

# Recovery of profitability

## Strengthening competitiveness by accelerating nanofiber development

**YAMASHIN-FILTER CORP.**  
Financial Results for the Second Quarter of  
the Fiscal Year Ended March 31, 2023

November 18, 2022

- While sales and income decreased due to various factors such as lockdown in China, high marine transportation costs, soaring raw material costs, and rapid depreciation of the yen, profitability steadily improved through price pass-on and cost improvement

### Construction machinery filter business (Market Environment)



### Air Filter Business (Market Environment)

Demand for filter replacement of office buildings, etc. is recovering  
 Under the environmental issues such as CO2 reduction and reduction of industrial waste

**Opportunities to expand our business are coming**

Business Results for Q2 FY2022

**Consolidated sales: 9,123 million yen**  
 YoY: **4.5% decrease**

**Consolidated operating income: 521 million yen**  
 YoY: **41.3% decrease**

**\*Shareholders' equity ratio: 78.6%**

Construction machinery filter	Sales decreased 5.4% YoY to 7,852 million yen	Construction equipment uptime and demand for new vehicles remained strong, but lockdowns in the Chinese market had a major impact
Air filter	Sales increased 1.5% YoY to 1,270 million yen	Demand for filters for building air-conditioning systems is recovering in line with the recovery in economic activity, and is on a par with the previous year

- Construction equipment market remains firm
- Earnings are expected to improve due to price pass-through, and full-year forecasts have been revised upward.

Full-Year Forecasts for FY2022

**Consolidated sales:**  
**¥19,230 million**

Compared to the previous announcement:  
**8.0%** increase in sales

**Consolidated operating income:**  
**¥ 1,380 million (7.2%)**

Compared to the previous announcement: **97.1%** increase

**EPS ¥11.9 ROIC 3.8%**

Construction machinery filter

Compared to the previous announcement:  
 10.2% increase in sales  
 16,530 million

Construction equipment uptime and new vehicle demand remained strong outside of China. Profitability is expected to improve due to the promotion of price shifting.

Air filter

Sales down 3.6% from the previous announcement:  
 2.7 billion yen

Profitability is expected to improve due to cost improvement and price shifting.

## Further strengthening of sales capacity

- **Construction machinery filter business**  
**Promote business by taking advantage of the solid business environment**
  - ◆ Expanding adoption of high-value-added filter products utilizing new nanofiber materials and IoT technologies
  - ◆ Promote filter sales of YAMASHIN NANO FILTER® material launched in April 2022
  - ◆ Application of construction machinery filter technology to other fields
- **Air filter business**  
**Capture new market share with new product NanoWHELP®.**
- **SDGs Initiatives and Business portfolio expansion at the same time**  
YAMASHIN NANO FILTER® expansion of market area as industrial materials

## Profit Improvement Initiatives

- **Construction machinery filter business**  
**Responding to the drastically changing external environment**
  - ◆ **Promotion of price pass-on to customers**
    - ◆ Passing on prices to customers as a countermeasure against soaring raw material and logistics costs
  - ◆ **Restructuring and strengthening the value chain**
    - ◆ Stabilization of procurement of key raw materials
    - ◆ Started reviewing supply chain by operating YVC (Vietnam Plant)
  - ◆ **Measures to cope with exchange rate fluctuations**
    - ◆ Aggressive use of derivatives transactions, etc. to mitigate the impact of sharp exchange rate fluctuations on business results
- **Air filter business**  
**Improve profitability through higher productivity**

**I**

**Business Performance Results for Q2 FY2022 and Full-Year Forecasts for FY2022 (Ending March 31, 2023)**

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## I BUSINESS PERFORMANCE RESULTS FOR Q2 FY2022 AND FULL-YEAR FORECASTS FOR FY2022 (ENDING MARCH 31, 2023)

# **Business Performance Results for Q2 FY2022** **(Jul 2022 to Sep 2022)**

# Q2 FY2022 Financial Results (2022 Jul to Sep)

(million yen)		Q2 FY2021 Results	Q2 FY2022 Results	Difference	
		Amount	Amount	Amount	%
<b>Net sales</b>		4,870	4,953	82	1.7%
	Construction machinery filters, etc.*	4,256	4,319	63	1.5%
	Air filters	613	633	19	3.2%
<b>Operating income (segment income)</b>		546	427	△119	△21.8%
	Construction machinery filters, etc.*	583	423	△160	△27.4%
	Air filters	△37	3	40	-
<b>Operating income margin</b>		<b>11.2%</b>	<b>8.6%</b>	<b>△2.6Pt</b>	
	Ordinary profit	541	400	△140	△26.0%
<b>Ordinary profit margin</b>		<b>11.1%</b>	<b>8.1%</b>	<b>△3.0Pt</b>	
	Net income	120	259	138	115.6%
<b>Net income margin</b>		<b>2.5%</b>	<b>5.2%</b>	<b>2.8%</b>	
Exchange rates (ave.)	USD	109.8	133.9	24.2	22.0%
	EUR	130.9	138.7	7.8	6.0%

\* "Construction machinery filters" includes filters for construction machinery, industrial use and process use.

\* The healthcare business is included in the product lineup of the construction machinery filter business from the fiscal year ending March 31, 2022, to reflect the degree of impact on YAMASHIN's performance.

\* With respect to operating income for the fiscal year ending March 31, 2022, general and administrative expenses and other expenses of the administrative divisions of the head office and subsidiaries, which were separately presented as corporate expenses, are included in the operating income of each segment.

(million yen)	FY2021	Q2 FY2022	Change (Amount)	Change (%)
<b>Current assets</b>	13,964	13,999	34	0.2%
Cash and deposits	3,750	3,970	219	5.9%
Notes and accounts receivable-trade	4,696	4,653	△ 42	△ 0.9%
Merchandise and finished goods, Raw materials and Supplies	4,775	5,102	327	6.8%
Other	742	272	△ 469	△ 63.3%
<b>Fixed assets</b>	12,747	12,610	△ 137	△ 1.1%
Tangible fixed assets	11,609	11,594	△ 15	△ 0.1%
Intangible fixed assets	236	177	△ 58	△ 24.9%
Investments and other assets	901	838	△ 63	△ 7.0%
<b>Total assets</b>	26,712	26,609	△ 102	△ 0.4%

	FY2021	Q2 FY2022	Change (Amount)	Change (%)
<b>Current liabilities</b>	4,634	4,397	△ 236	△ 5.1%
Notes and accounts payable-trade	2,213	1,563	△ 650	△ 29.4%
Corporate bonds payable within one year and short-term loans payable	403	1,603	1,200	297.5%
Other	2,016	1,230	△ 786	△ 39.0%
<b>Fixed liabilities</b>	1,506	1,287	△ 219	△ 14.6%
Corporate bonds and long-term debt	1,126	924	△ 201	△ 17.9%
Net defined benefits Liability	232	237	4	1.9%
Other	147	125	△ 22	△ 15.1%
<b>Total net assets</b>	20,571	20,924	353	1.7%
<b>Total of liabilities and net assets</b>	26,712	26,609	△ 102	△ 0.4%

\*Shareholders' equity ratio      77.0      78.6%

(million yen)	Q2 FY2021 Results	Q2 FY2022 Results	Difference	
	Amount	Amount	Amount	%
<b>Construction machinery filters</b>	3,737	3,895	157	4.2%
Line parts	1,296	1,463	167	12.9%
Service parts	2,441	2,431	△9	△0.4%
<b>Industrial filters *1</b>	276	198	△78	△28.3%
<b>Process filters</b>	242	226	△16	△6.7%
<b>Subtotal (Construction machinery filters, etc.)</b>	4,256	4,319	63	1.5%
<b>Air filters</b>	613	633	19	3.2%
<b>Total</b>	4,870	4,953	82	1.7%

\*1 The healthcare business is included in the product lineup of the construction machinery filter business from the fiscal year ending March 31, 2022, to reflect the degree of impact on YAMASHIN's performance.

# FY2022 Q2 Sales by Region (Jul to Sep)

(million yen)	Q2 FY2021 Results		Q2 FY2022 Results		Difference	
	Amount	Composition Ratio (%)	Amount	Composition Ratio (%)	Amount	%
<b>Construction machinery filters, etc. *1*2</b>	4,256	87.4%	4,319	87.2%	63	1.5%
Japan	2,013	41.3%	2,123	42.9%	110	5.5%
North America	904	18.6%	980	19.8%	76	8.4%
China	379	7.8%	356	7.2%	△23	△ 6.1%
Other Asian countries	553	11.4%	408	8.2%	△144	△26.2%
Europe	406	8.4%	449	9.1%	42	10.4%
Others (Middle East, etc.)	-	0.0%	1	0.0%	1	-
<b>Air filters (Japan)</b>	613	12.6%	633	12.8%	19	3.2%
<b>Total sales</b>	4,870	100.0%	4,953	100.0%	82	1.7%

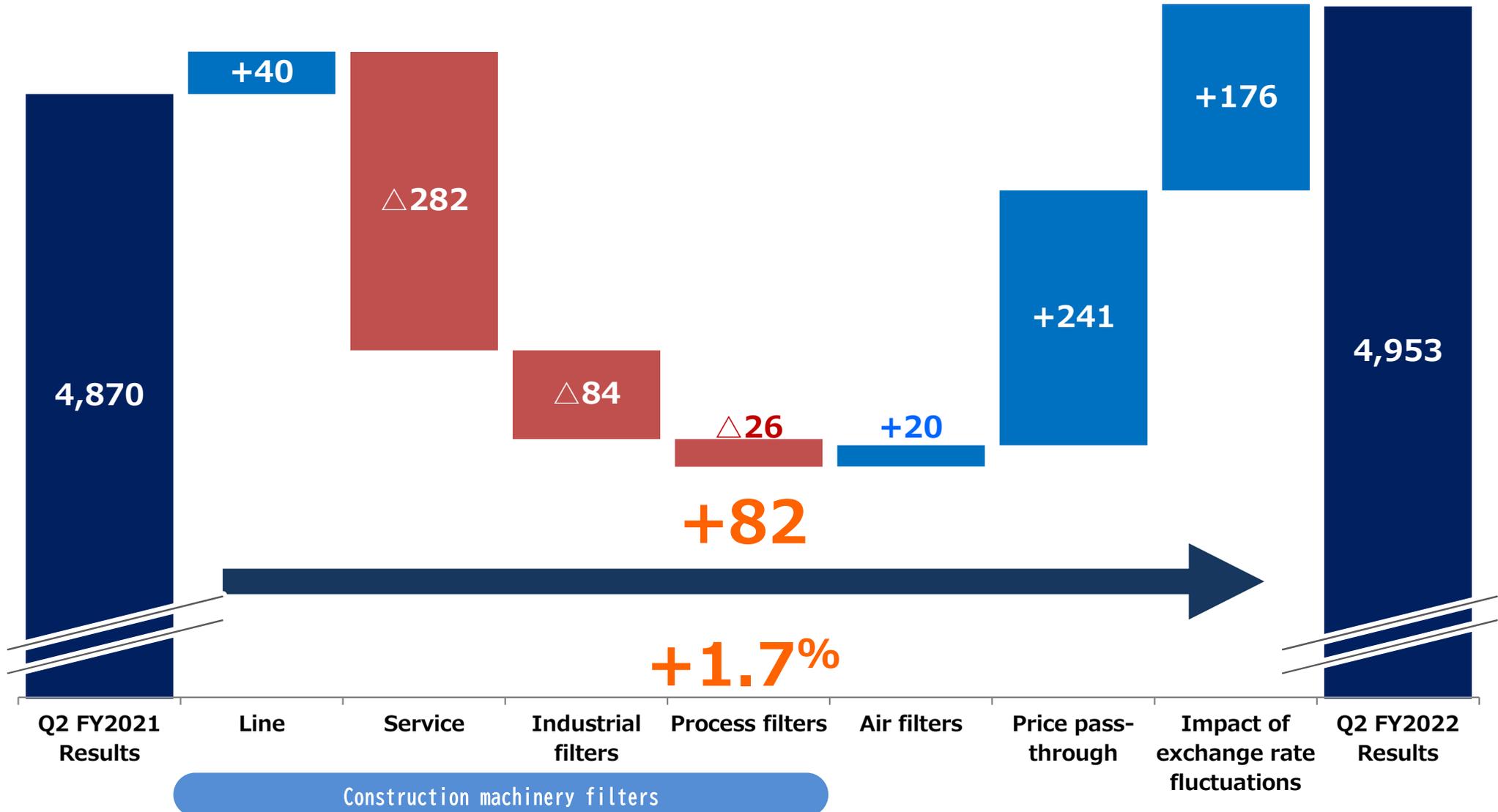
\*1 "Construction machinery filters" includes filters for construction machinery, industrial use and process use.

