CDBP is a transitionally managed pension plan to liquidate the former NTT Mutual Aid Plan pursuant to the Law to Partially Amend the Japanese Welfare Pension Insurance Law and other legislations. This aims to provide pension benefits based on the former Public Corporation Employee Mutual Aid Association Law, following the integration of the former NTT Mutual Aid Plan into the welfare pension insurance in April 1997.

NTT Special Accounting Fund for the NTT CDBP is a public welfare pension scheme and falls under a multiple-employer defined benefit plan.

In accordance with the provisions of the Law and other legislations, NTT Group pays contributions determined by the Japanese government every year based on the pay-as-you-go system to NTT Special Accounting Fund for the NTT CDBP (former NTT Special Accounting Fund for NTT Welfare Pension Plan). Such contributions are made pursuant to the former Public Corporation Employee Mutual Aid Association Law to cover the costs of pension benefits for the period of service in and prior to June 1956 for employees who worked at NTT, NIPPON TELEGRAPH AND TELEPHONE PUBLIC CORPORATION, and/or its former government organizations (the Ministry of Communications in the area of telecommunications and the Ministry of Telecommunications) and retired in July 1956 or later.

For NTT CDBP and NTT Special Accounting Fund for NTT CDBP in (ii) above, defined benefit obligations are calculated separately from lump-sum payments on retirement and contract-type corporate pension plans in (i) above.

These defined benefit plans are exposed to actuarial risks (investment risk, interest risk, longevity risk, and inflation risk).

③ Reconciliation of defined benefit obligations and net amount of plan assets and defined benefit liabilities (assets)

Reconciliation of defined benefit obligations and net amounts of plan assets and defined benefit liabilities (assets) in the fiscal years ended March 31, 2018 and 2019 is as follows:

(Unit: million yen)

	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Changes in defined benefit obligations		
Present value at the beginning of the year	362,290	380,844
Service cost	20,802	21,349
Net amount of interest cost	2,816	2,543
Remeasurements		
- Changes in demographic assumptions	16	(457)
- Changes in financial assumptions	5,635	7,042
- Other	(1,909)	(3,915)
Benefit payments (lump-sum payments on retirement and pension)	(13,450)	(14,324)
Effect of business combinations and disposal	3,584	—
Foreign currency translation adjustments	1,149	(794)
Other	(87)	(1,570)
Balance of present value at the end of the year	380,844	390,719
Changes in plan assets		
Present value at the beginning of the year	178,702	187,927
Interest income	1,563	1,311
Remeasurements		
- Income related to plan assets excluding interest income	6,285	1,846
Employer contributions	6,000	13,447
Benefit payments (pension)	(6,706)	(6,667)
Effect of business combinations and disposal	1,578	—
Foreign currency translation adjustments	921	(477)
Other	(415)	(325)
Present value at the end of the year	187,927	197,061
Net amount of defined benefit liabilities (assets) recorded in the consolidated statement of financial position	192,917	193,657

④ Defined benefit obligations and plan assets

Relation between the present value of defined benefit obligations, fair value of plan assets and the net amount of defined benefit liabilities (assets) recorded in consolidated financial statements is as follows:

(Unit: million yen)

	Date of transition to IFRS (April 1, 2017)	As of March 31, 2018	As of March 31, 2019
Present value of defined benefit obligations	362,290	380,844	390,719
Fair value of plan assets	(178,702)	(187,927)	(197,061)
Total	183,589	192,917	193,657
Defined benefit liabilities	189,193	199,849	202,491
Net defined benefit asset	(5,604)	(6,932)	(8,834)

(Note) Assets related to retirement benefits are included in “other non-current assets” on the consolidated statement of financial position.

⑤ Details of the fair value of plan assets

The details of the fair value of plan assets on the date of transition to IFRS, as of March 31, 2018 and March 31, 2019 are as follows:

(Unit: million yen)

	Date of transition to IFRS (April 1, 2017)		As of March 31, 2018		As of March 31, 2019	
	Quoted market value in an active market		Quoted market value in an active market		Quoted market value in an active market	
	Avairable	NA	Avairable	NA	Avairable	NA
Cash and cash equivalents	3,464	94	10,951	87	14,739	210
Equity securities	19,083	1,485	20,432	2,039	24,106	1,738
Domestic	12,704	969	13,472	2,039	16,114	1,738
Overseas	6,380	516	6,961	―	7,992	―
Debt instruments	60,898	14,258	53,240	16,632	46,644	16,325
Domestic	58,141	13,792	51,743	14,658	44,762	16,179
Overseas	2,757	466	1,496	1,974	1,882	147
Beneficiary certificates of securities investment trust	1,854	19,628	1,953	20,791	5,029	21,457
Pooled funds	5,137	20,976	5,369	22,504	5,493	19,782
Life insurance company general accounts	4,023	22,139	3,332	24,629	3,528	25,704
Other	5,544	119	5,846	122	10,093	2,215
Total	100,003	78,699	101,124	86,804	109,631	87,431

⑥ Important actuarial assumption used in calculating the present value of defined benefit obligations

The important actuarial assumption on the date of transition to IFRS, as of March 31, 2018 and March 31, 2019 is as follows:

	Date of transition to IFRS (April 1, 2017)	As of March 31, 2018	As of March 31, 2019
Discount rate	0.2%～0.7%	0.2%～0.6%	0.1%～0.5%

⑦ Effects of defined benefit plan on the amount, period and uncertainties of future cash flow of a company

(i) Sensitivity analysis of defined benefit obligations

The effects on defined benefit obligations in case one of the important actuarial assumptions changed within the range of reasonable possibility on the reporting date, assuming that there is no change in other assumptions on the date of transition to IFRS, as of March 31, 2018 and March 31, 2019, are as follows:

(Unit: million yen)

		As of March 31, 2018	As of March 31, 2019
Discount rate	In case of 0.5% increase	(24,779)	(25,934)
	In case of 0.5% decrease	28,346	29,682

(Note) In reality, the change does not necessarily occur with one independent assumption, so the result in the future may differ from the analysis above.

(ii) Funding policy

NTT DATA Group's funding policy takes into account various factors such as allowable limit of deductible expenses in terms of tax, funded status of plan assets, and actuarial calculations. Contributions for plan assets are intended for covering the benefits for services to be provided in the future in addition to the benefits for services that have already been provided.

In order to be able to maintain financial balance over the future, NTT CDBP and the contract-type corporate pension plans stipulate that the amount of the premium be recalculated every five years and every three years, respectively, as of the end of the fiscal year. However, if there is a significant change in the environment surrounding the pension finance, NTT DATA Group will review the financial status as necessary.

(iii) Management policy with respect to pension assets

NTT DATA Group's management policy with respect to pension assets is formulated with the objective of ensuring steady disbursement of benefit in future periods. Therefore, the long-term aim of asset management is to secure the total profits deemed necessary to ensure sound pension financing. To achieve this, NTT DATA Group selects various investments and takes into consideration their expected return and risks, and the correlation among the selected investments. The Group then sets the target of allocation ratio for plan assets and endeavors to maintain that ratio. The target allocation ratio for plan assets is determined from a mid- to long-term perspective and is reviewed annually. In the event that there is a significant change in the investment environment, the Group reviews the target allocation ratio for plan assets as necessary.

(iv) Expected contribution amount in the following fiscal year

NTT DATA Group estimates that the contribution for defined benefit plan for the following fiscal year is 2,964 million yen.

Duration of defined benefit obligations as of March 31, 2018 and March 31, 2019 are 16.3 years and 16.4 years, respectively.

(2) Defined contribution plans

The amount recognized as expenses regarding defined contribution plan in the previous fiscal and the current fiscal year are 9,707 million yen and 7,207 million yen, respectively.

(3) Employee benefit expenses

The employee benefit expenses included in the consolidated statement of profit or loss were 843,258 million yen in the previous fiscal year and 869,335 million yen in the current fiscal year. The employee benefit expenses include employees' salary and allowance, legal welfare expenses, retirement benefit expenses, etc.

The employee benefit expenses are included and shown in "cost of sale" and "selling general and administrative expenses."

21. Provisions

(1) Reconciliation tables related to provisions

Details and changes of provisions in the current fiscal year are as follows:

(Unit: million yen)

	Provision for loss on order received	Other	Total
Balance at beginning of the year (April 1, 2018)	5,760	5,383	11,143
Increase during the term	18,654	2,445	21,099
Changes from business combinations	—	—	—
Decrease during the term (used for purpose)	(14,150)	(692)	(14,842)
Decrease during the term (reversal)	(300)	(964)	(1,264)
Foreign currency translation adjustment	(17)	(122)	(140)
Balance at the end of the year (March 31, 2019)	9,947	6,049	15,996

The balance of current and non-current liabilities on the date of transition to IFRS, as of March 31, 2018 and March 31, 2019 are as follows:

(Unit: million yen)

	Date of transition to IFRS (April 1, 2017)	As of March 31, 2018	As of March 31, 2019
Current liabilities	6,072	7,935	12,434
Non-current liabilities	2,692	3,208	3,562
Total	8,765	11,143	15,996

(2) Details of provisions

Provisions are recognized in cases where NTT DATA Group has present legal or constructive obligations as a result of past events, as well as where it is probable that the obligations will be required to be settled and when it is possible to reliably estimate the amount of the obligation.

Using the time value of money and the interest rate reflecting the specific risks of the liabilities, provisions are measured by discounting the estimated future cash flows to the present value, taking into account the risks and uncertainties related to the obligations as of the fiscal year end.

Allowance for losses on contracts

This is related to software built-to-order, and the amount of allowance is calculated by estimating the development effort and unit cost expected to occur in the future. During the period in which outflow of economic benefit is expected, it is affected by status, etc. of future projects, but usually is expected to be within one year from the end of a fiscal year. There is no compensation expected at this time.

(3) Changes in accounting estimates

In the current consolidated fiscal year, a defect was found in projects in the Public & Social Infrastructure Segment that could not have been anticipated at the time of the previous review of total costs. As a result, the possibility of outflow of further economic benefits has increased, and we have changed the estimated total cost.

Accordingly, the additional provision for loss on order received which is within the “cost of sales” increased 13,239 million yen.

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22. Other financial liabilities

(1) Date of transition to IFRS and as of March 31, 2018

Other financial liabilities are recorded with the information based on JGAAP on the date of transition to IFRS and as of March 31, 2018, pursuant to exemption provision under IFRS 1 in association with application of IFRS 9.

