

NSG

GROUP





NSG Group

FY2018 Annual Results

(from 1 April 2017 to 31 March 2018)

Nippon Sheet Glass Company, Limited
11 May 2018

Shigeki Mori
Chief Executive Officer

Clemens Miller
Chief Operating Officer

Kenichi Morooka
Chief Financial Officer

Agenda



1. FY2018 Financial Results
2. FY2018 Business Update
3. Dividends
4. FY2019 Forecast
5. Medium-term Plan (MTP) Phase 2 Update
6. Summary

Slide 4 shows the agenda for today's presentation.
First, I will talk about FY2018 financial results and then FY2019 forecast.

Agenda



1. **FY2018 Financial Results**
2. FY2018 Business Update
3. Dividends
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FY2018 Results Highlights



Revenue	JPY603.9 bn (+4%)	Strong market demand; positive impact from weaker yen
Trading profit	JPY37.7 bn (+14%)	Robust European markets; improved results in Technical Glass; continued benefit from operational improvements
Profit before taxation	JPY22.2 bn (+50%)	Significant improvement from reduced financial expenses; improvement in JVs
Profit attributable to owners of the parent	JPY6.1 bn (+9%)	Year-on-year improvement despite deferred tax write-down of JPY9.6 bn
Free cash flow	JPY16.8 bn	Achieving the target of more than JPY10 bn
Ordinary dividend	JPY20/share	Resuming dividend payment based on sufficient recovery of performance

Revenue and profit growth; Resumption of dividend

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Slide 6 lays out the Highlights of FY2018 Results.

Revenue increased by 4% from the previous year to 603.9 billion yen, due to good market conditions and the foreign exchange effects.

Trading profit continues to show an improving trend, as the figure improved by 4.6 billion yen (14%) from the previous year to 37.7 billion yen. This is mainly due to robust market conditions in Europe, improved results in Technical Glass and continued benefit from operational improvements.

Profit before taxation improved from the previous year by 50% to 22.2 billion yen, with significant improvement from reduced financial expenses and an increased share of profits from joint ventures and associates.

Profit attributable to owners of the parent improved by 0.6 billion yen to 6.1 billion yen, despite being hit by a deferred tax write down of 9.6 billion yen due to a reduction in the US federal tax rate, as announced in last December.

Free cash inflow was 16.8 billion yen, which was comfortably above the target of 10 billion yen.

Based on sufficient recovery in profitability, the Group will resume dividends of 20 yen per one share of ordinary shares.

Consolidated Income Statement



	FY2017	FY2018
(JPY bn)		
Revenue	580.8	603.9
Trading profit	33.1	37.7
Amortization *	(3.2)	(2.0)
Operating profit	29.9	35.7
Exceptional items	2.9	(1.3)
Finance expenses (net)	(19.1)	(14.6)
Share of JVs and associates	1.1	2.4
Profit before taxation	14.8	22.2
Taxation	(7.5)	(4.7)
Adjustment in respect of US tax rate change	-	(9.6)
Profit for the period	7.3	7.9
Profit attributable to owners of the parent	5.6	6.1
EBITDA	62.1	66.2

* Amortization arising from the acquisition of Pilkington plc only

Continued improvement in profitability

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The Group's Consolidated Income Statement is presented in Slide 7.

This is a year-on-year comparison of cumulative full-year results.

Revenue increased due to effects of a weakening Japanese yen against the Euro and continued good market conditions in Europe.

Operating profit has improved from the previous year by 5.8 billion yen (19.3%) to 35.7 billion yen in line with our full-year forecast.

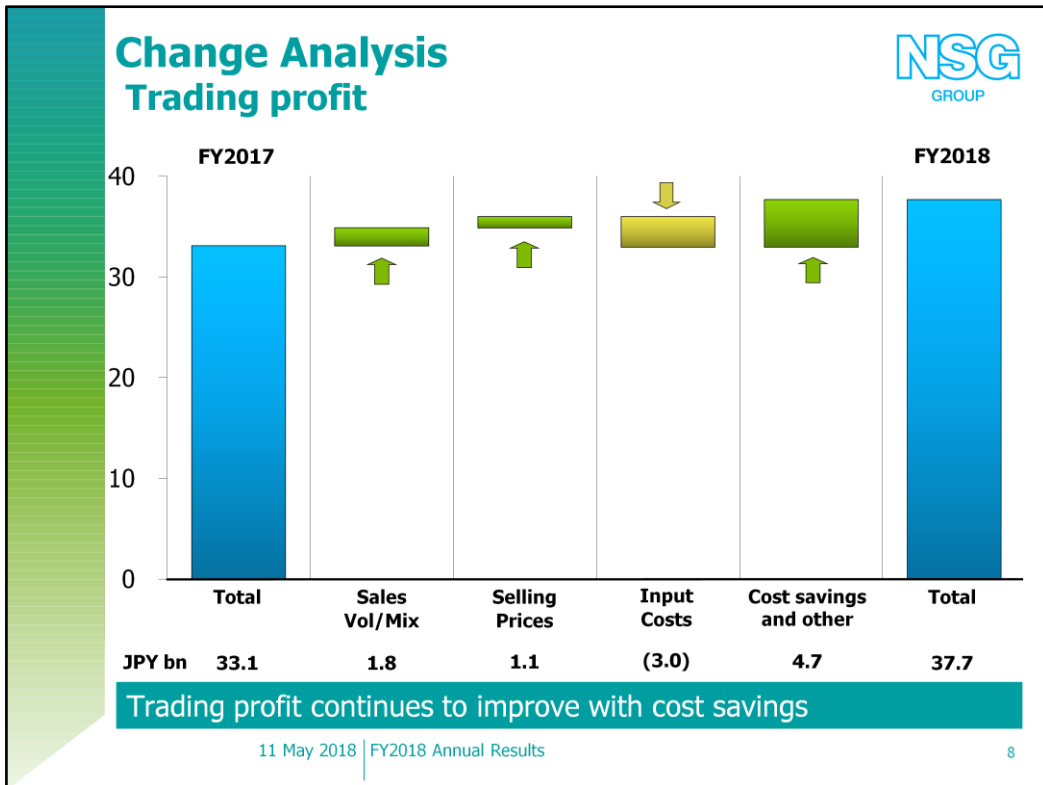
Exceptional losses of 1.3 billion yen include the reversal of impairment of investments in joint ventures, which was more than offset by costs related to restructuring and costs arising from the suspension of facilities, especially in Ottawa.

Net financial expenses have fallen from the previous year by 4.5 billion yen to 14.6 billion yen, as result of lower average debt levels and reduced costs of borrowings.

Our share of joint ventures and associates' profits has increased from the previous year, mainly due to improved results at Cebrace, our joint venture in Brazil.

The underlying taxation charge improved from the previous year, as the

Group recognized additional deferred tax assets in some of its regions. (Despite the 9.6 billion yen charge related to the adjustment in respect of US tax rate change,) profit attributable to owners of the parent improved to 6.1 billion yen.



Slide 8 lays out the analysis of year-on-year trading profit movement.

Increases in volumes and improvements in product mix were seen in Automotive Europe and Japan, Architectural and Automotive South America, and Technical Glass, but this was partially offset with negatives elsewhere.

Prices have improved in Architectural, particularly in Europe and for some products in Technical Glass.

Increases in energy, logistics and raw materials costs in regions such as South East Asia, Japan, North America and South America East Asia have affected the Group's input costs.

The cost savings and other column shows the effect of our continuous drive to improve operational efficiency and reduction of costs, which continues to more than offset inflationary factors.

Exceptional Items



(JPY bn)	FY2017	FY2018
Reversal of impairment of investments in JVs	-	4.1
Gain on disposal of non-current assets	8.2	2.1
Gain on disposal of investments in JVs and associates	0.9	1.5
Gain on settlement of insurance proceeds	-	1.0
Reversal of impairments of non-current assets	1.5	-
Restructuring costs	(4.8)	(5.2)
Suspension of facilities	-	(4.6)
Impairments of non-current assets	(3.9)	(0.5)
Other items	1.0	0.3
	2.9	(1.3)

JV impairment reversal – improving performance of business in Russia

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Details of Exceptional Items are explained here on Slide 9.

