2019

ANNUAL CONSOLIDATED FINANCIAL STATEMENTS

FISCAL YEAR ENDED 31 MARCH 2019

Nippon Sheet Glass Company, Limited

BUSINESS AND OTHER RISKS

This information does not form part of the audited consolidated financial statements of the Nippon Sheet Glass Company, Limited and is provided purely for the information of the investors.

Business and other risks

The Group regularly reviews the principal financial and operating risk factors considered relevant to its current business activities and financial position. An updated analysis of the principal financial and operating risk factors facing the Group is presented below. Any references to future events below are based on what the Group judged as effective as at the end of this financial year.

There were no material issues or events occurring during the year that cast doubt on the ability of the Group to continue to operate as a going concern for the foreseeable future.

Economic conditions

The Group operates in three principal regions around the world being, Asia including Japan, Europe, and the Americas. As a result, changes in the business environment of our customers worldwide and geopolitical issues may affect our business.

In addition, we believe that emerging markets such as South America will grow at a faster pace than developed countries or regions in the long-run, but, compared to the developed countries or regions in which the Group operates, there is also a greater potential risk.

Dependency on certain specified industries and sectors

The Group's Architectural and Automotive businesses together account for over 90 percent of Group revenues for the year ended 31 March 2019. In FY2019, the Group's Architectural and Automotive business accounted for 41 percent and 51 percent of sales to external customers respectively. Products are principally provided to customers in the construction, housing and automotive industries. These industries have historically experienced swings in demand in response to cyclical changes in consumer confidence, and this is likely to continue to be the case in the future.

The Group is working to increase its revenues generated from value-added glass products that generate higher than average margins, and are typically sold into markets with significant growth prospects. Such products would normally have a lower level of cyclical volatility than commodity products, and are therefore less likely to be effected by deteriorating economic conditions. However there can be no assurance that such products will continue to enjoy higher than average margins, or that the markets for such products will continue to grow at higher than average rates. In addition, technological advances by other glass manufacturers in these areas could lead to an increased level of competition with a resulting erosion of profit margins for value-added products.

In addition, there is a possibility that customers may change their strategies in such a way that is disadvantageous to the Group. In that case, the business results and financial condition of the Group may be affected.

The Automotive business is also working to diversify its customer base. In recent years there has been a significant level of consolidation in the Automotive industry, leading to increased purchasing power for the Group's automotive customers. If such consolidation continues then this could mean that the Group's automotive customer base becomes more concentrated.

Competition

The Group competes with domestic and overseas glass product manufacturers. The Group also competes with material manufacturers of various plastic, metal and other materials used in the Architectural, Automotive and/or IT sectors. Although the Group endeavours to ensure a competitive edge in the provision of original technologies and products in these markets, if the Group is unable to ensure a competitive advantage due to changes in market needs or due to the emergence of a manufacturer providing low-cost products, or due to a manufacturer with a solid customer base and a high level of name recognition, or if our competitors receive governmental subsidies which are not available to us, there could be an adverse effect on the Group's financial performance and financial position.

Development of new products and technological innovation

The Group focuses on developing original technologies and products in its existing business fields and on developing new products in non-exploited business fields. The new product development process could require considerable time and expenses, and the Group might be requested to invest considerable amounts of capital and resources before achieving revenues from the sale of new products. Should any competitor launch a similar product in the target market earlier than the Group, or if alternative technologies and products are preferred by the market, the previous investment in the Group's product development might not produce the profits initially expected. Should the Group be unable to predict or respond to an anticipated technological innovation and/or succeed in the development of a new product that sufficiently meets customers' needs, such failure in product development or technological innovation could adversely affect the Group's businesses, financial performance and financial position.

Funds necessary for future business operations

The Group might have additionally to raise funds to 1) launch new products, 2) conduct business or R&D projects, 3) extend manufacturing capacity, 4) acquire a supplementary business, technology or service, 5) implement cost-saving initiatives and restructuring projects, or 6) repay maturing debt. If such funds cannot be raised under the intended conditions or at all, the Group might not be able to invest in the expansion, development or reinforcement of any product or service, capitalize on an opportunity for business development, or ensure higher competitiveness to its competitors, or the Group's financial position could be negatively affected.

Overseas operations

The Group has many production facilities in numerous areas around the world including Japan, elsewhere in Asia, Europe, North America, and South America.

The Group has various joint venture operations, investments, alliances and subsidiary operations in emerging markets such as South America, Russia, and China. The Group believes that the stakes it holds in these operations are an important part of its strategy to keep its manufacturing capacities in these regions. In previous years the Group has impaired certain of these investments, resulting in an exceptional charge within the Group's income statement. There can be no assurance that there will not be a further deterioration in the underlying markets faced by the Group's affiliates and subsidiaries in these regions. Consequently, there can be no assurance that the Group will not have to recognize further impairments with respect to these businesses in the future. In addition, the Group could face unexpected losses from these investments if it becomes difficult to continue an operation as a result of disagreements with its joint venture partners or other partners regarding business operation policy or for other reasons.

Risk involved in the suspension of production

The Group undertakes regular anti-disaster inspections and the maintenance of facilities in order to minimize the potential adverse effects that might be caused by the suspension of production activity. In addition to this, to minimize the potential adverse effects on production facilities due to a natural disaster (including an earthquake, a typhoon, a flood, an electrical power outage or any other type of event that causes a suspension of the Group's or of its customers' production), business continuity plans (BCP) are formulated at major business locations. Nevertheless, the impact of a natural disaster cannot always be mitigated. In some cases, certain types of products manufactured at a Group facility might not be able to be produced by another facility. Consequently, in case that production activity is suspended at a facility due to a natural disaster, the possibility of considerably reduced production capacity for certain specific product(s) could adversely affect the Group's financial performance and financial position. The Group insures against such events but there can be no guarantee that such insurance will fully compensate the Group in all circumstances.

Fluctuations in foreign exchange and interest rates

The Group has manufacturing operations in a variety of different countries around the world. Consequently, the Group is exposed to the risk of fluctuations in foreign exchange and interest rates associated with those countries. In addition, as the assets and liabilities denominated in local currencies are translated into yen when consolidated financial statements are prepared, the Group might be exposed to the risk of fluctuations in foreign exchange rates. Furthermore, fluctuations in interest rates might affect the values of interest expenses, interest income or financial assets and liabilities. Although the Group aims to hedge these risks, such fluctuations in foreign exchange and interest rates could adversely affect the Group's businesses, financial performance and financial position.

Changes in supply of raw materials and fuel, and distribution of products

Specific raw materials, such as silica sand and soda ash, and fuels, such as fuel oil and natural gas, are critical to the glass manufacturing process. Fluctuations in the cost of supplying raw materials and fuel may adversely affect the Group's financial performance and financial condition. The Group uses commodity derivatives and swap contracts to hedge the effect of fluctuations in the market prices for raw materials and fuel. However, there can be no assurance that such measures can eliminate the impact of future increases in the prices of raw materials and fuel.

The Group has entered into purchase agreements with selected suppliers of raw materials and fuel for medium and long-term fixed prices. The Group also sells its products through third party distributors in addition to its own distribution channels. If, for some reason, the Group's relationship with a major supplier or distributor ended, or such suppliers failed to perform their contractual obligations, the Group may have to enter into agreements with less favorable terms and conditions, or the supply of raw materials and the distribution of products may be impeded. This may result in the Group's financial performance and financial condition being adversely affected.

Retirement Benefit Obligations

The Group operates numerous corporate pension plans and healthcare benefit plans for retiring employees. In the event of large fluctuations in the market value of the assets backing such schemes, discount rates used to calculate pension liabilities, or mortality assumptions used in the calculation of pension liabilities, the Group may be obliged to contribute additional funds into the schemes.

While providing appropriate retirement benefit plans for our employees, the Group regularly reviews its retirement benefit obligations in order to reduce the risk to the Group. In recent years the Group has taken actions such as reducing the risk profile of assets within asset backed schemes, hedging longevity risks of certain groups of pensioners, and capping pensionable salaries for certain groups of active employees. However, there can be no assurance that such actions will be completely effective in eliminating the risk of increasing cash outflows into the Group's pension schemes in the future.

Legal restrictions

The Company and its subsidiaries and affiliates are subject to local and international regulations regarding investments, imports and exports, fair competition rules, regulations for environmental conservation, and other laws regarding business transactions, labor, intellectual property rights, income tax, currency control and so forth of the respective countries and regions where they operate. Any change to these laws and regulations or operation thereof could adversely affect the Group's financial performance and financial position through limitation of the Group's business activities or imposition of expenses to be disbursed regarding legal compliance or penalty fees, and their subsequent claims for damages based on civil liability, to the Group by reason of infringement of any of the relevant laws and regulations.

Business strategies

The Group's business strategies are affected by a variety of factors, including the economic environment, the price of raw materials, foreign exchange rates, and the development and provision of new technologies and products. However, there can be no assurances that, under these conditions, the intended results of the business strategies will be achieved. Furthermore, it is possible that the proposed execution of the Group's business plan will not be delivered, or that the intended effects will not be realized.

The Group develops and invests in new technology and products with the aim of transitioning from relatively low margin products to value-added products in order to keep its competitive advantages. However, there can be no assurance that the Group can succeed in development and commercialization of higher technology earlier than its competitors, or, as a result, can ensure higher competitiveness than its competitors.

BUSINESS AND OTHER RISKS

Intellectual property rights
Patents and other intellectual property rights are an important competitive factor in the Group's operation. However, there can be no assurance that the Group will always be successful in adequately protecting its intellectual property rights. In addition, the Group conducts its operations globally, which increases the risk of disputes between the Group and third parties over intellectual property rights. Any such infringements or disputes could have a negative impact on the Group's business, financial performance and financial condition.

Civil liability
If individuals are injured as a result of defects in the Group's products, the Group could be subject to claims for damages based on product liability. In addition, the occurrence of the claim could negatively affect the Group's reputation.

The Group strives to ensure that its products are of the highest quality. However, if unexpected quality problems occur, the Group may need to conduct a major recall. If this happens, the Group's reputation may be harmed and its financial performance and financial position may be adversely affected.

Environmental laws and regulations
The Group is focusing on efforts to build a sustainable society such as measuring its performance against targets aimed at contributing to a reduction in global warming. The Group makes efforts to work on environmental issues such as CO_2 reduction, energy saving, waste reduction and non-use or removal of harmful substances in order to have a beneficial environmental impact and comply with all relevant laws and regulations. However, any change to environmental laws and regulations or operation thereof, could adversely affect the Group's financial performance and financial position through limitation of the Group's business activities or imposition of expenses to be disbursed regarding legal compliance or penalty fees charged to the Group by reason of infringement of any relevant laws and regulations.

Evaluation and impairment of balance sheet assets
The Group has a considerable value of assets included on its balance sheet that must be tested annually for impairment. Such assets include, but are not limited to, goodwill and intangible assets arising on the acquisition of Pilkington plc, and deferred taxation assets arising largely from historic taxable losses generated in certain territories. In previous years, the Group has concluded that an impairment of goodwill was required with respect to its Automotive Rest of World cash generating unit. There can be no assurance that further impairments of goodwill with respect to that cash generating unit will not be required in the future, and there can also be no assurance that goodwill held with respect to other cash generating units will not also be required in the future. In particular, if the performance of the Group in the future does not improve to the extent that has been assumed in previous impairment tests, then impairments of such assets in the future will be more likely.

Whilst the Group has recorded various write-downs of deferred tax assets following its annual review of the realization profile of such assets in recent years, there can be no assurance that there will not be further similar write downs in the future. In addition, as the current tax environment globally is one of falling corporate tax rates, write-downs could arise in the future as a result of the application of reduced tax rates to the deferred tax assets recognized on the Group's balance sheet.

Information security
The Group owns and uses various kinds of confidential information and data related to its business activities. Controls over information technology systems are increasingly important to enable the Group to control such information and data appropriately and manage the operations efficiently. The Group makes efforts in sufficiently protecting such confidential information and its information systems, but in case the information system and the business activities are disrupted or any confidential information leaks externally due to any events such as natural disasters, telecommunications failures, computer viruses and cyber-attacks, it could have a material adverse effect on the Group's financial performance and financial position.

CONSOLIDATED INCOME STATEMENT

Nippon Sheet Glass Company, Limited and consolidated subsidiaries
For the period ended 31 March 2019

	Note	2019	2018 (restated)
			Millions of yen
Revenue	2	**612,789**	598,897
Cost of sales		**(452,095)**	(436,963)
Gross profit		**160,694**	161,934
Other income	4	**1,130**	2,571
Distribution costs		**(55,582)**	(54,536)
Administrative expenses		**(63,999)**	(66,613)
Other expenses	5	**(5,388)**	(7,724)
Operating profit before exceptional items	3	**36,855**	35,632
Exceptional items	7	**(7,068)**	(1,265)
Operating profit after exceptional items		**29,787**	34,367
Finance income	9	**2,131**	1,080
Finance expenses	9	**(15,432)**	(15,704)
Share of post-tax profit of joint ventures and associates accounted for using the equity method	16	**6,244**	2,403
Profit before taxation		**22,730**	22,146
Taxation	10	**(8,352)**	(4,649)
Adjustment in respect of US tax rate change	10	**—**	(9,590)
Profit for the period		**14,378**	7,907
Profit attributable to non-controlling interests	42	**1,091**	1,743
Profit attributable to owners of the parent		**13,287**	6,164
		14,378	7,907
Earnings per share attributable to owners of the parent:			
Basic earnings per share (yen)	36	**115.16**	48.27
Diluted earnings per share (yen)	36	**85.14**	38.87

Financial statements

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

Nippon Sheet Glass Company, Limited and consolidated subsidiaries
For the period ended 31 March 2019

	Note	2019	2018 (restated)
			Millions of yen
Profit for the period		**14,378**	7,907
Other comprehensive income:			
Items that will not be reclassified to profit or loss:			
Re-measurement of retirement benefit obligations (net of taxation)	27	**697**	1,749
Revaluation of Assets held at Fair Value through Other Comprehensive Income – equity investments (net of taxation)		**(157)**	(6,357)
Sub total		**540**	(4,608)
Items that may be reclassified to profit or loss:			
Foreign currency translation adjustments		**(18,054)**	6,552
Revaluation of Assets held at Fair Value through Other Comprehensive Income – other investments (net of taxation)		**36**	(302)
Cash flow hedges – fair value gains, net of taxation		**(103)**	1,407
Hyperinflation adjustment	40	**2,829**	—
Sub total		**(15,292)**	7,657
Other comprehensive income for the period, net of taxation		**(14,752)**	3,049
Total comprehensive income for the period		**(374)**	10,956
Attributable to non-controlling interests		**508**	735
Attributable to owners of the parent		**(882)**	10,221
		(374)	10,956

CONSOLIDATED BALANCE SHEET

Nippon Sheet Glass Company, Limited and consolidated subsidiaries
As at 31 March 2019

	Note	2019	2018 (restated)
			Millions of yen
Assets			
Non-current assets			
Goodwill	12	**107,349**	112,455
Intangible assets	13	**53,790**	57,249
Property, plant and equipment	14	**241,506**	244,105
Investment property	15	**371**	413
Investments accounted for using the equity method	16	**18,294**	17,655
Retirement benefit asset	27	**27,557**	27,144
Contract asset	2	**1,047**	1,110
Trade and other receivables	17	**14,327**	16,159
Financial assets			
assets held at fair value through other comprehensive income	18	**18,640**	17,290
derivative financial instruments	19	**435**	445
Deferred tax assets	21	**32,411**	35,901
Tax receivables		**561**	912
		516,288	530,838
Current assets			
Inventories	22	**119,645**	114,774
Contract assets	2	**1,645**	3,142
Trade and other receivables	17	**63,994**	70,430
Financial assets			
assets held at fair value through other comprehensive income	18	**—**	100
derivative financial instruments	19	**966**	938
Cash and cash equivalents	23	**52,406**	64,801
Tax receivables		**1,721**	3,569
		240,377	257,754
Assets held for sale or included in a disposal group held for sale	24	**5,204**	—
		245,581	257,754
Total assets		**761,869**	788,592

CONSOLIDATED BALANCE SHEET

	Note	2019	2018 (restated)
		Millions of yen	
Liabilities and equity			
Current liabilities			
Financial liabilities			
borrowings	25	**41,054**	96,470
derivative financial instruments	19	**1,132**	1,093
Trade and other payables	26	**127,425**	131,991
Contract liabilities	2	**3,780**	3,566
Taxation liabilities		**3,084**	4,655
Provisions	28	**13,880**	16,416
Deferred income	29	**1,191**	809
		191,546	255,000
Liabilities related to assets held for sale	24	**1,432**	—
		192,978	255,000
Non-current liabilities			
Financial liabilities			
borrowings	25	**328,598**	274,185
derivative financial instruments	19	**724**	906
Trade and other payables	26	**481**	680
Contract liabilities	2	**590**	879
Deferred tax liabilities	21	**18,469**	18,418
Taxation liabilities		**2,408**	2,307
Retirement benefit obligations	27	**66,177**	71,937
Provisions	28	**14,184**	15,903
Deferred income	29	**4,754**	4,662
		436,385	389,877
Total liabilities		**629,363**	644,877
Capital and reserves attributable to the owners of the parent			
Called up share capital	31	**116,588**	116,546
Capital surplus	32	**160,953**	166,661
Retained earnings	33	**(40,530)**	(51,350)
Retained earnings (translation adjustment at the IFRS transition date)		**(68,048)**	(68,048)
Other reserves	34	**(45,203)**	(28,617)
Total shareholders' equity		**123,760**	135,192
Non-controlling interests	42	**8,746**	8,523
Total equity		**132,506**	143,715
Total liabilities and equity		**761,869**	788,592

The financial statements on pages 5 to 78 were approved by the Executive Officers on 28 June 2019.

Executive Officers

Shigeki Mori
Representative Executive Officer
President and Chief Executive Officer

Kenichi Morooka
Representative Executive Officer
Chief Financial Officer

Financial statements

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

Nippon Sheet Glass Company, Limited and consolidated subsidiaries
For the period ended 31 March 2019

Millions of yen

	Called up share capital	Capital surplus	Retained earnings	Retained earnings (translation adjustment at the IFRS transition date)	Other reserves	Total shareholders' equity	Non-controlling interests	Total equity
Note	31	32	33		34		42	
Balance at 31 March 2017 (*)	**116,463**	**166,578**	**(58,890)**	**(68,048)**	**(31,201)**	**124,902**	**9,562**	**134,464**
Profit for the period (*)	—	—	6,164	—	—	**6,164**	1,743	**7,907**
Other comprehensive income (*)	—	—	1,749	—	2,308	**4,057**	(1,008)	**3,049**
Total comprehensive income (*)	—	—	7,913	—	2,308	**10,221**	735	**10,956**
Transactions with owners								
Dividends paid	—	—	—	—	—	**—**	(1,774)	**(1,774)**
Stock options	83	83	—	—	(95)	**71**	—	**71**
Purchase of treasury stock	—	—	—	—	(3)	**(3)**	—	**(3)**
Disposal of treasury stock	—	—	—	—	1	**1**	—	**1**
Transfer of other reserves to retained earnings	—	—	(373)	—	373	**—**	—	**—**
Balance at 31 March 2018 (*)	**116,546**	**166,661**	**(51,350)**	**(68,048)**	**(28,617)**	**135,192**	**8,523**	**143,715**
Hyperinflation adjustment	—	—	770	—	—	**770**	598	**1,368**
At 31 March 2018 (after hyperinflation adjustment)	**116,546**	**166,661**	**(50,580)**	**(68,048)**	**(28,617)**	**135,962**	**9,121**	**145,083**
Profit for the period	—	—	13,287	—	—	**13,287**	1,091	**14,378**
Other comprehensive income	—	—	2,432	—	(16,601)	**(14,169)**	(583)	**(14,752)**
Total comprehensive income	—	—	15,719	—	(16,601)	**(882)**	508	**(374)**
Transactions with owners								
Dividends paid	—	—	(5,669)	—	—	**(5,669)**	(472)	**(6,141)**
Stock options	42	42	—	—	19	**103**	—	**103**
Purchase of treasury stock	—	—	—	—	(5,754)	**(5,754)**	—	**(5,754)**
Retirement of treasury stock	—	(5,750)	—	—	5,750	**—**	—	**—**
Equity transaction with non-controlling interests	—	—	—	—	—	**—**	(411)	**(411)**
Balance at 31 March 2019	**116,588**	**160,953**	**(40,530)**	**(68,048)**	**(45,203)**	**123,760**	**8,746**	**132,506**

(*): Restated

CONSOLIDATED STATEMENT OF CASH FLOWS

Nippon Sheet Glass Company, Limited and consolidated subsidiaries
For the period ended 31 March 2019

	Note	2019	2018 (restated)
		Millions of yen	
Cash flows from operating activities			
Cash generated from operations	35	**44,434**	51,042
Interest paid		**(12,047)**	(11,596)
Interest received		**2,019**	1,021
Income tax paid		**(5,376)**	(5,751)
Net cash generated from operating activities		**29,030**	34,716
Cash flows from investing activities			
Dividends received from joint ventures and associates		**3,606**	2,508
Purchase of joint ventures and associates		**—**	(575)
Proceeds on disposal of joint ventures and associates		**15**	—
Proceeds on disposal of subsidiaries		**—**	156
Purchases of property, plant and equipment		**(28,125)**	(29,135)
Proceeds on disposal of property, plant and equipment		**479**	4,065
Purchases of intangible assets		**(2,380)**	(2,166)
Proceeds on disposal of intangible assets		**1**	944
Purchases of assets held at fair value through other comprehensive income		**(1,801)**	(208)
Proceeds on disposal of assets held at fair value through other comprehensive income		**10**	5,313
Loans advanced to joint ventures, associates and third parties		**(502)**	(500)
Loans repaid from joint ventures, associates and third parties		**555**	1,484
Others		**(1)**	202
Net cash used in investing activities		**(28,143)**	(17,912)
Cash flows from financing activities			
Dividends paid to owners of the parent		**(5,656)**	—
Dividends paid to non-controlling interests		**(472)**	(1,774)
Repayment of borrowings	25	**(107,973)**	(94,736)
Proceeds from borrowings	25	**108,907**	62,624
Increase in treasury stock		**(5,754)**	(3)
Others		**(410)**	—
Net cash used in financing activities		**(11,358)**	(33,889)
Decrease in cash and cash equivalents (net of bank overdrafts)		**(10,471)**	(17,085)
Cash and cash equivalents (net of bank overdrafts) at the beginning of the period	23	**62,799**	79,808
Effect of foreign exchange rate changes		**(3,558)**	76
Hyperinflation adjustment	40	**1,522**	—
Cash and cash equivalents (net of bank overdrafts) at the end of the period	23	**50,292**	62,799

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1.1. Summary of significant accounting policies

The principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all the periods presented. The Group elected to early adopt IFRS 9 "Financial Instruments" from FY2017 onwards.

Reporting entity

Nippon Sheet Glass Company, Limited (the Company) together with its consolidated subsidiaries (the Group) is a world leader in the supply of flat glass for architectural and automotive applications. In addition, the Group has a number of discreet technical glass businesses, operating in high technology areas.

The parent company of the Group, Nippon Sheet Glass Company, Limited is incorporated and domiciled in Japan and has shares publicly traded on the Tokyo Stock Exchange. The registered office is located at 5-27, Mita 3-chome, Minato-ku, Tokyo, 108-6321, Japan.

Basis of preparation

The consolidated financial statements of the Group have been prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB). The consolidated financial statements have been prepared on a historical cost basis, except for investment property, derivative financial instruments and assets held at fair value through other comprehensive income that have been measured at fair value, and also except for the application of hyperinflationary accounting at the Group subsidiaries in Argentina.

The financial statements are presented in Japanese yen and are rounded to the nearest million yen (¥m) except where otherwise indicated.

IFRS standards not relevant for this financial period

Certain new standards, amendments and interpretations to existing standards have been published that are mandatory for the Group's annual accounting periods beginning on or after 1 April 2019 and are considered to be relevant and potentially material to the Group's primary financial statements. The Group has elected not to adopt early the standards as described below:

IFRS 16 "Leases" addresses the principles for the recognition and measurement of leases, and will be effective from FY2020. This new standard will replace IAS 17 'Leases' and IFRIC 4 'Determining whether an Arrangement contains a Lease'. The Group will adopt this new standard using the modified retrospective approach. This involves adjusting the opening balance sheet as at 1 April 2019 to conform to IFRS16 accounting rules. The Group will record intangible "right-of-use" assets and associated lease liabilities for arrangements previously considered to be operating leases. The initial values of the assets and liabilities created will be approximately ¥32,600 million, and consequently the impact on net assets will be immaterial. Leases previously considered to be finance leases will be reclassified within the balance sheet but without any change in their value. The income statement impact is also likely to be relatively immaterial and will involve operating lease rental costs being removed from the Group's income statement and being replaced with an amortization charge on right-of-use assets and a finance charge on lease liabilities.

IFRIC 23 "Uncertainty over Income Tax Treatments" clarifies the recognition and measurement guidance contained within IAS 12 "Income Taxes" with respect to uncertain tax treatments. An uncertain tax treatment is any tax treatment, applied in local tax filings, where there is uncertainty whether the local tax authority will accept that tax treatment according to local laws. This new interpretation is effective from the Group's financial period commencing 1 April 2019. The Group intends to adopt this new interpretation retrospectively with the cumulative effect of initial application recognized in the opening balance sheet on 1 April 2019. The Group is still in the process of reviewing the impact of the adoption of IFRIC23 on its opening balance sheet as at 1 April 2019. The adoption of this new interpretation is not expected to result in a material change to the Group's annual tax charge.

IFRS 17 "Insurance Contracts" addresses accounting for insurance contracts and will be effective from the Group's financial period commencing 1 April 2021. This new standard will replace IFRS 4 "Insurance Contracts". The Group has not yet calculated the impact of the adoption of this standard.

Consolidation

(a) Subsidiaries

Subsidiaries are all entities over which the Group has the power to control the financial and operating policies, generally accompanying a shareholding of more than one-half of the voting rights. The existence and effect of potential voting rights arising from equity share options that are currently exercisable or convertible, are considered when assessing whether the Group controls another entity. Subsidiaries where the Group controls more than 50 percent of the voting rights are fully consolidated from the date on which control is transferred to the Group. They are consolidated until the date that control ceases.

The Group uses the acquisition method of accounting to account for business combinations. The consideration transferred for the acquisition of a subsidiary is the fair value of the assets transferred, the liabilities incurred and the equity interests issued by the Group. The consideration transferred includes the fair value of any assets or liabilities resulting from a contingent consideration arrangement. Acquisition-related costs are expensed as incurred. Identifiable assets acquired, and liabilities and contingent liabilities assumed, in a business combination are measured initially at their fair values at the acquisition date.

The excess of the consideration transferred, the amount of any non-controlling interest, based upon the appropriate share of the acquiree's net asset value, and the acquisition-date fair value of any previous equity interest in the acquiree, over the fair value of the Group's share of the identifiable net assets acquired, is recorded as goodwill. If this is less than the fair value of the net assets of the subsidiary acquired in the case of a bargain purchase, the difference is recognized immediately in the consolidated income statement (see Intangible Assets — Goodwill).

Inter-company transactions, balances and unrealized gains on transactions between Group companies are eliminated. Unrealized losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred. All Group companies use a common set of accounting policies, and are consolidated using a common accounting reference date of 31 March.