Details of other financial liabilities on the date of transition to IFRS and as of March 31, 2018 are as follows:

(Unit: million yen)

	Date of transition to IFRS (April 1, 2017)	As of March 31, 2018
Commercial paper	−	20,000
Lease obligations	5,441	5,730
Derivative financial liabilities	906	239
Other	5,508	8,078
Total	11,855	34,047
Current liabilities	3,094	23,111
Non-current liabilities	8,762	10,936
Total	11,855	34,047

(2) As of March 31, 2019

Details of other financial liabilities as of March 31, 2018, are as follows:

(Unit: million yen)

	As of March 31, 2019
Financial liabilities measured at amortized cost	
Commercial paper	24,000
Other	8,923
Financial liabilities measured at fair value through net income/loss	
Derivative financial liabilities	2,197
Lease obligations	15,506
Total	50,625
Current liabilities	28,717
Non-current liabilities	21,908
Total	50,625

23. Other liabilities

Details of other current liabilities and other non-current liabilities on the date of transition to IFRS, as of March 31, 2018 and March 31, 2019 are as follows:

(Unit: million yen)

	Date of transition to IFRS (April 1, 2017)	As of March 31, 2018	As of March 31, 2019
Consumption tax payable	14,804	9,104	10,782
Real estate tax payable	4,598	4,649	4,828
Other	28,596	29,033	29,751
Total	47,998	42,786	45,361
Current liabilities	38,741	30,870	32,898
Non-current liabilities	9,257	11,916	12,463
Total	47,998	42,786	45,361

24. Equity and other components of equity

(1) Common stock

Changes in the total number of authorized shares and the total number of issued shares in the fiscal years ended March 31, 2018 and 2019 are as follows:

(Shares)

	Total number of authorized shares (common stock with no par value)	Total number of issued shares (common stock with no par value)	Treasury stock (common stock with no par value)
April 1, 2017	1,122,000,000	280,500,000	99
Stock split under resolution of the Board of Directors	4,488,000,000	1,122,000,000	396
Repurchase of treasury stock based on less-than-one-unit share purchase demand	-	-	458
March 31, 2018	5,610,000,000	1,402,500,000	953
Stock split under resolution of the Board of Directors	-	-	-
Repurchase of treasury stock based on less-than-one-unit share purchase demand	-	-	-
March 31, 2019	5,610,000,000	1,402,500,000	953

(2) Additional paid-in capital and retained earnings

Additional paid-in capital consists of amount generated from capital transaction, which is not included in common stock, and consists of capital reserve and other additional paid-in capital (mainly disposal difference of treasury stock). Under Japanese Companies Act, one half or more of the amount related to payment for issuing stock must be capitalized to common stock and the remaining to capital reserve. The Companies Act requires that one tenth of dividend of other additional paid-in capital and other retained earnings be reserved as capital reserve and legal retained earnings, respectively, until the total of capital reserve and legal retained earnings reaches one fourth of the common stock. Capital reserve, legal retained earnings, other additional paid-in capital, and other retained earnings are admitted to be reclassified between accounts by resolution of a general meeting of shareholders under a certain condition.

Retained earnings consists of legal retained earnings and other retained earnings (mainly accumulated amount of net income/loss of each reporting period. Under Companies Act, on the day dividend with retained earnings as a source is paid out, one tenth of the amount of surplus which decreases due to dividend of surplus must be reserved as capital reserve or legal retained earnings, until the total of capital reserve and legal retained earnings reaches one fourth of common stock. Legal retained earnings can be withdrawn by resolution of general meeting of shareholders.

The distributable amount which becomes the dividend resources of NTT DATA is calculated based on the Company's non-consolidated financial statements prepared according to corporate accounting standards generally recognized as fair and appropriate by Japanese Companies Act and in Japan.

(3) Capital management

NTT DATA Group has set a mid- to long-term increase of corporate value through management by keeping soundness of financial base and capital efficiency in mind, as well as stable shareholder return as the basic policies.

D/E ratio and ROE are the main indicators used by NTT DATA Group for capital management.

	As of March 31, 2018	As of March 31, 2019
Debt Equity Ratio (Times)(Note 1)	0.71	0.65
Ratio of Net income to Equity attributable to shareholders of NTT DATA (ROE)(Note 2)	10.3%	10.7%

(Note) 1 Interest-bearing debt / Shareholders' equity (Total equity － Non-controlling interests)

Of liabilities recorded on the consolidated statement of financial position, interest-bearing debt includes corporate bonds and loans.

2 Net income attributable to shareholders of NTT DATA / Equity attributable to shareholders of NTT DATA (average of beginning and end of the year)

(4) Put options granted to non-controlling interests

See “3. Significant accounting policies (20) Put options granted to non-controlling interests.”

Put options are classified into three levels of fair value hierarchy.

(5) Other components of equity

Details and changes in other components of equity in the fiscal years ended March 31, 2018 and 2019 are as follows:

(Unit: million yen)

	Net change in fair value of financial assets measured at fair value through other comprehensive income (Note)	Cash flow hedge	Hedge cost	Remeasurement of net amount of defined benefit liabilities	Foreign currency translation adjustments	Total
April 1, 2017	39,935	(156)	―	―	―	39,779
Other comprehensive income	17,733	227	―	1,426	(18,748)	638
Non-controlling interests transfer	86	0	―	(27)	(212)	(153)
Transfer to retained earnings	―	―	―	(1,399)	―	(1,399)
March 31, 2018	57,755	71	―	―	(18,961)	38,865
Cumulative effect of adoption of IFRS 9	3,182	(464)	636	―	―	3,354
Other comprehensive interests	11,756	(731)	100	(1,271)	11,060	20,913
Non-controlling interests transfer	(35)	3	―	208	153	330
Transfer to retained earnings	(290)	―	―	1,063	―	773
March 31, 2019	72,368	(1,120)	736	―	(7,748)	64,236

(Note) Valuation difference on available-for-sale securities on March 31, 2018 and earlier.

(6) Other comprehensive income

Details of other comprehensive income and amount of related tax effects as well as amounts reclassified to profit in the fiscal years ended March 31, 2018 and 2019 are as follows:

(Unit: million yen)

	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Net change in fair value of financial assets measured at fair value through other comprehensive income (Note)		
Amounts arising during the period	25,952	17,320
Amounts reclassified to profit	(269)	–
Before tax effect	25,683	17,320
Tax effect	(7,950)	(5,563)
After tax effect	17,733	11,756
Cash flow hedge		
Amounts arising during the period	959	6,327
Amounts reclassified to profit	(629)	(7,392)
Before tax effect	329	(1,066)
Tax effect	(102)	335
After tax effect	227	(731)
Hedge cost		
Amounts arising during the period	–	522
Amounts reclassified to profit	–	(373)
Before tax effect	–	149
Tax effect	–	(49)
After tax effect	–	100
Remeasurement of net amount of defined benefit liabilities		
Amounts arising during the period	2,176	(632)
Amounts reclassified to profit	–	–
Before tax effect	2,176	(632)
Tax effect	(750)	(639)
After tax effect	1,426	(1,271)
Foreign currency translation adjustments		
Amounts arising during the period	(18,941)	11,273
Amounts reclassified to profit	–	–
Before tax effect	(18,941)	11,273
Tax effect	–	–
After tax effect	(18,941)	11,273
Share of other comprehensive income of entities accounted for using the equity method		
Amounts arising during the period	193	(213)
Amounts reclassified to profit	–	–
After tax effect	193	(213)
Total other comprehensive income (after tax)	638	20,913

(Note) Valuation difference on available-for-sale securities on March 31, 2018 and earlier.

25. Dividend

Dividends paid are as follows:

① Fiscal year ended March 31, 2018

Resolution	Class of shares	Total dividend (millions of yen)	Source of dividends	Dividend per share (yen)	Record date	Effective date
June 20, 2017 General Meeting of Shareholders	Common shares	11,220	Retained earnings	40 (Note)	March 31, 2017	June 21, 2017
November 7, 2017 Board of Directors	Common shares	10,519	Retained earnings	7.5	September 30, 2017	December 1, 2017

(Note) Stock split was conducted for common shares at a ratio of 1:5 as of the effective date of July 1, 2017. Dividend per share above shows amount without taking the stock split into account. When taking the stock split into consideration, dividend per share is 8 yen.

② Fiscal year ended March 31, 2019

Resolution	Class of shares	Total dividend (millions of yen)	Source of dividends	Dividend per share (yen)	Record date	Effective date
June 19, 2018 General Meeting of Shareholders	Common shares	10,519	Retained earnings	7.5	March 31, 2018	June 20, 2018
November 2, 2018 Board of Directors	Common shares	11,921	Retained earnings	8.5	September 30, 2018	December 3, 2018

③ Dividends during the fiscal year ended March 31, 2019 with effective date during the fiscal year ending March 31, 2020

Resolution	Class of shares	Total dividend (millions of yen)	Source of dividends	Dividend per share (yen)	Record date	Effective date
June 20, 2019 General Meeting of Shareholders	Common shares	11,921	Retained earnings	8.5	March 31, 2019	June 21, 2019

26. Revenue

(1) Details of goods and services

Integrated IT Solutions

NTT DATA Group owns the facility assets and provides services to clients.

In made-to-order type integrated IT solution businesses, we provide services covering the full life cycle of clients' systems, from requirements definition to maintenance/operation. NTT DATA Group makes capital investments and owns the facilities as assets according to orders from clients and recognizes the revenue according to the contract period mainly at a fixed amount.

In plan-based integrated IT solutions businesses, we provide services mainly in payment area. NTT DATA Group makes capital investments and holds the facilities as assets by anticipating the use of multiple clients, collects considerations for the services as usage fee according to the actual usage by the clients. The revenue is recognized when clients have used the service.

System software development

We are entrusted with plans, designs, development, etc. for clients' information systems and deliver them to the clients.

As deliverables are transferred to clients according to the progress of system software development, revenues are recognized over the course of the installation period depending on the progress of installation. As cost is deemed to arise in proportion to degree of installation progress, we use cost-to-cost method based on the cost occurred for estimating the progress. Contract consideration is normally paid upon delivery.

When losses are expected to arise, allowance for losses is recorded in the consolidated fiscal year in which the date the losses became apparent belongs.

Consulting support

In consulting business, we provide services such as consulting for improving clients' business that either involves transfer of deliverables to clients including requirements definition, market research, etc. that does not accompany system software development or that does not involve transfer of deliverables to clients. In case of involving transfer of deliverables, since the benefits are transferred to clients according to the progress of the deliverables, revenues are recognized over the course of the installation period depending on the progress of installation. As cost is deemed to arise in proportion to degree of installation progress, we use cost-to-cost method based on the cost occurred for estimating the progress. Contract consideration is normally paid upon delivery. In case of not involving transfer of deliverables, considerations for the services are collected according to results, such as the number of days service was provided or with fixed amount depending on the actual usage of service by clients. Revenue is recognized when the clients have used the services.

