

Business Results and Progress of Key Measures

FY2020 (FY Ended March 2021)

DOWA HOLDINGS CO.,LTD.

May 19, 2021

Hello, everyone.

Thank you for attending our results briefing.

My name is SEKIGUCHI Akira. I am president and representative director of DOWA HOLDINGS.

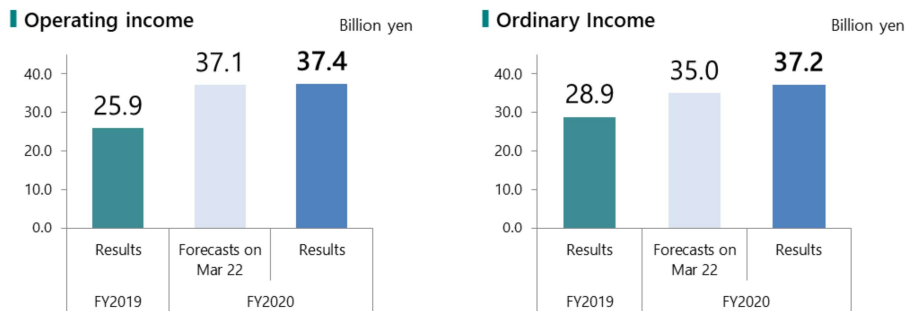
Today, I will be briefly describing the results in FY2020 and will then talk mainly about our plans and forecasts for FY2021.

Results for FY2020 (1) Overview of Results

Billion yen (Amounts less than 100 million yen are omitted.)

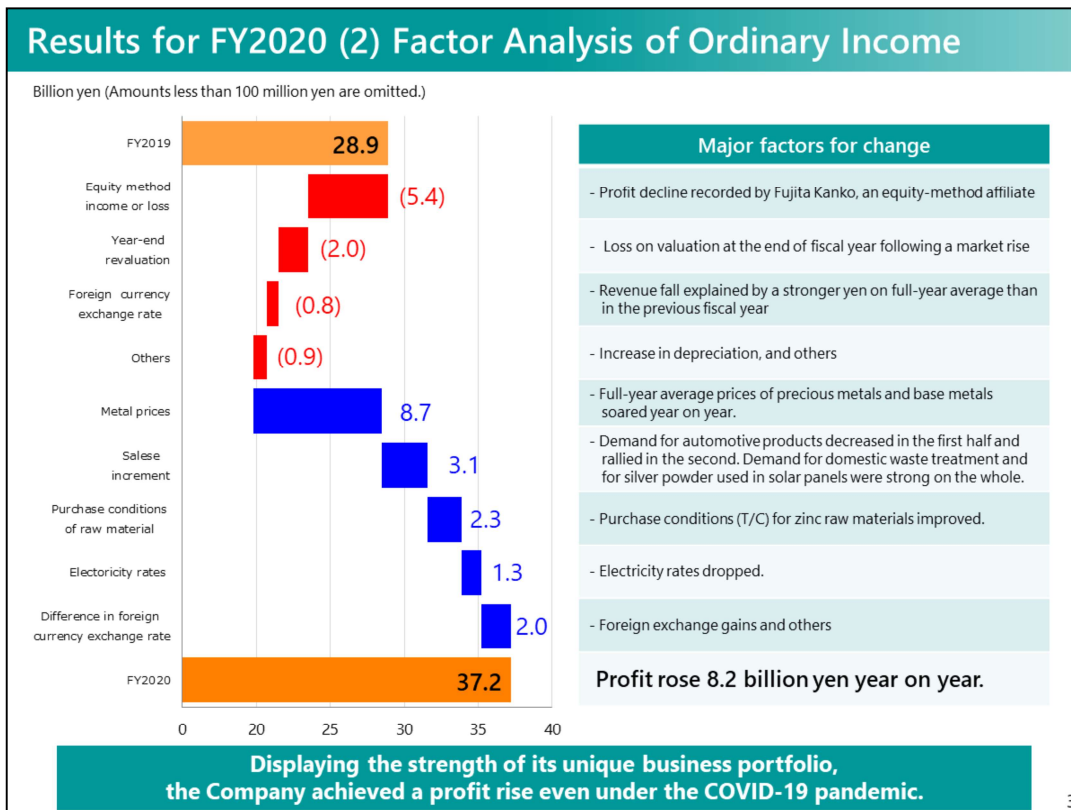
	FY2019 Results A	FY2020		Changes			
		Forecasts on Mar 22 B	Results C	Year-on-Year (C - A)		From Forecasts on Mar. 22 (C - B)	
Net Sales	485.1	582.8	588.0	102.8	21%	5.2	1%
Operating Income	25.9	37.1	37.4	11.4	44%	0.3	1%
Ordinary Income	28.9	35.0	37.2	8.2	28%	2.2	6%
Profit attributable to owners of parent	17.3	15.7	21.8	4.4	25%	6.1	39%

✓ For FY2020, both sales and profit increased year on year.



First, let me give an overview of the results in FY2020.

In FY2020, both sales and profit rose year on year. The tide changed significantly after the first half. In the first half, results were affected significantly by the COVID-19 pandemic. In the second half, a recovery trend became clear in each segment.



I will explain the factors for the increase in income, comparing the results in FY2019 and FY2020.

An equity method loss was the largest negative contributor. That was chiefly due to a decline in profit at Fujita Kanko. Another factor was the new Los Gatos Mine project in Mexico, which unfortunately was in the red in FY2020. The next largest negative contributor was a market price change. The loss on valuation at the end of the fiscal year was larger than FY2019, reflecting the rise of metal prices until the end of FY2020.

The largest positive contributor was an increase in market prices. The prices of base metals and other metals, were low at the beginning of the fiscal year. From the middle to end of the fiscal year, the prices of precious metals and base metals rose, and the full-year average prices increased year on year. The second factor was an increase in sales. Sales of domestic waste treatment and electronic materials, particularly silver powder, were strong. Sales of automotive products recovered significantly in the second half, which was also a positive factor.

The third contributor was raw material purchase conditions. The purchase conditions for zinc, in particular, improved. The other positive contributors include the decrease of electricity rates and foreign exchange gains. Total profit increased 8.2 billion yen year on year.

Results for FY2020 (3) Results by Segment									
Billion yen (Amounts less than 100 million yen are omitted.)									
	FY2019 Results			FY2020 Results			Changes		
	Net Sales	Operating Income	Ordinary Income	Net Sales	Operating Income	Ordinary Income	Net Sales	Operating Income	Ordinary Income
Environmental Management & Recycling	112.1	7.2	6.9	117.6	8.4	8.6	5.4	1.2	1.7
Nonferrous Metals	227.2	10.0	12.2	282.0	20.3	25.9	54.7	10.3	13.7
Electronic Materials	98.2	1.0	2.4	151.2	2.4	3.6	53.0	1.4	1.2
Metal Processing	82.3	5.1	5.1	77.8	4.3	4.6	(4.5)	(0.7)	(0.5)
Heat Treatment	27.9	1.2	1.2	23.1	0.7	0.8	(4.8)	(0.4)	(0.4)
Other/ Elimination	(62.8)	1.3	1.0	(63.9)	1.0	(6.5)	(1.0)	(0.3)	(7.5)
Total	485.1	25.9	28.9	588.0	37.4	37.2	102.8	11.4	8.2

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I will explain results by segment in FY2020.

In the Environmental Management & Recycling segment, we continued to make a profit throughout the year, and income increased from the previous fiscal year. In the Nonferrous Metals segment, full-year income climbed year on year. In the first half, the Los Gatos Mine project fell into the red, and income was low. In the full year, income increased significantly from the level of the previous year chiefly due to the increase of precious metal prices. Performance in the Electronic Materials segment was firm throughout the year. The Metal Processing and Heat Treatment segments really struggled in the first half, but demand recovered in the second half. In the full year, these segments were in the black.

FY2021 Full-year (1) Forecasts

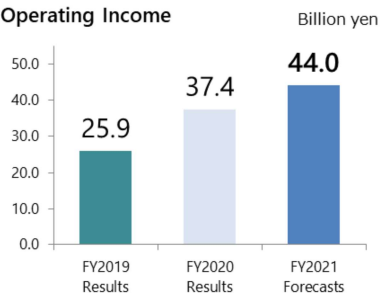
Billion yen (Amounts less than 100 million yen are omitted.)