(b) Non-controlling interests, joint ventures and associates

Non-controlling interests

Changes in the Group's ownership interests in subsidiaries, arising from transactions between the Group and non-controlling interests, that do not result in a change in the Group's control over a subsidiary, are treated as equity transactions and therefore do not result in goodwill, or in gains and losses in the income statement.

Joint ventures

A joint venture is a contractual arrangement whereby the Group and other parties undertake an economic activity, which is then subject to joint control. In the Group, all such jointly controlled activities are undertaken through jointly controlled entities with the Group entitled to a share of the net assets of the jointly controlled entity. Consequently, the Group considers each of its joint arrangements to be joint ventures rather than joint operations. The Group considers that it has no other material contractual arrangements with its joint venture partners, other than the joint venture agreement itself. The Group accounts for its interest in these jointly controlled entities by the equity method of accounting, as described in relation to associates below.

Associates

Associates are all entities over which the Group has significant influence, generally accompanying a shareholding of between 20 and 49 percent of the voting rights. Significant influence is the power to participate in the financial and operating policy decisions of an investee, but is not control or joint control over these policies. Investments in associates are accounted for by the equity method of accounting and are initially recognized at cost. The Group considers that it has no material contractual arrangements with the other investors in each of the Group's associated entities, other than those which arise in the normal course of business. The Group's investment in associates includes goodwill (net of any accumulated impairment loss) identified on acquisition (see Intangible Assets— Goodwill).

The Group's share of its associates' post-acquisition profits or losses is recognized in the income statement, and its share of post-acquisition movements in reserves is recognized in reserves. The cumulative post-acquisition movements are adjusted against the carrying amount of the investment. When the Group's share of losses in an associate equals or exceeds its interest in the associate, including any other unsecured receivables, the Group does not recognize further losses, unless it has incurred obligations or made payments on behalf of the associate.

Unrealized gains on transactions between the Group and its associates are eliminated to the extent of the Group's interest in the associates. Unrealized losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred.

Accounting for joint ventures and associates

Joint ventures and associates are accounted for on the basis of audited accounts, or where these are not available, on the basis of unaudited management accounts prepared up to the Group's accounting date. Where it is not practicable to obtain such accounts, audited accounts or unaudited management accounts prepared to an accounting date not more than three months prior to the Group's accounting date are used. Where appropriate, the financial statements of joint ventures and associates are adjusted to conform to the Group's accounting policies.

Segment reporting

The chief operating decision-making body in the Group is the Board of Directors. The Group reports the results of its operating segments externally in a manner consistent with its internal reporting to the Board of Directors. The Board of Directors is responsible for allocating resources to, and assessing the performance of, the Group's operating segments.

Foreign currency translation

(a) Functional and presentation currency

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates (the functional currency). The consolidated financial statements are presented in Japanese yen which is the Company's functional and the Group's presentation currency.

(b) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at period-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognized in the income statement, except when deferred in equity as qualifying cash flow hedges and qualifying net investment hedges.

Translation differences on non-monetary items, such as equities classified as assets held at fair value through other comprehensive income, are included in the fair value reserve in equity.

(c) Group companies

The results and financial position of all Group entities with a functional currency different from the Group's presentation currency, except for subsidiary companies in Argentina which have a functional currency considered to be hyperinflationary, are translated into the presentation currency as follows:

- assets and liabilities for each balance sheet presented are translated at the closing rate at the date of that balance sheet;
- income and expenses for each income statement are translated at average exchange rates (unless this average is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case income and expenses are translated at the dates of the transactions); and
- all resulting exchange differences are recognized in the exchange translation reserve, a separate component of equity.

The results and transactions of subsidiaries in Argentina are translated into the Group's presentational currency using closing year-end rates of exchange as a result of the use of hyperinflationary accounting.

On consolidation, exchange differences arising from the translation of the net investment in foreign entities, and of borrowings and other currency instruments designated as hedges of such investments, are taken to the exchange translation reserve within shareholders' equity. When a foreign operation is sold, such exchange differences are recognized in the income statement as part of the gain or loss on sale.

Exchange differences recognized prior to 31 March 2010 are included in a separate reserve within retained earnings called 'Retained earnings (translation adjustment at the IFRS transition date)'. Exchange differences arising on or after 1 April 2010 are recognized within a separate exchange reserve.

Goodwill, intangibles and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at the closing rate.

Property, plant and equipment

Land and buildings comprise mainly the Group's manufacturing facilities. Land is shown at historical cost (and depreciated and impaired if held on a finance lease). All property (excluding land) and plant and equipment are stated at historical cost less accumulated depreciation and impairment. Historical cost comprises all expenditure that is directly attributable to the acquisition of the items. Cost may also include transfers from equity of any gains/losses on qualifying cash flow hedges of foreign currency purchases of property, plant and equipment.

Borrowing costs are capitalized with respect to material capital expenditure projects, using the Group's marginal cost of borrowing over the period of construction of the asset. Borrowing costs are depreciated over the useful economic life of the asset to which they relate.

Subsequent costs are included in the asset's carrying amount or recognized as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. All other repairs and maintenance are charged to the income statement during the financial period in which they are incurred.

Freehold land is not depreciated. Depreciation on other assets is calculated using the straight-line method to allocate their cost less their residual values over their estimated useful lives, as follows:

Freehold buildings	3 to 50 years
Long leasehold land and buildings	lease term or useful economic life
Float glass tanks	10 to 15 years
Glass-making plant	25 years
Glass-processing plant	15 years
Other plant and equipment	5 to 20 years
Vehicles	5 years

The assets' residual values and useful lives are reviewed to take account of technological changes, intensity of use over their lives and market requirements, and adjusted if appropriate, at each balance sheet date. In the event of impairment, an asset's carrying amount is written down immediately to its recoverable amount (see Impairment of Assets).

Gains and losses on disposals are determined by comparing the proceeds with the carrying amount. These are included in the income statement.

Investment property

Investment property principally comprises land, office buildings and small industrial units, and those parts of other properties not occupied by the Group, which are held for long-term rental yields. Investment properties are initially recognized at cost and are thereafter carried at fair value, representing open-market value determined annually by discounted cash flows or by the use of external valuers. Changes in fair value are recorded in the income statement as part of other income and expense.

Intangible assets

(a) Goodwill

Goodwill is tested annually for impairment and carried at cost less accumulated impairment losses. Gains and losses on the disposal of an entity include the carrying amount of goodwill relating to the entity sold.

Goodwill is allocated to cash-generating units for the purpose of impairment testing. Each of those cash-generating units represents the Group's investments in each region of operation by each primary reporting segment (see Impairment of Assets).

(b) Trademarks and licenses

Trademarks and licenses are shown at historical cost. Trademarks and licenses have a finite useful life and are carried at cost less accumulated amortization. Amortization is calculated using the straight-line method to allocate the cost of trademarks and licenses over their estimated useful lives (over a maximum of twenty years).

(c) Computer software

Acquired computer software licenses are capitalized on the basis of the costs incurred to acquire and bring to use the specific software. These costs are amortized over their estimated useful lives (five to ten years).

Costs associated with developing or maintaining computer software programs are recognized as an expense as incurred. Costs that are directly associated with the production of identifiable and unique software products controlled by the Group, which are seen to generate economic benefits exceeding costs beyond one year, are recognized as intangible assets. Direct costs include the software development employee costs and an appropriate portion of relevant overheads.

Computer software development costs recognized as assets are amortized over their estimated useful lives (not exceeding ten years).

(d) Research and development

Research expenditure is recognized as an expense as incurred. Costs incurred on development projects (relating to the design and testing of new or improved products or processes which will be used internally within the Group) are recognized as intangible assets when it is probable that the project will be commercially successful and technologically feasible or will give rise to internally improved processes, and costs can be measured reliably.

Other development expenditure is recognized as an expense as incurred. Development costs previously recognized as an expense are not recognized as an asset in a subsequent period. Development costs with a finite useful life that have been capitalized, are amortized from the date when the product or use of the process becomes available for commercial production on a straight-line basis over the period of its expected benefit, not exceeding five years (products) and twenty years (processes).

(e) Intangible assets created on acquisition

The intangible assets identified on acquisition of the Pilkington Group in June 2006 as part of the fair valuing of the net assets acquired include customer relationships, know-how, license agreements, the Pilkington brand name and other brands, in-process research and development and developed technology. These have been capitalized and are amortized over the estimated life of each category of intangible asset and are amortized on a straight-line basis over the period of their expected benefit to the Group as follows:

Customer relationships	Up to 20 years
Know-how**	10 years
License agreements**	11 years
Pilkington brand name*	Nil
Other brands**	10 years
Research and development	Up to 20 years
Developed technology	Up to 15 years

* The Pilkington brand name has been assigned an indefinite useful life and is therefore not subject to routine amortization, but is instead tested annually for impairment.

** Fully amortized, with remaining book value of nil

Impairment of assets

Assets that have an indefinite useful life are not subject to amortization and are tested annually for impairment. Assets that are subject to amortization are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognized when the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use.

For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units). A number of significant assumptions and estimates are involved in forecasting future cash flows, including market growth rates, sales volumes and market prices. Forecasts of future cash flows are based on best estimates of future revenues and operating expenses using historical trends, market conditions and industry trends. These assumptions are subject to review by management and the Board of Directors. The future forecasts are adjusted by an appropriate discount rate derived from the cost of capital plus a risk premium at the date of the evaluation. The discount rate, based on the pre-tax weighted average cost of capital used in calculating the recoverable value, is set at a rate appropriate to each territory, consistent with the rates used to assess the potential impairment of goodwill, detailed in note 12.

Financial risk management

Financial risk factors

The Group's multinational operations and debt financing expose it to a variety of financial risks that include the effects of changes in foreign currency exchange rates, energy prices, debt market prices, interest rates, credit risks, and liquidity. The Group has in place a risk management program that seeks to limit the effects on the financial performance of the Group by using financial instruments.

Financial risk management is carried out by a central treasury department (Group Treasury) under policies approved by the Board of Directors. Group Treasury identifies, evaluates and hedges financial risks in close co-operation with the Group's operating units. The Board provides written principles for overall risk management, as well as written policies covering specific areas, such as foreign exchange risk, energy price risk, use of derivative and non-derivative financial instruments, credit risk, and investing excess liquidity.

(a) Market risk

(i) Foreign exchange risk

The Group operates internationally and is exposed to foreign exchange risk arising from various currency exposures, primarily with respect to the euro, sterling and US dollar. Foreign exchange risk arises from future commercial transactions, recognized assets and liabilities and net investments in foreign operations.

To manage their foreign exchange risk arising from future commercial transactions and recognized assets and liabilities, companies in the Group use forward contracts, transacted with Group Treasury. Foreign exchange risk arises when future commercial transactions and recognized assets and liabilities are denominated in a currency that is not the entity's functional currency. Group Treasury is responsible for managing the net position in each foreign currency by using external forward currency contracts.

Each subsidiary designates contracts with Group Treasury as fair value hedges or cash flow hedges, as appropriate.

External foreign exchange contracts are designated at Group level as hedges of foreign exchange risks on specific assets, liabilities or future transactions on a gross basis.

The Group's risk management policy is to hedge forecast transactions creating the foreign currency exposure provided that such forecast transactions are reasonably certain.

The Group has certain investments in foreign operations, whose net assets are exposed to foreign currency translation risk. Currency exposure arising from the net assets of the Group's foreign operations is managed primarily through borrowings denominated in the relevant foreign currencies.

The Group is exposed to the risk of fluctuations in foreign exchange rates, mainly as the assets, liabilities, incomes and expenses denominated in local currencies are translated into yen when consolidated financial statements are prepared.

All other things being equal, a 1% increase in the value of the yen would lead to a decrease in total equity of ¥3,300 million

(2018: ¥3,500 million). Based on the financial results for the year to 31 March 2018, a 1% increase in the value of the yen would result in a decrease in the profit for the period of ¥200 million (2018: ¥50 million).

(ii) Energy price risks

The Group consumes significant amounts of energy and is exposed to energy price risk arising from this consumption, principally of oil and gas.

The Group's risk management policy is to hedge between 20 percent and 100 percent of anticipated purchases for the subsequent 12 months and between 0 percent and 80 percent for the subsequent four years.

(iii) Cash flow and fair value interest rate risk

As the Group has no significant interest-bearing assets, the Group's income and operating cash inflows are substantially independent of changes in market interest rates.

The Group's interest rate risk arises primarily from long-term borrowings. Borrowings issued at variable rates expose the Group to cash flow interest rate risk. Borrowings issued at fixed rates expose the Group to fair value interest rate risk. Group policy is to maintain approximately 30 to 70 percent of net borrowings in fixed rate instruments. All other things being equal, a 1 percent increase in interest rates would result in an increase in annual interest costs on financial balances of ¥2,154 million (2018: ¥1,806 million).

The Group manages its cash flow interest rate risk by using floating-to-fixed interest rate swaps. Such interest rate swaps have the economic effect of converting borrowings from floating rates to fixed rates. Under the interest rate swaps, the Group agrees with other parties to exchange, at specific intervals, the difference between fixed contract rates and floating rate interest amounts calculated by reference to the agreed notional principal amounts.

(b) Credit risk

The Group has no significant concentrations of credit risk other than in relation to the receivables due from automotive original equipment manufacturers. It has policies in place to ensure that sales of products are made to customers with an appropriate credit history. Derivative counterparties are limited to high credit quality financial institutions. The Group has policies that limit the amount of credit exposure to any financial institution.

As set out in note 38, the Group has outstanding loans and receivables owed by joint ventures and associates. The Group manages these balances on an arms-length basis, ensuring that loans and receivables are only advanced to joint ventures and associates where the Group is satisfied that these balances will be repaid.

(c) Liquidity risk

Prudent liquidity risk management policies maintain sufficient cash and cash equivalents and availability of funding through committed credit facilities. Due to the dynamic nature of the underlying businesses, Group Treasury aims to maintain flexibility in funding by keeping a substantial portion of committed credit lines undrawn.

Financial Instruments

The Group classifies its financial instruments in the following categories: financial assets and liabilities at fair value through profit or loss, financial assets and liabilities held at amortized cost, and financial assets held at fair value through other comprehensive income. Management determines the classification of its instruments at initial recognition and re-evaluates this designation at every reporting date. The evaluation considers the characteristics of the cash flows generated by the instruments and the Group's business model rationale for holding the instruments.

(a) Financial assets/liabilities at fair value through profit or loss

This category has two sub-categories: financial assets held for trading, and those designated at fair value through profit or loss at inception. A financial asset is classified in this category if acquired principally for the purpose of selling in the short term. Derivatives are also categorized as held for trading unless they are designated as hedges. Assets/liabilities in this category are classified as current assets/liabilities if they are either held for trading or are expected to be realized within 12 months of the balance sheet date. With the exception of derivatives not qualifying for hedge accounting, at the balance sheet date the Group does not have any assets or liabilities in this category.

(b) Financial assets and liabilities at amortized cost

Assets within this category are included in the Group's balance sheet as receivables. Receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They arise when the Group provides money, goods or services directly to a debtor with no intention of trading the receivable. They are included in current assets, except for maturities greater than 12 months after the balance sheet date and these are classified as non-current assets. Loans and receivables are included in trade and other receivables in the balance sheet.

Liabilities in this category are included in the balance sheet either as financial liabilities – borrowings, or as trade and other payables. Financial liabilities - borrowings predominantly arise from the Group's lending facilities arranged with its banks, classified either as current liabilities for maturities within 12 months, or non-current for maturities later than 12 months. Liabilities in this category have fixed or determinable payments to debt holders and are not quoted in an active market. Trade and other payables arise when the Group receives goods and services from its suppliers and is similarly split into current and non-current liabilities dependent on the time period expected before settlement.

Financial assets and liabilities at amortized cost are carried at amortized cost using the effective interest method, unless the asset or liability arises through the normal course of business with payments terms that indicate that the Group is neither granting a financing arrangement to its suppliers or receiving one from its customers. Where no financing arrangement exists then the asset or liability, classified as a receivable or payable, is held at amortized cost.

Borrowings consist of bonds payable, loans payable, lease obligations and non-controlling interests entitled to receive a fixed share dividend. Borrowings are recognized initially at fair value then subsequently stated at amortized cost. Borrowing transaction costs are expensed in the income statement over the period to the maturity of the related financial liability. Any difference between the proceeds (net of transaction costs) and the redemption value is recognized in the income statement over the period of the borrowings using the effective interest method.

Non-equity preference shares are classified as liabilities and are measured in the balance sheet at their most recent redemption price. The dividends on these preference shares are recognized in the income statement as interest expense. Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least 12 months after the balance sheet date.

The Group applies the expected credit loss method to receivables balances and considers individual provisions for specific balances where appropriate. This involves considering likely credit losses for a group of receivables using a range of forward looking scenarios. A provision for impairment of trade receivables is established with respect to an individual receivable when the Group will not be able to collect all amounts due according to the original terms of trade. The amount of the provision is the difference between the asset's carrying amount and the present value of estimated future cash flows, discounted at the effective interest rate. The expected credit loss method applied to a group of receivables can result in a provision being created even when on an individual basis, the Group expects each receivable to be converted to cash with no loss arising. The movement in receivables provisions is recognized in the income statement. Same methodology is also applied to contract assets balances.

Where trade receivables are sold to a financial institution through a securitization program and where the Group does not retain the significant risks and rewards of these receivables, or where the Group retains an element of risk and reward but no longer controls the asset, the Group derecognizes the trade receivables.

(c) Financial assets at fair value through other comprehensive income

Financial assets held at fair value through other comprehensive income are non-derivative financial investments where the Group is unable to exert significant influence over the investee. This category of investment could include equity investments which are not held for trading and irrevocably elected to be measured at fair value through other comprehensive income, or investments that are expected to generate fixed or determinable payments by collecting contracted cash flows and selling financial assets.

Financial assets at fair value through other comprehensive income are initially and subsequently recognized at fair value. Unrealized gains and losses arising from changes in the fair value of such assets are recognized within the statement of comprehensive income and result in a movement within the fair value reserve within equity. The Group assesses at each balance sheet date whether a financial asset or a group of financial assets is impaired. When assets that represent fixed interest investments held in this category are impaired, then the Group treats this as a realized loss recognized in the income statement, with historical amounts recycled from reserves through the statement of comprehensive income.

Accounting for derivative financial instruments and hedging activities

Derivatives are initially recognized at fair value on the date a derivative contract is entered into and are subsequently re-measured at their fair value. The method of recognizing the resulting gain or loss depends on whether the derivative is designated as a hedging instrument, and, if so, the nature of the item being hedged and the effectiveness of the hedging arrangement. The Group designates certain derivatives as hedges of the changes in fair value of recognized assets or liabilities or a firm commitment (fair value hedges), hedges of exposure to variability in cash flows associated with an asset or liability or arising from highly probable forecast transactions (cash flow hedges), and hedges of net investments in foreign operations (net investment hedges).

The Group documents at the inception of the transaction the relationship between hedging instruments and hedged items, as well as its risk management objective and strategy for undertaking various hedge transactions. The Group also documents, both at hedge inception and on an ongoing basis, its assessment of whether the derivatives used in hedging transactions are highly effective in offsetting changes in fair values or cash flows of hedged items. For time period related hedges, the cost of hedging is reflected in the income statement on a straight-line basis over the period of the hedge, with the accounting treatments described below relating to movements in the principal value of the hedge.

(a) Fair value hedge

Changes in the fair value of derivatives, designated and qualifying as fair value hedges, are recorded in either the statement of comprehensive income, if hedging a financial instrument at fair value through comprehensive income, or the income statement if hedging other items. Consequently, the movement in the fair value of the hedging contract is treated in a manner consistent with the movement in the fair value of the item being hedged.

(b) Cash flow hedge

The effective portion of changes in the fair value of derivatives, designated and qualifying as cash flow hedges, is recognized in equity. The gain or loss relating to the ineffective portion is recognized immediately in the income statement.

Amounts accumulated in equity are recycled in the income statement in the periods when the hedged item affects profit or loss (for instance, when the forecast sale that is hedged takes place). However, when the forecast transaction that is hedged results in the recognition of a non-financial asset (for example, inventory) or a liability, the gains and losses previously deferred in equity are transferred from equity and included in the initial measurement of the cost of the asset or liability.

When a forecast transaction is no longer expected to occur, the cumulative gain or loss that was reported in equity is immediately transferred to the income statement.

(c) Net investment hedge

Hedges of net investments in foreign operations are accounted for similarly to cash flow hedges. Any gain or loss on the hedging instrument relating to the effective portion of the hedge is recognized in equity, the gain or loss relating to the ineffective portion is recognized immediately in the income statement.

Gains and losses accumulated in equity are included in the income statement when the foreign operation is disposed of.

(d) Derivatives that do not qualify for hedge accounting

Certain derivative instruments do not qualify for hedge accounting. Changes in the fair value of any derivative instruments, not qualifying for hedge accounting, are recognized immediately in the income statement.

Fair value estimation

The fair value of financial instruments traded in active markets (such as investments at fair value through other comprehensive income) is based on quoted market prices at the balance sheet date. The quoted market price used for financial assets held by the Group is the current bid price. The appropriate quoted market price for financial liabilities is the current offer price. In the event of an indication of a potential impairment, management assess the recoverable value of the asset based on the higher of its value in use and fair value less cost to sell.

The fair value of financial instruments that are not traded in an active market is determined by using valuation techniques. The Group uses a variety of methods and makes assumptions that are based on market conditions existing at each balance sheet date.

The fair values of foreign exchange contracts are determined using forward exchange market rates at the balance sheet date. The fair values of interest rate swaps are calculated as the present value of the estimated future cash flows based on observable yield curves at the balance sheet date. The fair values of commodity hedges are determined by using forward market prices at the balance sheet date.

The fair value of financial liabilities is determined using cash flows discounted using a rate based on credit risk factors and the relevant currency swap rate for the specific maturity, plus a margin.

Unlisted equities are valued using forward-looking projections where available, however in most cases forward-looking projections are not available. Therefore, fair value is determined based on net asset values at balance sheet date.

Inventories

Inventories are stated at the lower of cost and net realizable value. Cost is mainly determined using the first-in, first-out (FIFO) method. The cost of finished goods and work-in-progress comprises design costs, raw materials, direct labor, other direct costs and related production overheads (based on normal operating capacity). Net realizable value is the estimated selling price in the ordinary course of business, less applicable variable selling expenses. Costs of inventories include the transfer from equity of any gains/losses on qualifying cash flow hedges relating to purchases of raw materials.

Inventories carried in the balance sheet are reviewed on a regular basis and, in the case of any inventories which are slow moving, or where the Group considers that it is unlikely to recover the cost of such inventory through subsequent sale, appropriate provisions are made to impair the inventory to its estimated net realizable value.

As result of the Group's adoption of IFRS15 'Revenue from Contracts with Customers', incremental costs of obtaining a contract with a customer are recognized as inventory, if the Group expects such cost will be recovered. Such costs are amortized by straight-line method over the length of the contract it relates to.

Cash and cash equivalents

Cash and cash equivalents include cash in hand, deposits held on call with banks, other short-term highly liquid investments with original maturities of three months or less, and bank overdrafts. Bank overdrafts are shown within borrowings in current liabilities on the balance sheet.

Leases

When entering into a contract that commits the Group to a series of regular cash flows in return for a right to use an asset, the Group considers whether the arrangement contains a lease. In the event that the arrangement represents in substance payment for a service, the Group does not consider the arrangement to be a lease. In other cases, the Group considers the arrangement to be a finance or operating lease as appropriate and accounts for all cash flows on this basis without separating non-lease components.

Assets held under finance leases (in which a significant proportion of the risks and rewards of ownership are retained by the Group) are included in property, plant and equipment or intangible assets at cost and are depreciated/amortized over the shorter of the lease term or their useful economic life. Obligations under finance leases, net of finance charges in respect of future periods, are included as appropriate under borrowings due within or after one year. Finance charges are allocated to accounting periods over the lease term to reflect a constant rate of interest on the remaining balance of the obligations.

Where a lease is identified as an operating lease (a lease other than a finance lease), any payments made thereunder (net of any incentives received from the lessor) are charged to the income statement on a straight-line basis over the period of the lease.

Where a sale and lease-back transaction results in the creation of a finance lease, the Group does not recognize a disposal of the asset sold nor any resulting gain or loss. Similarly the Group accounts for the finance lease created as a secured borrowing.

Taxation

Current income taxes for the current period are measured based on the amount expected to be paid to, or recovered from, local taxation authorities.

Deferred income tax is provided in full, using the liability method and without discounting, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. However, if the temporary difference arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss, it is not accounted for. Deferred income tax is determined using tax rates (and laws) that have been enacted or substantially enacted by the balance sheet date and are expected to apply when the related deferred income tax asset is realized or the deferred income tax liability is settled.

Deferred income tax assets are recognized to the extent that it is probable that future taxable profits will be available, against which the temporary differences can be utilized. Deferred income tax is provided on temporary differences arising on investments in subsidiaries and associates, except where the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred taxation liabilities are not recognized on timing differences arising from the initial recognition of goodwill. The Group offsets deferred tax assets and liabilities if a legally enforceable right exists to set off current tax assets against current income tax liabilities and the deferred tax asset and liability are related to the same taxable entity or group of entities and the same taxation authority.

Employee benefits

(a) Pension obligations

The Group operates various pension schemes globally. The schemes are generally funded through payments to insurance companies or trustee-administered funds, as determined by periodic actuarial calculations. The Group has both defined benefit and defined contribution plans.

The liability recognized in the balance sheet in respect of defined benefit pension plans is the present value of the defined benefit obligation at the balance sheet date less the fair value of plan assets. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of high quality corporate bonds that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating to the terms of the related pension liability.

Retirement benefit assets, net of applicable taxes that would be levied on the refund of a pension surplus, are recognized for schemes in surplus, when the Group has an unconditional right to a refund of that surplus.

Current service costs, representing the additional liability accrued as a result of employee's services undertaken during the period, are charged to operating costs within the income statement.

Past service costs are recognized immediately in the income statement.

Finance costs are calculated by applying territory specific discount rates to the net defined benefit obligation in that region.

Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are taken through the statement of comprehensive income to equity in accordance with IAS 19 'Employee Benefits'.

For defined contribution plans, the Group pays contributions to publicly or privately administered pension insurance plans on a mandatory, contractual or voluntary basis. The Group has no further payment obligations once the contributions have been paid.

Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in the future payments is available.

(b) Other post-employment retirement obligations

Group companies in the USA and the UK provide post-retirement healthcare benefits to certain retired employees. The entitlement to these benefits is usually conditional on the employee remaining in service up to retirement age and the completion of a minimum service period. The expected costs of these benefits are accrued over the period of employment using an accounting methodology similar to that for defined benefit pension plans.

Actuarial gains and losses arising from experience adjustments, and changes in actuarial assumptions, are charged or credited to the statement of comprehensive income in accordance with IAS 19. These obligations are valued annually by independent qualified actuaries.

(c) Termination benefits

Termination benefits are payable when employment is terminated before the normal retirement date, or whenever an employee accepts voluntary redundancy in exchange for these benefits. The Group recognizes termination benefits when it is demonstrably committed to either terminating the employment of current employees according to a detailed formal plan without possibility of withdrawal, or providing termination benefits as a result of an offer made to encourage voluntary redundancy.