In support business, we provide technology support for system development, etc. that does not involve transfer of deliverables to clients, such as AMO (∗1), ITO (∗2), and BPO (∗3) services, or services in which we perform maintenance and operation. We collect considerations for the services according to results such as the number of days services were provided to clients or with a fixed amount depending on the actual usage by customers, and the revenue is recognized when the clients have used the services.

∗1 Application Management Outsourcing: outsourcing service for operation and maintenance of clients' custom applications.

∗2 IT Outsourcing: one stop service for maintenance and operation of internal systems, etc. used by clients.

∗3 Business Process Outsourcing: outsourcing service implementing efficient business operation by undertaking part of clients' operations

Other services

Service such as leasing facilities other than information device mainly including buildings, power, line equipment and fee collection agent.

(2) Breakdown of net sales

Net sales is broken down into major services. The relation between breakdown of net sales and each reportable segment is as follows:

Almost all the net sales of NTT DATA Group is a revenue recognized from contracts with clients. Lease revenue based on IAS 17 is included in the net sales in the table below because it has no significance.

Fiscal year ended March 31, 2018 (from April 1, 2017 to March 31, 2018)

(Unit: million yen)

	Reportable segment					Other	Total
	Public & Social Infra-structure	Financial	Enterprise & Solutions	North America	EMEA & LATAM		
Integrated IT Solutions	72,630	267,479	78,916	118,751	38,662	422	576,861
System Software Development	146,346	107,641	116,732	64,595	87,670	21,079	544,062
Consulting Support	135,285	115,897	105,306	229,997	246,678	9,462	842,626
Other services	7,506	5,410	39,232	8,918	10,854	4,222	76,141
Total	361,767	496,427	340,186	422,262	383,863	35,184	2,039,690

(Note) The amount after deducting internal transactions among group companies are shown.

Fiscal year ended March 31, 2019 (from April 1, 2018 to March 31, 2019)

(Unit: million yen)

	Reportable segment					Other	Total
	Public & Social Infra-structure	Financial	Enterprise & Solutions	North America	EMEA & LATAM		
Integrated IT Solutions	69,040	271,291	85,253	113,972	44,475	560	584,591
System Software Development	180,839	96,987	133,586	56,934	87,869	25,238	581,454
Consulting Support	141,975	118,195	119,172	232,853	280,984	12,171	905,351
Other services	7,727	5,105	41,223	12,724	20,530	4,920	92,229
Total	399,581	491,579	379,234	416,484	433,858	42,889	2,163,625

(Note) The amount after deducting internal transactions among group companies are shown.

(3) Contract balance

NTT DATA Group records contract assets for considerations for system development services, etc. in progress. The contract assets are reclassified to trade receivable as soon as the right to payment becomes unconditional. The Group also records contract liabilities for consideration received in advance from clients.

The balance of contract assets and liabilities are as follows:

(Unit: million yen)

	Date of transition to IFRS (April 1, 2017)	As of March 31, 2018	As of March 31, 2019
Contract assets	73,612	81,948	81,929
Contract liabilities	185,847	213,791	218,774
Of recognized revenues, those that were included in the balance of contract liabilities as of the beginning of the year	—	63,784	110,620

There is no significance in the amount of revenue recognized from performance obligation satisfied in the past periods in the fiscal years ended March 31, 2018 and 2019.

(4) Transaction price allocated to the remaining performance obligation

Revenues expected to be recognized in the future related to unsatisfied (or partially unsatisfied) performance obligations as of March 31, 2018 and March 31, 2019 are as follows. NTT DATA Group does not apply the practical expedient of Paragraph 121 of IFRS 15 and includes performance obligations related to contracts expected to be satisfied within 1 year.

(Unit: million yen)

	As of March 31, 2018	As of March 31, 2019
Within 1 year	938,247	1,088,137
Over 1 year and within 2 years	557,606	467,821
Over 2 years and within 3 years	354,309	363,770
Over 3 years	519,047	537,361
Total	2,369,209	2,457,088

(5) Contract costs

There are no significant assets recognized from contract costs on the date of transition to IFRS, in the fiscal years ended March 31, 2018 and 2019.

In case the amortization period of the assets to be recognized is within 1 year, the practical expedient is applied and incremental costs of obtaining a contract is recognized as expenses at the time they are incurred.

27. Cost of sales and selling general and administrative expenses

Details of cost of sales and selling general and administrative expenses by characteristics in the fiscal years ended March 31, 2018 and 2019 are as follows:

(Unit: million yen)

	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Employees' salaries and allowances	703,823	729,888
Outsourcing expenses	562,074	597,280
Depreciation and amortization cost	152,488	153,216
Cost of goods	135,845	152,628
Research and development expenses (Note)	14,595	15,094
Legal welfare expenses	43,598	47,741
Welfare expenses	42,096	39,096
Rent expenses	32,957	36,964
Traveling expenses	29,074	31,321
Communications and transportation expenses	22,666	28,775
Other	177,355	183,906
Total	1,916,570	2,015,908

(Note) Research and development expenses recognized as expenses, are all included in selling general and administrative expenses.

28. Finance income and finance costs

For the fiscal year ended March 31, 2018, the information is recorded based on JGAAP pursuant to exemption provision under IFRS 1 for the application of IFRS 9. IFRS 9 is applied for the fiscal year ended March 31, 2019.

Details of finance income and finance costs in the fiscal years ended March 31, 2018 and 2019 are as follows:

(Unit: million yen)

	Fiscal year ended March 31, 2018
Finance income	
Interest income	2,089
Dividend income	1,805
Other	1,973
Total finance income	5,867
Total costs	
Interest expenses	4,405
Exchange loss	1,970
Other	817
Total finance costs	7,193

	(Unit: million yen)
	Fiscal year ended March 31, 2019
Finance income	
Financial assets measured at amortized cost	
Interest income	2,800
Other	56
Financial assets measured at fair value through other comprehensive income	
Dividend income	1,746
Other finance income	2,246
Total finance income	6,848

Finance costs	
Financial liabilities measured at amortized cost	
Interest expenses	4,633
Other	56
Exchange differences (net amount)	1,911
Other finance costs	1,225
Total finance costs	7,825

29. Earnings per share

Basically, earnings per share in the fiscal years ended March 31, 2018 and 2019 are calculated based on net income attributable to the shareholders of NTT DATA and the average number of common shares during the period shown below.

Diluted earnings per share is not recorded because there is no potentially dilutive shares with dilutive effect.

	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Net income attributable to shareholders of NTT DATA (Unit: million yen)	82,392	93,616
Amount not attributable to ordinary shareholders (Unit: million yen)	—	—
Net income used for calculating earnings per share (Unit: million yen)	82,392	93,616
Outstanding shares (share)	1,402,500,000	1,402,500,000
Impact of treasury shares (share)	953	953
Average number of common shares during the period (share)	1,402,499,177	1,402,499,047

(Note) Stock split was conducted for common stock at a ratio of 1:5 as of the effective date of July 1, 2017. Net income per share is calculated based on the assumption that the stock split was conducted at the beginning of the previous consolidated fiscal year.

30. Financial instruments

At the date of transition to IFRS, and for the fiscal year ended March 31, 2018, NTT DATA applied the previous accounting standards (JGAAP) pursuant to the exemptions of IFRS 1 for retroactive application of IFRS 7 and IFRS 9. IFRS 7 and IFRS 9 are applied in the fiscal year ended March 31, 2019.

(1) Financial risk management

NTT DATA Group is exposed to various financial risks (credit risk, liquidity risk, exchange risk, interest rate risk, and stock price fluctuation risk) in the course of its business activities. To prevent and mitigate such financial risks, NTT DATA Group manages risks in accordance with certain policies.

With regard to derivative transactions, NTT DATA Group limits and performs them within the actual demand by taking specified procedures for trade execution in accordance with the derivative transaction management rules.

(2) Credit risk management

In conducting business, NTT DATA Group is exposed to clients' credit risks in trade and other receivables and other financial assets (deposits, stocks, receivables and derivatives among others.)

In the Company, with regard to trade receivables, the person in charge of the trade receivables of each sector, etc. conducts regular monitoring of the collection status of individual clients to manage due dates as well as the credit balance in accordance with credit management rules, etc., and at the same time, delays in trade receivables are reported to the Corporate Management Committee on a quarterly basis so that early and secured collections can be achieved. Consolidated subsidiaries also conduct credit risk control using similar methods to those of the Company.

When using derivatives, the Company conducts transactions only with highly rated financial institutions, judging that there is little default risk (credit risk) of the counterparties.

Through the above risk management procedures, NTT DATA Group aims to prevent or mitigate credit risks and is not exposed to any excessive credit risk.

Credit risks on the date of transition to IFRS and in the fiscal year ended March 31, 2018 are as follows. The amount of the fiscal year ended March 31, 2018 is based on JGAAP, and changes in allowance for doubtful accounts based on JGAAP are recorded.

(Unit: million yen)

	Allowance for doubtful accounts
Balance on April 1, 2017	3,295
Increase	3,625
Decrease (used for purpose)	(2)
Decrease (reversal)	(2,966)
Balance on March 31, 2018	3,952

Credit risk management in the fiscal year ended March 31, 2019 are as described below.

Maximum credit risk exposure

The carrying amounts after impairment of financial assets shown in the consolidated financial statements are maximum credit risk exposures of financial assets of NTT DATA Group, without taking into account the appraisal value of acquired collateral.

Trade and other receivables and contract assets

The table below shows credit risk exposure and loss allowance related to trade and other receivables and contract assets as of March 31, 2019.

(Unit: million yen)

Overdue period	Total carrying amounts	Required allowance rate	Loss allowance	Credit impairment
Within 30 days	603,083	0.0%	110	N
30 – 90 days	15,016	0.8%	114	N
More than 90 days	15,055	17.1%	2,577	Y
Total	633,154		2,801	

NTT DATA Group is not exposed to any excessive credit risk with a single party or a group to which the party belongs.

NTT DATA Group measures loss allowance with the following method for above financial receivables.

Measurement of expected credit losses for 12 months and lifetime

See “3. Significant accounting policies (4) Financial instruments ② (b) Impairment of financial assets.”

Forward-looking information

In measuring expected credit losses, we use the provision rate with forward-looking information taken into account in the history of past losses from bad debt.

Changes in the estimation technique or important assumptions during the reporting period

There is no change in the estimation technique or important assumptions during the reporting period.

Reconciliation of loss allowance related to trade receivables and contract assets in the fiscal year ended March 31, 2018 is shown below.

