



“Nonwoven fabric for medical gowns”  
(Nonwoven fabric produced by Oji Nepia)



“Nonwoven face masks”  
Startup scheduled in June 2020



Installing a new nonwoven mask machine  
at New Tac Kasei/Yamamoto Plant



Oji Holdings Corporation

# Summary of Financial Business Results

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May 25, 2020

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**Beyond the Boundaries**



# **I . FY2019 Result Overview**

# 1. Financial Highlights of FY2019 (consolidated)

		(¥ billion)		
		FY2018	FY2019	Increase (Decrease)
<b>Net Sales</b>		1,551.0	<b>1,507.6</b>	(43.4)
<b>Operating Profit</b>		110.2	<b>106.1</b>	(4.1)
	[Domestic Companies]	[33.7]	[70.0]	[36.3]
	[Overseas Companies]	[76.5]	[36.1]	[(40.4)]
<b>Ordinary Profit</b>		118.4	<b>101.3</b>	(17.1)
<b>Profit Attributable to Owners of Parent</b>		52.0	<b>58.2</b>	6.2
<b>Depreciation</b>		69.5	<b>63.4</b>	(6.1)
<b>Overseas Sales Ratio</b>		32.0%	<b>29.9%</b>	(2.1%)
<b>Average Exchange Rate (¥/US\$)</b>		110.9	<b>108.7</b>	(2.2)
<b>Number of Consolidated Companies</b>	Domestic	91	<b>91</b>	-
	Overseas	99	<b>98</b>	(1)
	Total	190	<b>189</b>	(1)

Domestic : -

Overseas : +1[Corrugated containers in China], (1)[Forest plantation in China], (1) [Lumber in Myanmar]

## 2. Sales and Operating Profit by Segment

[FY2019 Result] (consolidated)

(¥ billion)

	FY2018		FY2019		Increase (Decrease)	
	Net Sales	Operating Profit	Net Sales	Operating Profit	Net Sales	Operating Profit
Household & Industrial Materials	681.2	22.4	<b>686.1</b>	<b>40.9</b>	4.9	18.5
Functional Materials	224.1	18.4	<b>214.7</b>	<b>15.4</b>	(9.4)	(3.0)
Forest Resources & Environment Marketing	326.5	64.6	<b>285.6</b>	<b>28.8</b>	(40.9)	(35.8)
Printing & Communications Media	302.9	(4.8)	<b>292.7</b>	<b>11.3</b>	(10.2)	16.1
Others	16.3	9.6	<b>28.7</b>	<b>9.7</b>	12.4	0.1
<b>Total</b>	<b>1,551.0</b>	<b>110.2</b>	<b>1,507.6</b>	<b>106.1</b>	<b>(43.4)</b>	<b>(4.1)</b>

\*1: Sales include intra-segment sales \*2: Others include adjustment amount

# 3. Analysis of Operating Profit by Segment

## (1) Household and Industrial Materials

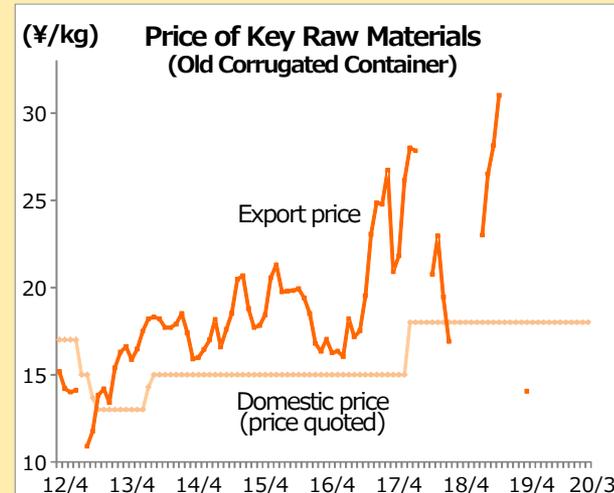
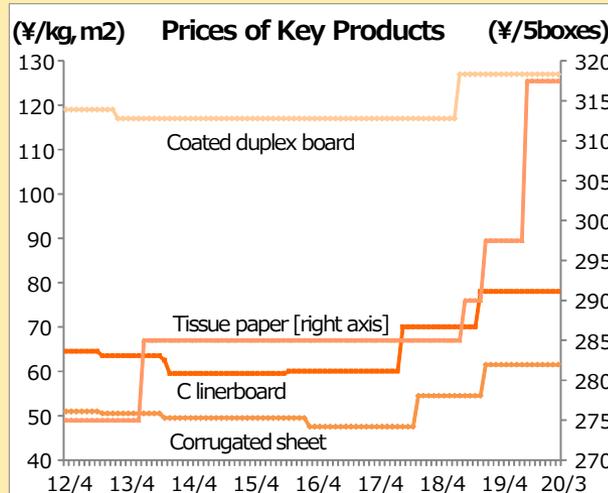
FY2018			FY2019			Increase (Decrease)	
Net Sales	Operating Profit		Net Sales	Operating Profit		Operating Profit	
<b>¥681.2 billion</b>	<b>¥22.4 billion</b>	Domestic <b>¥14.1 billion</b> Overseas <b>¥8.3 billion</b>	<b>¥686.1 billion</b>	<b>¥40.9 billion</b>	Domestic <b>¥32.5 billion</b> Overseas <b>¥8.4 billion</b>	<b>+¥18.5 billion</b>	Domestic <b>+¥18.4 billion</b> Overseas <b>+¥0.1 billion</b>

### Domestic +¥18.4 billion

Sales & market factor +¥17.7 bil.  
etc.

### Overseas +¥0.1 billion

Sales & market factor (¥5.2 bil.)  
Price difference in raw materials & fuels +¥4.0 bil.  
etc.



Sales of Key Products (*)		FY2018			FY2019			Increase (Decrease)			
		Sales Volume 1,000 t (or) million m2 (or) million pcs	Unit Price ¥/kg (or) m2	Sales Amount ¥ billion	Sales Volume 1,000 t (or) million m2 (or) million pcs	Unit Price ¥/kg (or) m2	Sales Amount ¥ billion	Sales Volume 1,000 t (or) million m2 (or) million pcs	Year-on Year %	Unit Price ¥/kg (or) m2	Sales Amount ¥ billion
Paperboard	Domestic	3,023	67.34	203.6	<b>2,946</b>	<b>71.35</b>	<b>210.2</b>	(77)	97.4%	4.01	6.6
Corrugated containers (million m2)	Domestic	2,956	64.25	189.9	<b>2,968</b>	<b>67.32</b>	<b>199.8</b>	12	100.4%	3.07	9.9
Disposable diapers for babies (million pcs)	Domestic & Overseas	1,178	-	-	<b>1,170</b>	-	-	(8)	99.3%	-	-

\*Total of Group's consolidated manufacturing companies, with intra-Group consumption included

# 3. Analysis of Operating Profit by Segment

## (2) Functional Materials

FY2018				FY2019				Increase (Decrease)	
Net Sales		Operating Profit		Net Sales		Operating Profit		Operating Profit	
<b>¥224.1billion</b>	<b>¥18.4billion</b>	Domestic <b>¥11.9 billion</b>	Overseas <b>¥6.5billion</b>	<b>¥214.7billion</b>	<b>¥15.4billion</b>	Domestic <b>¥10.8billion</b>	Overseas <b>¥4.6billion</b>	<b>¥(3.0 billion)</b>	Domestic <b>¥(1.1 billion)</b> Overseas <b>¥(1.9 billion)</b>

### Domestic (¥1.1 billion)

Sales &amp; market factor (¥2.1 bil.)

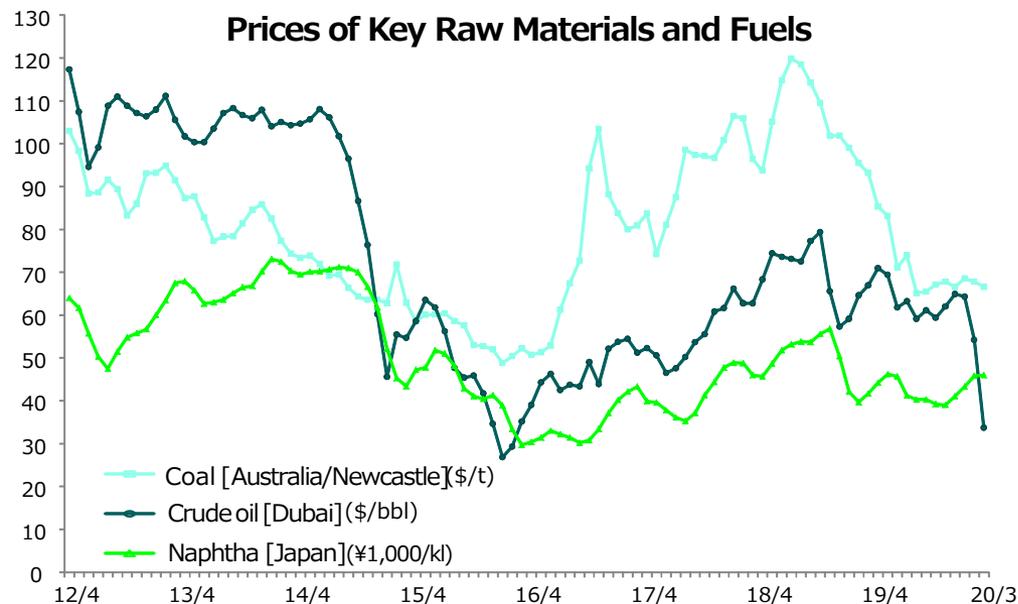
Price difference in raw materials &amp; fuels +¥1.1 bil.

etc.

### Overseas (¥1.9 billion)

Price difference in raw materials &amp; fuels (¥1.2 bil.)

etc.