\*2 The healthcare business is included in the product lineup of the construction machinery filter business from the fiscal year ending March 31, 2022, to reflect the degree of impact on YAMASHIN's performance.

The above figures by region are based on the billing address.

# Changes in Sales (2022 Jul to Sep)

(million yen)



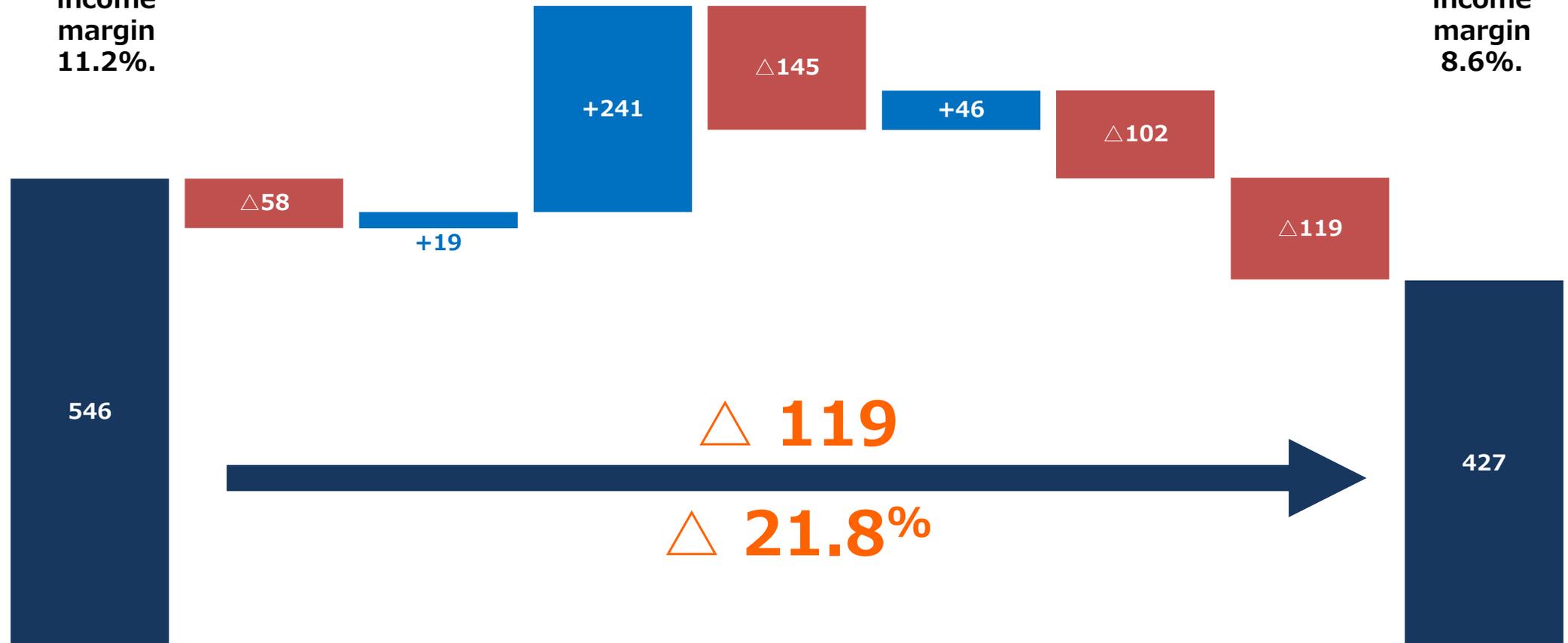
The "Industrial" segment includes the Healthcare product line.

# Changes in Operating Income (2022 Jul to Sep)

(million yen)

Operating income margin 11.2%.

Operating income margin 8.6%.



Q2 FY2021 Results

[Construction machinery] Decrease in profit due to decrease in sales

[Air filters] Increase in profit due to sales increase and cost improvement

[Construction machinery] Increase due to price pass-through

[Construction machinery] Decrease in profit due to increase in marine transportation costs

[Construction machinery] Increase in profit due to decrease in airfare

[Construction machinery] Decrease in profit due to soaring material costs

Impact of exchange rate fluctuations

Q2 FY2022 Results

# **Business Performance Results for FY2022 YTD (Apr 2022 to Sep 2022)**

# FY2022 YTD Financial Results (Apr to Sep )

(million yen)		FY2021 YTD Results	FY2022 YTD Results	Difference	
		Amount	Amount	Amount	%
<b>Net sales</b>		9,556	9,123	△433	△4.5%
	Construction machinery filters, etc.*	8,304	7,852	△451	△5.4%
	Air filters	1,251	1,270	18	1.5%
<b>Operating income (segment income)</b>		887	521	△366	△41.3%
	Construction machinery filters, etc.*	951	516	△434	△45.7%
	Air filters	△63	4	68	-
<b>Operating income margin</b>		<b>9.3%</b>	<b>5.7%</b>	<b>△3.6Pt</b>	
	Ordinary profit	876	458	△417	△47.7%
<b>Ordinary profit margin</b>		<b>9.2%</b>	<b>5.0%</b>	<b>△4.1Pt</b>	
	Net income	328	271	△57	△ 17.4%
<b>Net income margin</b>		<b>3.4%</b>	<b>3.0%</b>	<b>△0.5Pt</b>	
Exchange rates (ave.)	USD	109.8	133.9	24.2	22.0%
	EUR	130.9	138.7	7.8	6.0%

\*1 "Construction machinery filters" includes filters for construction machinery, industrial use and process use.

\* The healthcare business is included in the product lineup of the construction machinery filter business from the fiscal year ending March 31, 2022, to reflect the degree of impact on YAMASHIN's performance.

\* With respect to operating income for the fiscal year ending March 31, 2022, general and administrative expenses and other expenses of the administrative divisions of the head office and subsidiaries, which were separately presented as corporate expenses, are included in the operating income of each segment.

(million yen)	FY2021 YTD Results	FY2022 YTD Results	Difference	
	Amount	Amount	Amount	%
<b>Construction machinery filters *1</b>	7,172	7,032	△140	△2.0%
Line parts	2,785	2,763	△22	△0.8%
Service parts	4,387	4,268	△118	△2.7%
<b>Industrial filters</b>	701	383	△317	△45.3%
<b>Process filters</b>	430	437	6	1.6%
<b>Subtotal (Construction machinery filters, etc.*)</b>	8,304	7,852	△451	△5.4%
<b>Air filters</b>	1,251	1,270	18	1.5%
<b>Total</b>	9,556	9,123	△433	△4.5%

\*1 The healthcare business is included in the product lineup of the construction machinery filter business from the fiscal year ending March 31, 2022, to reflect the degree of impact on YAMASHIN's performance.

# FY2022 YTD Sales by Product Category (Apr - Sep)

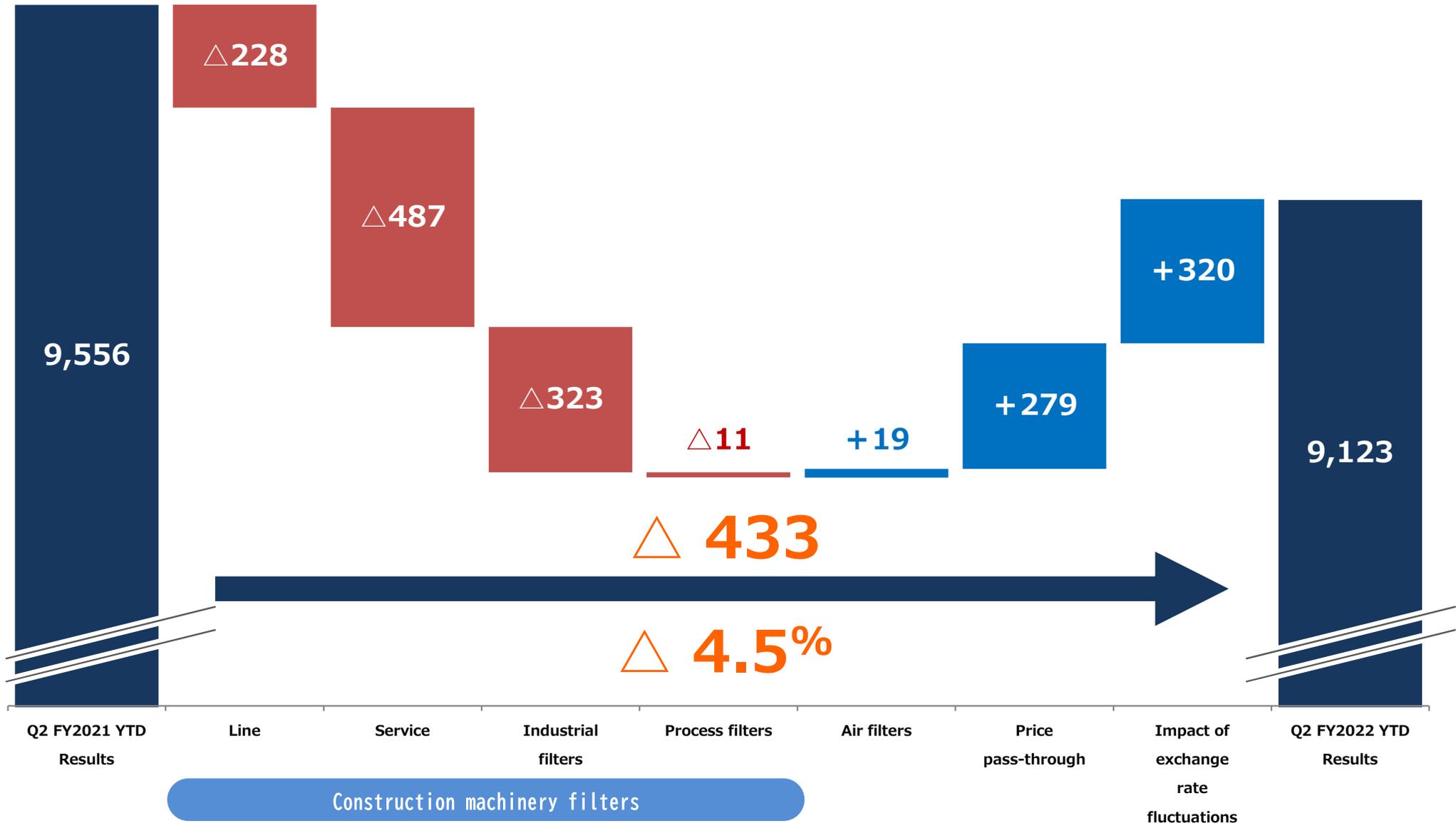
(million yen)	Q2 FY2021 YTD Results		Q2 FY2022 YTD Results		Difference	
	Amount	Composition Ratio (%)	Amount	Composition Ratio (%)	Amount	%
<b>Construction machinery filters, etc. *1*2</b>	8,304	86.9%	7,852	86.1%	△451	△5.4%
Japan	4,037	42.3%	3,964	43.5%	△73	△1.8%
North America	1,590	16.6%	1,640	18.0%	49	3.1%
China	944	9.9%	624	6.9%	△319	△33.8%
Other Asian countries	918	9.6%	743	8.1%	△174	△19.1%
Europe	812	8.5%	875	9.6%	63	7.8%
Others (Middle East, etc.)	1	0.0%	3	0.0%	2	237.8%
<b>Air filters (Japan)</b>	1,251	13.1%	1,270	13.9%	18	1.5%
<b>Total sales</b>	9,556	100.0%	9,123	100.0%	△433	△4.5%

\*1 "Construction machinery filters" includes filters for construction machinery, industrial use and process use.

\*2 The healthcare business is included in the product lineup of the construction machinery filter business from the fiscal year ending March 31, 2022, to reflect the degree of impact on YAMASHIN's performance.

The above figures by region are based on the billing address.