(d) Profit-sharing, bonus and management incentive plans

The Group recognizes a liability and an expense for bonus schemes, which take into consideration the attainment of profit and cash flow targets. The Group recognizes a provision where contractually obliged or where there is a past practice that has created a constructive obligation.

Provisions

Provisions are recognized when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Group expects some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognized as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the income statement net of any reimbursement. Provisions are not recognized for future losses.

Where there are a number of similar obligations, the likelihood that an outflow will be required in settlement is determined by considering the class of obligations as a whole. A provision is recognized even if the likelihood of an outflow with respect to any one item included in the same class of obligations may be small.

All provisions, where the time value of money is material with a settlement date exceeding 12 months, are discounted and carried at their discounted value. The discount is unwound through a charge to finance costs each period until the provision is settled. Discount rates are based on rates applicable in each relevant territory where the provision is carried, consistent with risks specific to the liability.

Revenue from contracts with customers

The Group has adopted IFRS 15 'Revenue from Contracts with Customers' from the Group's financial period commencing 1 April 2018. The Group has adopted IFRS15 retrospectively, with a restatement of prior periods.

In accordance with IFRS 15, the Group's revenue is recognized based on the following five-step model:

Step 1: Identify the contract with a customer
Step 2: Identify the performance obligation in the contract
Step 3: Determine the transaction price
Step 4: Allocate the transaction price to the performance obligations in the contract
Step 5: Recognize revenue when the entity satisfies a performance obligation

The Group has three primary strategic business units (SBUs) - Architectural, Automotive and Technical Glass. Each SBU is organized on a worldwide basis.

The Architectural Glass SBU engages in the manufacturing and sale of flat glass and various interior and exterior glazing products within commercial and residential markets. It also includes glass for the solar energy sector. Customers of this SBU include manufacturers which process the glass products which we supply into their own products, construction and house building companies, distributors and merchants.

The Automotive Glass SBU supplies a wide range of automotive glazing for new vehicles and for replacement markets. Customers include major global automotive manufacturers and aftermarket glazing distributors.

The Technical Glass SBU comprises a number of discrete businesses, including the manufacture and sale of very thin glass used as cover glass for displays, lenses and light guide for printers, glass components for engine timing belts and battery separators. Customers are mainly manufacturers which process the glass-related products which we supply into their own products.

The revenue streams derived from the three SBUs are analyzed into following categories based on the nature and circumstances of the contracts:

(a) Sales of glass and glass-related products

The majority of the Group's revenue is derived from sales of glass and glass-related products. The Group usually considers specific purchase orders to be a contract with a customer, which in some cases governed by a framework agreement. In cases where purchase orders are governed by a framework agreement, the terms and conditions within both the framework agreement and the purchase order would together form the basis for determining how revenue would be recognized. Contracts with customers are considered to be short-term when the time between order confirmation and satisfaction of the performance obligations in equal to or less than one year.

In most cases, revenue is recognized as the customer obtains control over the glass and glass-related products upon delivery. This is based on the judgement that the performance obligation had been satisfied upon transfer of control. Unless there is a specific reason to use an alternative assumption, the Group considers the control over the glass and glass-related products to rest with the customer once the customer has either accepted the glass at their premises or has collected the glass themselves from the Group's premises.

(b) Sales of services

Revenue in relation to sales of services is recognized when services have been rendered and obligations under the terms of a contract have been satisfied. This may be at a point in time or over time depending on the conditions of the contract.

(c) Engineering revenue

The Group's engineering contracts usually relates to a building, construction and supply of float glass lines or a material asset for an external customer or a related party, such as a joint venture. Contracts in this category represent performance obligation satisfied over time, as it creates or enhances an asset that the customer controls as the assets is created or enhanced. This is because the asset would usually be such of a size that it is physically located at the customer's premises with no realistic prospect of being relocated. The Group's revenue in relation to the engineering contracts is recognized based on the actual service provided to the end of the reporting period as a proportion of the total services to be provided. This is determined by the input method, except for cases where specific milestones are clearly set in the contract against which the revenue could be reliably measured.

Estimates of revenues, costs or extent of progress toward completion are revised if circumstances change. Any resulting increases or decreases in estimated revenues or costs are reflected in profit or loss in the period in which the circumstance arises.

(d) Royalty and licensing contracts

The Group enters into licensing agreements with customers under which it licenses its intellectual property, such as patents and developed technologies. Revenue in relation to royalty and licensing contracts is recognized at a point in time or over time depending on the nature of the technology rights that the Group has granted to its customer.

If the license is to use a certain technology which the Group owns as it exists at the start of the contract, revenue will be recognized in full at the point in time when the license is granted.

If the license is to use a certain technology which the Group owns as it exists at the start of the contract and as it develops over the life of the license, revenue will be recognized over time through the life of the contract.

Revenues arising from licenses that contain an ongoing support obligation from the Group are recognized over time through the contract, as the obligation to provide support is not usually distinct from the obligation to grant a license.

(e) Tooling

The Group constructs tooling in order to manufacture glass products to the customers' specification. Revenue from sale of tooling is recognized based on judgement of specific facts and circumstances of related contracts.

If the construction of tooling is a separate performance obligation from the sale of glass and glass-related products, the Group recognizes inventory as the tooling is constructed. Revenue is recognized based on the stand-alone selling price (SSP) of the tooling when the control of tooling passes to the customer. Any shortfall between the invoiced amount and the SSP of the tooling are accounted for as contract assets. Revenue will be adjusted based on the input or output method over the life of the contract.

If the construction of tooling is not a separate performance obligation from the sale of glass products glass-related products, and the control remains with the Group, tooling will be included in property, plant and equipment in the Group's balance sheet. Any customer contribution in relation to tooling will be held as deferred income and released to the revenue over the life of the contract based on the output method.

Group's considerations in relation to revenue recognition

The transaction price includes estimates of variable consideration, such as rebates and price discounts, which are accounted for as reductions in revenue. All estimates are based on the Group's historical experience and the Group's best judgement at the time the estimate is made. Variable considerations included in the transaction price are estimated using the expected value method or most likely amount depending on the nature of the variable considerations. These estimates are reassessed each reporting period and are included in the transaction price to the extent it is highly probable that a significant reversal will not occur.

The majority of contracts have a single performance obligation of which the transaction price is stated in the contract. For contracts with multiple performance obligations, the Group allocates the transaction price to each performance obligation based on the stand-alone selling price, which is the price the Group would sell a promised good or service to the customer.

The Group does not expect to have any contracts where the period between the transfer of the promised goods or services to the customer and payment by the customer exceeds one year. Consequently, the Group has elected to use the practical expedient not to adjust transaction prices for the effects of a significant financing component.

Interest income

Interest income is recognized on a time-apportioned basis using the effective interest method. Interest income on impaired loans is recognized either as cash is collected or on a cost recovery basis as conditions warrant.

Dividend income

Dividend income is recognized when the right to receive payment is established.

Exceptional Items

The Group discloses certain gains or losses in the income statement as exceptional items if this is necessary to gain a fair understanding of the Group's operating performance. Exceptional items would usually be material in value and/or would be of a non-recurring nature.

Deferred income

(a) Government grants

The Group recognizes government grants at their fair value where there is reasonable assurance that the grant will be received and all attaching conditions will be complied with. When the grant relates to an expense item, it is recognized as income over the periods necessary to match the grant on a systematic basis to the costs that it is intended to compensate. Where the grant relates to property, plant and equipment, the fair value is credited to deferred income and released to the income statement over the expected useful life of the relevant asset by equal annual installments.

(b) Other deferred income

The Group recognizes other deferred income including fair valued customers' contributions to automotive tooling that continues to be recognized in the Group's balance sheet following the adoption of IFRS 15. The income is recognized in the income statement over the periods necessary to match the write-off of the asset, to which the deferred income relates, by equal annual installments.

Emission rights

Emissions rights granted are recognized on a systematic basis over the period to which they relate. The difference between the emission rights granted and recognized at the balance sheet date, and CO2 emitted is recorded as an asset or liability at fair value at each balance sheet date.

Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of these assets, until such time as the assets are substantially ready for their intended use or sale. All other borrowing costs are recognized in the consolidated income statement in the period in which they are incurred.

Share capital

Common (ordinary) shares are classified as equity. Preferred shares, that are not mandatorily redeemable with cash or other monetary asset, and where the Group has no contractual obligation to pay cash dividends or to deliver a variable number of the entity's own equity instruments by exercise of any put options attached to the preferred shares, are classified as equity. Incremental costs directly attributable to the issue of new shares or options are shown in equity as a deduction, net of tax, from the proceeds.

Treasury shares

Treasury shares represent the Group's interests in its own equity instruments, and are included within shareholders' funds. Treasury shares are measured at their cost.

Share based payments
The Group operates a number of equity settled, share-based payment plans, under which the entity receives services from directors, executive officers, senior corporate officers and corporate officers as consideration for equity instruments (options) of the Group. The fair value of the employee services received in exchange for the grant of options is calculated using the Black-Scholes model. In accordance with IFRS 2 'Share-based Payment', the resulting cost is recognized in the income statement over the vesting period of the options, being the period in which the services are received. All plans are classified as equity settled.

Discontinued operations and assets held for sale
Discontinued operations include components of the Group that have been disposed of (through sale or abandonment) or are classified as held for sale and represent a major line of the Group's business or geographical area of operations or represent a part of a single coordinated plan to dispose of such a business line or geographical area.

Non-current assets and disposal groups are classified as held for sale if their carrying amount will be recovered principally through a sale transaction rather than through continued use. This condition is regarded as met only when the sale is highly probable and the non-current asset (or disposal group) is available for immediate sale in its present condition. Management must be committed to the sale, which should be expected to be completed within one year.

When the Group is committed to a sale plan involving loss of control of a subsidiary, all of the assets and liabilities of that subsidiary are classified as held for sale when the criteria described above are met, regardless of whether the Group will retain a minority interest in its former subsidiary after the sale.

Assets classified as held for sale are measured at the lower of their previous carrying amount and fair value less costs to sell. Property, plant and equipment and intangible assets classified as held for sale are not depreciated or amortized after classification as held for sale.

Critical accounting estimates and assumptions
Estimates and judgments are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

The Group makes estimates and assumptions concerning the future. The resulting accounting estimates will not usually be equal to the resulting actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial period are discussed below.

(a) Estimated impairment of goodwill and intangible assets
The Group tests, on an annual basis, whether goodwill or intangible assets with an indefinite useful life have suffered any impairment, in accordance with the accounting policy stated above.

(b) Income taxes
The Group is subject to income taxes in numerous jurisdictions worldwide. During the normal course of business, there are a significant number of transactions where the final tax determination is uncertain. The Group recognizes liabilities for anticipated tax audit issues based on an estimate of both the value of any additional taxes that may be due and the likelihood that the final tax audit outcome may result in such additional liabilities. In arriving at the total liability to be provided, significant judgment is required. Where the final tax outcome of these matters is different from the amounts provided, any difference is recorded in the period in which that final outcome is known.

(c) Post-retirement benefits
The Group has a variety of post-retirement benefit schemes in various countries in which it operates. Where such schemes are in the nature of a defined benefit arrangement, the Group uses a variety of assumptions in the calculation of the scheme assets and liabilities. These assumptions are subject to a degree of uncertainty and the Group takes advice from professional actuaries before finalizing such assumptions.

(d) Provisions
Provisions are evaluated using either the Group's experience of previous provisions or, where appropriate, using the advice of professional consultants. Claims and litigation provisions are calculated based on discussions with claimants and the Group's legal advisors. Environmental provisions are calculated based on either currently estimated remediation costs, or, for more material environmental provisions, simulation models, evaluated with the assistance of environmental consultants, which consider a range of possible outcomes. Bonus provisions are estimated based on the Group's current and expected future performance evaluated against the terms of specific bonus schemes. Redundancy and restructuring provisions are estimated using the expected costs of restructuring programs that have been announced prior to the balance sheet date. Warranty provisions are calculated using the Group's experience of previous customer claims rates.

(e) Preferred shares
The Group has considered the terms and conditions attaching to Class A shares, and determined that these shares are classified as equity instruments, as a fixed number of common shares would be delivered to Class A Shareholders in the event of relevant put options being exercised. The Group has no contractual obligation to mandatorily redeem these shares through cash or any other monetary assets. Also, the Group has no contractual obligation to pay dividends although terms of dividends are stipulated in the contract, and any payment of dividends for each relevant period is ultimately determined by the Company's board of directors.

1.2. Changes in accounting policies and disclosures

The Group has adopted IFRS 15 'Revenue from Contracts with Customers' from the Group's financial period commencing 1 April 2018. This new standard addresses the recognition of revenues and replaces IAS 18 'Revenue' and IAS 11 'Construction Contracts'. The Group does not expect any material change to its financial performance or position to arise as a consequence of adopting this standard. The main practical change is that the Group will, in certain circumstances, recognize revenue from the sale of tooling to automotive customers on acceptance of that tool by the customer. The Group's previous policy was to recognize revenue over the life of the associated automotive supply contract. In some years this may result in more revenue being recognized than would otherwise have been the case, although in other years it may be less. Over the medium-term, no material impact is expected.

The Group applied IFRS 15 retrospectively using the practical expedient in paragraph C5(d) of IFRS 15, under which the Group does not disclose the amount of consideration allocated to the remaining performance obligations or an explanation of when the Group expects to recognize that amount as revenue for all reporting periods presented before 1 April 2018.

The impact of adopting the amendments to IFRS 15 is summarized in note 39 'Restatement of FY2018 comparative information'.

From the second quarter of the Group's financial period commencing 1 April 2018, the Group has applied hyperinflationary accounting adjustments when consolidating the financial results and positions of its subsidiaries in Argentina as required by IAS 29 'Financial Reporting in Hyperinflationary Economies'. Adjustments have been made to present the financial results and position of the Group's subsidiaries in Argentina using the measuring unit current as at the period end date. This has involved applying Argentina inflation to the underlying results and balance sheet net assets of these businesses. As required by IAS 21 'The Effects of Changes in Foreign Exchange Rate', the Group has used closing period-end exchange rates when consolidating the cash flows and comprehensive income of its subsidiaries in Argentina. The financial effect of applying this approach as at 31 March 2019, is a decrease in revenues of ¥1,650 million, a decrease in operating profit of ¥560 million, a decrease in profit for the period of ¥1,620 million and a decrease in profit attributable to owners of the parent of ¥920 million. Shareholders' equity was increased by ¥1,680 million.

From the Group's financial period commencing 1 April 2018, the Group has early-adopted an amendment to IAS 19 'Employee benefits' regarding plan amendments, curtailments or settlements that would otherwise have been applicable to the Group's financial periods commencing from 1 April 2019. This requires that, in the event of a plan amendment, curtailment or settlement, at one of the Group's post-retirement benefit schemes, the Group will update the actuarial assumptions determining current service cost and finance cost as at the date of the plan amendment, curtailment or settlement. The previous accounting treatment would have been to continue to calculate current service costs and finance costs using actuarial assumptions set from the start of the financial period. The financial effect of adopting this amended approach as at 31 March 2019 is to reduce operating costs by ¥22 million and to reduce finance costs by ¥57 million. This change in accounting treatment is applicable to UK pension schemes only, due to the past service cost recorded for these schemes during the third quarter. This past service cost is generated from the equalization of guaranteed minimum pensions recorded as an exceptional item (note 7) during the third quarter.

2. Revenue from contracts with customers

Disaggregation of revenue

The Group's revenue is disaggregated by geographical markets, revenue categories and timing of revenue recognition in the table below. Geographical markets are based on the location where revenues were recognized. This table also includes a reconciliation of the disaggregated revenue with the Group's three strategic business units, which are also its reportable segments.

					Millions of yen
					2019
	Architectural	**Automotive**	**Technical Glass**	**Other**	**Total**
Geographical markets					
Europe	**95,976**	**140,169**	**8,125**	**735**	**245,005**
Asia	**92,928**	**70,601**	**39,448**	**955**	**203,932**
Americas	**58,444**	**103,875**	**1,533**	**—**	**163,852**
	247,348	**314,645**	**49,106**	**1,690**	**612,789**
Revenue category					
Sale of glass and glass related products	**239,311**	**307,714**	**45,486**	**151**	**592,662**
Sale of services	**69**	**1,640**	**—**	**143**	**1,852**
Engineering contracts	**—**	**—**	**3,333**	**73**	**3,406**
Royalty and licensing contracts	**181**	**100**	**21**	**362**	**664**
Tooling	**—**	**3,355**	**—**	**—**	**3,355**
Other sundry sales	**7,787**	**1,836**	**266**	**961**	**10,850**
	247,348	**314,645**	**49,106**	**1,690**	**612,789**
Timing of revenue recognition					
Products and services transferred at a point in time	**244,320**	**313,545**	**45,847**	**956**	**604,668**
Products and services transferred over time	**3,028**	**1,100**	**3,259**	**734**	**8,121**
	247,348	**314,645**	**49,106**	**1,690**	**612,789**

					Millions of yen
					2018 (restated)
	Architectural	Automotive	Technical Glass	Other	Total
Geographical markets					
Europe	93,844	139,978	7,876	633	242,331
Asia	86,151	67,822	39,207	441	193,621
Americas	57,971	103,628	1,346	—	162,945
	237,966	311,428	48,429	1,074	598,897
Revenue category					
Sale of glass and glass related products	231,174	305,962	43,536	153	580,825
Sale of services	55	1,739	—	92	1,886
Engineering contracts	—	—	4,606	200	4,806
Royalty and licensing contracts	170	40	17	397	624
Tooling	—	1,587	—	—	1,587
Other sundry sales	6,567	2,100	270	232	9,169
	237,966	311,428	48,429	1,074	598,897
Timing of revenue recognition					
Products and services transferred at a point in time	236,450	310,365	43,916	444	591,175
Products and services transferred over time	1,516	1,063	4,513	630	7,722
	237,966	311,428	48,429	1,074	598,897

Assets and liabilities related to contracts with customers

The following table provides information about receivables, contract assets and contract liabilities from contracts with customers.

Millions of yen

	31 March 2019	31 March 2018 (restated)	1 April 2017 (restated)
Trade receivables, net of provision for impairment of receivables	**44,429**	44,186	45,338
Contract assets	**2,692**	4,252	4,158
Contract liabilities	**(4,370)**	(4,445)	(3,038)

Contract assets can be separated into two categories. Firstly relate to the Group's rights to consideration for glass products dispatched or works related to engineering contracts and other minor Architectural projects, which are not billed at the balance sheet date. The contract assets in this category are transferred to trade receivables when the rights become unconditional. Secondly these relate to contract assets arising upon recognition of revenue on automotive tooling, which is included in the transaction price of glass and glass-related products. The contract assets in this category will be amortized over the length of the contract.

Contract liabilities include amounts with respect to customer contributions on automotive tooling and other prepayments received from customers. Contract liabilities are classified as current or non-current based on the timing of when the Group expects to recognize revenue for contributions on automotive tooling and other prepayments.

Changes in the contract assets and the contract liabilities balances during the period are as follows.

Millions of yen

	Contract assets	Contract liabilities
At 1 April 2018	**4,252**	**(4,445)**
Exchange differences	**(51)**	**162**
Cumulative catch-up adjustments to revenue	**(38)**	**2**
Impairment of contract assets	**(97)**	**—**
Contract assets transferred to receivables	**(2,080)**	**—**
Satisfaction of performance obligations not yet invoiced	**1,412**	**—**
Opening contract liabilities recognized as revenue in the period	**—**	**2,250**
Cash received, excluding amounts recognized as revenue during the period	**(82)**	**(2,420)**
Transfer to assets held for sale	**(310)**	**110**
Other	**(314)**	**(29)**
At 31 March 2019	**2,692**	**(4,370)**

Millions of yen

	Contract assets	Contract liabilities
At 1 April 2017	4,158	(3,038)
Exchange differences	97	(127)
Cumulative catch-up adjustments to revenue	(356)	(3)
Impairment of contract assets	(118)	—
Contract assets transferred to receivables	(1,457)	—
Satisfaction of performance obligations not yet invoiced	1,921	—
Opening contract liabilities recognized as revenue in the period	—	1,086
Cash received, excluding amounts recognized as revenue during the period	35	(1,920)
Other	(28)	(443)
At 31 March 2018	4,252	(4,445)

Transaction price allocated to the remaining performance obligations

The following table includes revenue expected to be recognized in the future related to performance obligations that are unsatisfied (or partially unsatisfied) at the balance sheet date.

Millions of yen

	Within one year	After one year	Total
At 31 March 2019	**2,906**	**643**	**3,549**
At 31 March 2018	1,198	674	1,872

As permitted under the practical expedient in IFRS15 para 121, the Group does not disclose information about remaining performance obligations that have original expected duration of one year or less. No consideration from contracts with customers is excluded from the amounts presented above.

Capitalized costs of obtaining a contract
The costs of obtaining a contract are capitalized on premises these incremental costs would not have been incurred if the Group had not attempted to win the contract. The Group considers the amount of capitalized costs to be recoverable, as they do not exceed the overall level of profit expected from the contract.

These assets are included in inventory in the Group's balance sheet and are amortized over the life of the contract. The amount of amortization was ¥277 million (2018: ¥208 million).

Applying the practical expedient in IFRS 15 para 94, the Group recognizes the incremental costs of obtaining contracts as an expense when incurred if the amortization period of the assets that the Group otherwise would have recognized is one year or less.

3. Segmental information

Primary reporting format – by business line
The Group is organized on a worldwide basis into the following principal primary operating segments:

The Architectural segment engages in the manufacturing and sale of flat glass and various interior and exterior glazing products within commercial and residential markets. It also includes glass for the solar energy sector.

The Automotive segment supplies a wide range of automotive glazing for new vehicles and for replacement markets.

The Technical Glass segment comprises a number of discrete businesses, including the manufacture and sale of very thin glass used as cover glass for displays, lenses and light guides for printers, as well as glass fiber products, such as battery separators and glass components for engine timing belts.

The Other segment covers corporate costs, consolidation adjustments, certain small businesses not included in the segments covered above, and the amortization of other intangible assets related to the acquisition of Pilkington plc.

No operating segments have been aggregated to form the above reportable operating segments.

The segmental results for the periods ended 31 March 2019 and 2018 are as follows:

Millions of yen

	2019				
	Architectural	**Automotive**	**Technical Glass**	**Other**	**Total**
Revenue					
External revenue	**247,348**	**314,645**	**49,106**	**1,690**	**612,789**
Inter-segmental revenue	**16,582**	**1,843**	**1,331**	**3,638**	**23,394**
Total revenue	**263,930**	**316,488**	**50,437**	**5,328**	**636,183**
Trading profit	**25,811**	**15,118**	**8,062**	**(10,167)**	**38,824**
Amortization arising from acquisition of Pilkington plc	**—**	**—**	**—**	**(1,969)**	**(1,969)**
Operating profit before exceptional items	**25,811**	**15,118**	**8,062**	**(12,136)**	**36,855**
Exceptional items	**(4,172)**	**(4,596)**	**3,327**	**(1,627)**	**(7,068)**
Operating profit after exceptional items					**29,787**
Finance costs - net					**(13,301)**
Share of post-tax profits from joint ventures and associates					**6,244**
Profit before taxation					**22,730**
Taxation					**(8,352)**
Profit for the period					**14,378**

	Architectural	Automotive	Technical Glass	Other	Total
	Millions of yen				
	2018 (restated)				
Revenue					
External revenue	237,966	311,428	48,429	1,074	598,897
Inter-segmental revenue	19,322	2,411	372	3,582	25,687
Total revenue	257,288	313,839	48,801	4,656	624,584
Trading profit	26,246	14,209	5,403	(8,195)	37,663
Amortization arising from acquisition of Pilkington plc	—	—	—	(2,031)	(2,031)
Operating profit before exceptional items	26,246	14,209	5,403	(10,226)	35,632
Exceptional items	(4,617)	(2,675)	109	5,918	(1,265)
Operating profit after exceptional items					34,367
Finance costs - net					(14,624)
Share of post-tax profits from joint ventures and associates					2,403
Profit before taxation					22,146
Taxation					(14,239)
Profit for the period					7,907

The Group uses a number of methods to calculate the price of intra-group transactions depending upon the business sector and geographic location. This is largely dependent on local custom and regulations. Usual methods include reference to external market prices or to manufacturing costs plus an appropriate margin.

No significant changes were made in the method of pricing intra-group transactions in the period.

Finance costs include results from cash flow hedges of interest-bearing borrowings that have been reported in the income statement during the period. They also include gains and losses from the re-measuring of interest rate derivatives designated as fair value hedges. Unallocated costs represent corporate Group expenses.

Other information in respect of items (charged) or credited within operating profit, excluding exceptional items, in the income statement are as follows:

	Note	**Architectural**	**Automotive**	**Technical Glass**	**Other**	**Total**
		Millions of yen				
		2019				
Depreciation	14	**(10,586)**	**(10,988)**	**(1,597)**	**(1,014)**	**(24,185)**
Amortization	13	**(176)**	**(402)**	**(21)**	**(3,093)**	**(3,692)**
Impairment of property, plant and equipment	14	**(112)**	**(44)**	**(41)**	**(998)**	**(1,195)**
Reversal of prior period impairments of property, plant and equipment	14	**1**	**—**	**—**	**—**	**1**
Profit/(loss) on sale of property, plant and equipment		**66**	**28**	**(2)**	**62**	**154**
Research and development expenditure		**(2,641)**	**(2,979)**	**(759)**	**(3,004)**	**(9,383)**
Operating lease rentals						
plant and equipment		**(1,551)**	**(1,762)**	**(35)**	**(61)**	**(3,409)**
property		**(1,062)**	**(4,519)**	**(141)**	**(1,005)**	**(6,727)**
Bad debts written off		**(24)**	**(204)**	**—**	**—**	**(228)**
Net credit for doubtful debt provision		**118**	**134**	**1**	**—**	**253**
Amortization of deferred income	29	**498**	**481**	**—**	**32**	**1,011**

Millions of yen

	Note	Architectural	Automotive	Technical Glass	Other	Total
		2018 (restated)				
Depreciation	14	(10,045)	(11,253)	(1,655)	(886)	(23,839)
Amortization	13	(143)	(531)	(40)	(3,379)	(4,093)
Impairment of property, plant and equipment	14	(47)	(12)	(100)	(23)	(182)
Reversal of prior period impairments of property, plant and equipment	14	13	2	—	—	15
Profit on sale of property, plant and equipment		107	206	800	—	1,113
Research and development expenditure		(2,677)	(2,819)	(2,044)	(1,559)	(9,099)
Operating lease rentals						
plant and equipment		(1,424)	(1,737)	(36)	(111)	(3,308)
property		(1,021)	(4,521)	(140)	(1,043)	(6,725)
Bad debts written off		(57)	(236)	—	—	(293)
Net charge for doubtful debt provision		(91)	(141)	(435)	—	(667)
Amortization of deferred income	29	218	590	—	32	840

Segmental net trading assets at 31 March 2019 and 2018 and capital expenditure for the periods then ended are as follows:

Millions of yen

	Architectural	**Automotive**	**Technical Glass**	**Other**	**Total**
	2019				
Segmental net trading assets	**140,370**	**137,588**	**31,972**	**7,379**	**317,309**
Capital expenditure (including intangibles)	**15,150**	**14,110**	**1,919**	**971**	**32,150**

Millions of yen

	Architectural	Automotive	Technical Glass	Other	Total
	2018 (restated)				
Segmental net trading assets	133,455	138,801	38,738	6,755	317,749
Capital expenditure (including intangibles)	16,488	12,032	1,737	361	30,618

Segmental net trading assets consist of property, plant and equipment, investment properties, intangible assets excluding those arising from a business combination, inventories, contract balances, trade and other receivables (excluding financial receivables) and trade and other payables (excluding financial payables).

