

NSG

GROUP

NSG Group

FY2020 Quarter 2 Results

(from 1 April 2019 to 30 September 2019)

Nippon Sheet Glass Company, Limited
31 October 2019

Shigeki Mori

Chief Executive Officer

Kenichi Morooka

Chief Financial Officer

Clemens Miller

Chief Operating Officer

Agenda



1. FY2020 Quarter 2 Financial Results
2. FY2020 Quarter 2 Business Update
3. Revision of FY2020 Full-year Forecast
4. FY2020 Policy: Shift to “VA + Growth” Update
5. Summary

FY2020 Quarter 2 Results Highlights



Impact of foreign exchange movements and increasingly difficult market conditions during Q2

Revenue	JPY 288.6 bn (6)%	Affected by translational impact of foreign exchange. Year-on-year decrease of 2% at constant exchange rates
Trading profit	JPY 15.8 bn (16)%	Profitability affected by the decrease in European car production volumes and increasingly difficult conditions during Q2 in certain architectural markets
Profit attributable to owners of the parent	JPY 1.9 bn (79)%	Lower operating profit and non-reoccurrence of an one-off gain recognized by a JV in the previous year
Free cash flow	JPY (28.8) bn	Resulting from scheduled strategic investments* and seasonal working capital movements

* Strategic investments: Please refer to Slide 19

This is the highlights of FY2020 second quarter.

Revenues declined by six percent to 288.6 billion yen, mainly due to the translational impact of the foreign exchange movements. Revenues would have fallen by two percent at constant exchange rates.

Trading profit declined by 16% to 15.8 billion yen, affected by the decrease of European car production volumes and worsened market conditions in certain architectural markets during the second quarter.

Profit attributable to owners of the parent was 1.9 billion yen, due to the non-recurrence of an one-off gain recognized by a joint venture in the previous year, together with the reduction in the trading profit.

Free cash flow recorded an outflow of 28.8 billion yen due to strategic investments and the seasonal movement in working capital. We are aiming to achieve a positive underlying free cash flow, excluding strategic investments, and expect our continued focus on working capital management to help us achieve this as the year progresses.

Consolidated Income Statement



Results affected by difficult market conditions

	FY2019 Q2	FY2020 Q2	Change
¥ bn			
Revenue	308.1	288.6	(19.5)
Trading profit	18.8	15.8	(3.0)
Amortization *	(1.0)	(0.9)	0.1
Operating profit	17.9	14.9	(3.0)
Exceptional items	(1.2)	(2.2)	(1.0)
Finance expenses (net)	(6.7)	(6.3)	0.4
Share of JVs and associates	3.8	0.8	(3.0)
Profit before taxation	13.7	7.2	(6.5)
Profit for the period	10.0	2.4	(7.6)
Profit attributable to owners of the parent	9.3	1.9	(7.4)
EBITDA	32.0	31.7	(0.3)

*: Amortization arising from the acquisition of Pilkington plc only

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Revenue, trading profit and profit attributable to owners of the parent are as explained in the previous slide.

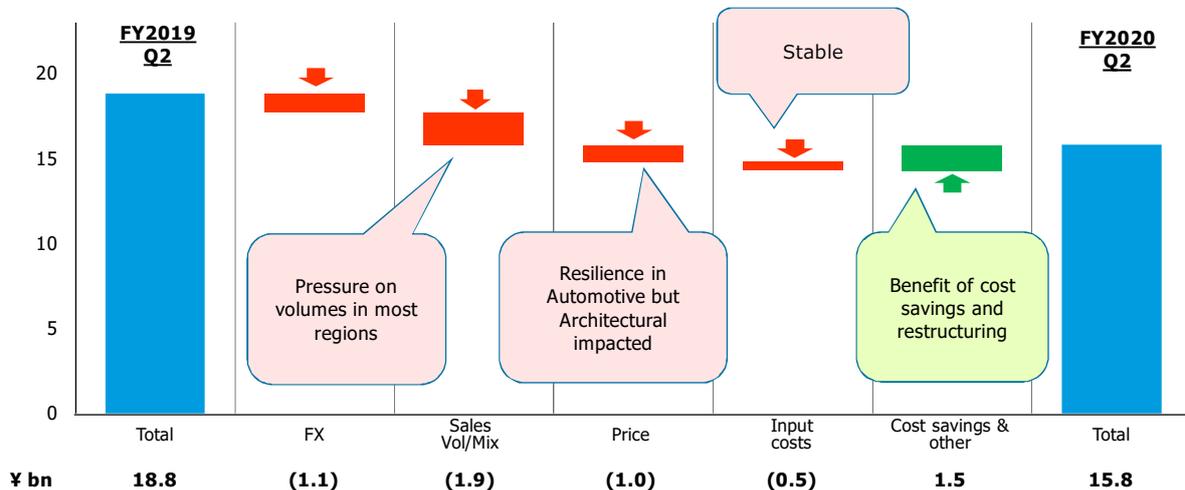
The exceptional loss of 2.2 billion yen is a result of a gain on disposal of a subsidiary, being more than offset by restructuring costs incurred in Automotive Europe and costs related to a suspension of the Group's Architectural facility in North America following a power failure. For further details, please refer to slide 33 in the appendices at the back of this document.

Net finance expenses decreased by 0.4 billion yen, despite the increase of interest costs due to the adoption of IFRS16 "Leases" from this year.

The share of JVs and associates have decreased significantly, but as discussed in the previous slide, this is due to a non-recurrence of an one-off gain recognized by Cebrace, a Group's joint venture in Brazil.