Sales of Key Products (*)	FY2018			FY2019			Increase (Decrease)				
	Sales Volume	Unit Price	Sales Amount	Sales Volume	Unit Price	Sales Amount	Sales Volume	Year-on Year	Unit Price	Sales Amount	
	million m2	¥ / m2	¥ billion	million m2	¥ / m2	¥ billion	million m2	%	¥ / m2	¥ billion	
Thermal paper (million m2)	Domestic & Overseas	3,395	20.23	68.7	<b>3,421</b>	<b>20.16</b>	<b>69.0</b>	26	100.8%	(0.07)	0.3

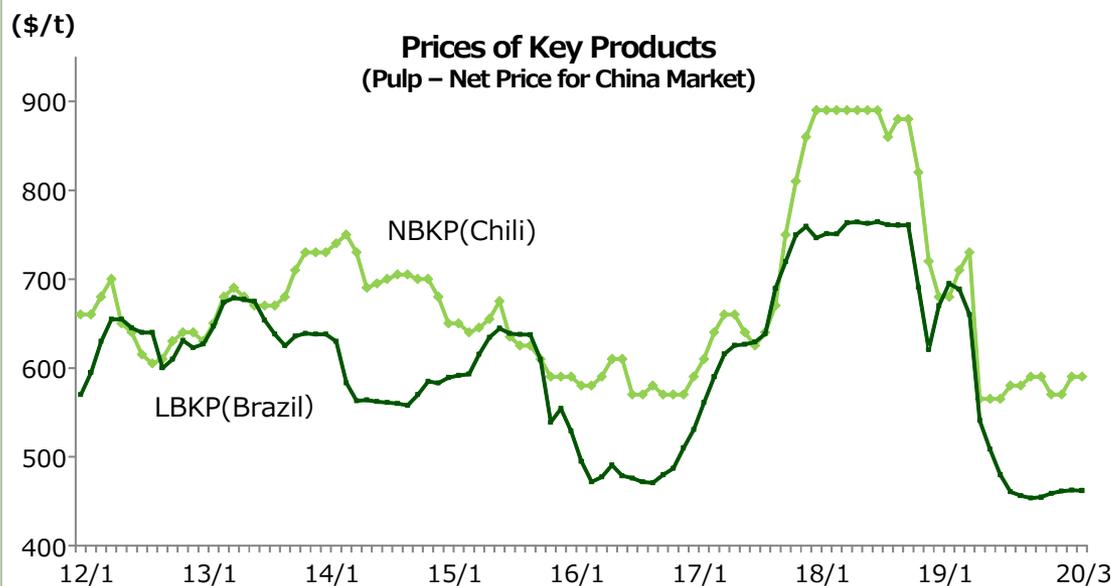
\*Total of Group's consolidated manufacturing companies, with intra-Group consumption included

# 3. Analysis of Operating Profit by Segment

## (3) Forest Resources and Environment Marketing



FY2018			FY2019			Increase (Decrease)		
Net Sales		Operating Profit	Net Sales		Operating Profit	Operating Profit		
<b>¥326.5 billion</b>	<b>¥64.6 billion</b>	Domestic <b>¥4.3 billion</b> Overseas <b>¥60.3 billion</b>	<b>¥285.6 billion</b>	<b>¥28.8 billion</b>	Domestic <b>¥7.6 billion</b> Overseas <b>¥21.2 billion</b>	<b>¥(35.8 billion)</b>	Domestic <b>+¥3.3 billion</b> Overseas <b>(¥39.1 billion)</b>	



### Overseas (¥39.1 billion)

Decline in pulp sales prices (¥41.6 bil.)  
Price difference in raw materials & fuels (¥4.6 bil.) etc.



Sales of Key Products (*)		FY2018			FY2019			Increase (Decrease)			
		Sales Volume 1,000t (or) GWh	Unit Price ¥/kg	Sales Amount ¥ billion	Sales Volume 1,000t (or) GWh	Unit Price ¥/kg	Sales Amount ¥ billion	Sales Volume 1,000t (or) GWh	Year-on Year %	Unit Price ¥/kg	Sales Amount ¥ billion
Market pulp	Domestic & Overseas	2,325	80.48	187.1	<b>2,392</b>	<b>62.35</b>	<b>149.2</b>	67	102.9%	(18.13)	(38.0)
Electric power (GWh)	Domestic	1,004	-	-	<b>1,220</b>	-	-	216	121.6%	-	-

\*Total of Group's consolidated manufacturing companies, with intra-Group consumption included

# 3. Analysis of Operating Profit by Segment

## (4) Printing and Communications Media



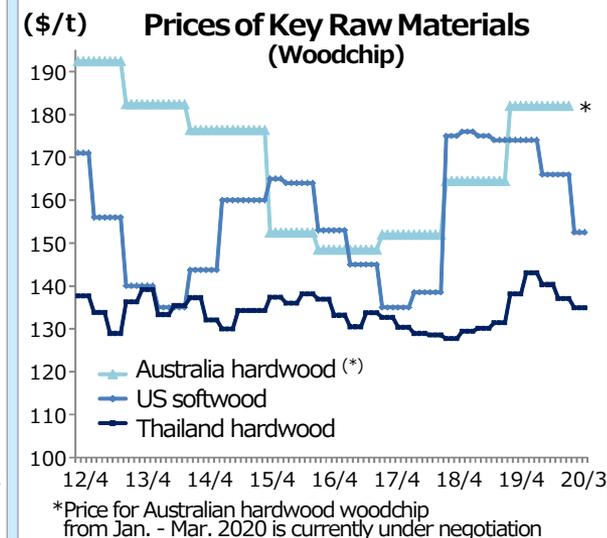
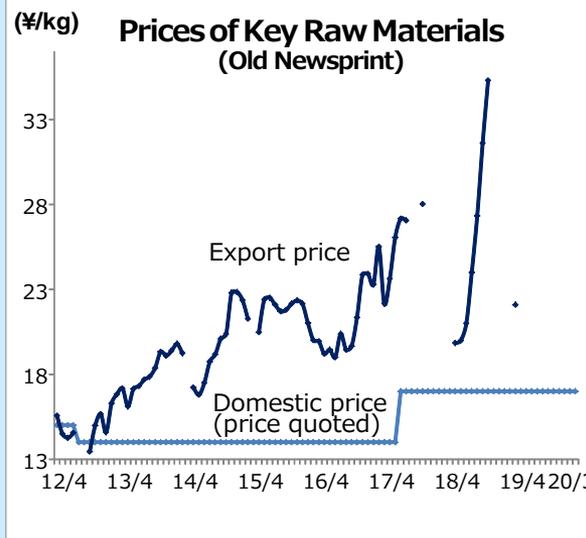
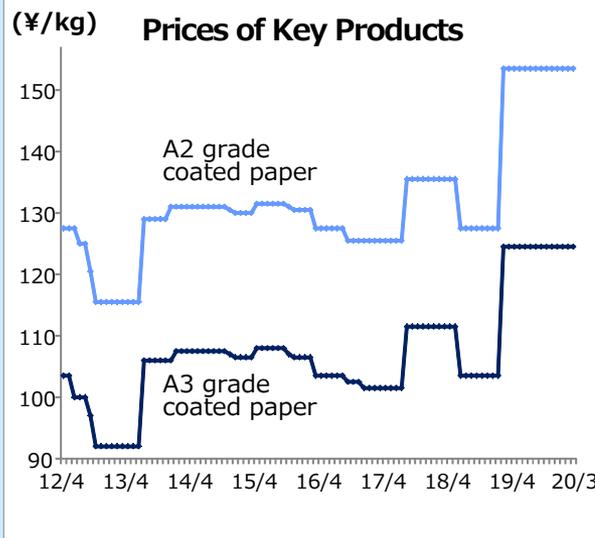
FY2018			FY2019			Increase (Decrease)		
Net Sales		Operating Profit	Net Sales		Operating Profit	Operating Profit		
¥302.9 billion	¥(4.8 billion)	Domestic ¥(6.2billion) Overseas ¥1.4billion	¥292.7 billion	¥11.3billion	Domestic ¥9.6billion Overseas ¥1.7billion	+¥16.1billion Domestic+¥15.8billion Overseas+¥0.3billion		

### Domestic +¥15.8 billion

Sales & market factor +¥6.7 bil. Price difference in raw materials & fuels +¥5.1 bil. etc.

### Overseas +¥0.3 billion

Sales & market factor +¥3.5 bil. Price difference in raw materials & fuels (¥3.7 bil.) etc.



Sales of Key Products (*)	FY2018			FY2019			Increase (Decrease)			
	Sales Volume 1,000 t	Unit Price ¥/kg	Sales Amount ¥ billion	Sales Volume 1,000 t	Unit Price ¥/kg	Sales Amount ¥ billion	Sales Volume 1,000 t	Year-on Year %	Unit Price ¥/kg	Sales Amount ¥ billion
Newsprint, printing & communication paper Domestic	2,348	104.15	244.6	2,151	111.93	240.7	(198)	91.6%	7.78	(3.8)

\*Total of Group's consolidated manufacturing companies, with intra-Group consumption included



# **II. FY2020 Financial Forecast**

## 1. Financial Forecast for FY2020 (consolidated)

(¥ billion)

	FY2019	FY2020F	Increase (Decrease)
<b>Net Sales</b>	1,507.6	<b>1,400.0</b>	(107.6)
<b>Operating Profit</b>	106.1	<b>90.0</b>	(16.1)
[Domestic Companies]	[70.0]	[62.1]	[(7.9)]
[Overseas Companies]	[36.1]	[27.9]	[(8.2)]
<b>Ordinary Profit</b>	101.3	<b>80.0</b>	(21.3)
<b>Profit Attributable to Owners of Parent</b>	58.2	<b>50.0</b>	(8.2)
<b>Depreciation</b>	63.4	<b>63.8</b>	0.4
<b>Overseas Sales Ratio</b>	29.9%	<b>28.4%</b>	(1.5%)
<b>Average Exchange Rate (¥/US\$)</b>	108.7	<b>107.0</b>	(1.7)

\*The above forecasts are based on the forecasts of economic conditions made at the time of publication.  
As such, actual results may differ from these forecasts due to various unforeseen circumstances.

