

8-Year Financial Summary

Chugai Pharmaceutical Co., Ltd. and Consolidated Subsidiaries/Years ended December 31

International Financial Reporting Standards (IFRS)	2019		2018		2017		2016	
	IFRS	Core ¹	IFRS	Core	IFRS	Core	IFRS	Core
Results								
Revenues ²	686.2		579.8		534.2		491.8	
Sales	588.9		527.8		499.3		472.7	
Royalties and other operating income	97.3		51.9		34.9		19.1	
Cost of sales	(266.1)	(265.1)	(262.8)	(261.9)	(254.2)	(252.9)	(247.9)	(246.7)
Operating expenses	(209.5)	(196.2)	(192.6)	(187.6)	(181.1)	(178.1)	(167.0)	(164.5)
Marketing and distribution	(77.2)	(73.5)	(73.7)	(73.7)	(72.8)	(72.8)	(69.8)	(69.8)
Research and development	(107.9)	(102.1)	(99.2)	(94.2)	(92.9)	(88.9)	(85.0)	(82.6)
General and administration	(24.4)	(20.6)	(19.7)	(19.7)	(15.3)	(16.3)	(12.2)	(12.1)
Operating profit	210.6	224.9	124.3	130.3	98.9	103.2	76.9	80.6
Profit before taxes	207.9	222.2	121.4	127.5	97.0	101.3	74.4	78.1
Net income	157.6	167.6	93.1	97.3	73.5	76.7	54.4	56.8
Attributable to Chugai shareholders	157.6	167.6	92.5	96.7	72.7	75.9	53.6	56.1
Core EPS (Yen)	—	305.80	—	176.42	—	138.68	—	102.50
Cash dividends per share (Yen)	140		86		62		52	
Core payout ratio	—	45.8%	—	48.7%	—	44.7%	—	50.7%
Financial Position								
Net operating assets	547.0		505.3		440.2		431.1	
Total assets	1,058.9		919.5		852.5		806.3	
Total liabilities	(204.9)		(163.0)		(159.6)		(159.8)	
Total net assets	854.0		756.5		692.9		646.5	
Investments in property, plant and equipment	54.0		71.8		34.3		19.4	
Depreciation	17.8		14.6		14.5		14.8	
Main Indicators								
Cost to sales ratio	45.2%	45.0%	49.8%	49.6%	50.9%	50.7%	52.4%	52.2%
Ratio of operating profit to revenues	30.7%	32.8%	21.4%	22.5%	18.5%	19.3%	15.6%	16.4%
Ratio of research and development expenditures to revenues	15.7%	14.9%	17.1%	16.2%	17.4%	16.6%	17.3%	16.8%
Core return on invested capital (Core ROIC) ^{3,4}	30.1%	31.9%	20.3%	21.2%	17.3%	18.1%	—	14.6%
Ratio of net income to equity attributable to Chugai shareholders (ROE) ⁵	19.6%	—	12.8%	—	10.9%	—	8.4%	—
Ratio of profit before taxes to total assets (ROA) ⁶	21.0%	—	13.7%	—	11.7%	—	9.3%	—
Equity per share attributable to Chugai shareholders (BPS) (Yen)	1,559.72	—	1,381.26	—	1,265.46	—	1,181.67	—
Ratio of equity attributable to Chugai shareholders	80.6%	—	82.2%	—	81.2%	—	80.1%	—
Number of employees	7,394		7,432		7,372		7,245	

1. Core basis results are the results after adjusting non-Core items to IFRS basis results. Core basis results are used by Chugai as internal performance indicators, for representing recurring profit trends both internally and externally, and as indices for establishing profit distributions such as returns to shareholders.

2. Revenues do not include consumption tax.

3. Core ROIC = Core net operating profit after taxes / Net operating assets (Core ROIC is calculated by using Core income taxes)

4. ROIC = Net operating profit after taxes / Net operating assets (Net operating profit after taxes = Operating profit – Income taxes)

5. Ratio of net income to equity attributable to Chugai shareholders (ROE) = Net income attributable to Chugai shareholders / Capital and reserves attributable to Chugai shareholders (average of beginning and end of fiscal year)

6. Ratio of profit before taxes to total assets (ROA) = Profit before taxes / Total assets (average of beginning and end of fiscal year)

								(Billions of yen)	
2015		2014		2013		2012			
IFRS	Core	IFRS	Core	IFRS	Core	IFRS	Core		
498.8		461.1		423.7		386.6			
468.4		436.9		401.3		375.2			
30.4		24.2		22.4		11.3			
(240.2)	(238.9)	(218.1)	(217.0)	(187.0)	(186.1)	(168.2)	(167.3)		
(171.8)	(169.3)	(167.2)	(166.8)	(157.9)	(157.7)	(143.7)	(143.7)		
(74.8)	(74.7)	(71.7)	(71.7)	(71.6)	(71.5)	(67.9)	(67.9)		
(83.8)	(81.9)	(80.8)	(80.6)	(74.3)	(74.1)	(66.6)	(66.6)		
(13.2)	(12.8)	(14.6)	(14.6)	(12.1)	(12.1)	(9.2)	(9.2)		
86.8	90.7	75.9	77.3	78.7	79.9	74.7	75.6		
87.3	91.2	76.2	77.6	76.9	78.1	72.7	73.6		
62.4	64.9	52.1	53.0	51.9	52.6	46.8	47.4		
61.1	63.7	51.0	51.9	50.9	51.6	46.1	46.6		
—	116.42	—	95.04	—	94.69	—	85.64		
58		48		45		40			
—	49.8%	—	50.5%	—	47.5%	—	46.7%		
380.4		357.7		325.2		307.9			
787.4		739.5		697.2		645.3			
(160.1)		(141.8)		(124.0)		(116.2)			
627.3		597.8		573.2		529.2			
28.7		16.3		13.0		14.2			
14.0		13.7		13.5		13.3			
51.3%	51.0%	49.9%	49.7%	46.6%	46.4%	44.8%	44.6%		
17.4%	18.2%	16.5%	16.8%	18.6%	18.9%	19.3%	19.6%		
16.8%	16.4%	17.5%	17.5%	17.5%	17.5%	17.2%	17.2%		
—	—	—	—	—	—	—	—		
10.0%	—	8.7%	—	9.3%	—	9.0%	—		
11.4%	—	10.6%	—	11.5%	—	11.8%	—		
1,146.17	—	1,092.90	—	1,049.47	—	970.08	—		
79.5%	—	80.6%	—	82.0%	—	81.8%	—		
7,169		7,023		6,872		6,836			

		(Billions of yen)
Japanese GAAP		2012
Results		
Revenues ¹		391.2
Sales		375.2
Other operating revenues		16.0
Cost of sales		167.7
Selling, general and administrative expenses		147.1
Marketing and distribution expenses		92.0
Research and development expenditures		55.1
Operating income		76.4
Net income (loss)		48.2
Net income per share (basic) (Yen)		88.58
Net income per share (diluted) (Yen)		88.54
Cash dividends per share (Yen)		40
Payout ratio		45.2%
Financial Position		
Total assets		587.7
Total net assets ²		490.1
Capital investments		14.2
Depreciation and amortization		15.3
Main Indicators		
Cost to sales ratio		44.7%
Ratio of operating income to revenues		19.5%
Ratio of research and development expenditures to revenues		14.1%
Return on equity ³		10.2%
Return on assets ⁴		8.6%
Net assets per share (Yen)		896.02
Shareholders' equity to total assets		83.0%
Number of employees		6,836

1. Revenues do not include consumption tax.
2. Net assets include minority interests.
3. Return on equity = Net income / Shareholders' equity (average of beginning and end of fiscal year)
4. Return on assets = Net income / Total assets (average of beginning and end of fiscal year)

Management's Discussion and Analysis

Management Policy

Chugai's Mission is to dedicate itself to adding value by creating and delivering innovative products and services for the medical community and human health around the world based on its strategic alliance with Roche. Aiming at becoming a top innovator for advanced and sustainable patient-centric healthcare, we set up our fundamental management policy of growing together with society. To achieve our goal, we have leveraged our close relationship with Roche and built systems capable of efficiently and continuously developing and

launching new drugs. Refining our strengths has also contributed to achieving innovation that has enabled us to create state-of-the-art drug discovery technology and maintain the top share of the domestic oncology area.

In mid-term business plan IBI 21, we aim to accelerate the growth of society and the Company through innovation focusing on the creation of innovative new drugs, with Core EPS CAGR over three years as a quantitative target. In light of favorable performance in the initial year of IBI 21,

including strong sales of in-house global products, Chugai revised its target of Core EPS CAGR from the high single digits (based on constant exchange rates) to around 30 percent (based on constant exchange rates and assuming no stock split). In addition, after taking into account future investment opportunities and funding plans, Chugai changed its dividend policy from a target Core EPS payout ratio of 50 percent on average to 45 percent on average to maintain its policy of a stable allocation of profit.

Overview of Results

Revenues

	(Billions of yen)			
	2017	2018	2019	2018/2019 Change
Revenues	534.2	579.8	686.2	+18.4%
Sales	499.3	527.8	588.9	+11.6%
Royalties and other operating income (ROOI)	34.9	51.9	97.3	+87.5%

- Revenues exceeded the level of the previous year because of strong sales in Japan of mainstay products and new products Hemlibra and Tecentriq, and increases in ROOI and exports to Roche.
- ROOI increased year on year due to a significant increase in royalty and profit-sharing income associated with Hemlibra.
- Overseas revenues increased steadily with the growth of global products from Chugai research.

Domestic Sales by Area

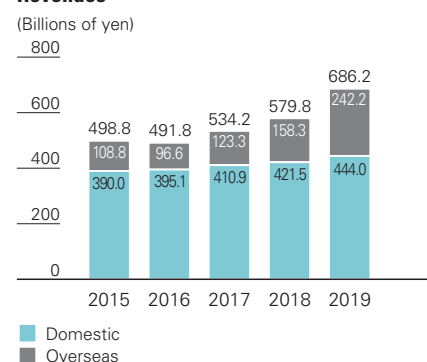
	(Billions of yen)			
	2017	2018	2019	2018/2019 Change
Domestic sales	405.3	399.9	437.6	+9.4%
Oncology	225.9	225.7	240.5	+6.6%
Bone and joint diseases	93.3	100.5	108.4	+7.9%
Renal diseases	39.3	36.3	34.6	-4.7%
Others	46.8	37.5	54.1	+44.3%

- Domestic sales increased 9.4 percent year on year in 2019, led by firm sales of new and mainstay products in the oncology area, mainstay products in the bone and joint diseases area, and new products in other areas.
- We maintained our number-one share in the mainstay domestic oncology market (16.4 percent)*. Strong sales of mainstay product Perjeta and new product Tecentriq more than offset a decrease in sales of Rituxan and other products mainly due to the impact of biosimilars and generics.
- In the bone and joint diseases area, sales of mainstay products such as Actemra and Edirof were firm.
- In the others area, sales increased due to firm sales of new product Hemlibra.

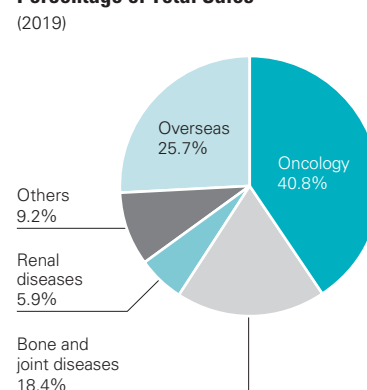
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Source: JPM 2019. Reprinted with permission. The scope of the market is defined by Chugai.

Revenues



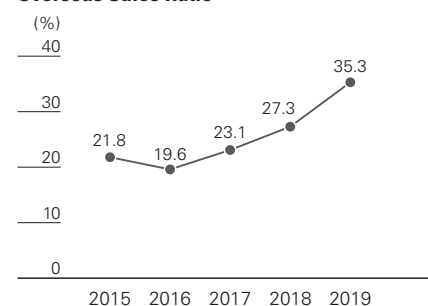
Percentage of Total Sales



Overseas Sales

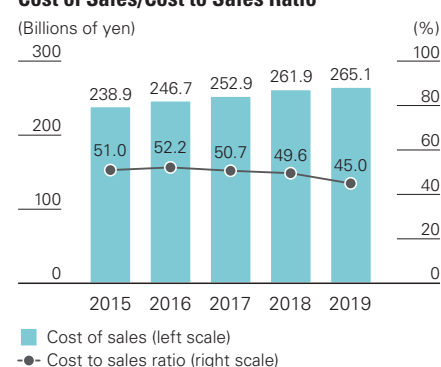
	(Billions of yen)			
	2017	2018	2019	2018/2019 Change
Overseas sales	94.0	127.9	151.3	+18.3%
Actemra (exports to Roche)	59.4	78.7	86.5	+9.9%
Alecensa (exports to Roche)	13.9	28.9	44.6	+54.3%

- Overseas sales increased year on year. Contributing factors included solid sales of Actemra due to increased prescriptions for giant cell arteritis and continued market penetration of the subcutaneous formulation, and increased exports of Alecensa to Roche due to significant penetration of the first-line market in Europe.

Overseas Sales Ratio**Cost of Sales (Core basis)**

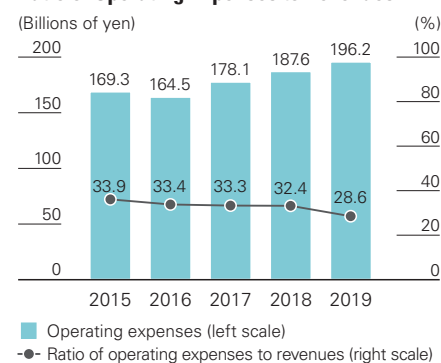
	(Billions of yen)			
	2017	2018	2019	2018/2019 Change
Cost of sales	(252.9)	(261.9)	(265.1)	+1.2%
Cost to sales ratio	50.7%	49.6%	45.0%	-4.6% pts

- The cost to sales ratio decreased year on year in 2019, mainly because Chugai products, which have a lower cost to sales ratio than products in-licensed from Roche, accounted for a higher percentage of the sales mix.

Cost of Sales/Cost to Sales Ratio**Operating Expenses (Marketing and Distribution Expenses, R&D Expenditures and General and Administration Expenses) (Core Basis)**

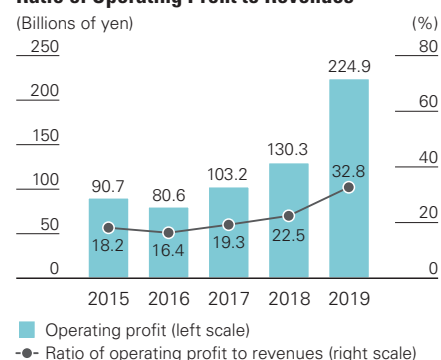
	(Billions of yen)			
	2017	2018	2019	2018/2019 Change
Total operating expenses	(178.1)	(187.6)	(196.2)	+4.6%
Marketing and distribution expenses	(72.8)	(73.7)	(73.5)	-0.3%
R&D expenditures	(88.9)	(94.2)	(102.1)	+8.4%
General and administration expenses	(16.3)	(19.7)	(20.6)	+4.6%

- The year-on-year growth rate for total operating expenses in 2019 was significantly lower than the growth rate for revenues.
- R&D expenditures increased year on year due to factors including the progress of development projects.
- General and administration expenses increased year on year due mainly to an increase in the enterprise tax (pro forma standard taxation).

Operating Expenses/ Ratio of Operating Expenses to Revenues**Operating Profit and Net Income (Core Basis)**

	(Billions of yen)			
	2017	2018	2019	2018/2019 Change
Operating profit	103.2	130.3	224.9	+72.6%
Ratio of operating profit to revenues	19.3%	22.5%	32.8%	+10.3% pts
Net income	76.7	97.3	167.6	+72.3%
Net income attributable to Chugai shareholders	75.9	96.7	167.6	+73.3%

- Operating profit and net income in 2019 increased substantially year on year with an increase in ROOI due to Hemlibra and lower cost of sales due to the higher percentage of Chugai products in the sales mix, which increased the ratio of operating profit to revenues significantly.

Operating Profit/ Ratio of Operating Profit to Revenues

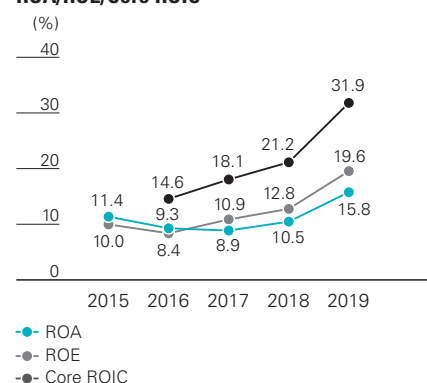
Profitability Indicators

	2017	2018	2019	2018/2019 Change
Gross profit to revenues (%) (Core)	52.7	54.8	61.4	+6.6% pts
Operating profit to revenues (%) (Core)	19.3	22.5	32.8	+10.3% pts
Ratio of profit before taxes to total assets (ROA) (%) (IFRS)	8.9	10.5	15.8	+5.3% pts
Ratio of net income attributable to Chugai shareholders (ROE) (%) (IFRS)	10.9	12.8	19.6	+6.8% pts
Core return on invested capital (Core ROIC) (%)	18.1	21.2	31.9	+10.7% pts

1. ROA = Net income attributable to Chugai shareholders / Total assets
2. ROE = Net income attributable to Chugai shareholders / Capital and reserves attributable to Chugai shareholders
3. Core ROIC = Core net operating profit after taxes / Net operating assets (Core ROIC is calculated by using Core income taxes)

- While net operating assets (NOA) increased significantly due to aggressive strategic investments such as Chugai Life Science Park Yokohama, Core ROIC rose steadily due to growth in Core net operating profit after taxes.

ROA/ROE/Core ROIC



Financial Position

Assets, Liabilities and Net Assets

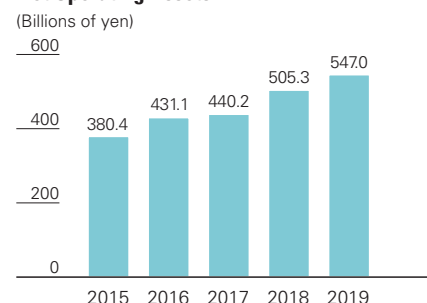
In conjunction with its decision to apply IFRS from 2013, Chugai has reorganized the consolidated balance sheets and discloses assets and liabilities including net operating assets for use as internal performance indicators (Roche discloses the same indicators). No items have been excluded from the IFRS balance sheet, as the Core basis results concept only applies to the income statement.

Net Operating Assets (NOA)

	2017	2018	2019	2018/2019 Change
Net working capital	250.7	235.1	237.2	+0.9%
Long-term net operating assets	189.5	270.1	309.8	+14.7%
Net operating assets (NOA)	440.2	505.3	547.0	+8.3%

- Long-term net operating assets increased from the end of the previous year due to an increase in property, plant and equipment resulting mainly from investment in Chugai Life Science Park Yokohama and an increase in right-of-use assets due to the application of IFRS 16 "Leases."
- NOA as of December 31, 2019 increased from the end of the previous year due to investments for the future.

Net Operating Assets



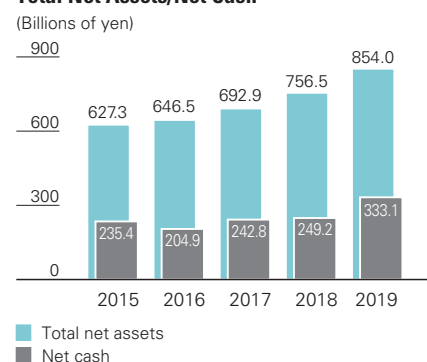
NOA are the total of net working capital and long-term net operating assets. Net working capital is composed of accounts receivable, inventories, accounts payable and other payables and receivables. Long-term net operating assets are composed of property, plant and equipment, intangible assets, and other items.

Total Net Assets

	2017	2018	2019	2018/2019 Change
Net operating assets (NOA)	440.2	505.3	547.0	+8.3%
Net cash	242.8	249.2	333.1	+33.7%
Other non-operating assets – net	9.9	2.1	(26.1)	—
Total net assets	692.9	756.5	854.0	+12.9%

- Total net assets at December 31, 2019 increased from a year earlier due to factors including an increase in property plant and equipment resulting from investment in Chugai Life Science Park Yokohama and an increase in net cash.
- Our ability to generate cash is continuously increasing, and net cash exceeded ¥300 billion as of December 31, 2019. In anticipation of an increasingly challenging business environment, we will consider and implement flexible and focused strategic investments to generate value in our businesses through the creation of new digital and life science technologies.