Change Analysis – Trading profit

Improvements in cost base partly offset impact of foreign exchange movements and difficult market conditions



Overall the profit decreased year-on-year, but we can see that cost savings and efficiency improvements have offset the adverse effects caused by reduced volumes and lower prices.

Volume/Mix were affected by reduced volumes in various parts of the Group, including both Architectural and Automotive businesses in Europe and some parts of Technical Glass business.

Prices movements were negative in Architectural North America, but were positive in Automotive overall.

Input costs were affected by increases in logistics and raw materials costs, but became stable in the second quarter.

The positive 1.5 billion yen 'cost savings and other' column includes the effects of restructuring in the UK Architectural downstream businesses and the cost reduction effect arising from the operational efficiency improvements in North America. This column also includes movements in other costs, inflationary cost increases and consolidation adjustments.

Key Performance Indicators



Net debt increased as result of IFRS16 and strategic investments

	<u>30 September</u> <u>2018</u>	<u>30 September</u> <u>2019</u>	<u>31 March</u> <u>2019</u>
Net Debt (¥ bn)	320.1	388.1 ^{*1}	317.7
Net Debt / EBITDA	5.1x	5.6x	4.9x
Net Debt / Equity Ratio	2.2x	3.8x	2.4x
Shareholders' Equity Ratio	17.8%	11.9%	16.2%
	<u>FY2019</u> <u>Q2</u>	<u>FY2020</u> <u>Q2</u>	<u>FY2019</u>
Operating Return ^{*2} on Sales	6.1%	5.5%	6.3%

*1: Includes net debt arising from adoption of IFRS16 of JPY 31.0 billion

*2: Trading profit

Net debt increased by 70.4 billion yen from 31 March 2019 to 388.1 billion yen, as result of the adoption of IFRS16 'Leases', capital expenditures on strategic investments and seasonal changes in working capital.

The Net debt/EBITDA and Net debt/Equity ratios are affected by the increase in net debt.

Affected by the translational impact of foreign currency movements and the adoption of IFRS16, the shareholders' equity ratio decreased from 16.6% at 31 March 2019 to 11.9%.

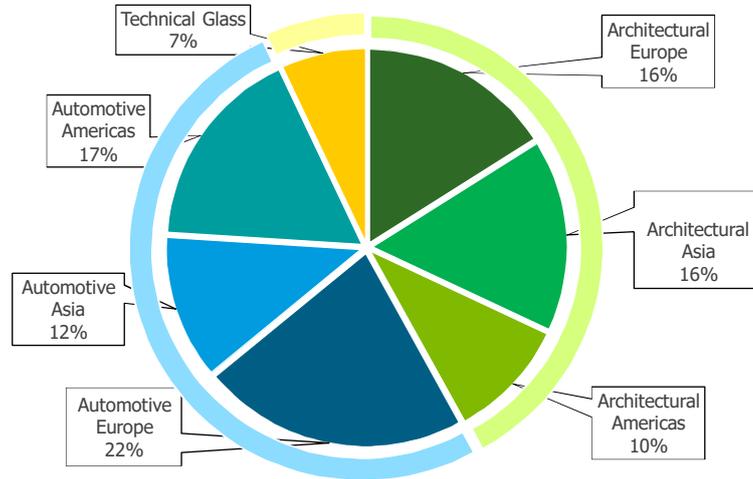
Operating return on sales was below the previous year.

External Revenue – Group Businesses



Diversified geographical coverage

¥ 288.6 billion

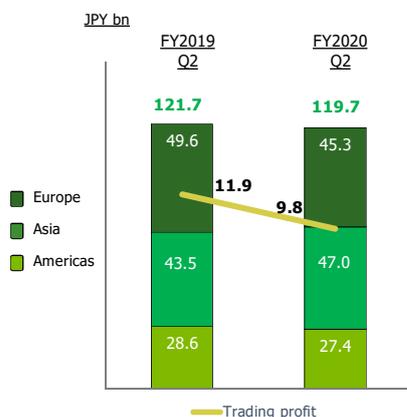


FY2020 Quarter 2

39 percent of the Group's sales are in Europe, 34 percent in Asia including Japan and 27 percent in Americas.

Architectural – FY2019 Q2 vs FY2020 Q2

Affected by foreign exchange translations and increasingly difficult conditions during the quarter in certain markets. Robust solar energy glass volumes



Europe (Revenue ▼, Profit ▼)

- Revenues affected by lower volumes, in addition to the impact of foreign exchange translations

Asia (Revenue ▲, Profit ▼)

- Increased dispatches of solar energy glass
- Despite one-off inventory valuation adjustment in Q2, profitability improved in Japan

Americas (Revenue ▼, Profit ▼)

- Increased flat glass supply caused erosion of domestic market prices in North America
- Local currency results improved in South America despite uncertainty in underlying economic environment
- Improved solar energy glass volumes

Revenues in our Architectural business decreased by 2 percent to 119.7 billion yen. At constant exchange rates, revenues would have increased by 4%. This is mainly due to the weakened European and South American currencies. Although solar energy glass volumes were robust, profits decreased by 2.1 billion yen to 9.8 billion yen, as conditions worsened in certain architectural markets, in addition to the translational effect of foreign currency movements.

In Europe, revenues and profits were lower than the previous year as the sales volumes decreased due to the increasingly difficult market conditions, in addition to the effect of weakened European currencies.