	FY2020 Results	FY2021 Forecasts	Changes	
Net Sales	588.0	640.0	51.9	9%
Operating Income	37.4	44.0	6.5	17%
Ordinary Income	37.2	50.0	12.8	34%
Profit attributable to owners of parent	21.8	30.0	8.1	37%

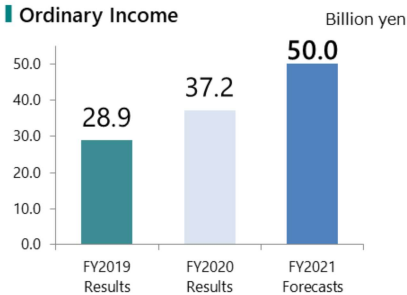
* The forecasts for FY2021 do not include Fujita Kanko's results forecast.

- ✓ A continued increase in sales and profit is forecast, given that past investments in starting the mass production of new products will exhibit a positive effect in addition to a metal market rise and rallying demand for automotive products.

Operating Income

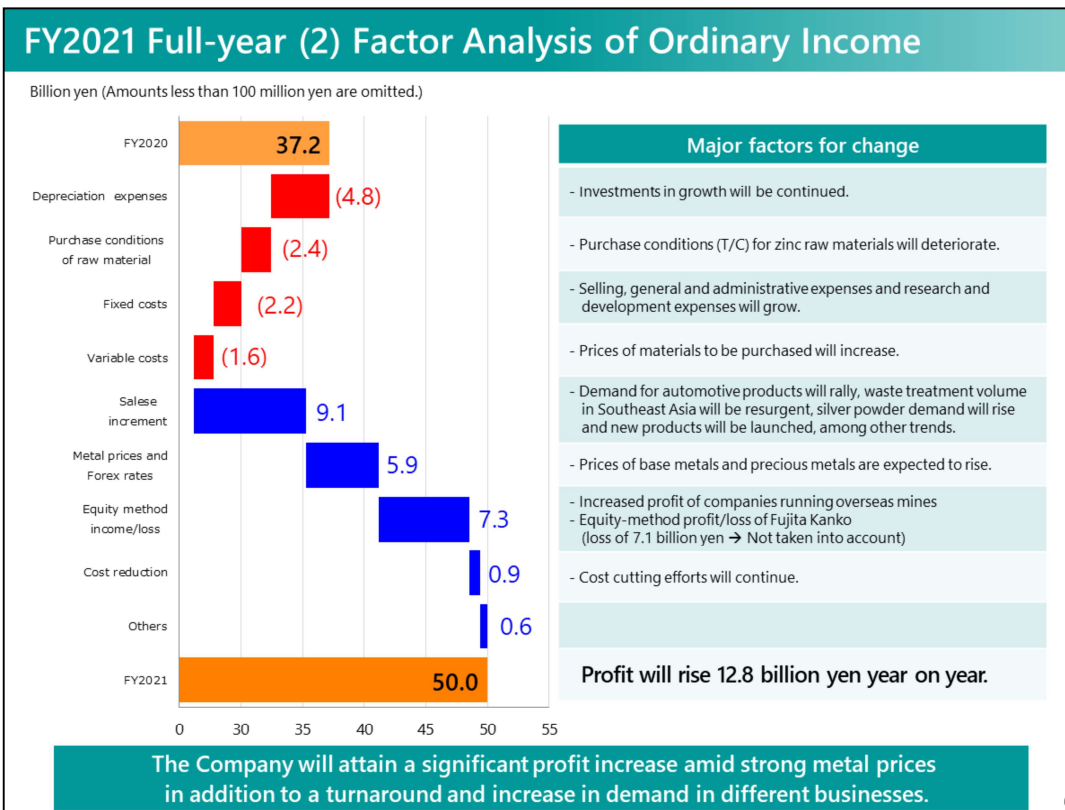


Ordinary Income



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In FY2021, we forecast that both net sales and profit will rise year on year. There are three factors in this. First, the continuing increase of the metal market and favorable exchange rates are factored in. Second, demand for automotive products will definitely recover from the fall during COVID-19 pandemic, as in the second half of FY2020. Third, of a range of investments that we have made, certain investments will positively impact us. Because of those factors, we forecast year-on-year increases both in sales and profit, as in FY2020.



This page shows our analysis of our forecast for FY2021.

First, we will continue to invest in growth, and depreciation expenses will continue to increase in FY2021. In addition, the purchase conditions for zinc and copper raw materials will deteriorate. Of our fixed costs, selling, general and administrative expenses will grow. This is inevitable when business normalizes, and is not a problematic cost increase.

The largest factor contributing to the rise in income is an increase in sales. Demand for automotive products and services is expected to recover. Orders for waste treatment are on an upward trend. Demand for silver powder will increase. In the Electronic Materials segment, new products will be mass produced. Regarding metal prices and forex rates, we expect that favorable conditions will continue as they did in FY2020.

The forecast for equity method income/loss in FY2021 does not include expected equity method income/loss from Fujita Kanko because Fujita Kanko has not disclosed its full-year forecast for FY2021. Partly due to that, the equity method income/loss forecast shows a significant improvement.

Costs were reduced in FY2020, and cost reduction will continue.

As a result, we forecast that in FY2021, income will increase significantly year on year.

FY2021 Full-year (3) Forecasts by Segment

Billion yen (Amounts less than 100 million yen are omitted.)

	FY2020 Results			FY2021 Forecasts			Changes		
	Net Sales	Operating Income	Ordinary Income	Net Sales	Operating Income	Ordinary Income	Net Sales	Operating Income	Ordinary Income
Environmental Management & Recycling	117.6	8.4	8.6	129.0	8.0	8.2	11.3	(0.4)	(0.4)
Nonferrous Metals	282.0	20.3	25.9	308.5	22.7	28.2	26.4	2.3	2.2
Electronic Materials	151.2	2.4	3.6	152.5	4.3	5.1	1.2	1.8	1.4
Metal Processing	77.8	4.3	4.6	83.4	5.5	5.6	5.5	1.1	0.9
Heat Treatment	23.1	0.7	0.8	28.2	2.5	2.3	5.0	1.7	1.4
Other/ Elimination	(63.9)	1.0	(6.5)	(61.6)	1.0	0.6	2.3	(0.0)	7.1
Total	588.0	37.4	37.2	640.0	44.0	50.0	51.9	6.5	12.8

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This page shows numerical targets by segment in FY2021.

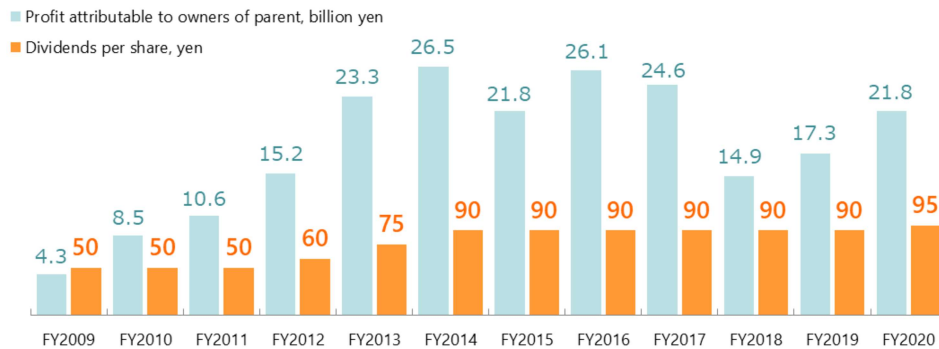
In the Environmental Management & Recycling segment, we expect that we can keep income high, although depreciation expenses will increase. The Nonferrous Metals segment will continue to perform well. The Los Gatos Mine is forecast to move into the black in the full year. Income is expected to continue to rise based on the assumption that metal prices are more favorable than in FY2020. In Electronic Materials, new products are expected to significantly contribute to an increase of income. We expect that the Metal Processing segment will definitely continue to recover throughout the year from the decline during the COVID-19 pandemic and that income will rise despite a rise in depreciation expenses. In the Heat Treatment segment, income will also rise, reflecting a recovery from a slump amid the COVID-19 pandemic and the effect of cost reductions.

Shareholder returns

DOWA sets out a policy of increasing dividends as performance allows, while ensuring sufficient internal reserves for bolstering the corporate structure and expanding business in the future in line with the basic principle of maintaining stable dividends.

During the Midterm Plan 2020, the Company aims to increase the dividend commensurate with the level of profitability, while maintaining a stable annual dividend of 90 yen per share.

In light of the circumstances described above and in consideration of results and future fund demand, the Company has decided to increase the annual dividend by 90 yen per share year on year, to 95 yen per share.



Note: The annual dividend per share between FY2009 and FY2016 has been adjusted to the amount after the consolidation of shares.