## 2. Preconditions for FY2020 Financial Forecast

### ◆ Effects of the spread of the Coronavirus Disease 2019 (COVID-2019) on sales volume [year-on-year]

#### <Domestic>

	1st-half of FY2020	2nd-half of FY2020
Speciality paper	(12%)	(4%)
Newsprint	(14%)	(11%)
Printing & communication paper	(17%)	(14%)

#### <Overseas>

	1st-half of FY2020	2nd-half of FY2020
Corrugated containers [Malaysia]	(8%)	(5%)
Printing paper[China]	(11%)	(10%)

### ◆ Exchange rates, raw material & fuel prices

Exchange rates	to remain static at current level
Woodchip	based on current contract
Recovered paper	static at current level
Coal	based on current contract
Heavy Oil	static at current level

### ◆ Effects of fluctuation on operating profit [per annum]

Exchange rates	[Japanese Yen]	approx. ¥0.34 billion with a fluctuation of US\$ by 1% (strong US\$ -)
	[Brazilian Real]	approx. ¥0.45 billion with a fluctuation of US\$ by 1% (strong US\$ +)
	[New Zealand Dollar]	approx. ¥0.97 billion with a fluctuation of US\$ by 1% (strong US\$ +)
Price of pulp		approx. ¥2.28 billion with a fluctuation of US\$10/t (high price +)
Price of woodchip		approx. ±¥2.97 billion with a fluctuation of US\$10/BDt
Price of recovered paper		approx. ±¥4.04 billion with a fluctuation of ¥1/kg
Price of Dubai crude oil		approx. ±¥0.25 billion with a fluctuation of US\$1/bbl (heavy oil, bunker, naphtha and others)

## 3. Sales and Operating Profit by Segment

[FY2020 Forecast] (consolidated)



(¥ billion)

	FY2019		FY2020F		Increase (Decrease)	
	Net Sales	Operating Profit	Net Sales	Operating Profit	Net Sales	Operating Profit
Household & Industrial Materials	686.1	40.9	667.0	37.0	(19.1)	(3.9)
Functional Materials	214.7	15.4	209.0	11.0	(5.7)	(4.4)
Forest Resources & Environment Marketing	285.6	28.8	259.0	22.0	(26.6)	(6.8)
Printing & CommunicationsMedia	292.7	11.3	243.0	12.0	(49.7)	0.7
Others	28.7	9.7	22.0	8.0	(6.7)	(1.7)
<b>Total</b>	<b>1,507.6</b>	<b>106.1</b>	<b>1,400.0</b>	<b>90.0</b>	<b>(107.6)</b>	<b>(16.1)</b>

\*1: Sales include intra-segment sales \*2: Others include adjustment amount

## 4. Operating Profit by Segment

(¥ billion)

### Household & Industrial Materials

	FY2019	FY 2020F
Net Sales	686.1	667.0
Operating Profit	40.9	37.0
[Domestic]	[32.5]	[29.2]
[Overseas]	[8.4]	[7.8]
Operating Profit Margin	6.0%	5.5%

Operating Profit

(¥ 3.9 billion)

◆ Domestic (¥3.3 billion)

◆ Overseas (¥0.6 billion)

### Functional Materials

	FY2019	FY 2020F
Net Sales	214.7	209.0
Operating Profit	15.4	11.0
[Domestic]	[10.8]	[9.2]
[Overseas]	[4.6]	[1.8]
Operating Profit Margin	7.2%	5.3%

Operating Profit

(¥ 4.4 billion)

◆ Domestic (¥1.6 billion)

◆ Overseas (¥2.8 billion)

### Forest Resources & Environment Marketing

	FY2019	FY 2020F
Net Sales	285.6	259.0
Operating Profit	28.8	22.0
[Domestic]	[7.6]	[7.6]
[Overseas]	[21.2]	[14.4]
Operating Profit Margin	10.1%	8.5%

Operating Profit

(¥ 6.8 billion)

◆ Domestic ±¥0 billion

◆ Overseas (¥6.8 billion)

### Printing & Communications Media

	FY2019	FY 2020F
Net Sales	292.7	243.0
Operating Profit	11.3	12.0
[Domestic]	[9.6]	[8.1]
[Overseas]	[1.7]	[3.9]
Operating Profit Margin	3.9%	4.9%

Operating Profit

+¥ 0.7 billion

◆ Domestic (¥1.5 billion)

◆ Overseas +¥2.2 billion

# 5. Impact on Operating Profit from External Environment

(¥billion/year)

◆ Changes in exchange rates			Household & Industrial Materials	Functional Materials	Forest Resources & Environment Marketing	Printing & Communications Media	Total
<b>USD-based transactions</b> (USD stronger by 10%)	Assumed exchange rates for FY2020 <b>Japanese Yen (JPY)</b> 107.00 JPY/USD		↓	↓		↓	(3.6)
	<b>Brazilian Real (BRL)</b> 5.90 BRL/USD			↓	↑		↑ 4.5
	<b>New Zealand Dollar (NZD)</b> 1.67 NZD/USD		↑		↑		↑ 9.7

◆ Changes in pulp prices			Household & Industrial Materials	Functional Materials	Forest Resources & Environment Marketing	Printing & Communications Media	Total
<b>Pulp sales &amp; purchase</b> (USD 10/t stronger)			↓	↓	↑	↓	↑ 2.3

+ : Improve ( ) : Worsen



# **III. Management Targets**

**Management Philosophy**

~Future Image of Oji Group~

Creation of Innovative Value

Contribution to the Future and the World

Harmony with Nature and Society

「Beyond the Boundaries」

**Management Strategy**

~Fundamental Policies and Numerical Targets~

~FY2019-21 Fundamental Policies~



~FY2021 Numerical Targets~

Consolidated Operating Profit

**More than ¥150.0 billion**

(Continue stable profit of more than ¥100.0 billion)

Overseas Sales Ratio

**40 %**

(Aim for 50% ASAP)

ROE

**10.0 %**

Net D/E Ratio

**Status quo\***

\*FY2018 Result : 0.7

▶▶▶ **Market Capitalization: More than ¥1 trillion**



## Streamline of existing operations & Enhancement & expansion of promising businesses

Downtrend demand of newsprint, printing & communication paper ⇔ Uptrend demand of certain products such as corrugated containers, etc.

**Cost Reduction**  
**¥3,800 mil./yr.**

### 《Streamline of Operations》

#### Permanent Shut

- ◆ February 2020  
• Oji Paper/Tomioka Mill/#9 Machine [Printing & communication paper]
- ◆ 1st-half of FY2020  
• Oji F-TEX/Ebetsu Mill/#1,4 Machine [Printing & communication paper, specialty paper]  
• Oji Paper/Tomakomai Mill/#N-1 Machine [Newsprint]
- ◆ December 2021  
• Oji Materia/Nayoro Mill/#3 Machine [Corrugating medium]

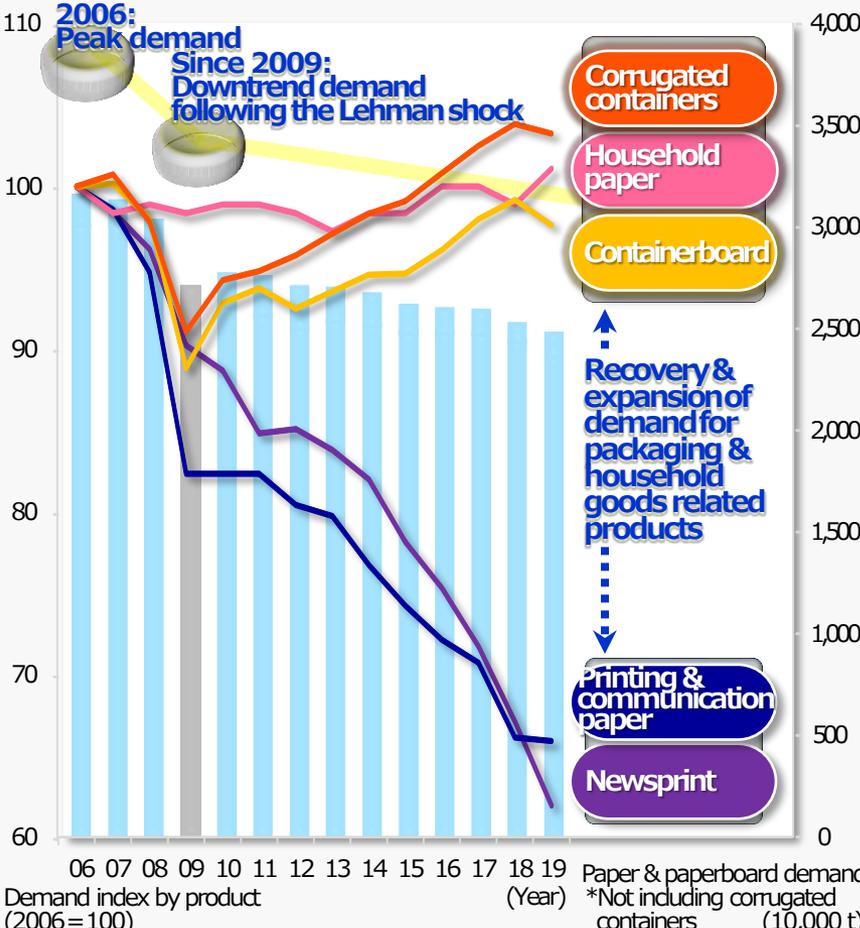
#### Conversion/Relocation

- ◆ Shutdown in 1st-half of FY2020 & Startup in FY2021  
• Oji Paper/Tomakomai Mill/#N-5 Machine  
[Conversion: Newsprint → Containerboard]
- ◆ September 2021  
• Oji Materia/Nayoro Mill/#2 Machine  
[Relocation to Tomakomai, Special linerboard]

**Profit Improvement (FY2021)**  
**¥500 mil./yr.**

### 《Enhancing & Expanding Promising Businesses》

- ◆ Packaging
  - JV paper liquid container business with ISHIZUKA GLASS
  - Establishing a new plant in Funabashi-shi, Chiba (the Greater Tokyo Area)
  - Offering environmentally-friendly next-generation packaging systems
- ◆ Household & Consumer Products
  - JV household paper business with Mitsubishi Paper Mills (MPM)
  - Establishing a new converting plant in Edogawa Mill (the Greater Tokyo Area) etc.



Sources: Japan Paper Association – Statistics on Paper and Paperboard, Japan Corrugated Case Association – Production Volume of Corrugated Case

## Strengthen business foundation through business alliances

### 《Business Alliances with Mitsubishi Paper Mills (MPM)》

1 JV household paper company

MPM Oji Home Products  
Startup: April 2019

⇒ Logistics cost reduction through acquiring the first operation base in the Tohoku Region

2 JV biomass power generation company

MPM Oji Eco Energy  
Startup: September 2019

⇒ Largest biomass power plant adapted to FIT in Japan

3 Transfer & consolidation of production & sales of carbonless paper

From Oji Imaging Media (Oji IM)/Kanzaki Mill to MPM/Takasago Mill (scheduled in July 2020)

⇒ Oji : Enhancing productivity & competitiveness  
MPM : Increasing market share & improving profitability

◆ Joint procurement of raw materials

◆ Mutual utilization of sales channels

◆ Mutual OEM supplies

etc.

