

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 in the 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 majority of the Group's products are sold in the Japanese, European and North American markets, with these markets representing 24 percent, 40 percent and 19 percent, respectively, of net sales for the year ended 31 March 2018. The majority of sales made outside of these three areas are in emerging markets such as South America. Over the long-term, the Group expects that its growth in emerging markets is likely to exceed its growth in more mature markets, and therefore the proportion of Group sales recorded in such markets is likely to increase in the future. Such markets may be considered to have a more significant level of risk than the more mature markets in which the Group operates. Changes in the business environments of the Group's customers and any geopolitical issues around the world might affect the Group's business, and if economic conditions or particular business environments in these regions of the Group's major markets and emerging markets deteriorate, this could have a significant negative effect on the Group's financial performance and financial position.

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 2018. In FY2018, the Group's Architectural and Automotive business accounted for 40 percent and 52 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.

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 endeavors 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, 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 recent 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. Nevertheless, the potential adverse effects on production facilities due to a natural disaster (including an earthquake, an electric power outage or any other type of event that causes a suspension of the Group's or of its customers' production) cannot always be prevented or 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 an earthquake or any other similar event, 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 Group's pension assets, 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 Group's business plan will be successful, or that the intended results of the business strategies through the success of the strategy 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 invests intensively in shifting from relatively low margin products to value-added products which require advanced technology in order to keep its competitive advantages. However, there can be no assurance that the Group can succeed in development of higher technology earlier than its competitors, or, as a result, can ensure higher competitiveness than its competitors.

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 our 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.

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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 subject to a variety of environmental laws and regulations. Although the Group makes efforts to implement a variety of measures in regard to product development and manufacturing process in order to have a beneficial environmental impact and comply with the relevant laws and regulations, there can be no assurance that the Group can achieve expected results through those measures. Also, 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 to the Group by reason of infringement of any of the 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 recent 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 particular the current tax environment globally is one of falling corporate tax rates. In FY2018, the Group incurred a deferred tax write-down in the U.S.A following a reduction in federal tax rates in that country. Whilst such reductions are generally beneficial for the Group, they result in a reduction in the Group's net asset balance in the short-term. There may be further accounting write-downs in the future arising on 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.