Fiscal year ended March 31, 2019 (from April 1, 2018 to March 31, 2019)

(Unit: million yen)

Classification	Recorded at the same amount as the 12-month expected credit losses	Recorded at the same amount as the lifetime expected credit losses			Total
		Related to assets that are not credit impaired financial assets	Related to credit impaired financial assets	Related to trade receivables or contract assets	
Balance on April 1, 2018	-	-	-	2,641	2,641
Increase	-	-	-	1,425	1,425
Decrease	-	-	-	(1,264)	(1,264)
Balance on March 31, 2019	-	-	-	2,801	2,801

With regard to other financial assets (loans receivables) for which loss allowance other than those above is set, there is no concentrated credit risk for ratings and no significance in exposure.

There is no significant collateral or credit enhancement in the fiscal year ended March 31, 2019.

(3) Liquidity risk management

Liquidity risk is mainly the risk that NTT DATA Group faces in fulfilling its obligations related to financial liabilities that are settled by cash or other financial assets. The Group aims to secure stable, low-cost funds when raising funds to support business activities.

NTT DATA Group manages liquidity risks by certain means, for example, formulating and updating monthly funding plans. The Company also makes use of bank loans and NTT Group Finance for financing and has received ratings of long-term bonds and commercial paper from two rating institutions in Japan for more stable financing. Accordingly, the Company has secured enough funding liquidity which could substitute cash and cash equivalents.

NTT DATA Group has introduced a group cash management system, which aims to improve the fund efficiency by letting the Company centrally manage the Group’s funds and lend needed funds to each group company.

Balance of financial liabilities by due date in the fiscal year ended March 31, 2019 are shown below. Trade and other receivables are not included in the table because they are usually settled within one year.

As of March 31, 2019

(Unit: million yen)

	Carrying amount	Contractual cash flow	Within 1 year	Over 1 year and within 2 years	Over 2 years and within 3 years	Over 3 years and within 4 years	Over 4 years and within 5 years	Over 5 years
Corporate bonds and loans	581,023	607,786	141,386	91,865	66,145	70,886	67,808	169,696
Commercial paper	24,000	24,000	24,000	-	-	-	-	-
Lease obligations	15,506	18,739	4,015	3,003	1,973	1,327	1,116	7,306
Derivative financial liabilities	2,197	2,197	365	1,792	40	-	-	-
Total	622,725	652,721	169,766	96,659	68,158	72,213	68,924	177,002

(4) Market risks

Market risks refer to risks concerning fluctuations in market prices, such as foreign exchange rates, interest rates, and equity prices and affect NTT DATA Group’s earnings or the value of its holdings of financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimizing the return.

With regard to foreign currency denominated assets and liabilities, NTT DATA Group basically hedges foreign exchange risk by possessing foreign currency liability in the same currency or other currency which links with the currency in question, making forward exchange contracts, currency swap transactions, currency option transactions, or combinations of them. With regard to variable rate assets and liabilities, the Company basically hedges interest rate risk by possessing liabilities which are linked to the industry interest rate, interest rate swap transactions, interest rate option transactions, or combinations of them.

With regard to stocks, their market risk is managed by grasping their fair value and checking the financial position of the issuers regularly. Derivatives are used in accordance with risk control rules and the Finance Department of the Company manages them centrally. The use of derivatives by consolidated subsidiaries is subject to prior discussion with the Company.

① Foreign exchange risk management

NTT DATA Group conducts corporate activities globally and is subject to risk of foreign exchange fluctuations as the group companies based in various regions of the world conduct trade, financing, and investment in non-functional currencies. To maintain economic value of cash flows in non-functional currencies, NTT DATA Group manages foreign exchange fluctuation risks by using contracts such as forward exchange contract. NTT DATA Group considers that these transactions effectively offset the impact of exchange fluctuations. Main hedged currencies are US dollars and Euros.

(a) Currency risk exposure

Currency risk exposures of NTT DATA Group in the fiscal year ended March 31, 2019 are as follows. The amount of foreign exchange risk hedged by derivatives is excluded.

(Unit: million yen)

Currency	As of March 31, 2019
USD	18,218
Euro	66,934

(b) Sensitivity analysis of currency exchange

Estimated amount of increase in profit before taxes assuming that Japanese yen depreciated by 1 yen in the fiscal year ended March 31, 2019 is as follows. The amount of decrease in profit before taxes assuming that the Japanese yen appreciated by 1 yen is the same amount.

(Unit: million yen)

Currency	As of March 31, 2019
USD	153
Euro	537

② Interest rate risk management

In conducting business activities, NTT DATA Group pays interest accrued by raising funds necessary for working capital and capital investment among others. With regard to borrowings with interest rate risks, NTT DATA Group usually hedges such interest rate risks by using an interest rate swap.

(a) Interest rate risk exposure

Interest rate risk exposures of NTT DATA Group in the fiscal year ended March 31, 2019 are as follows:

(Unit: million yen)

	As of March 31, 2019
Short-term borrowings	67,188
Long-term borrowings (incl. the current portion)	199,539

(b) Sensitivity analysis of interest rate

There is no significance in the effect on profit before taxes in case interest rate of financial instruments with floating interest rates held by NTT DATA Group as of March 31, 2019 changed by 1%.

③ Equity price fluctuation risk control

NTT DATA Group is exposed to equity price fluctuation risks as it holds marketable shares especially those of clients and associates as of March 31, 2019. Based on its risk control strategy, NTT DATA Group manages equity price fluctuation risks by regularly monitoring fair value and unrealized profit and loss for each investee.

Sensitivity analysis of equity price

The impact on other comprehensive income (before considering tax effect) in case market price declined by 10% for securities traded in an active market assuming that all other variables are unchanged is as follows:

(Unit: million yen)

	As of March 31, 2019
Impact on other comprehensive income (before considering tax effect) (( ) shows negative amount)	(11,246)

(5) Fair value of financial instruments

Fair value is defined as “a price that is assumed to be received for selling an asset or a price that is assumed to be paid to transfer a liability in an ordinary transaction between market participants on the day of the measurement.” In IFRS, there are 3 levels of faire values. Inputs used for measuring fair values are prioritized according to observability. Each input are as follows:

Level 1: market price of the same asset and liability in an active market
Level 2: observable input other than the market price included in Level 1 regarding asset and liability
Level 3: unobservable input regarding asset and liability

Reclassification between the levels of fair values is recognized as having occurred at the end of each quarter.

Financial instruments that are not measured at fair value

Financial instruments that are not measured at fair value on the date of transition to IFRS, as of March 31, 2018 and March 31, 2019 are as follows. Other financial instruments are not included in the table as their carrying amounts are largely equivalent to their fair values.

(Unit: million yen)

	Date of transition to IFRS (April 1, 2017)		As of March 31, 2018	
	Carrying amount	Fair value	Carrying amount	Fair value
Long-term loans (incl. those to be repaid within a year)	221,969	228,675	359,346	364,406
Corporate bonds (incl. those to be redeemed within a year)	210,072	216,280	160,081	163,623

(Note) The amount on the date of transition to IFRS and as of March 31, 2018 is based on JGAAP and fair value is shown in an amount disclosed as market value based on JGAAP.

(Unit: million yen)

	As of March 31, 2019	
	Carrying amount	Fair value
Long-term loans (incl. those to be repaid within a year)	397,164	422,535
Corporate bonds (incl. those to be redeemed within a year)	110,087	111,690

Assets and liabilities measured ordinarily at fair value

Assets and liabilities measured ordinarily at fair value on the date of transition to IFRS, as of March 31, 2018 and March 31, 2019 are as follows. NTT DATA Group continues to measure other financial assets (securities) and derivatives at fair value.

Date of transition to IFRS (April 1, 2017)

(Unit: million yen)

	Fair value			
	Total	Level 1	Level 2	Level 3
Other financial assets:				
Stocks	71,100	71,100	—	—
Derivative financial assets	730	—	730	—
Total	71,830	71,100	730	—
Other financial liabilities:				
Derivative financial liabilities	906	—	906	—
Total	906	—	906	—

(Note) The amount on the date of transition to IFRS is based on JGAAP and fair value is shown in an amount disclosed as market value based on JGAAP. Unlisted stocks do not have market values and since their market values are not disclosed based on JGAAP as financial instruments whose market values are acknowledged as extremely difficult to grasp, they are not included in above table for the date of transition to IFRS.

As of March 31, 2018

(Unit: million yen)

	Fair value			
	Total	Level 1	Level 2	Level 3
Other financial assets:				
Stocks	94,926	94,926	—	—
Derivative financial assets	621	—	621	—
Total	95,547	94,926	621	—
Other financial liabilities:				
Derivative financial liabilities	239	—	239	—
Total	239	—	239	—

(Note) The amount on the date of transition to IFRS is based on JGAAP and fair value is shown in an amount disclosed as market value based on JGAAP. Unlisted stocks do not have market values and since their market values are not disclosed based on JGAAP as financial instruments whose market values are acknowledged as extremely difficult to grasp, they are not included in above table for the date of transition to IFRS.

As of March 31, 2019

(Unit: million yen)

	Fair value			
	Total	Level 1	Level 2	Level 3
Other financial assets:				
Stocks, etc.	131,441	112,462	—	18,979
Derivative financial assets	1,978	—	1,978	—
Total	133,419	112,462	1,978	18,979
Other financial liabilities:				
Derivative financial liabilities	2,197	—	2,197	—
Total	2,197	—	2,197	—

There is no reclassification between Level 1 and Level 2.

Reconciliation of Level 3 assets and liabilities measure ordinarily at fair value in the fiscal year ended March 31, 2019 is as follows:

(Unit: million yen)

Classification	Balance at the beginning of the year	Gain/Loss Other comprehensive income	Increase by purchase	Decrease by selling	Other	Balance at the end of the year
Other financial assets						
Stocks, etc.	20,752	(176)	729	(2,980)	654	18,979

(Note) 1 "Balance at the beginning of the year" shows the value after applying IFRS 9.

2 "Gain/loss" included in "other comprehensive income" is related to equity securities measured at fair value through other comprehensive income as of the final day of the reporting period, and is included in "changes in fair value of financial assets measured through other comprehensive income" of the consolidated statement of comprehensive income.

3 There are no significant reclassifications in the fiscal year ended March 31, 2018.

(6) Measurement method of fair values

Fair values of financial assets and financial liabilities are determined as follows. In case a market price could be obtained in estimating fair values of a financial instrument, the market price is used. For the fair value of a financial instrument whose market price cannot be obtained, estimation is made using a method of discounting future cash flow or other appropriate methods.

"Trade and other receivables," "trade and other payables," and "short-term loan"

Carrying amounts are largely equivalent to their fair values.

"Other financial assets (current)" and "other financial assets (non-current)"

Fair values of marketable securities are measured with a market price of the same asset in an active market.

Other financial assets include common stock issued by unlisted companies not accounted for by equity method such as clients. Fair values of unlisted common stocks are calculated using assessment model based on discount future cash flow, revenue, profitability and net asset, similar industry comparison and other assessment methods.