The reversal of impairment of investments in joint ventures of 4.1 billion yen relates to the Group's investment in a joint venture owning production facilities in Russia. The Group has recognized the reversal gain, as the performance of this joint venture has steadily improved, leading the Group to re-assess its future prospects.

Gain on disposal of non-current assets of 2.1 billion yen mainly relates to assets in Technical Glass in China, which were disposed following the completion of restructuring activities undertaken earlier in the year.

Current year restructuring costs of 5.2 billion yen include restructuring activities in Technical Glass in China, Automotive Europe and a number of more minor projects elsewhere.

The suspension of facilities (loss of 4.6 billion yen) relates to the Group's decision to proceed with an expedited repair of the furnace at Ottawa, Illinois, U.S.A.

Consolidated Cash Flow Summary



(JPY bn)	FY2017	FY2018
Profit for the period	7.3	7.9
Depreciation and amortization	32.2	32.0
Net impairment	2.5	(3.5)
Gain on disposal of assets and exit of business	(9.9)	(4.0)
Tax adjustment in respect of US tax rate change	-	9.6
Tax paid	(5.0)	(5.8)
Others	(3.3)	(0.6)
Net operating cash flows before movement in working capital	23.8	35.6
Net change in working capital	6.6	1.6
Net cash flows from operating activities	30.4	37.2
Purchase of property, plant and equipment	(24.1)	(31.6)
Disposal proceeds	14.4	10.3
Others	(0.4)	0.9
Net cash flows from investing activities	(10.1)	(20.4)
Free cash flow	20.3	16.8

Achieved the target of more than JPY10 bn

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Slide 10 is the Consolidated Cash Flow Summary.

Reflecting the growth in operational profitability, net cash flows from operating activities improved. The Group's free cash inflow was 16.8 billion yen with strict control of working capital and the disposal of non-core assets.

		NSG GROUP	
		<u>31-Mar-17</u>	<u>31-Mar-18</u>
Net Debt (JPY bn)	313	306	
Net Debt/EBITDA	5.0x	4.6x	
Net Debt/Equity Ratio	2.3x	2.2x	
Shareholders' equity ratio	15.7%	17.0%	
	<u>FY2017</u>	<u>FY2018</u>	
Operating Return* on Sales	5.7%	6.2%	

Improvements in financial KPIs

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Slide 11 lays out the Group's Financial Key Performance Indicators.

Net debt was affected by the foreign exchange impact of a weakening Yen, but with the help of strong cash inflows, decreased by 7 billion yen to 306 billion yen.

The shareholders' equity ratio improved to 17.0%.

The operating return on sales ratio also improved to 6.2%.

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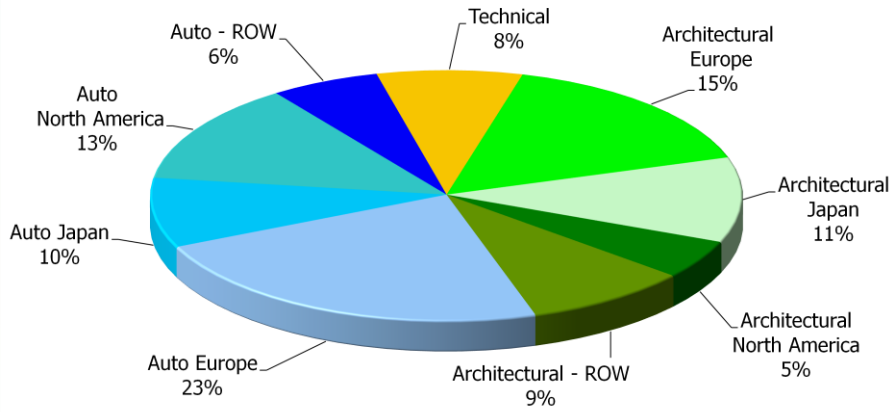


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External Revenue - Group Businesses



¥ 603.9 billion



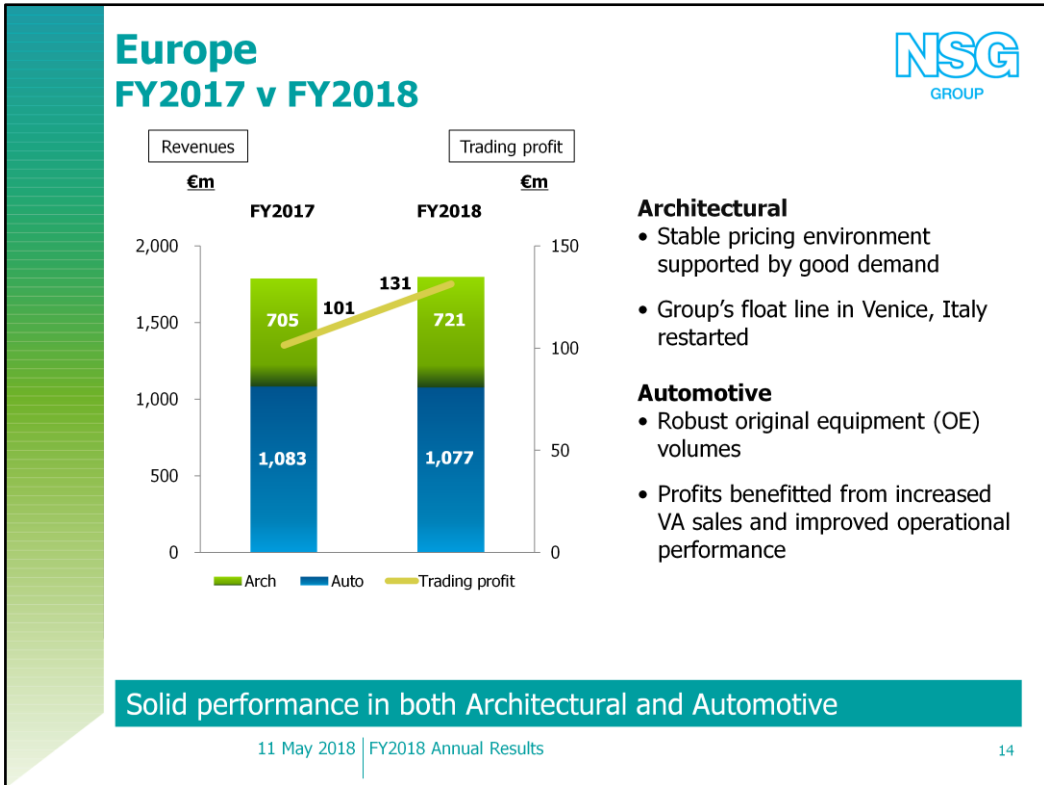
FY2018

Diversified geographical coverage

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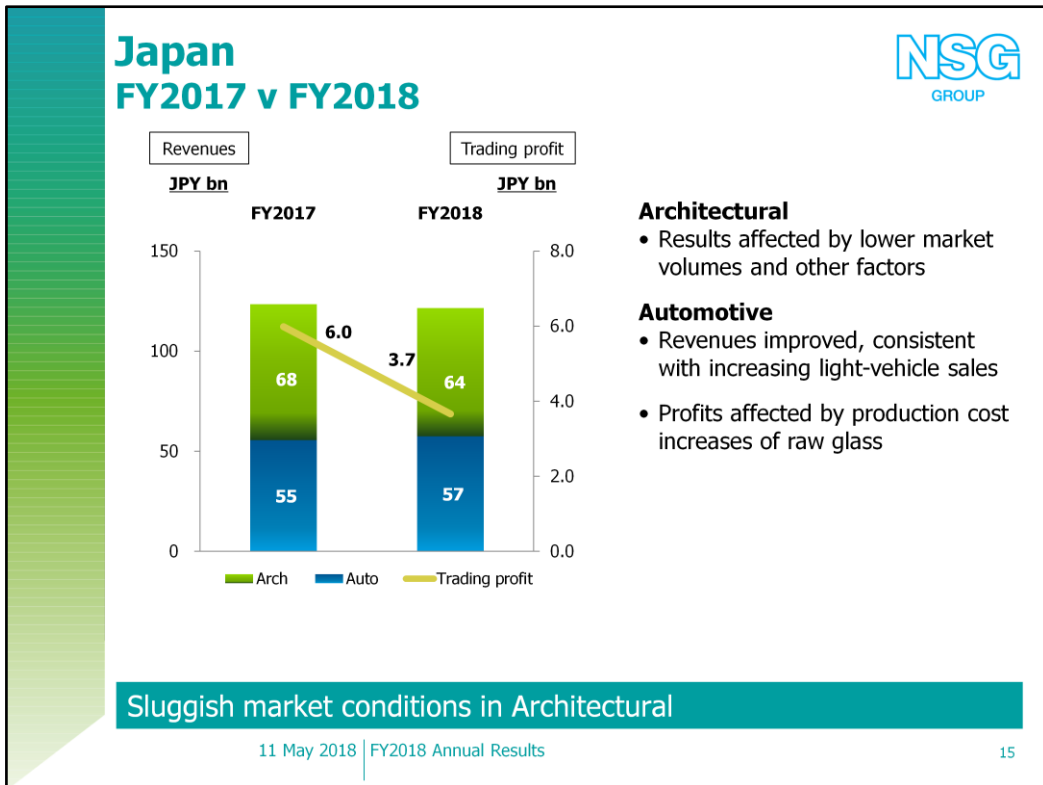
(Slide 13 shows the proportion of sales generated by each of the Group's business segments.)