(million yen)



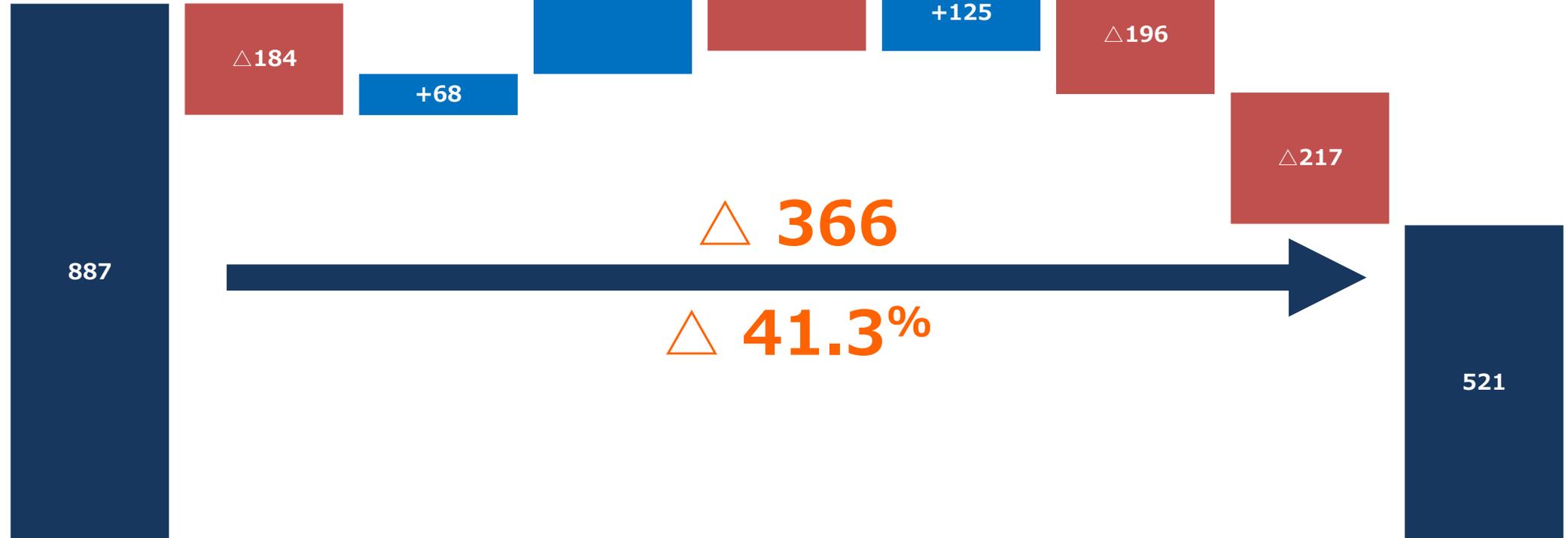
\*The "Industrial" segment includes the Healthcare product line.

# Changes in Operating Income (2022 Apr to Sep)

(million yen)

Operating income margin 9.3%

Operating income margin 5.7%



Q2 FY2021 YTD Results

[Construction machinery] Decrease in profit due to decrease in sales

[Air filter] Increase in profit due to sales increase and cost improvement

[Construction machinery] Increase due to price pass-through

[Construction machinery] Decrease in profit due to increase in marine transportation costs

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[Construction machinery] Decrease in profit due to soaring material costs

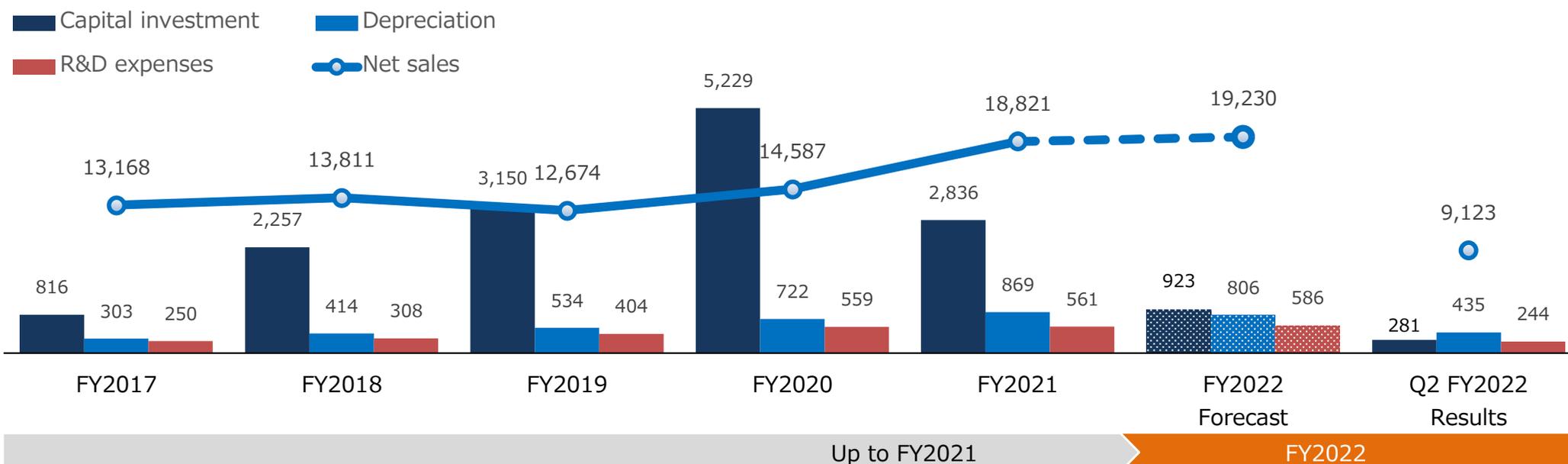
Impact of exchange rate fluctuations

Q2 FY2022 YTD Results

# Capital Expenditures, Depreciation and R&D Expenses

(million yen)	FY2017 Results	FY2018 Results	FY2019 Results	FY2020 Results	FY2021 Results	FY2022 Forecast	FY2022 Q2 Results
Net sales	13,168	13,811	12,674	14,587	18,821	19,230	9,123
Capital investment	816	2,257	3,150	5,229	2,836	923	281
Land and building	-	1,588	2,682	3,194	1,488	67	33
Facilities and others	816	669	468	2,036	1,347	855	247
Expense to sales ratio	6.2%	16.3%	24.9%	35.9%	15.1%	4.8%	3.1%
Depreciation and amortization	303	414	534	722	869	806	435
Expense to sales ratio	2.3%	3.0%	4.2%	5.0%	4.6%	4.2%	4.8%
R&D expenses	250	308	404	559	561	586	244
Expense to sales ratio	1.9%	2.2%	3.2%	3.8%	3.0%	3.1%	2.7%

## Change in net sales and capital investment and depreciation & amortization & R&D expenses



Implement comprehensive improvements in production technology, management and systems to strengthen the profit structure

## PAC22



romptly



ctivated



ost reduction

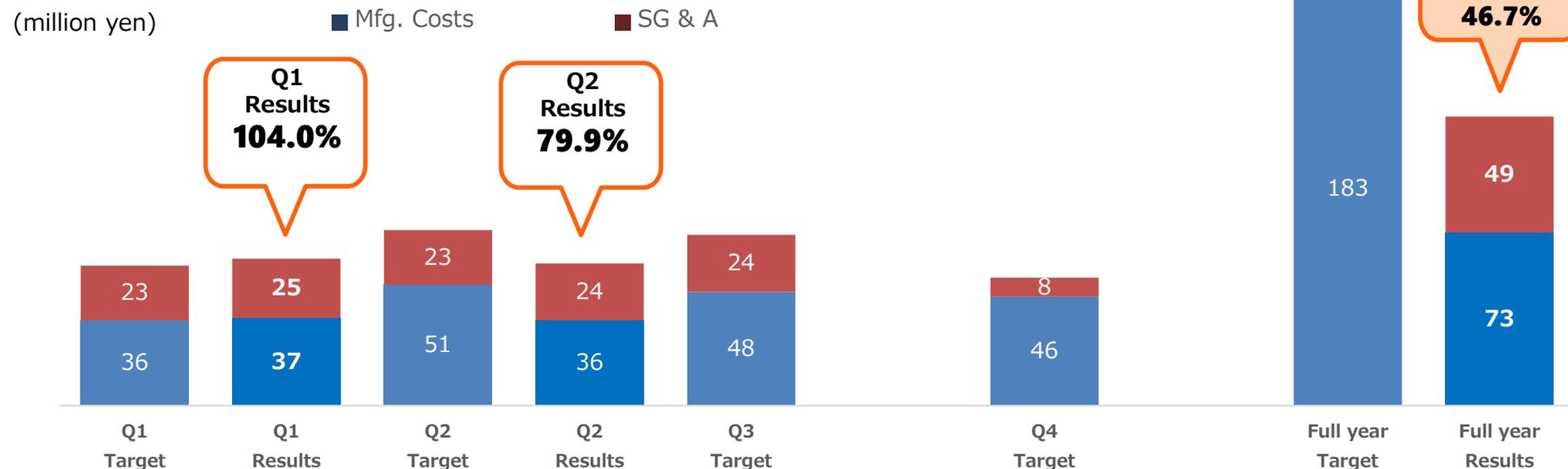
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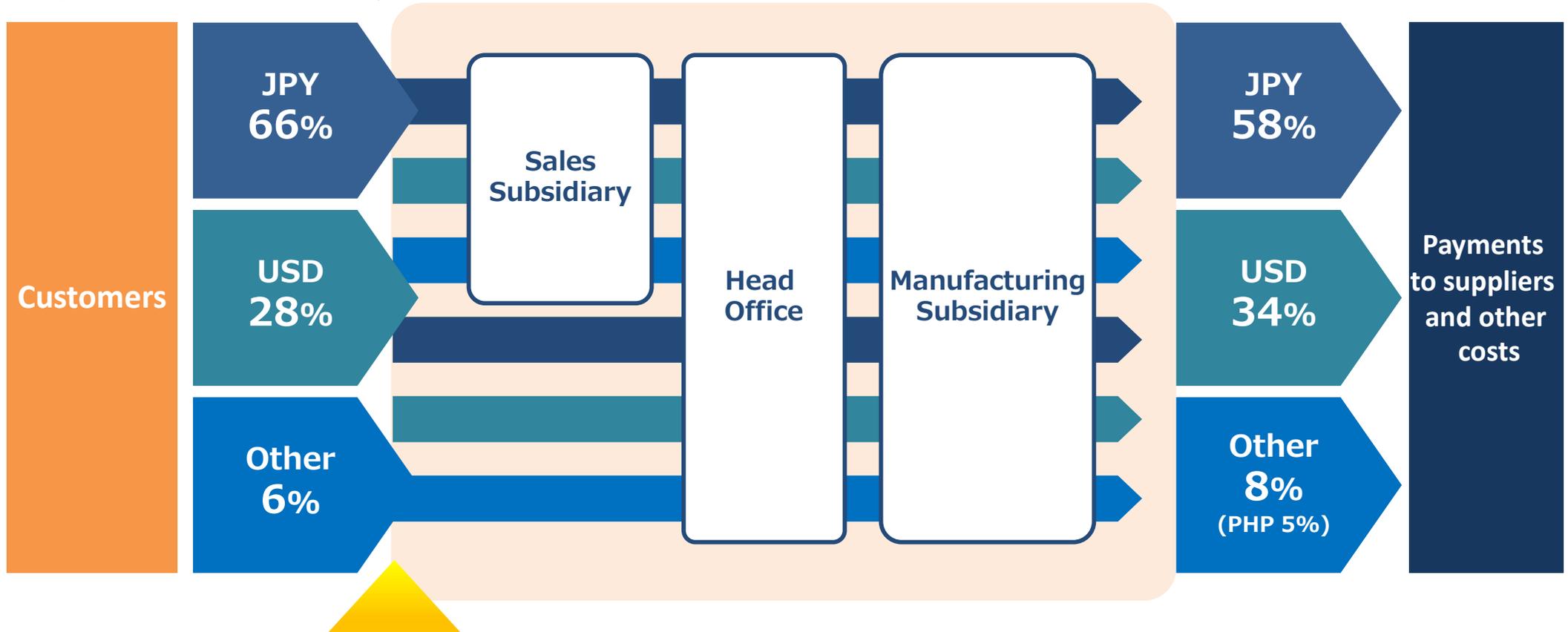
### Reduction Targets and Results

(million yen)		Q1 Target	Q1 Actual	Q2 Target	Q2 Actual	Q3 Target	Q4 Target	Regular (Period) Target
PAC22	Mfg. Costs	36	37	51	36	48	46	183
	SG & A	23	25	23	24	24	8	80
Total		60	62	75	60	72	54	263

### Progress



Negative impact of approx. 217 million yen on operating income due to the rapid depreciation of the yen



## 70% of transaction currency is JPY.

- Operating income impact of a 1-yen depreciation of the yen would be a decrease of approximately 9 million yen.
- Strengthening of exchange rate marie by reviewing settlement currency, and reduce negative impact on operating income through forward exchange contracts, etc.

Target figures are set at each department (administrative and other operation departments) to achieve the overall company target for MAVYS.

## What is **MAVY'S?** (ROIC - WACC)

**M**aximizing  
**A**dded  
**V**alue of  
**Y**amashin Filter  
**S**pread

The key goal indicator (KGI), based on which each relevant department sets its KPIs and KSFs, and works on measures to attain targets, with the goal of maximizing return on invested capital.