In Asia, Solar energy glass volumes were robust. Domestic markets in South East Asia were affected by lower prices, but profitability in Japan improved despite recording an one-off inventory valuation adjustment in the second quarter.

In North America, volumes of Solar energy glass were also robust, but the domestic businesses were affected by lower prices as result of increased supply in the commodity market.

In South America, local currency results improved despite the uncertainty in underlying economic environment.

Automotive – FY2019 Q2 vs FY2020 Q2

Slowdown in new car production in European markets



Europe (Revenue ▼, Profit ▼)

- Results affected by reduction in volumes

Asia (Revenue ▲, Profit ▼)

- Revenue increased with higher volume in Japan, while profitability affected by increased raw glass costs

Americas (Revenue ▼, Profit ▲)

- OE profit improvements driven by manufacturing efficiency gains in North America. AGR ahead of the previous year.
- Profitability in South America was similar to the previous year

Affected mainly by the reduction of new car production in Europe, revenues decreased by 8% to 148.2 billion yen, and profits decreased by 2.2 billion yen to 5.2 billion yen.

In Europe, results were affected by reduction in volumes.

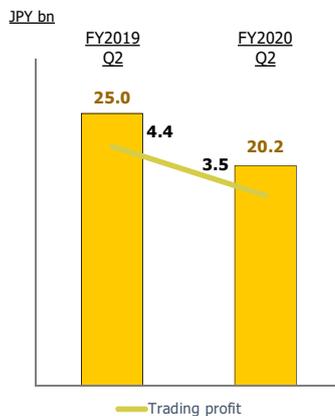
In Asia, revenues improved but profits decreased. In Japan, volumes improved as the demand increased before the consumption tax hike, but profits were affected by the increase of raw glass costs.

As also seen in the Group's Architectural businesses, the results of the Americas were also affected by the translational impact of foreign currency movements. Revenues decreased by 5% mainly due to devaluation of Argentinian Peso.

Profits improved in North America, driven by manufacturing efficiency gains in OE and better results in AGR. Profitability in South America was similar to the previous year.

Technical Glass – FY2019 Q2 vs FY2020 Q2

Parts of business affected by difficult market conditions



Technical Glass (Revenue ▼, Profit ▼)

- Fine Glass results reflect continued cost reduction efforts and better sales mix
- Revenues of printer lenses and glass cord used in engine timing belts declined due to weaker market conditions
- Battery separators results remained solid

As some of its businesses were affected by difficult market conditions, revenues decreased by 4.8 billion yen to 20.2 billion yen and profits decreased by 0.9 billion yen to 3.5 billion yen.

Fine Glass's results benefitted from a lower cost base from continued cost reduction efforts, along with improvements in sales mix.

Results of printer lenses and glass cord used in engine timing belts were affected by the softened demand in their respective markets.

Battery separator results continued to be solid.

Revision of Full-year Forecast



Based on latest business expectations

¥ bn	FY2019 Actual	FY2020 Forecast (Original)	FY2020 Revised Forecast	Change
Revenue	612.8	620.0	570.0	(50.0)
Trading profit	38.8	37.0	31.0	(6.0)
Amortization *	(1.9)	(2.0)	(2.0)	-
Operating profit	36.9	35.0	29.0	(6.0)
Exceptional items	(7.1)	(6.0)	(7.0)	(1.0)
Finance expenses (net)	(13.3)	(14.0)	(14.0)	-
Share of JVs and associates	6.2	4.0	2.0	(2.0)
Profit before taxation	22.7	19.0	10.0	(9.0)
Profit for the period	14.4	12.0	4.0	(8.0)
Profit attributable to owners of the parent	13.3	11.0	3.0	(8.0)

*: Amortization arising from the acquisition of Pilkington plc only

The Group's Q2 results were affected by difficult market conditions, and these same conditions are expected to continue in our main markets throughout the second half of the year. Therefore, the Group has regrettably revised its full-year forecast as shown on the slide.

Forecast of revenues now stands at 570.0 billion yen, which is 50.0 billion yen less than the original forecast. Operating profit is reduced by 6.0 billion yen to 29.0 billion yen and profit attributable is reduced by 8.0 billion yen to 3.0 billion yen.

Summary



FY2020 Quarter 2 Financial Results

- Affected by the translational impact of foreign currency movements and a decrease in European car production volumes, as well as increasingly difficult conditions during the quarter in certain architectural markets

Outlook for the remainder of FY2020

- Revised FY2020 full-year forecast to reflect expectations that markets will continue to be difficult
- Architectural
 - Europe and North America affected by increased glass supply
 - Growth in solar energy glass
- Automotive and some areas of Technical Glass
 - Affected by reduction of car production in Europe and China
- Focus on attaining positive underlying free cash flow, excluding the strategic capital expenditure projects

As discussed in the previous slides, the Group has revised its FY2020 full-year forecast as result of increasingly difficult market conditions seen in the second quarter and with expectations that such conditions will continue during the second half of the year.

As for the business outlook for the second half of the year, Architectural Europe and North America are expected to be affected by the increased glass supply, while volumes of solar energy glass will be robust. Automotive and parts of Technical Glass businesses will be affected by the reduction of new car production in Europe and China.

The Group will aim to achieve a positive underlying free cash flow, excluding strategic investments, with continued focus on working capital management to help us achieve this as the year progresses.

Global and domestic economies have become increasingly uncertain, and while we keep our eyes on the developments, the Group will drive to attain the results as set out in the revised annual forecast, by further increasing sales of our VA products, and through realization of operational efficiency improvements and cost reductions. Furthermore, with the aim the return to profit growth, the Group will initiate the key step-change actions.