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Let me explain shareholder returns.

Our dividend policy is to continue to pay stable dividends, aiming to increase dividends if we have an opportunity. Under this policy, considering the results in FY2020, the forecasts for FY2021, and the Group's short-term funding needs, we have decided to increase the annual dividend by 5 yen per share year on year, to 95 yen per share.

Ref. FY2021 Forecasts (Assumptions and Sensitivities)

Sensitivity (Operating Income / FY2021)			Million yen
	Assumptions	Fluctuation	Sensitivity
Exchange rate	108.0 ¥/\$	±1 ¥/\$	600
Copper	8,500 \$/t	±100 \$/t	40
Zinc	2,500 \$/t	±100 \$/t	420
Indium	180 \$/kg	±10 \$/kg	60

* Exchange rate sensitivity; Nonferrous Metals 480 million yen and Electronic Materials 120 million yen.

Foreign-exchange rate and Metal Prices

	FY2020			FY2021			(Ref.)
	H1 Averages	H2 Averages	Full Year Averages	H1 Assumptions	H2 Assumptions	Full Year Averages	Apr. 2021 Averages
Exchange rate: (¥/\$)	106.9	105.2	106.1	108.0	108.0	108.0	109.1
Copper: (\$/t)	5,931	7,826	6,879	8,500	8,500	8,500	9,336
Zinc: (\$/t)	2,150	2,689	2,419	2,500	2,500	2,500	2,827
Indium: (\$/kg)	147	185	166	180	180	180	201

Sensitivity is based on assumptions that the Company assumes to be reasonable at the time of publication.
Actual effects may differ materially due to a variety of factors.

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For reference, assumptions and metal prices are shown on this page.

Our assumptions for the exchange rate and base metal and indium prices were a bit conservative compared with the current level. Nevertheless, our forecasts are based on the assumption that the more favorable market environment for us than we experienced in FY2020 will continue.

Review of Midterm Plan 2020

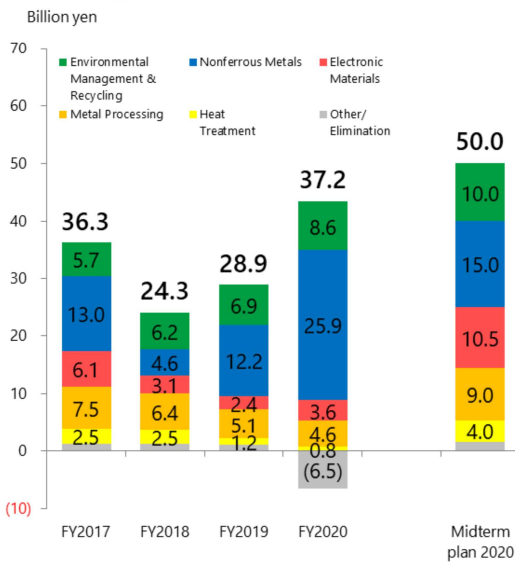
Progress in Financial Aspects

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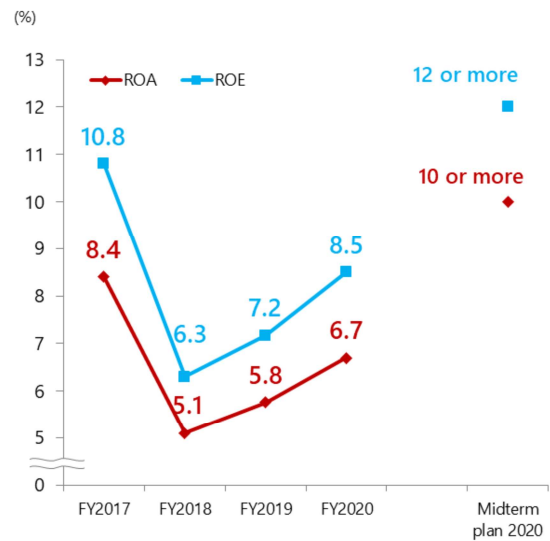
Next, let's look at progress of Midterm Plan 2020 in financial terms.

Ordinary Income, ROA/ROE

Ordinary Income



ROA/ROE



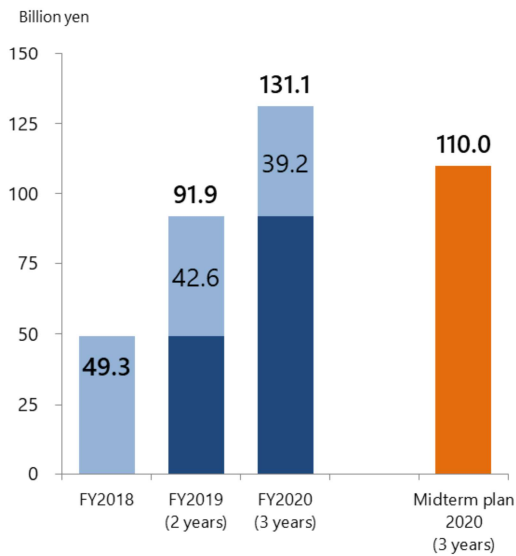
After an investment project developed into a business, the profit level rose.
Performance indicators improved for the second consecutive year.

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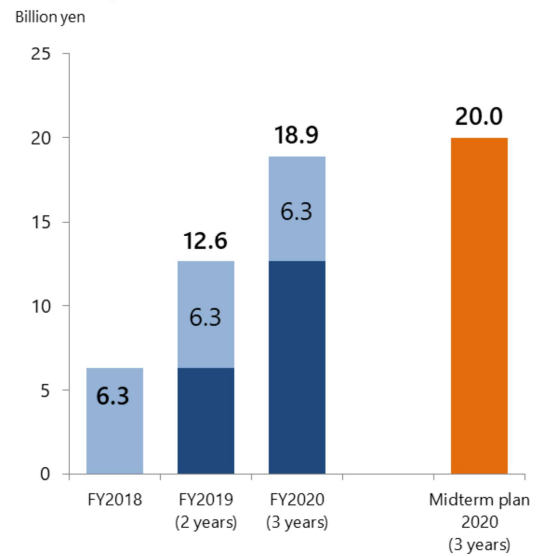
Ordinary income fell year on year in FY2018, but increased in FY2019 and FY2020. If we achieve the forecast that we showed earlier for FY2021, ordinary income will rise year on year for the third consecutive fiscal year. As income increased, performance indicators have improved.

Investment, R&D Expenses

Investment



R&D Expenses



Mainly because of additional projects, investments were larger than in the Midterm Plan. Research and development expenses were as planned.

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Income fell and rose over the past few years. Regardless of this, we will continue to invest steadily. The investment target in the Midterm Plan for three years from FY2018 to FY2020 is 110.0 billion yen. Actual investment exceeded 130.0 billion yen, about 20.0 billion yen greater than the target. That is chiefly due to additional projects that were not included in the Midterm Plan in the Environmental Management & Recycling, Nonferrous Metals and Electronic Materials segments. The forecasts for FY2021 factor in projects that will impact investment which are not included in the Midterm Plan. We have steadily invested in R&D.

Progress of Key Measures in Each Segment

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Next, I will explain details of each segment.

Environmental Management & Recycling (1)
Business Overview

Business Environment (FY2021)

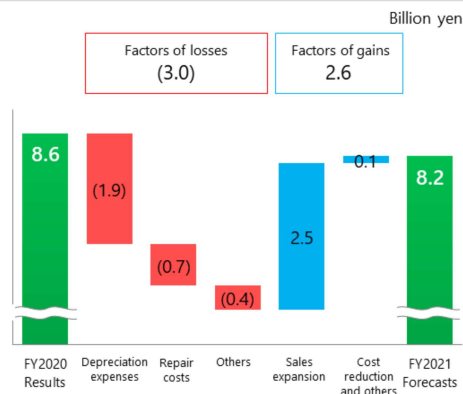
- Waste will be generated in large quantities in Japan and in Southeast Asia.
- Automobile shredder dust and waste home electrical appliances will be collected in large quantities.