Meet the expectations of stakeholders by improving MAVYS (key goal indicator).

Assign KPIs to relevant departments who are responsible for target setting and implementing actions for achieving the targets in a company-wide coordinated effort.

# MAVYS: The Big Picture and the Department (FY2022)

Key Goal Indicator (KGI)	Key Performance Indicator (KPI)	Key Success Factor (KSF)	Relevant Departments	Targets for FY2022 (Action plan)	FY2022 Progress											
<b>MAVYS's</b> Prv: -0.6% Cur: -1.5%	<b>Operating income</b> Prv: 7.1% Cur: 7.2%	<b>Operating capital turnover rate</b> Prv: 3.1 Cur: 2.8	<b>ROIC</b> Prv: 4.7% Cur: 3.8%	<b>WACC</b> Prv: 5.3% Cur: 5.3%	<b>ROE</b> Prv: 0.2% Cur: 4.1%	<b>ROA</b> Prv: 0.2% Cur: 3.1%	<b>Investment capital turnover rate</b> Prv: 0.9 Cur: 0.8	<b>Gross profit ratio</b> Prv: 40.4% Cur: 39.8%	<b>SG&amp;A ratio</b> Prv: 33.3% Cur: 32.7%	<b>Operating capital turnover rate</b> Prv: 3.1 Cur: 2.8	<b>FA turnover rate</b> Prv: 1.5 Cur: 1.4	<b>Sales growth ratio</b> Prv: 29.0% Cur: 2.2%	<b>New product development Enhance market share of genuine products</b>	<b>Sales / R&amp;D</b>	Construction machinery: - Expand share of major customers (long-life, sensors), - Expand and accelerate entry into the Chinese market - Air filters: Expand sales through new products (NanoWhelp) (direct sales, domestic and overseas) - Enter new business domains	- Made progress on proposals involving hybrid filters - Improve adoption rates of new models for Chinese construction machinery manufacturers - Continued progress in sales for new air filter products - Continued progress in supply to the apparel industry (not using down materials)
												<b>Cost to sales ratio</b> Prv: 59.6% Cur: 60.2%	<b>Enhance buying power Improve yield ratio</b>	<b>Production / SCM</b>	- PAC22 - Reform and improve purchasing power and reduce logistics costs - Improve production management	- Revised supplier evaluation standards and completed the consolidation process - Reduced procurement costs through joint procurement with AQC - Improved yields through planned service and maintenance, progress in manufacturing cost reduction measures
												<b>Depreciation cost ratio</b> Prv: 4.6% Cur: 4.2%	<b>Investment plan</b>	<b>Management planning / Finance and accounting</b>	- M&A (for revenue expansion stabilizing management) →Research potential M&A targets →Acquire nonwoven fabrics manufacturing entities (downstream) →Acquire new material development entities (upstream)	- Exploring opportunities and gathering data for M&A (domestic and overseas) - Enhanced communication (through conference calls) with Prv: possible M&A target company
												<b>R&amp;D cost ratio</b> Prv: 3.0% Cur: 3.1%	<b>Narrowing down themes Prioritization</b>	<b>R&amp;D</b>	- Develop new materials (Recycling, Biomass, etc.) - Actions to achieve IoT - Develop aeration and other technologies	- Accelerated the commercialization of nanofiber air filters - Supplied various trial sensor products to clients - Accelerated new materials development through industrial/academic collaborations
												<b>Personnel cost ratio</b> Prv: 13.7% Cur: 14.4%	<b>Optimal staffing</b>	<b>HR and General Affairs</b>	- Establish and implement the talent management system	- Efforts to identify the next generation of management talent - Increased R&D staff for product development - Hired specialist staff members to assist in company reorganization and growth
												<b>Accounts receivable turnover rate</b> Prv: 4.2 Cur: 3.9	<b>Credit management</b>	<b>Sales / Finance and accounting</b>	- Further optimize AR debt collection - Promote paperless systems	- Streamlined and optimized AR debt collection for improving working capital
												<b>Inventory turnover rate</b> Prv: 4.8 Cur: 4.4	<b>Set appropriate inventory level</b>	<b>Production / Sales</b>	- Reduce company-wide inventory assets	- Determined suitable inventory levels based on pareto analysis; currently implementing inventory reduction plans
												<b>Accounts payable turnover rate</b> Prv: 4.8 Cur: 5.0	<b>Debt management</b>	<b>SCM Production</b>	- Improve working capital - Promote paperless systems	- Optimized AP debt turnover ratio for improving working capital
												<b>Tangible fixed asset turnover rate</b> Prv: 1.7 Cur: 1.6	<b>Facilities planning (R&amp;D, production)</b>	<b>Management planning Administration / Production / R&amp;D</b>	- Optimize investment recovery effect (Return on Investment)	- Prioritized R&D and capital investments by analyzing the validity of investment return period
												<b>Intangible fixed asset turnover rate</b> Prv: 66.4 Cur: 85.2	<b>Investment plan</b>	<b>Management planning / Finance and Accounting</b>	- Formulate IP strategies and action plans	- Established strategies, devised action plans, and enhanced training for targeted group, stakeholders - Actively applied for patents in Chinese market

\*KPI figures are based on the following.  
 Prv : Annual results for FY2021  
 Cur : Revised budget for FY2022

# Full-year Forecasts for FY2022 (Ending March 31, 2023)

## Construction machinery filters

- While new vehicle sales volume is expected to be lower than the previous year due to the sluggish Chinese market, demand in the construction equipment market in Japan, North America, Europe and Asian markets is expected to remain strong.
- The outlook for logistics costs and material price hikes remains uncertain, and in addition to continuing cost reduction activities, we are working to pass on these costs to customers.
- Strive to improve profitability by establishing a stable production and supply system through a review of the supply chain and transfer of production sites, and by stabilizing foreign exchange rates and raw material procurement.

## Air filters

- Progress in efforts to adopt our products in office buildings, factories, railway cars, etc. through recovery in replacement demand for existing products and development of high-value-added products such as nanofiber air filters.
- Improve profitability by increasing production efficiency and reducing expenses

## Healthcare:

Establish a structure that will enable us to secure operating income despite anticipated decline in sales volume in the household mask market



Since the impact on consolidated earnings is extremely small, **YAMASHIN will disclose the information for the fiscal year ending March 31, 2023 by including it in the product lineup of the construction machinery filter business.**

(million yen)		FY2021 Results	FY 2022 Initial budget	FY 2022 Revised budget	Difference	
		Amount	Amount	Amount	Amount	
<b>Net sales</b>		18,821	17,800	19,230	1,430	
	Construction machinery filters, etc.*	16,244	15,000	16,530	1,530	
	Air filters	2,577	2,800	2,700	△100	
<b>Operating income (segment income)</b>		1,344	700	1,380	680	
	Construction machinery filters, etc.*	1,467	660	1,300	640	
	Air filters	△123	40	80	40	
<b>Operating income margin</b>		7.1%	3.9%	7.2%	3.2Pt	
	Ordinary profit	1,317	650	1,240	590	
<b>Ordinary profit margin</b>		7.0%	3.7%	6.4%	2.8Pt	
	Net income	47	458	855	397	
<b>Net income margin</b>		0.3%	2.6%	4.4%	1.9Pt	
Exchange rates (ave.)		USD	112.4	122.0	145.0	18.9%
		EUR	130.6	137.0	144.0	5.1%

\*"Construction machinery filters" includes filters for construction machinery, industrial use and process use.

\* The healthcare business is included in the product lineup of the construction machinery filter business from the fiscal year ending March 31, 2022, to reflect the degree of impact on YAMASHIN's performance.

# Sales Forecast by Product Category

(million yen)	FY2021 Results		FY2022 Initial budget		FY2022 Revised budget		Difference	
	Amount	Composition Ratio (%)	Amount	Composition Ratio (%)	Amount	Composition Ratio (%)	Amount	%
<b>Construction machinery filters</b>	14,169	75.3%	13,273	74.6%	14,807	77.0%	1,533	11.6%
Line parts	5,633	29.9%	5,733	32.2%	6,401	33.3%	667	11.6%
Service parts	8,536	45.4%	7,539	42.4%	8,405	43.7%	866	11.5%
<b>Industrial filters *1</b>	1,174	6.2%	653	3.7%	772	4.0%	118	18.1%
<b>Process filters</b>	900	4.8%	1,072	6.0%	950	4.9%	△122	△11.4%
<b>Subtotal (Construction machinery filters, etc.*)</b>	16,244	86.3%	15,000	84.3%	16,530	86.0%	1,530	10.2%
<b>Air filters</b>	2,577	13.7%	2,800	15.7%	2,700	14.0%	△100	△3.6%
<b>Total</b>	18,821	100.0%	17,800	100.0%	19,230	100.0%	1,430	8.0%

\*1 The healthcare business is included in the product lineup of the construction machinery filter business from the fiscal year ending March 31, 2022, to reflect the degree of impact on YAMASHIN's performance.

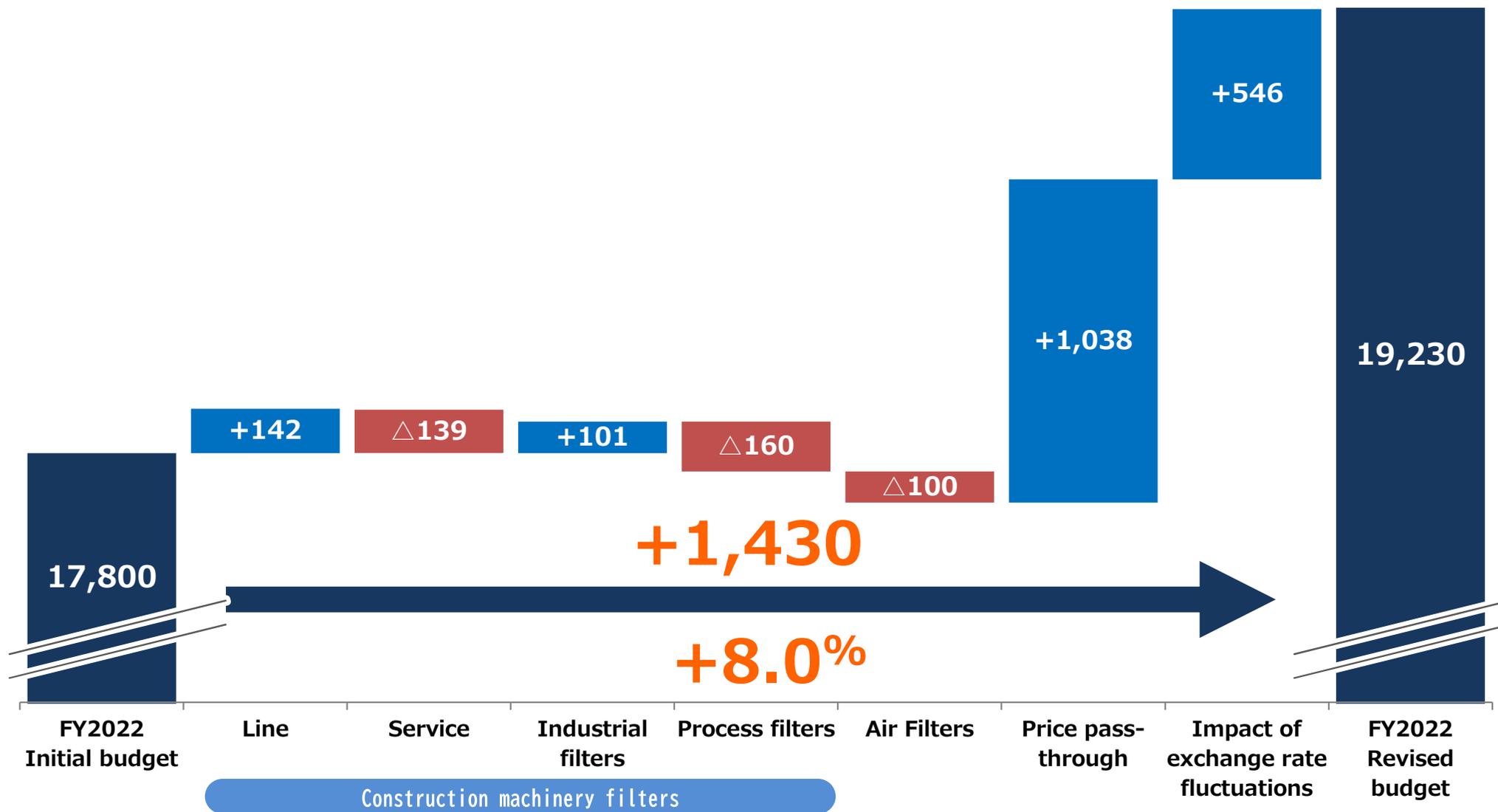
# Sales Forecast by Region

(million yen)	FY2021 Results		FY2022 Initial budget		FY2022 Revised budget		Difference	
	Amount	Composition Ratio (%)	Amount	Composition Ratio (%)	Amount	Composition Ratio (%)	Amount	%
<b>Construction machinery filters, etc. *1*2</b>	16,244	86.3%	15,000	84.3%	16,530	86.0%	1,530	10.2%
Japan	7,946	42.2%	7,079	39.8%	8,141	42.3%	1,062	15.0%
North America	2,939	15.6%	3,135	17.6%	3,680	19.1%	545	17.4%
China	1,711	9.1%	1,507	8.5%	1,470	7.6%	△36	△2.4%
Other Asian countries	1,889	10.0%	1,902	10.7%	1,707	8.9%	△194	△10.2%
Europe	1,755	9.3%	1,371	7.7%	1,477	7.7%	106	7.8%
Others (Middle East, etc.)	2	0.0%	5	0.0%	52	0.3%	46	890.5%
<b>Air filters (Japan)</b>	2,577	13.7%	2,800	15.7%	2,700	14.0%	△100	△3.6%
<b>Total sales</b>	18,821	100.0%	17,800	100.0%	19,230	100.0%	1,430	8.0%

\*1 "Construction machinery filters" includes filters for construction machinery, industrial use and process use.