Total Net Assets/Net Cash

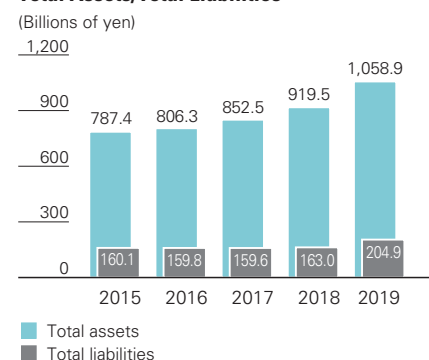


Total Assets and Total Liabilities

	2017	2018	2019	2018/2019 Change
	(Billions of yen)			
Total assets	852.5	919.5	1,058.9	+15.2%
Total liabilities	(159.6)	(163.0)	(204.9)	+25.7%

- The Group began applying IFRS 16 "Leases" from 2019. As a result, leased assets totaling ¥15.2 billion, including right-of-use assets and lease receivables, and lease liabilities totaling ¥14.6 billion were recognized on the balance sheet as of January 1, 2019.

Total Assets/Total Liabilities

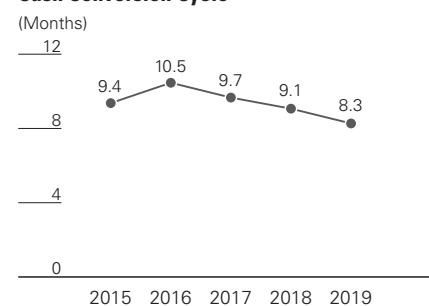


Financial Position Indicators

	2017	2018	2019	2018/2019 Change
Ratio of equity attributable to Chugai shareholders (%)	81.2	82.2	80.6	-1.6% pts
Cash conversion cycle (months)	9.7	9.1	8.3	-0.8 months
Net cash turnover period (months)	5.5	5.2	5.8	+0.6 months
Current ratio (%)	487.5	443.8	390.3	-53.5% pts
Debt-to-equity ratio (%)	0.0	0.0	0.0	—

- Notes: 1. Ratio of equity attributable to Chugai shareholders = Capital and reserves attributable to Chugai shareholders (fiscal year-end) / Total assets (fiscal year-end)
 2. Cash conversion cycle = [Trade accounts receivable / Sales + (Inventories – Trade accounts payable) / Cost of sales] x Months passed
 3. Net cash turnover period = Net cash / Revenues x Months passed
 4. Current ratio = Current assets (fiscal year-end) / Current liabilities (fiscal year-end)
 5. Debt-to-equity ratio = Interest-bearing debt (fiscal year-end) / Capital and reserves attributable to Chugai shareholders (fiscal year-end)

Cash Conversion Cycle

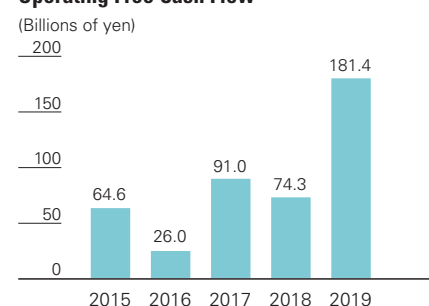


Cash Flows

In conjunction with its decision to apply IFRS from 2013, Chugai has reorganized the consolidated statements of cash flows and uses free cash flows as internal performance indicators (Roche discloses the same indicators). No items have been excluded from cash flows, as the Core basis results concept only applies to the income statement.

	2017	2018	2019	2018/2019 Change
	(Billions of yen)			
Movement of Free Cash Flows				
Operating profit	98.9	124.3	210.6	+69.4%
Operating profit, net of operating cash adjustment	121.0	147.4	245.2	+66.4%
Operating free cash flow	91.0	74.3	181.4	+144.1%
Free cash flow	64.7	43.7	142.6	+226.3%
Net increase/decrease in cash	37.9	6.4	83.9	13.1 times
Consolidated Statement of Cash Flows				
Cash flows from operating activities	107.6	119.1	206.6	+73.5%
Cash flows from investing activities	(36.7)	(74.1)	(81.7)	+10.3%
Cash flows from financing activities	(29.6)	(35.0)	(66.9)	+91.1%
Net increase in cash and cash equivalents	43.7	7.8	57.0	+630.8%
Cash and cash equivalents at end of year	139.1	146.9	203.9	+38.8%

Operating Free Cash Flow



Operating free cash flow

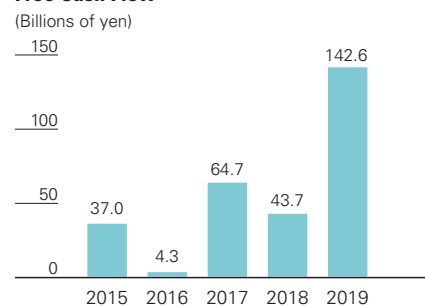
- Operating profit, net of operating cash adjustment, is calculated by adjusting for depreciation and other items that are included in operating profit but are not accompanied by cash inflows or outflows and all inflows and outflows related to net operating assets (NOA) that are not accompanied by profit or loss.

- Operating free cash flow amounted to a net inflow of ¥181.4 billion due to factors including a significant increase in operating profit, despite expenditures of ¥61.2 billion for the purchase of property, plant and equipment and intangible assets. Purchase of property, plant and equipment included investment in Chugai Life Science Park Yokohama.
- With the application of IFRS 16 "Leases," operating free cash flow includes expenditures of ¥8.9 billion for lease liabilities paid.

Free cash flow (FCF)

- Free cash flow increased year on year after subtracting expenditures including income taxes paid of ¥34.8 billion, settlement for transfer pricing taxation of ¥3.1 billion, and payments made for defined benefit plans of ¥11.5 billion.
- Net cash as of December 31, 2019, after subtracting expenditures including dividends paid of ¥56.4 billion and purchase of non-controlling interests of ¥2.3 billion, increased ¥83.9 billion compared with the end of the previous year to ¥333.1 billion.

Free Cash Flow



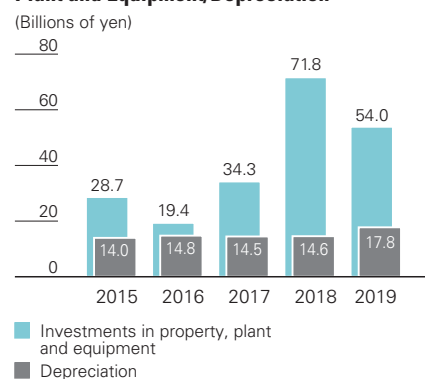
Capital Investments

	2017	2018	2019	2018/2019 Change
Investments in property, plant and equipment	34.3	71.8	54.0	-24.8%
Depreciation	14.5	14.6	17.8	+21.9%

(Billions of yen)

- Capital investments in 2019 included investment in Chugai Life Science Park Yokohama and investments in manufacturing facilities at the Fujieda Plant.
- Chugai plans to make capital investments of ¥72.5 billion during 2020, consisting primarily of new investment in the main facilities below, and expects depreciation to total ¥21.0 billion.

Capital Investments in Property, Plant and Equipment/Depreciation



Major Capital Investments – Current and Planned

(Chugai Pharmaceutical Co., Ltd.)

Facilities (Location)	Description	Planned investment (Billions of yen)		Fund-raising method	Start of construction	Planned transfer/completion date
		Total amount	Investment to date			
Chugai Life Science Park Yokohama (Totsuka-ku, Yokohama, Kanagawa)	Pharmaceutical research	127.3	22.9	Self-financing	June 2019	August 2022
Fujieda Plant (Fujieda, Shizuoka)	Small and middle molecule API manufacturing	18.2	9.0	Self-financing	May 2019	March 2022
Ukima Research Laboratories (Kita-ku, Tokyo)	Construction of a new synthetic research building for strengthening the process development function of small and middle molecule APIs	4.5	3.1	Self-financing	May 2018	January 2020

Outlook for 2020

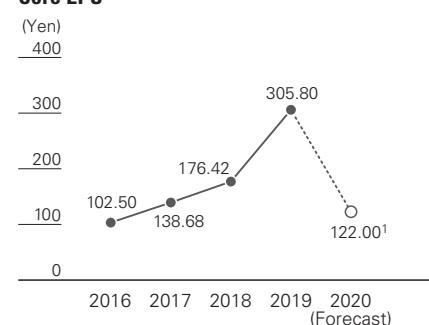
Forecast Assumptions

For 2020, Chugai assumes exchange rates of ¥110/CHF, ¥121/EUR, ¥107/USD and ¥80/SGD.

Results Forecast (Core Basis)

	(Billions of yen)			
	2018	2019	2020 Forecast	2019/2020 Change
Revenues	579.8	686.2	740.0	+7.8%
Sales	527.8	588.9	580.0	-1.5%
Domestic	399.9	437.6	411.6	-5.9%
Overseas	127.9	151.3	168.4	+11.3%
Royalties and other operating income (ROOI)	51.9	97.3	160.0	+64.4%
Royalty and profit-sharing income	24.1	76.5	141.0	+84.3%
Other operating income	27.9	20.8	19.0	-8.7%
Core operating profit	130.3	224.9	275.0	+22.3%
Core EPS (Yen)	176.42	305.80	122.00 ¹	— ¹

- Despite expected sales growth from new products including Tecentriq and Hemlibra, domestic sales are forecast to decrease compared with 2019 due to the effect of NHI drug price revisions and competing products including generics.
- Overseas sales are forecast to increase, mainly due to the start of Hemlibra exports to Roche at the regular shipment price.
- ROOI is forecast to increase substantially because royalties and profit-sharing income are expected to increase, primarily in connection with Hemlibra. Other operating income is also expected to decrease due to factors including a decrease in one-time income.
- The cost to sales ratio is forecast to decrease because the share of products from Chugai research in the product mix in Japan and overseas will continue to increase and Hemlibra exports to Roche at the regular shipment price will begin. These factors should more than offset any negative impact from NHI price revisions.
- We expect operating expenses to increase overall due mainly to an increase in research and development activity, including the progress of development projects and related expenses to produce investigational drugs.
- We forecast that Core operating profit and Core EPS will increase despite the expected decrease in domestic sales, mainly as a result of growth in exports of Hemlibra to Roche, increased royalty income, and the lower cost of sales.

Core EPS²

1. The forecast presented for Core EPS for 2020 is the amount following the stock split effective July 1, 2020. When calculated assuming no stock split, Core EPS would be ¥366.00 (an increase of 19.7% year on year). Because of the planned stock split, no figure is presented for change in Core EPS.
2. Core EPS = Core net income attributable to Chugai shareholders / Diluted weighted average shares outstanding

Fundamental Profit Distribution Policy and Dividends

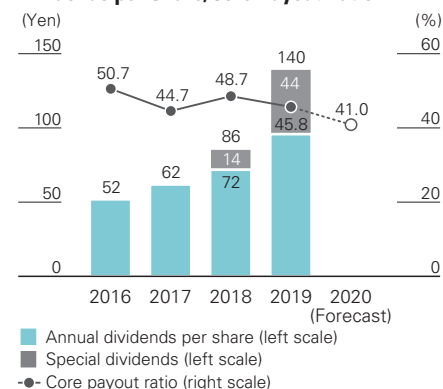
After taking strategic funding needs and the results forecast into account, Chugai has changed from a target Core EPS payout ratio of 50 percent on average to 45 percent on average to provide for stable allocation of profit to all shareholders. Internal reserves will be used to increase corporate value through investments for further growth in existing strategic areas and to explore future business opportunities.

	(Yen)			
	2017	2018	2019	2020 Forecast
Basic net income per share (EPS)	133.04	169.08	287.84	—
Core EPS	138.68	176.42	305.80	122.00*
Equity per share attributable to Chugai shareholders (BPS)	1,265.46	1,381.26	1,559.72	—
Cash dividends per share	62	86	140	—
Core payout ratio	44.7%	48.7%	45.8%	41.0%
Core payout ratio (five-year average)	48.4%	48.6%	47.4%	45.0%

- Cash dividends per share for 2019 totaled ¥140, and the five-year average Core EPS payout ratio was 47.4 percent.
- On January 21, 2020, the Board of Directors resolved to implement a three-for-one split of the common stock of Chugai Pharmaceutical Co., Ltd effective July 1, 2020.
- The dividend forecast for the year ending December 31, 2020 is ¥75 per share at the end of the second quarter, prior to the stock split, and ¥25 per share at the end of the year, after the stock split. When calculated assuming no stock split, dividends per share for the year would be ¥150.

Note: The forecast presented for Core EPS for 2020 is the amount following the planned stock split. When calculated assuming no stock split, Core EPS would be ¥366.00.

Dividends per Share/Core Payout Ratio



Business Risks

Chugai's corporate performance is subject to material impact from a range of possible future events. Below, we list what we consider the principal sources of risk to our business operations. We recognize the possibility of these risk events actually occurring, and have prepared policies to forestall such events and take appropriate measures when they do occur.

The categories of future risks identified in this section are based on assessments made by Chugai Pharmaceutical on a consolidated basis as of December 31, 2019.

1. Potential Risks in Management Strategy

1) New Product Research and Development

With the aim of becoming a top innovator for advanced and sustainable patient-centric healthcare, Chugai aggressively pursues research and development in Japan and overseas. Powered by our unique strength in science and technology, our development pipeline is well stocked, especially in the field of oncology. However, in recent years intensifying competition in R&D has made the creation of new drugs more challenging, and R&D expenses have increased significantly. Therefore, bringing all drug candidates smoothly through to the market from the development stage may not be possible, and we expect to have to abandon development in some cases. This could have a material impact on business performance, depending on the drug candidate.

2) Changes in Product Environments

In recent years, there have been rapid technological advancements in the pharmaceutical industry, and Chugai faces fierce competition from pharmaceutical companies in Japan and overseas. Competing products, generics and biosimilars are penetrating the market, and therapeutic modalities including regenerative medicine, cellular and genomic therapies, therapeutic nucleic acids, and digital therapies are evolving beyond the scope of conventional drugs. Moreover, the emergence of a digital oligopoly brought on by the entry of IT platform providers into the healthcare industry is engendering new technologies and threats in life science and digital markets. The competitive environment in the healthcare industry is therefore changing rapidly. Changes in the environment surrounding the Group's products that exceed the Group's expectations, such as the emergence of new technologies and treatment modalities that significantly alter the treatment of diseases targeted by Chugai's drugs and development candidates could have a material impact on business performance.

3) Healthcare System Reform

Japan and other countries are strengthening measures to reduce drug prices as issues such as aging populations and surging healthcare costs put strains on their finances. Steadily growing pressure to curb healthcare costs is particularly apparent in Japan, where the government is holding meetings on social security reform to discuss the benefits and premiums of Japan's universal healthcare insurance system. Value-based healthcare will continue to advance as the trend toward pursuing only solutions that offer true value for patients gains momentum. Healthcare system reforms and market trends in countries around the world may have a material impact on business performance, including reduced revenues due to drug price reductions, restricted access to drugs and increased expenses for demonstrating the value of drugs including healthcare economics.

4) Strategic Alliance with Roche

Under its strategic alliance with Roche, Chugai is the only pharmaceutical partner of Roche in the Japanese market and has granted Roche first refusal rights with respect to Chugai's products in global markets outside Japan, excluding South Korea and Taiwan. Consequently, Chugai has in-licensed and out-licensed many products and projects from and to Roche. Changes in Chugai's strategic alliance with Roche for any reason could have a material impact on business performance.

2. Operational Risks

1) Side Effects

Pharmaceutical products and medical devices are approved by regulatory authorities in each country after strict review. However, because of the characteristics of the products, it is difficult to completely prevent adverse outcomes such as side effects from their use even if all possible safety measures are taken. The Group monitors drug safety. However, in cases where side effects occur, particularly newly discovered serious side effects, in addition to publishing precautions, the Group may have to terminate sales and recall products, which could have a material impact on business performance.

2) Intellectual Property Rights

Chugai recognizes that it applies intellectual property rights in pursuing its business activities, and takes care to distinguish its own proprietary intellectual property rights and licensing arrangements recognized under law. However, the possibility remains of unintentional infringement on third-party intellectual property rights. Major disputes involving intellectual property rights associated with our business could have outcomes that have a material impact on business performance, including the suspension of production and sale, or expenses for countermeasures.

3) International Business Activities

Chugai actively conducts international operations including overseas marketing and research and development, and export and import of bulk drug products. These business activities expose Chugai to risks associated with legal and regulatory changes, political instability, economic uncertainty, local labor-management relations, changes in and diverse interpretations of systems of taxation, changes in foreign currency markets, differences in commercial practices and other issues. Compliance and other problems arising from these issues could have a material impact on business performance.

4) Information Technology Security and Information Control

Chugai makes full use of a wide range of information technology systems in its business activities. Consequently, its operations may be disrupted due to negligence or willful misconduct among employees or service providers, or by system malfunctions caused by cyberattacks or other external factors. In addition, the leakage of material and confidential information associated with private individuals or intellectual property may result in liability for damages, loss of trust, loss of competitive advantage or other outcomes that have a material impact on business performance.

To prepare for these risks, the Group takes measures including establishing and disseminating related rules, conducting security education for employees, and safeguarding against cyberattacks and system failures (prevention and monitoring as well as countermeasures and preparations for recovery), and strives to reduce risk by maintaining an annual process of evaluating and enhancing these countermeasures Group-wide.

5) Impact from Large-Scale Disasters and Other Events

Factors such as disruption of business activities due to severe damage to Chugai's business sites or sales locations, or to those of its business partners caused by natural disasters such as earthquakes or typhoons and accidents such as fires, or a significant drop in employee attendance caused by pandemics such as novel influenza outbreaks, and significant expenses for the repair of damaged buildings and facilities, could have a material impact on business performance. The Group has prepared for the risks associated with such disasters and works to reduce those risks with measures to protect employees and ensure an uninterrupted supply of pharmaceuticals. Measures include the use of property and casualty insurance,

the implementation of business continuity plans (BCPs) and drills, the use of aseismic construction, and the maintenance of safety stock.

6) Litigation

The Group may be subject to litigation or investigation by regulatory authorities because of pharmaceutical side effects, product liability, labor issues, fair trade or other issues associated with its business activities. This could result in the suspension of manufacturing and sale or in remedial expenses or other outcomes that could have a material impact on business performance.

7) Human Rights

Delays in addressing workplace harassment or human rights issues including occupational health and safety could weaken the Group's human resources in ways such as negatively affecting the physical and mental health of employees and increasing employee turnover, and damaging public trust in the Group, which could have a material impact on business performance. The Group addresses these human rights issues with training for executives and employees, as well as with harassment hotlines. It also conducts health and safety programs as part of its health and productivity management. In addition, the Group asks suppliers to respect human rights and works with them to resolve issues related to human rights.

8) Supply Chains

Natural disasters such as large-scale earthquakes or typhoons and heavy rain due to climate change could damage suppliers, including raw material suppliers or contract manufacturers. Moreover, delays in addressing supply chain compliance or environmental issues could create problems in procuring raw materials or maintaining production, thereby reducing public trust in the Group or reducing market share, which could have a material impact on business performance. The Group has prepared for these supply chain risks. Measures for the uninterrupted supply of pharmaceuticals include the use of property and casualty insurance, the formulation of business continuity plans (BCPs), maintenance of safety stock and the establishment of systems for sharing information with suppliers. We also work with suppliers to resolve issues such as supply chain compliance and environmental issues that the Group cannot resolve on its own.

9) Environmental Pollution and the Global Environment

The Group complies with relevant laws and regulations and has established a set of even higher voluntary standards that it is committed to achieving and will continue to strengthen and enhance. However, the Group may have to bear expenses for countermeasures or liability for damages should unexpected contamination by harmful substances or collateral damage occur, which could have a material impact on business performance. We consider climate change to be a key challenge in protecting the global environment, and are therefore committed to reducing greenhouse gas emissions. However, natural disasters or other events resulting from climate change caused by continued global warming could damage the Group's logistics network and manufacturing facilities, resulting in outcomes such as the suspension or significant delay of product supply, which could have a material impact on business performance. In addition, more stringent environmental regulations in the future may limit Group business activities including research, development and manufacturing.