Derivatives are interest rate swap contracts, currency option transactions and forward exchange contracts. Their fair values are assessed based on observable market data, and are classified as Level 2. Also, appraisal value is regularly verified using observable market data such as foreign exchange rate.

"Long-term loan" (including those to be repaid within a year) and "corporate bonds" (including those to be redeemed within a year)

Fair values of long-term loans (including those to be paid within a year) are and corporate bonds (including those to be redeemed within a year) are estimated based on the future discount cash flow using interest used in case NTT DATA Group borrows an equivalent new loan.

Fair values are assessed and verified based on observable market data and classified as Level 2.

"Other financial liabilities (current)" and "other financial liabilities (non-current)"

Derivatives are interest swap contracts, currency option transactions and forward exchange contracts. Their fair value is assessed based on observable market data, and is classified as Level 2. Also, appraisal value is regularly verified using observable market data such as foreign exchange rate.

Quantitative information concerning assets classified as Level 3

In NTT DATA Group, financial instruments classified as Level 3 are mainly comprised of unlisted stocks. The fair value of unlisted stocks is measured with available data using assessment methods and inputs that can most appropriately reflect the nature, characteristics, and risks of financial instruments concerned. The result of the measurement is reviewed and approved by an appropriately authorized person.

With regard to financial instruments classified as Level 3, increase and decrease of an important fair value in case unobservable input is changed to an alternative and reasonable assumption are not anticipated.

(7) Derivative transactions and hedging

Derivative transactions and hedging on the date of transition to IFRS and for the fiscal year ended March 31, 2018 are as follows:

Derivative and hedging transactions

NTT DATA Group has several financial instruments including long-term borrowings and other financial assets and liabilities in the ordinary course of business. Such financial instruments are exposed to market risks from changes in interest rates and foreign exchange rates. NTT DATA Group formulates risk management policies for mitigating such risks using derivatives such as forward foreign exchange contracts, interest rate swap agreements, currency swap agreements, and forward contracts in principle. The Group does not conduct derivative transactions for speculative purposes.

Risk management of foreign exchange fluctuations

NTT DATA Group concludes forward foreign exchange contracts and currency swap agreements, mainly in order to hedge the risks from changes in foreign currency rates related to foreign currency-denominated long-term borrowings. Such contracts and agreements have the same maturity as the underlying debt.

Risk management of interest rate fluctuations

Market risks from interest rate fluctuations that NTT DATA Group is exposed to are mainly related to obligations. Interest rate swap agreements are concluded to convert underlying debt of floating interest rate into payables of fixed interest rate. These instruments are executed with creditworthy financial institutions.

Derivative transactions to which hedge accounting is not applied on the date of transition to IFRS and as of March 31, 2018 are as shown below. These transactions are conducted for the purpose of economically hedging the currency exchange risks arising mainly from foreign currency-denominated receivables and payables. Hedge accounting is not applied to these transactions because most of them are for small amounts and short-term.

Date of transaction to IFRS (April 1, 2017)

(Unit: million yen)

	Contract amount, etc.	Portion of amount on the left exceeding 1 year	Market price	Gains or losses on valuation
Forward exchange contracts	25,637	404	(297)	(297)

As of March 31, 2018

(Unit: million yen)

	Contract amount, etc.	Portion of amount on the left exceeding 1 year	Market price	Gains or losses on valuation
Forward exchange contracts	53,318	240	(106)	(106)
Currency swaps	7,139	-	26	26

Derivative transactions to which hedge accounting is applied on the date of transition to IFRS and as of March 31, 2018 are as follows:

Date of transition to IFRS (April 1, 2017)

(Unit: million yen)

	Hedge accounting method	Main hedged items	Contract amount, etc.	Portion of amount on the left exceeding 1 year	Market price
Foreign exchange risk Forward exchange contracts	General processing method	Foreign currency-denominated forecast transaction	14,752	1,000	284
Interest rate risk Interest rate swap	Interest rate swap exceptional processing	Long-term borrowings	8,976	8,976	(98)
Foreign exchange/interest rate risk Interest rate currency swap	Interest rate currency swap processed together	Long-term borrowings	167,739	113,322	13,399

As of March 31, 2018

(Unit: million yen)

	Hedge accounting method	Main hedged items	Contract amount, etc.	Portion of amount on the left exceeding 1 year	Market price
Foreign exchange risk Forward exchange contracts	General processing method	Foreign currency-denominated forecast transaction	16,682	-	430
	Allocation processing	Foreign currency-denominated forecast transaction	1,322	66	(4)
Interest rate risk Interest rate swap	Interest rate swap exceptional processing	Long-term borrowings	8,502	8,502	97
Foreign exchange/interest rate risk Interest rate currency swap	Interest rate currency swap processed together	Long-term borrowings	107,333	107,333	(6,495)

Derivative transactions and hedging for the fiscal year ended March 31, 2019 are as follows:

Cash flow hedge

As a cash flow hedge, NTT DATA Group designates forward exchange, currency swap and interest rate swap to fix the changes in the cash flows of foreign currency-denominated receivables and payables, foreign currency-denominated firm commitments, foreign currency-denominated forecast transactions, and floating rate loans.

Derivative transactions to which hedge accounting is not applied as of March 31, 2019 are as follows. These transactions were conducted to economically hedge foreign exchange risks mainly arising from foreign currency-denominated receivables and payables. Hedge accounting is not applied to these derivatives because they are for small amount and short-term.

(Unit: million yen)

	Notional principal		Carrying amount	
	Total amount	Portion exceeding 1 year in the left	Assets	Liabilities
Forward exchange contracts	59,421	167	352	276
Currency swap	305	—	—	1

Items designated as hedging instruments as of March 31, 2019 are as follows:

(Unit: million yen)

	Notional principal		Carrying amount		Line item	Change in the value of the hedging instrument
	Total amount	Portion exceeding 1 year in the left	Assets	Liabilities		
Cash flow hedges						
Foreign exchange risk						
Forward exchange contracts	11,157	1,588	26	163	(Note 2)	188
Foreign currency-denominated deposit	33,731	-	33,730	-	(Note 3)	(1)
Interest rate risk						
Interest rate swap	8,881	8,881	8	-	(Note 2)	(89)
Foreign exchange/interest rate risk						
Interest rate currency swap	112,120	112,120	1,592	1,757	(Note 2)	6,330

(Note) 1 The average rate from forward exchange contracts and foreign currency-denominated deposit is 111.04 yen per dollar. Average interest rate of interest rate swap is 2.69%. Average rate of interest rate currency swap is 109.64 per dollar and average interest rate is minus 0.08%.

2 “Other financial assets (current),” “other financial assets (non-current),” “other financial liabilities (current),” and ”other financial liabilities (non-current)”

3 “Cash and cash equivalents”

The items designated as hedged items in the fiscal year ended March 31, 2019 are as follows:

(Unit: million yen)

	Change in the value of the hedging instrument	Cash flow hedge reserve related to ongoing hedges
Cash flow hedges		
Foreign exchange risk		
Foreign currency-denominated forecast transaction	(158)	158
Foreign currency-denominated finalized transactions, etc.	(29)	29
Interest rate risk		
Floating interest rate long-term loans	89	0
Foreign exchange/interest rate risk		
Floating interest rate foreign currency-denominated long-term loans	(6,274)	932

The result of applying hedge accounting, which had impact on the consolidated statement of comprehensive income of the fiscal year ended March 31, 2019 is as follows:

(Unit: million yen)

	Gain or loss on hedges recognized in the period in other comprehensive income (Note)	Amount reclassified from cash flow hedge reserve to profit or loss as reclassification adjustment (Note)	Major line item in consolidated statement of profit or loss for reclassification adjustment
Cash flow hedges			
Foreign exchange risk	62	(302)	Finance cost
Interest rate risk	0	-	-
Foreign exchange/interest rate risk	6,265	(7,090)	Finance cost

(Note) Amount before tax effect.

In the current fiscal year, hedge ineffectiveness recognized as profit or loss is not material.

31. Major subsidiaries

(1) NTT DATA Group structure

The consolidated financial statements of NTT DATA Group as of March 31, 2019 consist of NTT DATA and 307 consolidated subsidiaries (303 companies as of March 31, 2018).

Status of major consolidated subsidiaries as of March 31, 2019 is as follows:

Name	Main business	Location	Reportable segment	Percentage of voting rights (%)
				As of March 31, 2019
NTT DATA i CORPORATION	System design/development	Japan	Public & Social Infrastructure	100.0
NTT DATA KYUSHU Corporation	System design/development	Japan	Public & Social Infrastructure	100.0
NTT DATA TOKAI Corporation	System design/development	Japan	Public & Social Infrastructure	100.0
NTT DATA KANSAI CORPORATION	System design/development	Japan	Public & Social Infrastructure	100.0
NTT DATA SYSTEM TECHNOLOGIES INC.	System design/development	Japan	Financial	97.1
NTT DATA CUSTOMER SERVICE Corporation	System operation/maintenance	Japan	Financial	100.0
NTT DATA FINANCIAL CORE CORPORATION	System design/development	Japan	Financial	100.0
NTT DATA FORCE CORPORATION	System design/development	Japan	Financial	90.0
NTT DATA FRONTIER CORPORATION	System design/development	Japan	Financial	56.9
NTT DATA SOFIA Corporation	System design/development	Japan	Financial	85.0
NTT DATA Getronics Corporation	System design/development	Japan	Financial	70.0
XNET Corporation	Sales of systems	Japan	Financial	51.0
Japan Information processing Service Co., Ltd.	System design/development	Japan	Financial	80.0
NTT DATA SMS CORPORATION	System operation	Japan	Enterprise & Solutions	100.0
NTT DATA INTRAMART CORPORATION	Sales of packaged software	Japan	Enterprise & Solutions	(Note 1) 46.8
NTT DATA DATA WAVE CORPORATION	System design/development	Japan	Enterprise & Solutions	80.1
NTT DATA BUSINESS SYSTEMS CORPORATION	System design/development	Japan	Enterprise & Solutions	100.0
NTT DATA ENGINEERING SYSTEMS Corporation	System design/development	Japan	Enterprise & Solutions	100.0
NTT DATA CCS CORPORATION	System design/development	Japan	Enterprise & Solutions	60.0
NTT DATA MSE CORPORATION	System design/development	Japan	Enterprise & Solutions	(Note 1) 45.0
JSOL Corporation	System design/development	Japan	Enterprise & Solutions	50.0
NJK Corporation (Note 2)	System design/development	Japan	Enterprise & Solutions	100.0
NTT DATA Global Solutions Corporation	System design/development	Japan	Enterprise & Solutions	100.0
NTT DATA MHI Systems Corporation	System design/development	Japan	Enterprise & Solutions	51.0
QUNIE CORPORATION	Consulting	Japan	Enterprise & Solutions	100.0