\*2 The healthcare business is included in the product lineup of the construction machinery filter business from the fiscal year ending March 31, 2022, to reflect the degree of impact on YAMASHIN's performance.

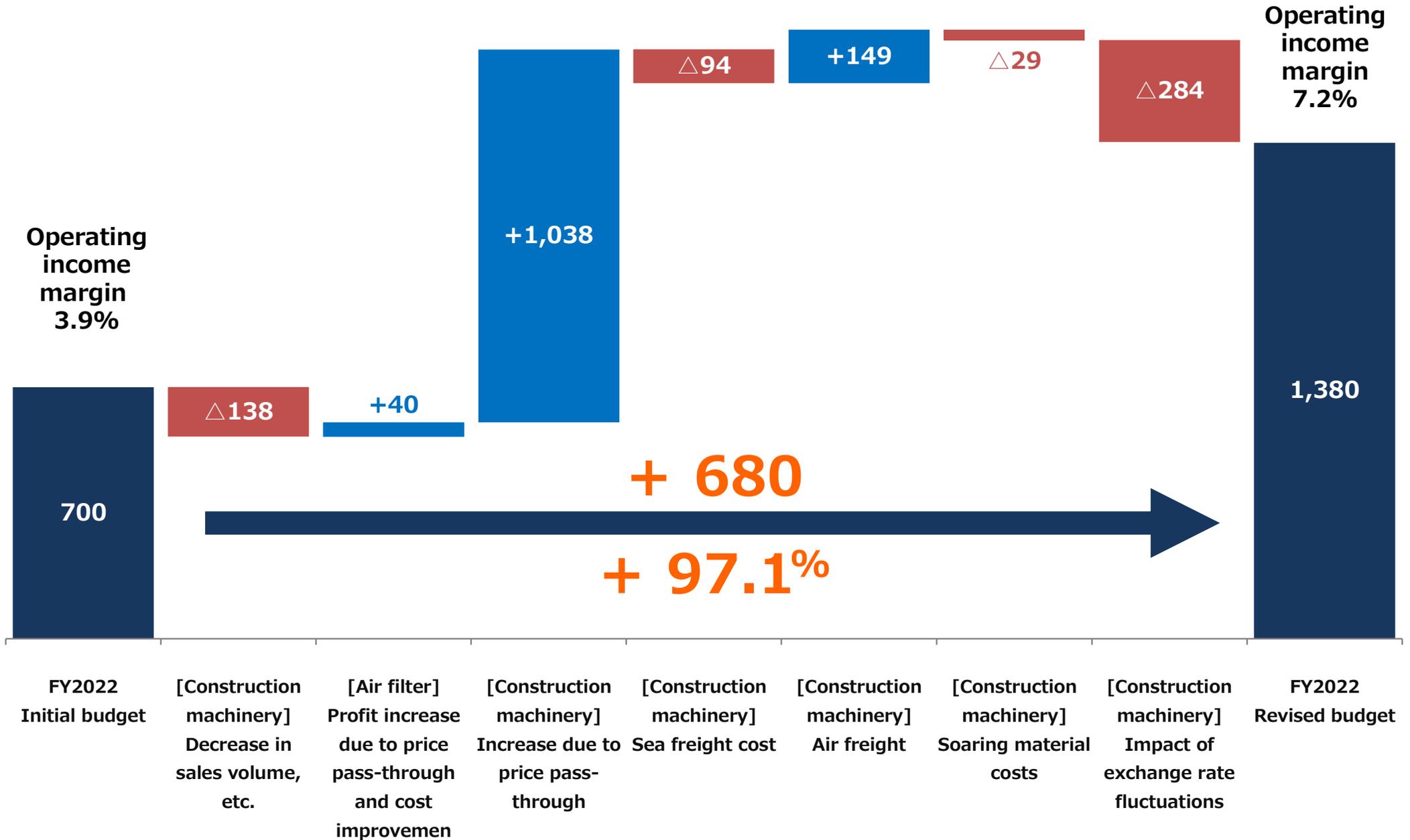
(million yen)



The "Industrial" segment includes the Healthcare product line.

# FY2022 Forecasts : Changes in Operating Income

(million yen)



The annual dividend, consisting of the interim dividend of 3.0 yen and the year-end dividend of 3.0 yen, will remain unchanged at 6.0 yen per share.

	FY2019	FY2020	FY2021	FY2022 Forecast
<b>Dividend per share</b>	¥ 6.0	¥ 6.0	¥ 6.0	¥ 6.0
<b>DOE<sup>*1</sup></b>	2.3%	2.2%	2.1%	2.1%
<b>Total return ratio<sup>*2</sup></b>	72.3%	59.3%	960.4%	57.1%

\*1 DOE (Dividend on equity) = (Annual dividend ÷ Shareholders' equity) × 100 = (ROE × Dividend payout ratio)

\*2 Total return ratio = (Total dividend + Treasury stock acquired + Shareholder benefit) ÷ Net income



# 市場

## II Market Conditions

# Conditions in the Construction Machinery Market

# External conditions impacting the construction machinery market

- Demand remained high in the second quarter in all major markets except China, especially in North America and Asia
- Challenges such as shortages in the supply of semiconductors and other components, rising logistics costs, and soaring raw material prices continue
- Demand remains strong despite new concerns such as currency risk

Q1 FY2022

Q2 FY2022

Future Outlook

Japan

Construction equipment operating hours and demand for new vehicles Remained at a high level  
Ocean transport costs and prices of key raw materials soared

Demand for construction equipment remained firm  
**Logistics costs and raw material prices continue to rise**  
Sharp depreciation of the yen

**Demand for construction equipment remained firm**  
The impact of rising logistics costs and raw material prices, the continuing trend of yen depreciation

North America

Construction equipment operating hours and demand for new vehicles Remained at a high level  
Ocean transport costs and prices of key raw materials soared

Housing starts are on a downward trend.  
**Construction equipment operating hours and demand for new vehicles have steady growth**

**Construction equipment operating hours and demand for new vehicles have steady growth** Logistics costs  
Continued impact of raw material price hikes

Europe

Construction equipment operating hours and demand for new vehicles Remained at a high level  
Ocean transport costs and prices of key raw materials soared

**Demand for construction machinery remained firm**, and Logistics costs and Raw material prices continue to rise

Russia, prolonged situation in Ukraine.  
**The outlook for demand is uncertain** due to logistics costs and raw material price hikes.  
Continued Impact

Asia

The recovery from COVID-19 has been clear and Construction equipment operating hours Remained at a high level

**Demand for construction equipment remained firm**  
Logistics costs and Raw material prices continue to rise

Focusing on India and Indonesia  
**Demand is steady**. Logistics costs and continued impact of raw material price hikes

China

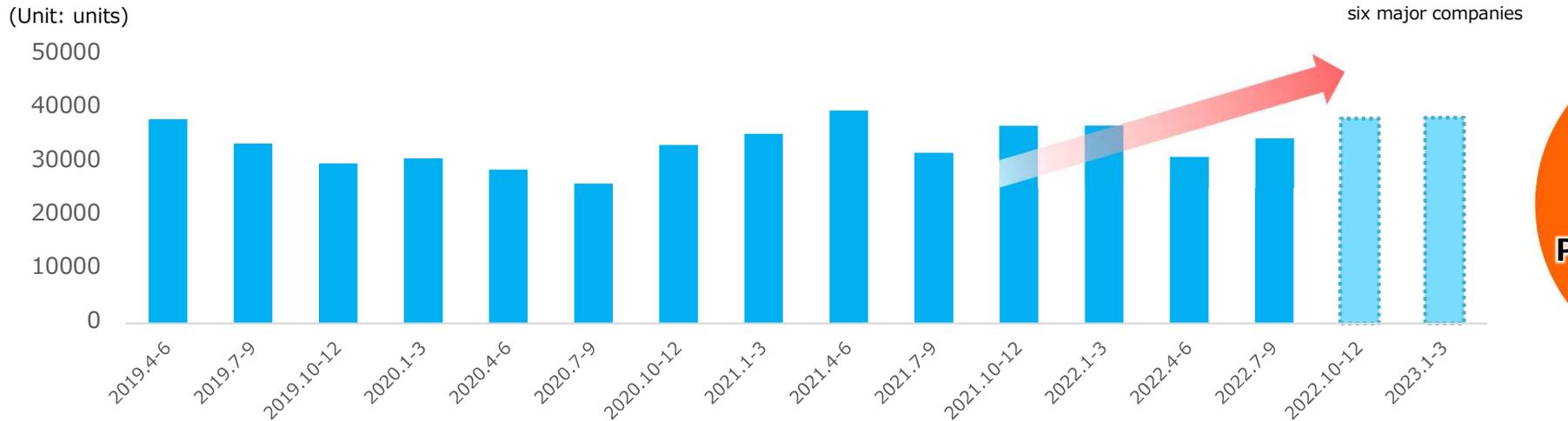
Following the spread of COVID-19 infection  
Sluggish due to lockdowns

Following the spread of COVID-19 infection, Impact of Lockdown,  
**Sluggish due to stagnant economic activity**

Due to continued market slump  
**new vehicle sales are expected to fall below the previous year**

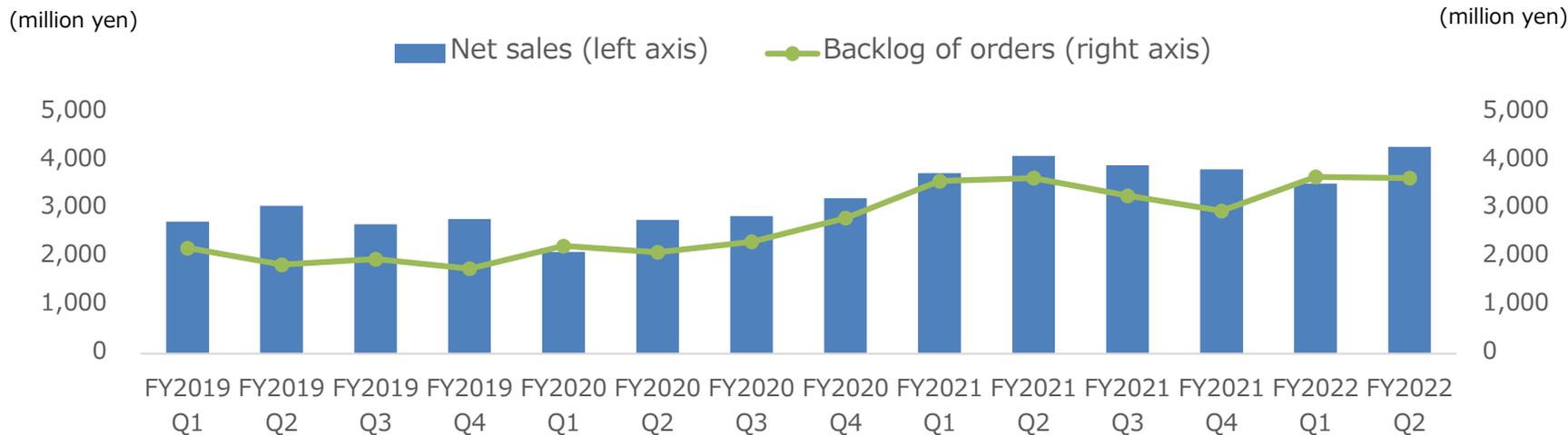
- Production plan is at high level, although it may be affected by customers' production capacity and difficult-to-source products
- Strong demand has kept the Company's order backlog at a high level.