Capital expenditure comprises additions to property, plant and equipment, note 14, and intangible assets, note 13.

Secondary reporting format –geographical location of customers

The Group's revenue from its external customers based on the geographical location of those customers is as follows:

Millions of yen

	2019	2018 (restated)
Revenue		
Japan	**141,390**	150,727
Europe	**239,136**	232,636
North America	**120,921**	112,756
Rest of World	**111,342**	102,778
	612,789	598,897

No individual customer accounts for more than 10 percent of total revenues of the Group.

The total of non-current assets, other than retirement benefit assets, financial instruments, deferred tax assets, contract assets, trade and tax receivables, located in Japan is ¥58,383 million (2018: ¥60,545 million), UK ¥184,809 million (2018 restated: ¥199,070 million) and the total of these non-current assets located in other countries is ¥178,118 million (2018 restated: ¥172,262 million).

4. Other income

	2019	2018
	Millions of yen	
Dividend income on assets held at fair value through other comprehensive income	**135**	256
Profit on disposals	**219**	1,498
Other	**776**	817
	1,130	2,571

5. Other expenses

	Note	2019	2018 (restated)
		Millions of yen	
Amortization of intangibles	13	**(3,692)**	(4,093)
Impairment of property, plant and equipment	14	**(1,195)**	(182)
Reversal of prior period impairments of property, plant and equipment	14	**1**	15
Impairment of intangible assets	13	**(36)**	(4)
Research and development costs expensed in the period		**(1,007)**	(852)
Bad debts written off		**(95)**	(293)
Doubtful debt provision increase	17	**(425)**	(1,011)
Reversal of previously held doubtful debt provision	17	**545**	347
Float tank repair costs		**(41)**	(2)
Net foreign exchange on other expense items		**10**	(455)
Decrease in fair value of investment properties	15	**(20)**	(68)
Redundancy and restructuring		**(246)**	(196)
Loss on disposal		**(60)**	(60)
Reversal of environmental provision		**1,279**	—
Others		**(406)**	(870)
		(5,388)	(7,724)

6. Net foreign exchange gains and losses

The net foreign exchange differences on operating items charged to the income statement in the year amounted to a gain of ¥116 million (2018: a loss of ¥551 million).

7. Exceptional items

	Note	2019	2018
		Millions of yen	
Exceptional items (gains):			
Reversal of impairment of non-current assets	13, 14	**2,717**	72
Exchange gain on business closure		**698**	—
Settlement of litigation matters		**271**	190
Reversal of impairment of investments in joint ventures		**—**	4,065
Gain on disposal of non-current assets		**—**	2,139
Gain on disposal of investments in joint ventures and associates		**—**	1,541
Gain on settlement of insurance proceeds		**—**	997
Others		**—**	115
		3,686	9,119
Exceptional items (losses):			
Restructuring costs, including employee termination payments		**(4,415)**	(5,190)
Impairments of non-current assets	13, 14	**(3,544)**	(436)
Retirement benefit obligations – past service cost		**(1,385)**	—
Suspension of facilities		**(968)**	(4,621)
Settlement of litigation matters		**(194)**	(137)
Others		**(248)**	—
		(10,754)	(10,384)
		(7,068)	(1,265)

The reversal of impairment of non-current assets relates mainly to a float line in Vietnam. This line was previously mothballed after being impaired during the year to 31 March 2016. The Group will convert this line from its former usage as thin-glass line into a solar-energy line.

The previous-year gain on reversal of non-current assets relates mainly to assets in Architectural Europe and Vietnam, and Automotive Europe.

The exchange gain on business closure relates to gains previously posted to reserves using the Statement of Comprehensive Income which have now been recycled to retained earnings through the income statement having been realized following the closure of a technical Glass business in China.

The settlement of litigation matters relates to legal claims arising as a result of transactions that were previously recorded as exceptional items.

The previous-year reversal of impairment of investments in joint ventures related to the Group's investment in SP Glass Holdings BV, a joint venture owning production facilities in Russia.

The previous-year gain on disposal of non-current assets related to assets in Technical Glass in China which were disposed following the completion of restructuring activities undertaken earlier in that year.

The gain on the disposal of investments in joint ventures in the previous year related to the disposal of the Group's interest in Tianjin SYP Pilkington Glass Co., Ltd. The exceptional gain included a partial reversal of a previous impairment and a gain on recycling to the income statement of previous foreign exchange postings made directly to the Statement of Comprehensive Income.

The previous-year gain on settlement of insurance proceeds relates to insurance monies received following the Tornado that struck the Group's plant at Ottawa, Illinois, U.S.A, on 28 February 2017.

Restructuring costs principally include the cost of compensating redundant employees for the termination of their contracts of employment. The most significant projects during the year were in Architectural and Automotive Europe, and Architectural in Japan. The previous year costs were related to restructuring activities in Technical Glass in China, Automotive Europe, and a number of more minor projects elsewhere.

The impairment of non-current assets relates to assets in both Architectural and Automotive Europe as a consequence of restructuring projects in these businesses. The previous year impairment related mainly to assets in Automotive North America and also assets at the Ottawa facility.

The past service cost on retirement benefit obligations relates to a court ruling in the U.K. regarding Guaranteed Minimum Pensions (GMP's). Following this judgement, U.K. pension schemes are required to equalize benefits in excess of the GMP as between male and female scheme members for the period between 1990 and 1997. GMP's represent an element of the Group's pension liability which was designed to substitute for pension benefits that would otherwise have been provided by the state, with the state-provided pension benefits being unequal between men and women resulting in inequality of the scheme-provided benefit. The exceptional item recognized consists of a gross charge of ¥2,144 million and a credit with respect to taxation on pension surplus of ¥759 million.

The suspension of facilities includes the cost of repair to a float line in Japan required as a direct result of typhoon damage during the third quarter, and also the temporary suspension of automotive facilities in Europe to equate the Group's production capacity with levels of demand.

The suspension of facilities in the previous year relates to the Group's decision to proceed with an expedited repair of the furnace at Ottawa, Illinois, U.S.A..

8. Employee benefit expenses

		Millions of yen	
	Note	**2019**	2018
Wages and salaries		**(126,439)**	(126,946)
Redundancy and termination benefits		**(2,926)**	(3,373)
Social security costs		**(14,881)**	(15,173)
Share options granted to directors and employees	30	**(102)**	(71)
Pension costs, excluding those classed as exceptional items			
defined contribution schemes		**(9,037)**	(8,844)
defined benefit schemes		**(3,489)**	(3,782)
Other short-term employee benefits		**(6,805)**	(6,482)
		(163,679)	(164,671)

Key management compensation (included above) comprises:

	Millions of yen	
	2019	2018
Short-term employee benefits	**(1,133)**	(1,201)
Post-employment benefits	**(185)**	(250)
Other long-term benefits	**(289)**	(107)
Termination benefits	**—**	(11)
Share-based payment	**(102)**	(71)
	(1,709)	(1,640)

Key management compensation comprises the remuneration of those 35 (2018: 30) key employees who have responsibility for planning, controlling and directing the activities of the Group and includes all the members of the Group's Executive Board and corporate and senior corporate officers. Included within key management remuneration are post-employment benefits based on the IFRS operating cost charge in respect of service costs.

9. Finance income and expenses

	Note	2019	2018
		Millions of yen	
Finance income			
Interest income		**2,003**	1,072
Foreign exchange transaction gains		**128**	8
		2,131	1,080
Finance expenses			
Interest expense – bank and other borrowings		**(12,219)**	(13,190)
Dividend on non-equity preference shares due to minority shareholders		**(258)**	(260)
Foreign exchange transaction losses		**(90)**	(8)
Other interest and similar charges		**(697)**	(1,028)
		(13,264)	(14,486)
Unwinding of discounts on provisions	28	**(205)**	(218)
Retirement benefit obligations – net finance charge	27	**(480)**	(1,000)
Hyperinflation - loss on net monetary position	40	**(1,483)**	—
		(15,432)	(15,704)

10. Income tax

The analysis of the tax charge for the period is as follows:

	Note	2019	2018 (restated)
		Millions of yen	
Current tax			
Charge for the period		**(6,159)**	(6,261)
Adjustment in respect of prior periods		**(254)**	(464)
		(6,413)	(6,725)
Deferred tax			
Credit/(charge) for the period		**(2,119)**	1,812
Adjustment in respect of prior periods		**192**	279
Adjustment in respect of rate changes		**(12)**	(9,605)
	21	**(1,939)**	(7,514)
		(8,352)	(14,239)

The tax charge for the year is calculated as the sum of the total current and deferred tax charge or credit arising in each territory in which the Group operates.

The Group's expected weighted average tax rate (after deducting the Group's share of post-tax profit of joint ventures and associates) is 26.26 percent (2018 restated: 30.59 percent). The tax rate is different to the prior year because of changes in the mix of profits and losses realized by the Group in each of the territories in which it operates and differences in tax rates across each of those territories.

A number of countries have changed their corporate income tax rates during the year and any such changes that have been enacted or substantively enacted at 31 March 2019 are reflected in the weighted average tax rate. None of these rate changes are significant enough, on their own, to have a material impact on the weighted average tax rate. For reference, the applicable tax rate in Japan is 30.62 percent (2018: 30.86 percent) and this consists of corporate income tax, inhabitants' taxes and enterprise tax.

The tax charge for the prior year in the above table includes a one-time accounting tax charge of ¥9,590 million following U.S. tax reforms enacted during the previous year. The headline rate of U.S. federal corporate tax fell from 35 percent to 21 percent with a corresponding decrease in the accounting value of the Group's deferred tax assets.

The tax charge for the year period differs from the tax charge that would be anticipated by applying the weighted average tax rate to the Group's profit before tax. The differences are explained as follows:

	Millions of yen	
	2019	2018 (restated)
Profit before taxation	**22,730**	22,146
Deduct share of post-tax profits of joint ventures and associates	**(6,244)**	(2,403)
Profit before tax of Group companies	**16,486**	19,743
Tax charge calculated at the statutory tax rates applicable to profits/(losses) in the respective countries	**(4,329)**	(6,039)
Expenses not deductible for tax purposes	**(3,253)**	(957)
Income not subject to tax	**3,825**	3,337
Non-deductible gains on hedging derivative contracts	**30**	87
Other items giving rise to local tax adjustments	**(315)**	602
Adjustment to tax in respect of prior periods		
current tax	**(254)**	(464)
deferred tax	**192**	279
Adjustment to tax as a result of changes in tax rates	**(12)**	(9,605)
Tax losses and other temporary differences for which no deferred tax asset is recognized	**(2,658)**	(591)
Other local, non-corporate and withholding taxes suffered	**(1,578)**	(888)
Total taxation charge – continuing operations	**(8,352)**	(14,239)

11. Dividends

	Millions of yen	
	2019	2018
Dividends on ordinary shares declared and paid during the period:		
Final dividend for the year ended 31 March 2019 ¥20 per share (2018: ¥0 per share)	**1,809**	—
Interim dividend for the year ended 31 March 2019 ¥10 per share* (2018: ¥0 per share)	**905**	—
Dividends on ordinary shares declared after the end of the reporting period and not recognized as a liability:		
Final dividend for the year ended 31 March 2019 ¥20 per share (2018: ¥20 per share)	**1,811**	1,809

* Centennial commemoration dividend

	Millions of yen	
	2019	2018
Dividends on Class A shares declared and paid during the period:		
Final dividend for the year ended 31 March 2019 ¥45,000 per share (2018: ¥0 per share)	**1,800**	—
Interim dividend for the year ended 31 March 2019 ¥27,575.30 per share (2018: ¥0 per share)	**1,103**	—
The daily pro-rated preferred dividend for the partial acquisition during FY2019 ¥10,246.60 per share (2018: ¥0 per share)	**51**	—
Dividends on Class A shares declared after the end of the reporting period and not recognized as a liability:		
Final dividend for the year ended 31 March 2019 ¥27,424.70 per share (2018: ¥45,000 per share)	**960**	1,800

On 10 May 2019 the Group announced its intention to undertake a partial acquisition and retirement of Class A shares. The daily pro-rated preferred dividend which is not recognized as a distribution to owners during the period for the partial acquisition on 6 June 2019 was ¥ 50 million, ¥10,068.30 per share.

12. Goodwill

	Millions of yen	
	2019	2018
Cost		
At 1 April	**118,850**	112,968
Exchange differences	**(5,885)**	5,882
At 31 March	**112,965**	118,850
Accumulated impairment		
At 1 April	**6,395**	6,996
Exchange differences	**(779)**	(601)
At 31 March	**5,616**	6,395
Net book amount at 31 March	**107,349**	112,455

In accordance with IAS 36, goodwill has been tested for impairment at 31 March 2019. To perform this test, at 31 March 2019 and 2018, the directors compared the carrying value of each cash-generating unit, including the value of goodwill and intangible assets allocated to that cash-generating unit, to the value in use of each cash-generating unit. The value in use for this purpose is considered to be the capitalized current value of the future cash flows of each cash-generating unit as calculated by discounting the projected future operating cash flows of each cash-generating unit, using the discount rates in the table below. The projected future operating cash flows were based on financial forecasts covering a maximum four-year period being the Group's current planning horizon, with a perpetuity applied thereafter.

A general growth rate of two percent each year has been applied to the cash flows included within the perpetuity for cash generating units in Europe and North America (2018: two percent each year). General growth rates of two and three percent have been applied to the perpetuity cash flows of the Architectural and Automotive Rest of World cash generating units respectively (2018: two percent for Architectural Rest of World and three percent for Automotive Rest of World). The pre-tax discount rate for each cash-generating unit is determined by adding an appropriate risk factor onto the Group's weighted average cost of capital.

The goodwill included in the balance sheet with an indefinite useful life has been allocated to cash-generating units as set out in the table below, for the purposes of testing the goodwill for potential impairment.

	Millions of yen	
	2019	2018
Architectural Europe	**39,918**	42,255
Architectural Japan	**12**	12
Architectural North America	**8,166**	7,843
Architectural Rest of World	**2,044**	2,810
Automotive Europe	**41,550**	44,080
Automotive North America	**12,848**	12,339
Automotive Rest of World	**1,718**	1,958
Others	**1,093**	1,158
Total	**107,349**	112,455

The key assumptions used in this process are as follows:

Assumption	Value
Period used for discounted cash flow calculations	Maximum of four years from the balance sheet date with perpetuity thereafter
Perpetuity growth rate	2.0% to 3.0%
Pre-tax discount rate used	6.49% to 15.59%

Other key assumptions include glass prices, growth in market volumes, and input prices. Glass prices are projected using current trends and expectations of demand and supply movements in the period covered. Growth in market volumes is estimated with reference to general GDP growth in each territory and specific factors pertaining to the glass industry in that market including for example changes in regulatory environment. Input prices are estimated based on recent negotiations with suppliers and also generally available industry forecasts.

The key sensitivity in the impairment test described above is the selection of the discount rate. If discount rates greater than the rates quoted above were used, there would be a reduction in the headroom for each cash-generating unit.

The cash-generating unit with the least amount of headroom was Automotive Rest of World. A 0.85% increase in discount rates would result in this cash-generating unit having no residual headroom.

The Architectural Europe cash-generating unit would also have no residual headroom in response to a reasonably foreseeable change in discount rates. A 0.65% increase in discount rates would result in this cash-generating unit having no residual headroom.

The Automotive North America cash-generating unit would also have no residual headroom in response to a reasonably foreseeable change in discount rates. A 1.00% increase in discount rates would result in this cash-generating unit having no residual headroom.

The Group considers that there is a satisfactory level of headroom with respect to other cash-generating units.

13. Intangible assets

Millions of yen

	Trademark and licenses	Development costs	Computer software	Other	Total
Cost					
At 1 April 2018	**319**	**16,742**	**15,727**	**145,396**	**178,184**
Exchange differences	**(7)**	**(683)**	**(369)**	**(6,046)**	**(7,105)**
Additions	**—**	**1,261**	**1,033**	**86**	**2,380**
Transfers to assets held for sale	**(1)**	**—**	**(65)**	**(5)**	**(71)**
Disposals	**—**	**—**	**(340)**	**(16)**	**(356)**
At 31 March 2019	**311**	**17,320**	**15,986**	**139,415**	**173,032**
Accumulated amortization and impairment					
At 1 April 2018	**316**	**11,410**	**12,877**	**96,332**	**120,935**
Exchange differences	**(7)**	**(486)**	**(281)**	**(4,175)**	**(4,949)**
Amortization charge for the period	**1**	**1,103**	**587**	**2,001**	**3,692**
Impairment charge in the period	**—**	**151**	**1**	**35**	**187**
Reversal of previous impairments	**—**	**—**	**—**	**(199)**	**(199)**
Transfers to assets held for sale	**(1)**	**—**	**(62)**	**(5)**	**(68)**
Disposals	**—**	**—**	**(340)**	**(16)**	**(356)**
At 31 March 2019	**309**	**12,178**	**12,782**	**93,973**	**119,242**
Net book amount at 31 March 2019	**2**	**5,142**	**3,204**	**45,442**	**53,790**

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Millions of yen

(Restated)	Trademark and licenses	Development costs	Computer software	Other	Total
Cost					
At 1 April 2017	306	14,159	14,543	138,263	167,271
Exchange differences	13	1,140	535	7,379	9,067
Additions	—	1,443	723	—	2,166
Disposals	—	—	(74)	(246)	(320)
At 31 March 2018	319	16,742	15,727	145,396	178,184
Accumulated amortization and impairment					
At 1 April 2017	302	9,485	11,641	89,741	111,169
Exchange differences	13	796	432	4,598	5,839
Amortization charge for the period	1	1,111	878	2,104	4,094
Impairment charge in the period	—	18	—	4	22
Disposals	—	—	(74)	(115)	(189)
At 31 March 2018	316	11,410	12,877	96,332	120,935
Net book amount at 31 March 2018	3	5,332	2,850	49,064	57,249

Amortization of ¥3,692 million has been charged to other expenses, note 5 (2018 restated: ¥4,093 to other expenses, note 5 and ¥1 million to exceptional items, note 7). Impairment of ¥151 million has been charged to exceptional items and ¥36 million to other expenses (2018: ¥18 million to exceptional items and ¥4 million to other expenses). Reversal of previous impairments of ¥199 million has been credited to exceptional items.

Development costs represent internally generated intangible assets. Computer software represents the acquisition cost of purchasing software plus internal costs to implement the usage of that software. Trademarks and licenses and other intangible assets represent the acquisition cost of those assets.

Computer software includes assets with a carrying amount of ¥6 million (2018: ¥12 million) is subject to specific charges to secure Group borrowings.

'Other' intangibles include the following amounts recognized on the acquisition of the Pilkington Group in June 2006:

Millions of yen

	Customer relationships	**Know-how**	**Pilkington brand**	**Other brands**	**Developed technology**	**Other**	**Total**
Cost							
At 1 April 2018	**25,656**	**41,764**	**44,670**	**4,765**	**22,895**	**390**	**140,140**
Exchange differences	**(1,299)**	**(1,737)**	**(1,661)**	**(216)**	**(1,006)**	**(16)**	**(5,935)**
At 31 March 2019	**24,357**	**40,027**	**43,009**	**4,549**	**21,889**	**374**	**134,205**
Accumulated amortization and impairment							
At 1 April 2018	**17,931**	**41,764**	**8,376**	**4,765**	**19,489**	**390**	**92,715**
Exchange differences	**(890)**	**(1,737)**	**(312)**	**(216)**	**(859)**	**(16)**	**(4,030)**
Amortization charge for the period	**940**	**—**	**—**	**—**	**1,029**	**—**	**1,969**
At 31 March 2019	**17,981**	**40,027**	**8,064**	**4,549**	**19,659**	**374**	**90,654**
Net book amount at 31 March 2019	**6,376**	**—**	**34,945**	**—**	**2,230**	**—**	**43,551**

Millions of yen

	Customer relationships	Know-how	Pilkington brand	Other brands	Developed technology	Other	Total
Cost							
At 1 April 2017	24,583	39,575	42,056	4,752	21,579	361	132,906
Exchange differences	1,073	2,189	2,614	13	1,316	29	7,234
At 31 March 2018	25,656	41,764	44,670	4,765	22,895	390	140,140
Accumulated amortization and impairment							
At 1 April 2017	16,230	39,575	7,885	4,752	17,446	353	86,241
Exchange differences	724	2,189	491	13	998	28	4,443
Amortization charge for the period	977	—	—	—	1,045	9	2,031
At 31 March 2018	17,931	41,764	8,376	4,765	19,489	390	92,715
Net book amount at 31 March 2018	7,725	—	36,294	—	3,406	—	47,425

In addition to the other intangible assets recognized on the acquisition of the Pilkington Group, the Group also has intangible assets relating to customer relationships recognized on smaller acquisitions and other intangible assets, amounting to ¥1,891 million (2018: ¥1,639 million). Amortization charged in the period on these other intangible assets amounted to ¥32 million (2018: ¥73 million) and impairments on these other intangible assets amounts to ¥35 million (2018: ¥4 million).

The Pilkington Brand has been assigned an indefinite useful life and is therefore not subject to routine amortization. This brand has a long history in an established industry, with a significant share of the worldwide glass market. These factors, together with the scale of the business, contribute to the brand's durability. The Group intends to use the Pilkington brand indefinitely. All other intangible assets have finite lives, as set out in note 1.1.

The Pilkington Brand included in the intangible assets on the balance sheet has been allocated to cash generating units as set out in the table below, for the purposes of testing for potential impairment. The testing has been carried out as part of the exercise to test goodwill for potential impairment. See note 12, goodwill, for details of the assumptions used in this testing.

Millions of yen

	2019	2018
Architectural Europe	**16,786**	17,789
Architectural North America	**3,442**	3,306
Automotive Europe	**8,644**	9,162
Automotive North America	**4,856**	4,664
Automotive Rest of World	**1,217**	1,373
Total	**34,945**	36,294

14. Property, plant and equipment

	Land and buildings	Plant, equipment and vehicles	Total
			Millions of yen
Cost			
At 1 April 2018	**175,958**	**551,065**	**727,023**
Exchange differences	**1,807**	**(4,968)**	**(3,161)**
Transferred from assets held for sale	**(4,772)**	**(229)**	**(5,001)**
Additions	**5,501**	**24,268**	**29,769**
Disposals	**(2,229)**	**(8,949)**	**(11,178)**
At 31 March 2019	**176,265**	**561,187**	**737,452**
Accumulated depreciation and impairment			
At 1 April 2018	**96,752**	**386,166**	**482,918**
Exchange differences	**1,324**	**(1,193)**	**131**
Charge for the period	**3,285**	**20,933**	**24,218**
Impairment losses arising in the period	**3,125**	**1,302**	**4,427**
Reversal of impairment losses from prior periods	**—**	**(2,536)**	**(2,536)**
Transferred to assets held for sale	**(2,201)**	**(155)**	**(2,356)**
Eliminated on disposals	**(2,026)**	**(8,830)**	**(10,856)**
At 31 March 2019	**100,259**	**395,687**	**495,946**
Net book amount at 31 March 2019	**76,006**	**165,500**	**241,506**

(Restated)	Land and buildings	Plant, equipment and vehicles	Total
			Millions of yen
Cost			
At 1 April 2017	174,233	522,954	697,187
Exchange differences	4,517	14,239	18,756
Transferred from assets held for sale	3	—	3
Disposal of business	(95)	(79)	(174)
Additions	827	27,625	28,452
Disposals	(3,527)	(13,674)	(17,201)
At 31 March 2018	175,958	551,065	727,023
Accumulated depreciation and impairment			
At 1 April 2017	95,354	365,338	460,692
Exchange differences	1,042	11,008	12,050
Disposal of business	(94)	(78)	(172)
Charge for the period	3,214	22,128	25,342
Impairment losses arising in the period	74	526	600
Reversal of impairment losses from prior periods	—	(87)	(87)
Transferred to assets held for sale	(10)	—	(10)
Eliminated on disposals	(2,828)	(12,669)	(15,497)
At 31 March 2018	96,752	386,166	482,918
Net book amount at 31 March 2018	79,206	164,899	244,105

The carrying amount of the Group's land and buildings includes ¥870 million (2018: ¥1,074 million) and the Group's plant, equipment and vehicles includes ¥67 million (2018: ¥61 million) in respect of assets held under finance leases.

Land and buildings includes assets with a carrying amount of ¥824 million (2018: ¥897 million), and plant and machinery includes assets with a carrying amount of ¥14,034 million (2018: ¥18,104 million), are subject to specific charges to secure Group borrowings.

Of the additions in the period, ¥32 million were financed by new finance leases (2018: ¥39 million).

Capitalized borrowing costs have been included within additions of plant and equipment additions ¥5 million (2018: ¥nil million). The average rate used to calculate borrowing costs capitalized during the year was 4.95% (2018: nil).

Depreciation charged in the period all relates to continuing operations, this has been charged to cost of sales ¥21,291 million (2018 restated: ¥20,837 million), distribution costs ¥653 million (2018: ¥619 million), administrative expenses ¥2,241 million (2018: ¥2,383 million) and exceptional items ¥33 million (2018: ¥1,503 million), note 7. Impairments in the period have been charged to exceptional items ¥3,232 million (2018: ¥418 million) and other expenses ¥1,195 million (2018: ¥182 million). The reversal of previous period impairments have been credited to exceptional items ¥2,535 million (2018: ¥72 million) and other expenses ¥1 million (2018: ¥15 million).

Property, plant and equipment includes ¥2,956 million (2018: ¥2,267 million) in respect of assets in the course of construction.

15. Investment property

		Millions of yen	
	Note	**2019**	2018
Fair value			
At 1 April		**413**	523
Exchange differences		**(22)**	51
Disposal of businesses		**—**	(93)
Net decrease in fair value	5	**(20)**	(68)
At 31 March		**371**	413

Investment property principally comprises land, office buildings and small industrial units, and those parts of other properties not occupied by the Group, which are held for long-term rental yields. Investment properties are initially recognized at cost and are thereafter carried at fair value, representing open-market value determined annually by discounted cash flows or by the use of external valuers. Changes in fair value are recorded in the income statement as part of other income and other expenses.

The property rental income earned by the Group from its investment properties, all of which are leased out under operating leases, amounted to ¥220 million (2018: ¥210 million). Direct operating expenses arising on the investment properties in the period amounted to ¥130 million (2018: ¥148 million).

The Group has no restrictions on the realizability of its investment properties and there were no commitments at 31 March 2019 or 2018.

Fair value measurement disclosures for investment properties are provided in note 20.

16. Investments accounted for using the equity method

Joint ventures

The Group's interests in its material joint ventures, all of which are unlisted, are as follows:

Name	Proportion of issued ordinary shares held	Country of operation and incorporation	Principal activity
Cebrace Cristal Plano Limitada (Cebrace)	50%	Brazil	Glass manufacturing
SP Glass Holdings BV	62.5%	Russia/Netherlands	Glass manufacturing
Jiangsu Pilkington SYP Glass Co., Ltd	50%	China	Glass manufacturing

There were no material additions to joint ventures in the period ended 31 March 2019 (31 March 2018 – none).