《Major Product Trends》

(FY2020/H1 = 100)

	FY2020		FY2021	
	H1	H2	H1	H2
Intermediated Waste Treatment Volume in Japan	100	99	103	103
Treatment Volume in Melting and Recycling business	100	99	109	119
Waste Treatment Amount in Southeast Asia	100	95	125	138
Treatment Volume in Electric Equipment Recycling business	100	102	106	104

Ordinary Income (year-on-year)



Overview of FY2021

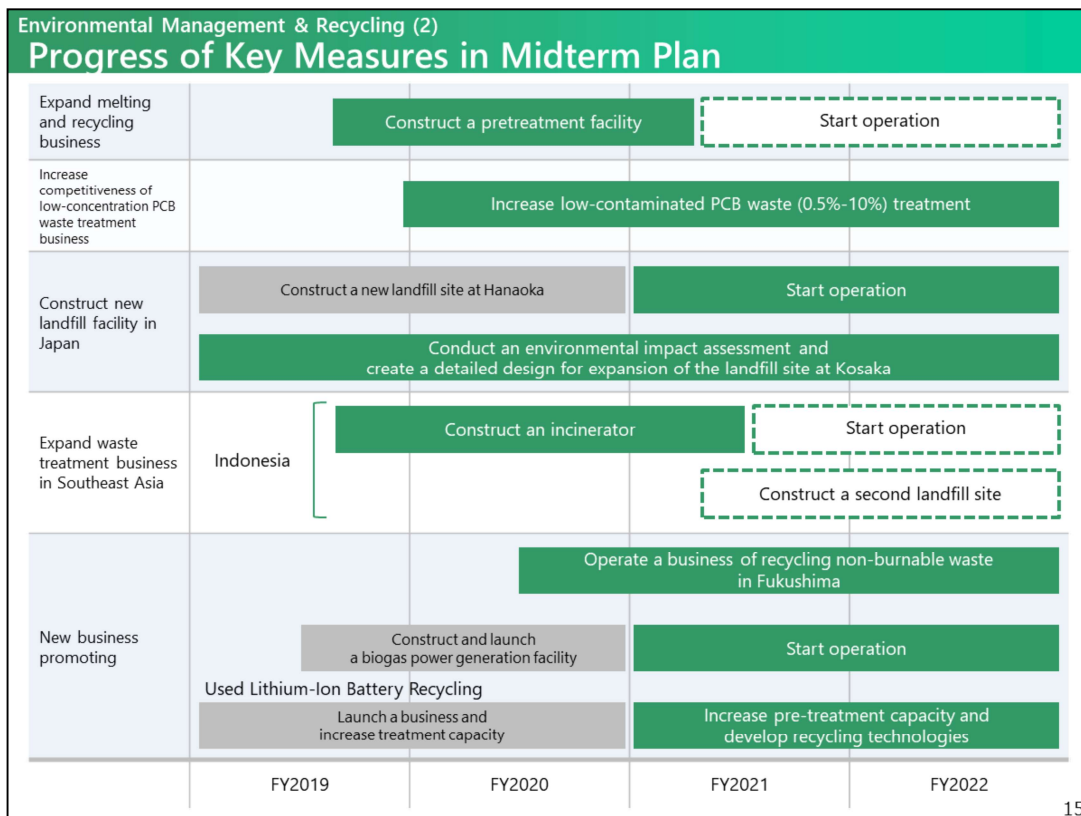
- Investments in Japan and overseas will end and depreciation will grow.
- A brisk volume of domestic waste will be processed for intermediate treatment.
- The treatment volume in melting and recycling will rise.
- A turnaround in waste generated in Southeast Asia is anticipated.
- For the recycling of waste home electrical appliances, dismantling and sorting sites will continue to operate at high levels.

I will begin with an explanation of the Environmental Management & Recycling segment.

In FY2021, we expect a favorable business environment in the waste market in Japan and Southeast Asia. Automobile shredder dust and waste home electrical appliances will be collected in large quantities as in the previous fiscal year.

As is obvious from the table at right, quantities are expected to rise year on year in all major product categories.

Ordinary income will remain at a high level in FY2021, with an increase in depreciation expenses as a result of investments offset by sales expansion.



This is a chronological chart showing the progress of measures in the Midterm Plan. Measures in the Midterm Plan have been making steady progress overall with no significant delays, although certain measures were affected by the COVID-19 pandemic.

Strengthening of Business Response Capabilities in Japanese Market

Expand melting and recycling business

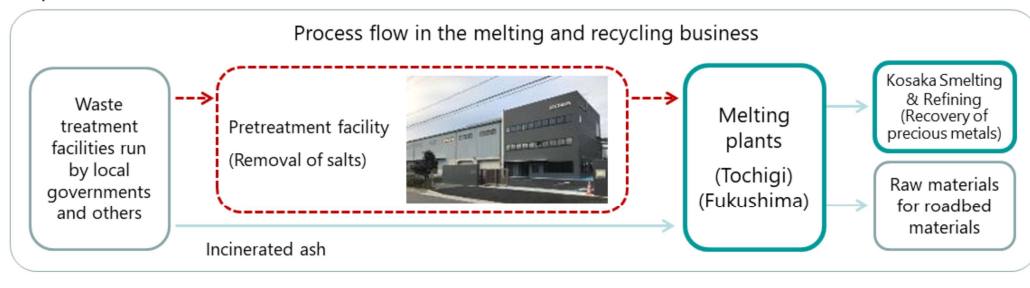
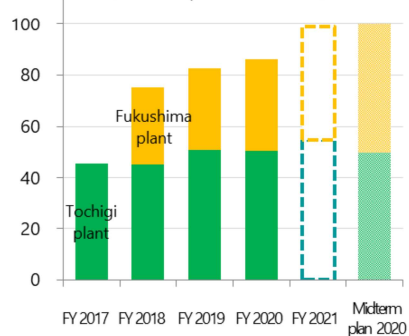
- Amid growing needs for recycling, the Company is increasingly being commissioned to conduct melting and recycling treatment.
- Needs for treatment of incinerated ash, which is difficult to recycle, are increasing.

A pretreatment facility is to come into operation in June 2021.

- Capable of melting incinerated ash with a high salt content
- Increasing treatment efficiency of melting plants through volume reduction

Increase the capacity of plants in Tochigi and Fukushima to capture demand.

Trends in melting/recycling treatment volume
(Midterm plan 2020 = 100)



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First, I will explain "Expand melting and recycling business."

As demand for recycling is increasing and the remaining capacity of controlled landfills in each municipality is becoming insufficient, needs for melting and recycling are expanding.

To increase capacity utilization at two melting plants (Tochigi and Fukushima), we are building pretreatment facilities, which will begin operating in June 2021. When the facilities start operating, capacity utilization and the number of operating days will increase, and the total capacity of the plants is expected to increase.

As shown in the upper right graph, the melting and recycling volumes are expected to reach the volumes expected in the Midterm Plan in FY2021.

Strengthening of Business Response Capabilities in Southeast Asia Markets

- Pharmaceutical, chemical and many other manufacturers now operate in Southeast Asia and an increasing amount of hazardous waste is generated.
- Only a limited number of operators are capable of treating hazardous waste.



Expand the waste treatment services to capture needs for hazardous waste treatment.

Indonesia

- Incinerator: Scheduled to commence commercial operation in August following trial operation after completion in June 2021
- Second landfill site: Construction due to start in June 2021

Thailand, Singapore

- Incineration: Increase collection of hazardous waste to boost profitability

Myanmar

- Customers suspend or reduce operation of their factories.
 - Continue minimal operation while ensuring safety of employees



The incinerator is under construction in Indonesia.

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The waste treatment business in Southeast Asia was temporarily affected by the COVID-19 pandemic. However, the amount of waste generated in the region will likely continue to increase.

Only a limited number of operators are capable of treating hazardous waste. We will continue to expand our waste treatment services, taking advantage of our strengths.

Specifically, in Indonesia, a new incinerator will be completed in June 2021 and is scheduled to fully begin operating in the second half of FY2021. Construction at a second landfill site will start in June 2021. The construction will be completed in a few years.

In Thailand and Singapore, incineration has already started. In FY2020, we were in the beginning phase. We will expand the business steadily.

In Myanmar, we are not able to increase the operating rate due to the situation there. At present, our operation at the site is limited to almost only maintenance. If the situation calms down, we may expand business again. However, the outlook is uncertain.

New Business Development

■ Biogas power generation from food waste

- Needs for effectively using food waste are growing.
- It is difficult to recycle food waste containing packages and containers.



A biogas power generation facility commenced operation in April 2021.

- An equipment for removing packages and containers has been introduced to open the way for generating power from food waste, which was conventionally incinerated for disposal.

→ This helps reduce greenhouse gas emissions and serves as a stable source of renewable energy for the region.



Biogas power generation plant

■ Recycling of used lithium-ion batteries

- With the use of expertise in and existing facilities for waste treatment, heat treatment safely inactivates used lithium-ion batteries.
- It paves the way for the recovery of iron, copper, aluminum and cobalt-nickel mixture on the recycling line.