Turning to slide 14, the Group's flat glass businesses in Europe.

Our Architectural businesses benefitted from robust market conditions, with the pricing environment being supported by good demand. The Group's float line in Venice, Italy has restarted in November, and this will help us meet customer demand going forward.

Automotive profits also increased, due to increased VA sales and improvements in operational performance. Underlying automotive market conditions continue to be positive.



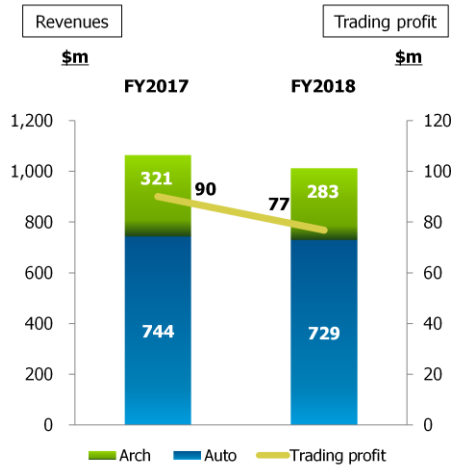
Slide 15 is Japan.

In Architectural, revenues were affected by lower market volumes and other factors. Increases in input costs such as heavy fuel oil and consumables have affected the production costs. Increase in labor costs due to the tight labor market contributed to an increase in production costs.

We are also continuing to address our cost base and promote glass products in preparation for the 2020 Summer Olympic Games in Tokyo, to ensure the Group can achieve satisfactory levels of profitability going forward.

In Automotive, our revenues improved, reflecting the increase in light-vehicle sales. Profits were affected by production cost increases of raw glass. We are implementing cost reduction actions to bring back the profitability to the previous level.

North America FY2017 v FY2018



Architectural

- Conventional architectural glass demand remained robust
- Volumes restricted by temporary reduction in NSG capacity at Ottawa, which restarted during Q4

Automotive

- Revenues and profits decreased due to slight fall in market volumes

Profitability affected by temporary factors in Architectural

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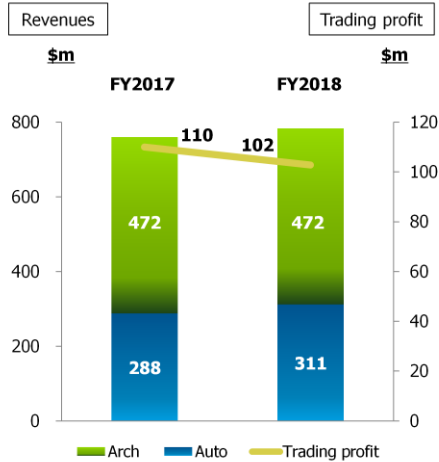
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Turning to North America on Slide 16.

In Architectural, the Group's capacity has been temporarily reduced due to an expedited repair at Ottawa, Illinois. This line restarted at the end of December. Solar volumes were affected by re-tooling at a major customer, but the demand for conventional architectural glass remain robust.

Automotive revenues and profits were affected by a slight fall in market volumes, but production efficiency continues to improve.

Rest of World FY2017 v FY2018



Architectural

- Domestic markets generally improved from the previous year
- Results impacted by re-tooling at a major customer

Automotive

- Market conditions in South America continue to recover

South American Automotive markets recovering

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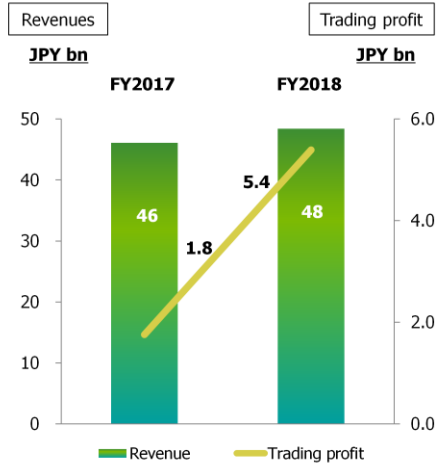
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Slide 17 is Rest of World.

Domestic architectural markets in South America and South East Asia were generally improved, although in South East Asia, volumes of solar energy glass were adversely affected by re-tooling at a major customer.

In Automotive, profitability of the businesses improved, as market conditions in South America continue to recover along with the improving trend of the region's economic outlook.

Technical Glass FY2017 v FY2018



Technical Glass

- Display's results improved from the previous year
- Demand for components used in multi-function printers strengthened
- Volumes of glass cord used in engine timing belts, glass flake for use in vehicle paints, and battery separators improved

Improvements across all business segments

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Turning to Slide 18, Technical Glass.

Display's results continue to improve, driven by improved production efficiency and increased prices in some products.

Volumes of components used in multi-function printers, glass cord used in engine timing belts, glass flakes (including Metashine) and battery separators increased from the previous year, due to good level of demand in their respective markets.

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Dividends

- Dividends for FY2018 and FY2019 Forecast

	FY2018 (year-end)	FY2019 (Q2 forecast)	FY2019 (Q4 forecast)	FY2019 Total forecast
Ordinary (JPY/share)	20	-	20	20
Commemoration (JPY/share)	-	10	-	10
Total Ordinary Dividend	20	10	20	30
Dividend Amount (JPY bn) (Ordinary Dividends)	3.6 (1.8)	2.0 (0.9)	2.9 (1.8)	4.9 (2.7)
(Preferred Dividends)	(1.8)	(1.1)	(1.1)	(2.2)
Consolidated Payout Ratio (Ordinary)	42%			23%

- Background
 - The Group has intended to resume dividend payment as soon as its performance recovers sufficiently
 - Given the latest results and forecast, it decided to resume ordinary dividend payment, judging the level of recovery is sufficient
 - With view to the centennial of company establishment in November 2018, commemoration dividend is planned for the second quarter of FY2019

Turning to Slide 20 – Dividends.

The Group has intended to resume dividend payment on ordinary shares as soon as its performance recovers sufficiently. Given the latest results and forecast, the Board of Directors have judged the level of recovery as sufficient and recommended a final dividend of 20 yen per share.

As the Group will celebrate its centennial anniversary in November 2018, the Group is planning a commemoration dividend of 10 yen per share at half-year, and a final dividend of 20 yen in FY2019.

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1. FY2018 Financial Results
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4. **FY2019 Forecast**
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FY2019 Forecast



(JPY bn)	<u>Actuals</u> <u>FY2018</u>	<u>Forecast</u> <u>FY2019</u>
Revenue	603.9	630.0
Trading profit	37.7	43.0
Amortization*	(2.0)	(2.0)
Operating profit	35.7	41.0
Exceptional items	(1.3)	(7.0)
Finance expenses (net)	(14.6)	(13.0)
Share of JVs and associates	2.4	3.0
Profit before taxation	22.2	24.0
Profit for the period	7.9	16.0
Profit attributable to owners of the parent	6.1	14.0

* Amortization arising from the acquisition of Pilkington plc only

Revenue Growth; forecasting sixth year of trading profit growth.
Continued net profit improvement

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Slide 22 lays out the Group's FY2019 Forecast.