MPM/Takasago Mill

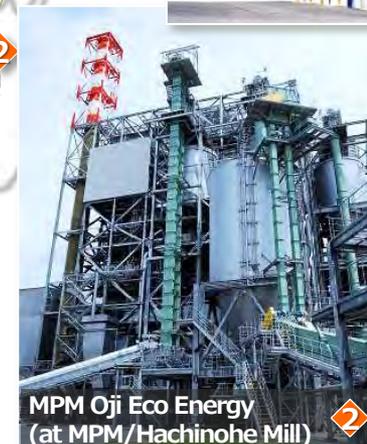


### Profit Improvement (FY2021)

Oji **¥3,700mil. or more**

MPM **¥2,500mil. or more**

MPM Oji Home Products (at MPM/Hachinohe Mill)



Oji Group's existing/under-construction sites

- Oji Nepia (household & consumer products)
- Oji IM (thermal paper, etc.)
- Biomass power plants





## Organic expansion from existing operations & Creation of synergies among businesses as well as operations

### 《Organic Expansion from Existing Operations》

			SE Asia & India	China	Oceania	South America	Europe
Industrial Materials	Containerboard	Machine extension	○ Malaysia/GSPP				
	Corrugated containers	Plant expansion & establishment	○ 8 operations in 6 countries	○ Oji Packaging (Chongqing), Nantong Oji Filter	○ NZ/Oji FS		
Household & Consumer Products	Disposable diapers	Own plant establishment, machine extension	○ Malaysia/OAHP, Indonesia/OIMP				
	Household paper	Base paper machine installation		○ Jiangsu Oji Paper			
Functional Materials	Thermal paper	Capacity enhancement				○ Brazil/OPE	○ Germany/KANZAN
Forest Resources & Environment Marketing Business	Pulp	Capacity & competitiveness enhancement			○ NZ/Oji FS, PANPAC	○ Brazil/Cenibra	
	Lumber processing	Competitiveness enhancement			○ NZ/PANPAC		

### 《Scheduled Investments》

- ◆ Containerboard : [GSPP, Malaysia] New machine with production capacity 450,000t/yr.
- ◆ Thermal Paper : [OPE, Brazil] 3rd phase of capacity enhancement (+70,000t/yr.: double from current capacity)

#### Startup:

- … in Apr. 2021
- … sequentially from Feb. 2021
- etc.

Profit Improvement (FY2021)

¥4,700 mil./yr.

### Ongoing investment project (i) Overseas packaging business

**GSPP**

**Installation of:  
Containerboard machine**

Selangor, Malaysia

- Startup: Apr.2021 (scheduled)
- Production capacity:  
450,000t/yr.

\*Rendering

**Harta Packaging Group**

**Establishment of:  
Corrugated container plant**

Phnom Penh, Cambodia  
(Special economic zone)

- Startup: Feb.2020
- Production capacity:  
96 million m<sup>3</sup>/yr.

### Ongoing investment project (ii) Overseas packaging business

**Oji India Packaging**

**Establishment of:  
Corrugated container plant**

Gujarat, India  
(Sanand Industrial Estate)

- Startup: Mar.2020
- Production capacity:  
72 million m<sup>2</sup>/yr.

3

**Oji Sinar Mas Packaging**

**Establishment of:  
Corrugated container plant**

Bekasi, West Java, Indonesia  
(Near Jakarta)

- Startup: 2020 (scheduled)
- Production capacity:  
109 million m<sup>2</sup>/yr.

4

### Ongoing investment project (iii) Overseas packaging business



**Oji Fibre Solutions** 5

**Establishment & relocation of:  
Corrugated container plant**

Christchurch, New Zealand

- **Startup:** 1st-half of FY2020
- **Production capacity:** (scheduled)  
102 million m<sup>2</sup>/yr.  
(+30 million m<sup>2</sup>/yr.)

\*Rendering



**Nantong Oji Filter** 6

**Establishment of: Filter plant**

Nantong, China

- **Startup:** Oct. 2020 (scheduled)

\*Rendering



### Ongoing investment project (iv) Overseas disposable diaper business

**Indo Oji Makmur Perkasa**

**Establishment of:  
Disposable diaper plant**

Bekasi, West Java, Indonesia  
(Near Jakarta)

- Startup: Jan.2020
- Production capacity:  
240 million pcs/yr.

**Oji Asia Household Products**

**Machine extension &  
operation integration**

Selangor, Malaysia

- Startup: Sequentially from Jul. 2020  
(scheduled)
- Production capacity:  
510 million pcs/yr.  
(+90 million pcs/yr.)

\*Rendering

## Ongoing investment project (v) Overseas household paper & thermal paper business



**Jiangsu Oji Paper** 9

**Installation of:  
Base paper machine for  
household paper**

Nantong, China

- **Startup:** Jul. 2020 (scheduled)
- **Production capacity:**  
120,000t/yr.



**Oji Papéis Especiais** 10

**Production enhancement of:  
Thermal paper machine**

Sau Paulo, Brazil

- **Startup** Sequentially from Feb. 2021 (scheduled)
- **Production capacity:**  
2,300 million m<sup>2</sup>/yr.  
(+900 million m<sup>2</sup>/yr.)

\*Coating Machine #3

## Promotion of Innovation

CNF slurry, CNF transparent sheet

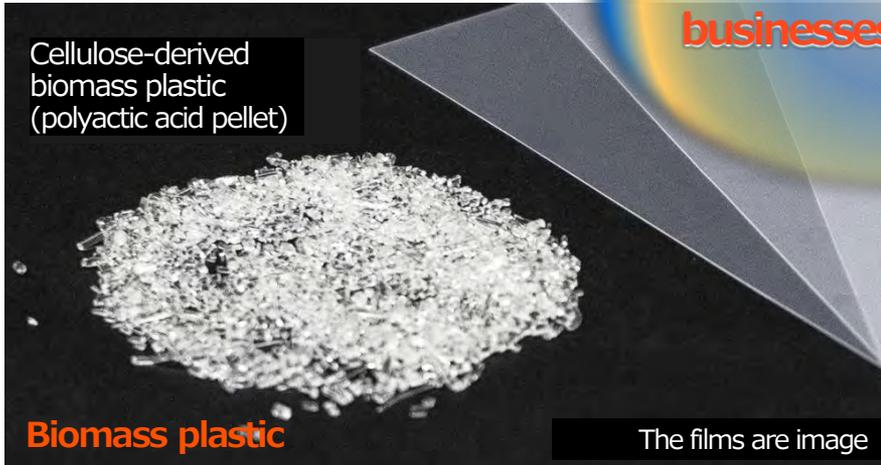


Milk carton, cup lid & packages made from pulp



Development of environmentally friendly businesses/products

Cellulose-derived biomass plastic (polyactic acid pellet)



Biomass plastic

The films are image

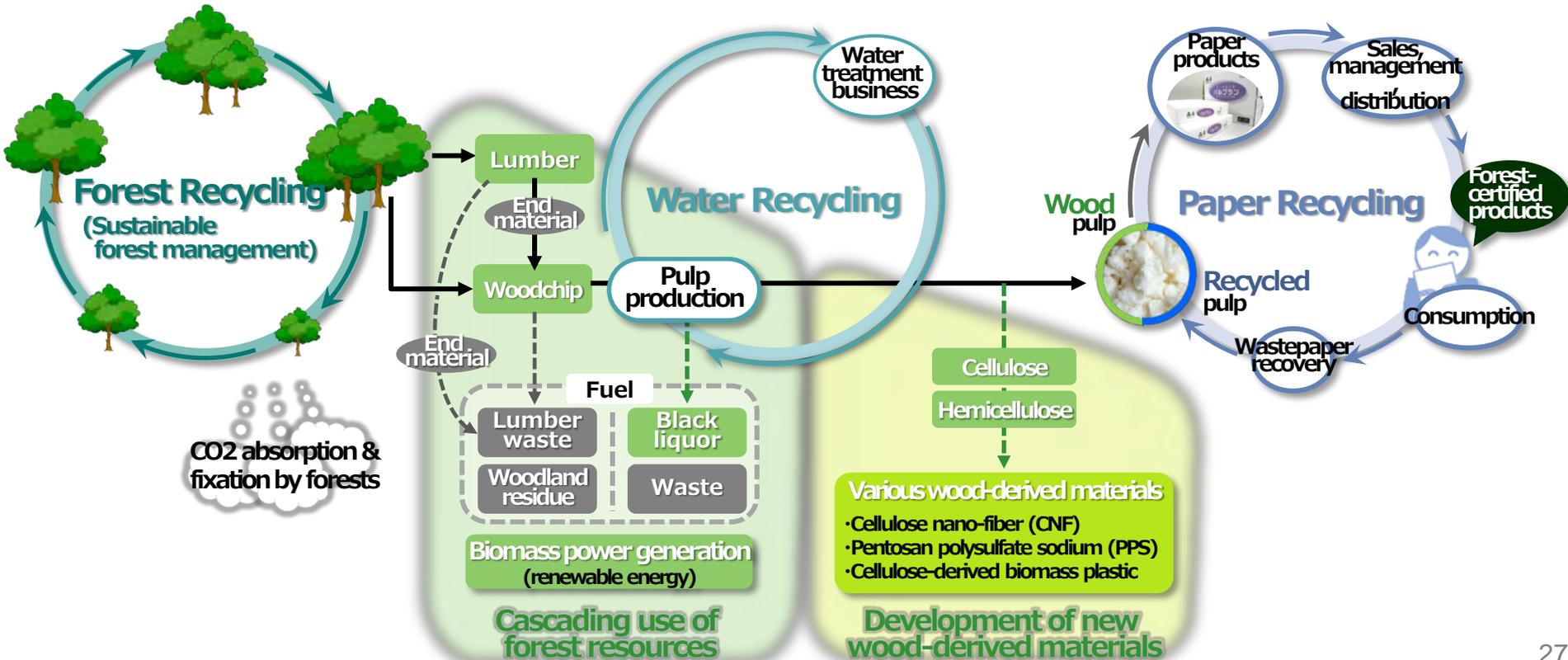
Therapeutic agents for Osteoarthritis (for horses, dogs)

Blood anticoagulants (for human)

**Oji Pharma**

Hemicellulose-derived pharmaceutical products

## Resource recycling throughout the value chain





# IV. Topics

# 1. Business Strategies

(1) Expansion of Domestic Packaging Business – 1 Enhancing & Expanding Promising Businesses

## Paper Container Business

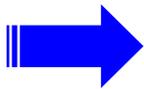
《Liquid container》 **JV with ISHIZUKA GLASS**  
 (ISHIZUKA GLASS 60% Oji 40%)  
**Startup: Sept. 2020 (scheduled)**

Operation base:  
 Fukusaki-cho, Kanzaki-gun, Hyogo

**Oji Group** ✓Supply of laminated base paper



**ISHIZUKA GLASS** ✓Paper container manufacturing technologies  
 ✓Sales & maintenance of filling machine



- ◆ Building an integrated manufacturing system in Japan
- ◆ Expanding overseas in the future