- Increase treatment capacity and improve quality of recovered metals in preparation for future demand growth.

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Next, let me describe two new projects, although they have yet to contribute to earnings.

The first is biogas power generation from food waste. A facility is already completed. It has been expanding operations gradually since April 2021 and will begin full-scale operations from August.

The second is the recycling of used lithium-ion batteries. In this project, we are making progress ahead of our competitors. We are already inactivating batteries using existing machines. We are also enhancing the method for recovering valuables on the recycling line. This project is a proactive project to ensure we do not lag behind the emerging recycling market and to demonstrate our strengths.

Nonferrous Metals (1) Business Overview

Business Environment (FY2021)

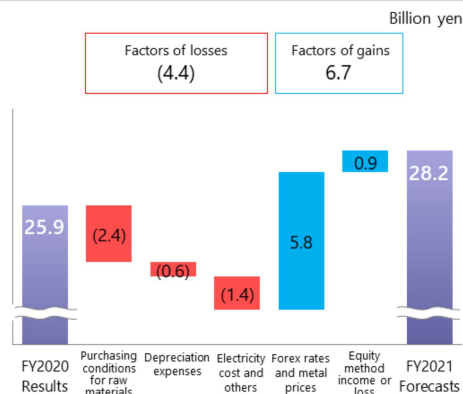
- Metal prices:
On the rise for both base metals and precious metals
- Demand for metals:
Expected to be strong overall following a turnaround in demand for automobiles

《Major Product Trends》

(FY2020/H1 = 100)

	FY2020		FY2021	
	H1	H2	H1	H2
Copper Production (Kosaka・Onahama)	100	99	94	104
Gold Production (Kosaka)	100	120	123	144
Zinc Production (Akita)	100	124	107	124

Ordinary Income (year-on-year)



Overview of FY2021

- The yen is expected to be weaker than the previous year.
- Purchase conditions (T/C) for zinc raw materials will deteriorate considerably.
- Production of copper will remain nearly at the previous year's level while that of gold, zinc, PGM and others will generally grow.
- Overseas mines as equity-method affiliates will earn more.

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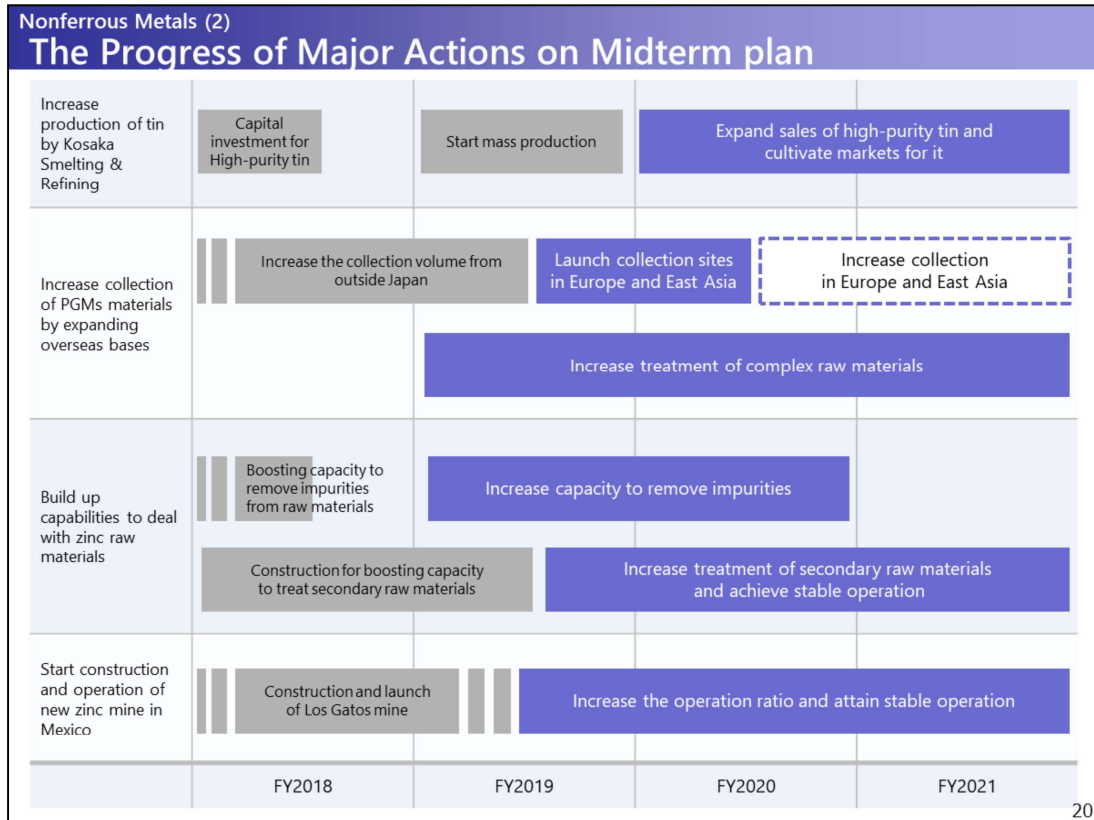
Moving on to the Nonferrous metals segment—

Looking at the business environment, we expect that metal prices will continue to rise. Regarding demand for metals, demand for zinc for automobiles declined in the first half of FY2020, but we expect demand will recover in FY2021.

Copper production will fall year on year in the first half of FY2021, reflecting a continued fall in capacity utilization at the Onahama Smelting & Refining Company, an equity method affiliate, in the first half of FY2021.

Gold production is expected to remain high, reflecting strong performance in the recycling business. Zinc production was temporarily affected by the COVID-19 pandemic in FY2020, but we forecast that it will recover in FY2021.

We expect that ordinary income in the Nonferrous Metals segment will exceed the level in FY2020 despite negative factors, worsening raw materials purchase conditions and rising electricity costs, due to favorable exchange rates and metal prices, continued progress from FY2020 in the recycling of precious metals, and the Los Gatos Mine being in the black in the full year.



This page shows the progress of major actions in the Nonferrous Metals segment during the Midterm Plan.

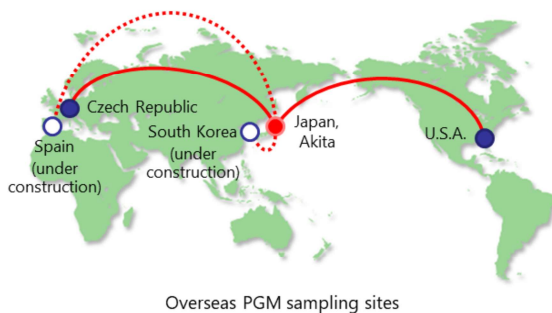
As in the Environmental Management & Recycling segment, which I have explained, there are no significant delays or changes. Progress has been made almost in line with the Midterm Plan. Certain projects were completed ahead of the initial plan.

Expansion of PGM Recovery Business

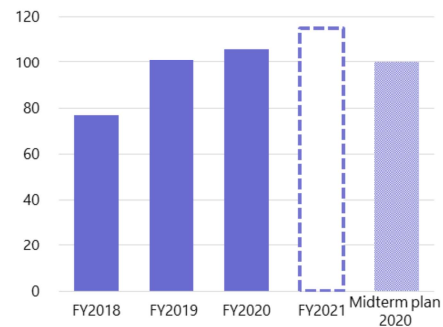
In FY2020, the collection and treatment volume surpassed 1,000 tons a month amid brisk demand.

→ Keep the collection and treatment volume at a high level in the future.

- Strengthen and expand overseas collection sites. (Strengthen the U.S.-based one and increase those in Spain and South Korea)
- Improve productivity of the sampling process
- Increase treatment of complex raw materials



Trend in treatment volume in PGM recovery business (Midterm Plan 2020 = 100)



PGM recovery plant

Let me explain the expansion of the PGM business, which has been accounting for a major part of earnings in the Nonferrous Metals segment in recent years.

The expansion of treatment capacity was completed three or four years ago. We are promoting the collection of raw materials. In FY2020, demand was strong, and the collection and treatment volume exceeded 1,000 tons a month, the target in the Midterm Plan. This, with rising PGM prices, is the largest contributing factor to the significant increase in income.

We will keep the collection and treatment volume at a high level. In addition, we are strengthening collection to make the most of our treatment capability. We have been strengthening collection, using the collection sites that we have in the United States and the Czech Republic and sites that the Group has in Southeast Asia. In addition to these sites, we will establish new collection sites in Spain and South Korea in FY2021. The collection site in South Korea will open soon. In Spain, the construction of facilities is delayed partly due to the COVID-19 pandemic, but the site is expected to open in FY2021.