Consolidated Financial Statements

1. Consolidated income statement and consolidated statement of comprehensive income

(1) Consolidated income statement in millions of yen

	Year ended December 31	
	2019	2018
Revenues	686,184	579,787
Sales (Notes 2 and 3)	588,896	527,844
Royalties and other operating income (Notes 2 and 3)	97,288	51,943
Cost of sales	(266,071)	(262,847)
Gross profit	420,113	316,940
Marketing and distribution	(77,183)	(73,706)
Research and development	(107,942)	(99,202)
General and administration	(24,391)	(19,710)
Operating profit	210,597	124,323
Financing costs (Note 4)	(125)	(111)
Other financial income (expense) (Note 4)	545	449
Other expense (Note 5)	(3,124)	(3,212)
Profit before taxes	207,893	121,449
Income taxes (Note 6)	(50,333)	(28,370)
Net income	157,560	93,079
Attributable to:		
Chugai shareholders (Note 22)	157,560	92,488
Non-controlling interests (Note 23)	-	591
Earnings per share (Note 27)		
Basic (yen)	287.84	169.08
Diluted (yen)	287.43	168.80

(2) Consolidated statement of comprehensive income in millions of yen

	Year ended December 31	
	2019	2018
Net income recognized in income statement	157,560	93,079
Other comprehensive income		
Remeasurements of defined benefit plans (Notes 6 and 22)	329	(2,472)
Financial assets measured at fair value through OCI (Notes 6 and 22)	(255)	363
Items that will never be reclassified to the income statement	74	(2,109)
Financial assets measured at fair value through OCI (Notes 6 and 22)	(17)	0
Cash flow hedges (Notes 6 and 22)	(1,317)	(225)
Currency translation of foreign operations (Notes 6 and 22)	(1,172)	(3,158)
Items that are or may be reclassified to the income statement	(2,506)	(3,383)
Other comprehensive income, net of tax (Note 6)	(2,433)	(5,492)
Total comprehensive income	155,127	87,587
Attributable to:		
Chugai shareholders (Note 22)	155,127	87,078
Non-controlling interests (Note 23)	-	509

2. Consolidated balance sheet in millions of yen

	December 31, 2019	December 31, 2018
Assets		
Non-current assets:		
Property, plant and equipment (Note 7)	255,559	222,388
Right-of-use assets (Note 8)	9,749	-
Intangible assets (Note 9)	23,540	22,699
Financial non-current assets (Note 10)	2,958	9,723
Deferred tax assets (Note 6)	42,680	35,568
Other non-current assets (Note 11)	24,750	29,077
Total non-current assets	359,235	319,455
Current assets:		
Inventories (Note 12)	168,122	159,360
Accounts receivable (Note 13)	181,641	179,556
Current income tax assets (Note 6)	0	3
Marketable securities (Note 14)	129,117	102,533
Cash and cash equivalents (Note 15)	203,941	146,860
Other current assets (Note 16)	16,858	11,781
Total current assets	699,680	600,093
Total assets	1,058,915	919,548
Liabilities		
Non-current liabilities:		
Long-term debt (Note 17)	-	(82)
Deferred tax liabilities (Note 6)	(9,304)	(9,031)
Defined benefit plan liabilities (Note 25)	(7,094)	(14,671)
Long-term provisions (Note 18)	(2,348)	(2,072)
Other non-current liabilities (Note 19)	(6,914)	(1,946)
Total non-current liabilities	(25,662)	(27,802)
Current liabilities:		
Short-term debt (Note 17)	-	(133)
Current income tax liabilities (Note 6)	(41,047)	(19,567)
Short-term provisions (Note 18)	(4)	(1)
Accounts payable (Note 20)	(77,635)	(71,706)
Other current liabilities (Note 21)	(60,582)	(43,810)
Total current liabilities	(179,268)	(135,218)
Total liabilities	(204,930)	(163,019)
Total net assets	853,985	756,529
Equity:		
Capital and reserves attributable to Chugai shareholders (Note 22)	853,985	755,864
Equity attributable to non-controlling interests (Note 23)	-	664
Total equity	853,985	756,529
Total liabilities and equity	1,058,915	919,548

3. Consolidated statement of cash flows in millions of yen

	Year ended December 31	
	2019	2018
Cash flows from operating activities		
Cash generated from operations (Note 28)	249,500	151,857
(Increase) decrease in working capital	6,205	4,486
Payments made for defined benefit plans	(11,540)	(2,652)
Utilization of provisions (Note 18)	(2)	(29)
Other operating cash flows	(2,741)	(3,022)
Cash flows from operating activities, before income taxes paid	241,423	150,639
Income taxes paid	(34,782)	(31,565)
Total cash flows from operating activities	206,641	119,074
Cash flows from investing activities		
Purchase of property, plant and equipment	(53,009)	(71,785)
Purchase of intangible assets	(8,168)	(5,886)
Disposal of property, plant and equipment	119	49
Interest and dividends received (Note 28)	197	200
Purchases of marketable securities	(256,768)	(263,503)
Sales of marketable securities	230,158	264,711
Purchases of investment securities	(1,013)	(709)
Sales of investment securities	6,743	2,863
Other investing cash flows	0	(0)
Total cash flows from investing activities	(81,741)	(74,060)
Cash flows from financing activities		
Purchase of non-controlling interests	(2,307)	-
Interest paid	(27)	(5)
Lease liabilities paid	(8,861)	-
Dividends paid to Chugai shareholders	(56,370)	(35,010)
Dividends paid to non-controlling shareholders	-	(791)
Exercises as part of equity compensation plans (Note 26)	735	996
(Increase) decrease in own equity instruments	(25)	(19)
Other financing cash flows	(16)	(187)
Total cash flows from financing activities	(66,872)	(35,014)
Net effect of currency translation on cash and cash equivalents	(947)	(2,215)
Increase (decrease) in cash and cash equivalents	57,081	7,785
Cash and cash equivalents at January 1	146,860	139,074
Cash and cash equivalents at December 31 (Note 15)	203,941	146,860

4. Consolidated statement of changes in equity in millions of yen

	Attributable to Chugai shareholders				Subtotal	Non-controlling interests	Total equity
	Share capital	Capital surplus	Retained earnings	Other reserves			
Year ended December 31, 2018							
At January 1, 2018	72,970	64,815	550,974	3,166	691,924	973	692,897
Impact of changes in accounting policies	-	-	10,606	-	10,606	-	10,606
At January 1, 2018 (revised)	72,970	64,815	561,580	3,166	702,530	973	703,503
Net income	-	-	92,488	-	92,488	591	93,079
Financial assets measured at fair value through OCI (Notes 6 and 22)	-	-	-	363	363	-	363
Cash flow hedges (Notes 6 and 22)	-	-	-	(225)	(225)	-	(225)
Currency translation of foreign operations (Notes 6, 22 and 23)	-	-	-	(3,077)	(3,077)	(82)	(3,158)
Remeasurements of defined benefit plans (Notes 6 and 22)	-	-	(2,472)	-	(2,472)	-	(2,472)
Total comprehensive income	-	-	90,016	(2,938)	87,078	509	87,587
Dividends (Notes 22 and 23)	-	-	(35,003)	-	(35,003)	(817)	(35,820)
Equity compensation plans (Note 22)	31	(97)	-	-	(66)	-	(66)
Own equity instruments (Note 22)	-	1,325	-	-	1,325	-	1,325
Transfer from other reserves to retained earnings	-	-	1,498	(1,498)	-	-	-
At December 31, 2018	73,000	66,043	618,091	(1,270)	755,864	664	756,529
Year ended December 31, 2019							
At January 1, 2019	73,000	66,043	618,091	(1,270)	755,864	664	756,529
Net income	-	-	157,560	-	157,560	-	157,560
Financial assets measured at fair value through OCI (Notes 6 and 22)	-	-	-	(272)	(272)	-	(272)
Cash flow hedges (Notes 6 and 22)	-	-	-	(1,317)	(1,317)	-	(1,317)
Currency translation of foreign operations (Notes 6, 22 and 23)	-	-	-	(1,172)	(1,172)	-	(1,172)
Remeasurements of defined benefit plans (Notes 6 and 22)	-	-	329	-	329	-	329
Total comprehensive income	-	-	157,889	(2,761)	155,127	-	155,127
Dividends (Notes 22 and 23)	-	-	(56,373)	-	(56,373)	-	(56,373)
Equity compensation plans (Note 22)	16	52	-	-	68	-	68
Own equity instruments (Note 22)	-	941	-	-	941	-	941
Changes in non-controlling interests	-	-	(1,662)	19	(1,643)	(664)	(2,307)
Transfer from other reserves to retained earnings	-	-	4,131	(4,131)	-	-	-
At December 31, 2019	73,016	67,037	722,076	(8,143)	853,985	-	853,985

Notes to Consolidated Financial Statements

1. General accounting principles and significant accounting policies

(1) Basis of preparation of the consolidated financial statements

These financial statements are the annual consolidated financial statements of Chugai Pharmaceutical Co., Ltd., (“Chugai”) a company registered in Japan, and its subsidiaries (“the Group”). The common stock of Chugai is publicly traded and is listed on the Tokyo Stock Exchange under the stock code “TSE: 4519”. The consolidated financial statements were approved by Tatsuro Kosaka, Representative Director, Chairman & CEO, and Toshiaki Itagaki, Executive Vice President & CFO on March 30, 2020.

Roche Holding Ltd. is a public company registered in Switzerland and the parent company of the Roche Group, which discloses its results in accordance with International Financial Reporting Standards (“IFRS”). The shareholding percentage of Roche Holding Ltd. in Chugai is 59.89% (61.22% of the total number of shares issued excluding own equity instruments). The Group became a principal member of the Roche Group after entering into a strategic alliance in October 2002.

The Group meets all of the requirements for a “Specified Company under Designated International Financial Reporting Standards” as stipulated under Article 1-2 of the “Regulations Concerning Terminology, Forms, and Preparation Methods of Consolidated Financial Statements” (Ministry of Finance of Japan Regulation No. 28, 1976). Hence, in accordance with Article 93 of the Regulation, the Consolidated Financial Statements have been prepared in accordance with IFRS.

The consolidated financial statements are presented in Japanese yen, which is Chugai’s functional currency, and amounts are rounded to the nearest ¥1 million. As a result, the totals shown in the consolidated financial statements do not necessarily agree with the sum of the individual amounts. They have been prepared using the historical cost convention except for items that are required to be accounted for at fair value.

(2) Key accounting judgments, estimates and assumptions

The preparation of the consolidated financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenues, expenses, assets, liabilities and contingent amounts. Actual outcomes could differ from those management estimates. The estimates and underlying assumptions are reviewed on an ongoing basis and are based on historical experience and various other factors. Revisions to estimates are recognized in the period in which the estimate is revised. The following are considered to be the key accounting judgments, estimates and assumptions made and are believed to be appropriate based upon currently available information.

Revenue.

Sales are recorded net of allowances for estimated rebates, cash discounts and estimates of product returns, all of which are established at the time of sale. The estimated rebates, chargebacks, cash discounts and estimates of product returns are recorded as current liabilities. The Group makes accruals for expected sales rebates, which are estimated based on analyses of existing contractual or legislatively-mandated obligations, historical trends and the Group’s experience. As these deductions are based on management estimates, they may be subject to change as better information becomes available. Such changes that arise could impact the accruals recognized in the balance sheet in future periods and consequently the level of sales recognized in the income statement in future periods.

Out-licensing agreements may be entered into with no further obligation or may include commitments to conduct research, late-stage development, regulatory approval, co-marketing or manufacturing. These may be settled by a combination of upfront payments, milestone payments, and reimbursements for services provided. Whether to consider these commitments as a single performance obligation or separate ones, or even being in scope of IFRS 15 ‘Revenues from Contracts with Customers’, is not straightforward and requires some judgment. Depending on the conclusion, this may result in all revenue being calculated at inception and either being recognized at once or spread over the term of a longer performance obligation.

As a practical expedient, the Group does not adjust the promised amount of consideration for the effects of a significant financing component, if the group expects, at contract inception, that the period between when the group transfers a promised good or service to a customer and when the customer pays for that good or service will be one year or less.

Impairment. Intangible assets not yet available for use are reviewed annually for impairment. Property, plant and equipment, right-of-use assets and intangible assets in use are assessed for impairment when there is a triggering event that provides evidence that an asset may be impaired. To assess whether any impairment exists estimates of expected future cash flows are used. Actual outcomes could vary significantly from such estimates of discounted future cash flows. Factors such as changes in discount rates, the planned use of buildings, machinery or equipment, closure of facilities, the presence or absence of competition, technical obsolescence and lower than anticipated product sales could lead to shorter useful lives or impairment.

Post-employment benefits. The Group operates a number of defined benefit plans and the fair values of the recognized plan assets and liabilities are based upon statistical and actuarial calculations. The measurement of the net defined benefit obligation is particularly sensitive to changes in the discount rate and expected mortality. The actuarial assumptions used may differ materially from actual results due to changes in market and economic conditions, longer or shorter life spans of participants, and other changes in the factors being assessed. These differences could impact on the defined benefit plan assets or liabilities recognized in the balance sheet in future periods.

Legal. The Group provides for anticipated legal settlement costs when there is a probable outflow of resources that can be reliably estimated. Where no reliable estimate can be made, no provision is recorded and contingent liabilities are disclosed where material. The status of significant legal cases is disclosed in Additional Information. These estimates consider the specific circumstances of each legal case and relevant legal advice, and are inherently judgmental due to the highly complex nature of legal cases. The estimates could change substantially over time as new facts emerge and each legal case progresses.

Environmental. The Group provides for anticipated environmental remediation costs when there is a probable outflow of resources that can be reasonably estimated. Environmental provisions consist primarily of costs to fully clean and refurbish contaminated sites, including landfills, and to treat and contain contamination at certain other sites. These estimates are inherently judgmental due to uncertainties related to the detection of previously unknown contaminated sites, the method and extent of remediation, the percentage of the problematic materials attributable to the Group at the remediation sites, and the financial capabilities of the other potentially responsible parties. The estimates could change substantially over time as new facts emerge and each environmental remediation progresses.

Income taxes. Significant estimates are required to determine the current and deferred tax assets and liabilities. Some of these estimates are based on interpretations of existing tax laws or regulations. Where tax positions are uncertain, accruals are recorded within income tax liabilities for management's best estimate of the ultimate liability that is expected to arise based on the specific circumstances and the Group's historical experience. Factors that may have an impact on current and deferred taxes include changes in tax laws, regulations or rates, changing interpretations of existing tax laws or regulations, future levels of research and development spending and changes in pre-tax earnings.

Leases.

Policy applicable from January 1, 2019

Where the Group is the lessee, key judgments include assessing whether arrangements contain a lease and determining the lease term. To assess whether a contract contains a lease requires judgment about whether it depends on a specified asset, whether the Group obtains substantially all the economic benefits from the use of that asset, and whether the Group has a right to direct the use of the asset. In order to determine the lease term judgment is required as extension and termination options have to be assessed along with all facts and circumstances that may create an economic incentive to exercise an extension option, or not exercise a termination option. Estimates include calculating the discount rate which is based on the incremental borrowing rate.

Policy applicable before January 1, 2019

The treatment of leasing transactions is mainly determined by whether the lease is considered to be an operating or finance lease. In making this assessment, management looks at the substance of the lease, as well as the legal form, and makes a judgment about whether substantially all of the risks and rewards of ownership are transferred. Arrangements which do not take the legal form of a lease but that nevertheless convey the right to use an asset are also covered by such assessments.

(3) Accounting policies

Consolidation policy

Subsidiaries are all companies over which the Group has control. Chugai controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Companies acquired during the year are consolidated from the date on which control is transferred to the Group, and subsidiaries to be divested are included up to the date on which control passes from the Group. Inter-company balances, transactions and resulting unrealized income are eliminated in full. Changes in ownership interests in subsidiaries are accounted for as equity transactions if they occur after control has already been obtained and if they do not result in a loss of control. Associates are companies over which the Group exercises, or has the power to exercise, significant influence, but which it does not control and they are accounted for using the equity method.

Foreign currency translation

Most foreign subsidiaries of the Group use their local currency as their functional currency. Certain foreign subsidiaries use other currencies (such as the euro) as their functional currency where this is the currency of the primary economic environment in which the entity operates. Local transactions in other currencies are initially reported using the exchange rate at the date of the transaction. Gains and losses from the settlement of such transactions and gains and losses on translation of monetary assets and liabilities denominated in other currencies are included in income, except when they are qualifying cash flow hedges. In such cases the gains and losses are deferred into other comprehensive income.

Upon consolidation, assets and liabilities of foreign subsidiaries using functional currencies other than Japanese yen are translated into Japanese yen using year-end rates of exchange. The income statement and statement of cash flows are translated at the average rates of exchange for the year. Translation differences due to the changes in exchange rates between the beginning and the end of the year and the difference between net income translated at the average and year-end exchange rates are taken directly to other comprehensive income.

Revenue

Sales. Revenue from the sale of goods supplied is recorded as ‘Sales’.

Sales are recognized when a promise in a customer contract (performance obligation) has been satisfied by transferring control over the promised goods to the customer. Control over a promised good refers to the ability to direct the use of, and obtain substantially all of the remaining benefits from, those goods. Control is usually transferred upon shipment or delivery to or upon receipt of goods by the customer, in accordance with the delivery and acceptance terms agreed with the customers. The amount of sales to be recognized (transaction price) is based on the consideration the Group expects to receive in exchange for its goods, excluding amounts collected on behalf of third parties such as consumption tax or other taxes directly linked to sales. The Group recognizes deferred income (contract liability) if consideration has been received (or has become receivable) before the Group transfers the promised goods to the customer.

Royalty and other operating income. ‘Royalty and other operating income’ includes royalty income, income from out-licensing agreements and income from disposal of products and other items.

Revenue for a sales-based or usage-based royalty promised in exchange for a license of intellectual property is recognized when the subsequent sale or usage occurs.

Income from out-licensing agreements typically arises from the receipt of upfront, milestone and other similar payments from third parties for granting a license to product or technology related intellectual property (IP). Out-licensing agreements may be entered into with no further obligation or may include commitments to conduct research, late-stage development, regulatory approval, co-marketing or manufacturing. Licenses granted are usually rights to use IP and are generally unique. Therefore, the basis of allocating revenue to performance obligations makes use of the residual approach. Upfront payments and other licensing fees are usually recognized upon granting the license unless some of the income shall be deferred for other performance obligations using the residual approach. Such deferred income is released and recognized as revenue when other performance obligations are satisfied. Milestone income is recognized at the point in time when it is highly probable that the respective milestone event criteria is achieved, and the risk of revenue reversal is considered remote.

Payments received for the disposal of product and similar rights are recognized as revenue upon transfer of control over such rights. To the extent that some of these payments relate to other performance obligations, a portion is deferred using the residual approach and recognized as revenue when performance obligations are satisfied.

Income from profit-sharing arrangements with collaboration partners is recognized as underlying sales and cost of sales are recorded by the collaboration partners.

Cost of sales

Cost of sales includes the corresponding direct production costs and related production overheads of goods sold and services rendered. Royalties, alliance and collaboration expenses, including all collaboration profit-sharing arrangements are also reported as part of cost of sales. Start-up costs between validation and the achievement of normal production capacity are expensed as incurred.

Research and development

Internal research and development activities are expensed as incurred for the following:

- Internal research costs incurred for the purpose of gaining new scientific or technical knowledge and understanding.
- Internal development costs incurred for the application of research findings or other knowledge to plan and develop new products for commercial production. The development projects undertaken by the Group are subject to technical, regulatory and other uncertainties, such that, in the opinion of management, the criteria for capitalization as intangible assets are not met prior to obtaining marketing approval by the regulatory authorities in major markets.
- Post-marketing studies after regulatory approval, such as phase IV costs in the pharmaceuticals business, generally involve safety surveillance and on-going technical support of a drug after it receives marketing approval to be sold. They may be required by regulatory authorities or may be undertaken for safety or commercial reasons. The costs of such post-marketing studies are not capitalized as intangible assets, as in the opinion of management, they do not generate separately identifiable incremental future economic benefits that can be reliably measured.