The Group expects to see a further recovery in profitability during the next financial year with modest improvements in market conditions and an increasing contribution from VA products.

In Architectural, European markets are expected to be robust, and profitability in Japan is expected to improve with support of strong demand in the non-residential sector, due to Summer Olympics in Tokyo. North America will benefit from continuing robust demand of conventional architectural glass, and the full-year operation of Ottawa plant. Solar volumes are also expected to recover.

In Automotive, mature markets are expected to be stable, while South American markets will continue to recover.

Technical Glass will continue to focus on cost improvement and growth of VA products.

As a result of the above factors, the Group forecasts improved revenues of 630 billion yen, and trading profit of 43 billion yen in FY2019.

Exceptional items will continue to reflect restructuring expenditure necessary

to achieve additional improvements in operational efficiency and overall cost reductions.

Financial costs will continue to fall as result of the decrease in borrowing costs.

Taxation will improve from FY2018, which experienced an one-off, non-cash adjustment in respect of US tax rate change.

Profit attributable to owners of the parent is expected to be positive and improve further, at 14 billion yen.

Whilst the Group will maintain its focus on cash generation, it will also make selective investments consistent with its strategy to become a VA glass company. One example of this initiative is the expansion of production capacity of on-line TCO (transparent conductive oxide) coated glass, which was announced today.

The Group will also continue maintain its focus on profit improvement and control of cash flow.

Results & Forecast Summary



- **FY2018 Results**
 - Fifth year of trading profit growth, significantly improved profit before taxation
 - Achieving the target of more than JPY10 bn free cash flow
 - Resuming dividend payment based on sufficient recovery of performance
- **FY2019 Forecast**
 - Revenue growth
 - Forecasting sixth year of trading profit growth. Net profit improvement expected
- **FY2019 Assumptions**
 - Markets to remain overall stable for all businesses; to accelerate VA shift
 - Improving core business profitability, with more efficient management
 - Architectural
 - Europe: Continued robust market; driving VA shift with coated glass etc
 - Japan: Making best of Olympic and energy-saving demand increases
 - North America: Robust conventional architectural market, with full-year contribution of restarted Ottawa
 - Solar: Volume recovery, markets to remain robust
 - Automotive
 - Stable mature markets and continued recovery in South America
 - Productivity improvement; opportunities in ADAS and EV
 - Technical: Continued cost improvement and VA revenue growth; new products

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Slide 23 is the summary of FY2018 financial results and FY2019 forecast.

As for the FY2019 forecast, I would like to point out that the Group expects a modest improvement in market conditions and increasing contribution from VA products. So far we do not see any significant downside risk for the Group's forecast.

The summary comments for each region are described above.

Agenda



1. FY2018 Financial Results
2. FY2018 Business Update
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4. FY2019 Forecast
5. **Medium-term Plan (MTP) Phase 2 Update**
6. Summary

From here, I will provide an update on Medium-term Plan (MTP) Phase 2 progress.

Medium-term Plan (MTP) Phase 2 (FY2018-FY2020) NSG GROUP

Phase 2 Measures

Growth Measures

- Drive VA No.1 Strategy
- Establish growth drivers
- Business culture innovation
- Enhance global management

Financial Measures

- Enhance equity
- Reduce net debt
- Issue Class Share

MTP Targets

- Financial sustainability
- Transform into VA Glass Company

Financial Targets

Net debt / EBITDA: 3x

ROS > 8%

[Expectation after achieving MTP Targets]
(After redemption of Class A Shares)

- Equity Ratio: 20%
- ROE: 10%
- VA Sales Ratio: > 50%
- Trading Profit: JPY50-60 bn

VA: Value-added ROS (Return on Sales): based on trading profit (profit before amortization of non-tangible assets)
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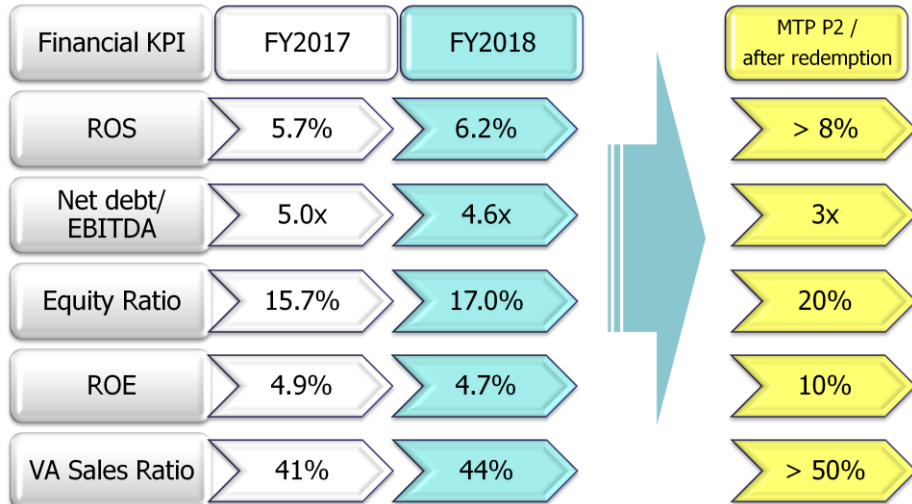
First of all, slide 25 is a recap of the Medium-term Plan (MTP) Phase 2, as explained in the past.

Under the MTP Phase 2, which started in April 2017, we aim for achieving the following targets: to establish financial sustainability; and to start transforming into a VA Glass Company, through “Growth Measures” and “Financial Measures”.

The Financial targets are to achieve Net debt/EBITDA of 3x; and Return on Sales of 8 percent or more.

Progress of MTP Phase2

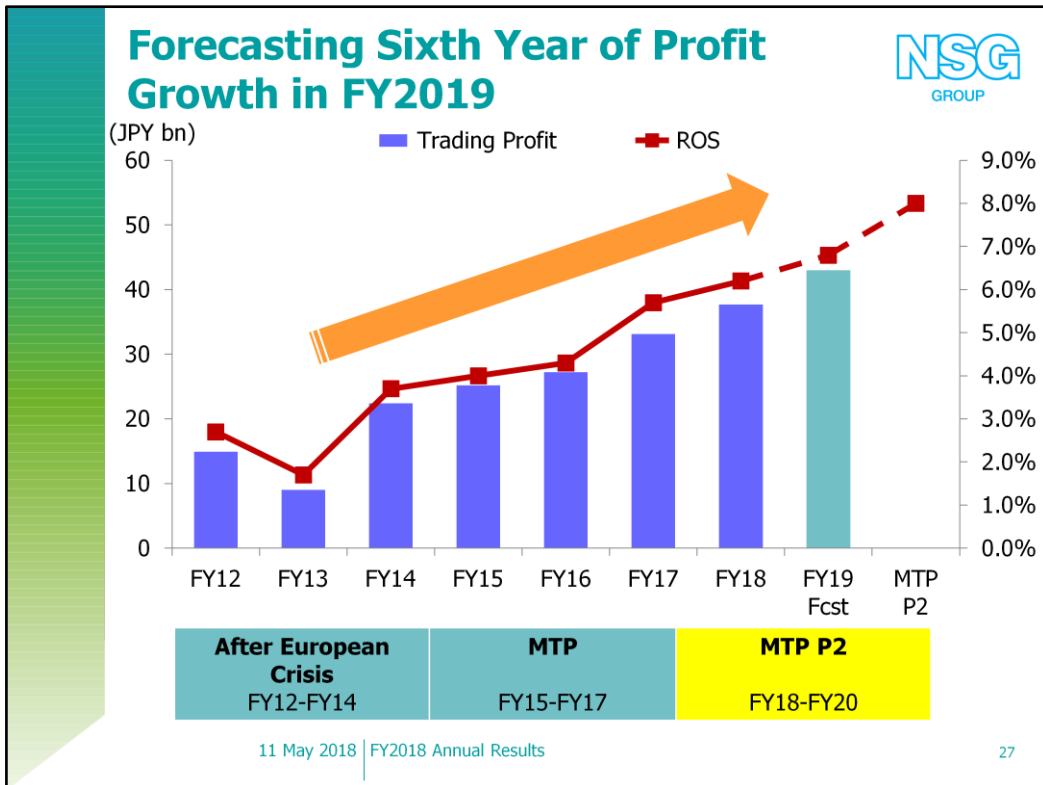
KPIs have been improving as planned for establishing financial sustainability



Moving to slide 26, here is an update on the KPIs for MTP Phase 2.