The treatment volume has exceeded the target in the Midterm Plan for two consecutive fiscal years. We plan to strengthen collection sites and expand treatment volume.

Actions in Zinc Business

Institute measures for improving capabilities to deal with different zinc materials

- Los Gatos Mine: Implement year-round full production of zinc concentrate for Akita Zinc with a view to stabilize earnings.
- Akita Zinc: Embarking on further increase in impurities removal capacity, which is expected to reach completion in the second half of FY2021
→ Increase treatment capacity for zinc concentrate with a high content of impurities to help stabilize production
- Bolstering of capacity to process secondary raw materials finished and operation already commenced in August 2020
- Zinc processing in Thailand: Strong sales projected amid rallying demand for hot dip galvanizing for automobiles
→ Resume consideration of investment in increased production



Ore crushing equipment at the Los Gatos Mine



Zinc processing site in Thailand

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Next, I will be explaining the zinc business.

In FY2021, we will strive to handle different zinc materials and stabilize production and earnings at the Los Gatos Mine, where we have started operations, thereby recovering the investment.

Monthly earnings at the Los Gatos Mine have been in positive territory since the latter half of last year. We aim to bring the mine into the black in the full year. In association with this, we will continue to increase treatment capacity for impurities in raw materials at Akita Zinc. The bolstering of the capacity to process secondary raw materials was completed in FY2020. We plan to make full use of this capacity.

At the zinc processing plant in Thailand, production and sales dropped significantly last year due to the spread of COVID-19, but production and sales started to recover in the second half. We plan to achieve solid sales in FY2021. In FY2020, we suspended the consideration of increased production due to declining demand. However, demand is strong now, and we plan to resume our consideration of investment to increase production in FY2021.

Business Overview

Business Environment (FY2021)

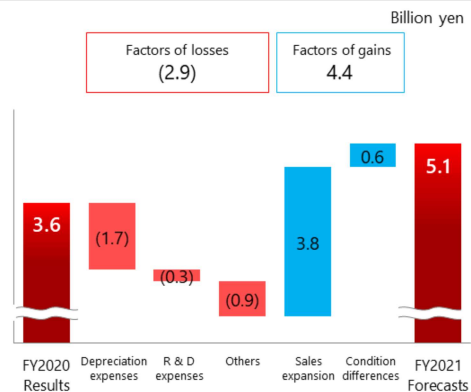
- As smartphone sales volume rallies and expands, the new type of proximity sensors is becoming the mainstream.
- Solar panel installations will continue to grow. The ratio of new generation panels is expected to expand.

《Major Product Trends》

(FY2020/H1 = 100)

	FY2020		FY2021	
	H1	H2	H1	H2
LED Sales Volume	100	96	139	181
Silver Powder Sales Volume	100	105	109	109
Income from new products (e.g. evaluation sample incomes)	100	76	86	111

Ordinary Income (year-on-year)



Overview of FY2021

- After the start of mass production and sales of short-wavelength-infrared LEDs, LED sales volume and depreciation will rise.
- Silver powder for new generation panels will make brisk sales.
- Among new products, fuel cell materials and deep-ultraviolet LEDs will earn higher sample revenues. Research and development expenses will increase in preparation for mass production.

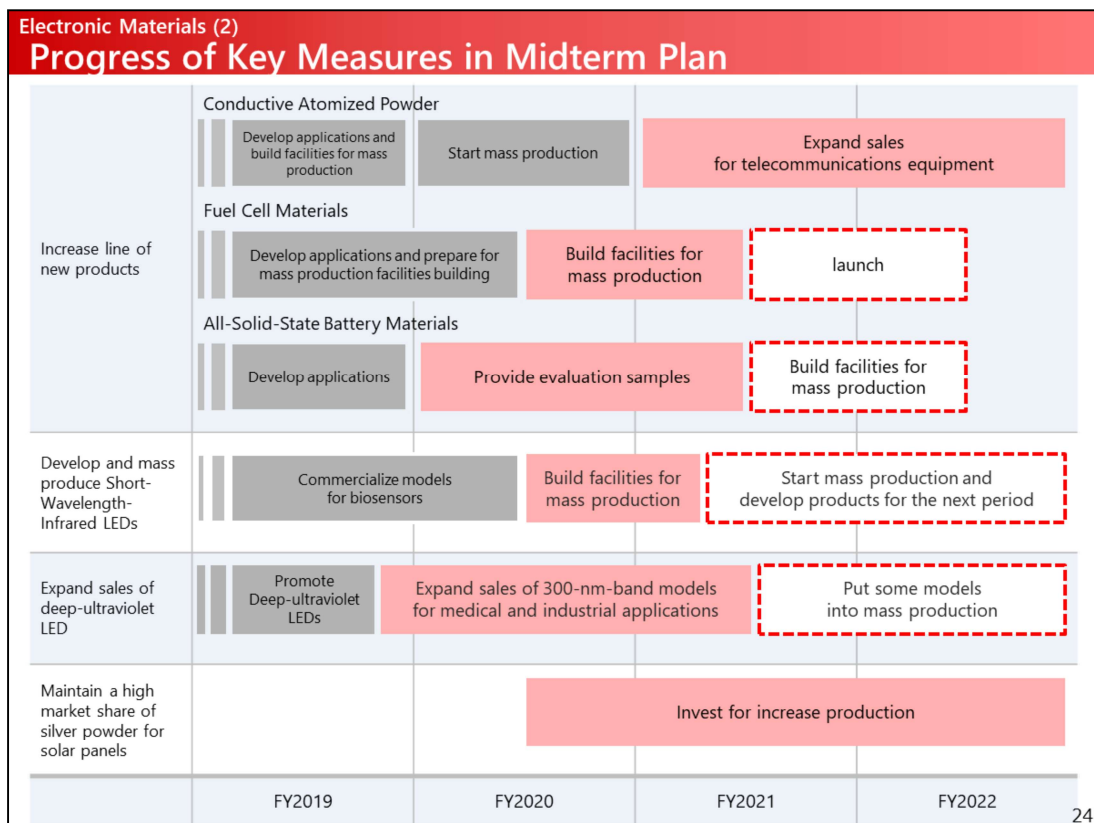
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In the Electronic Materials segment, we expect that in FY2021, the business environment in the fields the Company engages in will remain favorable.

We forecast that LED sales, in particular, will increase sharply from FY2020. That is because we will be able to start mass production of the short-wavelength-infrared LEDs that have been recently developed. Facilities have been already completed, and final approval will be given to mass-production items soon. We plan to start full-scale production and sales in the latter half of the first half of FY2021.

We expect continued strong demand for silver powder. In FY2021, the Company will strive to evolve its own differentiated products and expand production capacity.

The seeds of new products other than LEDs and silver powder are sprouting gradually. Expanding the business, including sample revenues, will remain a challenge as in FY2020.



This is the progress of key measures in the Midterm Plan in the Electronic Materials segment.

I will explain details on the next page. Regarding the expansion of sales of deep-ultraviolet LEDs, which is not described from the next page, the Company has changed its target market. We initially developed deep-ultraviolet LEDs for sterilization and disinfection applications, but are now focusing on the 300-nm-band models that differentiate us from our competitors. We are developing models for medical and industrial applications. If we make good progress, we will start to sell mass-production models in September or October.

Conductive atomized powder

Mass production and sales were started in April 2019 for MLCC applications.

The Company is receiving more orders in line with soaring demand for automotive and telecommunications applications.

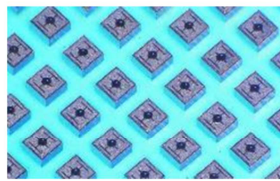
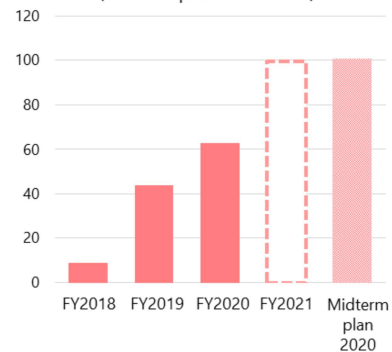
→ Expand sales for circuit board substrates and electronic components for telecommunications with a view to stabilizing revenue

Short-Wavelength-Infrared LEDs

Development efforts are made and mass production facilities are built and launched for introduction to wearable devices equipped with biosensors.

→ Start mass production and sales within the first half of FY2021.