The Group has legal ownership of 62.5 percent of the issued share capital of SP Glass Holdings BV, but, due to the existence of call options held by one of the Group's joint venture partners over part of the Group's shareholding and also other potential shareholder transactions, the Group accounts for this investment using a beneficial shareholding percentage of 43.75 percent.

Jiangsu Pilkington SYP Glass Co., Ltd is a 50 percent joint venture with Shanghai Yaohua Pilkington Glass Group Co., Ltd. In addition, Pilkington International Holdings BV, a subsidiary of the Group, holds a 13.26 percent interest in Shanghai Yaohua Pilkington Glass Group Co., Ltd. Therefore, the Group's proportionate economic interest in the entity is 56.63 percent.

Of the joint ventures above, Cebrace and Jiangsu Pilkington SYP Glass Co., Ltd report to an accounting date coterminous with that of the Group, but SP Glass Holdings BV reports to 31 December, being its local statutory accounting date.

During the year to 31 March 2018, the Group's investment in Tianjin SYP Pilkington Glass Co., Ltd (included in 'Others') was disposed with a gain arising on disposal of ¥1,541 million, as set out in note 7. Proceeds were simultaneously invested in Tianjin SYP Glass Co., Ltd, which is accounted for as assets held at Fair Value through Other Comprehensive Income (FVOCI).

At 31 March 2018, the Group recognized a gain of ¥4,065 million on reversal of impairment of investments in SP Glass Holding BV, which is accounted for as an exceptional item (See note 7). The performance of this joint venture has steadily improved, which caused the Group to re-assess its future prospects.

The balance sheet values of the Group's material joint ventures are as follows:

Millions of yen

			2019		
	Cebrace	**SP Glass Holdings BV**	**Jiangsu Pilkington SYP Glass Co., Ltd**	**Others**	**Total**
Current assets	**16,761**	**5,098**	**2,637**	**1,102**	**25,598**
Non-current assets	**24,132**	**9,422**	**7,526**	**419**	**41,499**
Current liabilities	**(18,311)**	**(2,029)**	**(5,059)**	**(458)**	**(25,857)**
Non-current liabilities	**(5,368)**	**(11,599)**	**(6,720)**	**(70)**	**(23,757)**
Total equity	**17,214**	**892**	**(1,616)**	**993**	**17,483**
NSG Group interest in total equity	**8,607**	**390**	**(808)**	**302**	**8,491**
NSG Group's unrecognized interest in total equity	**—**	**—**	**808**	**—**	**808**
Goodwill	**—**	**3,048**	**—**	**—**	**3,048**
Carrying amount of the Group's investment	**8,607**	**3,438**	**—**	**302**	**12,347**
The total equity above includes:					
Cash and cash equivalents	**827**	**1,880**	**109**	**242**	**3,058**
Current financial liabilities	**(10,271)**	**—**	**(329)**	**—**	**(10,600)**
Non-current financial liabilities	**—**	**(7,400)**	**(6,720)**	**—**	**(14,120)**

	Millions of yen				
	2018				
	Cebrace	SP Glass Holdings BV	Jiangsu Pilkington SYP Glass Co., Ltd	Others	Total
Current assets	10,672	4,736	2,051	1,169	18,628
Non-current assets	28,877	12,155	8,381	459	49,872
Current liabilities	(17,711)	(2,322)	(4,974)	(487)	(25,494)
Non-current liabilities	(6,933)	(12,662)	(6,837)	(89)	(26,521)
Total equity	14,905	1,907	(1,379)	1,052	16,485
NSG Group interest in total equity	7,453	835	(690)	320	7,918
NSG Group's unrecognized interest in total equity	—	—	690	—	690
Goodwill	—	3,230	—	—	3,230
Carrying amount of the Group's investment	7,453	4,065	—	320	11,838
The total equity above includes:					
Cash and cash equivalents	672	1,017	58	262	2,009
Current financial liabilities	(9,965)	—	(679)	—	(10,644)
Non-current financial liabilities	(57)	(7,398)	(6,837)	—	(14,292)

The Group considers that for all joint ventures accounted for using the equity method the balance sheet value approximates the fair value of the Group's investment. Current and non-current financial liabilities exclude trade and other payables as well as provisions.

The Group has no unrecognized commitments, relating to any of its joint ventures, which would result in a future outflow of economic resources from the Group.

The key income statement and comprehensive income figures of the Group's material joint ventures are as follows:

	Millions of yen				
	2019				
	Cebrace	**SP Glass Holdings BV**	**Jiangsu Pilkington SYP Glass Co., Ltd**	**Others**	**Total**
Revenue	**48,701**	**13,571**	**5,716**	**4**	**67,992**
Profit/(loss) for the period from continuing operations	**11,110**	**307**	**(282)**	**(1)**	**11,134**
Other comprehensive income	**—**	**(40)**	**—**	**—**	**(40)**
Total comprehensive income	**11,110**	**267**	**(282)**	**(1)**	**11,094**
NSG Group's share of profit for the period	**5,555***	**134**	**—**	**—**	**5,689**
NSG Group's unrecognized share of loss for the period	**—**	**—**	**(141)**	**—**	**(141)**
Dividends received by NSG Group	**3,528**	**—**	**—**	**—**	**3,528**
The profit/(loss) for the period includes the following:					
Depreciation and amortization	**(3,028)**	**(1,007)**	**(575)**	**—**	**(4,610)**
Interest expense	**423**	**(783)**	**(305)**	**1**	**(664)**
Taxation	**(5,787)**	**(202)**	**—**	**(1)**	**(5,990)**

* During the second quarter of the year, Cebrace recorded a one-off gain, of which the Group's share was ¥2,321 million, following the conclusion of a legal challenge regarding the calculation of sales-based taxes borne by the company in previous years.

Financial statements

	Millions of yen				
	2018				
	Cebrace	SP Glass Holdings BV	Jiangsu Pilkington SYP Glass Co., Ltd	Others	Total
Revenue	48,835	15,255	281	3,057	67,428
Profit/(loss) for the period from continuing operations	4,230	(34)	(578)	(83)	3,535
Other comprehensive income	—	(26)	—	—	(26)
Total comprehensive income	4,230	(60)	(578)	(83)	3,509
NSG Group's share of profit/(loss) for the period	2,115	—	—	(3)	2,112
NSG Group's unrecognized share of loss for the period	—	(12)	(289)	(32)	(333)
Dividends received by NSG Group	2,496	—	—	—	2,496
The profit/(loss) for the period includes the following:					
Depreciation and amortization	(3,488)	(1,168)	(166)	(220)	(5,042)
Interest expense	(931)	(1,650)	(247)	5	(2,823)
Taxation	(2,697)	(257)	—	—	(2,954)

Associates

The Group's interest in its material associates is as follows:

Name	Proportion of issued ordinary shares held	Country of operation and incorporation	Principal activity
Flachglas Wernberg GmbH	49%	Germany	Glass manufacturing and processing
Holding Concorde SA	21.9%	Colombia	Glass manufacturing and processing

The Group also owns a direct shareholding in a subsidiary of Holding Concorde SA, resulting in an effective interest of 23 percent in the closing consolidated net assets of this associate.

The accounting date for each of the associates listed above, is 31 December, the date to which each draws up its annual accounts.

The balance sheet values of the Group's material associates are as follows:

	Flachglas Wernberg GmbH	Holding Concorde SA	Others	Total
				Millions of yen
				2019
Current assets	**4,460**	**4,286**	**7,729**	**16,475**
Non-current assets	**5,378**	**11,081**	**7,393**	**23,852**
Current liabilities	**(2,591)**	**(2,974)**	**(4,219)**	**(9,784)**
Non-current liabilities	**(3,129)**	**(2,821)**	**(2,075)**	**(8,025)**
Total equity	**4,118**	**9,572**	**8,828**	**22,518**
NSG Group interest in total equity	**2,018**	**2,202**	**1,710**	**5,930**
Goodwill	**—**	**—**	**17**	**17**
Carrying amount of the Group's investment	**2,018**	**2,202**	**1,727**	**5,947**

	Flachglas Wernberg GmbH	Holding Concorde SA	Others	Total
				Millions of yen
				2018
Current assets	4,471	3,891	7,460	15,822
Non-current assets	5,610	12,683	6,521	24,814
Current liabilities	(2,941)	(3,151)	(3,278)	(9,370)
Non-current liabilities	(3,218)	(3,967)	(1,727)	(8,912)
Total equity	3,922	9,456	8,976	22,354
NSG Group interest in total equity	1,922	2,175	1,703	5,800
Goodwill	—	—	17	17
Carrying amount of the Group's investment	1,922	2,175	1,720	5,817

The Group considers that for all associates accounted for using the equity method, the balance sheet value is approximately equal to the fair value.

The key income statement and comprehensive income figures of the Group's material associates are as follows:

	Flachglas Wernberg GmbH	Holding Concorde SA	Others	Total
				Millions of yen
				2019
Revenue	**17,944**	**9,912**	**14,691**	**42,547**
Profit for the period from continuing operations	**547**	**1,142**	**(215)**	**1,474**
Other comprehensive income	**—**	**(28)**	**(1)**	**(29)**
Total comprehensive income	**547**	**1,114**	**(216)**	**1,445**
NSG Group's share of profit for the period	**268**	**250**	**37**	**555**
Dividends received by NSG Group	**63**	**—**	**15**	**78**

	Flachglas Wernberg GmbH	Holding Concorde SA	Others	Total
				Millions of yen
				2018
Revenue	17,709	9,505	12,046	39,260
Profit for the period from continuing operations	152	654	279	1,085
Total comprehensive income	152	654	279	1,085
NSG Group's share of profit/(loss) for the period	74	143	74	291
Dividends received by NSG Group	—	—	12	12

17. Trade and other receivables

	Note	2019	2018 (restated)
		Millions of yen	
Trade receivables		**46,831**	47,617
Less provision for impairment of receivables		**(2,402)**	(3,431)
Trade receivables – net		**44,429**	44,186
Amounts due from customers for contract work		**797**	2,812
Amounts owed by related parties (trading)	38	**1,553**	1,872
Loans to related parties	38	**9,255**	9,344
Other receivables		**18,492**	17,931
Prepayments and accrued income		**3,795**	10,444
		78,321	86,589
Current		**63,994**	70,430
Non-current		**14,327**	16,159
		78,321	86,589

The directors consider that the carrying amount of trade and other receivables approximates to their fair value.

There is no particular concentration of credit risk relating to Architectural, Automotive AGR, or Technical Glass balances, as these operations have a large number of customers. There is, however, a concentration of credit risk within the Automotive OE balances where the Group is supplying automotive manufacturers worldwide. The Automotive OE business customers constitute the majority of the major global car manufacturers. Due to the nature of the industry with a relatively small number of large customers, there is therefore a higher credit risk concentration. Total amounts owed by Automotive OE customers were ¥16,045 million (2018 restated: ¥14,321 million). This risk is managed through the monitoring of aged receivables, analysis of the cost effectiveness of insuring receivables and through general credit collection procedures.

Receivable balances are impaired on a case by case basis when the value may not be collectable. Overdue balances may not be impaired when there is good reason to expect that the receivable would still be collected.

As at 31 March 2019, trade receivables at nominal value of ¥2,402 million, (2018 restated: ¥3,431 million) were impaired and fully provided for.

Movements in the provision for impairment of receivables were as follows:

	Note	2019	2018 (restated)
		Millions of yen	
At 1 April		**(3,431)**	(2,897)
Exchange differences		**112**	(161)
Charge for the period	5	**(425)**	(1,011)
Unused amounts reversed	5	**545**	347
Utilized		**797**	291
At 31 March		**(2,402)**	(3,431)

As at 31 March, the ageing analysis of current trade and other receivables (excluding prepayments and accrued income) is below. All non-current trade and other receivables (excluding prepayments and accrued income) is considered neither past due nor impaired.

			Past due but not impaired			Millions of yen
	Total	Neither past due nor impaired	Less than 3 months overdue	Between 3 and 6 months overdue	Between 6 and 12 months overdue	More than 12 months overdue
2019	**60,905**	**56,784**	**1,956**	**476**	**232**	**1,457**
2018 (restated)	63,134	58,247	2,618	574	72	1,623

18. Assets held at fair value through other comprehensive income

The equity investments held within this category are those where the Group does not have a significant influence over the finance and operating policies of the investee. The Group generally expects to retain its investments in these entities, although may consider disposals on an opportunistic basis if appropriate. The Group considers gains and losses arising from fluctuations in valuations of investments to be unrealized. On adoption of IFRS 9 the Group elected to classify such investments at fair value through other comprehensive income with subsequent gains and losses recorded in other comprehensive income. The Group considers this accounting treatment to be more aligned with its intentions with respect to these investments.

		Millions of yen	
	Note	**2019**	2018
At 1 April		**17,390**	27,140
Exchange differences		**(399)**	703
Transferred to assets held for sale		**(3)**	—
Acquisitions		**1,801**	1,195
Original value of assets disposed		**(10)**	(5,078)
Revaluation surplus			
transferred to equity	34	**(139)**	(6,336)
transferred to income statement	34	**—**	(234)
At 31 March		**18,640**	17,390
Current		**—**	100
Non-current		**18,640**	17,290
		18,640	17,390

The acquisition in the period ended 31 March 2019 mainly relates to the Group's investment in SYP Kangqiao Autoglass Company Limited, a company registered and operating in China (2018: related mainly to the Group's investment in Tianjin SYP Glass Co., Ltd, which was received as proceeds in the disposal of the Group's interest in Tianjin SYP Pilkington Glass Co., Ltd).

The disposal in the period ended 31 March 2019 relates to the sale of unlisted shares (2018: related to the sale of listed equities and UK government gilts). Included in the value of disposals for the year to 31 March 2018, was the disposal of the Group's shareholding in China Glass Holdings Ltd. The fair value of the investment disposed, being the proceeds received, was ¥2,452 million.

Assets held at fair value through other comprehensive income include the following:

	Millions of yen	
	2019	2018
UK Government gilts	**2,315**	2,375
Listed equities	**11,052**	10,397
Unlisted shares	**4,942**	4,076
Bond funds	**289**	307
Other	**42**	235
	18,640	17,390

Fair value measurement disclosures are provided in note 20.

19. Derivative financial instruments

				Millions of yen
		2019		2018
	Assets	**Liabilities**	Assets	Liabilities
Interest rate swaps				
not qualifying as hedges	**10**	**106**	6	105
cash flow hedges	**132**	**601**	317	599
Forward foreign exchange contracts				
not qualifying as hedges	**10**	**2**	19	31
cash flow hedges	**203**	**96**	53	113
net investment hedges	**267**	**203**	301	488
Commodity hedges				
cash flow hedges	**779**	**848**	687	663
	1,401	**1,856**	1,383	1,999
Current	**966**	**1,132**	938	1,093
Non-current	**435**	**724**	445	906
	1,401	**1,856**	1,383	1,999
Derivatives at fair value through income statement	**20**	**108**	25	136
Derivatives at fair value through other comprehensive income	**1,381**	**1,748**	1,358	1,863
	1,401	**1,856**	1,383	1,999
Maturity				
within one year	**966**	**1,132**	938	1,093
between one and two years	**304**	**624**	87	403
between two and three years	**80**	**75**	314	63
between three and four years	**45**	**11**	44	31
over four years	**6**	**14**	—	409
	1,401	**1,856**	1,383	1,999

Of the above financial instruments, gross cash flows are exchanged for forward foreign exchange contracts only. The contractual liabilities are ¥60,303 million (2018: ¥96,477 million), falling due within one year.

Gains and losses in equity on forward foreign exchange contracts as of 31 March 2019 will be released to the income statement at various dates up to 12 months from the balance sheet date. Fair values are calculated with reference to market prices discounted to current value.

The notional principal amounts of the outstanding interest rate swap contracts at 31 March 2019 were ¥58,512 million (2018: ¥ 86,729 million). At 31 March 2019, the fixed interest rates on interest rate swaps vary from (0.263) percent to 1.478 percent (2018: (0.263) percent to 1.5 percent) and the main floating rates are TIBOR, EURIBOR and LIBOR. The Group designates a portion of its currency denominated borrowings and derivatives as hedges of the net investment in the Group's overseas subsidiaries. The fair value of these borrowings as at 31 March 2019 was ¥71,419 million (2018: ¥68,541 million). The fair value of the derivatives as at 31 March 2019 was a loss of ¥17 million (2018: ¥124 million). The foreign exchange loss of ¥1,661 million (2018: ¥2,713 million) on translation of the borrowings and derivatives to yen at the balance sheet date was recognized in the exchange translation reserve in shareholders' equity, note 34.

Fair value measurement disclosures for derivative assets and liabilities are provided in note 20.

Financial risk management

An explanation of the Group's financial instrument risk management objectives, policies and strategies is set out in the financial risk management section in note 1.1, Summary of significant accounting policies.

20. Fair value measurement

Fair value hierarchy

For those assets and liabilities included in the consolidated balance sheet at fair value, the table below provides the fair value measurement of the Group's assets and liabilities 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: inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices)
Level 3: inputs for the asset or liability that are not based upon market data (unobservable inputs).

Assets and liabilities included in the balance sheet at amortized cost, have fair value disclosures included within the relevant disclosure note for that balance sheet item, where required by IFRS 13 or other relevant standards.

					Millions of yen
					2019
	Note	**Level 1**	**Level 2**	**Level 3**	**Total**
Investment properties	15				
rental properties		**—**	**—**	**371**	**371**
		—	**—**	**371**	**371**
Assets held at fair value through other comprehensive income	18				
UK Government gilts		**2,315**	**—**	**—**	**2,315**
listed equities		**11,052**	**—**	**—**	**11,052**
unlisted equities		**—**	**—**	**4,942**	**4,942**
bond funds		**289**	**—**	**—**	**289**
other		**—**	**—**	**42**	**42**
		13,656	**—**	**4,984**	**18,640**
Derivative assets	19				
interest rate swaps		**—**	**142**	**—**	**142**
forward foreign exchange contracts		**—**	**480**	**—**	**480**
commodity hedges		**—**	**779**	**—**	**779**
		—	**1,401**	**—**	**1,401**

					Millions of yen
					2018
	Note	Level 1	Level 2	Level 3	Total
Investment properties	15				
rental properties		—	—	413	413
		—	—	413	413
Assets held at fair value through other comprehensive income	18				
UK Government gilts		2,375	—	—	2,375
listed equities		10,397	—	—	10,397
unlisted equities		—	—	4,076	4,076
bond funds		307	—	—	307
other		—	—	235	235
		13,079	—	4,311	17,390
Derivative assets	19				
interest rate swaps		—	323	—	323
forward foreign exchange contracts		—	373	—	373
commodity hedges		—	687	—	687
		—	1,383	—	1,383

					Millions of yen
					2019
	Note	**Level 1**	**Level 2**	**Level 3**	**Total**
Derivative liabilities	19				
interest rate swaps		**—**	**706**	**—**	**706**
forward foreign exchange contracts		**—**	**301**	**—**	**301**
commodity hedges		**—**	**849**	**—**	**849**
		—	**1,856**	**—**	**1,856**

					Millions of yen
					2018
	Note	Level 1	Level 2	Level 3	Total
Derivative liabilities	19				
interest rate swaps		—	704	—	704
forward foreign exchange contracts		—	632	—	632
commodity hedges		—	663	—	663
		—	1,999	—	1,999

Investment properties

Investment properties are valued either by reference to future expected rental receipts or by reference to a recently obtained valuation prepared by a qualified valuation professional. Gains or losses arising on the fair value of investment properties are recognized in operating profit, see note 15. The sensitivity of the fair value of investment properties is subject to rental yields and fluctuation of property prices in the relevant markets however the Group has not quantified the impact of any change as any reasonable change would not have a material impact.

Assets held at fair value through other comprehensive income

UK government gilts, listed equities, and bond funds are valued based on quoted market prices obtained by the Group at the balance sheet date. Unlisted equities and other assets held at fair value through other comprehensive income are valued using a variety of different techniques including future projected cash flows and net asset values of the underlying investments. Those classified in level 3 of the fair value hierarchy are subject to a variety of sensitivities and, as these investments comprise mainly Japanese trading companies, economic growth projections in Japan are the main sensitivity influencing the valuation. The Group has not quantified the impact of the change in GDP growth rates for these investments, included within level 3, as any reasonable movement would not have a material impact.

Fair value gains and losses are recognized within the statement of comprehensive income, see note 18.

Derivatives

The fair values of foreign exchange contracts are determined using forward exchange market rates at the balance sheet date. The fair values of interest rate swaps are calculated as the present value of the estimated future cash flows based on observable yield curves at the balance sheet date. The fair values of commodity hedges are determined by using forward market prices at the balance sheet date.

Gains and losses arising on the fair value of net derivative assets and liabilities have been recognized as follows. A gain of ¥9 million was recognized in operating profit (2018: ¥53 million) in relation to derivatives classed as fair value through profit or loss. A gain of ¥38 million was recognized directly in the statement of comprehensive income (2018: ¥1,087 million) in relation to derivatives classed as fair value through other comprehensive income.

There was no hedge ineffectiveness in the year therefore no charge to the income statement in respect of hedge ineffectiveness of assets classed as fair value through other comprehensive income.

Transfer between levels

The Group determines whether a transfer between levels in the hierarchy has occurred by reassessing categorization at the end of each reporting period. During the periods ended 31 March 2019 and 2018, there were no transfers between Level 1 and Level 2 fair value measurements.

There have been no changes in the valuation techniques in either the current or prior year.

A reconciliation of movements in assets held at fair value through other comprehensive income included in the above hierarchy based on level 3 valuation techniques is as follows:

	Millions of yen	
	2019	2018
At 1 April	**4,311**	3,013
Acquisition	**1,792**	1,017
Transfer to assets held for sale	**(3)**	—
Disposals	**(10)**	(6)
Movements in fair value recognized in comprehensive income within "Revaluation of assets held at fair value through other comprehensive income – equity investments (net of taxation)"	**(1,041)**	244
Exchange differences recognized in other comprehensive income	**(65)**	43
At 31 March	**4,984**	4,311

The acquisition in the period ended 31 March 2019 mainly relates to the Group's investment in SYP Kangqiao Autoglass Company Limited, a company registered and operating in China.

The previous year acquisition relates to the Group's investment in Tianjin SYP Glass Co., Ltd, which was received as proceeds in the disposal of the Group's interest in Tianjin SYP Pilkington Glass Co., Ltd.

Management have assessed that fair value of assets and liabilities such as cash and short-term deposits, trade receivables, trade payables, bank overdrafts and other current liabilities approximate their carrying amounts largely due to the short-term maturity of these instruments.

21. Deferred income tax

	Millions of yen	
	2019	2018 (restated)
Deferred tax assets	**32,411**	35,901
Deferred tax liabilities	**(18,469)**	(18,418)
Net deferred tax asset	**13,942**	17,483

The movement for the period in the net deferred tax asset is as follows:

		Millions of yen	
	Note	**2019**	2018 (restated)
At 1 April		**17,483**	26,487
Exchange differences		**(573)**	(385)
Charge to the income statement for the period	10	**(1,939)**	(7,514)
Deferred tax transferred to assets held for sale		**(117)**	—
Charge to other comprehensive income for the period		**(912)**	(1,105)
At 31 March		**13,942**	17,483

The charge of ¥912 million (2018: ¥1,105 million) to other comprehensive income in the year comprises a credit to the hedging reserve of ¥13 million (2018: a charge of ¥450 million), note 34, and a credit to the fair value reserve of ¥18 million (2018: a charge of ¥89 million), note 34. The Company also has a charge to other comprehensive income in respect of retirement benefit obligations in retained earnings of ¥943 million (2018: ¥566 million), note 27.

The previous-year charge to the income statement for the period includes the charge of ¥9,590 million related to the change in U.S. federal corporate tax rate.

The following movement in the Group's deferred tax assets and liabilities took place during the periods ended 31 March 2019 and 31 March 2018.

Millions of yen

	Note	Property, plant and equipment	Tax losses	Fair value losses	Defined benefit obligations	Provisions	Other	Total
Deferred tax assets								
At 1 April 2018		**3,856**	**12,098**	**406**	**12,807**	**7,347**	**2,972**	**39,486**
Exchange differences		**(3)**	**(156)**	**(22)**	**(22)**	**(158)**	**(79)**	**(440)**
(Charge)/credit to the income statement in the period	10	**(512)**	**(2,402)**	**—**	**(169)**	**665**	**(762)**	**(3,180)**
Transfer to assets held for sale		**(26)**	**(39)**	**—**	**—**	**(49)**	**(3)**	**(117)**
Charge to other comprehensive income for the period		**—**	**—**	**—**	**(943)**	**—**	**(105)**	**(1,048)**
Gross deferred tax assets		**3,315**	**9,501**	**384**	**11,673**	**7,805**	**2,023**	**34,701**
Offset of deferred tax assets and liabilities relating to income taxes levied by the same taxation authority		**(768)**	**(315)**	**—**	**(198)**	**(128)**	**(881)**	**(2,290)**
At 31 March 2019		**2,547**	**9,186**	**384**	**11,475**	**7,677**	**1,142**	**32,411**

Millions of yen

(Restated)	Note	Property, plant and equipment	Tax losses	Fair value losses	Defined benefit obligations	Provisions	Other	Total
Deferred tax assets								
At 1 April 2017		4,008	15,100	368	16,656	9,146	2,913	48,191
Exchange differences		(57)	289	39	175	52	186	684
(Charge)/credit to the income statement in the period	10	(95)	(3,291)	(1)	(3,458)	(1,851)	36	(8,660)
Charge to other comprehensive income for the period		—	—	—	(566)	—	(163)	(729)
Gross deferred tax assets		3,856	12,098	406	12,807	7,347	2,972	39,486
Offset of deferred tax assets and liabilities relating to income taxes levied by the same taxation authority		(1,554)	(344)	—	(197)	(301)	(1,189)	(3,585)
At 31 March 2018		2,302	11,754	406	12,610	7,046	1,783	35,901

The Group assesses its ability to utilize tax losses in future periods based on management-approved financial forecasts. This takes account of the Group's medium and long-term strategic and financial plans and the expected future economic outlook. The ability to utilize tax losses in future periods also takes account of material tax adjusting items and the period (if any) in which tax losses might expire under local tax laws. The Group's ability to utilize its tax losses is re-assessed annually.

At 31 March 2019, the Group has tax losses which it is able to carry forward of ¥215,679 million (2018: ¥235,759 million), in respect of which it is recognizing a deferred tax asset of ¥9,501 million (2018: ¥12,098 million).

A significant part of this deferred tax asset arises in the USA and a deferred tax asset of ¥4,408 million (2018: ¥5,614 million) has been recognized based on management-approved financial forecasts, taking into account the date of expiry of tax losses under US tax laws and these are expected to be utilized by 2023.

There deferred tax assets recognized in Poland of ¥1,460 million (2018: ¥1,980 million). The group has reviewed the latest forecasted results for the Polish business and based on these we believe it is probable that this asset will be utilised by 2026.

There are deferred tax assets in Italy of ¥1,348 million (2018: ¥1,511 million). Based on the current forecast the Group believes it is probable that this credit will be fully utilized in the next 5 to 7 years.

Tax losses of ¥28,272 million (2018: ¥38,047 million) are being carried forward in Japan, on which a deferred tax asset of ¥59 million is recognized (2018: ¥101 million). The remaining tax losses have no deferred tax recognized. Tax losses of ¥10,545 million expired during the period ended 31 March 2019. Remaining tax losses are subject to time expiry between 2020 and 2026, with ¥10,833 million expiring within the next 5 years.