As you can see, although there are some differences in progress, the indices are improving overall as planned.

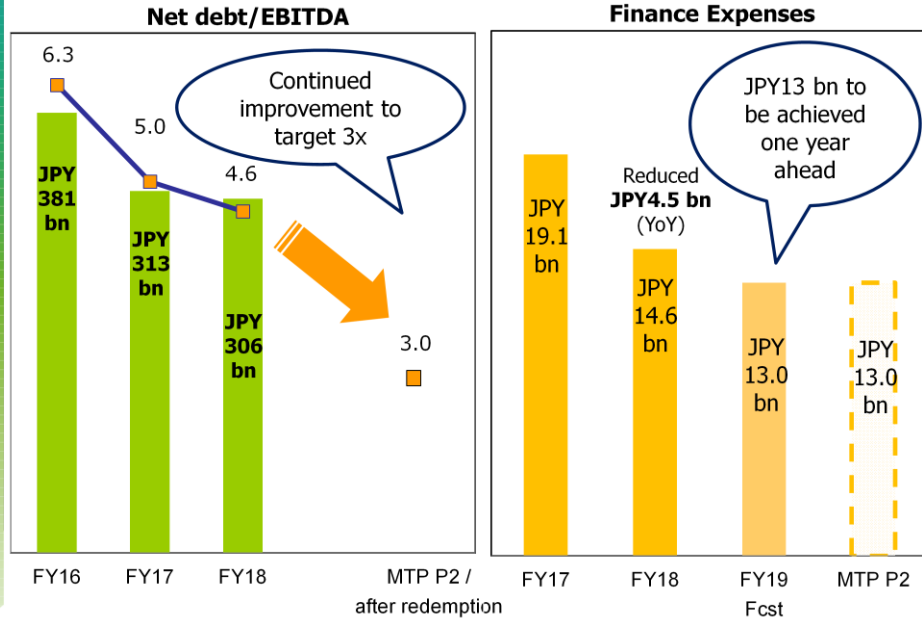
While ROE lowered slightly due to a net profit impact in FY2018 with the US federal tax rate change, as we announced in last December, all the other indices improved. We expect further improvement in FY2019.



Slide 27 shows the trend of our trading profit.

As you can see, we are forecasting the sixth year of profit growth in FY2019. The ROS forecast for FY2019 is 6.8 percent, improving from 6.2% in FY2018.

Steadily Progress towards Financial Sustainability



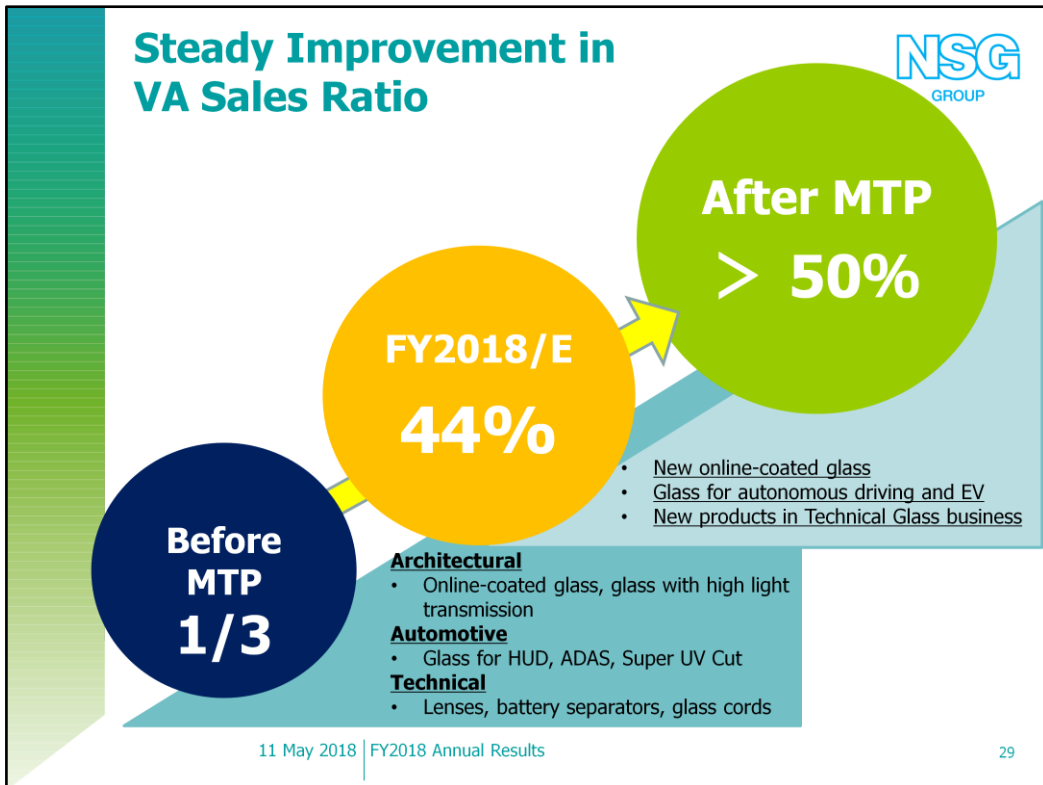
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Slide 28 shows Net debt/EBITDA on the left side and Finance Expenses on the right.

Both are improving.

Net debt/EBITDA is improving steadily toward the MTP target of 3 times. Our forecast of finance expenses for FY2019 is JPY13 bn. It means we will achieve FY2020's target one year ahead.



Slide 29 shows VA Sales Ratio.

As you saw on slide 26, this ratio is improving steadily toward the target of 50%; we achieved 44 percent in FY2018.

On the lower half of the slide, you can see the products which have contributed to the VA Sales Ratio improvement.

(Architectural; Online-coated glass, glass with high light transmission)

(Automotive; Glass for HUD, ADAS, Super UV Cut)

(Technical; Lenses, battery separators, glass cords)

In addition to these existing VA products, those on the right side are what we consider promising new VA products such as; New online-coated glass, Glass for autonomous driving and EV, New products in Technical Glass business.

Driving 4 Key Measures (1)

- ◆ **Good start for first year of MTP Phase 2**
⇒ **Further profit improvement**
- ◆ **Accelerating actions to achieve MTP targets**

Key Measures

1. Drive VA No.1 Strategy

- New APBL(*1) lines installed in Japan, the US and Europe
- New plant for battery separators to be built in Indonesia by joint venture with Entek and Separindo

2. Establish Growth Drivers

- Expediting new business development by managing promising R&D projects as **Star Projects**



Planned site for new facility in Indonesia

Please turn to slide 30.

Here, I will talk about the actions we took in FY2018 regarding the four key measures.

First, on "Drive VA No.1 strategy". As I explained at the FY2018 second quarter results announcement, the key actions taken in FY2018 were as follows:

- New APBL lines installation in Japan, North America and Europe
- New plant for battery separators to be built in Indonesia by a joint venture with Entek and Separindo. The picture shows the planned site for the new plant which is to start production in next January.

As for "Establish Growth Drivers", I am directly in charge of managing 27 promising R&D projects as "Star Projects".

Driving 4 Key Measures (2)

Key Measures

3. Business Culture Innovation

- Enhancing Manufacturing Excellence
Focus on productivity improvement in Automotive (Production line integration, new KPIs (MMP (*1)・VAA% (*2)), robots etc.)
- More focus on Marketing
"Marketing Workshop" led by Global Marketing Director



Robot used at automotive assembly line

4. Global Management Enhancement

- Developing Shared Service Center
Selected sites located in Poland, Japan, China and Brazil providing services globally
- Inclusion & Diversity
Attracting diverse talents, supporting inclusion, stimulating innovation and promoting business development



*1) MMP: Man Minute per Piece *2) VAA%: Value Added Activity percent

Please move to slide 31.