Name	Main business	Location	Reportable segment	Percentage of voting rights (%)
				As of March 31, 2019
Netyear Group Corporation	SIPS (Strategic Internet Professional Services) business	Japan	Enterprise & Solutions	(Note 1) 48.5
NTT DATA, Inc.	Consulting System design/development	United States	North America	100.0
NTT Data International L.L.C.	Supervision of North American operating subsidiaries	United States	North America	100.0
NTT DATA Enterprise Services Holding, Inc.	Consulting System design/development	United States	North America	100.0
NTT DATA Consulting, Inc.	Consulting System design/development	United States	North America	100.0
NTT DATA Services International Holdings B.V.	Consulting System design/development	Nederland	North America	100.0
NTT DATA Services Holdings Corporation	Consulting System design/development	United States	North America	100.0
NTT DATA Services, LLC	Consulting System design/development	United States	North America	100.0
NTT DATA EMEA LTD.	Supervision of European operating subsidiaries	United Kingdom	EMEA & LATAM	100.0
EVERIS PARTICIPACIONES, S.L.U.	Consulting System design/development	Spain	EMEA & LATAM	100.0
itelligence AG	Consulting System design/development	Germany	EMEA & LATAM	100.0
NTT DATA EUROPE GmbH & CO. KG	Supervision of APAC operating subsidiaries	Germany	EMEA & LATAM	100.0
NTT DATA MANAGEMENT SERVICE Corporation	Administrative agent business	Japan	Other	70.0
NTT DATA INTELLILINK Corporation	System design/development	Japan	Other	100.0
NTT DATA ASIA PACIFIC PTE. LTD.	Supervision of APAC operating subsidiaries	Singapore	Other	100.0
NTT DATA BEEN (China) Information Technology Co.,Ltd.	Supervision of China operating subsidiaries	China	Other	100.0

(Note) 1 Though our share is less than 50/100, the company is consolidated because we have the power as a result of considering distribution status of the voting rights, power to appoint directors, etc., and judging that we have substantial control.

2 Effective April 1, 2019, NJK CORPORATION changed its trade name to NTT DATA NJK Corporation.

3 There has been no material changes in the percentages of ownership of the consolidated subsidiaries since fiscal year ended March 31, 2018.

(2) Structured entities

Consolidated structured entities

NTT DATA owns a property management company as a consolidated structured entity. This management company was established for the purpose of mainly undertaking operations related to taking over of specified assets according to asset securitization plans based on Act on Securitization of Assets, as well as their management and disposal. It is designed so that the voting rights or similar rights are not determinant in evaluating control, but NTT DATA judged that it has control over its management.

NTT DATA has not provided, nor intends to provide, any significant financial support or other significant support to the consolidated structured entities without contractual obligation.

32. Related parties

(1) Transactions with related parties

Transactions and balances of receivables and payables between NTT DATA Group and related parties are as follows:

Fiscal year ended March 31, 2018 (from April 1, 2017 to March 31, 2018)

(Unit: million yen)

Type	Names of related parties	Business or occupation	Transaction	Amount	Outstanding balance
Subsidiary of the parent company	NTT FINANCE CORPORATION	Total leasing	Settlement of transactions between NTT group companies	38,105	10,214
			Fund deposit (Note 3)	43,429	12,000
			Interest income in association with fund deposit	3	—
			Fund borrowing	179,378	219,378
			Fund borrowing (Note 3)	9,152	12,752
			Interest in association with fund borrowing	411	—
Officer	Toshio Iwamoto	President and CEO, Representative Director of NTT DATA Chairman of Japan Electronic Payment Promotion Organization	System development income	13	—
			Income from other businesses such as building leases	28	—
			Payment of annual membership fee	3	—

(Note) 1 Consumption tax is included in both transaction amounts and balance at the end of the period for transaction settlements between NTT group companies but not in other transactions.

2 Terms of transactions and the method of deciding the terms are same as those of transactions with other business partners.

3 For transaction amount of fund deposits and borrowings, average balance of deposits and short-term loans are shown.

Fiscal year ended March 31, 2019 (from April 1, 2018 to March 31, 2019)

(Unit: million yen)

Type	Names of related parties	Business or occupation	Transaction	Amount	Outstanding balance
Subsidiary of the parent company	NTT FINANCE CORPORATION	Total leasing	Settlement of transactions between NTT group companies	59,253	14,388
			Fund deposit (Note 3)	39,526	382
			Interest income in association with fund deposit	2	—
			Fund borrowing	40,000	259,216
			Fund borrowing (Note 3)	4,737	20,440
			Interest in association with fund borrowing	2,291	—
Officer	Yo Honma	President and CEO, Representative Director of NTT DATA Chairman of Japan Electronic Payment Promotion Organization	System development income	10	—
			Income from other businesses such as building leases	7	—
Officer	Shigeki Yamaguchi	Senior Executive Vice President and Representative Director of NTT DATA Representative Board Member of Japan ID Connect with Secure Authentication Promotional association, a general incorporated association	Payment of annual membership fee	1	—
Officer	Toshio Iwamoto	Chief Corporate Advisor of NTT DATA Chairman of Japan Electronic Payment Promotion Organization (Note 4)	System development income	10	—
			Income from other businesses such as building leases	7	—
			Payment of annual membership fee	3	—
		Chief Corporate Advisor of NTT DATA Chairman of the Japanese Association of Healthcare Information Systems Industry (Note 4)	Payment of annual membership fee	5	—

(Note) 1 Consumption tax is included in both transaction amounts and balance at the end of the period for transaction settlements between NTT group companies but not in other transactions.

2 Terms of transactions and the method of deciding the terms are same as those of transactions with other business partners.

3 For transaction amount of fund deposits and borrowings, average balance of deposits and short-term loans are shown.

4 Transactions while still in office as President & CEO and Representative Director until June 19, 2018.

(2) Remuneration for key management

Remuneration for key management in fiscal years ended March 31, 2018 and 2019 are as follows. Remuneration for key management is the remuneration for directors of NTT DATA.

(Unit: million yen)

	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019
Short-term remuneration	518	751
Long-term incentive	—	390
Total	518	1,141

(3) Parent company

Name	Main business	Location	Percentage of ownership		
			Date of transition to IFRS (April 1, 2017)	As of March 31, 2018	As of March 31, 2019
NIPPON TELEGRAPH AND TELEPHONE CORPORATION	Regional telecommunications operations, long-distance / international telecommunications operations, mobile telecommunications, data communications, etc.	Japan	54.2%	54.2%	—
NTT, Inc.	Governance, strategy development, policy promotion, etc. of NTT Group	Japan	—	—	54.2%

(4) Ultimate parent company

Name	Main business	Location	Percentage of ownership		
			Date of transition to IFRS (April 1, 2017)	As of March 31, 2018	As of March 31, 2019
NIPPON TELEGRAPH AND TELEPHONE CORPORATION	Regional telecommunications operations, long-distance / international telecommunications operations, mobile telecommunications, data communications, etc.	Japan	54.2%	54.2%	54.2%

33. Commitments

On the date of transition to IFRS, as of March 31, 2018 and March 31, 2019、commitments for acquiring assets after the reporting date amounted to 1,315 million yen, 5,633 million yen, and 3,002 million yen. These are mainly for unperformed contracts related to the purchase of property, plant and equipment.

34. Contingent liabilities

There are no material contingent liabilities.

35. Subsequent events

NTT DATA Group's conversion of Cognosante Consulting, LLC into a subsidiary

(1) Outline of business combination

On April 1, 2019, NTT DATA, the company submitting consolidated financial statements, acquired equity interest of Cognosante Consulting, LLC, the consulting division of Cognosante based in Virginia, U.S.A., to obtain 100% of voting rights and control of the company through NTT DATA Services, the subsidiary in North America. The outline of this deal is shown below. While NTT DATA applied IFRS 3 "Business Combination," we do not disclose detailed information on accounting treatment because we have not completed the accounting process for the business combination at the time of writing.

Name of the acquired company	Cognosante Consulting, LLC
Main business	Providing healthcare-related agencies of the U.S. state governments with support for development of IT strategies and planning, quality assurance services, services to assist their project management, and others
Main reason for the business combination	The acquisition will enable NTT DATA Services to provide industry-focused professional consulting services in the healthcare-related field to which state governments allocate the largest portion of their budgets. Also, NTT DATA Services will accelerate its efforts to roll out services by acquiring the expertise of Cognosante Consulting, LLC based on their enriched experience of providing services for 48 state governments for nearly 30 years through the business combination.
Date of acquisition	April 1, 2019
Method adopted by the acquirer company to take control of the acquired company	Acquisition of equity interest in exchange for cash payment
Percentage of the voting rights acquired	100%

(2) Consideration of the transfer

The fair value in consideration of the transfer as of the day of acquisition is as follows.

Consideration of the transfer	Cash
The fair value in consideration of the transfer	31,555 million yen

(3) Amount and item of acquisition-related costs

They have not been determined yet.

(4) Goodwill and identifiable assets acquired and liabilities assumed

They have not been determined yet because we are still calculating the fair value of acquired assets and assumed liabilities as of the day of acquisition.

36. First-time adoption of IFRS

(1) Transition to financial reporting based on IFRS requirements

Starting from the fiscal year ended March 31, 2019, the NTT DATA Group discloses its consolidated financial statements in compliance with the IFRS. Its most recent consolidated financial statements (for the period from April 1, 2017 to March 31, 2018) were issued in compliance with JGAAP, and the transition to IFRS was implemented as of the transition date of April 1, 2017.

IFRS 1 requires that companies adopting the IFRS for the first time apply new rules retrospectively, to periods before the transition. However, there are certain exceptions in retrospective application, either voluntary or mandatory. The Group adjusted for inconsistencies caused in complying with this requirement by modifying retained earnings and other capital components, as of the transition date.

The voluntary exemptions that NTT DATA availed itself of are as follows:

① Business combinations

Under IFRS 1, companies are allowed to apply IFRS 3 retrospectively to all business combinations that took place before the transition date or apply IFRS 3 only to specific business combinations taking place on the transition date or prior dates.

NTT DATA has elected to apply IFRS 3 to business combinations taking place from the transition date.

② Foreign currency translation differences for foreign operation

Under IFRS 1, first-time adopters of the IFRS are allowed to elect to either deem cumulative translation adjustments from foreign operations as of the transition date as zero, or restate translation differences retrospectively to the date of establishment or acquisition of their foreign businesses. NTT DATA has elected to deem any previous foreign currency translation differences booked as of the transition date, as zero.

③ Use of deemed cost

Under IFRS 1, first-time adopters have an option to use fair value as of the transition date, as current deemed cost for properties, plants and equipment. NTT DATA opted to use fair value as of the transition date, as current deemed cost for some of its properties, plants and equipment.