Acquired in-process research and development resources obtained through in-licensing arrangements, business combinations or separate asset purchases are capitalized as intangible assets. The acquired asset must be controlled by the Group, be separately identifiable and expected to generate future economic benefits, even if uncertainty exists as to whether the research and development will ultimately result in a marketable product. Consequently, upfront and milestone payments to third parties for pharmaceutical products or compounds before regulatory marketing approval are recognized as intangible assets. Assets acquired through such arrangements are measured on the basis set out in the “Intangible assets” policy. Subsequent internal research and development costs incurred post-acquisition are treated in the same way as other internal research and development costs. If research and development are embedded in contracts for strategic alliances, the Group carefully assesses whether upfront or milestone payments constitute funding of research and development work or acquisition of an asset.

Employee benefits

Short-term employee benefits include wages, salaries, social security contributions, paid annual leave and sick leave, profit sharing and bonuses, and non-monetary benefits for current employees. The costs are recognized within the operating results when the employee has rendered the associated service. The Group recognizes a liability for profit sharing and bonuses where contractually obliged or where there is a past practice that has created a constructive obligation.

Termination benefits are payable when employment is terminated by the Group before the normal retirement date, or whenever an employee accepts voluntary redundancy in exchange for these benefits. Termination costs are recognized at the earlier of when the Group can no longer withdraw the offer of the benefits or when the Group recognizes any related restructuring costs.

Post-employment benefits

For defined contribution plans, the Group contributions are recognized within the operating results when the employee has rendered the associated service.

For defined benefit plans the liability or asset recognized in the balance sheet is net amount of the present value of the defined benefit obligation and the fair value of the plan assets. All changes in the net defined benefit liability (asset) are recognized as they occur as follows:

Recognized in the income statement:

- Current service costs are charged to the appropriate income statement heading within the operating results.
- Past service costs, including curtailment gains or losses, are recognized immediately in general and administration within the operating results.
- Settlement gains or losses are recognized in general and administration within the operating results.
- Net interest on the net defined benefit liability (asset) is recognized in financing costs.

Recognized in other comprehensive income:

- Actuarial gains and losses arising from experience adjustments (the difference between previous assumptions and what has actually occurred) and changes in actuarial assumptions.
- The return on plan assets, excluding amounts included in net interest on the net defined benefit liability (asset).

Net interest on the net defined benefit liability (asset) comprises interest income on plan assets and interest costs on the defined benefit obligation. The net interest is calculated using the same discount rate that is used in calculating the defined benefit obligation, applied to the net defined benefit liability (asset) at the start of the period, taking account of any changes from contribution or benefit payments.

Pension assets and liabilities in different defined benefit plans are not offset unless the Group has a legally enforceable right to use the surplus in one plan to settle obligations in the other plan.

Equity compensation plans

The fair value of all equity compensation awards, including restricted stocks, granted to directors and certain employees is estimated at the grant date and recorded as an expense over the vesting period. The expense is charged to the appropriate income statement heading within the operating results. For equity-settled plans, an increase in equity is recorded for this expense and any subsequent cash flows from exercises of vested awards are recorded as changes in equity.

Property, plant and equipment

Property, plant and equipment are initially recorded at cost of purchase or construction, and include all costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management. These include items such as costs of site preparation, installation and assembly costs and professional fees. The net costs of testing whether the asset is functioning properly, including validation costs, are also included in the initially recorded cost of construction. Property, plant and equipment are depreciated on a straight-line basis, except for land, which is not depreciated. The estimated useful lives of major classes of depreciable assets are as follows:

- Land improvements: 40 years
- Buildings: 10-50 years
- Machinery and equipment: 3-15 years

Where parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate components. The estimated useful lives of the assets are regularly reviewed, and, if necessary, the future depreciation charges are accelerated. Repairs and maintenance costs are expensed as incurred.

Leases

Policy applicable from January 1, 2019

At inception of a contract, the Group assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. The Group recognizes a right-of-use asset and a corresponding lease liability for each contract that is, or contains, a lease at the lease commencement date, except for short-term leases and leases of low-value assets. Payments for short-term leases and leases of low-value assets are recognized as an expense on a straight-line basis over the term of the respective lease. The lease liability is initially measured at the present value of the future lease payments that are not paid at the lease commencement date. The lease payments are discounted using the interest rate implicit in the lease or, if not readily determinable, the Group's incremental borrowing rate in the respective markets. Lease payments include fixed payments, variable payments that depend on an index or rate known at the lease commencement date and payments from exercising purchase options if the Group is reasonably certain to exercise. The lease liability is subsequently measured at amortized costs using the effective interest method. It is remeasured, with a corresponding adjustment to the related right-of-use asset, when there is a change in future lease payments following a contract renegotiation, a change of an index or rate or a reassessment of options. The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any payments made at or before the lease commencement date and which includes any initial direct costs incurred and expected costs of obligations to dismantle, remove or refurbish the underlying asset, less any incentives received. Right-of-use assets are depreciated on a straight-line basis from the commencement date to the end of the useful life of the underlying asset if the lease transfers ownership of the underlying asset to the lessee by the end of the lease term or if the cost of the right-of-use asset reflects that the lessee will exercise a purchase option. Otherwise, right-of-use assets are depreciated on a straight-line basis from the lease commencement date over the shorter of the lease term or the useful life of the underlying asset. Right-of-use assets are assessed for impairment whenever there is an indication for impairment.

Policy applicable before January 1, 2019

Where the Group is the lessee, finance leases exist when substantially all of the risks and rewards of ownership are transferred to the Group. Finance leases are capitalized at the start of the lease at fair value, or the present value of the minimum lease payments, if lower. The rental obligation, net of finance charges, is reported within debt. Finance lease assets are depreciated over the shorter of the lease term and its useful life. The interest element of the lease payment is charged against income over the lease term based on the effective interest rate method. Operating leases exist when substantially all of the risks and rewards of ownership are not transferred to the Group. Payments made under operating leases are charged against income on a straight-line basis over the period of the lease.

Intangible assets

Purchased patents, trademarks, licenses and other intangible assets are initially recorded at cost. Assets that have been acquired through a business combination are initially recorded at fair value. Once available for use, intangible assets are amortized on a straight-line basis over their useful lives. The estimated useful life is the lower of the legal duration and the economic useful life. The estimated useful lives of intangible assets are regularly reviewed. Estimated useful lives of major classes of amortizable intangible assets are as follows:

- Product intangibles in use: 1-17 years
- Marketing intangibles in use: 5 years
- Technology intangibles in use: 3-9 years

Impairment of property, plant and equipment, right-of-use assets and intangible assets

An impairment assessment is carried out at each reporting date when there is evidence that an asset may be impaired. In addition intangible assets that are not yet available for use are tested for impairment annually. When the recoverable amount of an asset, being the higher of its fair value less costs to sell and its value in use, is less than its carrying value, then the carrying value is reduced to its recoverable amount. This reduction is reported in the income statement as an impairment loss. Value in use is calculated using estimated cash flows. These are discounted using an appropriate long-term interest rate. When an impairment loss arises, the useful life of the asset is reviewed and, if necessary, the future depreciation/amortization charge is accelerated. If the amount of impairment loss subsequently decreases and the decrease can be related objectively to an event occurring after the impairment was recognized, then the previously recognized impairment loss is reversed through the income statement as an impairment reversal.

Inventories

Inventories are stated at the lower of cost and net realizable value. The cost of finished goods, work in process and intermediates includes raw materials, direct labour and other directly attributable costs and overheads based upon the normal capacity of production facilities. Cost is determined using the weighted average method. Net realizable value is the estimated selling price less cost to completion and selling expenses.

Accounts receivable

Accounts receivable are carried at the original invoice amount less allowances made for doubtful accounts, trade discounts, cash discounts, volume rebates and similar allowances. A receivable represents a right to consideration that is unconditional and excludes contract assets. The Group always measures an allowance for doubtful accounts that result from transactions that are within the scope of IFRS 15 equal to the credit losses expected over the lifetime of the trade receivables. These estimates are based on specific indicators, such as the ageing of customer balances, specific credit circumstances and the Group's historical loss rates for each category of customers, and adjusted for forward looking macroeconomic data. While the Group measures an allowance for doubtful accounts that result from transactions that are not within the scope of IFRS 15 equal to 12-months expected credit losses, when the credit risk for these accounts has not increased significantly since initial recognition.

Expenses for doubtful trade receivables are recognized within marketing and distribution expenses. Trade discounts, cash discounts, volume rebates and similar allowances are recorded on an accrual basis consistent with the recognition of the related sales, using estimates based on existing contractual obligations, historical trends and the Group's experience. Accounts receivable are written off (either partially or in full) when there is no reasonable expectation of recovery. Where receivables have been written off, the Group continues to engage in enforcement activities to attempt to recover the receivable due. Where recoveries are made, these are recognized in profit or loss.

Cash and cash equivalents

Cash and cash equivalents include cash on hand and time, call and current balances with banks and similar institutions. Such balances are only reported as cash equivalents if they are readily convertible to known amounts of cash, are subject to insignificant risk of changes in their fair value and have a maturity of three months or less from the date of acquisition.

Provisions and contingencies

Provisions are recognized where a legal or constructive obligation has been incurred which will probably lead to an outflow of resources that can be reliably estimated. In particular, restructuring provisions are recognized when the Group has a detailed formal plan that has either commenced implementation or has been announced. Provisions are recorded for the estimated ultimate liability that is expected to arise and are discounted when the time value of money is material. A contingent liability is disclosed where the existence of the obligation will only be confirmed by future events or where the amount of the obligation cannot be measured with reasonable reliability. Contingent assets are not recognized, but are disclosed where an inflow of economic benefits is probable.

Fair values

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. It is determined by reference to quoted market prices or by the use of established valuation techniques such as option pricing models and the discounted cash flow method if quoted prices in an active market are not available.

Financial instruments

The Group classifies its financial assets, with the exception of derivatives, in the following measurement categories: amortized cost; fair value through OCI; and fair value through profit or loss.

The classification depends on the Group's business model for managing the financial assets and the contractual terms of the cash flows. The Group reclassifies debt securities and financial assets measured at amortized cost when and only when its business model for managing those assets changes.

At initial recognition, the Group measures a financial asset at its fair value excluding trade receivables at transaction price if it does not contain a significant financing component. In the case of a financial asset not at fair value through profit or loss, transaction costs that are directly attributable to the acquisition of the financial asset are added to the fair value. Transaction costs of financial assets carried at fair value through profit or loss are expensed in profit or loss.

Financial assets measured at amortized cost: Assets that are held for collection of contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortized cost. A gain or loss on a debt security that is subsequently measured at amortized cost and is not part of a hedging relationship is recognized in profit or loss when the asset is derecognized or impaired. Interest income from these financial assets is included in other financial income using the effective interest rate method. Financial assets measured at amortized cost are mainly comprised of accounts receivable, cash and cash equivalents and time accounts over three months.

Financial assets measured at fair value through other comprehensive income (fair value through OCI): These are financial assets that are held for collection of contractual cash flows and for selling the financial assets, where the assets' cash flows represent solely payments of principal and interest. These assets are initially recorded and subsequently carried at fair value. Changes in the fair value are recorded in other comprehensive income, except for the recognition of impairment gains or losses, interest revenue and foreign exchange gains and losses which are recognized in profit and loss. When the financial asset is derecognized, the cumulative gain or loss previously recognized in OCI is reclassified from equity to profit or loss. Interest income from these financial assets is included in other financial income using the effective interest rate method. Financial assets measured at fair value through other comprehensive income are mainly comprised of money market instruments.

Equity instruments measured at fair value through other comprehensive income (fair value through OCI): These are equity instruments measured at fair value through OCI for which an irrevocable election at initial recognition has been made, to present subsequent changes in fair value in other comprehensive income. Dividends are recognized as other financial income in profit or loss. Other net gains and losses are recognized in OCI and are never reclassified to profit or loss. When the instruments are derecognized, the cumulative amount of other comprehensive income is transferred to retained earnings.

Financial assets measured at fair value through profit or loss: These are financial assets whose performance is evaluated on a fair value basis. A gain or loss on a financial asset that is subsequently measured at fair value through profit or loss and is not part of a hedging relationship is recognized in profit or loss and presented within other financial income (expense) in the period in which it arises. Fair value through profit or loss assets are mainly comprised of debt instruments.

The Group classifies its financial liabilities as measured at amortized cost, except for derivatives. Financial liabilities are initially recorded at fair value, less transaction costs and subsequently carried at amortized cost using the effective interest rate method. Financial liabilities are mainly comprised of trade payables.

Derivative financial instruments that are used to manage the exposures to foreign currency exchange rate fluctuations are initially recorded and subsequently carried at fair value. Apart from those derivatives designated as qualifying cash flow hedging instruments, all changes in fair value are recorded as other financial income (expense).

Derecognition of financial instruments

A financial asset is derecognized when the contractual rights to the cash flows from the asset expire or when the Group transfers the rights to receive the contractual cash flows from the financial assets in a transaction in which substantially all the risks and rewards of ownership of the financial asset are transferred. A financial liability is derecognized when the contractual obligations are discharged, cancelled or expire.

Impairment of financial assets

The Group recognizes loss allowances for expected credit losses ('ECL') for financial assets measured at amortized cost and debt securities measured at fair value through OCI.

The Group always measures loss allowances that result from transactions that are within the scope of IFRS 15 equal to the credit losses expected over the lifetime of the trade receivables.

The Group measures loss allowances at an amount equal to 12-month expected credit losses for its debt securities carried at fair value through OCI and at amortized cost when the credit risk for these accounts has not increased significantly since initial recognition at the reporting date. The Group considers a debt investment to have low credit risk when their credit risk rating is equivalent to the globally understood definition of 'investment grade'. The Group considers this to be at least Baa3 from Moody's and BBB- from S&P.

The Group measures the allowances for doubtful account at an amount equal to lifetime ECL for its debt investments at fair value through OCI and at amortized cost on which credit risk has increased significantly since their initial recognition. The Group assumes that the credit risk on a financial asset has increased significantly if it is more than 30 days past due.

The Group considers a financial asset to be in default when the counterparty is unlikely to pay its obligations to the Group in full. In assessing whether a counterparty is in default, the Group considers both qualitative and quantitative indicators that are based on data developed internally and for certain financial assets also obtained from external sources.

Financial assets are written off (either partially or in full) when there is no realistic prospect of recovery. This is generally the case when the Group determines that the customer does not have assets or sources of income that could generate sufficient cash flows to repay the amounts subject to the write-off. However, financial assets that are written off are still subject to enforcement activities in order to comply with the Group's policy for recovery of amounts due.

Hedge accounting

The Group uses derivatives to manage its exposures to foreign currency risk. The instruments used may include forwards contracts. The Group generally limits the use of hedge accounting to certain significant transactions. To qualify for hedge accounting the hedging relationship must meet several strict conditions on documentation, probability of occurrence, hedge effectiveness and reliability of measurement. While many of these transactions can be considered as hedges in economic terms, if the required conditions are not met, then the relationship does not qualify for hedge accounting. In this case the hedging instrument and the hedged item are reported independently as if there were no hedging relationship, which means that any derivatives are reported at fair value, with changes in fair value included in other financial income (expense).

As the Group may continue to apply the hedge accounting requirements of IAS 39 instead of those in IFRS 9 at the initial application of IFRS 9, the Group has chosen to continue to apply the hedge accounting requirements of IAS 39.

A cash flow hedge is a hedge of the exposure to variability in cash flows that is attributable to a particular risk associated with a recognized asset or liability or a highly probable forecast transaction and could affect profit or loss. The hedging instrument is recorded at fair value. The effective portion of the hedge is included in other comprehensive income and any ineffective portion is reported in other financial income (expense). If the hedging relationship is the hedge of the foreign currency risk of a firm commitment or highly probable transaction, when that transaction results in the recognition of a non-financial item, the cumulative changes in the fair value of the hedging instrument that have been recorded in other comprehensive income are included in the initial carrying value of the non-financial item at the date of recognition, or otherwise included in profit or loss when the hedged transaction affects net income.

For other hedged forecasted cash flows, the cumulative changes in the fair value of the hedging instrument that have been recorded in other comprehensive income are included in other financial income (expense) when the forecasted transaction affects net income.

Taxation

Income taxes include all taxes based upon the taxable profits of the Group. Other taxes not based on income, such as property and capital taxes, are included in the appropriate heading within the operating results.

Liabilities for income taxes, which could arise on the remittance of retained earnings, principally relating to subsidiaries, are only recognized where it is probable that such earnings will be remitted in the foreseeable future. Where the amount of tax liabilities is uncertain, accruals are recorded within income tax liabilities for management's best estimate of the ultimate liability that is expected to arise based on the specific circumstances and the Group's historical experience.

Deferred tax assets and liabilities are recognized on temporary differences between the tax bases of assets and liabilities and their carrying values. Deferred tax assets are recognized to the extent that it is probable that future taxable profit will be available against which the unused tax losses can be utilized.

Current and deferred tax assets and liabilities are offset when the income taxes are levied by the same taxation authority and when there is a legally enforceable right to offset them. Deferred taxes are determined based on the currently enacted tax rates applicable in each tax jurisdiction where the Group operates.

Own equity instruments

The Group's holdings in its own equity instruments are recorded as a deduction from equity. The original purchase cost, consideration received for subsequent resale of these equity instruments and other movements are reported as changes in equity. The exercise of stock acquisition rights granted to directors and certain employees will result in the allotment from own equity instruments.

(4) Significant accounting policies

The Group applies the same significant accounting policies that are used for the previous fiscal year to the Consolidated Financial Statements, except for those stated in (5) Changes in accounting policies below.

(5) Changes in accounting policies

The Group has adopted IFRS 16 'Leases', including any consequential amendments to other standards, effective January 1, 2019. The nature and the effects of the changes from implementing IFRS 16 'Leases' most relevant to the Group's Consolidated Financial Statements are given below.

IFRS16 'Leases'

Effective January 1, 2019 the Group has implemented IFRS 16 'Leases'. IFRS 16 replaces existing leases guidance, including IAS 17 'Leases', and sets out the principles for recognition and measurement of leases. The new standard results in an increased volume of disclosure information in the consolidated financial statements. The main effect on the Group is that IFRS 16 introduces a single, on-balance sheet lease accounting model for lessees. It requires a lessee to recognize assets and liabilities for its leases unless practical expedients are applied for the recognition exemption. As a result, leased assets, including right-of-use assets, lease receivables and other assets totaling ¥ 15,203 million and lease liabilities totaling ¥ 14,553 million have been recorded on the balance sheet at January 1, 2019.

The application of the new standard results in the interest element of what was previously reported as operating lease costs being recorded as interest expenses. Given the leases involved and the current low interest rate environment, this effect is not material to the Group.

The main impact of the new standard on the statement of cash flows is that cash flows in respect of leases previously reported as operating leases are reported as part of cash flows from financing activities except for short-term lease payments, payments for leases of low-value assets and variable lease payments not included in the measurement of the lease liability from January 1, 2019. Previously these were included within cash flows from operating activities.

Transition approach

The Group has applied the cumulative catch-up method for the transition. Therefore, the cumulative effect of adopting IFRS 16 has been recognized as an adjustment to leased assets, including right-of-use assets, lease receivables and other assets totaling ¥ 15,203 million and lease liabilities totaling ¥ 14,553 million at January 1, 2019, with no restatement of comparative information. There is no impact on the opening balance of retained earnings at the date of initial application because the Group measures right-of-use assets at an amount equal to the lease liability. However, the Group has adjusted the lease liability by the amount of any prepaid or accrued lease payments relating to that lease recognized on the balance sheet immediately before the date of initial application. Except for this adjustment, there is no material impact on the Group's performance or financial position from the application of this standard.

Some practical expedients permitted by the standard are used, notably to not reassess upon transition whether an existing contract contains a lease, and the recognition exemptions for short-term leases and leases of low value assets.

Presentational changes

As a result of implementing IFRS 16, the Group has made a number of presentational changes in 2019, notably to present 'Right-of-use assets' as a separate line item in the balance sheet and to include lease liabilities in other current liabilities and other non-current liabilities.

(6) Future new and revised standards

The Group is currently assessing the potential impacts of new standards and interpretations that will be effective from January 1, 2020 and beyond. Based on the analysis to date, the Group does not anticipate that these will have a material impact on the Group's overall results and financial position.

2. Operating segment information

The Group has a single business of pharmaceuticals and does not have multiple operating segments. The Group's pharmaceuticals business consists of the research and development of new prescription medicines and the subsequent manufacturing, marketing and distribution activities. These functional activities are integrated and managed effectively.