For "Business Culture Innovation", we focused on productivity improvement in Automotive business (production line integration, new KPIs, utilization of robots etc.) to enhance manufacturing excellence.

In the marketing area, the Global Marketing Director is coordinating different regions' initiatives to reinforce the Group capability.

In "Global Management Enhancement", in addition to developing Shared Service Centers located in Poland (covering business in Europe and North America), China (Asia), Brazil (South America) and Japan (Japan) providing services globally, we declared our commitment to "Inclusion & Diversity" to promote diversity in talents and inclusion.

FY2019 Approach

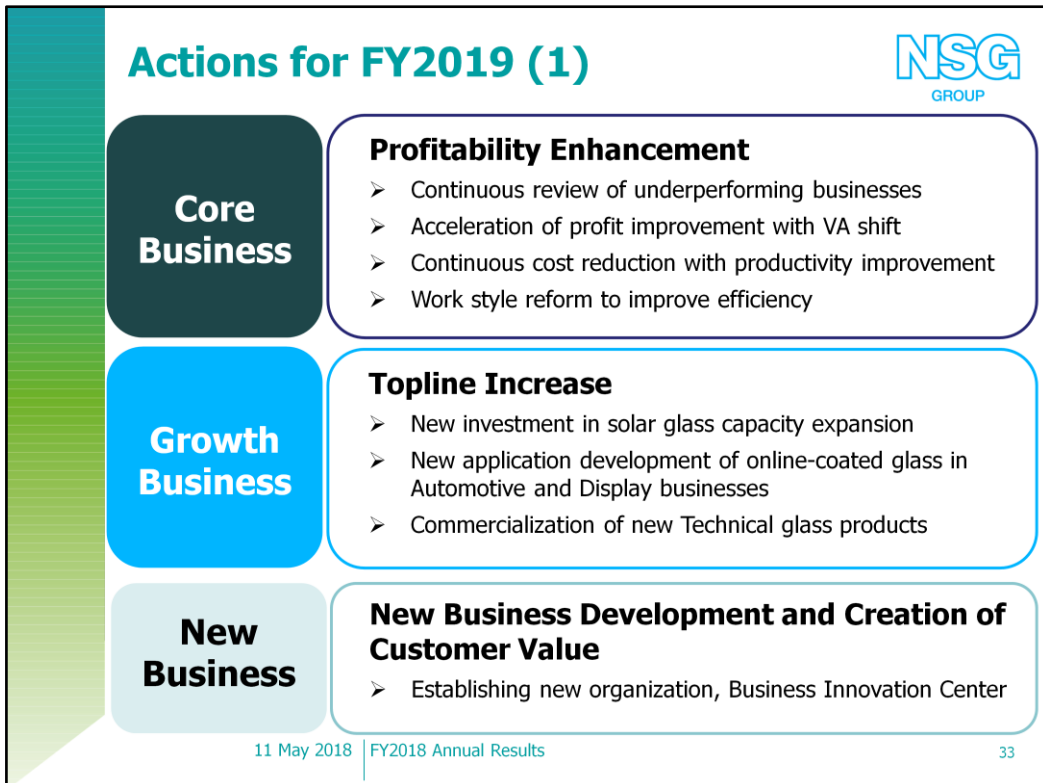
Shift to “VA + Growth”

- Profitability Enhancement
- Topline Increase



From this slide, I will talk about FY2019 approach, which is “Shift to VA + Growth”.

During the past three years we have been focusing on VA. The concept has been well understood by our employees. This year I will focus on “VA + Growth” to shift our attention more to growth.



The chart on slide 33 shows the actions to be taken in each of “Core Business, “Growth Business” and “New Business”.

In the Core Business, we are going to enhance profitability with the following actions,

Profitability Enhancement

- Continuous review of underperforming businesses
- Acceleration of profit improvement with VA shift
- Continuous cost reduction with productivity improvement
- Work style reform to improve efficiency

In the Growth Business, this year we are aiming for increase sales and profit by the following new products targeting for topline increase,

- New investment in solar glass capacity expansion
- New application development of online-coated glass in Automotive and Display businesses
- Commercialization of new Technical glass products

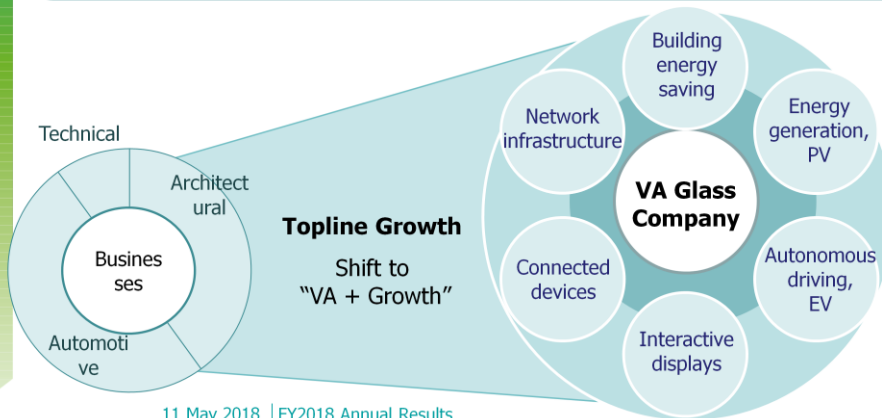
In the New Business, looking slightly further in the future, we are going to establish a new organization, “Business Innovation Center” in July.

Details will be shown in latter slides.

Actions for FY2019 (2)

- **Creating new businesses, in response to external changes**

- Actions against climate change
- Aging and decline of population in developed countries
- Population explosion in developing countries
- Proliferation of IoT
- Arrival of Smart Mobility Society
- Increasing need for safety, security and comfort



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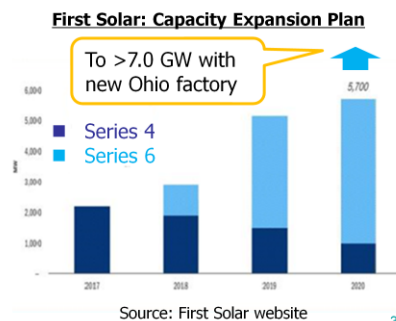
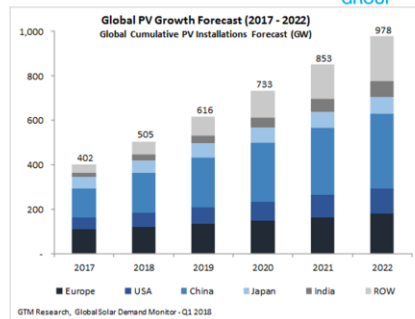
On the right side of slide 34, you can see the six new areas we are going to focus on.

(We are now facing significant external changes. Thus we need to transform our businesses, responding to the changing business environment and to continue to grow.)

Growth (1) Solar Glass Business

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- Growing solar market**
 The US accounts for about 20 percent of global solar panel market
 Southeast Asia, Middle East and Africa are to grow going forward
- New investment to expand solar glass manufacturing capacity**
 In the backdrop of growing demand for solar glass, JPY38 bn will be invested to install two furnaces with online coating capabilities in next two years
 - Upgrade and restart furnace in Vietnam
 - Build new line in the US
- Long-term supply contract entered into with First Solar**



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On slide 35 and onwards, I will explain our actions in each area.

The first area is the solar glass business expansion.

As you can see, the graph on the upper right shows that the global PV market is expected to grow substantially, especially in Southeast Asia, Middle East and Africa.

The graph below shows the capacity expansion plan by First Solar, our largest customer of solar glass. Their plan is to expand the capacity to over 7GW in 2020. We are going to supply glass for growing and more efficient Series 6 panels along with glass for conventional Series 4 panels.

In the backdrop of growing demand for solar glass, we announced today to expand our solar glass manufacturing capacity. JPY38bn will be invested to install two new furnaces with online coating capabilities in the next two years. Specifically, we will upgrade and restart a furnace in Vietnam and build a new line in the US.