Production Results and Plans of Major Construction Machinery Manufacturers (Quarterly)



**High level of demand in conjunction with Production plan is steady**

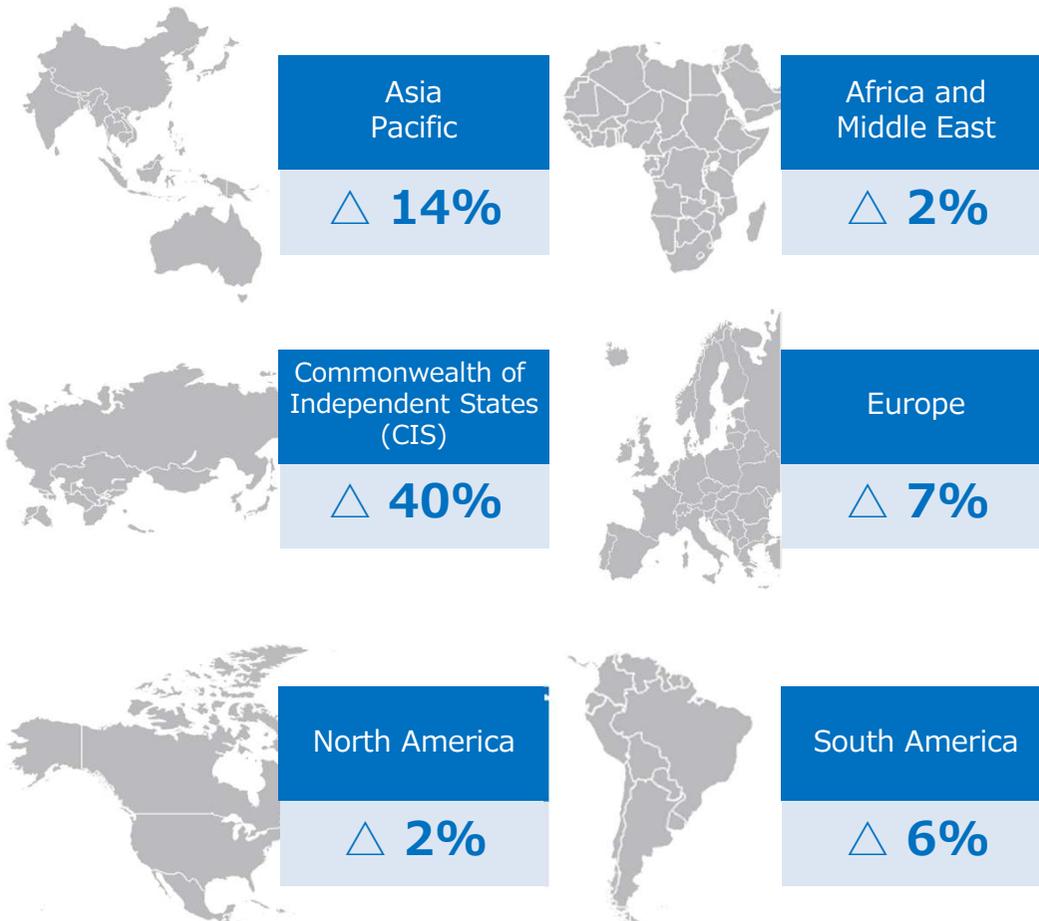
Sales and Backlog Orders: YAMASHIN Construction Machinery Filters (Quarterly)



**Production Planning and Supply Market Both benefited from strong demand. Order backlog remains at a high level**

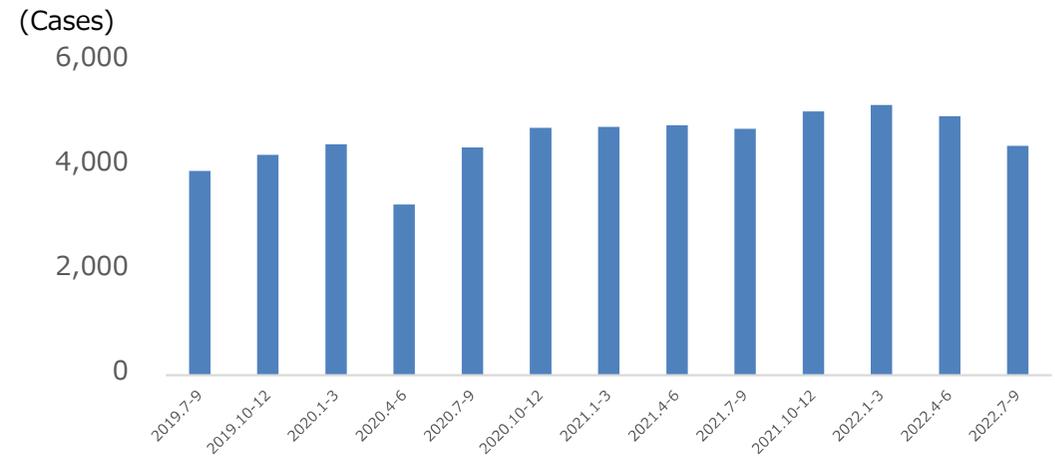
- Demand was negative year-on-year, but maintained a high level of demand at full customer production capacity
- North American housing starts decline, but housing inventories remain low

## Growth in demand for construction machinery by region



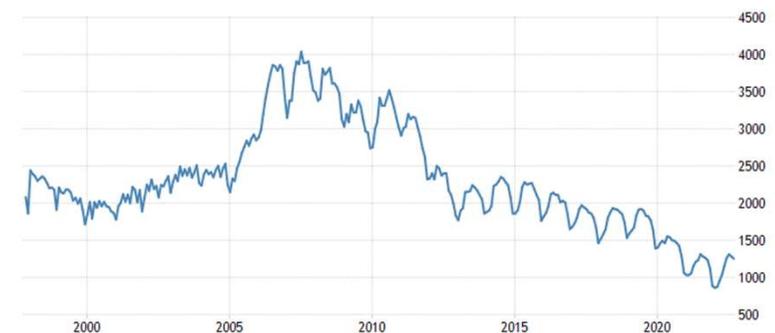
Demand trend index (21 vs. 22 forecast)

## North American market: Trends in housing starts



(Compiled by the Company from Bureau of the Census)

## North American market: Trends in gross housing inventories



(Adapted from TRADINGECONOMICS)

TRADINGECONOMICS.COM | NATIONAL ASSOCIATION OF REALTORS

- Filters for construction machinery transmissions account for more than 90% of the market share
- New field development to expand sales opportunities is determined by the release date.

## Share information for a major North American construction equipment manufacturer

### Hydraulic filter market share

	2021	2022	Fluctuation
Rolling Stock Construction Equipment	39%	50%	11%
Mining and Construction Equipment	20%	37%	17%
Forestry machinery	30%	45%	15%

### TM filter share

	2021	2022	Fluctuation
Rolling Stock Construction Equipment	88%	94%	6%
Mining and Construction Equipment	54%	68%	14%
Forestry machinery	71%	75%	4%

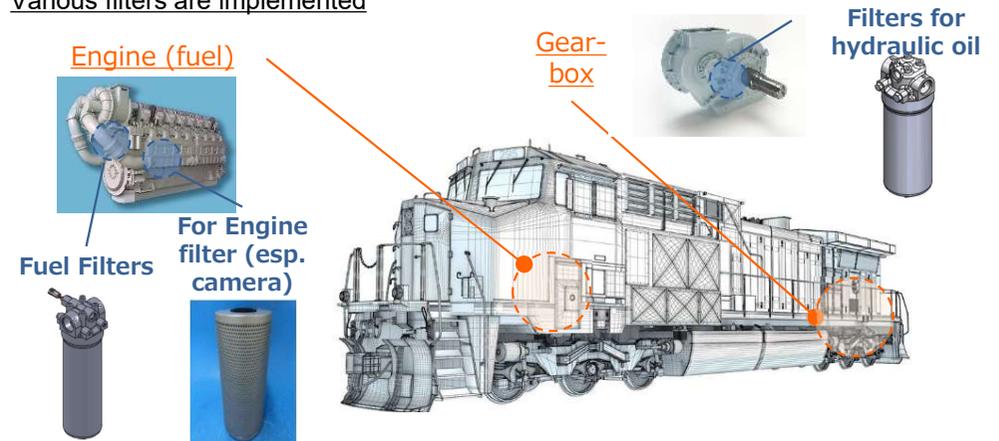
### Other filter share

	2021	2022	Fluctuation
Rolling Stock Construction Equipment	17%	40%	23%
Mining and Construction Equipment	12%	33%	21%
Forestry machinery	15%	20%	5%

## Progress in cultivating new business areas

### Numerous filter hiring opportunities exist for freight railroads

To make each component system in a freight railroad work, the Various filters are implemented



### First freight railway model to be adopted

#### Supply to start in April 2023

The range of hydraulic filters is wide, and the business areas in which our customers are involved are also wide.

The introduction of our fuel and hydraulic filter technologies for freight railways was highly evaluated and decided upon. In addition, we are actively expanding into other industrial machinery such as the agricultural field.

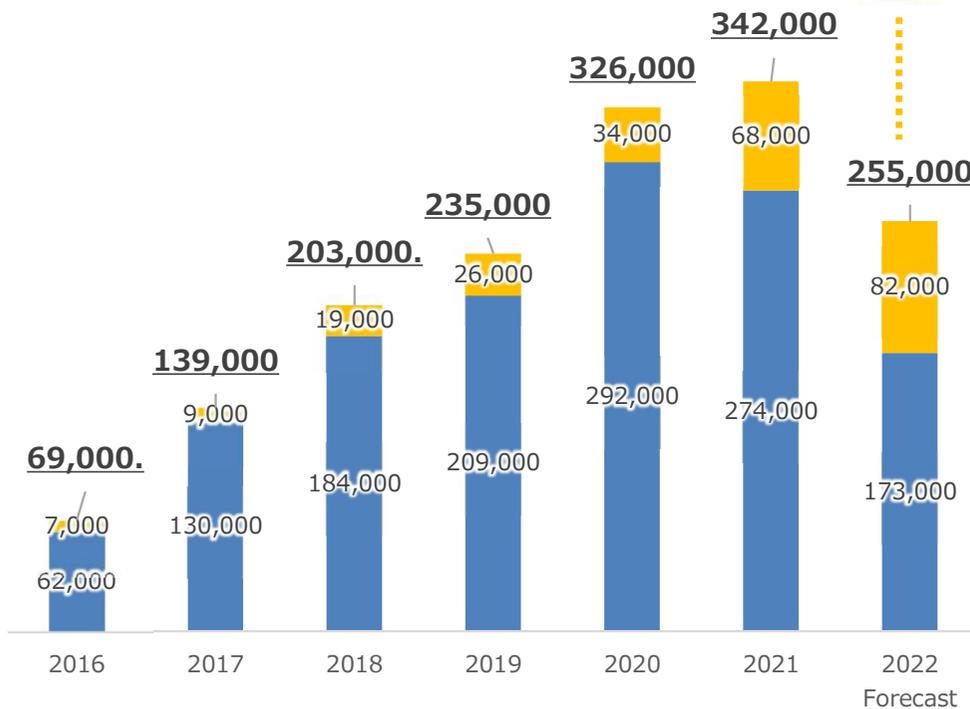
- Sporadic lockdowns are expected to reduce demand by more than 20% in 2022 compared to last year
- Export share is expected to increase in the future as we seek growth opportunities in overseas markets

## Annual sales volume in China

(Number of vehicles)