Information on revenues by geographical area in millions of yen

	2019		2018	
	Sales	Royalties and other operating income	Sales	Royalties and other operating income
Japan	437,561	6,404	399,906	21,569
Overseas	151,335	90,884	127,939	30,374
of which Switzerland	134,330	87,731	109,938	24,250
Total	588,896	97,288	527,844	51,943

Information on revenues by major customers in millions of yen

	2019	2018
	Revenues	Revenues
F. Hoffmann-La Roche Ltd.	217,265	134,188
Alfresa Corporation	114,202	103,959
Mediceo Corporation	75,797	76,004

3. Revenue

Disaggregated revenue information in millions of yen

	2019			2018		
	Revenue from contracts with customers	Revenue from other sources	Total	Revenue from contracts with customers	Revenue from other sources	Total
Sales	585,320	3,576	588,896	525,643	2,202	527,844
Japan	437,561	-	437,561	399,906	-	399,906
Overseas	147,759	3,576	151,335	125,737	2,202	127,939
Royalties and other operating income	84,595	12,692	97,288	40,803	11,140	51,943
Royalty and profit-sharing income	63,862	12,645	76,507	12,942	11,140	24,082
Other operating income	20,733	47	20,780	27,861	-	27,861

The revenue from other sources primarily relates to collaboration income for which the counterparty is not considered a customer, such as income from profit-sharing arrangements and the gains or losses from hedging activities.

Contract balances in millions of yen

	December 31, 2019	January 1, 2019
Receivables-contracts with customers	170,837	162,879
Accounts receivable	139,649	150,804
Other current receivables	31,188	12,075
Contract assets	1,240	-
Contract liabilities	160	206

Contract assets generally increase when the Group transfers goods or services to a customer (excluding claims for which the right to remuneration is unconditional) before the customer pays the consideration or before the payment becomes due and decrease when the Group bills the customer.

Contract liabilities generally increase when the Group receives consideration from a customer prior to the transfer of goods or services to the customer and decrease when the Group meets its performance obligations.

Of the amount of revenue recognized for the year ended December 31, 2019, ¥41 million was included in the beginning balance of contract liabilities.

In 2019 there was revenue recognized of ¥80,846 million relating to performance obligations that were satisfied in previous periods, mainly in relation to royalty and milestone revenue.

Transaction price allocated to the remaining performance obligations

There are no material amounts of the total transaction price allocated to the remaining performance obligations which have an original expected duration of more than one year as of December 31, 2019. As a practical expedient, the Group does not disclose the information for remaining performance obligations which are part of contracts that have an original expected duration of one year or less.

There are no material amounts which are not included in the transaction price in the consideration from the contracts with customers.

4. Financing costs and other financial income (expense)**Financing costs** in millions of yen

	2019	2018
Interest expense	-	(5)
Net interest cost of defined benefit plans	(88)	(53)
Interest expense on lease liabilities	(27)	-
Net other financing costs	(11)	(53)
Total financing costs	(125)	(111)

The implementation of IFRS 16 has resulted in part of what was previously reported as operating lease costs being recorded as interest expenses. Given the leases involved and the current low interest rate environment, this effect is not material to the Group.

Other financial income (expense) in millions of yen

	2019	2018
Dividend income from equity instruments measured at fair value through OCI	91	115
Net income from equity securities	91	115
Interest income from debt securities measured at fair value through OCI	20	9
Interest income from financial assets measured at amortized cost	89	74
Net interest income and income from debt securities	109	83
Foreign exchange gains (losses)	239	680
Gains (losses) on foreign currency derivatives	106	(429)
Net foreign exchange gains (losses)	345	251
Total other financial income (expense)	545	449

5. Other expense

Chugai filed an Advance Pricing Arrangement covering certain transactions with F. Hoffmann-La Roche Ltd. to the Japanese and Swiss tax authorities. In the first quarter of the year ended December 31, 2017, Chugai received a notice of agreement from both tax authorities which includes the instruction that the taxable income of Chugai shall be decreased by a certain amount and that of Roche shall be increased by the same amount in each fiscal year from 2016 to 2020, and if necessary, additional adjustments to the accounts shall be made in 2021.

As a result of this agreement, Chugai will transfer a part of the deducted amount of corporate and other taxes, to Roche as the estimated tax payable for Roche, in accordance with the license agreement between Chugai and Roche. The company has posted ¥3,124 million of adjustment from transfer pricing taxation.

6. Income taxes

Income tax expenses in millions of yen

	2019	2018
Current income taxes	(54,693)	(32,646)
Deferred taxes	4,360	4,276
Total income tax (expense)	(50,333)	(28,370)

Reconciliation of the Group's effective tax rate

	2019	2018
Weighted average expected tax rate	30.2%	30.3%
Tax effect of		
- Non-taxable income/non-deductible expenses	0.2%	0.4%
- Effect of changes in applicable tax rates on deferred tax balances	-%	0.0%
- Research and development tax credits	(5.3)%	(5.4)%
- Transfer pricing taxation related	(1.5)%	(2.2)%
- Other differences	0.6%	0.4%
Group's effective tax rate	24.2%	23.4%

Tax effects of other comprehensive income in millions of yen

	2019			2018		
	Pre-tax amount	Tax benefit	After-tax amount	Pre-tax amount	Tax benefit	After-tax Amount
Remeasurements of defined benefit plans	487	(158)	329	(3,566)	1,094	(2,472)
Financial assets measured at fair value through OCI	(578)	306	(272)	529	(166)	363
Cash flow hedges	(1,900)	583	(1,317)	(320)	95	(225)
Currency translation of foreign operations	(1,172)	-	(1,172)	(3,158)	-	(3,158)
Other comprehensive income	(3,164)	731	(2,433)	(6,516)	1,024	(5,492)

Income tax assets (liabilities) in millions of yen

	December 31, 2019	December 31, 2018
Current income taxes		
- Assets	0	3
- Liabilities	(41,047)	(19,567)
Net current income tax assets (liabilities)	(41,046)	(19,564)
Deferred taxes		
- Assets	42,680	35,568
- Liabilities	(9,304)	(9,031)
Net deferred tax assets (liabilities)	33,376	26,537

Current income taxes: movements in recognized net assets (liabilities) in millions of yen

	2019	2018
Net current income tax assets (liabilities) at January 1	(19,564)	(17,824)
Income taxes paid	34,782	31,565
(Charged) credited to the income statement	(54,693)	(32,646)
Currency translation effects and other	(1,571)	(659)
Net current income tax assets (liabilities) at December 31	(41,046)	(19,564)

Deferred taxes: movements in recognized net assets (liabilities) in millions of yen

	Property, plant and equipment and right-of- use assets	Intangible assets	Provisions	Employee benefits	Other temporary differences	Total
Year ended December 31, 2018						
At January 1, 2018	(19,002)	(3,155)	43	5,346	42,058	25,290
(Charged) credited to the income statement	(1,227)	32	2	253	5,216	4,276
(Charged) credited to other comprehensive income	-	-	-	1,094	595	1,690
(Charged) credited to Equity	-	-	-	-	(4,677)	(4,677)
Currency translation effects and other	9	(1)	(3)	(4)	(42)	(41)
At December 31, 2018	(20,219)	(3,124)	42	6,689	43,149	26,537

Year ended December 31, 2019

At January 1, 2019	(20,219)	(3,124)	42	6,689	43,149	26,537
Impact of changes in accounting policies	(4,593)	-	-	-	4,593	-
At January 1, 2019 (revised)	(24,812)	(3,124)	42	6,689	47,742	26,537
(Charged) credited to the income statement	(1,960)	148	88	(1,331)	7,416	4,360
(Charged) credited to other comprehensive income	-	-	-	(158)	2,506	2,348
Currency translation effects and other	(1)	(0)	(1)	(1)	135	131
At December 31, 2019	(26,773)	(2,976)	129	5,198	57,798	33,376

Other temporary differences mainly relate to prepaid expenses, amortization of deferred assets and accrued expenses.

Deferred tax assets are not recognized for deductible temporary differences of ¥1,157 million (2018: ¥1,749 million). Deferred tax assets are recognized for tax losses carried forward only to the extent that realization of the related tax benefit is probable.

Unrecognized tax losses: expiry in millions of yen

	2019	2018
Less than one year	-	-
Over one year and less than five years	235	242
Over five years	61	0
Tax losses not recognized in deferred tax assets	296	242

Deferred tax assets for unused tax credits are recognized only to the extent that realization of the related tax benefit is probable.

Unrecognized unused tax credits: expiry in millions of yen

	2019	2018
Less than one year	-	-
Over one year and less than five years	-	-
Over five years	110	111
Unused tax credits not recognized in deferred tax assets	110	111

Deferred tax liabilities have not been established for the withholding tax and other taxes that would be payable on the unremitted earnings of wholly owned foreign subsidiaries of the Group, where such amounts are currently regarded as permanently reinvested. The temporary differences relating to the unremitted earnings were ¥2,473 million (2018: ¥2,107 million).

7. Property, plant and equipment

Property, plant and equipment: movements in carrying value of assets in millions of yen

	Land	Buildings and land improvements	Machinery and equipment	Construction in progress	Total
At January 1, 2018					
Cost	9,141	119,981	186,617	32,116	347,854
Accumulated depreciation and impairment	(28)	(62,044)	(114,212)	-	(176,285)
Net book value	9,112	57,937	72,404	32,116	171,569
Year ended December 31, 2018					
At January 1, 2018	9,112	57,937	72,404	32,116	171,569
Additions	-	13	633	71,197	71,843
Disposals	-	(94)	(299)	-	(394)
Transfers	43,040	16,506	38,938	(98,484)	-
Depreciation charge	-	(4,232)	(10,358)	-	(14,590)
Impairment charge	-	-	(59)	-	(59)
Other	-	-	(5,791)	-	(5,791)
Currency translation effects	-	(45)	(120)	(24)	(189)
At December 31, 2018	52,152	70,085	95,347	4,804	222,388
Cost	52,169	135,620	211,362	4,804	403,955
Accumulated depreciation and impairment	(16)	(65,535)	(116,015)	-	(181,566)
Net book value	52,152	70,085	95,347	4,804	222,388
Year ended December 31, 2019					
At January 1, 2019	52,152	70,085	95,347	4,804	222,388
Impact of changes in accounting policies	-	-	(279)	-	(279)
At January 1, 2019 (revised)	52,152	70,085	95,068	4,804	222,109
Additions	-	18	278	53,701	53,997
Disposals	(14)	(192)	(357)	-	(563)
Transfers	-	1,821	20,614	(22,435)	-
Depreciation charge	-	(6,387)	(11,391)	-	(17,778)
Impairment charge	-	-	(1,252)	-	(1,252)
Other	-	-	(917)	-	(917)
Currency translation effects	-	(23)	(11)	(2)	(37)
At December 31, 2019	52,139	65,322	102,030	36,068	255,559
Cost	52,155	136,642	224,929	36,068	449,794
Accumulated depreciation and impairment	(16)	(71,320)	(122,899)	-	(194,235)
Net book value	52,139	65,322	102,030	36,068	255,559

In 2019, no borrowing costs were capitalized as property, plant and equipment (2018: none).

Impairment charge

The carrying value was reduced to the value in use as the recoverable amount of certain assets was less than the carrying value.

Classification of impairment of property, plant and equipment in millions of yen

	2019	2018
Cost of sales	1,252	59
Marketing and distribution	-	-
Research and development	-	-
General and administration	-	-
Total impairment charge	1,252	59

Commitments

The Group has commitments for the purchase or construction of property, plant and equipment after the end of the year ended December 31, 2019 totaling ¥93,579 million (2018: ¥6,362 million).

8. Leases

The impact of IFRS 16 ‘Leases’ on the Group consolidated financial statements is given in Note 1(5) “Changes in accounting policies” above. The comparative 2018 financial information has not been restated following the cumulative catch-up method for the transition applied by the Group. There is no significant difference between the amount calculated by discounting the sum of the future minimum lease payments under non-cancellable operating leases disclosed in the consolidated financial statements for the year ended December 31, 2018 by the incremental borrowing rate as of the date of initial application, and the lease liability recorded as adjustments at the beginning of the year ended December 31, 2019.

The Group enters into leasing transactions as a lessee mainly for reasons of convenience and flexibility. The Group has good cash generation ability and it enjoys strong long-term investment grade credit ratings. Therefore it typically does not enter into leasing arrangements for financing considerations. The main areas of leases that the Group has entered into are for offices and cars.

The right-of-use assets reported for the Group’s leases are shown in the table below. Additions to the right-of-use assets during 2019 were ¥8,098 million.

Right-of-use assets: movements in carrying value of assets in millions of yen

	Buildings and land improvements	Machinery and equipment	Total
At January 1, 2019	-	-	-
Cumulative catch-up for previously reported operating leases on implementation of IFRS 16	13,301	1,902	15,203
At January 1, 2019 (revised)	13,301	1,902	15,203
Depreciation charge	(5,298)	(733)	(6,031)
At December 31, 2019	8,481	1,267	9,749

Lease liabilities are presented in other current liabilities and other non-current liabilities. The amount of current lease liabilities and non-current lease liabilities are given in Note 19 and 21 respectively. Interest expense on the lease liability during 2019 was ¥27 million. The maturity analysis of lease liabilities is shown in the table below.

Contractual maturities of lease liabilities in millions of yen

	Carrying value	Total	Less than 1 year	1-2 years	2-5 years	Over 5 years
At December 31, 2019						
Lease liabilities	12,751	12,792	7,278	4,007	1,377	130

Short-term leases and leases of low-value assets are accounted for using the recognition exemption permitted by IFRS 16. Expenses for short-term leases are recognized on a straight-line basis and mainly include short-term leases for parking lots. The total amount reported in 2019 was ¥792 million. Expenses for leases of low-value assets are recognized on a straight-line basis and mainly include IT equipment. The total amount reported in 2019 was ¥381 million. Expenses for variable lease payments not included in the measurement of lease liabilities reported in 2019 was ¥137 million. The Group did not enter into any sale and leaseback transactions.

The major cash flows in respect of leases where the Group is the lessee are shown in the table below.

Leases: cash flows in millions of yen

	2019
Included in cash flows from operating activities	(1,310)
Included in cash flows from financing activities	(8,888)
Total lease payments	(10,197)

Cash flows from operating activities include cash flows from short-term leases, leases of low-value assets and variable lease payments. Cash flows from financing activities include the payment of interest and the principal portion of lease liabilities as well as prepayments made before the lease commencement date.

9. Intangible assets

Intangible assets: movements in carrying value of assets in millions of yen

	Product intangibles: in use	Product intangibles: not available for use	Marketing intangibles: in use	Technology intangibles: in use	Total
At January 1, 2018					
Cost	19,916	21,241	4,382	103	45,641
Accumulated amortization and impairment	(14,604)	(8,631)	(1,259)	(69)	(24,564)
Net book value	5,312	12,609	3,123	33	21,078

Year ended December 31, 2018

At January 1, 2018	5,312	12,609	3,123	33	21,078
Additions	148	5,178	2,577	564	8,468
Disposals	-	-	-	-	-
Transfers	1,562	(1,562)	-	-	-
Amortization charge	(916)	-	(818)	(254)	(1,988)
Impairment charge	(78)	(4,765)	-	-	(4,844)
Currency translation effects	(13)	(2)	-	-	(15)
At December 31, 2018	6,015	11,457	4,883	344	22,699

Cost	21,409	20,662	6,887	667	49,625
Accumulated amortization and impairment	(15,394)	(9,205)	(2,004)	(323)	(26,927)
Net book value	6,015	11,457	4,883	344	22,699

Year ended December 31, 2019

At January 1, 2019	6,015	11,457	4,883	344	22,699
Additions	190	3,187	2,727	-	6,104
Disposals	-	-	-	-	-
Transfers	2,182	(2,182)	-	-	-
Amortization charge	(964)	-	(1,377)	(251)	(2,592)
Impairment charge	-	(2,577)	(87)	-	(2,664)
Currency translation effects	(4)	(2)	-	-	(6)
At December 31, 2019	7,418	9,883	6,146	92	23,540

Cost	23,677	21,592	9,614	667	55,550
Accumulated amortization and impairment	(16,259)	(11,708)	(3,468)	(575)	(32,010)
Net book value	7,418	9,883	6,146	92	23,540

Significant intangible assets

The product intangibles in use and not available for use are mainly acquired through in-licensing agreements of products with related parties. The remaining amortization periods for product intangibles in use are from 1 to 15 years.

Impairment charge

Impairment charge in each year was mainly related to the cessation of R&D projects and the uncertainty regarding expected profits.

Classification of amortization and impairment expenses in millions of yen

	2019		2018	
	Amortization	Impairment	Amortization	Impairment
Cost of sales	1,062	87	1,014	-
Marketing and distribution	256	-	133	-
Research and development	632	2,577	428	4,844
General and administration	642	-	413	-
Total	2,592	2,664	1,988	4,844

Internally generated intangible assets

The Group currently has no internally generated intangible assets from development as the criteria for the recognition as an asset are not met.

Intangible assets with indefinite useful lives

The Group currently has no intangible assets with indefinite useful lives.

Product intangibles not available for use

These mostly represent in-process research and development assets acquired either through in-licensing arrangements or separate purchases. Due to the inherent uncertainties in the research and development processes, intangible assets not available for use are particularly at risk of impairment if the project is not expected to result in a commercialized product.

Impairment of intangible assets

Impairment charges arise from changes in the estimates of the future cash flows expected to result from the use of the asset and its eventual disposal. Factors such as the presence or absence of competition, technical obsolescence or lower than anticipated sales for products with capitalized rights could result in shortened useful lives or impairment.

Potential commitments from alliance collaborations

The Group is party to in-licensing and similar arrangements with its alliance partners. These arrangements may require the Group to make certain milestone or other similar payments dependent upon the achievement of agreed objectives or performance targets as defined in the collaboration agreements.

The Group's current estimate of future commitments for such payments is set out in the table below. These figures are undiscounted and are not risk adjusted, meaning that they include all such potential payments that can arise assuming all projects currently in development are successful. The timing is based on the Group's current best estimate.

Potential future collaboration payments at December 31, 2019 in millions of yen

	Third party	Related party	Total
Within one year	522	3,117	3,639
Between one and two years	400	4,785	5,185
Between two and three years	1,736	2,180	3,916
Total	2,658	10,082	12,740

10. Financial non-current assets

Financial non-current assets in millions of yen

	December 31, 2019	December 31, 2018
Financial assets measured at fair value through OCI	2,958	9,723
Total financial non-current assets	2,958	9,723

Financial non-current assets are equity instruments held not for pure investment purposes, but for the Group's business purposes to maintain and strengthen the relationship with business partners. Therefore, the Group has designated all equity instruments as measured at fair value through OCI.

11. Other non-current assets

Other non-current assets in millions of yen

	December 31, 2019	December 31, 2018
Long-term prepaid expenses	18,926	23,654
Other assets	5,824	5,422
Total other non-current assets	24,750	29,077

Long-term prepaid expenses are mainly payments to related parties for start-up and validation costs at plants used for outsourcing to the related parties.

12. Inventories

Inventories in millions of yen

	December 31, 2019	December 31, 2018
Raw materials and supplies	57,390	42,199
Work in process	165	118
Intermediates	45,870	53,682
Finished goods	66,570	65,037
Provision for slow-moving and obsolete inventory	(1,873)	(1,676)
Total inventories	168,122	159,360

Inventories expensed through cost of sales totaled ¥250,924 million (2018: ¥245,919 million). Inventory write-downs during the year resulted in an expense of ¥1,053 million (2018: ¥1,051 million).

13. Accounts receivable

Accounts receivable in millions of yen

	December 31, 2019	December 31, 2018
Trade receivables – third party	106,789	125,478
Trade receivables – related party	32,848	25,307
Notes receivables	12	19
Other receivables – third party (Contracts with customers)	319	1,105
Other receivables – related party (Contracts with customers)	30,869	10,970
Other receivables – third party	4,070	6,717
Other receivables – related party	6,743	9,967
Allowances for doubtful accounts	(10)	(7)
Total accounts receivable	181,641	179,556

14. Marketable securities

Marketable securities in millions of yen

	December 31, 2019	December 31, 2018
Financial assets measured at fair value through OCI		
Money market instruments	119,994	94,000
Debt securities	8,751	8,001
Financial assets measured at amortized cost		
Time accounts over three months	373	532
Total marketable securities	129,117	102,533

Marketable securities are held for fund management purposes. Money market instruments are mainly certificates of deposit, cash in trust and commercial paper. Debt securities are mainly corporate bonds.