FY2020 Policy: Shift to “VA + Growth”

Actions Taken to Drive Shift to “VA + Growth”



While affected by market, actions are being taken aiming to return to profit growth

FY2020 Actions based on growth phase

Core Business

Profitability enhancement

- VA shift acceleration to targeted 50%
- Productivity and cost structure
- Improvement of underperforming businesses

Growth Business

Developing growth opportunity

- Strategic investment projects
- Enhancing marketing capability
- Increasing and refocusing R&D
- New product launches

New Business

New Business Development

- More resources to Business Innovation Center, moving to execution phase

H1 Key Actions

- Productivity improvement & cost reduction
- Improving underlying profitability
- Strategic investment projects
 - Solar energy glass capacity increase (US, Vietnam)
 - Emerging market capacity increase (Argentina)
- New product & business development for growth
- Enhancing enterprise value – ESG

The policy for this year remains unchanged from last year's: Shift to “VA + Growth”. We added “Growth” to our conventional “shift to VA” policy. This was to clearly express that we are now focusing more on “growth”, looking ahead of the current phase of making our business more value added, i.e. VA shift under the Medium-term Plan (“MTP”)

The left side of the slide is a recap of what we showed at the beginning of this financial year: approaches based on different growth phases: core, growth and new businesses. The right side shows the actions planned and executed based on these approaches during the first half and their progress will be more fully explained in the following slides.

Cost Savings & Efficiency Improvement Actions



Profitability improvement with Group-wide cost reduction programs and efficiency improvement in focused businesses

OCS (Operational Cost Saving Programs)

- Continuous profit improvement activities, targeting more than JPY10 bn annual savings; progressing on schedule
- In addition to manufacturing KPI, materials, energy and labor, extended to CO2 reduction
- Warehouse & logistics global project launched



Automotive Business Efficiency improvement

- Tertiary operation VA shift
 - VAA%* improvement
 - Automation with robots & cobots
- A highly capable, flexible line for backlights in Europe
- Successful introduction of new complex models and products
- Significant efforts in place to efficiently align production with reduced demand



* VAA%: Value-added activity%; started in FY2018

The market environments change constantly. Therefore, the most important thing for a manufacturer to enhancing profitability is: to improve efficiency; and to save costs.

The left side of the slide explains the OCS, operational cost saving programs, which are continuous cost-reduction activities, focusing on operations with a reduction target of more than 10 billion yen for FY2020. In addition to the continued activities regarding manufacturing KPIs, materials and energy areas, we launched a new logistics cost reduction project this fiscal year. Further, given the increasingly stringent environmental regulations and cost hikes of CO2 emissions, our energy cost saving initiatives now extend to their reduction. The benefits of these activities will materialize throughout the financial year, offsetting ongoing inflation in labor and input costs, and contributing to controlling the cost base.

The right side is about improvements in production efficiency. Naturally the initiative is rolled out across the Group and the focus in the last several years has been on improving the Automotive business, whose processes tend to be more complex. In particular, we have been concentrating on improving the tertiary operations where many different components are attached to car glass depending on car models and their options. Together with processing line consolidation and replacements, improvements are becoming more visible in the Automotive Glass businesses in

Europe and North America. The improvement in North America is explained more in a later slide.

At the same time, however, significant efforts are put in place to align and optimize our production to a decrease in demand since the latter half of last year.

Profitability Improvement in Focus Businesses



Materializing benefits of structural reform and continuous efficiency improvement

Architectural Glass Japan

- Against the backdrop of future market decline in Japan, a structural reform project to ensure business sustainability is underway
- The multi-year project aims profitability improvement of more than JPY3bn
- Key actions being taken:
 - Processing site consolidation
 - Distribution network optimization
 - Restructuring
 - Processing line closures
 - Cost reduction, incl. logistics
- Robust VA shift drive continues
- Further price increases from 1 Oct

Automotive Glass North America

- Profitability improvement with better cost base achieved through line consolidation and automation
- Enhanced WS capability using the Group's APBL technology
- VA shift, leveraging the growth in SUV market



Toyota RAV4 Courtesy of TMNA

In addition to the company-wide improvement initiatives mentioned earlier, we have some specific business areas where the management is paying more attention on resolving issues in profitability improvement.

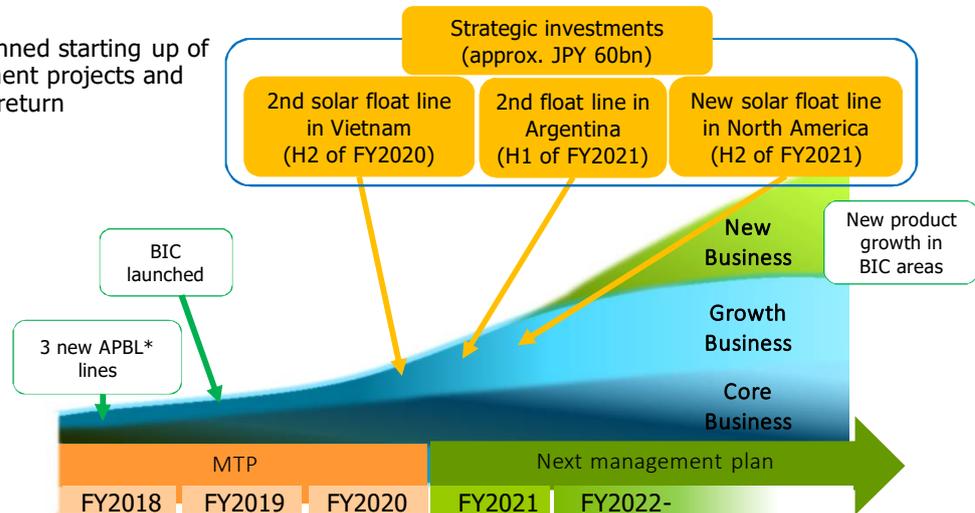
This slide shows the Architectural Glass business in Japan and Automotive Glass business in North America, which have begun to show improvement lately. The Architectural Glass business in Japan is aiming to improve profits by promoting the VA shift. However, in anticipation of future market changes based on declining population, we launched a more drastic structural reform last year. They involve certain difficult decisions but we strongly believe we must act now for the future. This multi-year project will continue into next year and we are expecting a benefit of more than 3 billion yen in total.