■ Domestic sales in China    ■ Overseas Export

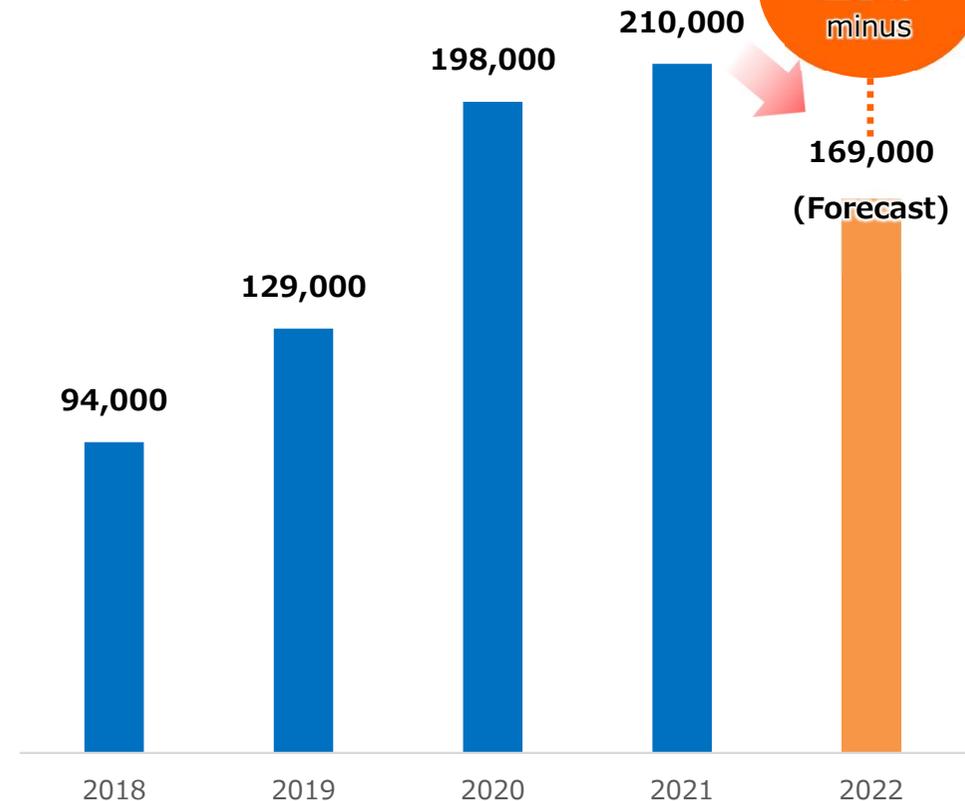
Overall Export about 40%



## Production volume (planned) of five major Chinese construction equipment manufacturers

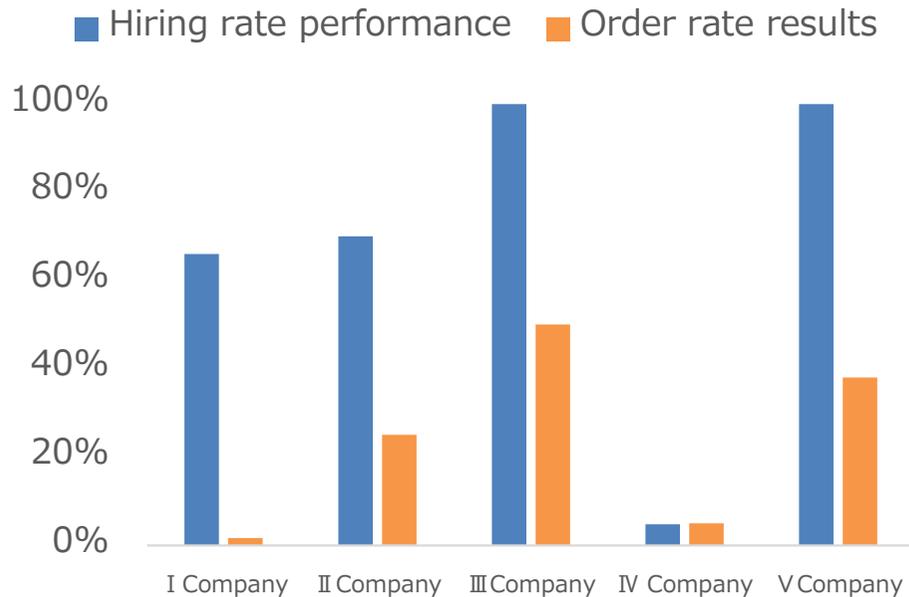
(Number of vehicles)

Approx. 20% minus

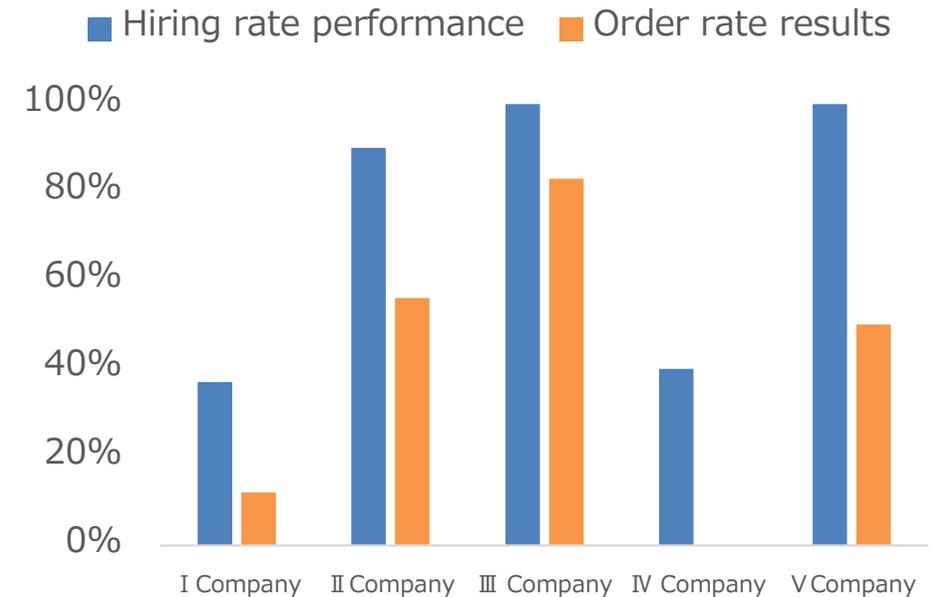


- Emission regulations are expected to start as scheduled in December 2022
- Both adoption rate and order rate are expected to steadily increase from models compliant with emission regulations.

## Adoption rate and order rate of current models



## Adoption rate and order rate for new models



### Overview of Exhaust Gas Regulations

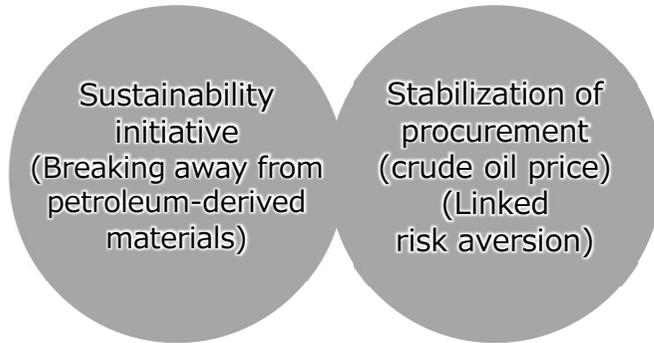


## From December 2022 Exhaust gas regulation started

- The regulation values have become stricter since the current Tier 3 exhaust gas regulations, to the same level as the current emission regulations in Europe and the U.S.
- Excavators, wheel loaders, bulldozers, asphalt paving machine, forklift truck etc. sold on or after December 1
- On the machine side with the engine, remote monitoring related matters were added to provide location information

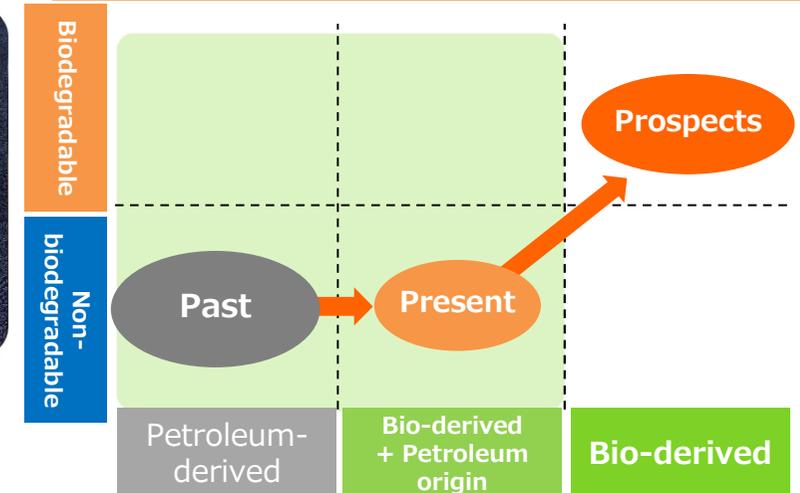
- Development of biomass PET filter materials progressed to the practical stage from conventional PET resin derived from petroleum
- We will continue research and development to introduce biodegradable materials that have a low environmental impact
- Began aggressively proposing solutions to customers with high environmental awareness

## Issues to be addressed

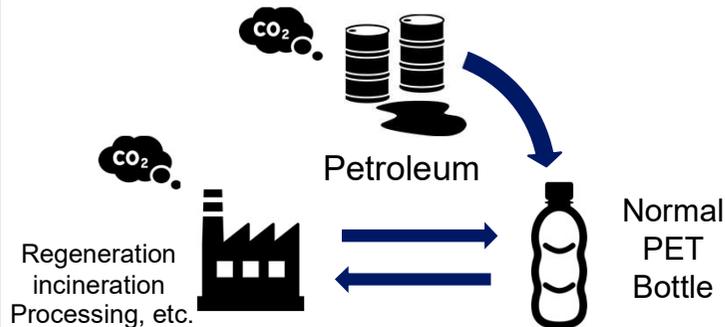


Biomass PET prototype

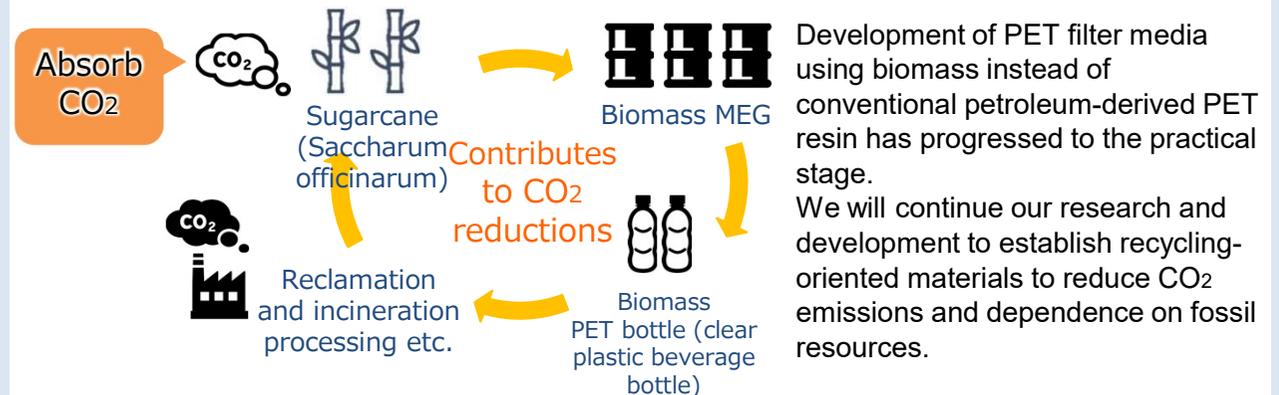
## Direction of Material Development



## Petroleum-derived PET resin production process



## Production process of biomass PET resin



# Conditions in the Air Filter Market

- Achieves top market share in pre-filters and medium-to-high-performance filters by providing a wide variety of products, quick delivery, and small-lot customization capabilities
- Wide coverage of air filter distributors enables us to sell our products through various routes

## Fair Filter Market Growth Rate

### Pre-filters\* (building air conditioning, etc.)

#### Actual results for 2021

7.5 billion yen  
(Domestic market  
7.36 billion yen)

#### Forecast for 2030

8.36 billion yen  
(Domestic market:  
8.2 billion yen)

**CAGR**  
**1.2%**

\*Coarse dust filters

### Medium to high performance filters (air conditioning for large buildings, etc.)

#### Actual results for 2021

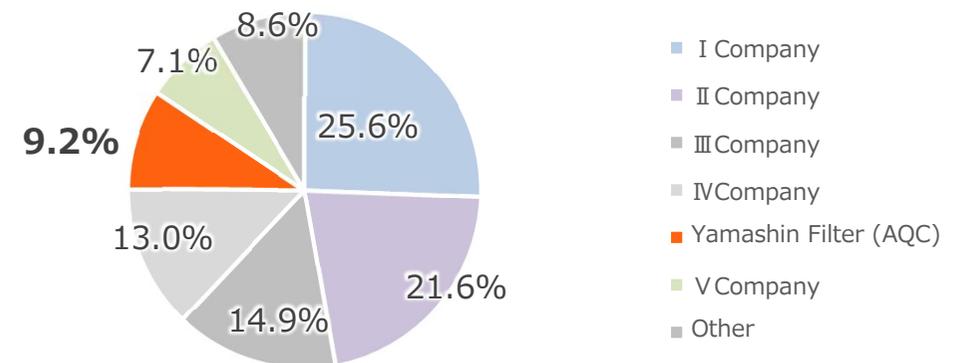
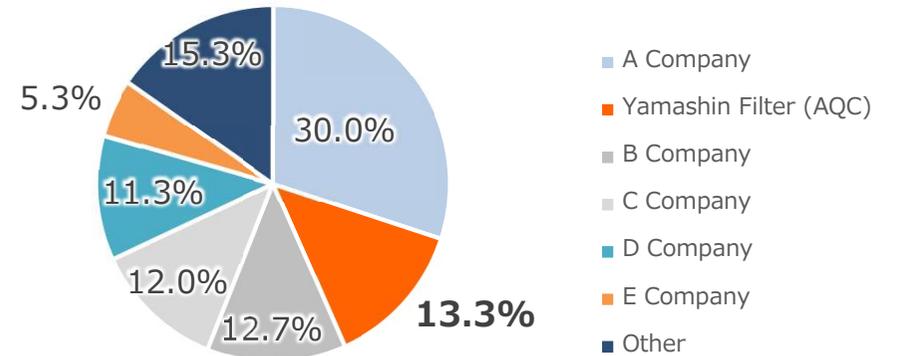
7.07 billion yen  
(Domestic market:  
6.99 billion yen)