15. Cash and cash equivalents

Cash and cash equivalents in millions of yen

	December 31, 2019	December 31, 2018
Cash - cash in hand and in current or call accounts	195,514	140,912
Cash equivalents - time accounts with a maturity of three months or less	8,427	5,948
Total cash and cash equivalents	203,941	146,860

16. Other current assets

Other current assets in millions of yen

	December 31, 2019	December 31, 2018
Derivative financial instruments	5,052	2,204
Total financial current assets	5,052	2,204
Prepaid expenses	11,807	9,577
Total non-financial current assets	11,807	9,577
Total other current assets	16,858	11,781

17. Debt

Debt: movements in carrying value of recognized liabilities in millions of yen

	2019	2018
At January 1	214	336
Increase in debt	-	12
Decrease in debt	(214)	(134)
At December 31	-	214
Finance lease obligations	-	214
Total debt	-	214
Long-term debt	-	82
Short-term debt	-	133
Total debt	-	214

Lease liabilities are presented in other current liabilities and other non-current liabilities following the implementation of IFRS 16.

18. Provisions and contingent liabilities

Provisions: movements in recognized liabilities in millions of yen

	Environmental provisions	Other provisions	Total
Year ended December 31, 2018			
At January 1, 2018	311	1,808	2,120
Additional provisions created	-	36	36
Unused amounts reversed	-	-	-
Utilized	(29)	(51)	(80)
Other	-	(3)	(3)
At December 31, 2018	282	1,791	2,073
Long-term provisions	281	1,791	2,072
Short-term provisions	1	-	1
At December 31, 2018	282	1,791	2,073

Year ended December 31, 2019			
At January 1, 2019	282	1,791	2,073
Additional provisions created	-	374	374
Unused amounts reversed	(0)	-	(0)
Utilized	(2)	(109)	(110)
Other	-	16	16
At December 31, 2019	280	2,073	2,353
Long-term provisions	280	2,068	2,348
Short-term provisions	-	4	4
At December 31, 2019	280	2,073	2,353
Expected outflow of resources			
Within one year	-	4	4
Between one to two years	-	327	327
Between two to three years	-	211	211
More than three years	280	1,531	1,811
At December 31, 2019	280	2,073	2,353

Environmental provisions

Provisions for environmental matters include various separate environmental issues. By their nature the amounts and timings of any outflows are difficult to predict. Significant provisions are discounted where the time value of money is material.

Other provisions

Other provisions arise mainly from expected decommissioning and removal costs with respect to property, plant and equipment. The timings of cash outflows are by their nature uncertain. Significant provisions are discounted where the time value of money is material.

Contingent liabilities

The operations and earnings of the Group continue, from time to time and in varying degrees, to be affected by political, legislative, fiscal and regulatory developments, including those relating to environmental protection. The industries in which the Group operates are also subject to other risks of various kinds. The nature and frequency of these developments and events, not all of which are covered by insurance, as well as their effect on future operations and earnings, are not predictable.

The Group has entered into strategic alliances with various companies in order to gain access to potential new products or to utilize other companies to help develop the Group's own potential new products. Potential future payments may become due to certain collaboration partners achieving certain milestones as defined in the collaboration agreements. The Group's best estimates for future commitment payments are given in Note 9.

19. Other non-current liabilities

Other non-current liabilities in millions of yen

	December 31, 2019	December 31, 2018
Deferred income	643	727
Lease liabilities	5,489	-
Other long-term liabilities	783	1,219
Total other non-current liabilities	6,914	1,946

Lease liabilities are presented in other current liabilities and other non-current liabilities following the implementation of IFRS 16.

20. Accounts payable

Accounts payable in millions of yen

	December 31, 2019	December 31, 2018
Trade payables – third party	7,403	5,991
Trade payables – related party	40,323	29,943
Other taxes payable	8,612	6,600
Accounts payable purchase of property, plant and equipment	6,625	5,637
Other payables – third party	4,998	4,909
Other payables – related party	9,674	18,626
Total accounts payable	77,635	71,706

21. Other current liabilities

Other current liabilities in millions of yen

	December 31, 2019	December 31, 2018
Deferred income	252	239
Lease liabilities	7,263	-
Accrued bonus and related items	17,529	14,024
Derivative financial instruments	6,848	2,096
Other accrued liabilities	28,690	27,451
Total other current liabilities	60,582	43,810

Lease liabilities are presented in other current liabilities and other non-current liabilities following the implementation of IFRS 16.

22. Equity attributable to Chugai shareholders

Changes in equity attributable to Chugai shareholders in millions of yen

	Share capital	Capital surplus	Retained earnings	Other reserves			Total
				Fair value reserve	Hedging reserve	Translation reserve	
Year ended December 31, 2018							
At January 1, 2018	72,970	64,815	550,974	6,068	281	(3,183)	691,924
Impact of changes in accounting policies	-	-	10,606	-	-	-	10,606
At January 1, 2018 (revised)	72,970	64,815	561,580	6,068	281	(3,183)	702,530
Net income attributable to Chugai shareholders	-	-	92,488	-	-	-	92,488
Financial assets measured at fair value through OCI							
- Equity instruments measured at fair value through OCI	-	-	-	528	-	-	528
- Debt securities at fair value through OCI	-	-	-	1	-	-	1
- Income taxes	-	-	-	(166)	-	-	(166)
Cash flow hedges							
- Effective portion of fair value gains (losses) taken to equity	-	-	-	-	(441)	-	(441)
- Transferred to income statement	-	-	-	-	42	-	42
- Transferred to initial carrying amount of hedged items	-	-	-	-	79	-	79
- Income taxes	-	-	-	-	95	-	95
Currency translation of foreign operations							
- Exchange differences	-	-	-	-	-	(3,158)	(3,158)
- Non-controlling interests	-	-	-	-	-	82	82
Defined benefit plans							
- Remeasurement gains (losses)	-	-	(3,566)	-	-	-	(3,566)
- Income taxes	-	-	1,094	-	-	-	1,094
Other comprehensive income, net of tax	-	-	(2,472)	363	(225)	(3,077)	(5,410)
Total comprehensive income	-	-	90,016	363	(225)	(3,077)	87,078
Dividends	-	-	(35,003)	-	-	-	(35,003)
Equity compensation plans	31	(97)	-	-	-	-	(66)
Own equity instruments	-	1,325	-	-	-	-	1,325
Transfer from other reserves to retained earnings	-	-	1,498	(1,498)	-	-	-
At December 31, 2018	73,000	66,043	618,091	4,933	57	(6,260)	755,864

Changes in equity attributable to Chugai shareholders in millions of yen

	Share capital	Capital surplus	Retained earnings	Other reserves			Total
				Fair value reserve	Hedging reserve	Translation reserve	
Year ended December 31, 2019							
At January 1, 2019	73,000	66,043	618,091	4,933	57	(6,260)	755,864
Net income attributable to Chugai shareholders	-	-	157,560	-	-	-	157,560
Financial assets measured at fair value through OCI							
- Equity instruments measured at fair value through OCI	-	-	-	(554)	-	-	(554)
- Debt securities at fair value through OCI	-	-	-	(24)	-	-	(24)
- Income taxes	-	-	-	306	-	-	306
Cash flow hedges							
- Effective portion of fair value gains (losses) taken to equity	-	-	-	-	(1,482)	-	(1,482)
- Transferred to income statement	-	-	-	-	(2)	-	(2)
- Transferred to initial carrying amount of hedged items	-	-	-	-	(416)	-	(416)
- Income taxes	-	-	-	-	583	-	583
Currency translation of foreign operations							
- Exchange differences	-	-	-	-	-	(1,172)	(1,172)
- Non-controlling interests	-	-	-	-	-	-	-
Defined benefit plans							
- Remeasurement gains (losses)	-	-	487	-	-	-	487
- Income taxes	-	-	(158)	-	-	-	(158)
Other comprehensive income, net of tax	-	-	329	(272)	(1,317)	(1,172)	(2,433)
Total comprehensive income	-	-	157,889	(272)	(1,317)	(1,172)	155,127
Dividends	-	-	(56,373)	-	-	-	(56,373)
Equity compensation plans	16	52	-	-	-	-	68
Own equity instruments	-	941	-	-	-	-	941
Changes in non-controlling interests	-	-	(1,662)	-	-	19	(1,643)
Transfer from other reserves to retained earnings	-	-	4,131	(4,131)	-	-	-
At December 31, 2019	73,016	67,037	722,076	530	(1,260)	(7,413)	853,985

Share capital (Number of shares)

	December 31, 2019	December 31, 2018
Authorized shares	799,805,050	799,805,050
Issued shares (Non-par value common stock)	559,685,889	559,685,889

Dividends

Date of resolution	Type of shares	Total dividends (millions of yen)	Dividend per share (yen)	Record date	Effective date
March 22, 2018 (Resolution of the Annual General Meeting of shareholders)	Common stock	18,044	33	December 31, 2017	March 23, 2018
July 26, 2018 (Board resolution)	Common stock	16,960	31	June 30, 2018	August 31, 2018
March 28, 2019 (Resolution of the Annual General Meeting of shareholders)	Common stock	30,097	55	December 31, 2018	March 29, 2019
July 25, 2019 (Board resolution)	Common stock	26,275	48	June 30, 2019	August 30, 2019
March 30, 2020 (Resolution of the Annual General Meeting of shareholders)	Common stock	50,372	92	December 31, 2019	March 31, 2020

Own equity instruments

	Number of shares	
	2019	2018
At January 1	12,459,413	12,909,947
Issue of common stocks	-	-
Exercises of equity compensation plans	(259,500)	(393,800)
Purchase/Disposal of own equity instruments	5,341	3,566
Grant of restricted stock	(42,900)	(60,300)
At December 31	12,162,354	12,459,413
Book value (millions of yen)	28,506	29,190

Other reserves

Fair value reserve: The fair value reserve represents the cumulative net change in the fair value of financial assets measured at fair value through OCI until the asset is sold, impaired or otherwise disposed of.

Hedging reserve: The hedging reserve represents the effective portion of the cumulative net change in the fair value of cash flow hedging instruments related to hedged transactions that have not yet occurred.

Translation reserve: The translation reserve represents the cumulative currency translation differences relating to the consolidation of foreign subsidiaries of the Group that use functional currencies other than the Japanese yen.

23. Non-controlling interests

Changes in equity attributable to non-controlling interests in millions of yen

	2019	2018
At January 1	664	973
Net income attributable to non-controlling interests	-	591
Currency translation of foreign operations	-	(82)
Other comprehensive income, net of tax	-	(82)
Total comprehensive income	-	509
Changes in non-controlling interests	(664)	-
Dividends to non-controlling shareholders	-	(817)
At December 31	-	664

Chugai sanofi-aventis S.N.C. became a wholly owned subsidiary of Chugai Pharma Europe Ltd. in January 2019. As a result, non-controlling interests decreased by ¥664 million in 2019, reducing the balance to zero.

24. Employee benefits

Employee benefits expense in millions of yen

	2019	2018
Wages and salaries	77,496	74,551
Social security costs	9,201	9,064
Defined contribution plans	992	973
Operating expenses for defined benefit plans	4,369	4,427
Equity compensation plans	309	286
Other employee benefits	9,374	4,235
Employee benefits expense included in operating results	101,742	93,535
Net interest cost of defined benefit plans	88	53
Total employee benefits expense	101,830	93,588

Other employee benefits consist mainly of welfare costs and expenses related to an early retirement incentive program.

25. Post-employment benefits plans

Post-employment benefits plans are classified as “defined contribution plans” if the Group pays fixed contributions into third-party financial institutions and will have no further legal or constructive obligation to pay further contributions. All other plans are classified as “defined benefit plans”, even if Chugai’s potential obligation is relatively minor or has a relatively remote possibility of arising.

Employees are covered by defined contribution and defined benefit plans sponsored by Group companies, most of which are classified as defined benefit plans.

A resolution was passed in the 98th Annual General Meeting of shareholders held in March 2009 to abolish the retirement benefits system for directors. In addition, a resolution was passed in the 95th Annual General Meeting of shareholders held in March 2006 to abolish the retirement benefits system for outside directors and audit & supervisory board members (including outside audit & supervisory board members).

Defined contribution plans

Defined contribution plans are funded through payments by the Group to funds administered by third parties. The Group’s expenses for these plans were ¥992 million (2018: ¥973 million).

Defined benefit plans

The Group has defined benefit plans mainly comprising a corporate pension fund and a lump-sum retirement benefit plan. Under the corporate pension fund, employees can receive a lump-sum payment based on the number of accumulated points received during their years of service. Employees with over a certain period of service can receive part of or all of the payment as certain annuity or life annuity. Under the lump-sum retirement benefit plan, employees can receive a lump-sum payment based on the number of accumulated points received during their years of service. A retirement benefit trust has been established for the lump-sum retirement benefit plan. Certain employees may be entitled to additional special retirement benefits apart from the defined benefit plans based on the conditions under which termination occurs.

The corporate pension fund and retirement benefit plan trust are independent of the Group and are funded only by payments from the Group.

A pension asset management strategy is developed to optimize expected returns and to manage risks through adopting investment strategies from a long-term perspective. For this purpose, the Group focusses on long-term objectives which are not influenced by fluctuations in short-term yields, and maintains a well-diversified portfolio.

The funding status is closely monitored at the corporate level and valuations at the balance sheet date are carried out annually. Although the financial position of the Group's pension fund is assessed to be sound, the Group has introduced risk-based contributions to prepare for risks that may arise in the future.

The defined benefit obligation is calculated using the projected unit credit method. If potential assets arise since defined benefit plans are over-funded, the recognition of pension assets is limited to the present value of any economic benefits available from refunds from the plans or reductions in future contributions to the plan.

Defined benefit plans: income statement in millions of yen

	2019	2018
Current service cost	4,369	4,427
Total operating expenses	4,369	4,427
Net interest cost of defined benefit plans	88	53
Total expense recognized in income statement	4,457	4,479

Defined benefit plans: funding status in millions of yen

	December 31, 2019	December 31, 2018
Fair value of plan assets	88,264	76,157
Defined benefit obligation	(95,359)	(90,829)
Over (under) funding	(7,094)	(14,671)
Defined benefit plan assets	-	-
Defined benefit plan liabilities	(7,094)	(14,671)
Net recognized asset (liability)	(7,094)	(14,671)

Defined benefit plans: fair value of plan assets in millions of yen

	2019	2018
At January 1	76,157	78,516
Interest income on plan assets	525	545
Remeasurements on plan assets	4,453	(2,227)
Currency translation effects	(3)	(8)
Employer contributions	11,223	2,442
Benefits paid – funded plans	(4,092)	(3,112)
At December 31	88,264	76,157
Composition of plan assets		
- Equity securities	13,188	10,640
- Debt securities	54,109	49,035
- Cash and cash equivalents	9,573	7,114
- Other investments	11,394	9,368
Total plan assets	88,264	76,157

Equity securities and debt securities have quoted market prices (Level 1 of fair value hierarchy).

In 2019, a contribution of ¥8,967 million was made, comprising additional contributions to the retirement benefit trust under the lump-sum retirement benefit plan and risk-based contributions to the corporate pension fund under the corporate pension fund plan, in addition to the provision of standard contributions.

Defined benefit plans: present value of defined benefit obligation in millions of yen

	2019	2018
At January 1	90,829	87,809
Current service cost	4,369	4,427
Interest cost	612	597
Remeasurements – demographic assumption	908	991
Remeasurements – financial assumptions	2,701	153
Remeasurements – experience adjustments	359	197
Currency translation effects	(11)	(23)
Benefits paid – funded plans	(4,408)	(3,322)
At December 31	95,359	90,829
Duration in years	15.6	15

Actuarial assumptions

Actuarial assumptions are unbiased and mutually compatible estimates of variables that determine the ultimate cost of providing post-employment benefits. They are set on an annual basis by the responsible departments of the Group based on advice from actuaries. Actuarial assumptions consist of demographic assumptions on matters such as mortality and employee turnover, and financial assumptions on matters such as interest rates.

Demographic assumptions: Demographic assumptions relate to mortality and employee turnover rates. Mortality rates are based on the standard mortality rate stated in the Ordinance for Enforcement of the Defined-Benefit Corporate Pension Act. Rates of employee turnover are based on historical behavior within the Group companies.

Financial assumptions: Discount rates are determined mainly with reference to interest rates on high-quality corporate bonds and reflect the period over which the obligations are to be settled.

	December 31, 2019	December 31, 2018
Discount rates (%)	0.51	0.69

Defined benefit plans: sensitivity of defined benefit obligation to actuarial assumption in millions of yen

The impact resulting from changes of actuarial assumption on the defined benefit obligation is shown in the table below. It is based on the assumption that variables other than the stated assumption used for the calculation are held constant.

	2019
Discount rates	
- 0.25% increase	(3,696)
- 0.25% decrease	3,942
Life expectancy	
- 1 year increase	2,186

Future cash flows

Based on the most recent actuarial valuations, the Group expects that employer contributions for defined benefit plans in 2020, including risk-based contributions, will be approximately ¥4,600 million.

26. Equity compensation plans

The Group operates equity-settled equity compensation plans for directors and certain employees. IFRS 2 “Share-based Payment” requires that the value of share-based payments be estimated based on the fair value at grant date and recorded as an expense over the vesting period. Effective since 2017, for the purpose of further promoting shared value with shareholders and providing an incentive to sustainably increase the Group’s corporate value, strengthening linkage between compensation and mid- to long-term business performance, a restricted stock compensation plan (the “Compensation Plan”) was introduced in place of the existing stock option compensation plans.

Expenses for equity compensation plans in millions of yen

	2019	2018
Cost of sales	1	1
Marketing and distribution	25	29
Research and development	59	60
General and administration	215	192
Total	300	282
Equity-settled plans		
- Chugai common stock options	-	52
- Chugai stock options as stock-based compensation	-	-
- Tenure-based restricted stock	224	158
- Performance-based restricted stock	76	72

Cash inflow from equity compensation plans in millions of yen

	2019	2018
Equity-settled plans		
- Exercises of Chugai common stock options	735	996
- Exercises of Chugai stock options as stock-based compensation	-	0

(1) Stock options

Chugai common stock options

The Group has issued stock acquisition rights to directors and certain employees as common stock options since 2003. Each right entitles the holder to purchase 100 Chugai shares at a specified exercise price. The rights are non-tradable and have an exercise period of around ten years after receiving the rights under the condition of approximately two years of continuous service of the holder after the grant date.

Chugai common stock options – movement in number of rights outstanding

	2019		2018	
	Number of rights	Weighted average exercise price (yen)	Number of rights	Weighted average exercise price (yen)
Outstanding at January 1	7,991	298,489	11,727	288,337
Granted	-	-	-	-
Forfeited	-	-	-	-
Exercised	(2,595)	283,054	(3,736)	266,623
Expired	(10)	169,600	-	-
Outstanding at December 31	5,386	306,166	7,991	298,489
- of which exercisable	5,386	306,166	7,991	298,489

Chugai common stock options – terms of rights outstanding at December 31, 2019

Year of grant	Rights outstanding			Rights exercisable	
	Number outstanding	Weighted average years remaining contractual life	Weighted average exercise price (yen)	Number exercisable	Weighted average exercise price (yen)
2010	76	0.31	188,100	76	188,100
2011	30	1.40	139,700	30	139,700
2012	778	2.31	152,800	778	152,800
2013	764	3.32	250,000	764	250,000
2014	1,065	4.31	267,400	1,065	267,400
2015	1,324	5.31	400,700	1,324	400,700
2016	1,349	6.31	374,600	1,349	374,600
Total	5,386	4.55	306,166	5,386	306,166

Chugai stock options as stock-based compensation

The Group has issued stock acquisition rights to directors as stock options as stock-based compensation since 2009 in lieu of the retirement benefit system for directors which was abolished. Each right entitles the holder to purchase 100 Chugai shares at an exercise price of ¥100. The rights are non-tradable and have an exercise period of 30 years after receiving the rights, which may be vested upon the holder's retirement as a director of Chugai.