## Corrugated Container Business

### New plant in Tokyo Suburbs (Funabashi-shi)

**Largest plant with leading-edge equipment in Japan**

Redevelop an existing distribution base in Funabashi-shi, Chiba

**Production Capacity**

**20 million m<sup>2</sup>/month**

**Startup**

**July 2020 (scheduled)**



# 1. Business Strategies

(1) Expansion of Domestic Packaging Business – 2 Next Generation Packaging Solution

## Next Generation Packaging Solution “OJI FLEX PACK’AGE”

### “One and Only” at OJI

- ◆ Realization of automatic packaging of corrugated containers that are perfect size for products with fanfold corrugated container “**RAKUDAN**” and “**Automatic Packaging System**”
- ◆ 3 types of lineup for automatic packaging system:
  - (1) 3-sided variable full-auto system … full automation
  - (2) 3-sided variable semi-auto system  
… flexible container designs
  - (3) Variable height system … handles random bottom areas

- ✓Combine technologies & expertise in packaging materials & system developed at Oji Group
- ✓Flexibly respond to customer issues to propose a variety of packaging materials & system that ensure products are packed in perfect-sized containers

Offering total solutions

Reduction of packaging materials

Reduction of delivery costs

Resolving labor shortages

Environmental measures

Efficiency improvement

#### Packaging materials

Fanfold corrugated sheet “**RAKUDAN**”



#### Packaging system



3-sided variable full-auto system



3-sided variable semi-auto system



Variable height automatic sealing system

**Enhancing & expanding packaging business**

**SE Asia**

Increase market share by:  
 • enhancing existing operations  
 • expanding into countries we haven't tapped into yet

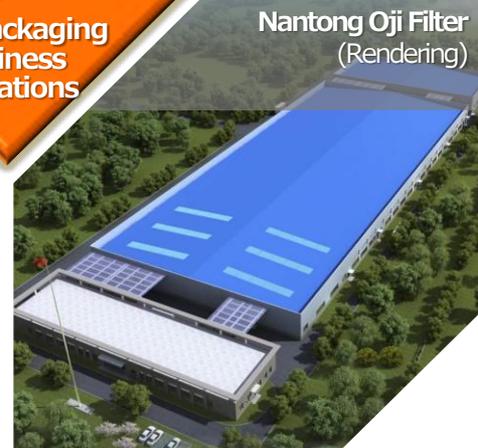
- ◆ **Malaysia**  
New containerboard machine  
 Startup: Apr. 2021 (scheduled)
- ◆ **Indonesia** ← **New Entry**  
New corrugated container plant  
 Startup: 2020 (scheduled) etc.

**Oceania**

Offer higher quality products stably & efficiently by installing latest equipment

- ◆ **Christchurch (NZ)**  
New corrugated container plant (relocation)  
 Startup: 1st-half of FY2021 (scheduled)

**Ensure competitiveness by expanding the Total Packaging Business**



**13** countries  
**52** operations  
 # of packaging business operations

**India**

Aggressively make investments to expand both production & sales in the rapidly growing market

- ◆ **New corrugated container plant**  
 Startup: Mar. 2020

**China**

Further improve competitiveness by building an optimal manufacturing system

- ◆ **New filter plant (Nantong)**  
 Startup: Oct. 2020 (scheduled)
- ◆ **New corrugated container plant (Chongqing)**  
 Startup: 2021 (scheduled)

**Enhancement of production & supply systems in Japan**

**《MPM Oji Home Products》**

- Startup: Apr. 2019
- Location: MPM/Hachinohe Mill

➔ Strengthen competitiveness by reducing logistics costs, leveraging the first operation base in the Tohoku Region acquired



MPM Oji Home Products's paper machine

**◆ Offering nonwoven face masks**

- Startup: Jun. 2020 (scheduled)
- Location: New Tac Kasei/Yamamoto Plant (Yamamoto-cho, Mitoyo-shi, Kagawa)
- Production capacity: Approx. 2 mil. pcs/month (scheduled)

Sales within China to capture strong demand

Exported to Japan for converting & shipping



Jiangsu Oji Paper's base paper machine

**◆ Offering nonwoven fabric for medical gowns**

- Startup: Jun. 2020 (scheduled)
- Location: Oji Nepia/Personal Care Nagoya Plant (Oji-cho, Kasugai-shi, Aichi)
- Production capacity: Approx. 80t/month (scheduled)



Nonwoven fabric for medical gowns

**《Base paper production in China → converting in Tokyo》**

- Base paper Startup - Jul. 2020 (scheduled)  
Location - China/Jiangsu Oji Paper
- Converting Startup - Aug. 2020 (scheduled)  
Location - Kanto Region/Edogawa Mill

➔ Promote collaboration of Japan & overseas to enhance production & supply systems

- : Existing operations
- ★ : New operations

Expanding both production & sales in growing markets in SE Asia and China

Malaysia

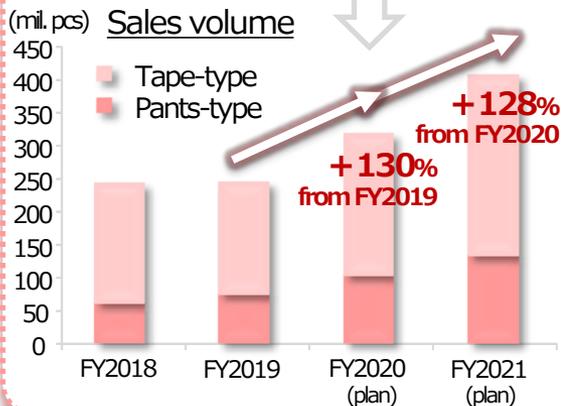
Market growth rate (\*) 3.6%

《Production expansion》

Jul. 2020 Startup of new tape-type machine  
 2020 Efficiency improvement through (scheduled) operation integration  
 → Consider further machine expansion

《Sales expansion》

- ◆ Increase exports to China & Vietnam
- ◆ Strengthen e-commerce (EC) sales
- ◆ Sample distribution at hospitals etc.

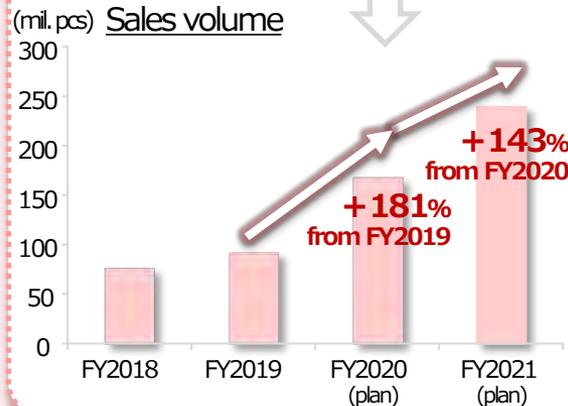


Indonesia

Market growth rate (\*) 9.6%

《Production expansion》

Jan. 2020 Startup of Oji & Indofood CBP JV company's own plant  
 → Consider further production enhancement following demand & sales increases



China

Market growth rate (\*) 8.1%

《Sales expansion》

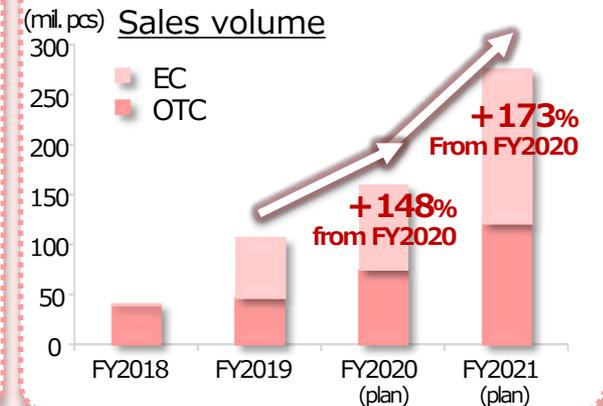
- ◆ Strengthen EC sales
- Active sales in rapidly growing markets
- ◆ Strengthen over-the-counter (OTC) sales
- Acquiring new customers by increasing the # of distribution outlets
- Launch of **Doraemon package** in mid-price market (largest market in China) in May 2020



Ads for EC event

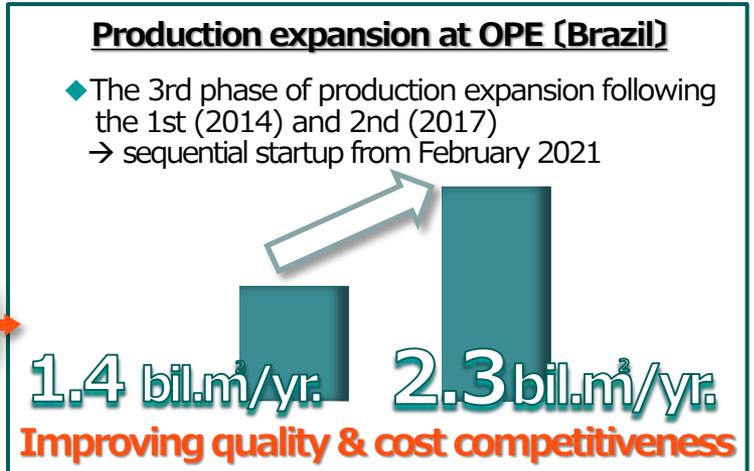
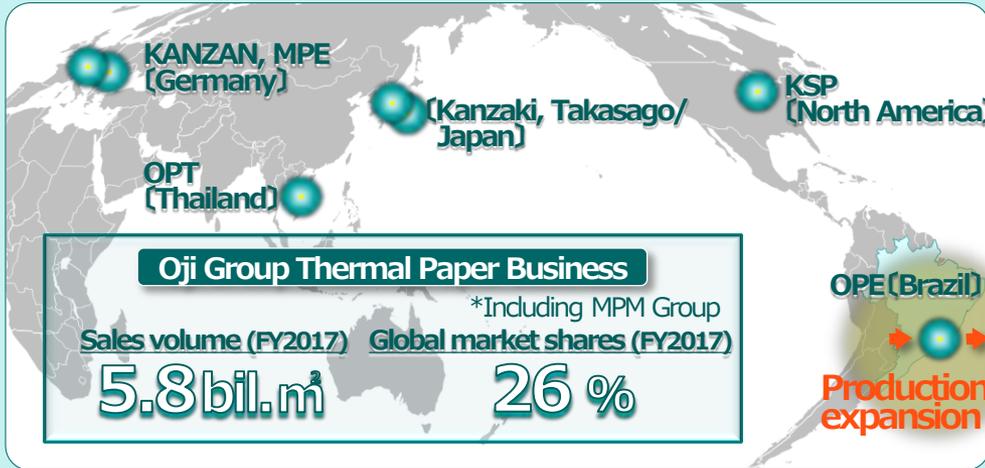