Benefits of efficiency improvement efforts are becoming more apparent in the Automotive business in North America. Two years ago, we invested in an APBL line and hope to continue this improvement momentum by continuing to supply quality VA products, responding to changing consumer preferences.

Investments for Growth

Selective investments in growing businesses where the Group has its strengths

- Ensuring the planned starting up of strategic investment projects and aiming for early return



* APBL : Advanced Press Bending for Laminated

The two strategic investment projects announced last year are the key drivers in our growth strategy. Specifically, the projects include capacity expansion investments to restart or build three float lines as shown in this slide. They have high priority and we are concentrated on starting up them as planned and ensure early return on investment.

Strategic Investment – Solar Energy Glass



Capacity Expansion to support business development in growing solar market

Solar demand remains robust with increasing shift to renewable energy

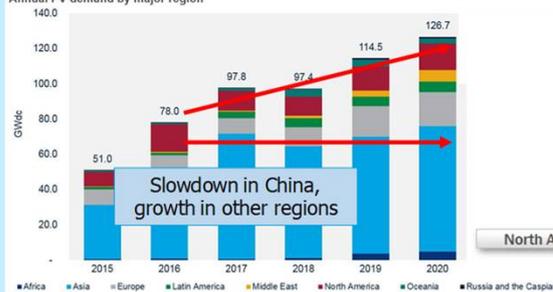
- Market growth trajectory to resume following slowdown in 2018
- Notable increases in Europe & Middle East, Stable demand in North America
- Gradual decline in China with reduced FiT

Strategic investment projects: progressing as planned

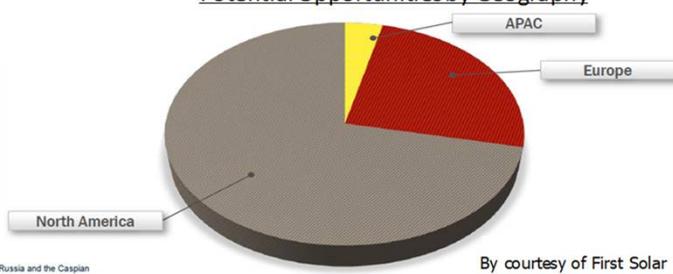
- Vietnam: to start production in FY2020 Q4
- US: to start production in FY2021 H2



Annual PV demand by major region



Potential Opportunities by Geography



By courtesy of First Solar

First, this is an update on the investment to increase solar glass production. In order to meet growing customer demand, we are converting a suspended float line in Vietnam to one with online coating capability and building a new line in the United States.

The demand for solar power is growing against the backdrop of accelerating shift to renewable energy. We believe this trend will continue. However, the renewable energy growth is expected to differ in different applications and regions. China's growth has slowed due to the change in subsidy policies, while the US, Europe, and the Middle East are growing. These are the areas where our key customer, First Solar, has strengths. Switching to renewable energy by IT and utility companies also provides an opportunity for our customer, whose main business area is large-scale solar farms.

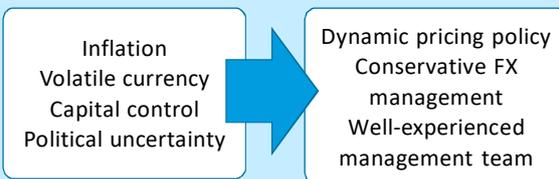
In Japan, solar-related businesses in general are considered challenging. It is important for me to clarify that our glass is used for producing thin-film solar panels, which are different from conventional crystalline silicon solar panels. We are very closely working with First Solar, who has an order book covering several years, to optimize our products to their requirements. As shown on the right side of the slide, the line in Vietnam is slated for starting production in the fourth quarter of this fiscal year and the one in the US in the second half of next fiscal year.

Strategic Investment – Emerging Markets



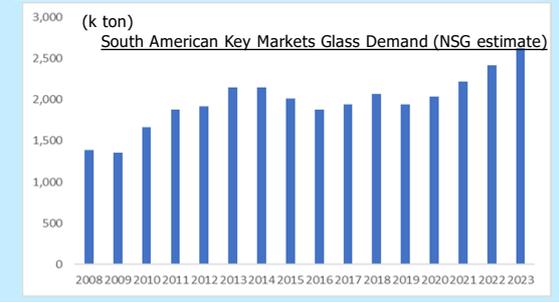
2nd float line is under construction in Argentina to support growing markets

- Political and economic uncertainty is affecting the market but domestic demand is still higher than supply
- VASA, subsidiary and jointly held with Saint-Gobain, is the only flat glass manufacturer with 8 decades of experience in Argentina
- Solid market position and customer base. Stable business management, adept at managing country-specific risks



No change to growth potential of South America, incl. Argentina * NSG estimate 2016

Per capita glass consumption	KG
Argentina	5
Brazil	8
Poland	>20
N America, W Europe	10~15



This slide is about the investment in a new float line in Argentina, South America. As you are all aware, the country is facing political and economic uncertainties right now. However, this is not the first time. We have been operating the business for more than eight decades in Argentina, which is jointly owned by Saint-Gobain, and have knowledge and experiences in risk management.