Trends in Conductive atomized powder sales volume (Midterm plan 2020 = 100)



Short-wavelength-infrared LED chips



Smartwatch Wireless earphones Smart glasses

Wearable devices that the new LEDs may be incorporated

Let me describe our progress in relation to new products.

First, about conductive atomized powder. We started mass production for MLCC applications in FY2019. Sales have been expanding successfully. We have built momentum to reach the sales target in the Midterm Plan in FY2021 as the market is expanding.

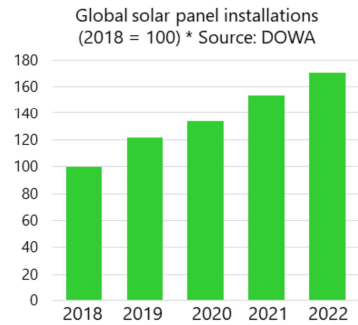
Second, about short-wavelength-infrared LEDs. They will soon be used in wearable devices. Mass production facilities have been completed, and good progress has been made. The probability of starting mass production in the first half of FY2021 is increasing.

Expansion to New Energy Fields

Silver powder

Strong demand for solar panels due to new energy policies in various countries

- Step up activities for developing silver powder answering demand for finer wiring to advance higher efficiency.
- Invest in increased production step by step to boost supply capacity.



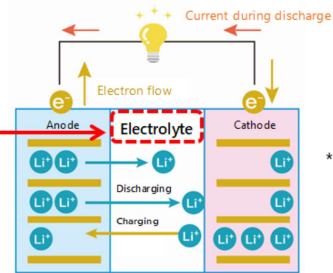
All-Solid-State Battery Materials

Solid electrolyte powder for all-solid-state batteries for telecommunication terminals (LAGP*) has been developed. It is under evaluation by users.

- Build manufacturing facilities in FY2021 with an eye towards mass production.



Solid electrolyte powder under development



*LAGP: $\text{Li}_{1.5}\text{Al}_{0.5}\text{Ge}_{1.5}(\text{PO}_4)_3$

Structure of an all-solid-state battery

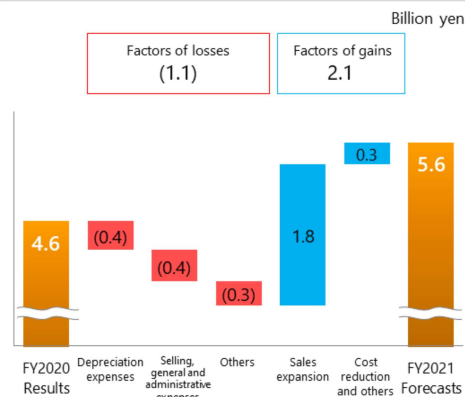
Next is silver powder, a mainstay product. Demand related to global warming is strong, as in FY2020. As the number of competitors is increasing, leveraging our technology, we will focus on sales of products that differentiate us from competitors, and will tap into the expanding market. Next, I will explain about all-solid-state battery materials for the first time. We have been researching and developing the materials for a few years and feel that we are able to ship samples to customers at full scale. Our materials for electrolytes for all-solid-state batteries are oxide-based materials, which are more stable and more safe than sulfide-based solid electrolytes. However, it is difficult to use them in larger batteries, and inevitably their uses are limited. We will continue to develop new materials and seize opportunities to expand the market.

Business Overview

Business Environment (FY2021)

- The shift of automobiles to electric power and intelligence advances.
- Telecommunication devices support increasing functions and faster communication.
- Increases in servers and base stations mean an expansion in demand for principal products.

Ordinary Income (year-on-year)



《Major Product Trends》

(FY2020/H1 = 100)

	FY2020		FY2021	
	H1	H2	H1	H2
Copper Alloy Sales Volume (For Automobile)	100	151	141	147
Copper Alloy Sales Volume (For information and communication equipment)	100	113	108	113

Overview of FY2021

- Demand will recover for copper rolled products and precious metal electroplating for automobiles.
- Metal-ceramic substrates will see poor sales from railway operators.
- Facilities will be continuously enhanced at major production sites in Japan in a bid to respond to demand that is expecting to expand over the medium and long terms.

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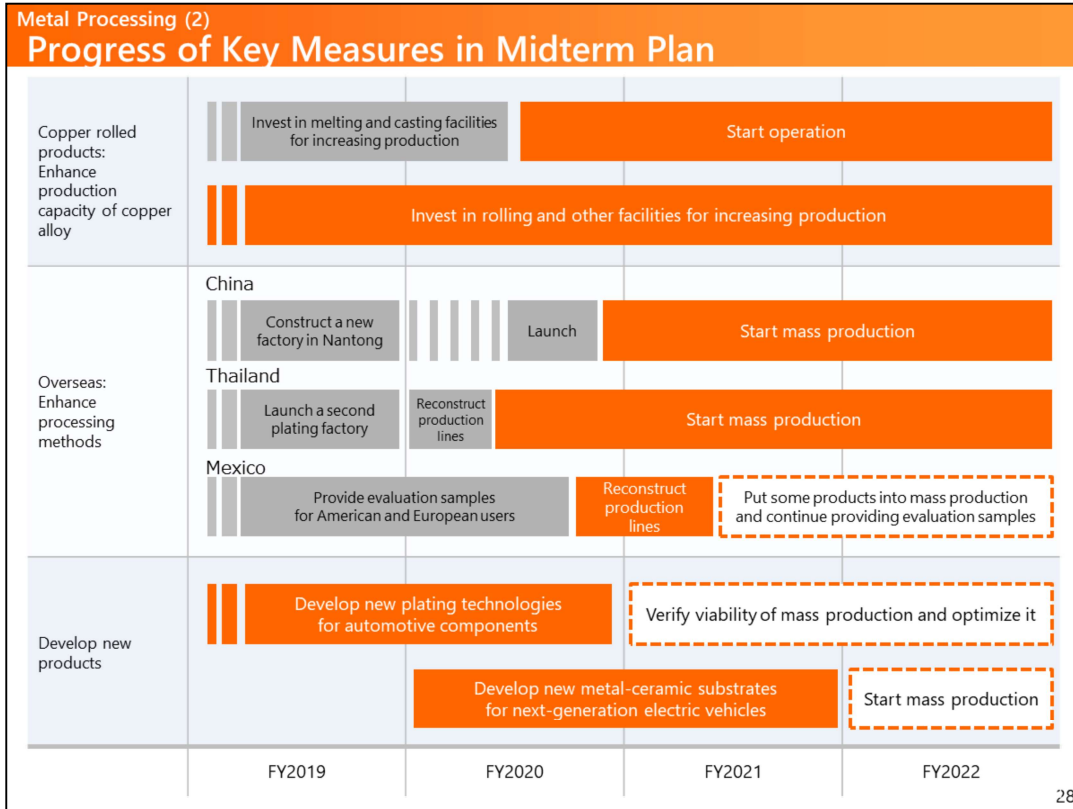
This page is about the Metal Processing segment.

This segment is significantly affected by a recovery in automobile-related demand. The automobile market is expected to continue to expand in the long term due to the shift of automobiles to electric power and intelligence. In FY2020, demand shrank due to the COVID-19 pandemic and recovered rapidly in the second half. We expect that the recovery trend will continue in FY2021. Telecommunication devices support increasing functionality and faster communications, and expectations for copper rolled products are increasing.

We forecast that ordinary income will increase year on year due to a recovery of demand for copper rolled products and precious metal electroplating for automobiles, despite an increase in depreciation expenses.

We forecast that metal-ceramic substances will see poor sales for railway operations, assuming that railway construction projects overseas will be postponed due to the COVID-19 pandemic. We expect that the poor sales from railway operations will impact us for a prolonged period. Meanwhile, sales of metal-ceramic substances for industrial machinery and automotive equipment are expected to recover. Overall, metal-ceramic substances will not be a significant negative factor in ordinary income.

To respond to demand that is expected to grow in certain fields over the medium and long terms, we will continue to improve facilities and develop new products.



This page describes the progress of key measures in the Midterm Plan in the Metal Processing segment.

The enhancement of copper alloy production capacity in Japan has made progress, almost as scheduled.

There were slight delays overseas. However, the development of systems was completed in all the projects in FY2020, and we will start in earnest to enhance production capacity.

Actions in Anticipation of Medium- and Long-Term Market Growth

■ Copper rolled products

Japan: Investments made in increasing production of high performance copper alloys

- Melting and casting facilities started operation.
- New rolling facilities under construction towards inauguration in FY2022

→ Respond to surging needs for thinner copper rolled products

China: A second tin plating factory has started operation in the city of Nantong.