④ Designation of financial instruments

Under IFRS 1, the Group had an option to designate any changes in the fair value of its equity instruments as “fair value through other comprehensive income (FVTOCI)” financial assets, if deemed appropriate based on the facts and circumstances of these financial instruments as of the beginning of the current term (April 1, 2018). NTT DATA has elected to designate its equity instruments as FVTOCI financial assets based on the facts and circumstances of these financial instruments as of the beginning of the current term (April 1, 2018).

⑤ Revenue

Under IFRS 1, first-time adopters of the IFRS are eligible for transitional relief provided in the paragraph C5 of IFRS 15. NTT DATA has elected to apply IFRS 15 retrospectively, while resorting to the practical expedient provided for in IFRS 15.C5(d), which exempts an entity from 1) disclosing any information about the amount of transaction price allocated to the performance obligations that are not satisfied; and 2) providing an explanation of when it expects to recognize this amount as revenue, for reporting periods before the fiscal year ended March 31, 2019 (i.e., the first IFRS reporting period for the Group).

⑥ Exemption from restatement of comparative period financial statements in case of applying IFRS 9

Under IFRS 1, if the first reporting period of a first-time adopter of the IFRS begins before January 1, 2019, and if applying IFRS 9 (2014 version), such adopter is not required to restate comparative period financial statements regarding items mentioned in IFRS 9, in compliance with IFRS 7 and IFRS 9, and thus, is allowed to apply the previous accounting standards to these items.

Using this exemption, the Group applies the JGAAP in recognizing and measuring items mentioned in IFRS 9 in the consolidated financial statements for comparative periods.

(2) Adjustments in shifting from JGAAP to IFRS

In shifting to the IFRS, NTT DATA has adjusted values reported in consolidated financial statements based on the JGAAP. The effects that the Group’s shift to the IFRS may have on its financial position, business results, and cash flows are explained in the table below and in the notes to the table.

Included in the “reclassification” column of the table are items that are irrelevant to equity and comprehensive income, while “differences in recognition and measurement” represents items affecting equity and comprehensive income.

Adjustments of equity on the date of transition to IFRS (April 1, 2017)

(Unit: million yen)

Japanese JGAAP (line item)	Japanese GAAP	Reclassifi-cations	Unification of reporting periods (a)(b)	Difference in recognition and measurement	IFRS	Notes	IFRS (line item)
Assets							Assets
Current assets							Current assets
Cash and deposits	212,459	47,580	(6,054)	—	253,984		Cash and cash equivalents
Notes and accounts receivable - trade	458,086	(3,494)	(5,683)	1,172	450,081		Trade and other receivables
Lease receivables and investment assets	28,085	(28,085)	—	—	—		
	—	49,444	8,419	15,748	73,612		Contract asset
Inventories	31,211	—	—	(17,152)	14,059		Inventories
Securities	4,303	8,871	414	—	13,588		Other financial assets
Allowance for doubtful accounts	(3,740)	3,740	—	—	—		
Deposits paid	55,809	(55,809)	—	—	—		
Other	79,636	(22,479)	104	42	57,302		Other current assets
Deferred tax assets	32,062	(32,062)	—	—	—		
Total current assets	897,910	(32,294)	(2,800)	(190)	862,626		Total current assets
Non-current assets							Non-current assets
Property, plant and equipment	356,860	(28,377)	(6,697)	(4,943)	316,843	(c)	Property, plant and equipment
Intangible assets (Goodwill)	315,261	—	29,648	(2,531)	342,378	(b)	Goodwill
Intangible assets (except for Goodwill)	462,022	—	(31,446)	(228)	430,348	(d)	Intangible fixed assets
Net defined benefit asset	5,604	(5,604)	—	—	—		
	—	28,377	84	—	28,462		Investment property
Investment securities	86,834	(80,243)	—	—	6,591		Investments accounted for using the equity method
	—	105,978	813	(106)	106,685		Other financial assets
Deferred tax assets	60,803	32,062	6,116	15,190	114,171	(e)	Deferred tax assets
Other	54,419	(20,885)	(94)	—	33,439		Other non-current assets
Allowance for doubtful accounts	(773)	773	—	—	—		
Total non-current assets	1,341,031	32,080	(1,577)	7,383	1,378,917		Total non-current assets
Total assets	2,238,941	(214)	(4,376)	7,192	2,241,543		Total assets

(Unit: million yen)

Japanese JGAAP (line item)	Japanese GAAP	Reclassifi-cations	Unification of reporting periods (a)(b)	Difference in recognition and measurement	IFRS	Notes	IFRS (line item)
Liabilities							Liabilities
Current liabilities							Current liabilities
Accounts payable – trade	138,453	115,555	4,245	34,526	292,779	(f)	Trade and other payables
Advances received	180,827	973	4,178	(132)	185,847		Advance received
Short-term loans payable	213,160	103,458	1,636	—	318,254		Bonds and borrowings
Current portion of long-term loans payable	53,462	(53,462)	—	—	—		
Current portion of bonds	49,997	(49,997)	—	—	—		
	—	3,037	56	—	3,094		Other financial liabilities
Income taxes payable	35,917	(367)	(4,512)	—	31,037		Income taxes payable
Provision for loss on order received	3,452	(3,452)	—	—	—		
	—	5,712	361	(1)	6,072		Provisions
Other	158,352	(121,706)	(2,142)	4,237	38,741	(g)	Other current liabilities
Total current liabilities	833,620	(247)	3,822	38,629	875,824		Total current liabilities
Non-current liabilities							Non-current liabilities
Bonds payable	160,075	168,618	(102)	—	328,591		Bonds and borrowings
Long-term loans payable	168,618	(168,618)	—	—	—		
	—	7,363	(12)	1,411	8,762		Other financial liabilities
Net defined benefit liability	186,788	—	199	2,205	189,193	(h)	Defined benefit liabilities
Provision for directors' retirement benefits	876	(876)	—	—	—		
	—	2,693	—	(1)	2,692		Provisions
Deferred tax liabilities	30,367	832	(3,258)	(21)	27,921		Deferred tax liabilities
Other	24,881	(9,979)	(2,915)	(2,730)	9,257		Other non-current liabilities
Total non-current liabilities	571,606	33	(6,088)	864	566,415		Total non-current liabilities
Total liabilities	1,405,225	(214)	(2,266)	39,494	1,442,239		Total liabilities
Net assets							Equity
Capital stock	142,520	—	—	—	142,520		Capital stock
Capital surplus	141,048	—	—	(21,747)	119,301		Capital surplus
Retained earnings	501,369	—	4,690	(39,109)	466,950	(k)	Retained earnings
Treasury shares	(1)	—	—	—	(1)		Treasury shares
Accumulated other comprehensive income	17,211	—	(6,801)	29,369	39,779		Other components of equity
Non-controlling interests	31,568	—	1	(815)	30,754		Non-controlling interests
Total net assets	833,716	—	(2,110)	(32,301)	799,304		Total equity
Total liabilities and net assets	2,238,941	(214)	(4,376)	7,192	2,241,543		Total liabilities and equity

Adjustments of equity as of March 31, 2018

(Unit: million yen)

Japanese JGAAP (line item)	Japanese GAAP	Reclassifi-cations	Unification of reporting periods (a)(b)	Difference in recognition and measurement	IFRS	Notes	IFRS (line item)
Assets							Assets
Current assets							Current assets
Cash and deposits	186,616	3,454	—	—	190,070		Cash and cash equivalents
Notes and accounts receivable - trade	504,632	(15,640)	(1,111)	(2,518)	485,363		Trade and other receivables
Lease receivables and investment assets	26,525	(26,525)	—	—	—		
	—	62,479	1,191	18,279	81,948		Contract asset
Inventories	41,166	(32)	—	(19,591)	21,543		Inventories
Securities	2,298	9,597	—	—	11,895		Other financial assets
Allowance for doubtful accounts	(3,218)	3,218	—	—	—		
Deposits paid	12,001	(12,001)	—	—	—		
Other	85,194	(24,788)	—	(775)	59,631		Other current assets
Deferred tax assets	30,212	(30,212)	—	—	—		
Total current assets	885,426	(30,450)	80	(4,605)	850,450		Total current assets
Non-current assets							Non-current assets
Property, plant and equipment	380,350	(27,305)	(375)	(4,273)	348,398	(c)	Property, plant and equipment
Intangible assets (Goodwill)	311,658	—	—	24,229	335,887	(b)	Goodwill
Intangible assets (except for Goodwill)	430,423	—	295	694	431,412	(d)	Intangible fixed assets
Net defined benefit asset	6,932	(6,932)	—	—	—		
	—	27,305	80	—	27,384		Investment property
Investment securities	112,803	(105,972)	—	—	6,831		Investments accounted for using the equity method
	—	134,650	—	3,573	138,223		Other financial assets
Deferred tax assets	50,120	30,212	91	15,335	95,757	(e)	Deferred tax assets
Other	57,300	(22,480)	1,040	—	35,860		Other non-current assets
Allowance for doubtful accounts	(734)	734	—	—	—		
Total non-current assets	1,348,852	30,212	1,131	39,558	1,419,752		Total non-current assets
Total assets	2,234,278	(239)	1,210	34,953	2,270,203		Total assets

(Unit: million yen)

Japanese JGAAP (line item)	Japanese GAAP	Reclassifi-cations	Unification of reporting periods (a)(b)	Difference in recognition and measurement	IFRS	Notes	IFRS (line item)
Liabilities							Liabilities
Current liabilities							Current liabilities
Accounts payable - trade	145,372	125,023	767	36,722	307,885	(f)	Trade and other payables
Advances received	209,747	5,251	248	(1,455)	213,791		Advance received
Short-term loans payable	46,846	50,567	—	—	97,413		Bonds and borrowings
Current portion of long-term payable	567	(567)	—	—	—		
Current portion of bonds	50,000	(50,000)	—	—	—		
	—	23,111	—	—	23,111		Other financial liabilities
Income taxes payable	26,212	—	—	0	26,213		Income taxes payable
Provision for loss on order received	5,760	(5,760)	—	—	—		
	—	7,935	—	—	7,935		Provisions
Other	181,468	(155,001)	(248)	4,651	30,870	(g)	Other current liabilities
Total current liabilities	665,972	559	767	39,919	707,217		Total current liabilities
Non-current liabilities							Non-current liabilities
Bonds payable	110,081	358,779	—	—	468,860		Bonds and borrowings
Long-term loans payable	358,779	(358,779)	—	—	—		
	—	9,483	—	1,453	10,936		Other financial liabilities
Defined benefit liabilities	197,924	—	—	1,925	199,849	(h)	Defined benefit liabilities
Provision for directors' retirement benefits	909	(909)	—	—	—		
	—	3,208	—	—	3,208		Provisions
Deferred tax liabilities	7,142	112	712	(255)	7,710		Deferred tax liabilities
Other	24,607	(12,691)	—	—	11,916		Other non-current liabilities
Total non-current liabilities	699,442	(798)	712	3,123	702,479		Total non-current liabilities
Total liabilities	1,365,414	(239)	1,479	43,042	1,409,696		Total liabilities
Net assets							Equity
Capital stock	142,520	—	—	—	142,520		Capital stock
Capital surplus	140,977	—	—	(24,784)	116,193		Capital surplus
Retained earnings	537,369	—	317	(9,084)	528,601	(k)	Retained earnings
Treasury shares	(1)	—	—	—	(1)		Treasury shares
Accumulated other comprehensive income	12,995	—	(585)	26,456	38,865		Other components of equity
Non-controlling interests	35,004	—	—	(677)	34,327		Non-controlling interests
Total net assets	868,863	—	(268)	(8,089)	860,506		Total equity
Total liabilities and net assets	2,234,278	(239)	1,210	34,953	2,270,203		Total liabilities and equity