Currently, there is only one float line in the country, which is not sufficient for satisfying the domestic and surrounding countries' demand. Also, the per capita glass consumption in the country is still low compared with other emerging markets, indicating growth potential.

Admittedly the business will be affected by short-term fluctuations of exchange rates and inflation but it should not hinder our efforts to prepare for the future growth.

CASE-Aligned VA Products for Growth



More VA awards in pipeline to improve business performance, leveraging the Group's technical strengths



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Growth opportunities in the Automotive Glass business are closely linked to so-called CASE, huge technological innovation in cars that is said to be once-in-a-century development. Consequently, opportunities for glass will be also related to CASE and we are in a good position to take advantage of them.

While our business performance is currently affected by a significant demand decline since last year, we are excited about many orders awarded for our VA products to be used in the car models launched from next year and onward.

They include environment-contributing products such as online-coated low e glass, heated WS based on our coating technology, and light-weight glass, as well as those supporting connectivity such as HUD-equipped WS, cover glass for car-mounted displays and next generation antennas. We are proud that the orders have been awarded because our customers recognize our strengths.

Preparing for Mid to Long-term Growth

Developing products and services, looking ahead for future trends

BIC organization is expanding, driving a shift in corporate culture

- **PicoGene™**: Trial sales began in Japan. Innovative characteristics recognized by academia and at trade shows
Start of global sales slated for May 2020
- One year from the launch, more than 100 people working including newly hired engineers in relevant fields
- **What's new to accelerate business and product development**
 - Shift in focus from products to matching them to applications -> Clear end markets
 - While ownership retained, more open collaboration -> Access to external resources

Accelerating the new product and business development in the four focus areas

Life Science

Focus on food/water safety, environment, academia



IoT. Cloud

Focus on high-speed data transmission, sensors, filters



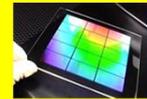
Energy Management

Improve conversion efficiency with functional materials



Industry 4.0

Improve sensor capability with fine glass applications



Looking further ahead, we started a new organization last year, the Business Innovation Center. Their actions are now in full swing to fulfill its mission.

So far only PicoGene, a mobile genetic testing machine, has been announced externally but we are working to quickly link our existing technologies and products to commercial applications in the four areas identified as priority, as shown on the right side of the slide.

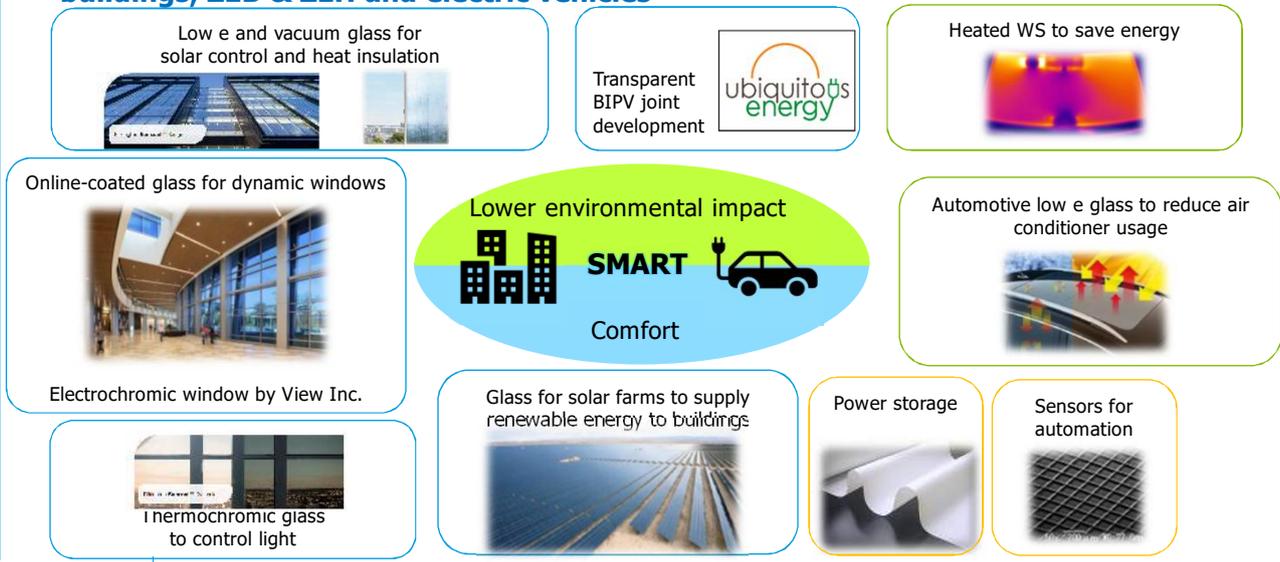
What is new about the BIC, what has changed from the past, is, first of all, a change in the corporate culture. The leader of the organization was hired externally from a company whose speed of business is much different from the glass industry. We have had good products and technologies but there was room for improvement in connecting them to markets. In the past year, we hire new people and expanded collaboration with third parties, which enabled the organization to gain a wider view and to increase the business speed.