Capable of slitting and plating, it is located outside the Export Processing Zone.

→ Capture demand for local automotive applications in China



New factory in China
(DOWA METALTECH (NANTONG))

■ Electroplating

Enhance and reconstruct the plating lines according to changing demand in Japan, Thailand and Mexico

Japan: Increase plating lines according to growing demand for terminal plating for electric vehicles

Thailand: Expand sales to main local customers of automotive terminal plating

Mexico: Capture new demand in the local market of automotive terminal plating

In the Metal Processing segment, we will assess trends in growth markets and accordingly execute intense business development.

Regarding the enhancement of production capacity in Japan, the construction of melting and casting facilities at DOWA METAL was completed as scheduled. New rolling facilities at DOWA METANIX will be being built in FY2021 and it is planned that they will come online in FY2022.

A tin plating factory in the city of Nantong began operations in March 2021. The factory is in its beginning phase. Our goal is for the factory to achieve profitability in the second half of FY2021. The factory is outside the Export Processing Zone and it is expected to tap into local Chinese customers.

Regarding electroplating, enhancing new services and products for electric vehicles is a major theme. In Japan, we will restructure and increase the electroplating lines. In Thailand, lines at a new factory have been completed. The factory will tap into local users, aiming to achieve profitability. In Mexico, we are still in the startup phase. We expect that the operations in Mexico will contribute to earnings from FY2022.

Heat Treatment (1)
Business Overview

Business Environment (FY2021)

- Automobile production volume is turning around in Japan and overseas after slowing due to the COVID-19 pandemic.

《Major Product Trends》 (FY2020/H1 = 100)

	FY2020		FY2021	
	H1	H2	H1	H2
Heat Treatment Sales Amount	100	154	145	156
Industrial Furnaces Sales Amount	100	109	86	173

Ordinary Income (year-on-year)

Billion yen

Category	Value (Billion yen)
FY2020 Results	0.8
Labor costs and others	(0.2)
Sales expansion	1.6
Cost reduction and others	0.1
FY2021 Forecasts	2.3

Overview of FY2021

- Demand will increase chiefly for heat treatment processing in sync with recovery of automobile production in Japan and abroad.
- Measures in response to growing demand will be taken while maintaining the effect of cost reduction in FY2020.

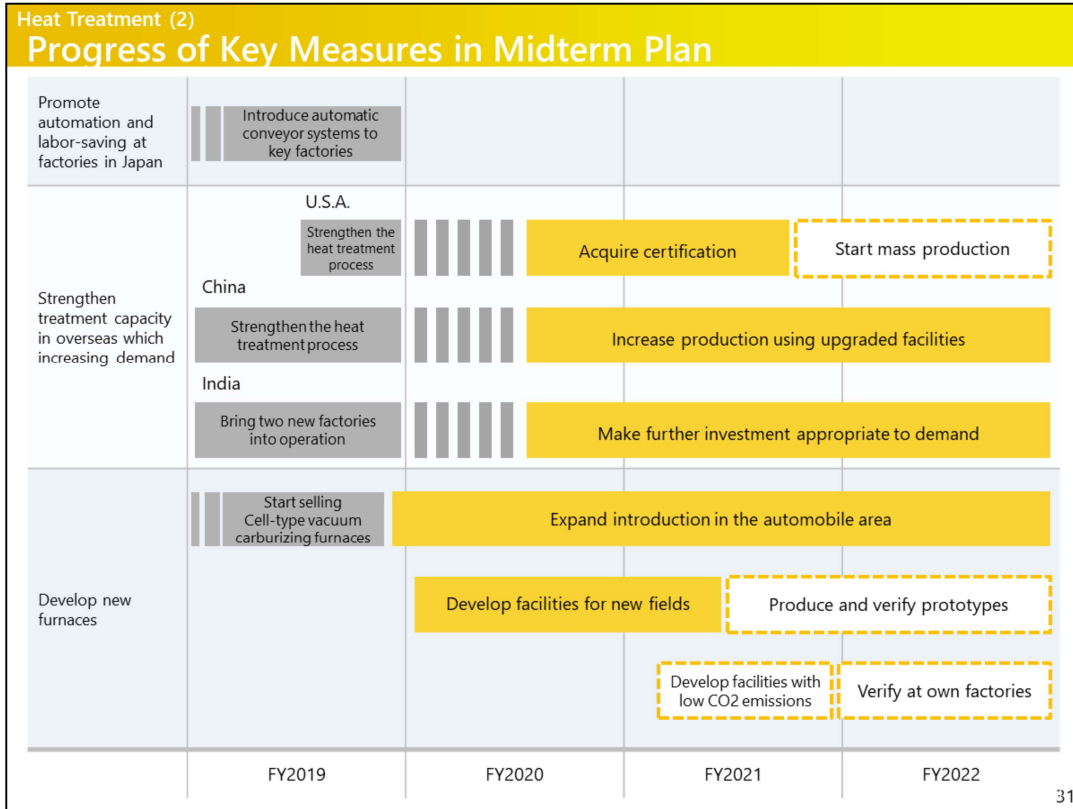
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Lastly, I will describe the Heat Treatment segment.

This segment has been most affected by the COVID-19 pandemic. Demand began to recover in the second half of FY2020 in Japan and overseas, but it has not fully recovered. We think that in FY2021, we will still be recovering.

Heat treatment sales recovered in the second half of FY2020. In FY2021, we forecast that sales will level off. Industrial furnace sales appear to drop in the first half of FY2021. This is because of a decline in the order backlog due to weak orders in FY2020. We forecast that sales will rebound in the second half.

A positive aspect of the previous fiscal year, when we were severely afflicted by the COVID-19 pandemic, was that we reduced costs significantly at each site. We will continue to enjoy the effects of the cost reduction in FY2021 if demand recovers. We forecast an increase in profit in FY2021 and the increase will be the result of increased sales and cost reductions.



This page shows the progress of major actions in the Midterm Plan in the Heat Treatment segment.

We have already completed the reorganization of the factories and the enhancement of the lines in Japan. This is a factor in the increase in income in FY2021, when demand will recover.

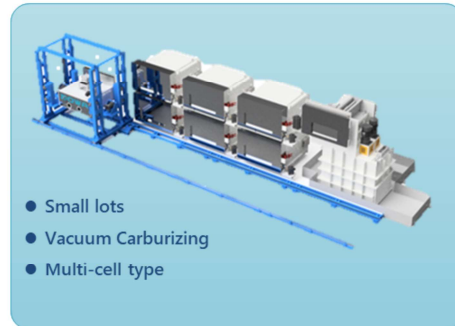
Strengthening treatment capacity overseas is a major initiative in the Midterm Plan, and we planned to establish certain factories beginning in FY2020. However, due to COVID-19, the schedules were moved back. In this situation, we believe that FY2021, the year when demand will recover, is a decisive year. We have revised certain plans for the strengthening of treatment capacity. A major challenge in the Heat Treatment segment is to make sure that effects of investment will emerge under the revised plans.

Another challenge is to undertake initiatives in new fields.

Demand Changes in a Shift towards Realization of Carbon-Free Society

■ Carmakers speed up CO₂ emission cuts

- (1) The production ratio of EVs, HVs and PHVs rises.
→ An EV has a smaller number of parts. However, demand for heat treatment will grow in line with the increase in automobile production.
- (2) Carmakers revise their investment plans to cut CO₂ emissions from their own heat treatment lines.
→ Needs will grow for heat treatment facilities with low CO₂ emissions.



SS vacuum carburizing furnace attaining low CO₂ emissions

[Heat treatment business]

- Aim to win more orders with the use of the global production system and sales channels.

[Industrial furnace business]

- Accelerate development and sales expansion of carburizing facilities that help reduce CO₂ emissions from heat treatment lines.

Display the advantage of operating both software and hardware businesses to the fullest degree to capture changing demand

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This page describes initiatives to help achieve a carbon-free society in the Heat Treatment segment.

There is concern about a decline in the number of items that require heat treatment processing with the increase in the electric vehicle production ratio. However, we expect that we will continue to see strong demand due to an increase in total automobile production. In the industrial furnace business, demand is increasing for new facilities that will help reduce CO₂ emissions from the heat treatment lines owned by auto manufacturers or companies related to them. Developing a new furnace that will meet the demand is one of the challenges in the medium to long term.

DOWA

* Forward-looking statements made in this document, such as business forecast, are based on the information available at this time and on certain premises that the Company assumes to be reasonable. Actual performance may differ materially from such forecasts due to a variety of factors.

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This concludes my presentation. Thank you for your time.