Chugai stock options as stock-based compensation – movement in number of rights outstanding

	2019		2018	
	Number of rights	Weighted average exercise price (yen)	Number of rights	Weighted average exercise price (yen)
Outstanding at January 1	3,783	100	3,985	100
Granted	-	-	-	-
Forfeited	-	-	-	-
Exercised	-	-	(202)	100
Expired	-	-	-	-
Outstanding at December 31	3,783	100	3,783	100
- of which exercisable	-	-	-	-

Chugai stock options as stock-based compensation – terms of rights outstanding at December 31, 2019

Year of grant	Rights outstanding			Rights exercisable	
	Number outstanding	Weighted	Weighted	Number exercisable	Weighted
		average years remaining contractual life	average exercise price (yen)		average exercise price (yen)
2009	519	19.31	100	-	-
2010	579	20.31	100	-	-
2011	672	21.40	100	-	-
2012	659	22.31	100	-	-
2013	414	23.32	100	-	-
2014	383	24.31	100	-	-
2015	261	25.31	100	-	-
2016	296	26.31	100	-	-
Total	3,783	22.27	100	-	-

Exercise of stock acquisition rights

	2019		2018	
	Number of rights	Weighted average share price (yen)	Number of rights	Weighted average share price (yen)
Chugai common stock options	2,595	8,006	3,736	6,158
Chugai stock options as stock-based compensation	-	-	202	5,380

(2) Restricted stock compensation plan

Under the Compensation Plan, the restricted stocks to be provided consist of “tenure-based restricted stock” for Eligible Directors, as well as certain employees, which requires continuous service for a certain period for Chugai, and “performance-based restricted stock” for only Eligible Directors which requires the attainment of Chugai’s mid- to long-term business performance target in addition to the aforementioned continuous service. The Eligible Directors and employees, shall make in-kind contribution of all monetary compensation claims or monetary claims to be provided by Chugai according to the Compensation Plan, and shall, in return, receive shares of common stock of Chugai that will be issued or disposed of by Chugai.

For the disposal of shares of common stocks of Chugai under the Compensation Plan, Chugai and each Eligible Directors and employees, shall make an agreement on allotment of restricted stocks including that (1) The Eligible Directors and employees, shall not transfer, create a security interest on, or otherwise dispose of the allotted shares during a certain restriction period, and (2) Chugai shall take back all or part of the allotted shares without cost in case where certain events happen.

Number of shares allotted and fair value at the grant date by year

Year		Tenure-based restricted stock	Performance-based restricted stock
2017	Number of shares allotted	74,900 shares	48,100 shares
	Fair value at the grant date	3,820 yen	2,910 yen
2018	Number of shares allotted	40,600 shares	19,700 shares
	Fair value at the grant date	5,400 yen	*3,859 yen
2019	Number of shares allotted	29,500 shares	13,400 shares
	Fair value at the grant date	7,700 yen	5,305 yen

*Revised from ¥5,788 to ¥3,859 from 2019

The impact of the aforementioned revision for 2018 was insignificant, and therefore the revised amount has been reflected in the consolidated financial statements for 2019.

Overview of the Compensation Plan

	Tenure-based restricted stock	Performance-based restricted stock
Evaluation method	Market price	Monte Carlo simulation
Allottees	Directors of Chugai Employees of Chugai Directors of Chugai's subsidiaries Employees of Chugai's subsidiaries	Directors of Chugai
Settlement method	Equity settlement	
Transfer restriction period	3 years	
Conditions for releasing transfer restriction	On the condition that the Eligible Directors, vice presidents and employees maintain their positions continuously during the transfer restriction period, Chugai shall release the transfer restriction for all of the allotted shares at the expiration of the transfer restriction period.	On the condition that the Eligible Directors maintain their positions continuously during the transfer restriction period, Chugai shall release the transfer restriction for the number of allotted shares, which is calculated by multiplying the number of shares that the Eligible Directors obtain at the expiration of the transfer restriction period by the release rate that is determined by the growth rate on the three-year (the "Evaluation Period") Total Shareholders Return (TSR) for a peer group as a performance goal decided by the Board of Directors in advance. The release rate is applied against the number of shares that is provided at the beginning of the restriction period by multiplying the maximum coefficient of 150%, ranging from 0% to 150% separately set by Chugai's Board, and is set from 0% to 100%.

The TSR calculation formula is as follows:

$$TSR = \frac{\text{Increase in the stock price during the Evaluation Period (B-A)} + \text{Dividends during the Evaluation Period}}{\text{Initial stock price (A)}}$$

A: Initial stock price (Average closing price for the three months prior to the start of the Evaluation Period)

B: Final stock price (Average closing price for the three months prior to the end of the Evaluation Period)

27. Earnings per share

Basic earnings per share

	2019	2018
Net income attributable to Chugai shareholders (millions of yen)	157,560	92,488
Weighted average number of common stock	559,685,889	559,685,889
Weighted average number of own equity instruments	(12,305,837)	(12,662,197)
Weighted average number of shares in issue	547,380,052	547,023,692
Basic earnings per share (yen)	287.84	169.08

Diluted earnings per share

	2019	2018
Net income attributable to Chugai shareholders (millions of yen)	157,560	92,488
Weighted average number of shares in issue	547,380,052	547,023,692
Adjustment for assumed exercise of equity compensation plans, where dilutive	790,042	892,227
Weighted average number of shares in issue used to calculate diluted earnings per share	548,170,094	547,915,919
Diluted earnings per share (yen)	287.43	168.80

There were no rights in equity compensation plans, which are anti-dilutive, and therefore excluded from the calculation of diluted earnings per share (2018: none).

28. Statement of cash flows

Cash flows from operating activities

Cash flows from operating activities arise from the Group's primary activities including research and development, manufacturing and sales in the Pharmaceuticals business. These are calculated by the indirect method by adjusting the Group's operating profit for any operating income and expenses that are not cash flows (for example depreciation, amortization and impairment) in order to derive the cash generated from operations. Operating cash flows also include income taxes paid on all activities.

Cash generated from operations in millions of yen

	2019	2018
Net income	157,560	93,079
Financing costs	125	111
Other financial income (expense)	(545)	(449)
Other expense	3,124	3,212
Income taxes	50,333	28,370
Operating profit	210,597	124,323
Depreciation of property, plant and equipment	17,778	14,590
Depreciation of right-of-use assets	6,031	-
Amortization of intangible assets	2,592	1,988
Impairment of property, plant and equipment	1,252	59
Impairment of intangible assets	2,664	4,844
Operating expense for defined benefit plans	4,369	4,427
Operating expense for equity-settled equity compensation plans	300	282
Net (income) expense for provisions	287	-
Inventory write-downs	1,053	1,051
Other adjustments	2,577	294
Cash generated from operations	249,500	151,857

Cash flows from investing activities

Cash flows from investing activities are principally those arising from the Group's investments in property, plant and equipment and intangible assets. Cash flows connected with the Group's portfolio of marketable securities and other investments are also included, as are any interest and dividend payments received in respect of these securities and investments.

Interest and dividends received in millions of yen

	2019	2018
Interest received	106	85
Dividends received	91	115
Total	197	200

Cash flows from financing activities

Cash flows from financing activities are primarily dividend payments to Chugai shareholders and lease liabilities paid.

Significant non-cash transactions

There were no significant non-cash transactions (2018: none).

29. Risk management

(1) Financial risk management

The Group is exposed to various financial risks arising from its underlying operations and corporate finance activities. The Group's financial risk exposures are predominantly related to changes in foreign exchange rates, interest rates and equity prices as well as the creditworthiness and the solvency of the Group's counterparties.

Financial risk management within the Group is governed by policies approved by the Board of Directors of Chugai. These policies cover credit risk, liquidity risk and market risk. The policies provide guidance on risk limits, type of authorized financial instruments and monitoring procedures. Policy implementation and day-to-day risk management are carried out by the relevant functions and regular reporting on these risks is performed by the relevant finance & accounting and controlling functions within Chugai.

1) Credit risk

Accounts receivable are exposed to customer credit risk. The main accounts receivable are trade receivables. The management of trade receivables is focused on the assessment of country risk, setting of credit limits, ongoing credit evaluation and account monitoring procedures. As part of the credit risk management, sales administration departments regularly monitor the financial position of major customers by checking payment term and balances of trade receivables for each customer according to the accounting manuals to ensure early identification and mitigation of overdue balances and potential bad debts associated with the deterioration of customers' financial position.

The objective of the management of trade receivables is to sustain the growth and profitability of the Group by optimizing asset utilization while maintaining risks at an acceptable level. The Group obtains credit insurance and similar enhancements when appropriate to protect the collection of trade receivables. No material collateral was held for trade receivables (2018: none).

Of the Group's accounts receivable, trade receivables from third parties are mainly to Japanese customers, of which major customers account for 66% as of December 31, 2019.

Trade receivables: major customers in millions of yen

	December 31, 2019	December 31, 2018
Alfresa Corporation	22,070	32,483
Suzuken Co., Ltd.	21,346	19,998
Mediceo Corporation	14,806	22,585
Toho Pharmaceutical Co., Ltd.	11,816	13,171
Total	70,038	88,237

Customer credit risk exposure based on accounts receivable days overdue that are within the scope of IFRS 15 in millions of yen

	Current	Overdue 1-3 months	Overdue 4-12 months	Overdue more than 1 year	Credit impaired	Total
At December 31, 2019						
Gross carrying amount	170,474	360	4	-	-	170,838
- Expected credit loss rate (%)	0	0	5	-	-	0
Allowance for doubtful accounts	(10)	(0)	(0)	-	-	(10)
At December 31, 2018						
Gross carrying amount	162,742	137	-	0	-	162,879
- Expected credit loss rate (%)	0	0	-	100	-	0
Allowance for doubtful accounts	(7)	(0)	-	(0)	-	(7)

The expected credit loss ('ECL') rate is based on the Group's historical experience and the Group's expectation of economic conditions over the period until receivables are expected to be paid.

Derivative transactions and money market instruments are restricted to financial institutions with high credit ratings in an effort to mitigate the counterparty risks.

The maximum exposure to credit risk resulting from financial activities, without taking into account any collateral held or other credit enhancements, is equal to the carrying value of the Group's financial assets.

Financial assets with credit risks (excluding accounts receivables that result from transactions that are within the scope of IFRS 15)

Cash and cash equivalents are held with banks and financial institutions, which are predominantly rated investment grade, based on Moody's and S&P Ratings. Cash and short-term time deposits are subject to rules which limit the Group's exposure to individual financial institutions.

Investments in marketable securities (excluding equity securities) are entered into on the basis of guidelines with regard to liquidity, quality and maximum amount. As a general rule, the Group invests only in high-quality securities with adequate liquidity and with counterparties that have a credit rating of at least Baa3 from Moody's and BBB- from S&P.

Credit risk on accounts receivables that result from transactions that are not within the scope of IFRS 15 are managed based on data obtained from external sources and historical experience.

The credit risk of the counterparties with external ratings below investment grade or non-rated is closely monitored and reviewed on an individual basis.

Rating analysis (excluding accounts receivables that result from transactions that are within the scope of IFRS 15) in millions of yen

	2019		
	Total	Fair value through OCI (12-month ECL)	Amortized costs (12-month ECL)
AAA~BBB- range	340,196	127,991	212,205
Total investment grade	340,196	127,991	212,205
Below BBB- range (below investment grade)	754	754	-
Unrated	1,595	-	1,595
Total gross carrying amounts	342,545	128,745	213,800
Loss allowance	-	-	-
	2018		
	Total	Fair value through OCI (12-month ECL)	Amortized costs (12-month ECL)
AAA~BBB- range	263,010	102,001	161,009
Total investment grade	263,010	102,001	161,009
Below BBB- range (below investment grade)	-	-	-
Unrated	3,067	-	3,067
Total gross carrying amounts	266,076	102,001	164,076
Loss allowance	-	-	-

Financial assets measured at amortized cost and those at fair value through OCI (excluding equity securities) are investment grade and therefore considered to be low risk, and thus the impairment allowance is determined at 12 months expected credit losses ('ECL') with a reference to external credit ratings of the counterparties. There were no financial assets for which the Group observed a significant increase in the credit risk which would require the application of the lifetime expected credit losses impairment model. There was no material impact resulting from the revised impairment approach under IFRS 9. In addition, there were no material movements in the loss allowance in 2019.

2) Liquidity risk

Liquidity risk arises through a surplus of financial obligations over available financial assets due at any point in time. The Group's approach to liquidity risk is to maintain sufficient readily available reserves in order to meet its liquidity requirements at any point in time. The Group manages liquidity risks based on a cash management plan prepared and updated as appropriate by finance and accounting departments based on the reporting from each department.

Chugai is rated as highly creditable by more than one major credit rating agency. The ratings will permit efficient access to the international capital markets in the event of major financing requirements.

Contractual maturities of financial liabilities in millions of yen

	Total	0-3 months	4-6 months	7-12 months	Over 1 year
At December 31, 2019					
Accounts payable	77,635	71,228	6,371	33	3
Other current liabilities					
- Derivative financial instruments*	6,848	598	1,461	3,038	1,751
Total financial liabilities	84,483	71,826	7,832	3,071	1,754
At December 31, 2018					
Accounts payable	71,706	68,178	3,340	28	160
Other current liabilities					
- Derivative financial instruments*	2,096	531	302	890	372
Total financial liabilities	73,802	68,709	3,642	919	532

*Derivative financial instruments are held for risk management purposes and for which there is no intention to cancel before the maturity date.

The maturity analysis of lease liabilities is shown in Note 8.

3) Market risk

Market risk arises from changing market prices, mainly due to foreign exchange rates and interest rates, of the Group's financial assets or financial liabilities which affect the Group's net income and equity.

Foreign exchange risk: Accounts receivable and accounts payable denominated in foreign currencies are exposed to foreign exchange risk. The objective of the Group's foreign exchange risk management activities is to preserve the economic value of its current and future assets and to minimize the volatility of the Group's financial result. The Group enters into derivative transactions such as foreign exchange forward contracts to reduce the risk of foreign currency exchange fluctuations related to both assets and liabilities denominated in foreign currencies. Some of these transactions qualify as cash flow hedges at the point that the forecast transaction is expected.

When making use of derivatives for hedging foreign exchange risk on assets and liabilities denominated in foreign currencies, Chugai conducts such operations in accordance with its internal regulations and monthly reports are prepared on the balance of such transactions, valuation gains and losses, and other related matters at fair value. Consolidated subsidiaries do not utilize derivative transactions.

Sensitivity analysis: Chugai has financial instruments denominated in currencies other than its functional currency. The table below shows the impact on profit before taxes resulting from a 1% decrease of the Swiss franc, euro and US dollar against the Japanese yen, which is Chugai's functional currency. The effective portion of derivative financial instruments for which hedge accounting is applied is excluded from the calculation. All calculations are based on the assumption that exchange rates for other currencies are constant and there are no changes in other variables such as interest rates.

Foreign currency sensitivity analysis

	2019	2018
Year-end exchange rate (yen per each currency)		
CHF	112.31	112.03
EUR	121.93	126.13
USD	108.88	110.28
Profit before taxes (millions of yen)		
CHF	1,191	12
EUR	22	32
USD	(462)	(289)

(Note) Positive numbers are the amount of positive impact on profit before taxes resulting from a 1% decrease of each currency against the Japanese yen. The amounts above do not reflect the impact on Chugai's cash flows or forecast result.

The impact resulting from a 1% decrease of each currency against the Japanese yen on the financial instruments denominated in foreign currency is shown in the tables below.

	2019			2018		
	Exposure (m CHF)	Exposure (m YEN)	Impact (m YEN)	Exposure (m CHF)	Exposure (m YEN)	Impact (m YEN)
CHF						
Accounts receivable	567	63,706	(637)	324	36,278	(363)
Accounts payable	(386)	(43,346)	433	(344)	(38,513)	385
Financial non-current assets	-	-	-	-	-	-
Cash and cash equivalents	14	1,614	(16)	15	1,667	(17)
Notional amounts of derivative financial instruments						
- Effective portion of hedge	(1,277)	(141,057)	1,411	(5)	(637)	6
- Other than above	-	-	-	-	-	-
Total	(1,081)	(119,083)	1,191	(10)	(1,204)	12
	Exposure (m EUR)	Exposure (m YEN)	Impact (m YEN)	Exposure (m EUR)	Exposure (m YEN)	Impact (m YEN)
EUR						
Accounts receivable	86	1,239	(12)	2	265	(3)
Accounts payable	(28)	(3,470)	35	(27)	(3,435)	34
Financial non-current assets	-	-	-	-	-	-
Cash and cash equivalents	-	-	-	-	-	-
Notional amounts of derivative financial instruments						
- Effective portion of hedge	-	-	-	-	-	-
- Other than above	-	-	-	-	-	-
Total	58	(2,230)	22	(25)	(3,170)	32
	Exposure (m USD)	Exposure (m YEN)	Impact (m YEN)	Exposure (m USD)	Exposure (m YEN)	Impact (m YEN)
USD						
Accounts receivable	11	1,210	(12)	35	3,850	(38)
Accounts payable	(73)	(7,984)	80	(100)	(11,034)	110
Financial non-current assets	-	-	-	-	-	-
Cash and cash equivalents	-	-	-	-	-	-
Notional amounts of derivative financial instruments						
- Effective portion of hedge	499	52,942	(529)	333	36,061	(361)
- Other than above	-	-	-	-	-	-
Total	437	46,168	(462)	267	28,877	(289)

Interest rate risk: There were no debt and loans at December 31, 2019 and given the nature of leases and the current low interest rate environment, the Group is not exposed to material interest rate risk.

(2) Financial instruments

Carrying value and fair value of financial instruments

The Group's financial instruments are mainly comprised of financial non-current assets, debt instruments included in other non-current assets, accounts receivable, marketable securities, cash and cash equivalents, derivative financial instruments included in other current assets, accounts payable, derivative financial instruments included in other current liabilities, debt and lease liabilities included in other non-current liabilities and other current liabilities. The carrying values of these financial instruments are equal to or reasonable approximates of fair values. Disclosure of the fair value of lease liabilities are not required.

Accounting classifications and fair values in millions of yen

	Financial assets measured at fair value through OCI	Fair value -hedging instruments	Fair value through profit or loss	Financial assets at amortized cost	Financial liabilities at amortized cost	Total
At December 31, 2019						
Non-current financial assets						
- Equity instrument	2,958	-	-	-	-	2,958
Other non-current assets						
- Debt instrument	-	-	113	-	-	113
Accounts receivable	-	-	-	181,641	-	181,641
Marketable securities						
- Debt instrument	8,751	-	-	-	-	8,751
- Money market instruments	119,994	-	-	-	-	119,994
- Time accounts over 3 months	-	-	-	373	-	373
Cash and cash equivalents	-	-	-	203,941	-	203,941
Other current assets						
- Derivative financial instruments	-	5,052	-	-	-	5,052
Total financial assets	131,703	5,052	113	385,954	-	522,821
Accounts payable	-	-	-	-	77,635	77,635
Other current liabilities						
- Derivative financial instruments	-	6,848	-	-	-	6,848
Total financial liabilities	-	6,848	-	-	77,635	84,483

	Financial assets measured at fair value through OCI	Fair value -hedging instruments	Fair value through profit or loss	Financial assets at amortized cost	Financial liabilities at amortized cost	Total
At December 31, 2018						
Non-current financial assets						
- Equity instrument	9,723	-	-	-	-	9,723
Other non-current assets						
- Debt instrument	-	-	-	-	-	-
Accounts receivable	-	-	-	179,556	-	179,556
Marketable securities						
- Debt instrument	8,001	-	-	-	-	8,001
- Money market instruments	94,000	-	-	-	-	94,000
- Time accounts over 3 months	-	-	-	532	-	532
Cash and cash equivalents	-	-	-	146,860	-	146,860
Other current assets						
- Derivative financial instruments	-	2,204	-	-	-	2,204
Total financial assets	111,724	2,204	-	326,948	-	440,876
Accounts payable	-	-	-	-	71,706	71,706
Other current liabilities						
- Derivative financial instruments	-	2,096	-	-	-	2,096
Total financial liabilities	-	2,096	-	-	71,706	73,801

Fair value hierarchy

The table below analyses financial instruments carried at fair value, by valuation method. The different levels have been defined as follows:

- Level 1 – quoted prices (unadjusted) in active markets for identical assets and liabilities.
- Level 2 – observable inputs directly or indirectly other than quoted prices in active markets for identical assets and liabilities.
- Level 3 – fair value determined using valuation method which includes unobservable inputs.