©Fujiko Pro



\*Source: Euromonitor International Nappies, Diapers, Pants CAGR2020-2023

**Increasing global market share by production expansion**



«Aim to maintain market share in Brazil and more in Latin America»



OPE Thermal paper base paper machine

**Capture the growing demand resulting from the spread & expansion of POS & logistics systems in Latin America**

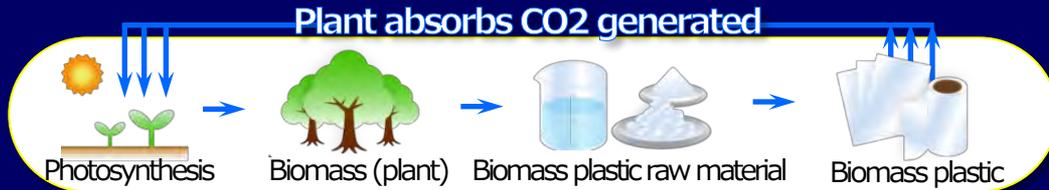
**Develop packaging materials & technologies to address environmental issues such as marine plastic waste and global warming**

**Biomass plastic**

《Cellulose-derived biomass plastic》

Adopted as a project commissioned by the Ministry of the Environment (Nov. 2019-Feb. 2022)

“One and Only” at OJI Develop **biomass plastics derived from cellulose** (a material that does not compete with food) **using enzyme technology**



Have developed biomass plastic by producing “glucose” from pulp cellulose, and started development of biomass plastic film

- ▶ Carbon neutral plastic that absorbs CO2 during plant growth
- ▶ Contribute to preservation of petroleum resources by replacing petroleum-derived plastic

《Biodegradable plastic & pulp composites》

Biodegradable plastic **X** Pulp

《Effects of compounding with pulp》

- ✓ More strength & rigidity of molded products
  - ✓ More heat resistance
  - ✓ Less time for injection molding
- Expanded uses of biodegradable plastics

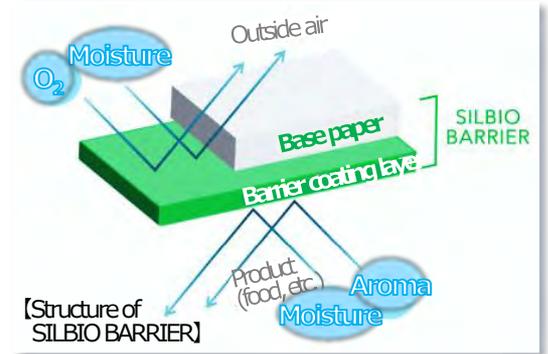


【Examples of processed products】

**Plastic alternative paper materials**

《Barrier paper “SILBIO BARRIER”》

- ✓ Curtail deterioration and maintain aroma & moisture of contents
- ✓ Raw materials are carefully selected. Can be used in a wide range of applications from food to industrial materials



《Others》

Cup lid & packages made from pulp

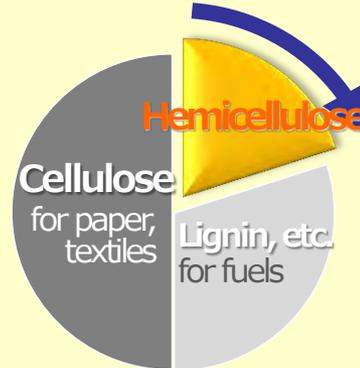


### Promoting the use of hemicellulose in the medical & healthcare fields

**"One and Only" at OJI**

- ◆ **Develop medical products from hemicellulose** leveraging advanced utilization technologies of wood resources
- ◆ Can manufacture **at low cost & in large quantities** by collaborating with dissolving pulp process at Oji Paper/ Yonago Mill

#### Expanding the application of wood resources



- Cosmetic raw materials
- Functional food raw materials
- **Active pharmaceutical ingredients**

Therapeutic agents for Osteoarthritis (for horses, dogs)  
 Blood anticoagulants (halal-addressed products)



- Cosmetic raw materials
- Functional food raw materials

• Veterinary medicines



• Human medicines



Global market size **¥40.0 bil. + ¥1,000.0 bil.**

**Big leap**



**Oji Pharma**

**Growth**

April 2020 **Foundation**

## Creation of Innovative Value

### Cellulose nano-fiber (CNF)

**"One and Only"** at OJI

Original **Phosphate Esterified CNF** offers **new functions** in various applications

- ◆ High transparency
- ◆ High viscosity & thixotropy
- ◆ High strength & elasticity
- ◆ High thermal dimensional stability

Joint development with users of more than 100 companies in Japan & overseas in a wide range of fields for practical application

#### 《Functional additives》



- ◆ Cosmetics
- ◆ Paints
- ◆ Concrete pump primer

#### 《Composites》



- ◆ Sporting goods
- ◆ Car window
- ◆ Resin/rubber
- ◆ Concrete

Leveraging the strengths of **Phosphate Esterified CNF** to accelerate application development & commercialization in a wide range of fields to make it a new business pillar

### Cell culture substrates for controlled cell orientation

Fabricate surface nanostructures of several hundred nm~several um in size  
 OJI's original technology **"Nano Dot Array"** Can be used in a variety of fields, including life sciences & medical care, etc.

#### Cell culture substrate for controlled cell orientation **"ND Cell Aligner Dish"**

Realization of parallel stripe structure with alternating nano-pillars & flats

Reproduce conditions similar to those in vivo: utilized in regenerative medicine research & development, such as culture of iPS cell-derived cardiomyocytes