It will take some time for the results to become more visible but we are starting to feel the change.

Environmental Contribution Opportunities for NSG Products



Wide range of solutions to support the evolution of society, including smart buildings, ZEB & ZEH and electric vehicles



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Regarding growth opportunities, we believe that increasing environmental awareness is also an opportunity for us. As buildings and automobiles become smarter, the need for comfort inside buildings and vehicles as well as the need to reduce the impact on the external environment will increase. We believe that the products and technologies that we have in the fields of Architecture, Automotive, and Technical Glass can make a significant contribution to these great social changes.

For example, smart buildings would use dynamic windows that control the light and heat to be taken in and out. BIPV, which is capable of generating electricity while being a building window, can find wider applications when it becomes completely transparent and has better power generation efficiency.

We have already mentioned the potential for automotive glass, and we are developing products and businesses that contribute to social change in the field of Technical Glass and BIC. Different businesses and products will have different timelines of development but we are looking forward to the opportunities to contribute to the society through the expansion of these products in accordance with our management principles, "Our Vision".

Enhancing Enterprise Value – ESG

Continued focus on ESG

Governance: foundation for sustainable development and mid- to long-term enhancement of enterprise value

- With the fifth Independent External Director, a majority of the Board consists of Independent Directors (5/9)
- Actions planned by the Board to focus more on critical strategic agenda, following the fourth effectiveness evaluation
- Enhancement of executive compensation disclosure

Environment: Contribution with products and manufacturing process improvement

- In addition to environmental contributions from NSG products, work is underway to reduce GHG emission from manufacturing processes
- SBT Initiative targets approved in October 2019
21% reduction by 2030 vs 2018
fuel energy conversion, manufacturing process, increased usage of renewable energy (e.g. solar installation at a UK site)



Society: Responsible company

- Inclusion & Diversity initiative to invigorate the organization
 - Focus on diversity in nationality and gender and disabled hires

The environmental contribution with our products mentioned earlier is an important pillar in our approach to ESG (environment, society and governance). Needless to say, robust corporate governance is the foundation for all our business activities. Our corporate governance framework has been highly advanced but we will continue to strive to improve it as described here, aiming for achieving sustainable growth and enhancing enterprise corporate value over the medium to long term.

In terms of the environment, reduction of greenhouse gases from our processes is a priority, as important as the contributions with our products described in the previous slide. Fossil fuels are used to melt glass, and taking actions in this area is critical in terms of corporate sustainability. To clarify our commit in this area internally and externally, we have set the SBT targets, which were approved as SBTi earlier this month.

The initiative in the social aspect focuses on “people”. The current priority is inclusion and diversity. I believe this initiative will be also helpful in invigorating the organization.

Summary



FY2020 Q2

- Affected by the translational impact of foreign currency movements and a decrease in European car production volumes, as well as increasingly difficult conditions during the quarter in certain architectural markets

H2 Outlook: Full-year forecast revised reflecting difficult business conditions

- Architectural
 - Europe and North America affected by increased glass supply
 - Growth in solar energy glass
- Automotive and some areas of Technical Glass
 - Affected by reduction of car production in Europe and China
- Focus on attaining positive underlying free cash flow, excluding the strategic capital expenditure projects

Key step-change actions progressing, aiming to return to profit growth

- Continued efficiency improvement, cost reduction and focused business improvement to enhance profitability
- Execution of strategic investments and acceleration of new product & business development for future growth

It is a summary.

Due to the increasingly challenging market conditions and the impact of foreign currency movements, regrettably we revised our full-year forecast for the current fiscal year. However, we will not cease our actions to lay the foundation for future growth and development.

Notice



The projections contained in this document are based on information currently available to us and certain assumptions that we consider to be reasonable. Hence the actual results may differ. The major factors that may affect the results are the economic and competitive environment in major markets, product supply and demand shifts, currency exchange and interest rate fluctuations, changes in supply of raw materials and fuel and changes and laws and regulations, but not limited.

Nippon Sheet Glass Company, Limited

Appendices



FY2020 Q2 Results

- Revenue & Trading Profit – by Business & Regions
- Revenue & Trading Profit – Quarterly Trend
- Consolidated Balance Sheet
- Consolidated Cash Flow
- Exceptional items
- Exchange Rates
- Impact of IFRS16 “Leases”
- News Releases (May 2019 to October 2019)

Revenue & Trading Profit – by Business & Regions



Revenue				Trading profit			
	<u>2nd Quarter (Apr - Sep: 6 months)</u>				<u>2nd Quarter (Apr - Sep: 6 months)</u>		
JPY bn	FY2019	FY2020	Change	JPY bn	FY2019	FY2020	Change
Architectural	121.7	119.7	(2.0)	Architectural	11.9	9.8	(2.1)
Europe	49.6	45.3	(4.3)	Automotive	7.4	5.2	(2.2)
Asia	43.5	47	3.5	Technical Glass	4.4	3.5	(0.9)
Americas	28.6	27.4	(1.2)	Other	(4.9)	(2.7)	2.2
Automotive	160.8	148.2	(12.6)	Total	18.8	15.8	(3.0)
Europe	74.0	62.9	(11.1)	Europe	9.5	5.7	(3.8)
Asia	33.4	34.6	1.2	Asia	9.0	7.3	(1.7)
Americas	53.4	50.7	(2.7)	Americas	5.2	5.5	0.3
Technical Glass	25	20.2	(4.8)	Other	(4.9)	(2.7)	2.2
Europe	4.1	3.5	(0.6)	Total	18.8	15.8	(3.0)
Asia	20.1	15.9	(4.2)				
Americas	0.8	0.8	0.0				
Other	0.6	0.5	(0.1)				
Total	308.1	288.6	(19.5)				