Fair value hierarchy of financial instruments in millions of yen

	Level 1	Level 2	Level 3	Total
At December 31, 2019				
Marketable securities:				
- Money market instruments	-	119,994	-	119,994
- Debt securities	8,751	-	-	8,751
Other current assets				
- Derivative financial instruments	-	5,052	-	5,052
Financial non-current assets				
- Equity instruments measured at fair value through OCI	878	-	2,080	2,958
Other non-current assets				
- Debt instrument	-	-	113	113
Financial assets recognized at fair value	9,629	125,045	2,192	136,867
Other current liabilities				
- Derivative financial instruments	-	(6,848)	-	(6,848)
Financial liabilities recognized at fair value	-	(6,848)	-	(6,848)
	Level 1	Level 2	Level 3	Total
At December 31, 2018				
Marketable securities:				
- Money market instruments and time accounts over 3 months	-	94,000	-	94,000
- Debt securities	8,001	-	-	8,001
Other current assets				
- Derivative financial instruments	-	2,204	-	2,204
Financial non-current assets				
- Available-for-sale financial assets	7,330	-	2,394	9,723
Financial assets recognized at fair value	15,331	96,204	2,394	113,928
Other current liabilities				
- Derivative financial instruments	-	(2,096)	-	(2,096)
Financial liabilities recognized at fair value	-	(2,096)	-	(2,096)

Level 1 financial assets consist of corporate bonds and quoted shares. Level 2 financial assets consist primarily of certificates of deposit, cash in trust, commercial paper and derivative financial instruments.

Fair values Level 2 financial assets are determined as follows:

- Marketable securities and derivative financial instruments are based on valuation models that use observable market data for interest rates, yield curves, foreign exchange rates and implied volatilities for similar instruments at the measurement date.

The Group recognizes transfers between levels of the fair value hierarchy as of the end of the reporting period during which the transfer has occurred. There were no significant transfers between Level 1 and Level 2 and vice versa.

Level 3 financial assets mainly consist of unquoted shares. Valuation is based on valuation method which includes unobservable inputs.

Reconciliation of financial instruments classified into level 3 in millions of yen

	Fair value through other		Total
	comprehensive income	Fair value through profit or loss	
At January 1, 2018	1,616	-	1,616
Gains or losses	72	-	72
Purchases	706	-	706
Disposals	-	-	-
Transfers	-	-	-
Currency translation effects	(1)	-	(1)
At December 31, 2018	2,394	-	2,394
At January 1, 2019	2,394	-	2,394
Gains or losses	(8)	-	(8)
Purchases	100	113	213
Disposals	(406)	-	(406)
Transfers	-	-	-
Currency translation effects	-	-	-
At December 31, 2019	2,080	113	2,192

Derecognition of FVTOCI equity investments

The fair value at the date of derecognition, cumulative gain or loss on disposal, and dividends recognized related to investments derecognized as a result of disposal of FVTOCI equity investments during the year, are as follows;

	December 31, 2019	December 31, 2018
Fair value at the date of derecognition	7,111	2,863
Cumulative gain or loss	5,748	2,163
Dividends	88	-

These are mainly stock divestments as a result of examination by the Board of Directors, the suitability of shareholding by assessing matters such as whether the purpose is appropriate, the capital efficiency in relation to the shareholding, and the rationale of the relevant transactions.

The cumulative gain or loss on disposal is before tax effect, and amounts transferred from other reserves to retained earnings is ¥4,131 million (2018: ¥1,498 million).

(3) Derivative financial instruments**Derivative financial instruments in millions of yen**

Assets	December 31, 2019	December 31, 2018
Forward exchange contracts	5,052	2,204
Total	5,052	2,204
Liabilities	December 31, 2019	December 31, 2018
Forward exchange contracts	(6,848)	(2,096)
Total	(6,848)	(2,096)

Hedge accounting

Hedge effectiveness is determined at the inception of the hedge relationship, and through periodic prospective effectiveness assessments at each reporting date to ensure that an economic relationship exists between the hedged item and hedging instrument. The Group performs a qualitative assessment of the hedge effectiveness, and the Group concludes that risks being hedged for the hedged items and the hedging instruments are sufficiently aligned.

The Group manages foreign exchange rate fluctuation risks by applying cash flow hedge, and an ineffective portion may occur when the volume of hedged items is lower than the hedged amount. The ineffective portion of the hedge accounting is recognized in the income statement and included in other financial income (expense). It is measured using the hypothetical derivative method for cash flow hedges. In 2019 there were no actual ineffectiveness being reported for any hedge accounting relationships, or hedging relationships for which hedge accounting is no longer applied (2018: None).

The table below shows fair values and nominal amounts of derivative financial instruments, including a range of the timing of the nominal amounts of the hedging instruments, which are designated as hedging instruments in a cash flow hedge. At December 31, 2019, the Group has the following cash flow hedges which are designated in a qualifying hedge relationship.

Cash flow hedges

	Nominal amount	Fair value in million yen		Maturity range
		Asset	Liability	
Risk hedged:				
Foreign exchange rate fluctuations				
- Forward exchange contracts	CHF 3,890 million	3,885	(6,848)	2020-2021
	USD 499 million	1,166	-	2020-2021
Total		5,052	(6,848)	

The Group is exposed to foreign exchange risk from transactions for inventories and others in foreign currencies with foreign related parties. The Group has entered into foreign exchange forward contracts to hedge a part of foreign exchange risk. Such instruments are recorded as fair value assets of ¥(1,796) million (2018: fair value assets of ¥109 million).

Reconciliation of hedging reserves in equity in millions of yen

	Forward exchange contracts
At January 1, 2019	57
Effective portion of fair value gains (losses) taken to equity	(1,482)
Transferred to income statement	(2)
Transferred to initial carrying amount of hedged items	(416)
Income taxes	583
At December 31, 2019	(1,317)

The present value of expected cash flows from qualifying cash flow hedges is shown in the table below.

Present value of expected cash flows of qualifying cash flow hedges in millions of yen

	Total	0-6	7-12	Over 1
		months	months	Year
Year ended December 31, 2019				
Cash inflows	486,322	179,436	212,439	94,447
Cash outflows	(488,118)	(179,359)	(213,291)	(95,468)
Total cash inflow (outflow)	(1,796)	77	(852)	(1,021)
Year ended December 31, 2018				
Cash inflows	275,004	102,316	119,583	53,105
Cash outflows	(274,895)	(102,221)	(119,610)	(53,065)
Total cash inflow (outflow)	109	95	(27)	41

(4) Capital management

The Group defines the capital that it manages as the Group's total capitalization, being the equity including non-controlling interests. The Group's objectives when managing capital are:

- To safeguard the Group's ability to continue as a going concern, so that it can continue to provide benefits for patients and returns to investors.
- To provide an adequate return to investors based on the level of risk undertaken.
- To have available the necessary financial resources to allow the Group to invest in areas that may deliver future benefits for patients and returns to investors.
- To maintain sufficient financial resources to mitigate against risks and unforeseen events.

Capitalization is monitored and reported to the CFO as part of the Group's regular internal management reporting.

The Group is not subject to regulatory capital adequacy requirements.

Capital in millions of yen

	December 31, 2019	December 31, 2018
Capital and reserves attributable to Chugai shareholders	853,985	755,864
Equity attributable to non-controlling interests	-	664
Capitalization	853,985	756,529

30. Related parties

(1) Controlling shareholder

Effective October 1, 2002, the Roche Group and Chugai completed an alliance to create a leading research-driven Japanese pharmaceutical company, which was formed by the merger of Chugai and Roche's Japanese pharmaceuticals subsidiary, Nippon Roche. Through the merger, Chugai became a member of the Roche Group as the surviving company.

Chugai has entered into certain agreements with Roche, which are discussed below:

Basic Alliance Agreement: As part of the Basic Alliance Agreement signed in December 2001, Roche and Chugai entered into certain arrangements covering the future operation and governance of Chugai. Amongst other matters these cover the following areas:

- The structuring of the alliance.
- Roche's rights as a shareholder.
- Roche's rights to nominate members of Chugai's Board of Directors.
- Certain limitations to Roche's ability to buy or sell Chugai's common stock.

Chugai issues additional shares of common stock in connection with its convertible debt and equity compensation plans, and may issue additional shares for other purposes, which affects Roche's percentage ownership interest. The Basic Alliance Agreement provides, amongst other matters, that Chugai will guarantee Roche's right to maintain its shareholding percentage in Chugai at not less than 50.1%.

Licensing Agreements: Under the Japan Umbrella Rights Agreement signed in December 2001, Chugai has exclusive rights to market Roche's pharmaceutical products in Japan. Chugai also has right of first refusal on the development and marketing in Japan of all development compounds advanced by Roche.

The Rest of the World Umbrella Rights Agreement (excluding Japan and South Korea) signed in May 2002 was revised and the Amended and Restated Rest of the World Umbrella Rights Agreement (excluding Japan, South Korea and Taiwan) was signed in August 2014. Under this Agreement, Roche has the right of first refusal on the development and marketing of Chugai's development compounds in markets outside Japan, excluding South Korea and Taiwan.

Further to these agreements, Roche and Chugai have signed a series of separate agreements for certain specific products. Depending on the specific circumstances and the terms of the agreement, this may result in payments on an arm's length basis between Roche and Chugai, for any or all of the following matters:

- Upfront payments, if a right of first refusal to license a product is exercised.
- Milestone payments, dependent upon the achievement of agreed performance targets.
- Royalties on future product sales.

These specific product agreements may also cover the manufacture and supply etc. of the respective products to meet the other party's clinical and/or commercial requirements on an arm's length basis.

Research Collaboration Agreements: Roche and Chugai have entered into research collaboration agreements in the areas of small-molecule synthetic drug research and biotechnology-based drug discovery.

Dividends: The dividends distributed to Roche by Chugai in respect to its holdings of Chugai shares totaled ¥34,528 million (2018: ¥21,454 million).

(2) Material transactions and balances with related parties**Transactions with F. Hoffmann-La Roche** in millions of yen

	2019	2018
Revenues	217,265	134,188
Purchases	145,336	125,657

From the year ended December 31, 2019, revenues include royalties and other operating income in addition to sales due to the increased significance of royalties and other operating income.

Balances with F. Hoffmann-La Roche in millions of yen

	December 31, 2019	December 31, 2018
Accounts receivable	69,152	46,078
Trade accounts payable	38,006	29,567

From December 31, 2019, accounts receivable also includes other receivables due to the increased significance of other receivables.

(3) Remuneration of key management personnel**Remuneration of members of the Board and audit & supervisory board members** in millions of yen

	2019	2018
Board of directors		
- Regular remuneration	298	304
- Bonuses	120	120
- Tenure-based restricted stock compensation plan	86	57
- Performance-based restricted stock compensation plan	76	72
- Chugai common stock options	—	21
Total	580	573
Audit & supervisory board members		
- Regular remuneration	96	87
Total	96	87

31. Subsidiaries

Subsidiaries	Country of incorporation	Equity interest %	
		2019	2018
Consolidated subsidiaries			
Chugai Research Institute for Medical Science, Inc.	Japan	100	100 %
Chugai Clinical Research Center Co., Ltd.	Japan	100	100 %
Chugai Business Support Co., Ltd.	Japan	100	100 %
Medical Culture, Inc.	Japan	100	100 %
Chugai Distribution Co., Ltd.	Japan	100	100 %
Chugai Pharma Manufacturing Co., Ltd.	Japan	100	100 %
Forerunner Pharma Research Co., Ltd.	Japan	100	100 %
Chugai Pharma USA, Inc.	United States	100	100 %
Chugai Pharma Europe Ltd.	United Kingdom	100	100 %
Chugai Pharma U.K. Ltd.	United Kingdom	100	100 %
Chugai Pharma Germany GmbH	Germany	100	-
Chugai Pharma France S.A.S.	France	100	100 %
Chugai Pharma Europe Logistics S.A.S.	France	100	55 %
Chugai Pharma Taiwan Ltd.	Taiwan	100	100 %
Chugai Pharma Science (Beijing) Co., Ltd.	China	100	100 %
Chugai Pharma China Co., Ltd.	China	100	100 %
Chugai Pharma Technology Taizhou Co., Ltd.	China	100	100 %
Chugai Pharmabody Research Pte. Ltd.	Singapore	100	100 %

(Note) Chugai sanofi-aventis S.N.C. became a wholly owned subsidiary of Chugai Pharma Europe Ltd., through the additional acquisition of its shares in January 2019, and changed its name to Chugai Pharma Europe Logistics S.A.S. In addition, Chugai Pharma Germany GmbH was established as a subsidiary of Chugai Pharma Europe Ltd. in February 2019.

32. Subsequent events

At the meeting of the Board of Directors held on January 21, 2020, a stock split and partial amendment to the articles of incorporation was resolved.

a. Purpose of the stock split

The stock split aims to reduce the investment unit price for the Company's stock, increase the liquidity of the stocks, and to further expand the investor base.

b. Outline of the stock split

(a) Method

Fixing Tuesday, June 30, 2020 as a record date, the Company will split its ordinary shares owned by shareholders listed or recorded in the shareholder registry three-for-one.

(b) Number of shares to be increased by the stock split

(i) Total number of shares issued before the stock split	559,685,889
(ii) Increase in the number of shares upon the stock split	1,119,371,778
(iii) Total number of shares issued after the stock split	1,679,057,667
(iv) Total number of shares issuable after the stock split	2,399,415,150

(c) Schedule

(i) Announcement of record date	Monday, June 15, 2020
(ii) Record date	Tuesday, June 30, 2020
(iii) Effective date	Wednesday, July 1, 2020

c. Effect of these changes on per share information

Per-share information calculated as if this stock split had taken place at the beginning of the year ended December 31, 2018 is as follows:

	2019	2018
Basic earnings per share (yen)	95.95	56.36
Diluted earnings per share (yen)	95.81	56.27

d. Partial amendment to the articles of incorporation**(a) Reasons for the amendment**

In line with the stock split, pursuant to the Article 184.2 of the Companies Act of Japan, the Company will amend as of Wednesday, July 1, 2020, the total number of shares issuable set by Article 6 in the Articles of Incorporation of the Company.

(b) Details of the amendment

Details are as follows.

Before the amendment	After the amendment
Article 6. (Total Number of Shares Issuable) The total number of shares issuable of the Company shall be <u>799,805,050</u> shares.	Article 6. (Total Number of Shares Issuable) The total number of shares issuable of the Company shall be <u>2,399,415,150</u> shares.

(c) Schedule

Effective date of the amendment to the articles of incorporation: Wednesday, July 1, 2020

e. Others**(a) Change in the amount of stated capital**

The stock split will not change the amount of stated capital.

Additional information

This additional information is provided for the benefit of readers and does not form part of the consolidated financial statements.

1. Significant legal cases

At December 31, 2019, the Group is involved in the following significant legal cases for which the outcome cannot be determined at this time, but for which the Group assesses that the possibility of any settlement to be remote:

(1) Arbitration in England regarding Actemra

In May 2017 Medical Research Council and LifeArc (formerly Medical Research Council Technology) requested arbitration against Chugai Pharmaceutical Co., Ltd. ('Chugai') with an arbitrator being appointed on 9 August 2017. In April 2018 United Kingdom Research and Innovation ('UKRI') was established and became the successor in title to the Medical Research Council, and the final claimants in the arbitration were LifeArc and UKRI (collectively, the 'Claimants'). Sums were sought from Chugai for alleged breach of obligations under a collaboration agreement dated 15 August 1990 in connection with the development of the humanized anti-human IL-6 receptor monoclonal antibody Actemra/ RoActemra. It was claimed that Chugai is obliged to pay royalties to the Claimants pursuant to the collaboration agreement. In January 2020 Chugai executed a formal settlement agreement with the Claimants to end this arbitration. Under the settlement agreement Chugai made a lump-sum payment to the Claimants as a sole settlement payment. The terms and conditions of this settlement agreement, including the amount of the settlement payment, are confidential. The matter is now concluded.

(2) Patent infringement lawsuit (in Japan) regarding Emicizumab

Baxalta (Baxalta Incorporated and Baxalta GmbH) filed a lawsuit against Chugai at the Tokyo District Court on May 6, 2016 (service of the complaint), for an injunction against manufacture, usage, transfer, exportation and offer of any transfer regarding emicizumab (development code name: ACE910) alleging emicizumab is infringing one of its Japanese patents (patent number 4313531). With regard to this action, the Tokyo District Court rendered a decision in favor of Chugai's claim. Given this ruling, Baxalta appealed to the Intellectual Property High Court on May 10, 2018 (service of appeal) and a decision in favour of Chugai's claim was rendered by the High Court on October 3, 2019. Baxalta has filed a petition for the acceptance of a final appeal to the Supreme Court.

(3) Patent infringement lawsuit (in US) regarding Emicizumab

Baxalta (Baxalta Incorporated and Baxalta GmbH) filed a lawsuit against Chugai and Genentech Inc., at the United States District Court for the District of Delaware on May 4, 2017 (the date of the complaint) requesting a relief including an injunction enjoining manufacturing, using, offering to sell, or selling emicizumab within the United States, or importing emicizumab into the United States. Baxalta filed a stipulation of dismissal with prejudice regarding Baxalta's claims against Chugai with the Court on September 13, 2018, and the Court issued an Order Dismissing Chugai from this lawsuit on September 19, 2018 (local time). The Court also entered a judgment in favour of Genentech on February 1, 2019. Given this, Baxalta appealed to the United States Court of Appeals for the Federal Circuit on February 8, 2019.

(4) A patent infringement lawsuit (in US) against Alexion

Chugai alleges that the anti-C5 antibody ALXN1210 (ravulizumab) product, an investigational drug developed by Alexion Pharmaceuticals, Inc., infringes one of its U.S. patents (U.S. Patent No. 9,890,377) relating to its proprietary antibody engineering technology. Thus, Chugai filed a patent infringement lawsuit against Alexion at the United States District Court for the District of Delaware on November 15, 2018 (the date of the complaint) requesting a judgment that the ALXN1210 product infringes Chugai's U.S. patent and injunctive relief precluding manufacturing and selling of the ALXN1210 product within the U.S. Chugai filed another patent infringement lawsuit against Alexion at the United States District Court for the District of Delaware on November 12, 2019 (the date of the complaint) requesting a judgment that the ALXN1210 product infringes Chugai's U.S. patent (U.S. Patent No. 10,472,623) and injunctive relief precluding manufacturing and selling of the ALXN1210 product within the U.S.

(5) A patent infringement lawsuit (in Japan) against Alexion

Chugai alleges that the anti-C5 antibody ALXN1210 (ravulizumab) product, an investigational drug developed by Alexion Pharma Godo Kaisha (Japan Regional Headquarters), infringes some of its Japan patents (Patent No. 4954326 and No. 6417431) relating to its proprietary antibody engineering technology. Thus, Chugai filed a patent infringement lawsuit against Alexion at the Tokyo District Court on December 5, 2018 (the date of the complaint) requesting a judgment that the ALXN1210 product infringes Chugai's Japan patent and injunctive relief precluding manufacturing and selling of the ALXN1210 product in Japan.

(6) A patent infringement lawsuit (in US) against Fresenius Kabi

Fresenius Kabi USA, LLC, in concert with Fresenius Kabi Oncology Limited and Fresenius SE & Co. KGaA (collectively “Fresenius”), filed an Abbreviated New Drug Application (“ANDA”) for approval of a generic version of Alecensa to the U.S. Food and Drug Administration. Under the framework of the Drug Price Competition and Patent Term Restoration Act (known as Hatch-Waxman Act), Chugai, Roche and Genentech filed a patent infringement lawsuit against Fresenius at the United States District Court for the District of Delaware on March 19, 2020 (the date of the complaint) alleging submission of ANDA infringed Chugai’s U.S. Patents (Nos. 9,126,931; 9,440,922; 9,365,514 and 10,350,214).

Independent Auditor's Report

Independent Auditor's Report

To the Board of Directors of Chugai Pharmaceutical Co., Ltd.:

We have audited the accompanying consolidated financial statements of Chugai Pharmaceutical Co., Ltd. and its consolidated subsidiaries, which comprise the consolidated balance sheet as at December 31, 2019, and the consolidated income statement, statement of comprehensive income, statement of changes in equity and statement of cash flows for the year then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Consolidated Financial Statements

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

Auditor's Responsibility

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

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

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

Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of Chugai Pharmaceutical Co., Ltd. and its consolidated subsidiaries as at December 31, 2019, and their financial performance and cash flows for the year then ended in accordance with International Financial Reporting Standards.

KPMG AZSA LLC

March 30, 2020
Tokyo, Japan