A further ¥889 million (2018: ¥1,053 million) of the deferred tax asset relates to tax losses arising in the UK, based on the management-approved financial forecasts. These tax losses are not subject to time expiry. Further tax losses of ¥100,615 million (2018: ¥101,408 million) are being carried forward in the UK and the Group does not consider it probable that there will be sufficient future taxable profits against which these losses may be utilized and therefore no deferred tax asset is recognized.

A deferred tax asset of ¥1,337 million (2018: ¥1,840 million), in respect of tax losses arising in other territories, is recognized in full, based on management-approved financial forecasts.

In addition to tax losses in Japan and the UK on which no deferred tax asset is being recognized, the Group also considers it appropriate not to recognize a deferred tax asset in respect of other tax losses of ¥41,538 million (2018: ¥39,274 million) arising in other countries, of which ¥5,921 million subject to time expiry under local tax laws. The balance of unrecognized tax losses of ¥35,617 million, are not subject to time expiry.

The deferred tax asset in respect of the Group's retirement benefit obligations arises mainly in USA, where a deferred tax asset of ¥5,935 million (2018: ¥6,825 million) is recognized. The other significant deferred tax asset recognized relates to Germany, being ¥5,030 million (2018: ¥5,394 million).

There are unrecognized deferred tax assets in relation to retirement benefit obligations of ¥1,301 million (2018: ¥1,203 million) of which ¥809 million relates to the UK (2018: ¥799 million).

The Group also has other assets on which no deferred tax is recognized amounting to ¥13,562 million (2018: ¥12,315 million), of which ¥8,393 million relates to Japan and ¥3,973 million to the UK.

The Group has losses amounting to ¥16,995 million (2018: ¥16,906 million) which are only available for offset against future capital gains in the UK and the USA. Since it is uncertain whether these losses will be utilized, no deferred tax is recognized. ¥10,567 million of these losses will expire within 5 years.

Millions of yen

	Note	**Property, plant and equipment**	**Fair value gains**	**Provisions**	**Other**	**Total**
Deferred tax liabilities						
At 1 April 2018		**10,216**	**9,943**	**373**	**1,471**	**22,003**
Exchange differences		**602**	**(394)**	**(15)**	**(60)**	**133**
(Credit)/charge to the income statement in the period	10	**(1,169)**	**(129)**	**91**	**(34)**	**(1,241)**
Charge to other comprehensive income for the period		**—**	**(18)**	**—**	**(118)**	**(136)**
Gross deferred tax liabilities		**9,649**	**9,402**	**449**	**1,259**	**20,759**
Offset of deferred tax assets and liabilities relating to income taxes levied by the same taxation authority		**(1,366)**	**—**	**(296)**	**(628)**	**(2,290)**
At 31 March 2019		**8,283**	**9,402**	**153**	**631**	**18,469**

Millions of yen

(Restated)	Note	Property, plant and equipment	Fair value gains	Provisions	Other	Total
Deferred tax liabilities						
At 1 April 2017		9,923	9,612	464	1,705	21,704
Exchange differences		470	594	22	(17)	1,069
Credit to the income statement in the period	10	(177)	(345)	(404)	(220)	(1,146)
Charge to other comprehensive income for the period		-	82	291	3	376
Gross deferred tax liabilities		10,216	9,943	373	1,471	22,003
Offset of deferred tax assets and liabilities relating to income taxes levied by the same taxation authority		(2,252)	-	(212)	(1,121)	(3,585)
At 31 March 2018		7,964	9,943	161	350	18,418

Deferred taxation provided on unremitted earnings of joints ventures and associates at 31 March 2019, was ¥174 million (2018: ¥349 million). This reflects local withholding and other taxes which would be suffered if these earnings were repatriated and which would not be creditable against local corporation tax.

Fair value gains principally relate to the recognition of intangible assets on acquisition of the Pilkington Group by NSG UK Enterprises Ltd in June 2006.

22. Inventories

	Millions of yen	
	2019	2018 (restated)
Raw materials	**26,130**	26,334
Work-in-progress	**22,829**	22,018
Finished goods	**67,150**	64,089
Capitalized costs of obtaining a contract	**3,536**	2,333
	119,645	114,774

The cost of inventories recognized as an expense and included in cost of sales amounted to ¥358,376 million (2018 restated: ¥347,666 million) and includes the write down of inventories totaling ¥1,564 million (2018: ¥2,331 million) and the reversal of inventory write-downs made in previous periods amounting to ¥1,205 million (2018: ¥2,052 million). The reversal of previous write-downs relates to an increase in the net realizable value at the end of the period.

In addition, write-down of inventories totaling ¥55 million (2018: ¥29 million) has been charged to exceptional items, note 7.

The carrying amount of inventories carried at fair value less cost to sell (net realizable value) amount to ¥12,450 million (2018: ¥13,102 million).

23. Cash and cash equivalents

	Millions of yen	
	2019	2018
Cash at bank and in hand	**42,841**	43,309
Short-term deposits	**9,565**	21,492
	52,406	64,801

The effective interest rate on the Group's short-term bank deposits was 1.77 percent (2018: 3.72 percent) with an average maturity of 35 days (2018: 17 days).

The short-term deposits noted above, which constitute cash equivalents, are represented by deposit account balances principally in the UK, Vietnam and Chile.

The Group's cash flow statement includes the following:

		Millions of yen	
	Note	**2019**	2018
Cash and cash equivalents		**52,406**	64,801
Bank overdrafts	25	**(2,114)**	(2,002)
		50,292	62,799

24. Assets held for sale

	Millions of yen 2019	2018
Assets held for sale within a disposal group		
Intangible assets	**3**	—
Property, plant and equipment	**2,605**	—
Investments accounted for using the equity method	**10**	—
Assets held at fair value through other comprehensive income	**3**	—
Deferred tax assets	**128**	—
Inventories	**81**	—
Trade and other receivables	**2,169**	—
Contract assets	**205**	—
	5,204	—
Liabilities related to assets held for sale within a disposal group		
Deferred tax liabilities	**(1)**	—
Borrowings	**(6)**	—
Trade and other payables	**(1,215)**	—
Provisions	**(210)**	—
	(1,432)	—
Assets held for sale within a disposal group held for sale (net)	**3,772**	—

At 31 March 2019, assets and liabilities held within a disposal group mainly relates to Architectural businesses in Europe and Technical Glass businesses in Japan. They are expected to be disposed within one year from the balance sheet date.

25. Borrowings

a. Borrowings and net debt

	Note	Millions of yen 2019	2018
Current			
Bank overdrafts	23	**2,114**	2,002
Bank borrowings		**38,599**	79,117
Other long-term loans		**64**	15,060
Finance lease liabilities		**23**	23
Non-equity non-controlling interest preference shares		**254**	268
		41,054	96,470
Non-current			
Bank borrowings		**323,752**	269,050
Other long-term loans		**331**	354
Finance lease liabilities		**46**	44
Non-equity non-controlling interest preference shares		**4,469**	4,737
		328,598	274,185
Total borrowings		**369,652**	370,655

Group borrowings include secured liabilities of ¥12,144 million (2018: ¥19,463 million). Borrowings are secured by fixed and floating charges over certain assets of undertakings in the Group. Bank borrowings in the above table include the liabilities of ¥12,144 million (2018: ¥19,463 million) as a consequence of the finance lease contracts from the sale and leaseback transactions made by the Group in Japan.

	Note	2019	2018
		Millions of yen	
Summary of net debt			
Financial liabilities			
borrowings		**369,652**	370,655
derivative financial instruments	19	**1,856**	1,999
Financial assets			
derivative financial instruments	19	**(1,401)**	(1,383)
Cash and cash equivalents	23	**(52,406)**	(64,801)
Net debt		**317,701**	306,470

Net debt includes commodity hedges within derivative financial instruments.

b. Movements of total borrowings

A reconciliation of movements in the total borrowings is as follows:

	Borrowings, other long term loans and bank overdrafts	Finance lease liabilities	Non-equity non-controlling interest preference shares	Total
				Millions of yen
				2019
At 1 April	**365,583**	**67**	**5,005**	**370,655**
Exchange differences and other movements	**(4,556)**	**—**	**(282)**	**(4,838)**
Repayment of borrowings	**(107,948)**	**(25)**	**—**	**(107,973)**
Proceeds from borrowings	**108,874**	**33**	**—**	**108,907**
Amortization of arrangement fees	**2,907**	**—**	**—**	**2,907**
Transfer to assets held for sale	**—**	**(6)**	**—**	**(6)**
At 31 March	**364,860**	**69**	**4,723**	**369,652**

	Borrowings, other long term loans and bank overdrafts	Finance lease liabilities	Non-equity non-controlling interest preference shares	Total
				Millions of yen
				2018
At 1 April	391,794	85	4,519	396,398
Exchange differences and other movements	3,027	—	486	3,513
Repayment of borrowings	(94,710)	(26)	—	(94,736)
Proceeds from borrowings	62,616	8	—	62,624
Amortization of arrangement fees	2,856	—	—	2,856
At 31 March	365,583	67	5,005	370,655

c. Interest rate exposure

The exposure of the Group's borrowings to interest rate changes and the contractual re-pricing dates are as follows:

	Less than one year	One to five years	Over five years	Total
				Millions of yen
				2019
Total borrowings	**316,275**	**47,896**	**5,481**	**369,652**
Effect of interest rate swaps	**(58,512)**	**58,512**	**—**	**—**
	257,763	**106,408**	**5,481**	**369,652**

	Less than one year	One to five years	Over five years	Total
				Millions of yen
				2018
Total borrowings	323,123	36,762	10,770	370,655
Effect of interest rate swaps	(86,729)	86,729	—	—
	236,394	123,491	10,770	370,655

The effective interest rates at the balance sheet date on the Group's principal currency borrowings were as follows:

	Interest rate %				
					2019
	Yen	**£**	**US$**	**Euro**	**Other**
Bank overdrafts	**—**	**0.99**	**—**	**0.06**	**1.14**
Bank borrowings	**1.56**	**—**	**5.01**	**1.73**	**—**
Other long-term loans	**1.56**	**—**	**—**	**—**	**—**
Finance lease obligations	**3.04**	**—**	**—**	**—**	**9.00**

	Interest rate %				
					2018
	Yen	£	US$	Euro	Other
Bank overdrafts	—	1.71	—	2.01	0.11
Bank borrowings	1.85	—	5.10	2.51	15.25
Other long-term loans	1.56	—	—	—	—
Finance lease obligations	2.18	—	—	—	—

The non-equity non-controlling interest preference shares relate to Pilkington Deutschland AG and Dahlbusch AG with the right to a dividend of 5.6 and 4.5 percent of nominal value respectively in perpetuity.

d. Fair values of borrowings

The carrying amounts and fair values of the Group's non-current borrowings are as follows:

	Millions of yen			
		2019		2018
	Carrying amounts	**Fair values**	Carrying amounts	Fair values
Bank borrowings	**323,752**	**299,020**	269,050	249,392
Other long-term loans	**331**	**331**	354	354
Finance lease obligations	**46**	**46**	44	44
Non-equity non-controlling interest preference shares	**4,469**	**4,469**	4,737	4,737
	328,598	**303,866**	274,185	254,527

The above fair values are based on cash flows discounted using a rate based on credit risk factors and the relevant currency swap rate for the specific maturity, plus a margin. This methodology is consistent with hierarchy level 2 inputs as set out in note 20.

e. Currency of borrowings

The Group's total borrowings are denominated in the following currencies:

	Millions of yen	
	2019	2018
Japanese yen	**266,366**	266,216
Euro	**64,261**	56,332
Sterling	**7,842**	16,456
Polish zloty	**7,103**	10,067
US dollar	**21,189**	18,099
Swedish krona	**1,832**	1,863
Other currencies	**1,059**	1,622
	369,652	370,655

f. Maturity profile of committed borrowings

The Group has the following undrawn borrowing facilities:

	Millions of yen	
	2019	2018
Floating rate		
maturing after one year	**74,591**	90,082

The overall maturity profile of the Group's borrowings is as follows:

	Millions of yen	
	2019	2018
Within one year	**41,054**	96,470
One to two years	**38,617**	97,194
Two to three years	**138,114**	25,550
Three to four years	**82,734**	91,244
Four to five years	**62,571**	36,121
After five years	**6,562**	24,076
	369,652	370,655

g. Finance leases

The finance lease liabilities are analyzed as follows:

	Millions of yen	
	2019	2018
Finance lease liabilities – minimum lease payments		
not later than one year	**23**	23
later than one year and not later than five years	**45**	44
Later than five years	**1**	—
Present value of finance lease liabilities	**69**	67

The maturity of the present value of finance lease liabilities is as follows:

	Millions of yen	
	2019	2018
Not later than one year	**23**	23
Later than one year and not later than five years	**45**	44
Later than five years	**1**	—
Present value of finance lease liabilities	**69**	67

The fair value of the Group's non-current finance lease liabilities equates to book value.

It is the Group's policy to lease certain of its plant and equipment under finance leases. Interest rates are fixed at the contract date. The majority of the Group's leases are subject to fixed interest rates and all leases are on a fixed repayment basis.

26. Trade and other payables

		Millions of yen	
	Note	**2019**	2018 (restated)
Trade payables		**85,976**	86,603
Amounts owed to related parties (trading)	38	**2,206**	2,826
Loans from related parties		**—**	12
Social security and other taxes		**5,880**	5,982
Other payables		**20,711**	22,387
Accruals		**13,133**	14,861
		127,906	132,671
Current		**127,425**	131,991
Non-current		**481**	680
		127,906	132,671

The directors consider that the carrying amount of trade and other payables approximates to their fair value.

27. Pensions and other post-employment benefits

The Group operates a number of defined benefit pension arrangements, together with related arrangements, which are required to be disclosed as post-employment or other long-term benefits under IAS 19. The defined benefit pension arrangements cover schemes operating in Japan, the UK, Germany, Austria, the USA, Canada and Sweden and there are leaving indemnity arrangements in Italy and Austria, together with phased retirement (Altersteilzeit) and long service arrangements in Germany.

The defined benefit pension schemes are closed with the exception of those in Japan, Canada and Sweden. The German and UK defined benefit pension schemes are closed to new members but continuing employees accrue pension rights covering their current employment. Although benefits are accruing in the UK plans, the definition of pensionable salary has been 'frozen' so that benefits no longer increase in line with salary increases.

All the pension schemes are unfunded except for those in Japan, the UK, the USA and Canada. The assets of the funded schemes are generally held in separately administered trusts, either as specific assets or as a proportion of a general fund, or are insurance contracts. Pension scheme assets held in trust are governed by local regulations and practice in each country. Responsibility for governance of the schemes - including investment decisions and contribution schedules – lies either with the Group or jointly with the Group and the board of trustees.

Through its defined benefit pension schemes, the Group is exposed to a number of risks, the most significant of which are detailed below:

Asset volatility	The liabilities are calculated using a discount rate set with reference to corporate bond yields; if assets underperform against this yield, this will create a deficit. All funded schemes hold a significant proportion of growth assets, which are expected to outperform corporate bonds in the long-term while providing volatility and risk in the short-term. The allocation to growth assets is monitored regularly to ensure it remains appropriate and in line with the Group's long-term strategy to manage the schemes.
Changes in bond yields	A decrease in corporate bond yields will increase the scheme liabilities, although this will be partially offset by an increase in the value of the schemes' bond holdings.
Inflation risk	Much of the UK schemes' benefit obligations are linked to inflation, and higher inflation will lead to higher liabilities (although, in most cases, caps on the level of inflationary increases are in place to protect against extreme inflation). The Pilkington Superannuation Scheme (PSS) hedges 90% of liability movements against interest and inflation rate volatility.
Life expectancy	The majority of the plans' obligations are to provide benefits for the life of the member, and in some cases, their spouse on death of the member, so increases in life expectancy will result in an increase in the liabilities. Some of the longevity risk in the main UK plan is hedged with a longevity swap which was put in place in 2012. In August 2016 NSG entered into an agreement with the Pension Insurance Corporation (PIC) to insure pensions in payment for a group of current pensioners in the UK main plan. The plan now holds annuity contracts to cover these thereby removing all risks in respect of these pensions.

Pension plan assets are invested in different asset classes in order to maintain a balance between risk and return. The main plans use government and corporate bonds as well as cash as liability matching assets. The remainder of the asset classes are used as return seeking assets. Investments are well diversified to limit the financial effect of the failure of any individual investment.

The largest pension scheme is in the UK. This scheme, the Pilkington Superannuation Scheme (PSS), covered 662 employees, 2,580 deferred members and 9,816 pensioners as at 31 March 2019. This scheme was closed to new members with effect from 30 September 2008. This scheme is subject to applicable UK employment laws and is governed by a Board of Trustees. The Board of Trustees consists of seven member nominated directors and seven employer nominated directors. Of the employer nominated directors, two are independent and five are current or former employees of the Group. The Board of Trustees is responsible for the overall governance of the scheme and the management of its assets.

Prior to 1 January 2009, employer contributions under the PSS's governing trust deed were fixed at 10.5 percent of pensionable salary for active members. However, with effect from that date, employer contributions are now levied at 16 percent of pensionable salary for active members accruing on a 1/60th basis, and 12.5 percent for active members accruing on a 1/80th basis.

A formal funding valuation of the scheme's liabilities is carried out using a prudent basis, as agreed between the Trustee and the Company, every three years. If the funding valuation reveals a deficit the Trustee agree with the Group a plan for recovering that deficit. Following the actuarial valuation as at 31 December 2017, the Group agreed a funding plan which requires annual deficit contributions of £25 million (¥3,675 million at FY2018 exchange rates) payable up to and including 2018. For the financial years FY2020 to FY2022 the Company has agreed with the Trustee to set up and contribute to an escrow account in favor of the scheme. This will provide further security to the scheme should it be required in the future in order to meet the scheme's funding targets or in the unlikely event of a company insolvency. The contributions to the escrow account will be not more than £12 million (¥1,752 million at FY2019 exchange rates) per year.

The Group has an unconditional right to a refund of surplus, as defined under IFRIC 14 and considers that the possibility that a surplus could be reduced or extinguished by discretionary actions by the trustee does not affect the existence of the asset at the end of the reporting period. The Group therefore recognizes a pension asset with respect to this scheme valued on an IAS19R basis. No liability is recognized with respect to further funding contributions.

The investment objectives and asset allocation policy adopted by the Trustee are defined in the scheme's Statement of Investment Principles and associated documentation. The Company and Trustee continue to investigate jointly any potential opportunities to de-risk the PSS including but not limited to the composition of the investment portfolio and further use of buy-in policies when this becomes financially attractive.

The Group operates a number of defined benefit pension plans in Japan. These plans are of cash balance design and generally provide lump sums at retirement. The plans are governed by the Japanese Ministry of Health, Labor and Welfare in accordance with the Defined Benefit Corporate Pension Law. They are subject to minimum funding requirements stipulated in law, which requires the plan sponsor to pay additional contributions to achieve a minimum funding level within a certain time scale if the plan does not hold sufficient assets. The largest Japanese plan covers employees of Nippon Sheet Glass Company, Limited, NSG Co Ltd (Tarui), and NSG Co Ltd (Tsu). The latest valuation for this plan was carried out as at 31 March 2016, and showed a surplus of ¥2,272 million. The investment strategy is determined by the Trustee and the current strategic allocation is approximately 22% equity, 78% bonds and insurance products.

The Group also operates post-retirement healthcare and life insurance benefits for employees, retirees and their dependents in the USA and for retirees in the UK. The method of accounting, assumptions and the frequency of actuarial valuations are similar to those used for defined benefit pension schemes.

Balance sheet obligations (assets) are as follows:

	Millions of yen	
	2019	2018
Recognized in non-current (assets):		
Pension and early-retirement benefit schemes in surplus	**(27,557)**	(27,144)
Recognized in Pension and other long-term benefit obligations:		
Pension and early-retirement benefit schemes in deficit	**45,057**	47,871
Post-retirement healthcare benefits	**20,972**	23,913
Long service arrangements	**148**	153
Total recognized in Pension and other long-term benefit obligations	**66,177**	71,937
Net liability in the balance sheet	**38,620**	44,793

(Charges)/credits in the income statement and statement of comprehensive income are as follows:

		Millions of yen						
		2019				2018		
	Note	**Operating profit**	**Exceptional Items**	**Finance costs**	**SoCI***	Operating profit	Finance costs	SoCI*
Pension and early-retirement benefits		**(3,600)**	**(2,144)**	**361**	**(465)**	(3,851)	(88)	6,367
Post-retirement healthcare benefits		**(26)**	**—**	**(839)**	**3,682**	(27)	(911)	(677)
Long service arrangements		**(11)**	**—**	**(2)**	**—**	(7)	(1)	—
Deferred income and other taxes**	21	**—**	**759**	**—**	**(2,520)**	—	—	(3,941)
At 31 March		**(3,637)**	**(1,385)**	**(480)**	**697**	(3,885)	(1,000)	1,749

* Statement of comprehensive income

** Of the deferred income and other taxes in the Statement of Comprehensuive Income, a charge of ¥943 million (2018: ¥566 million) is included within deferred tax (note 21). Other taxes of ¥1,577 million (2018: ¥3,375 million) are included as a charge against the pension asset.

Excluding long service arrangements, the amounts recognized in the balance sheet are determined as follows:

	Millions of yen				
	2019				
	Pension and early retirement benefits				**Post-retirement healthcare**
	Japan	**UK**	**Rest of world**	**Total**	**Total**
Present value of the funded benefit obligation	**35,767**	**229,663**	**24,584**	**290,014**	**—**
Fair value of assets of the plans	**(33,355)**	**(272,058)**	**(20,715)**	**(326,128)**	**—**
Deficit/(surplus) in the funded plans	**2,412**	**(42,395)**	**3,869**	**(36,114)**	**—**
Present value of the unfunded benefit obligation	**—**	**4,507**	**34,269**	**38,776**	**20,972**
Net liability/(asset) in the balance sheet	**2,412**	**(37,888)**	**38,138**	**2,662**	**20,972**
Taxes relating to refund of pension fund surplus	**—**	**14,838**	**—**	**14,838**	**—**
Net liability/(asset) in the balance sheet after tax on refund	**2,412**	**(23,050)**	**38,138**	**17,500**	**20,972**
Included in non-current assets	**—**	**(27,557)**	**—**	**(27,557)**	**—**
Included in pension and other long-term benefit obligations	**2,412**	**4,507**	**38,138**	**45,057**	**20,972**

	Millions of yen				
	2018				
	Pension and early retirement benefits				Post-retirement healthcare
	Japan	UK	Rest of world	Total	Total
Present value of the funded benefit obligation	35,336	239,325	26,252	300,913	—
Fair value of assets of the plans	(33,622)	(281,085)	(21,480)	(336,187)	—
Deficit/(surplus) in the funded plans	1,714	(41,760)	4,772	(35,274)	—
Present value of the unfunded benefit obligation	—	4,575	36,810	41,385	23,913
Net liability/(asset) in the balance sheet	1,714	(37,185)	41,582	6,111	23,913
Taxes relating to refund of pension fund surplus	—	14,616	—	14,616	—
Net liability/(asset) in the balance sheet after tax on refund	1,714	(22,569)	41,582	20,727	23,913
Included in non-current assets	—	(27,144)	—	(27,144)	—
Included in pension and other long-term benefit obligations	1,714	4,575	41,582	47,871	23,913

The weighted average duration of the pension obligations across all plans was 14 years as at 31 March 2019.

Excluding long service arrangements, the amounts recognized in the income statement are as follows:

					Millions of yen
					2019
	Pension and early retirement benefits				**Post-retirement healthcare**
	Japan	**UK**	**Rest of world**	**Total**	**Total**
Current service cost	**(1,328)**	**(1,325)**	**(494)**	**(3,147)**	**(26)**
Past service cost	**—**	**—**	**(35)**	**(35)**	**—**
Past service cost (exceptional, net of tax credit)	**—**	**(1,385)**	**—**	**(1,385)**	**—**
Settlements and terminations losses	**—**	**(122)**	**—**	**(122)**	**—**
Administration expenses	**(13)**	**(1)**	**(282)**	**(296)**	**—**
Operating profit charge	**(1,341)**	**(2,833)**	**(811)**	**(4,985)**	**(26)**
Net interest on the net defined benefit liability	**(8)**	**1,089**	**(720)**	**361**	**(839)**
Finance costs – (charge)/credit	**(8)**	**1,089**	**(720)**	**361**	**(839)**
Total income statement charge	**(1,349)**	**(1,744)**	**(1,531)**	**(4,624)**	**(865)**

					Millions of yen
					2018
	Pension and early retirement benefits				Post-retirement healthcare
	Japan	UK	Rest of world	Total	Total
Current service cost	(1,339)	(1,587)	(459)	(3,385)	(27)
Past service cost	—	(70)	(17)	(87)	—
Settlements and terminations losses	—	(83)	7	(76)	—
Administration expenses	(13)	(16)	(274)	(303)	—
Operating profit charge	(1,352)	(1,756)	(743)	(3,851)	(27)
Net interest on the net defined benefit liability	(18)	783	(853)	(88)	(911)
Finance costs – (charge)/credit	(18)	783	(853)	(88)	(911)
Total income statement charge	(1,370)	(973)	(1,596)	(3,939)	(938)

Including charges with respect to long service arrangements, of the total charge to operating profit of ¥5,021 million (2018: ¥3,885 million), a charge of ¥1,429 million (2018: ¥1,561 million) is included in cost of sales, a charge of ¥68 million (2018: ¥136 million) is included within distribution costs, a charge of ¥2,166 million (2018: ¥2,166 million) is included within administrative expenses, a charge of ¥1,385 million (2018: ¥29 million) is included within exceptional items and a credit of ¥nil million (2018: credit of ¥7 million) is included within other income.

The actual return on the various plan assets was a gain of ¥15,018 million (2018: ¥7,216 million). The Group expects to contribute ¥5,061 million to pension plans (excluding contributions to the escrow account) during the next financial period and ¥1,690 million to post-retirement healthcare plans.