Adjustments of profit or loss and comprehensive income for the year ended March 31, 2018 (from April 1, 2017 to March 31, 2018)

(Unit: million yen)

Japanese JGAAP (line item)	Japanese GAAP	Reclassifi-cations	Unification of reporting periods (a)(b)	Difference in recognition and measurement	IFRS	Notes	IFRS (line item)
Net sales	2,117,167	—	(79,775)	2,298	2,039,690		Net sales
Cost of sales	1,592,746	1,805	(61,076)	2,060	1,535,535		Cost of sales
Gross profit	524,422	(1,805)	(18,700)	238	504,155		Gross profit
Selling general and administrative expenses	400,899	19,491	(13,178)	(26,177)	381,035	(b)	Selling general and administrative expenses
Operating income	123,522	(21,296)	(5,522)	26,415	123,120		Operating income
Non-operating income	10,161	(10,161)	—	—	—		
Non-operating expenses	12,120	(12,120)	—	—	—		
Ordinary income	121,564	(121,564)	—	—	—		
Extraordinary losses	21,480	(21,480)	—	—	—		
	—	5,988	(121)	—	5,867		Financial income
	—	9,103	(438)	(1,473)	7,193		Financial costs
	—	1,027	(118)	—	909		Share of profit or loss of entities for using equity mtehod
Income before income taxes	100,084	—	(5,323)	27,943	122,704		Income before income taxes
Total income taxes	38,716	—	(1,641)	(62)	37,013		Income taxes
Net income	61,368	—	(3,682)	28,005	85,691		Net income
Net income attributable to owners of parent	58,173	—	(3,680)	27,899	82,392		Net income attributable to Shareholders of NTT DATA
Net income attributable to non-controlling interests	3,195	—	(2)	106	3,299		Non-controlling interests

(Unit: million yen)

Japanese JGAAP (line item)	Japanese GAAP	Reclassifi-cations	Unification of reporting periods (a)(b)	Difference in recognition and measurement	IFRS	Notes	IFRS (line item)
Net income	61,368	—	(3,682)	28,005	85,691		Net income
Other comprehensive income							Other comprehensive income (after taxes)
							Items that will not be reclassified to profit or loss
Valuation difference on available-for-sale securities	17,786	—	(53)	—	17,733		Profit or loss from investments in equity instruments designated at fair value through other comprehensive income
Remeasurements of defined benefit plans, net of tax	2,688	—	—	(1,262)	1,426		Remeasurements of defined benefit plans
	—	0	—	0	0		Share of other comprehensive income of entities accounted for using equity method
Other	213	—	—	(213)	—		
							Items that may be reclassified subsequently to profit or loss
Deferred gains or losses on hedges	227	—	—	—	227		Cash flow hedges
Foreign currency translation adjustment	(24,993)	—	6,369	(317)	(18,941)		Foreign currency translation adjustment
Share of other comprehensive income of entities accounted for using equity method	152	(0)	(9)	50	193		Share of other comprehensive income of entities accounted for using equity method
Total other comprehensive income	(3,926)	—	6,307	(1,742)	638		Total other comprehensive income (after taxes)
Comprehensive income	57,442	—	2,625	26,263	86,329		Comprehensive income
Comprehensive income attributable to							Comprehensive income attributable to:
Comprehensive income attributable to owners of parent	53,957	—	2,626	26,294	82,877		Shareholders of NTT DATA
Comprehensive income attributable to non-controlling interests	3,485	—	(2)	(31)	3,452		Non-controlling interests

(3) Notes on adjustments to equity, profit or loss and comprehensive income

① Reclassification

- Under JGAAP, deferred tax assets are classified as either current assets or non-current assets, and deferred tax liabilities as current liabilities or non-current liabilities. As the IFRS does not permit deferred tax assets/liabilities to be classified as current assets/liabilities, they are classified as non-current assets or liabilities in the Group's financial statements.
- Whether an accounting item is disclosed separately or grouped into some broader category is indicated in accordance with IFRS items.

② Differences in recognition and measurement between JGAAP and IFRS

(a) Alignment of reporting periods

Some subsidiaries had different reporting periods from NTT DATA, but their accounting periods were aligned with NTT DATA's in fiscal year 2017. Under the JGAAP, any gains/losses resulting from aligning the reporting periods of NTT DATA and its subsidiaries were to be reported as net income/loss for the current fiscal year; under the IFRS, these gains/losses are not reflected in net income/loss but included in retained earnings on the date of transition to IFRS.

(b) Business combinations

Under the JGAAP, goodwill was amortized consistently over periods in which ROI is reasonably estimated to occur. Under the IFRS, goodwill is not amortized.

Under the JGAAP, cost allocation was accounted for on the assumption that this revision was made in the fiscal year in which the provisional accounting treatment was confirmed (fiscal year 2017, to which the transition date belongs). Under the IFRS, these revisions related to cost allocation are accounted for retrospectively, by assuming that the provisional accounting treatment was confirmed in the fiscal year in which business combinations occurred (fiscal year 2016).

(c) Deemed cost

The Group has elected to apply the optional exemption to use the fair value as of the transition date as deemed cost for some of its properties, plants and equipment and investment properties.

(d) Intangible assets

Under the JGAAP, R&D costs are recognized as expense as incurred, except in cases where different accounting standards are applied.

Under the IFRS, expenditures relating to development activities can be measured by the total of expenditure that recognized in the period from the date on which these expenses meet the requirements all for recognition as intangible assets to the date on which the development process essentially ends. Also, it has been recorded in the Consolidated Statement of Financial Position. The Group are mainly developing system (System Integration) and providing services (Plan-Based Services).

(e) Deferred tax assets

Under the JGAAP, the Group recognized deferred tax assets by following the "Implementation Guidance on Recoverability of Deferred Tax Assets" (ASBJ Guidance No. 26); under IFRS, only the portions of deductible temporary differences, amount of loss carried forward and deduction of carryover tax that are highly likely to bring in tax benefits are recognized as deferred tax assets.

(f) Unused paid holidays

The JGAAP has no provisions for unused paid holidays. Under the IFRS, unused paid holidays are accounted for as liability.

(g) Levies

Under the JGAAP, property taxes and other levies that have become payable were accounted for over the fiscal year. Under the IFRS, these levies are to be booked as they become payable.

(h) Employee benefits

Under the JGAAP, service costs, interest expenses, and expected return on plan assets related to defined benefit post retirement plans are recognized as retirement benefit expenses. In addition, the portions of actuarial differences arising from defined benefit post retirement plans and prior service costs that are not recognized as retirement benefit expenses for the current term are recognized as other cumulative comprehensive income, which shall be recognized as net income/loss for a certain period.

Under the IFRS, current service costs and prior service costs for plan assets related to defined benefit post retirement plans are recognized as net income/loss; for net interest gains/expenses, net defined benefit liabilities (assets) multiplied by a discount rate are recognized as net income/loss. In addition, actuarial differences arising from the re-measurement of net defined benefit liabilities (assets) are recognized as components of other capital, and are classified as retained earnings incurred without being recognized through profit or loss. Please note that the re-measurement of net defined benefit liabilities (assets) consists of actuarial differences related to defined benefit obligation and return on plan assets (excluding interest income on plan assets).

(i) Foreign currency translation differences for foreign operations

NTT DATA deems any previous foreign currency translation differences booked as on the transition date, as zero, and transferred the differences to retained earnings.

(j) Stock issuance cost

Under the JGAAP, the transaction costs of equity transaction spent directly for stock issuance are recognized as net income/loss. Under the IFRS, the transaction costs of equity transaction are accounted for as a deduction from equity, net of any related income tax benefit.

(k) Adjustments to retained earnings

The effects that the adjustments mentioned above might have on retained earnings are as follows:

(Unit: million yen)

Items of adjustments	As of April 1, 2017 (Date of transition to IFRS)	As of March 31, 2018
Alignment of reporting periods (a)	4,690	317
Differences in recognition and measurement		
Business combinations (b)	(2,987)	24,414
Deemed cost (c)	(3,453)	(3,453)
Intangible assets (d)	647	561
Deferred tax assets (e)	863	909
Unused paid holidays (f)	(21,170)	(22,553)
Levies (g)	(3,536)	(3,582)
Employees benefits (h)	(31,571)	(28,829)
Foreign currency translation differences for foreign operations (i)	16,605	16,605
Stock issuance cost (j)	5,708	5,708
Other	(215)	1,136
Total differences in recognition and measurement	(39,109)	(9,084)
Adjustments to retained earnings	(34,419)	(8,767)

(4) Adjustments to the consolidated statements of cash flows of the previous consolidated fiscal year

Most of the differences between the consolidated statements of cash flows in compliance with JGAAP and those in compliance with IFRS are resulted from aligning the reporting periods of NTT DATA and some of its subsidiaries.

(2) 【Other】

Quarterly information of the fiscal year ended March 31, 2019, etc.

(Accumulated period)		1Q	2Q	3Q	Fiscal year ended March 31, 2019
Net sales	(million yen)	505,240	1,022,722	1,550,686	2,163,625
Income before income taxes (current FY)	(million yen)	30,204	61,046	94,608	146,914
Net income attributable to shareholders of NTT DATA (current FY)	(million yen)	20,809	38,664	59,521	93,616
Net income per share (current FY)	(Yen)	14.84	27.57	42.44	66.75

(Accounting period)		1Q	2Q	3Q	4Q
Net income per share	(Yen)	14.84	12.73	14.87	24.31

(Note) The quarterly information of the fiscal year ended March 31, 2019 is prepared based on IFRS. The figures are rounded off to the nearest million yen.