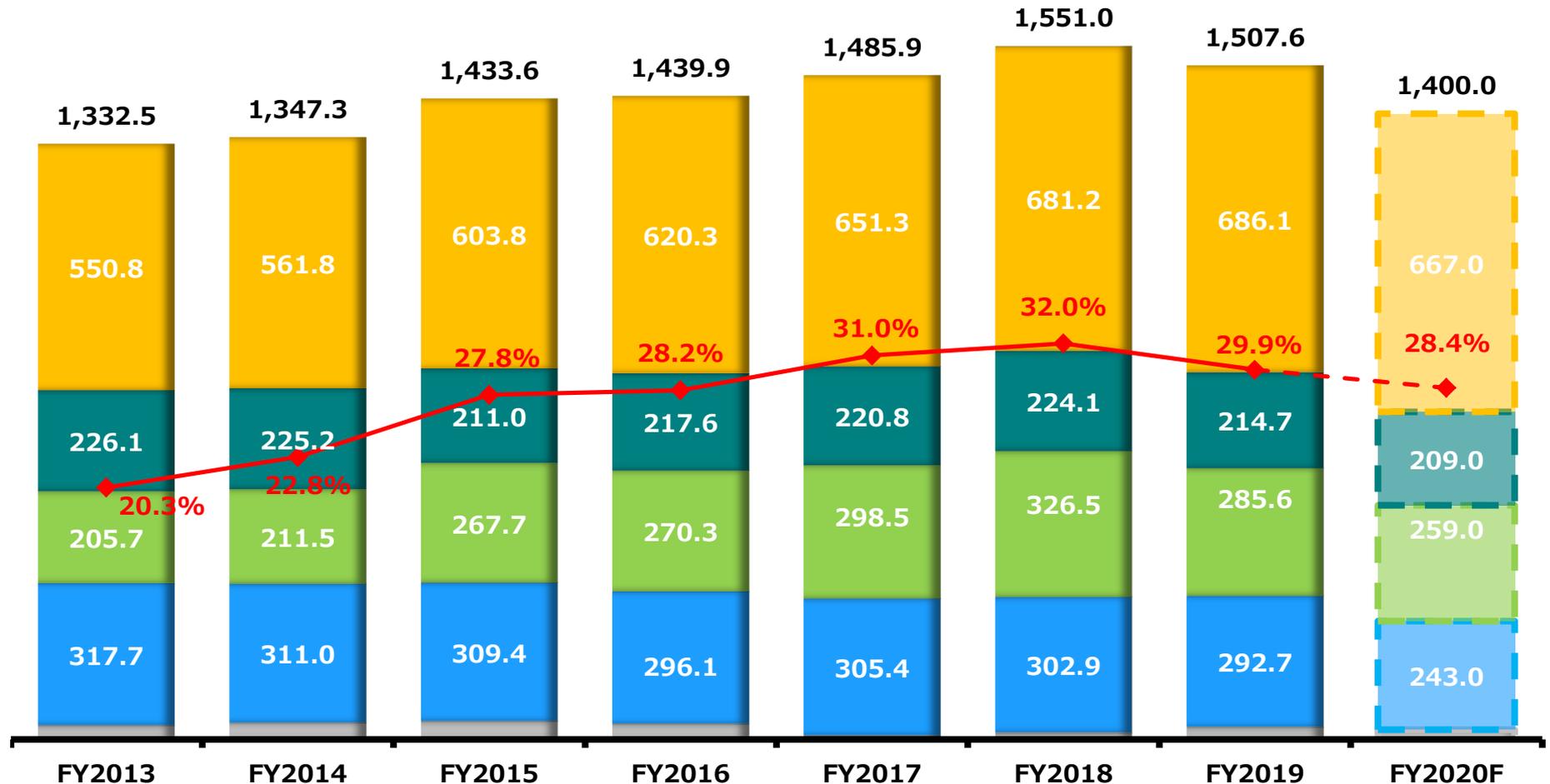




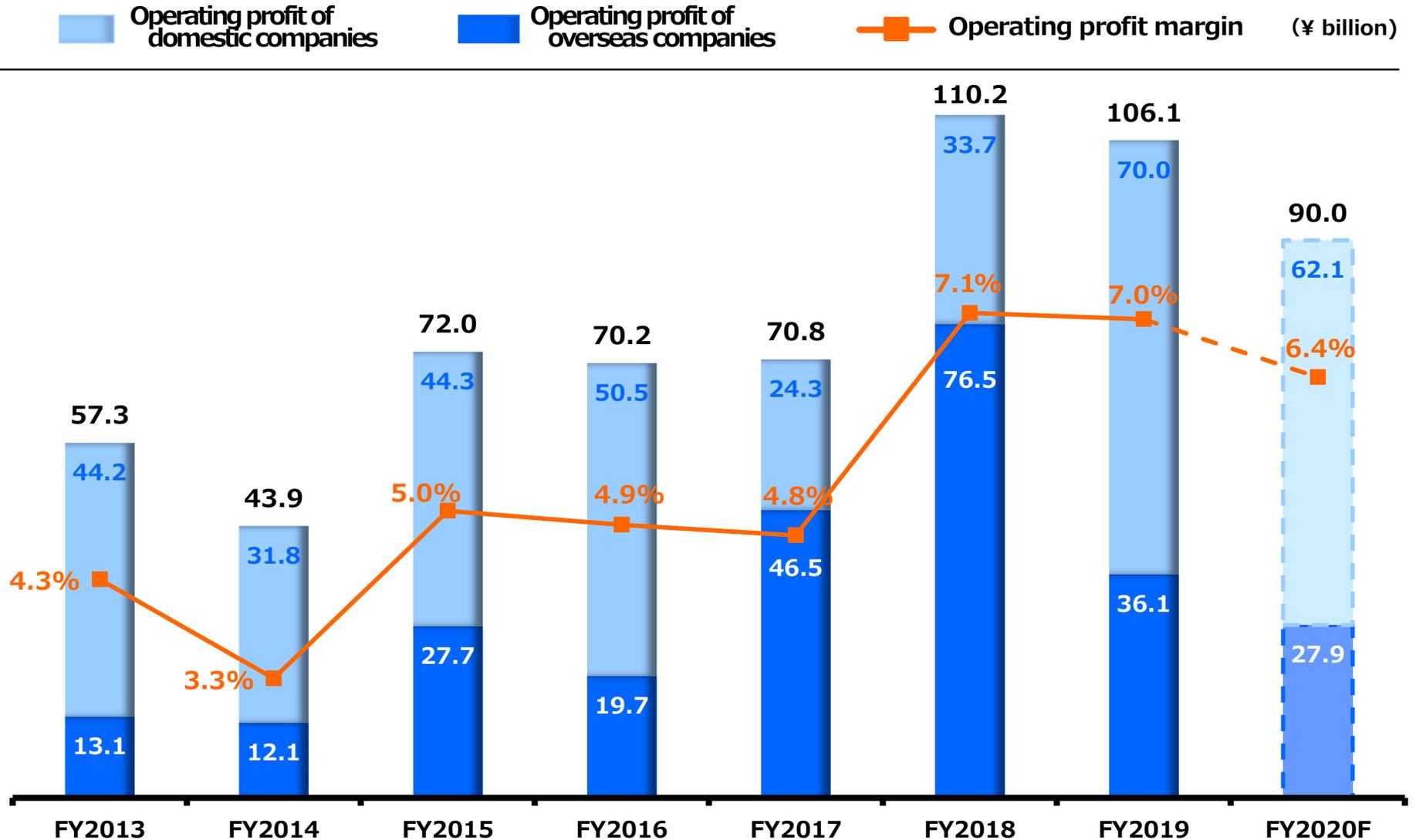
# 《 Reference Materials 》

# Trends of Net Sales by Segment (consolidated)

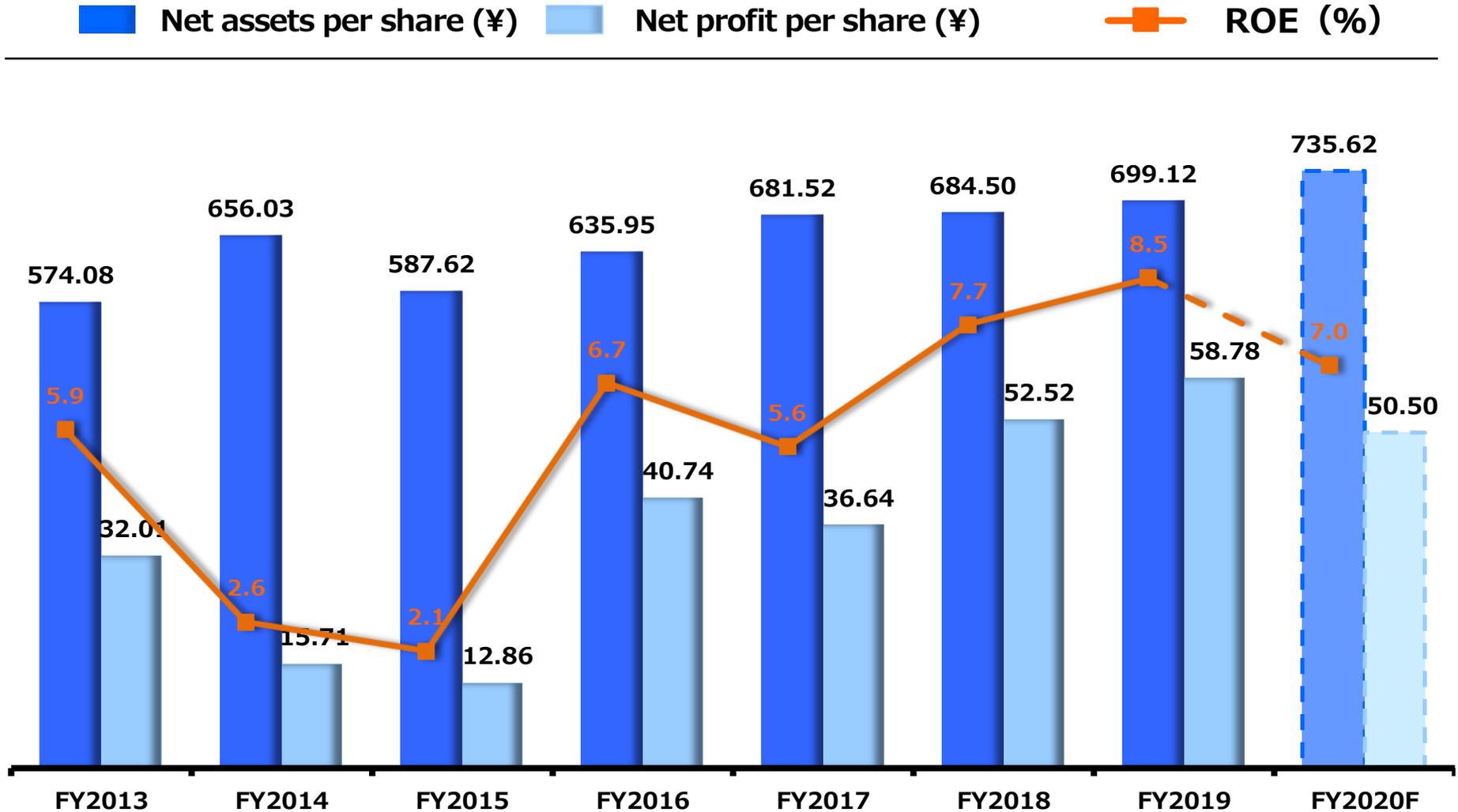
■ Household & Industrial Materials     ■ Functional Materials     ■ Others     ◆ Overseas Sales (¥ billion)  
■ Forest Resources & Environment Marketing     ■ Printing & Communications Media