The (charges)/credits recognized in the statement of comprehensive income during the period are as follows:

Millions of yen

	2019				
	Pension and early retirement benefits				Post-retirement healthcare
	Japan	UK	Rest of world	Total	Total
Actual return less interest income on plan assets recognized in the income statement	**(137)**	**7,003**	**(87)**	**6,779**	**—**
Experience gains arising on schemes’ liabilities	**(28)**	**(57)**	**(25)**	**(110)**	**2,614**
Changes in the financial assumptions underlying the present value of the schemes’ liabilities	**(368)**	**(7,559)**	**(459)**	**(8,386)**	**(348)**
Changes in the demographic assumptions underlying the present value of the schemes’ liabilities	**—**	**(9)**	**1,261**	**1,252**	**1,416**
	(533)	**(622)**	**690**	**(465)**	**3,682**

Millions of yen

	2018				
	Pension and early retirement benefits				Post-retirement healthcare
	Japan	UK	Rest of world	Total	Total
Actual return less interest income on plan assets recognized in the income statement	1,499	(3,456)	841	(1,116)	—
Experience gains arising on schemes’ liabilities	162	4,883	167	5,212	136
Changes in the financial assumptions underlying the present value of the schemes’ liabilities	(373)	1,640	(1,692)	(425)	(1,237)
Changes in the demographic assumptions underlying the present value of the schemes’ liabilities	—	2,401	295	2,696	424
	1,288	5,468	(389)	6,367	(677)

The movements in the present value of the Defined Benefit Obligations (DBO) recognized in the balance sheet are as follows:

Millions of yen

	Pension and early retirement benefits				Post-retirement healthcare
	Japan	UK	Rest of world	Total	Total
At 31 March 2017	**35,247**	**241,629**	**61,736**	**338,612**	**24,506**
Current service cost	1,339	1,587	459	3,385	39
Interest cost on the schemes' liabilities	276	6,437	1,707	8,420	911
Members' contributions	—	19	—	19	—
Plan amendments	—	70	17	87	(12)
Settlements and terminations	—	83	(7)	76	—
Actuarial losses	211	(8,924)	1,230	(7,483)	677
Benefits paid	(1,737)	(15,785)	(4,357)	(21,879)	(1,183)
Exchange differences	—	18,784	2,277	21,061	(1,025)
At 31 March 2018	**35,336**	**243,900**	**63,062**	**342,298**	**23,913**
Current service cost	1,328	1,325	494	3,147	26
Interest cost on the schemes' liabilities	242	6,107	1,529	7,878	839
Members' contributions	—	33	—	33	—
Plan amendments	—	2,144	35	2,179	—
Settlements and terminations	—	122	—	122	—
Actuarial losses	396	7,625	(777)	7,244	(3,682)
Benefits paid	(1,535)	(17,354)	(4,452)	(23,341)	(1,099)
Exchange differences	—	(9,731)	(1,039)	(10,770)	975
At 31 March 2019	**35,767**	**234,171**	**58,852**	**328,790**	**20,972**

The movements in the fair value of assets recognized in the balance sheet are as follows:

Millions of yen

	Pension and early retirement benefits				Post-retirement healthcare
	Japan	UK	Rest of world	Total	Total
At 31 March 2017	**32,422**	**266,733**	**22,856**	**322,011**	**—**
Members' contributions	—	19	—	19	—
Settlements and terminations	—	83	—	83	—
Return on plan assets (excluding amount included in interest income)	1,499	(3,456)	841	(1,116)	—
Benefits paid	(1,737)	(15,785)	(4,357)	(21,879)	(1,183)
Expenses paid	(13)	(16)	(274)	(303)	—
Employer's contributions	1,193	5,314	2,483	8,990	1,183
Interest income on assets	258	7,220	854	8,332	—
Exchange differences	—	20,973	(923)	20,050	—
At 31 March 2018	**33,622**	**281,085**	**21,480**	**336,187**	**—**
Members' contributions	—	33	—	33	—
Settlements and terminations	—	122	—	122	—
Return on plan assets (excluding amount included in interest income)	(137)	7,003	(87)	6,779	—
Benefits paid	(1,535)	(17,354)	(4,452)	(23,341)	(1,099)
Expenses paid	(13)	(1)	(282)	(296)	—
Employer's contributions	1,184	5,248	2,419	8,851	1,099
Interest income on assets	234	7,196	809	8,239	—
Exchange differences	—	(11,274)	828	(10,446)	—
At 31 March 2019	**33,355**	**272,058**	**20,715**	**326,128**	**—**

The movements in the net liability recognized in the balance sheet are as follows (excluding taxation arising on refund of surplus):

Millions of yen

	Pension and early retirement benefits				Post-retirement healthcare
	Japan	UK	Rest of world	Total	Total
At 31 March 2017	**(2,825)**	**25,104**	**(38,880)**	**(16,601)**	**(24,506)**
Total charge recognized in the income statement	(1,370)	(973)	(1,596)	(3,939)	(938)
Total credit/(charge) recognized in other comprehensive income	1,288	5,468	(389)	6,367	(677)
Employer's contributions	1,193	5,314	2,483	8,990	1,183
One-off employer contributions for financing terminations	—	83	—	83	—
Exchange differences	—	2,189	(3,200)	(1,011)	1,025
At 31 March 2018	**(1,714)**	**37,185**	**(41,582)**	**(6,111)**	**(23,913)**
Total charge recognized in the income statement	(1,349)	(2,503)	(1,531)	(5,383)	(865)
Total credit/(charge) recognized in other comprehensive income	(533)	(622)	690	(465)	3,682
Employer's contributions	1,184	5,248	2,419	8,851	1,099
One-off employer contributions for financing terminations	—	122	—	122	—
Exchange differences	—	(1,543)	1,867	324	(975)
At 31 March 2019	**(2,412)**	**37,887**	**(38,137)**	**(2,662)**	**(20,972)**

The principal actuarial assumptions (calculated as weighted averages over the various Group plans) were as follows:

Millions of yen

	2019			2018		
	Japan	UK	Rest of World	Japan	UK	Rest of World
Discount rate	**0.60%**	**2.40%**	**2.30%**	0.70%	2.60%	2.50%
Future salary increases*	**2.40%**	**—**	**2.20%**	2.40%	—	2.30%
Future pension increases	**—**	**1.10%**	**1.60%**	—	1.20%	1.70%
Consumer Price inflation	**0.25%**	**2.10%**	**1.90%**	0.25%	2.00%	1.90%
Long-term increase in healthcare costs	**—**	**4.60%**	**4.50%**	—	4.60%	4.50%

* The weighted average future salary increases exclude frozen salaried plans; UK PSS, NGF and US salaried plan.

The Group uses appropriate mortality tables in each geographical location. The mortality assumptions used for the valuation of the PSS (which accounts for around 64 percent of the Group's total Defined Benefit Obligation) at 31 March 2019 are based on the 'SAPS2' standard UK mortality tables, with an adjustment to reflect actual mortality experience of members of that scheme based on recent experience investigations carried out by the scheme's Trustees. Future improvements in mortality have been allowed for in line with the CMI 2017 Core Projections with a long-term rate of mortality improvements of 1.25 percent per annum. Expected future lifetimes of pensioners using this mortality basis are shown below:

	31 March 2019
	Years
Expected future lifetime of a current pensioner aged 60	
- Men	**26.5**
- Women	**28.3**
Expected future lifetime, at age 60, of a future pensioner aged 60 in 20 years time	
- Men	**28.0**
- Women	**29.9**

The composition and fair value of the schemes' assets are:

Millions of yen

2019

	Japan		UK		Rest of World	
	Quoted	Unquoted	Quoted	Unquoted	Quoted	Unquoted
Domestic government bonds	**10,591**	**—**	**147,557**	**—**	**2,118**	**—**
Domestic corporate bonds	**—**	**1,701**	**46,060**	**—**	**10,158**	**—**
Overseas bonds	**6,109**	**300**	**—**	**—**	**1,605**	**—**
Domestic equities	**6,423**	**—**	**5,347**	**—**	**2,600**	**—**
Overseas equities	**2,184**	**—**	**38,623**	**5,731**	**2,602**	**—**
Property	**—**	**—**	**358**	**1,354**	**—**	**—**
Cash	**—**	**1,812**	**244**	**3,110**	**551**	**—**
Other	**—**	**4,235**	**—**	**23,674***	**1,081**	**—**
	25,307	**8,048**	**238,189**	**33,869**	**20,715**	**—**

* Note: this includes ¥28,152 in respect of the buy-in assets and a negative asset of ¥4,478 in respect of the longevity swap.

Millions of yen

2018

	Japan		UK		Rest of World	
	Quoted	Unquoted	Quoted	Unquoted	Quoted	Unquoted
Domestic government bonds	13,548	—	156,882	—	253	—
Domestic corporate bonds	—	1,073	46,592	—	18,228	—
Overseas bonds	3,413	1,686	—	—	—	—
Domestic equities	6,970	—	5,149	—	577	—
Overseas equities	2,085	—	38,962	5,535	394	—
Property	—	—	377	2,010	—	—
Cash	—	789	48	210	1,907	—
Other	—	4,058	—	25,320*	121	—
	26,016	7,606	248,010	33,075	21,480	—

* Note: this includes ¥29,385 in respect of the buy-in assets and a negative asset of ¥4,065 in respect of the longevity swap.

The principal assumptions used to determine the Defined Benefit Obligation (DBO) are the discount rate, inflation rate and the mortality basis. The sensitivity of the DBO to changes in each of these assumptions is set out below for the material plans in UK and Japan:

Assumption	Change in assumption	Impact on scheme liabilities (%)	
		Japan	UK
Discount rate	Increase/decrease by 0.5%	Decrease/increase by 5.0% / 5.4%	Decrease/increase by 6.6% / 7.4%
Inflation rate	Increase/decrease by 0.5%	n/a	Increase/decrease by 3.5% / 3.1%
Mortality	Increase life expectancy by one year	n/a	Increase by 4.1%

Sensitivities in the above table consider only the impact of assumption changes on gross scheme liabilities. As discussed earlier in this note, changes in discount rates which would be reflected in changes in bond yields, would be partially offset by a change in the value of bond holdings within funded schemes.

A one percent reduction in healthcare cost trend rates would result in a decrease in the benefit obligation of ¥531 million and a decrease in the interest and service costs of ¥27 million. A one percent increase in healthcare cost trend rates would result in an increase in the benefit obligation of ¥413 million and an increase in the interest and service costs of ¥20 million. The above trend rate sensitivities take into account the fact that increases in employer costs are subject to an annual cap.

The above sensitivity analyses are generally based on a change in one assumption while holding all other assumptions constant. In practice, this is unlikely to occur, and some changes of the assumptions may be correlated. Where relevant, the inflation sensitivity above includes changes to any inflation linked pension increases.

When calculating the sensitivity of the DBO to significant assumptions the same method has been applied as when calculating the pension liability recognized in the statement of financial position. The methods and types of assumptions used in preparing the sensitivity analysis did not change compared to previous periods.

28. Provisions

Millions of yen

	Note	Warranty	Redundancy and Restructuring	Bonus	Environmental	Claims and litigation	Other	Total
At 1 April 2018		**531**	**2,994**	**7,856**	**8,141**	**4,773**	**8,024**	**32,319**
Exchange differences		**(26)**	**(121)**	**(206)**	**148**	**(410)**	**(67)**	**(682)**
Charged to the income statement								
Charged to provisions		**547**	**3,815**	**7,542**	**97**	**1,226**	**956**	**14,183**
Effect of discounting	9	**—**	**—**	**(2)**	**207**	**—**	**—**	**205**
Transferred to assets held for sale		**—**	**—**	**(73)**	**—**	**—**	**(137)**	**(210)**
Released to the income statement in the period		**(242)**	**(78)**	**(856)**	**(1,285)**	**(839)**	**(299)**	**(3,599)**
Utilized in the period		**(155)**	**(3,495)**	**(7,989)**	**(386)**	**(981)**	**(1,146)**	**(14,152)**
At 31 March 2019		**655**	**3,115**	**6,272**	**6,922**	**3,769**	**7,331**	**28,064**
Current		**442**	**3,025**	**5,733**	**335**	**1,255**	**3,090**	**13,880**
Non-current		**213**	**90**	**539**	**6,587**	**2,514**	**4,241**	**14,184**
		655	**3,115**	**6,272**	**6,922**	**3,769**	**7,331**	**28,064**

Millions of yen

	Note	Warranty	Redundancy and Restructuring	Bonus	Environmental	Claims and litigation	Other	Total
At 1 April 2017		396	2,850	7,117	8,279	4,679	7,673	30,994
Exchange differences		32	218	314	(120)	(156)	121	409
Disposal of businesses		(5)	—	—	—	—	—	(5)
Charged to the income statement								
Charged to provisions		387	4,373	8,622	82	2,183	1,519	17,166
Effect of discounting	9	—	—	—	218	—	—	218
Released to the income statement in the period		(195)	(425)	(1,036)	(45)	(811)	(738)	(3,250)
Utilized in the period		(84)	(4,022)	(7,161)	(273)	(1,122)	(551)	(13,213)
At 31 March 2018		531	2,994	7,856	8,141	4,773	8,024	32,319
Current		335	2,803	7,523	428	1,491	3,836	16,416
Non-current		196	191	333	7,713	3,282	4,188	15,903
		531	2,994	7,856	8,141	4,773	8,024	32,319

Warranty provisions are created where the Group has given a guarantee to cover the reliability and performance of products over an extended period. Warranty provisions are calculated based on historical claims levels. Future claim levels could be different to historical claims, although changes in claims levels are not expected to have a material effect on the amounts provided. Warranty provisions are expected to be utilized over the warranty periods granted, resulting in an average period of utilization of less than two years.

Redundancy and restructuring provisions relate to provisions set up in Architectural amounting to ¥1,801 million (2018: ¥610 million), Automotive ¥1,262 million (2018: ¥2,369 million), Technical Glass ¥nil million (2018: ¥7 million) and Other Operations ¥52 million (2018: ¥8 million). Redundancy and restructuring provisions are established when the Group has a detailed formal plan and has announced that plan to the employees affected. The eventual outcome of such restructuring programs is unlikely to be materially different to the amounts provided as the provision is calculated based on specific data on the number of employees affected and related employment termination costs. Redundancy and restructuring provisions are expected to be utilized mainly within the next financial period.

Bonus provisions are established on the accrued expected payment with respect to bonus schemes offered to employees. These are calculated with reference to the performance of the Group in comparison to the metrics within the bonus scheme. Where this relates to expectations of future performance, the Group compares its estimates of expected future performance with the metrics of the bonus scheme, to calculate an expected future bonus payment.

Environmental provisions cover the cost of remediating environmental issues where the Group has a constructive or legal obligation to do so. At 31 March 2019, ¥912 million (2018: ¥971 million) of this provision was recorded in Architectural, ¥53 million (2018: ¥53 million) was recorded in Automotive, ¥173 million (2018: ¥287 million) was recorded in Technical Glass and ¥5,784 million (2018: ¥6,830 million) was recorded in Other Operations. The environmental provision in Other Operations relates primarily to historic liabilities in North America.

Claims and litigation provisions cover a variety of claims and potential settlements. Included in this category are historic employee and public liability issues, some of which are the subject of litigation. Where appropriate this provision includes an element of Incurred But Not Reported (IBNR) liabilities.

Other provisions relate principally to immaterial pension provisions of ¥3,804 million (2018: ¥3,916 million), cumulative leave provisions of ¥2,994 million (2018: ¥2,979 million) and onerous lease and rental provisions of ¥172 million (2018: ¥79 million).

29. Deferred income

	Millions of yen	
	2019	2018 (restated)
Deferred income	**2,079**	979
Government grants	**3,866**	4,492
	5,945	5,471
Current	**1,191**	809
Non-current	**4,754**	4,662
	5,945	5,471

		Millions of yen	
	Note	**2019**	2018 (restated)
At 1 April		**5,471**	5,290
Exchange differences		**(294)**	437
Deferred income receivable		**1,779**	584
Released to income statement	3	**(1,011)**	(840)
At 31 March		**5,945**	5,471

Deferred income comprises of customer contributions to automotive tooling costs ¥309 million (2018 restated: ¥440 million) and other deferred income of ¥1,770 million (2018: ¥539 million). The former principally comprises income received from automotive customers, whereby the tool (carried in property, plant and equipment within non-current assets) is depreciated over the same period as the related deferred income is amortized to the income statement.

Government grants mainly arise in the European Architectural and Automotive businesses and relate to capital expenditure grants in the UK, Germany, Italy and Poland. Government grants are recognized in the income statement on a straight-line basis over the period of the grant. There are no unfulfilled conditions or contingencies relating to government grants recognized as deferred income.

30. Share based payments

The Group operates a number of equity settled, share-based payment plans, under which the entity receives services from Directors, Executive Officers, Senior Corporate Officers or Corporate Officers as consideration for equity instruments (options) of the Group. The fair value of the employee services received in exchange for the grant of options is calculated using the Black-Scholes model. In accordance with IFRS 2 'Share-based Payment', the resulting cost is recognized in the income statement over the vesting period of the options, being the period in which the services are received. All plans are classified as equity settled.

The expense recognized for compensation type share options received during the period is shown below:

		Millions of yen	
	Note	**2019**	2018
Total expenses arising from share-based payment transactions	8	**102**	71

There have been no cancellations or modifications to any of the plans during 2019 or 2018.

Each share option entitles the recipient to acquire one hundred shares of common stock. Movements in the number of stock compensation-type stock options outstanding and their related weighted average exercise price are as follows:

	2019 Weighted average exercise price Yen/share	**2019** Options	2018 Weighted average exercise price Yen/share	2018 Options
At 1 April	**1**	**6,546**	1	6,847
Granted	**1**	**917**	1	917
Exercised	**1**	**(1,059)**	1	(1,218)
At 31 March	**1**	**6,404**	1	6,546

Out of the 6,404 outstanding options (2018: 6,546 options), 1,052options (2018: 2,111 options) were exercisable. Options exercised in 2019 resulted in 105,900 shares (2018: 121,800 shares) being transferred at a price of 1 yen each (2018: 1 yen each). The related weighted average share price at the time of exercise was 965 yen (2018: 869 yen) per share.

Share options outstanding at the end of the period have the following expiry date and exercise prices:

Stock option	Expiry date	Exercise price in yen/share	**2019** Shares	2018 Shares
2008 Stock Options	27 September 2038	1	**5,200**	6,500
2009 Stock Options	30 September 2039	1	**10,300**	14,000
2010 Stock Options	30 September 2040	1	**6,600**	6,600
2011 Stock Options	14 October 2041	1	**12,400**	12,400
2012 Stock Options	28 September 2042	1	**61,200**	88,400
2013 Stock Options	15 October 2043	1	**84,500**	124,200
2014 Stock Options	30 September 2044	1	**71,400**	85,200
2015 Stock Options	30 September 2045	1	**83,500**	95,200
2016 Stock Options	14 October 2046	1	**121,900**	130,400
2017 Stock Options	29 September 2047	1	**91,700**	91,700
2018 Stock Options	26 July 2048	1	**91,700**	—
			640,400	654,600

There are no vesting conditions for these stock options.

Method for estimating the fair value per share of stock options

The fair value of options granted during the period is determined using the Black-Scholes valuation model and the significant inputs into the model are listed below.

	Note	**2018 plan**	2017 plan
Share price at grant date (yen)		**1,182**	875
Exercise price (yen)		**1**	1
Expected volatility of the share price	i	**42.2%**	41.2%
Expected remaining life of the option	ii	**7 years**	7 years
Expected dividend	iii	**9.3 yen/share**	15.0 yen/share
Risk-free interest rate	iv	**(0.05)%**	(0.02)%

Notes:

i. The volatility of the share price for the 2018 plan is estimated by taking into account the actual share prices for seven years (from 28 July 2011 to 26 July 2018 (2017 plan: seven years (from 1 October 2010 to 29 September 2017)).

ii. The expected remaining life of the option is estimated reflecting the actual conditions of the option, taking into account that any person to whom the stock options were allotted may exercise the stock options five years after the holders' tenure as a Director, an Executive Officer, Senior Corporate Officer or a Corporate Officer had ended.

iii. Expected dividends for the 2018 plan is based on the actual dividends paid in the seven year period between 31 March 2012 and 31 March 2019 (2017 plan: based on the actual dividends paid in the seven year period between 31 March 2011 and 31 March 2018).

iv. The risk-free interest rate represents the yield on Government bonds for the period that corresponds to the expected remaining life of each option.

31. Called up share capital

	Number of shares	
	2019	2018
Shares authorized		
Common shares	**177,500,000**	177,500,000
Class A shares	**40,000**	40,000
Shares issued		
Common shares of no par value each	**90,593,399**	90,487,499
Class A shares of JPY 1,000,000 per share	**35,000**	40,000
Treasury shares		
Common shares	**18,418**	14,465

				Millions of yen
		2019		2018
	Number of shares	**Value**	Number of shares	Value
Issued and fully paid common shares				
At 1 April	**90,487,499**	**116,546**	90,365,699	116,463
Increase due to exercise of share options	**105,900**	**42**	121,800	83
At 31 March	**90,593,399**	**116,588**	90,487,499	116,546
Issued and fully paid Class A (preferred) shares				
At 1 April	**40,000**	**—**	40,000	—
Redemption for money	**(5,000)**	**—**	—	—
At 31 March	**35,000**	**—**	40,000	—

As at 31 March 2017, the Group issued Class A shares. The issuance of Class A shares improves the strength of the Group's balance sheet providing funds to enable the repayment of debt and investment in VA capital equipment in the Group's businesses.

The preferred dividend rate of Class A shares was set at 4.5% a year if the record date falls before 31 March 2018, 5.5% a year if the record date falls between 1 April 2018 to 31 March 2020, and 6.5% a year if the record date falls on 1 April 2020 or thereafter. Class A Shareholders are entitled to receive dividends in priority to common shareholders. If preferred dividends for Class A Shareholders are insufficient in a business year, the said shortfall will be carried forward to the following business year and beyond. In principle, Class A Shareholders are not entitled to receive dividends of common shares of the Company in addition to the said preferred dividends. Please refer to note 11 for information regarding dividends on Class A shares.

For Class A shares, call options for money and put options the consideration for which is common shares are attached.

Any time on or after 1 April 2018, the Company may acquire all or a part of Class A shares in exchange for cash.

Class A Shareholders are entitled to exercise put options, the consideration for which is common shares on or after 1 July 2020, as long as a Conversion Restriction Removal Reason has not occurred, as provided for in the Class A shares Agreement (the Agreement). The number of common shares to be delivered if the put options are exercised will be the number (excluding the total amount of the Amount Equivalent to Cumulative Accrued Dividends and Daily Prorated Accrued Preferred Dividend Amount) calculated by multiplying the amount equivalent to the amount to be paid in for the Class A shares for which the put options are exercised by the following factor, depending on the day when the put options are exercised, and dividing that product by the acquisition price of the common shares.

From 1 April 2017 to 30 June 2017:	1.05
From 1 July 2017 to 30 June 2018:	1.08
From 1 July 2018 to 30 June 2019:	1.15
From 1 July 2019 to 30 June 2020:	1.22
From 1 July 2020 to 30 June 2021:	1.29
From 1 July 2021 to 30 June 2022:	1.36
From 1 July 2022 onward	1.43

On 7 December 2018 and on 6 June 2019, the Company acquired and then retired 5,000 Class A shares respectively.

The acquisition price of common shares is 846.5 yen, which is equivalent to 95% (calculated to the second decimal place below one (1) yen and rounded to the first decimal place) of the average value of the Volume Weighted Average Price (VWAPs; calculated to the second decimal place below one (1) yen and rounded to the first decimal place) in ordinary trading of the common shares of the Company, publicly announced on the Tokyo Stock Exchange, Inc. over 30 consecutive trading days prior to 2 February 2017 (the signing date of the Agreement).

Class A shares do not have voting rights and are subject to restrictions on transfer.

Capital management
The Group considers that called up share capital and capital surplus together constitutes its capital, and they are managed in such a way as to improve its financial strength consistent with its strategy. The directors will consider this position on an ongoing basis in line with the Group's performance. Capital may be issued where the directors consider that the beneficial impact of a strengthened balance sheet or the returns on investment that would be generated by investing such funds into new projects, would outweigh any potential dilutive effects from that new share issuance. When the Group issues share capital other than common shares, the directors consider the rights and obligations attaching to the shares issued and would prioritize repayment of such shares over and above other potential uses of its funds where appropriate to do so. During FY2017, the Group issued Class A shares improving the strength of the Group's balance sheet and providing funds to enable the repayment of debt and investment in VA capital equipment in the Group's businesses. The Company intends to redeem the remaining Class A Shares in a timely and flexible manner, while maintaining financial stability, in order to ultimately redeem all of the Class A shares in future for money.

32. Capital surplus

	Note	Millions of yen	
		2019	2018
At 1 April		**166,661**	166,578
Issuance and purchase of treasury stock		**42**	83
Retirement of treasury stock	34	**(5,750)**	—
At 31 March		**160,953**	166,661

33. Retained earnings

	Note	Millions of yen	
		2019	2018 (restated)
At 1 April		**(51,350)**	(58,890)
Hyperinflation adjustment	40	**770**	—
At 1 April (after hyperinflation adjustment)		**(50,580)**	(58,890)
Profit for the period		**13,287**	6,164
Retirement benefit obligations	27	**3,217**	5,690
Deferred and other taxes on retirement benefit obligations	27	**(2,520)**	(3,941)
Hyperinflation adjustment	40	**1,735**	—
Dividends paid		**(5,669)**	—
Transfer from other reserves to retained earnings	34	**—**	(373)
At 31 March		**(40,530)**	(51,350)
Retained earnings (translation adjustment at the IFRS transition date)		**(68,048)**	(68,048)
Total retained earnings at 31 March		**(108,578)**	(119,398)

Previous year transfer from other reserves to retained earnings relates to the amount in fair value reserve which is considered to be realized after the disposal of the Group's remaining interest in China Glass Holdings Ltd.

Nippon Sheet Glass Company, Limited is subject to The Corporation Law of Japan (the Law). The Law provides that an amount equal to 10 percent of the amount to be disbursed as distributions of capital surplus (other than the capital reserve) and retained earnings (other than the legal reserve) be transferred to the capital reserve and the legal reserve, respectively, until the sum of the capital reserve and the legal reserve equals 25 percent of the capital stock account. Such distributions can be made at any time by resolution of the shareholders, or by the Board of Directors if certain conditions are met.

34. Other reserves

Millions of yen

	Note	Hedging reserve	Fair value reserve	Exchange translation reserve	Treasury stock	Stock subscription rights	Total
At 1 April 2018		**(3,290)**	**(6,256)**	**(19,564)**	**(33)**	**526**	**(28,617)**
Currency translation differences		**—**	**—**	**(14,714)**	**—**	**—**	**(14,714)**
Loss on net investment hedges	19	**—**	**—**	**(1,661)**	**—**	**—**	**(1,661)**
Cash flow hedges							
fair value gains in the period		**36**	**—**	**—**	**—**	**—**	**36**
transferred to income statement		**(154)**	**—**	**—**	**—**	**—**	**(154)**
deferred tax on fair value gains in the period	21	**13**	**—**	**—**	**—**	**—**	**13**
Assets held at fair value through other comprehensive income							
fair value losses in the period	18	**—**	**(139)**	**—**	**—**	**—**	**(139)**
deferred tax on fair value gains in the period	21	**—**	**18**	**—**	**—**	**—**	**18**
Purchase of treasury stock		**—**	**—**	**—**	**(5,754)**	**—**	**(5,754)**
Retirement of treasury stock		**—**	**—**	**—**	**5,750**	**—**	**5,750**
Share based payments		**—**	**—**	**—**	**—**	**19**	**19**
At 31 March 2019		**(3,395)**	**(6,377)**	**(35,939)**	**(37)**	**545**	**(45,203)**

Millions of yen

	Note	Hedging reserve	Fair value reserve	Exchange translation reserve	Treasury stock	Stock subscription rights	Total
At 1 April 2017		(4,702)	30	(27,119)	(31)	621	(31,201)
Currency translation differences		—	—	10,268	—	—	10,268
Loss on net investment hedges	19	—	—	(2,713)	—	—	(2,713)
Cash flow hedges							
fair value gains in the period		1,092	—	—	—	—	1,092
transferred to income statement		770	—	—	—	—	770
deferred tax on fair value gains in the period	21	(450)	—	—	—	—	(450)
Assets held at fair value through other comprehensive income							
fair value losses in the period	18	—	(6,336)	—	—	—	(6,336)
transferred to income statement	18	—	(234)	—	—	—	(234)
deferred tax on fair value gains in the period	21	—	(89)	—	—	—	(89)
Purchase of treasury stock		—	—	—	(3)	—	(3)
Disposal of treasury stock		—	—	—	1	—	1
Share based payments		—	—	—	—	(95)	(95)
Transfer from other reserves to retained earnings	33	—	373	—	—	—	373
At 31 March 2018		(3,290)	(6,256)	(19,564)	(33)	526	(28,617)

Hedging reserve
This reserve is used to record the portion of the gain or loss on a hedging instrument that is determined to be an effective hedge.