We have entered into a long-term supply contract with First Solar.

Growth (2) Online-coated Products



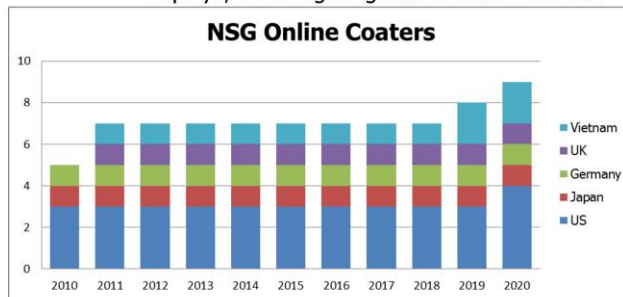
- **Developing new applications – thin-film technology**

Thin, uniform metallic oxide film deposited over glass while formed inside the float bath:

- Durable - suitable for further processing,
 - suitable for use as an external glass pane
- Versatile - architectural and solar applications
 - low-e properties for automotive applications
 - technical applications include thin or curved displays, OLED lighting and thin-film sensors



Automotive application (low-e glass)



Super thin NSG TEC™

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The second area is our online-coated products on slide 36.

Our proprietary online coating technology can provide various functions such as low-e and electro-conductive coating, and anti-reflection and anti-glare coating used for displays.

The online-coated film is durable and suitable for further processing. We expect increasing demand for various applications.

We intend to develop many potential applications such as automotive glass, thin or curved displays, OLED lighting and thin-film sensors.

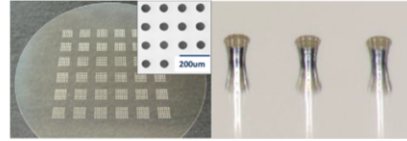
As shown in the graph below, at the moment we have seven coaters worldwide and two new lines will be installed in the US and Vietnam, as announced today.

Growth (3) Technical Glass Products

NSG
GROUP

- **Proliferation of IoT and Arrival of Smart Mobility Society**

- Opportunities in growth of key technologies such as net work infrastructure and connected devices



Through Glass Via (TGV)

Smart cities
(Cities, houses, infrastructure)

Healthcare
(Wearable devices, medicine)

Smart Factories
(AI, robots)

Connected cars
(Autonomous driving, EVs)

New Products

Information
Devices

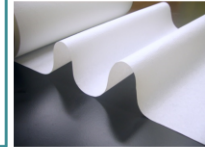
Displays

Separators

Functional
Glass Cords



Mobile DNA Testing
Equipment



Super Glass Paper

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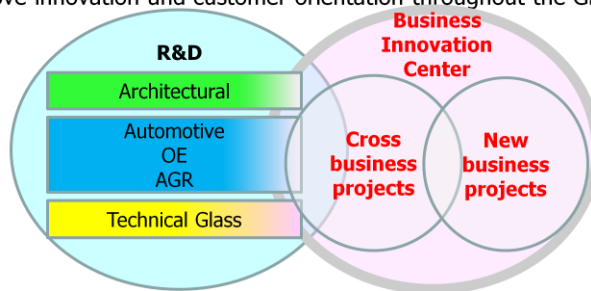
37

On slide 37, I will talk about the commercialization of new products in the Technical Glass business.

Commencing with Through Glass Via (TGV), mobile DNA testing equipment and Super Glass Paper (SGP), which have been already announced, we are going to continue developing new products, responding to the changing social needs.

New Business Development and Creation of Customer Value

- **To establish Business Innovation Center (BIC) in July 2018**
 - An organization tasked to lead the Group's growth strategy, in developing new businesses customized for needs of different regions and markets
 - With mission to grasp the needs of customers, create and deliver customer value
 - Close cooperation with a wide-range of third parties including educational or research institutions, start-up companies and investors expected
 - External talent to be brought in to lead the organization, with the relevant new business experience to provide stimulus and a fresh perspective
 - Playing a role that encourages the whole NSG Group to be innovative
 - To improve innovation and customer orientation throughout the Group



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With slide 38, I will introduce briefly the Business Innovation Center (BIC), to be established in July 2018, in order to develop new businesses.

The function of this new organization is to lead the Group's growth strategy, in developing new businesses customized for needs of different regions and markets. An external talent will be brought in to lead the organization, with the relevant new business experience to provide stimulus and a fresh perspective.

BIC will play a key role in our effort to expedite the new business development going forward.

ESG* Drive for Increasing Corporate Value (1)



- **Environment: Reducing CO2 emissions**

- Group Target
 - One percent year on year reductions in CO2 intensity across glass manufacturing operations
- Science based targets (SBT) for greenhouse gas reduction being developed for committing in summer 2018
- Shift to renewable energy
 - Green Energy

In Europe, contract in place to switch 50 percent of electricity to green energy



*ESG: Environment, Social and Governance

- Solar Energy

Planning to install PV panels at Lathom (UK), Northwood (US) and other Group sites



Architectural DS site in Kyushu, Japan
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Today, I will also talk about what we are doing in the area of E (Environment), S (Social) and G (corporate Governance), a concept well recognized by the investment community.

The first topic on slide 39 is "environment".

As a glass manufacturer, we are contributing to the environment by supplying glass for energy saving and energy generation. On the other hand, we are consuming a large amount of gas and fuel oil at our plants. Therefore, reducing CO2 emissions is a key pillar of our activity in this field.

As shown in this slide, we have been reducing the emission year by year in line with the Group target.

Additionally, actions to set up and commit to science based targets (SBT) by summer this year for green house gas reduction are underway.

(Further, our operational sites are promoting the switch to renewable energy, such as purchasing green energy or installing PV panels.)

ESG Drive for Increasing Corporate Value (2)



- **Social**
 - **Employees**
 - Global and regional talent development programs and succession planning
 - Leadership development programs to identify and develop talent pool
 - Competency model to define expectations for Group employees
 - Promotion of inclusion & diversity
 - **Supply Chain**
 - Based on "Supplier Code of Conduct" issued in 2009, more than 350 suppliers audited by FY2018 for its compliance, with coverage increasing 20 percent p.a.
 - **Ethics and Compliance**
 - Rolling out "Code of Ethics" and maintaining 100% annual training completion
 - Communications on Ethics & Compliance Hotline and encouraging reporting
 - **NSG Foundation**
 - NSG Foundation was established to commemorate the 60th anniversary of NSG with the aim to contributing to the promotion of R&D activities on inorganic materials through research grants, which amounts to JPY1,568 million for 1,197 projects cumulatively.

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Slide 40 shows activities in the "social" area.

Diverse talents are the key for our business. We believe it is very important to develop our people and promote inclusion globally.

We are focusing on ethics and compliance. Our activities in the area extend to out supply chain as well as inside our Group.

ESG Drive for Increasing Corporate Value (3)



- **Corporate Governance: Framework to support sustainable growth**
 - Diversity and independence of Board of Directors – material decision making and supervision of executives, representing shareholders
 - Clear separation of roles between Board chairman and CEO
 - Robust succession plan based on nomination process
 - Global incentive scheme – alignment of shareholder interest and management objectives
 - Key developments
 - 2008: Adoption of “Company with Committees” style; four Independent External Directors
 - 2012: Each of all three Committees chaired by Independent External Director
 - 2013: The Board chaired by Independent External Director
 - 2014: Share purchase factor in LTIP; shareholding targets for Executive Officers
 - 2015: Publication of NSG Group Corporate Governance Guidelines
 - 2016: First Board Effectiveness Evaluation; compliance with all the principles of CGC
 - 2018: Third Board Effectiveness Evaluation underway
 - Board Effectiveness Evaluation
 - Led by Independent External Directors to evaluate the performance of Board annually
 - Based on evaluation in FY2017, the following action plans were set and followed up
 - 1) Deeper discussion on strategic direction including ESG; 2) More robust risk management

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Slide 41 introduces our initiatives on corporate governance, the key in “ESG” and the important foundation for operating a business.

In overall business, I believe it is essential for the management to establish and maintain effective governance, which ensures transparency and objectivity, under the supervision of the Board of Directors.