## Trends of Operating Profit (consolidated)



# Trends of Return on Equity (ROE)

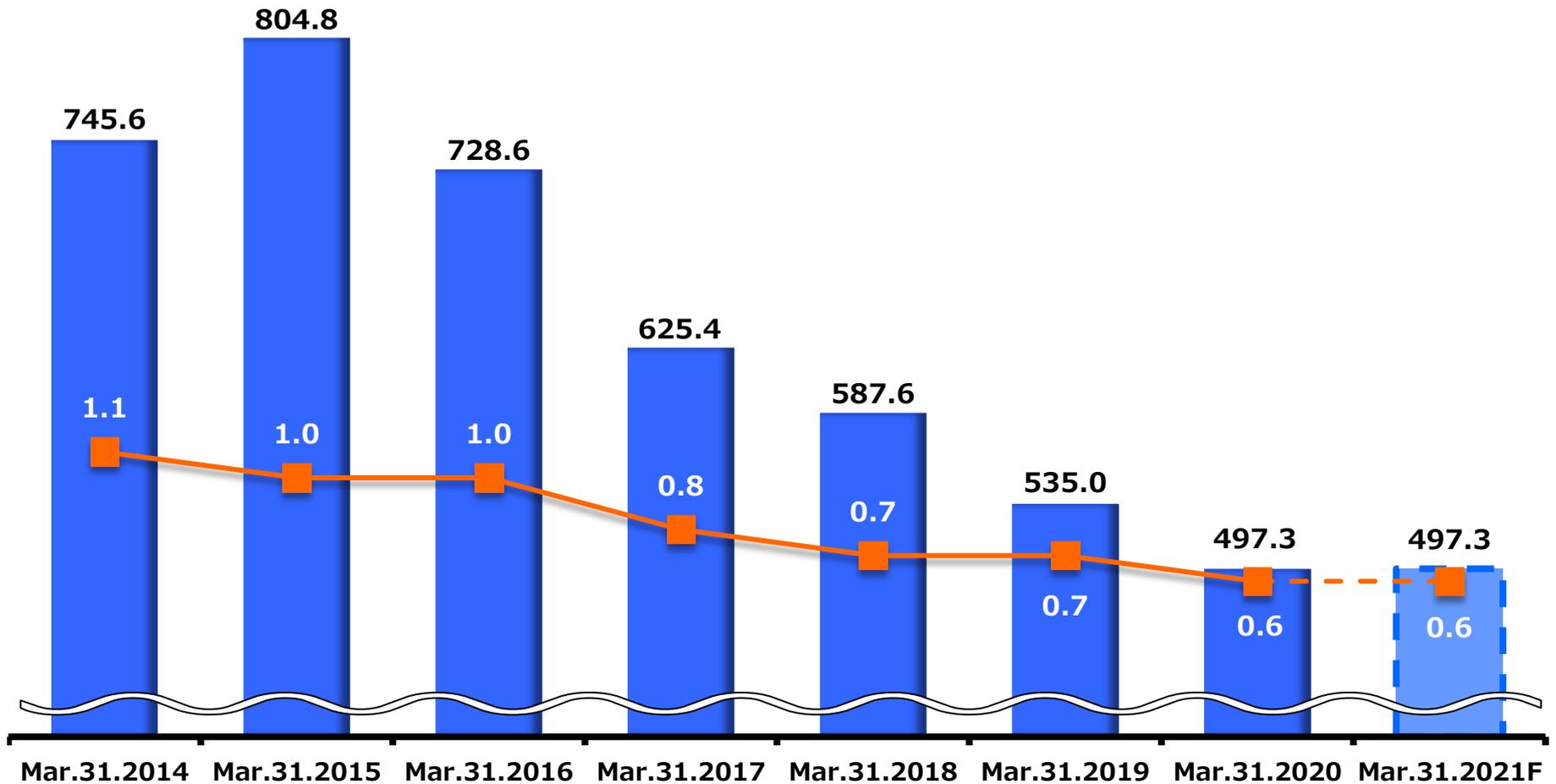


# Trends of Net Interest-bearing Debt (consolidated)

**Consolidated net interest-bearing debt (¥ billion)**

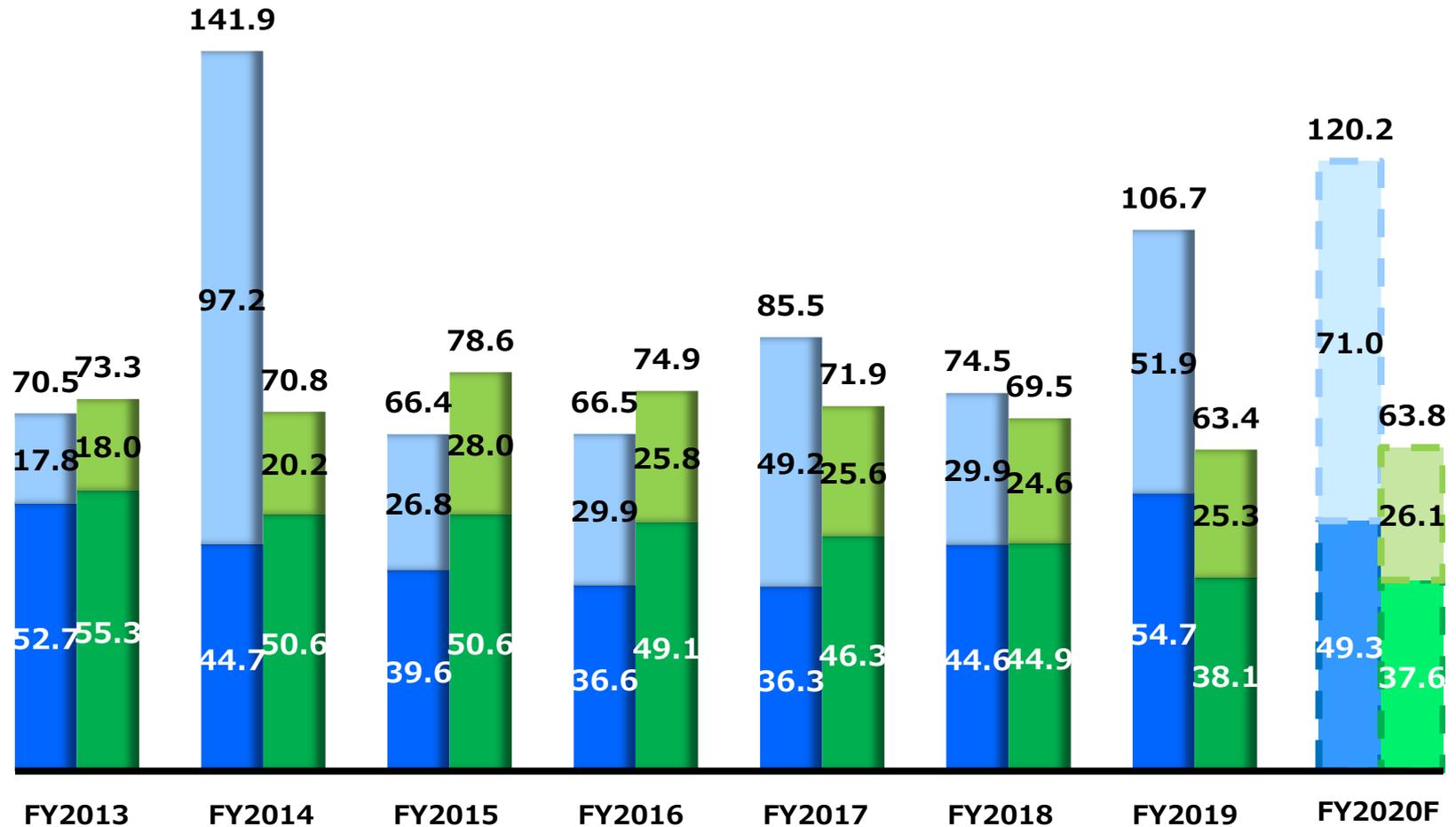
**D/E(x)**

\*D/E(x) = consolidated net interest-bearing debt / net assets at the year-end



## Trends of CAPEX / Depreciation (consolidated)

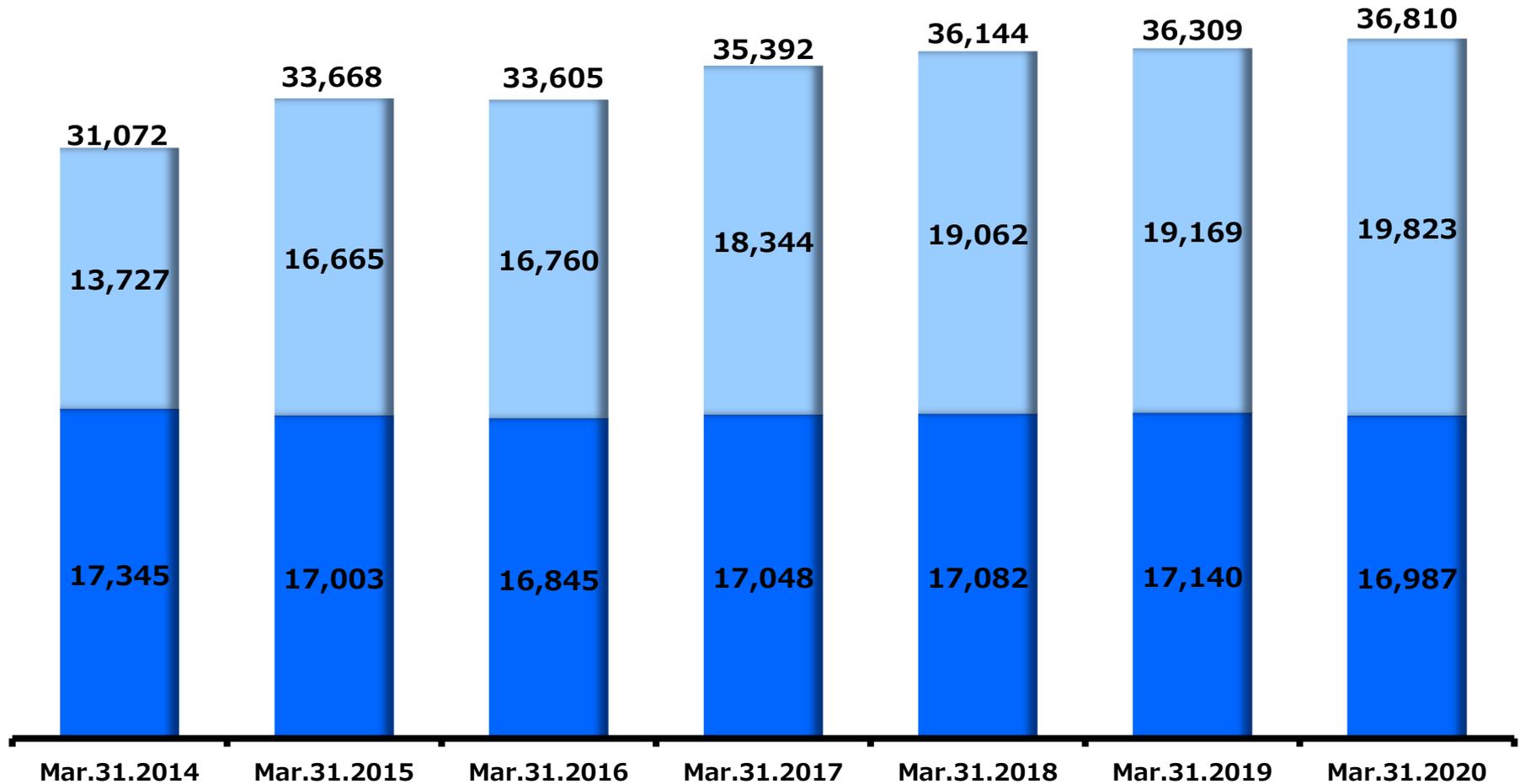
■ CAPEX, investment & loan [Domestic]   
 ■ CAPEX, investment & loan [Overseas]   
 ■ Depreciation [Domestic]   
 ■ Depreciation [Overseas]   
 (¥ billion)



# History of the Number of Employees (consolidated)

■ **Employees [Domestic] (consolidated)**
■ **Employees [Overseas] (consolidated)**
(person)

\*The figures do not include number of temporary employees



(1,000t)

	Domestic Shipments		Custom Cleared Imports *1		Total	
	Year-on-Year		Year-on-Year		Year-on-Year	
Containerboard	9,044	97.6%	43	85.4%	9,087	97.5%
Boxboard	1,515	95.6%	242	104.1%	1,757	96.7%
Other Paperboard	640	96.7%	25	74.0%	665	95.6%
<b>Paperboard Total</b>	<b>11,200</b>	<b>97.2%</b>	<b>310</b>	<b>97.9%</b>	<b>11,509</b>	<b>97.3%</b>
Sanitary Paper	1,849	103.7%	235	128.1%*2	2,085	106.0%
Packaging Paper	687	96.0%	7	110.4%	695	96.1%
Newsprint	2,349	92.3%	2	82.7%	2,351	92.3%
Printing/Communications Paper	6,642	93.1%	973	137.9%	7,615	97.1%
Miscellaneous Paper	683	95.2%	15	85.4%	697	95.0%
<b>Paper Total</b>	<b>12,210</b>	<b>94.7%</b>	<b>1,232</b>	<b>134.6%</b>	<b>13,442</b>	<b>97.3%</b>
<b>Paperboard and Paper Total</b>	<b>23,410</b>	<b>95.9%</b>	<b>1,542</b>	<b>125.2%</b>	<b>24,952</b>	<b>97.3%</b>

(million m<sup>3</sup>)

<b>Corrugated Containers *3</b>	<b>14,336</b>	<b>99.6%</b>			<b>14,336</b>	<b>99.6%</b>
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Source: Japan Paper Association - Statistics on Paper and Paperboard; Trade Statistics of Ministry of Finance, Japan; Japan Corrugated Case Association - Production Volume of Corrugated Case

\*1: Statistics for customs cleared imports of paper: April 2019 - March 2020(preliminary)

\*2: The figure includes secondary products (processed goods)

\*3: The figure represents the production volume of corrugated board