Of the net fair value losses of cash flow hedges transferred to the income statement of ¥154 million (2018: gains of ¥770 million), ¥nil million is charged to finance expenses (2018: ¥4 million), ¥1 million is charged (2018: charge of ¥3 million) to other expenses, and ¥153 million is charged (2018: credit of ¥777 million) to cost of sales.

Fair value reserve
This reserve records fair value changes on assets held at fair value through other comprehensive income.

Of the net fair value losses on assets held at fair value through other comprehensive income, ¥nil million is transferred to the income statement as a credit to other income (2018: ¥234 million).

The previous year transfer from other reserves to retained earnings relates to the amount in fair value reserve which is considered to be realized after the disposal of the Group’s remaining interest in China Glass Holdings Ltd.

Exchange translation reserve
This reserve is used to record exchange differences arising from the translation of the financial statements of foreign subsidiaries and the effect of hedging foreign net investments in foreign operations.

35. Cash flow from operating activities

	Note	2019	2018 (restated)
		Millions of yen	
Profit for the period from continuing operations		**14,378**	7,907
Adjustments for			
taxation	10	**8,352**	14,239
depreciation	14	**24,218**	25,342
amortization	13	**3,692**	4,094
impairments		**4,614**	622
reversal of impairment of non-current assets		**(2,735)**	(4,195)
profit on sale of property, plant and equipment		**(157)**	(2,381)
profit on sale of subsidiaries, joint ventures, associates and businesses		**(4)**	(51)
exchange gain on business closure	7	**(698)**	—
gain on disposal of investments in associates	7	**—**	(1,541)
movements in grants and deferred income	29	**768**	(256)
finance income	9	**(2,131)**	(1,080)
finance expense	9	**15,432**	15,704
share of profit from joint ventures and associates	16	**(6,244)**	(2,403)
other		**(1,433)**	(1,399)
Operating cash flows before movement in provisions and working capital		**58,052**	54,602
Decrease in provisions and retirement benefit obligations		**(8,593)**	(5,671)
Changes in working capital:			
inventories		**(10,045)**	(4,688)
trade and other receivables		**2,211**	(993)
trade and other payables		**1,394**	6,486
contract balances		**1,415**	1,306
Net change in working capital		**(5,025)**	2,111
At 31 March		**44,434**	51,042

In the cash flow statement, proceeds from the sale of property, plant and equipment, joint ventures and associates and investments are as follows:

	Property, plant and equipment	**Joint ventures and associates**	**Assets held at fair value through other comprehensive income**	**Other**	**Total**
	Millions of yen				
	2019				
Net book amount	**322**	**11**	**10**	**—**	**343**
Profit on sale	**157**	**4**	**—**	**—**	**161**
Proceeds from sale	**479**	**15**	**10**	**—**	**504**

	Property, plant and equipment	Joint ventures and associates	Assets held at fair value through other comprehensive income	Other	Total
	Millions of yen				
	2018				
Net book amount	1,684	—	5,313	270	7,267
Transfer from other comprehensive income	—	—	(234)	—	(234)
Profit/(loss) on sale	2,381	—	234	88	2,703
Proceeds from sale	4,065	—	5,313	358	9,736

There were no non-cash transactions in the period ended 31 March 2019 or 31 March 2018.

36. Earnings per share

Basic

Basic earnings per share is calculated by dividing the profit attributable to owners of the parent, after deducting dividends and redemption premium paid to holders of Class A shares, by the weighted average number of ordinary shares in issue during the year. The dividends related to Class A shares are calculated by the dividend rate defined in the terms and conditions of the shares. The weighted average number of ordinary shares excludes ordinary shares purchased by the company and held as treasury shares.

	2019	2018 (restated)
Profit attributable to owners of the parent (millions of yen)	**13,287**	6,164
Adjustment for;		
- Dividends on Class A shares (millions of yen)	**(2,114)**	(1,800)
- Redemption premium paid on Class A shares (millions of yen)	**(750)**	—
Profit used to determine basic earnings per share (millions of yen)	**10,423**	4,364
Weighted average number of shares (thousands)	**90,509**	90,403
Basic earnings per share (yen)	**115.16**	48.27

Diluted

Diluted earnings per share is calculated by adjusting the weighted average number of ordinary shares outstanding to assume conversion of all dilutive potential ordinary shares, following the exercise of share options and exercise of put options, attached to Class A shares, for which the consideration is common shares. As for share options, a calculation is performed to determine the number of shares that could have been acquired at fair value (determined as the average annual market share price of the Company's shares) based on the monetary value of the subscription rights attached to the outstanding share options. The number of shares calculated as above is deducted from the number of shares that would have been issued assuming the exercise of the share options. As for Class A shares, a calculation is performed to determine the number of shares that would have been issued, assuming a conversion to common shares that is most advantageous for holders of the class shares. Conversion of Class A shares to common shares is reflected in the diluted earnings per share, using the factor applied to the case where the put options are exercised from 1 July 2022 onward, if the conversion has dilutive effect.

	2019	2018 (restated)
Profit attributable to owners of the parent (millions of yen)	**13,287**	6,164
Profit used to determine diluted earnings per share (millions of yen)	**13,287**	6,164
Weighted average number of common shares in issue (thousands)	**90,509**	90,403
Adjusted for;		
share options (thousands)	**611**	609
Class A shares (thousands)	**64,934**	67,572
Weighted average number of common shares for diluted earnings per share (thousands)	**156,054**	158,584
Diluted earnings per share (yen)	**85.14**	38.87

On 10 May 2019 the Group announced its intention to undertake a partial acquisition and retirement of Class A shares. See note 43, significant subsequent events, for further details.

37. Commitments

Capital Commitments

Capital expenditure contracted for at the balance sheet date but not yet incurred is as follows:

	Millions of yen	
	2019	2018
Property, plant and equipment	**12,696**	756

Operating lease commitments

The Group leases various property, plant and equipment under non-cancellable operating lease agreements. The leases have varying terms, escalation clauses and renewal rights. The lease expenditure charged to the income statement during the period is disclosed in note 3.

The future aggregate minimum lease payments under non-cancellable operating leases which fall due are as follows:

	Millions of yen			
	2019		2018	
	Property	**Plant and equipment**	Property	Plant and equipment
Not later than one year	**4,315**	**2,461**	4,421	2,663
Later than one year and not later than five years	**11,131**	**4,271**	10,375	3,515
Later than five years	**7,436**	**270**	10,454	177
	22,882	**7,002**	25,250	6,355

38. Related party transactions

During the period, the Group entered into the following transactions with related parties, who are not members of the Group. Related parties have been identified as those businesses that act as joint ventures or had an associate relationship with Nippon Sheet Glass Company, Limited and its subsidiaries.

Sales of goods and services

	Millions of yen	
	2019	2018
Sales of goods		
Joint ventures	**519**	699
Associates	**1,932**	1,913
Sales of services		
Joint ventures	**5**	22
Associates	**38**	24
	2,494	2,658

Goods and services are sold to joint ventures and associates on normal commercial terms, applicable to third parties. Additionally, services such as R&D support are provided to joint ventures. In 2019, these amounted to ¥5 million, of which related mainly to SP Glass Holdings BV and Cebrace (2018: ¥22 million of which related mainly to SP Glass Holdings BV and Cebrace).

Purchase of goods and services

	Millions of yen	
	2019	2018
Purchase of goods		
Joint ventures	**6,496**	7,703
Associates	**874**	1,466
Purchase of services		
Associates	**3,222**	3,154
	10,592	12,323

Goods are purchased from joint ventures by Nippon Sheet Glass Company, Limited's subsidiaries as follows:

Cebrace – on normal trading conditions at prices agreed by both joint venture parties. Payments are made on 37 day terms from the invoice date.

Technical assistance and license agreements to

	Millions of yen 2019	2018
Joint ventures	—	313

The Group has technical assistance agreements and license agreements with related parties. These agreements cover income received in respect of the use of technology and intellectual property used in the manufacture of float and automotive glass.

In addition, there is income in respect of royalties on patents, the provision of technical support and the use by the related party of know-how.

Royalties and fees are calculated as a percentage of the sales value or on the number of pieces produced (piece rates) depending upon the nature of the license and the normal commercial practice in that area. Agreements with related parties are made on commercial terms similar or identical to those with other licensees.

Period-end balances arising from sales and purchases of goods and services, technical assistance and license agreements

	Note	Millions of yen 2019	2018
Receivables from related parties			
Joint ventures		**1,448**	1,787
Associates		**105**	85
	17	**1,553**	1,872
Payables to related parties			
Joint ventures		**1,289**	1,928
Associates		**917**	898
	26	**2,206**	2,826

The Group has established provisions with respect to the potential non-payment of receivables due from related parties of ¥131 million (2018: ¥nil). Similarly, there were no receivable balances from related parties, joint ventures or associates written off during the period. There are no restrictions in place which would prevent the related parties fulfilling their trading obligations to the Group.

Loans to related parties

		Millions of yen			
		2019		2018	
	Note	**Joint ventures**	**Associates**	Joint ventures	Associates
At 1 April		**9,226**	**118**	8,579	119
Exchange differences		**(367)**	**(4)**	641	11
Loan repayments received		**—**	**(1)**	(472)	(12)
Interest charged		**283**	**—**	478	—
At 31 March	17	**9,142**	**113**	9,226	118

The loans to joint ventures and associates are unsecured.

Commitments and contingencies
There were no material commitments and contingencies of joint ventures and associates at 31 March 2019 or 2018.
At 31 March 2019 and 31 March 2018, the Group has not made any guarantees in the ordinary course of business in respect of joint ventures and associates.

Key management compensation
Details of the key management compensation are disclosed in note 8.

Post-employment benefit plans
Details of contributions into post-employment benefit plans are included in note 8. The assets (including details of the Group's right to surplus) and liabilities of post-employment benefit plans as well as deficit funding arrangements are detailed in note 27. The Group paid ¥3,650 million into the Pilkington Superannuation Scheme during the year (2018: ¥3,675 million) in respect of deficit funding.

39. Restatement of FY2018 comparative information

The Group has adopted IFRS 15 'Revenue from Contracts with Customers' effective from the Group's financial period commencing 1 April 2018. The Group applied IFRS 15 retrospectively using the practical expedient in paragraph C5(d) of IFRS 15, under which the Group does not disclose the amount of consideration allocated to the remaining performance obligations or an explanation of when the Group expects to recognize that amount as revenue for all reporting periods presented before 1 April 2018.

The main practical change is that the Group will, in certain circumstances, recognize revenue from the sale of tooling to automotive customers on acceptance of that tooling by the customer. The Group's previous policy was to recognize this revenue over the life of the associated automotive supply contract. This may result in a change to the level of revenue recognized with respect to automotive tooling in any given year, although the Group expects no material impact over the medium-term.

In accordance with IAS1, as the Group considers the financial impact of adopting IFRS15 to be relatively immaterial, a third full comparative statement of financial position as at 1 April 2017 is not provided. The following tables summarize the impacts of adopting IFRS 15 on the Group's consolidated financial statements:

Consolidated balance sheet

Millions of yen

	Impact of changes in accounting policies		
As at 1 April 2017	As previously reported	Adjustments	**As restated**
Total Assets	790,192	(4,158)	**786,034**
Total Liabilities	656,484	(4,914)	**651,570**
Retained earnings	(59,646)	756	**(58,890)**
Other	183,792	—	**183,792**
Total shareholders' equity	124,146	756	**124,902**
Non-controlling interests	9,562	—	**9,562**
Total Equity	133,708	756	**134,464**
Total Liabilities and Equity	790,192	(4,158)	**786,034**

Millions of yen

	Impact of changes in accounting policies		
As at 31 March 2018	As previously reported	Adjustments	**As restated**
Intangible assets	57,389	(140)	**57,249**
Property, plant and equipment	252,778	(8,673)	**244,105**
Deferred tax assets	36,115	(214)	**35,901**
Contract assets	—	4,252	**4,252**
Trade and other receivables	90,262	(3,673)	**86,589**
Inventories	108,975	5,799	**114,774**
Construction work-in-progress	641	(641)	**—**
Other	245,722	—	**245,722**
Total Assets	791,882	(3,290)	**788,592**
Trade and other payables	134,290	(1,619)	**132,671**
Contract liabilities	—	4,445	**4,445**
Deferred income	12,296	(6,825)	**5,471**
Deferred tax liabilities	18,567	(149)	**18,418**
Other	483,872	—	**483,872**
Total Liabilities	649,025	(4,148)	**644,877**
Retained earnings	(52,140)	790	**(51,350)**
Other reserves	(28,685)	68	**(28,617)**
Other	215,159	—	**215,159**
Total shareholders' equity	134,334	858	**135,192**
Non-controlling interests	8,523	—	**8,523**
Total Equity	142,857	858	**143,715**
Total Liabilities and Equity	791,882	(3,290)	**788,592**

Consolidated income statement

Millions of yen

For the period 1 April 2017 to 31 March 2018	Impact of changes in accounting policies As previously reported	Adjustments	As restated
Revenue	603,852	(4,955)	**598,897**
Cost of sales	(441,887)	4,924	**(436,963)**
Other net operating costs	(126,302)	—	**(126,302)**
Operating profit	35,663	(31)	**35,632**
Exceptional items	(1,265)	—	**(1,265)**
Finance costs – net	(14,624)	—	**(14,624)**
Share of post-tax profit from joint ventures and associates	2,403	—	**2,403**
Profit before taxation	22,177	(31)	**22,146**
Taxation	(14,304)	65	**(14,239)**
Profit for the period	7,873	34	**7,907**
Profit attributable to non-controlling interests	1,743	—	**1,743**
Profit attributable to owners of the parent	6,130	34	**6,164**
	7,873	34	**7,907**

Consolidated statement of comprehensive income

Millions of yen

For the period 1 April 2017 to 31 March 2018	Impact of changes in accounting policies As previously reported	Adjustments	As restated
Profit for the period	7,873	34	**7,907**
Other comprehensive income:			
Items that may be reclassified to profit or loss:			
Foreign currency translation adjustments	6,484	68	**6,552**
Other	(3,503)	—	**(3,503)**
Total comprehensive income for the period	10,854	102	**10,956**
Profit attributable to non-controlling interests	735	—	**735**
Profit attributable to owners of the parent	10,119	102	**10,221**
	10,854	102	**10,956**

Consolidated statement of cash flow

Millions of yen

For the period 1 April 2017 to 31 March 2018	Impact of changes in accounting policies As previously reported	Adjustments	As restated
Profit for the period	7,873	34	**7,907**
Adjustments for:			
Taxation	14,304	(65)	**14,239**
Depreciation	27,896	(2,554)	**25,342**
Amortization	4,134	(40)	**4,094**
Grants and deferred income	65	(321)	**(256)**
Changes in working capital:			
Inventories	(2,362)	(2,326)	**(4,688)**
Construction work-in-progress	41	(41)	**—**
Trade and other receivables	(2,898)	1,905	**(993)**
Trade and other payables	6,831	(345)	**6,486**
Contract balances	—	1,306	**1,306**
Other	(18,721)	—	**(18,721)**
Net cash inflows from operating activities	37,163	(2,447)	**34,716**
Purchases of property, plant and equipment	(31,582)	2,447	**(29,135)**
Purchases of intangible assets	(2,166)	—	**(2,166)**
Other	13,389	—	**13,389**
Net cash outflows from investing activities	(20,359)	2,447	**(17,912)**
Net cash outflows from financing activities	(33,889)	—	**(33,889)**
Decrease in cash and cash equivalents (net of bank overdrafts)	(17,085)	—	**(17,085)**

40. Hyperinflationary accounting adjustments

As from Q2 FY2019, the wholesale price index in Argentina indicated that cumulative 3-year inflation had exceeded 100 percent. Consequently the Group has concluded that its subsidiaries in Argentina, each of which has the Argentine Peso as a functional currency, are currently operating in a hyperinflationary environment. The Group has therefore applied accounting adjustments to the underlying financial results and position of its subsidiaries in Argentina as required by IAS 29 'Financial Reporting in Hyperinflationary Economies'.

As required by IAS 29, the Group's consolidated financial statements will include the results and financial position of its Argentinian subsidiaries, restated in terms of the measuring unit current at the period end date.

For the restatement of results and financial positions of its Argentinian subsidiaries, the Group will apply the conversion coefficient derived from the Internal Wholesales Price Index (IPIM) published by Instituto Nacional de Estadística y Censos de la República Argentina (INDEC). IPIM and corresponding conversion coefficients from June 2006 are presented below.

Balance sheet date	Internal Wholesales Price Index (IPIM) (30 June 2006 = 100)	Conversion coefficient
30 June 2006	100.0	9.709
31 March 2007	103.9	9.348
31 March 2008	120.2	8.077
31 March 2009	128.7	7.544
31 March 2010	146.5	6.628
31 March 2011	165.5	5.867
31 March 2012	186.7	5.200
31 March 2013	211.1	4.599
31 March 2014	265.6	3.656
31 March 2015	305.7	3.176
31 March 2016	390.6	2.486
31 March 2017	467.2	2.078
31 March 2018	596.1	1.629
30 April 2018	606.8	1.600
31 May 2018	652.3	1.488
30 June 2018	694.7	1.398
31 July 2018	727.4	1.335
31 August 2018	763.0	1.273
30 September 2018	812.6	1.195
31 October 2018	827.9	1.173
30 November 2018	854.0	1.137
31 December 2018	877.9	1.106
31 January 2019	901.4	1.077
28 February 2019	935.4	1.038
31 March 2019	970.9	1.000

The Group's subsidiaries in Argentina have restated their non-monetary items held at historical cost, namely property, plant and equipment, by applying the conversion coefficient based on when the items were initially recognized. Monetary items and non-monetary items held at current cost will not be restated, as they are considered to be expressed in terms of the measuring unit current at the period end date. The effect of inflation on the net monetary position of the Group's Argentinian subsidiaries is presented in the finance expenses section of the income statement.

The Argentinian subsidiaries' income statement and cash flow statement will also be restated, applying the conversion coefficient for the current financial year as shown in the above table.

For the purpose of consolidation, the results and financial position of the Group's Argentinian subsidiaries are translated using the closing exchange rates at the period end date. Comparative financial statements are not restated based on IAS 21 'The Effects of Changes in Foreign Exchange Rates' para 42(b).

41. Group information

The consolidated financial statements of the Group include 213 entities in form of subsidiaries, joint ventures and associates. The following list of subsidiary undertakings comprises those companies that principally affect the financial statements of the Group. All subsidiary undertakings account to 31 March each year. Details of joint ventures and associates can be found in note 16.

Name	Proportion of issued ordinary shares held	Country of operation and incorporation	Principal activity
Europe			
Pilkington United Kingdom Ltd.	100%	UK	Architectural
Pilkington Automotive Ltd.	100%	UK	Automotive
Pilkington Technology Management Ltd.	100%	UK	Architectural and Automotive
NGF Europe Ltd.	100%	UK	Technical Glass
Pilkington Deutschland AG	96.3%	Germany	Architectural
Pilkington Automotive Deutschland GmbH	100%	Germany	Automotive
Pilkington Austria GmbH	100%	Austria	Architectural
Pilkington Norge AS	100%	Norway	Architectural
Pilkington Automotive Finland OY	100%	Finland	Automotive
Pilkington IGP Sp. zo.o.	100%	Poland	Architectural
Pilkington Automotive Poland Sp. zo.o.	100%	Poland	Automotive
Pilkington Polska Sp. zo.o.	100%	Poland	Architectural
Pilkington Italia SpA	100%	Italy	Architectural and Automotive
Asia			
NSG Building Products Co., Ltd.	100%	Japan	Architectural
Thanxs Corporation Co., Ltd.	92.5%	Japan	Architectural
Nippon Sheet Glass WIN-TEC Co., Ltd.	99.3%	Japan	Architectural
Guilin Pilkington Safety Glass Co., Ltd.	100%	China	Automotive
Suzhou NSG Electronics Co., Ltd.	100%	China	Technical Glass
NSG Hong Kong Co., Ltd.	100%	Hong Kong	Technical Glass
Malaysian Sheet Glass Sdn. Bhd.	100%	Malaysia	Architectural and Automotive
Vietnam Float Glass Co., Ltd.	55%	Vietnam	Architectural
NSG Vietnam Glass Industries Ltd.	100%	Vietnam	Architectural
Americas			
Pilkington North America Inc.	100%	USA	Architectural and Automotive
L-N Safety Glass SA de CV	100%	Mexico	Automotive
Vidrieria Argentina S.A.	51%	Argentina	Architectural
Vidrios Lirquen S.A.*	51.6%	Chile	Architectural
Pilkington Automotive Argentina S.A.	100%	Argentina	Automotive
Pilkington Brasil Ltda.	100%	Brazil	Architectural and Automotive
Holding and financing companies			
NSG Holding (Europe) Ltd.	100%	UK	Holding company
NSG UK Enterprises Ltd.	100%	UK	Holding company
Pilkington Group Ltd.	100%	UK	Holding company

*: Vidrios Lirquen S.A. is owned 51.6% by a 51% owned subsidiary of Pilkington Group Limited.

Parent company

The parent company of the Group, Nippon Sheet Glass Company, Limited, is incorporated and domiciled in Japan and has shares publicly traded on the Tokyo Stock Exchange.

Restrictions on accessing the assets of subsidiaries

The ability of NSG UK Enterprises Ltd, a significant subsidiary company of the Group, to pay cash dividends to its immediate parent company, and ultimately therefore to Nippon Sheet Glass Company, Limited, is restricted by the external banking agreements entered into by NSG UK Enterprises Ltd, such that NSG UK Enterprises Ltd is only able to pay cash dividends to its immediate parent, to the extent that such a dividend would not cause it to be in breach of its banking covenants.

In general, the Group’s subsidiaries in Europe, North America, and South America are also subsidiaries of NSG UK Enterprises Ltd, although there are several examples of subsidiaries in these regions that are not also subsidiaries of NSG UK Enterprises Ltd, and also examples of subsidiaries in other regions that are subsidiaries of NSG UK Enterprises Ltd.

The cash and cash equivalent balances held by the Group’s subsidiaries which are not generally available for use elsewhere amounted to ¥3,483 million (2018: ¥5,833 million).

42. Non-controlling interests

Name	Non-controlling shareholding	Country of operation and incorporation	Principal activity
Vidrieria Argentina S.A.	49%	Argentina	Architectural
Vidrios Lirquen S.A.*	48.4%	Chile	Architectural

*: Vidrios Lirquen S.A. is owned 51.6% by a 51% owned subsidiary of Pilkington Group Limited.

	Millions of yen	
	2019	2018
Accumulated balances of material non-controlling interests		
Vidrieria Argentina S.A.	**3,390**	2,810
Vidrios Lirquen S.A.	**2,273**	2,880
Others	**3,083**	2,833
Total	**8,746**	8,523
Profit/(loss) for the period allocated to material non-controlling interests		
Vidrieria Argentina S.A.	**352**	904
Vidrios Lirquen S.A.	**414**	343
Others	**325**	496
Total	**1,091**	1,743

The summarized financial information of these subsidiaries is provided below. This information is based upon amounts before intra-company eliminations.

Summarized income statements

	Millions of yen			
	2019		2018	
	Vidrieria Argentina S.A	**Vidrios Lirquen S.A**	Vidrieria Argentina S.A	Vidrios Lirquen S.A
Revenue	**12,894**	**7,166**	17,535	6,652
Profit for the period from continuing operations	**718**	**562**	1,845	466
Total comprehensive income	**2,650**	**491**	748	322
Dividends paid to non-controlling interests	**—**	**(177)**	(1,000)	(372)

Summarized statements of financial position

	Millions of yen			
	2019		2018	
	Vidrieria Argentina S.A	**Vidrios Lirquen S.A**	Vidrieria Argentina S.A	Vidrios Lirquen S.A
Current assets	**5,143**	**2,447**	7,551	2,932
Non-current assets	**6,623**	**2,899**	2,850	3,343
Current liabilities	**(3,853)**	**(1,598)**	(4,286)	(1,577)
Non-current liabilities	**(995)**	**(663)**	(380)	(790)
Total equity	**6,918**	**3,085**	5,735	3,908
Attributable to owners of the parent	**3,528**	**812**	2,925	1,028
Attributable to non-controlling interests	**3,390**	**2,273**	2,810	2,880

Summarized cash flow statements

	2019		2018	
Millions of yen	**Vidrieria Argentina S.A**	**Vidrios Lirquen S.A**	Vidrieria Argentina S.A	Vidrios Lirquen S.A
Cash flows from operating activities	**209**	**387**	1,465	462
Cash flows from investing activities	**(1,932)**	**(153)**	(202)	(140)
Cash flows from financing activities	**1,093**	**(587)**	(1,005)	(372)
Increase/(decrease) in cash and cash equivalents (net of bank overdrafts)	**(630)**	**(353)**	258	(50)
Cash and cash equivalents (net of bank overdrafts) at the beginning of the period	**3,246**	**1,176**	4,138	1,169
Effect of foreign exchange rates	**(1,694)**	**(81)**	(1,150)	57
Cash and cash equivalents (net of bank overdrafts) at the end of the period	**922**	**742**	3,246	1,176

43. Significant subsequent events

Partial acquisition and retirement of Class A Shares

On 10 May 2019 the Group announced its intention to undertake a partial acquisition and retirement of Class A shares. The Company redeemed 5,000 shares, leaving 30,000 Class A shares remaining in issue. Including preferred dividends and acquisition premium payable, the total acquisition cost of these shares was ¥5,800 million. The acquisition date was 6 June 2019 and as a result, other capital surplus was reduced by ¥5,750 million.

The Company originally issued Class A Shares of ¥40,000 million on 31 March 2017 in order to expedite the enhancement of shareholders' equity and achieve a stable financial base. The NSG Group's subsequent efforts to improve its financial position and reduce interest cost have been successfully achieved, enabling a continuous improvement of the Group's earnings. Consequently in December 2018, the Company first acquired and retired 5,000 shares (issue price ¥5,000 million) as a part of the issued Class A shares (acquisition and retirement), aiming for reducing preferred dividend and redemption premium payments. The second acquisition and retirement was decided for the same purpose.

The Company intends to redeem the remaining Class A Shares in a timely and flexible manner, while maintaining financial stability, in order to ultimately redeem all of the Class A shares in future for money.

INDEPENDENT AUDITORS' REPORT

The Board of Directors
Nippon Sheet Glass Company, Limited

We have audited the accompanying consolidated financial statements of Nippon Sheet Glass Company, Limited and its consolidated subsidiaries, which comprise the consolidated balance sheet as at 31 March 2019, the consolidated income statement, the consolidated statements of comprehensive income, changes in equity and cash flows for the year then ended and notes to the consolidated financial statements.

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

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

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

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

Opinion
In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Nippon Sheet Glass Company, Limited and its consolidated subsidiaries as at 31 March 2019, and their consolidated financial performance and cash flows for the year then ended in conformity with International Financial Reporting Standards.

Ernst & Young ShinNihon LLC
28 June 2019
Tokyo, Japan

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