Dividends Policy



- The Group's dividend policy is to secure dividend payments based on sustainable business results
- Once and after all Class A Shares have been redeemed and cancelled, while the Group maintains this basic policy in all respects, the Group will continue to use the sincere efforts to declare dividends with introduction of consolidated dividend payout ratio of 30 percent as a guide

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Slide 42 shows our dividends policy.

Our policy has been to secure dividend payments based on sustainable business results.

Now the Group has preferred shares and are paying preferred dividends. However, once and after all Class A Shares have been redeemed and cancelled, while the Group maintains the basic policy in all respects, the Group will continue to use the sincere efforts to declare dividends with introduction of consolidated dividend payout ratio of 30 percent as a guide.

Progress of MTP Phase2 & FY2019 Actions



- Good start for first year of MTP P2
- Accelerating actions in second year, based on Shift to “VA + Growth” through three key initiatives – Profit enhancement in core business; top-line increase in growth business; and new business development
 - Expanding coated products capacity, responding to thin film solar demand
 - Business Innovation Center to expedite new business development
- ESG (environment, social and governance) drive to bolster sustainable growth
- Continue to aim for securing dividend payments based on sustainable business results

Slide 43 is a summary on MTP Phase 2 progress.

Agenda



1. FY2018 Financial Results
2. FY2018 Business Update
3. Dividends
4. FY2019 Forecast
5. Medium-term Plan (MTP) Phase 2 Update
6. Summary

Summary



- FY2018 Results
 - Fifth year of trading profit growth, significant improvement in profit before taxation
 - Achieving the target of more than JPY10 bn free cash flow
 - Resuming dividend payment based on sufficient recovery of performance
- FY2019 Forecast
 - Revenue growth
 - Forecasting sixth year of trading profit growth. Net profit improvement expected
- Medium-term Plan (MTP) Phase 2 Update
 - Good start for first year of MTP P2
 - Accelerating actions in second year, based on Shift to "VA + Growth" through three key initiatives - Profit enhancement in core business; top-line increase in growth business; and new business development
 - Investment in two new lines for coated products
 - Business Innovation Center to expedite new business development

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Slide 45 summarizes today's presentation.

We posted a large impairment losses and sorted out the issues in FY2016. Since then, we have implemented three significant measures; restructuring of the business, productivity improvement and promoting shift to VA company. We can see the results of these measures now. Also, we carried out the capital reinforcement last year. Owing to this, our balance sheet has been enhanced, and stabilized.

I believe the actions to make our business the markets strengthen to the market conditions have been considerably penetrated. Also in FY2019, we are forecasting further profit growth, and believe these actions enable us to achieve it.

I talked about our new actions such as solar investment and BIC today. It is not true that we are completely out of the tunnel, but little by little, we are seeing the bright future. We are going ahead to reach the end of this tunnel.

This is the end of our presentation today.
Thank you very much for your attention.

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 environment in major markets (such as Europe, Japan, the U.S. and Asia), product supply/demand shifts, and currency exchange fluctuations.

Nippon Sheet Glass Company, Limited

Appendices

- FY2018 Annual Results
 - Revenue by Business & Regions
 - Trading Profit by Business & Regions
 - Consolidated Balance Sheet
 - Depreciation & Amortization, CAPEX
 - Exchange Rates
- MTP (Four Key Measures)

Revenue by Business & Regions FY2017 v FY2018



(JPY bn)	<u>FY2017</u>	<u>FY2018</u>	<u>Change</u>
Architectural	237.7	241.7	4.0
Europe	84.1	93.8	9.7
Japan	67.7	64.4	(3.3)
North America	34.8	31.3	(3.5)
Rest of World	51.1	52.2	1.1
Automotive	296.6	312.7	16.1
Europe	129.3	140.2	10.9
Japan	55.5	57.5	2.0
North America	80.6	80.6	0.0
Rest of World	31.2	34.4	3.2
Technical Glass	46.1	48.4	2.3
Europe	7.0	7.9	0.9
Japan	24.1	25.0	0.9
North America	1.0	1.3	0.3
Rest of World	14.0	14.2	0.2
Other Operations	0.4	1.1	0.7
Europe	0.0	0.6	0.6
Japan	0.4	0.4	0.0
North America	0.0	0.0	0.0
Rest of World	0.0	0.1	0.1
Total	580.8	603.9	23.1

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Trading Profit by Business & Regions FY2017 v FY2018



(JPY bn)	<u>FY2017</u>	<u>FY2018</u>	<u>Change</u>
by SBU			
Architectural	27.0	26.2	(0.8)
Automotive	12.7	14.3	1.6
Technical Glass	1.8	5.4	3.6
Other Operations	(8.4)	(8.2)	0.2
Total	33.1	37.7	4.6
by Region			
Europe	9.4	16.3	6.9
Japan	2.4	2.4	0.0
North America	9.2	7.4	(1.8)
Rest of World	12.1	11.6	(0.5)
Total	33.1	37.7	4.6

Consolidated Balance Sheet



	31-Mar-17	31-Mar-18	Change
(JPY bn)			
Assets	790.2	791.9	1.7
Non-current assets	527.8	538.9	11.1
Goodwill & intangible assets	162.3	169.8	7.5
Property, plant and equipment	245.2	252.8	7.6
Other	120.3	116.3	(4.0)
Current assets	262.4	253.0	(9.4)
Cash and cash equivalents	84.9	64.8	(20.1)
Other	177.5	188.2	10.7
Liabilities	656.5	649.1	(7.4)
Current liabilities	223.2	255.2	32.0
Financial liabilities	79.8	97.6	17.8
Other	143.4	157.6	14.2
Non-current liabilities	433.3	393.9	(39.4)
Financial liabilities	319.6	275.1	(44.5)
Other	113.7	118.8	5.1
Equity	133.7	142.8	9.1
Shareholders' equity	124.1	134.3	10.2
Non-controlling interests	9.6	8.5	(1.1)
Total liabilities and equity	790.2	791.9	1.7

Depreciation and Amortization, CAPEX and R&D expenditures



(JPY bn)	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018
Depreciation and Amortization	36.6	40.4	41.7	40.9	32.2	32.0
Capital expenditures	26.0	31.6	36.6	28.2	28.0	33.1
R&D expenditures	7.3	7.9	8.2	9.8	8.5	9.1

Exchange Rates



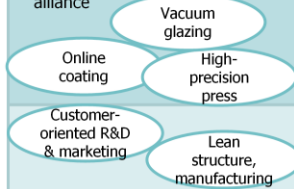
	<u>FY2017</u>	<u>FY2018</u>	<u>FY2019</u> <u>Forecast</u>
Average rates used:			
JPY/GBP	142	147	150
JPY/USD	108	111	110
JPY/EUR	119	130	130
Closing rates used:			
JPY/GBP	139	150	
JPY/USD	111	106	
JPY/EUR	119	132	

MTP Phase 2: Four Key Measures



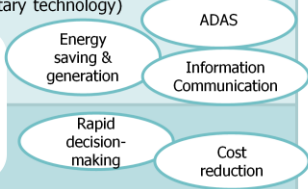
Drive VA No.1 Strategy

- Win leading position in the areas with "high growth potential" and "core strength"
- How:
 - Focus resources on VA shift in the areas where NSG technology and brand have the biggest advantage
 - Enhance customer relationship, build strategic alliance



Establish Growth Drivers

- Launch multiple, promising growth drivers
- Target areas:
 - Architectural Glass (energy-save/generation, health, design)
 - Automotive Glass (ADAS, connected, UV/IR shield, light-weight)
 - Technical Glass (new products/applications with proprietary technology)



VA Glass Company

Business Culture Innovation

- Build leaner business structure
- How:
 - Optimize all work processes
 - Enhance manufacturing excellence in each region
 - Optimize global R&D with customer viewpoints
 - Strengthen customer-oriented marketing

Enhance Global Management

- Advance global management to achieve the Group's optimization
- How:
 - Drive talent development, promote diversity
 - Enhance faster decision-making with flexible organization management
 - Continue to reduce cost across the Group

NSG

GROUP