Revenue & Trading Profit – Quarterly Trend



Architectural



Automotive



Technical Glass



Consolidated Balance Sheet



JPY bn	<u>31 March</u> <u>2019</u>	<u>30 Sep</u> <u>2019</u>	<u>Change</u>
Assets	761.9	776.7	14.8
Non-current assets	516.3	536.6	20.3
Goodwill & intangible assets	161.1	151.7	(9.4)
Property, plant and equipment	241.5	281.4	39.9
Other	113.7	103.5	(10.2)
Current assets	245.6	240.1	(5.5)
Cash & cash equivalents	52.4	44.8	(7.6)
Other	193.2	195.3	2.1
Liabilities	629.4	674.6	45.2
Current liabilities	193.0	193.4	0.4
Financial liabilities	42.2	59.2	17.0
Other	150.8	134.2	(16.6)
Non-current liabilities	436.4	481.2	44.8
Financial liabilities	329.3	374.5	45.2
Other	107.1	106.7	(0.4)
Equity	132.5	102.1	(30.4)
Shareholders' equity	123.8	92.6	(31.2)
Non-controlling interests	8.7	9.5	0.8
Total liabilities and equity	761.9	776.7	14.8

Consolidated Cash Flow Summary



JPY bn

	FY2019 2nd Quarter	FY2020 2nd Quarter	Change
Profit for the period	10.0	2.4	(7.6)
Depreciation and amortization	14.2	17.2	3.0
Net impairment	(0.2)	0.5	0.7
Gain on disposal of assets	-	(1.0)	(1.0)
Tax paid	(3.4)	(3.5)	(0.1)
Others	(3.8)	(0.7)	3.1
Net operating cash flows before movement in working capital	16.8	14.9	(1.9)
Net change in working capital	(13.7)	(13.5)	0.2
Net cash flows from operating activities	3.1	1.4	(1.7)
Purchase of property, plant and equipment			
- Strategic projects	-	(20.3)	(20.3)
- Other	(11.7)	(10.8)	0.9
Disposal proceeds	0.1	2.2	2.1
Others	(0.7)	(1.3)	(0.6)
Net cash flows from investing activities	(12.3)	(30.2)	(17.9)
Free cash flow	(9.2)	(28.8)	(19.6)

Exceptional items



JPY bn

Gain on disposal of a subsidiary
Restructuring costs, including employee termination payments
Suspension of facilities
Net impairment of non-current assets
Settlement of litigation matters
Other

	<u>FY2019</u> <u>2nd Quarter</u>	<u>FY2020</u> <u>2nd Quarter</u>
	-	1.0
	(1.3)	(1.7)
	-	(1.2)
	0.2	(0.2)
	0.1	(0.1)
	(0.2)	-

Foreign exchange rates



Average rates used

	FY2018				FY2019				FY2020		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Forecast
GBP	142	144	146	147	149	147	146	146	141	137	135
USD	111	112	111	111	110	111	111	111	109	109	109
EUR	122	126	128	130	131	130	129	129	124	121	122
BRR	34.6	35.0	34.8	34.4	30.4	29.3	29.3	29.4	28.0	27.6	-
ARS	7.06	6.74	6.65	6.30	4.70	-	-	-	-	-	-

FX Sensitivity

Increase (decrease) if the value of the yen increases by 1% (all other things being equal):

(JPY bn)	FY2018	FY2019
Equity	(3.5)	(3.3)
Profit for the period	(0.1)	(0.2)

Closing rates used

	FY2018				FY2019				FY2020	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
GBP	146	151	152	150	145	148	141	144	137	133
USD	112	113	113	106	111	113	111	111	108	108
EUR	128	132	136	132	128	132	127	124	123	118
BRR	34.0	35.4	33.9	32.1	28.6	28.2	28.5	28.3	28.3	26.0
ARS	6.81	6.42	6.03	5.30	3.94	2.84	2.93	2.53	2.53	1.88

Oil prices (Brent)

FY2020 Forecast US\$ 67 per barrel

Impact of IFRS16 “Leases”



	Impact
Income statement (Annual/Estimate)	
EBITDA	Increase of JPY 9.0bn
Depreciation	Increase of JPY 8.0bn
Operating profit	Increase of JPY 1.0bn
Finance expenses	Increase of JPY 1.0bn
Profit before taxation	Negligible
Balance Sheet (Opening balance adjustment)	
Property, plant and equipment	Increase of JPY 34.2bn
Lease liabilities	Increase of JPY 34.2bn

News Releases — May 2019 to October 2019



21 May 2019	NSG Group and Ubiquitous Energy to Jointly Develop Transparent Solar windows
30 May 2019	Pilkington Automotive scoops Jaguar Land Rover's Supplier Excellence Award
14 Jun 2019	NSG Glass selected for ISUZU ERGADUO, Japan's first hybrid joint bus
8 July 2019	Solar installation to power NSG Group's European Technical Centre
30 Sep 2019	NSG Group Publishes the 2019 Integrated Report
9 Oct 2019	SBT Initiative Approves NSG's Target for Greenhouse Gas Reduction
10 Oct 2019	NSG PAIRMULTI EA® and SE® selected by Kitakyushu City as No. 1 Eco Premium Product

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