#### Forecast for 2030

8.21 billion yen  
(Domestic market  
8.04 billion yen)

**CAGR**  
**1.7%**

## Our Share in Each Segment (Actual Results in 2021)



Source: Fuji Keizai

"Details and future predictions of technologies and markets related to high-performance separation membranes and filters 2022"

\*The market size and pie chart show the domestic market + overseas sales of Japanese manufacturers

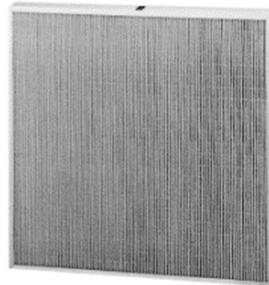
- In the buildings and structures market, the main market, the impact of the Corona vortex is expected to be limited and demand is expected to remain flat year on year
- Increasing need to control maintenance costs in response to soaring costs of various types

	Market Overview	Market environment	
		Previous period	Forecast for the current term
<b>Buildings</b>	Air filters for outdoor air intake units, indoor air conditioning, etc. installed in offices, commercial buildings, etc.	Repeat orders in urban areas are stable, but new orders are slow.	Although some small and regional properties have been postponed, there is a nationwide recovery trend centered on large properties.
<b>General factories</b>	Air filters for outdoor air intake units, indoor air conditioning, etc. installed in factories	Movement in large-scale renovations is slow, but there is positive movement in necessary capital investment.	Moderate recovery trend mainly in small properties
<b>Semiconductor factories</b>	Chemical Filter Replacement Market	Capital investment remains strong.	Capital investment continued to be favorable but has reached a slight plateau.
<b>Environmental equipment</b>	Air filters for residential air conditioning and air purifiers used in homes	Housing-related sectors continue to be affected by the Wood Shock, but are on a recovery trend.	The impact of the Wood Shock has almost disappeared; orders increased in the second half of the 3Q and are on a recovery trend.
<b>Vehicles</b>	Air filters for air conditioning of railways, etc. Air filters for construction machinery dust	Orders for construction machinery filters were firm. Orders for railroad filters were in line with plans.	Sales of railroad products remained flat. Construction machinery filters are recovering, although there is a review of the schedule due to order adjustments.

- Highly evaluated for filter performance and environmental friendliness
- The reliability of the MERV14 standard and the scarcity of acquisition by Japanese manufacturers make it highly competitive

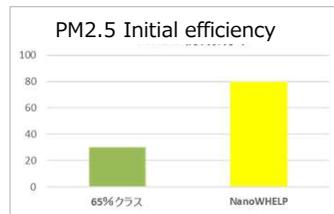
## New NanoWHELP®

World's first nanofilter air filter



### Product Features

- YANAMSHIN NANO FILTER® performance and **sustained low pressure drop**
- The only medium to high performance filter from a Japanese manufacturer  
**MERV14 certification**, the highest level for building air conditioning
- In addition to high performance, it is also **effective in reducing CO2 emissions.**
- **Reduce CO2 by 22% (compared to our own products)**  
**Collection efficiency of 96% for PM2.5**  
**Initial efficiency 80% or more**



### Status of New Introductions



At K Hospital, Chiba, Japan  
Outside air intake filters throughout the building changed to **NanoWHELP®95**

#### Customer Challenges

Uses a high cleanliness HEPA filter

- Insufficient ventilation airflow
- Cost is at a premium

#### Solutions with our products

Highest cleanliness required  
In the operating room  
**NanoWHELP® is a medium performance filter**, which fulfills both requirements such as cleanliness and ventilation air volume

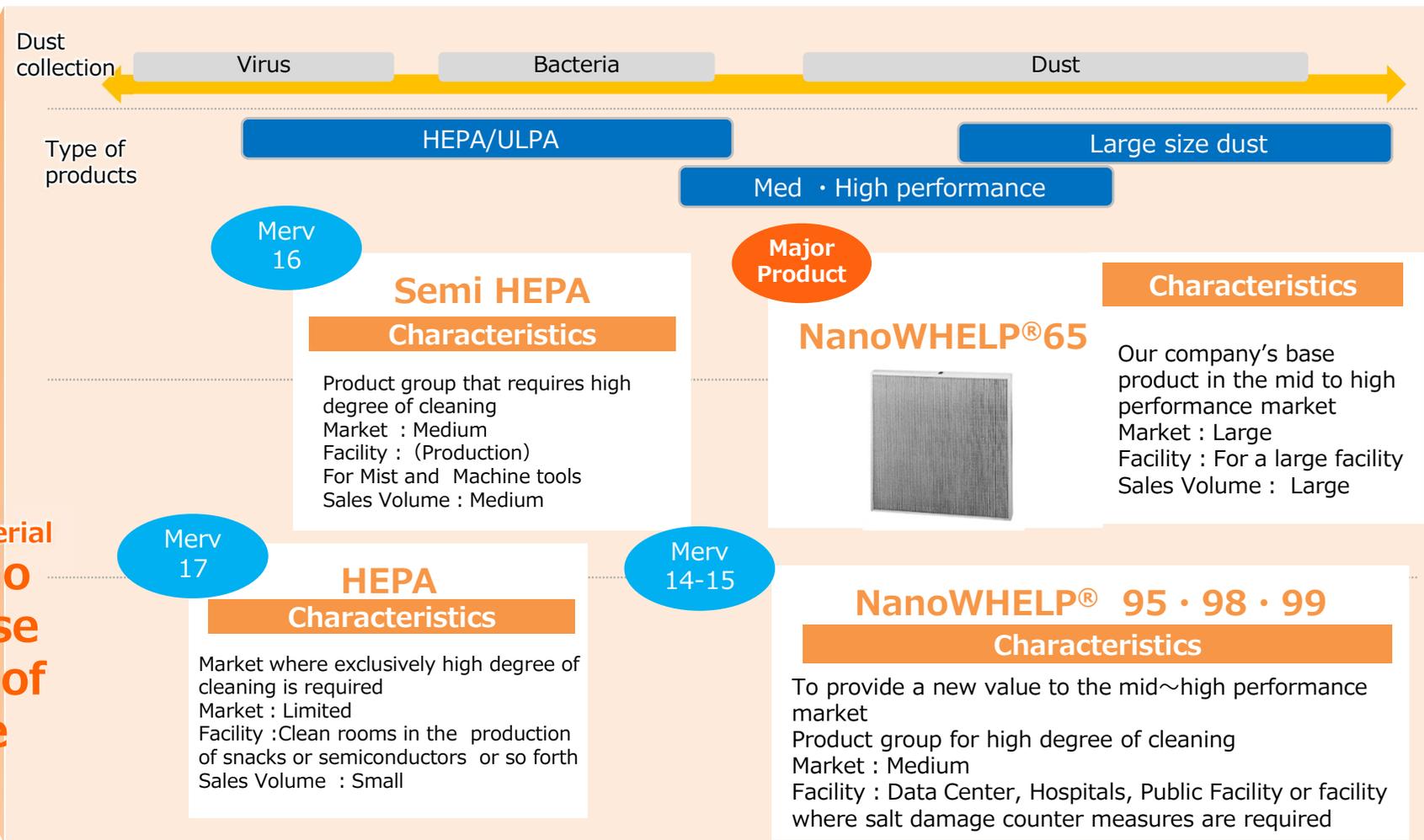
Many facilities are well served by mid- to high-performance filter product lines

Ongoing proposal activities in consideration of the balance between performance and cost

- Sales expansion of the NanoWHELP® series using the market's only proprietary nanofiber filter media
- Create sales channel directly to the users to enhance product development that better meet their needs



A uniquely developed material  
**YAMASHIN Nano Filter®** is the base of development of each backbone product line





# III Future Strategies

## SUSTAINABLE DEVELOPMENT GOALS

Achieving SDGs through our business activities

ESG management implementation

TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

Support for recommendations

Environment

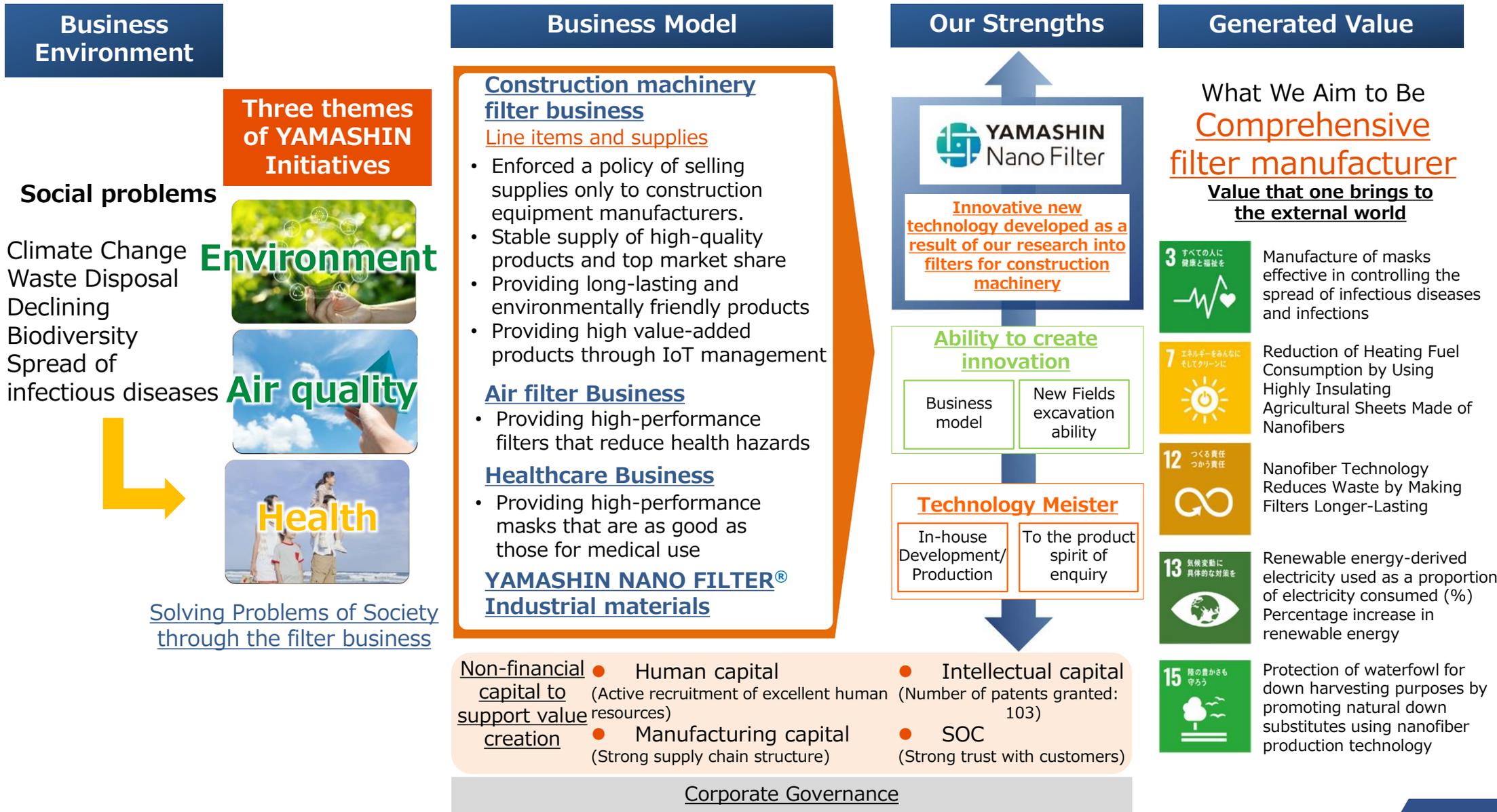
Air quality

Health

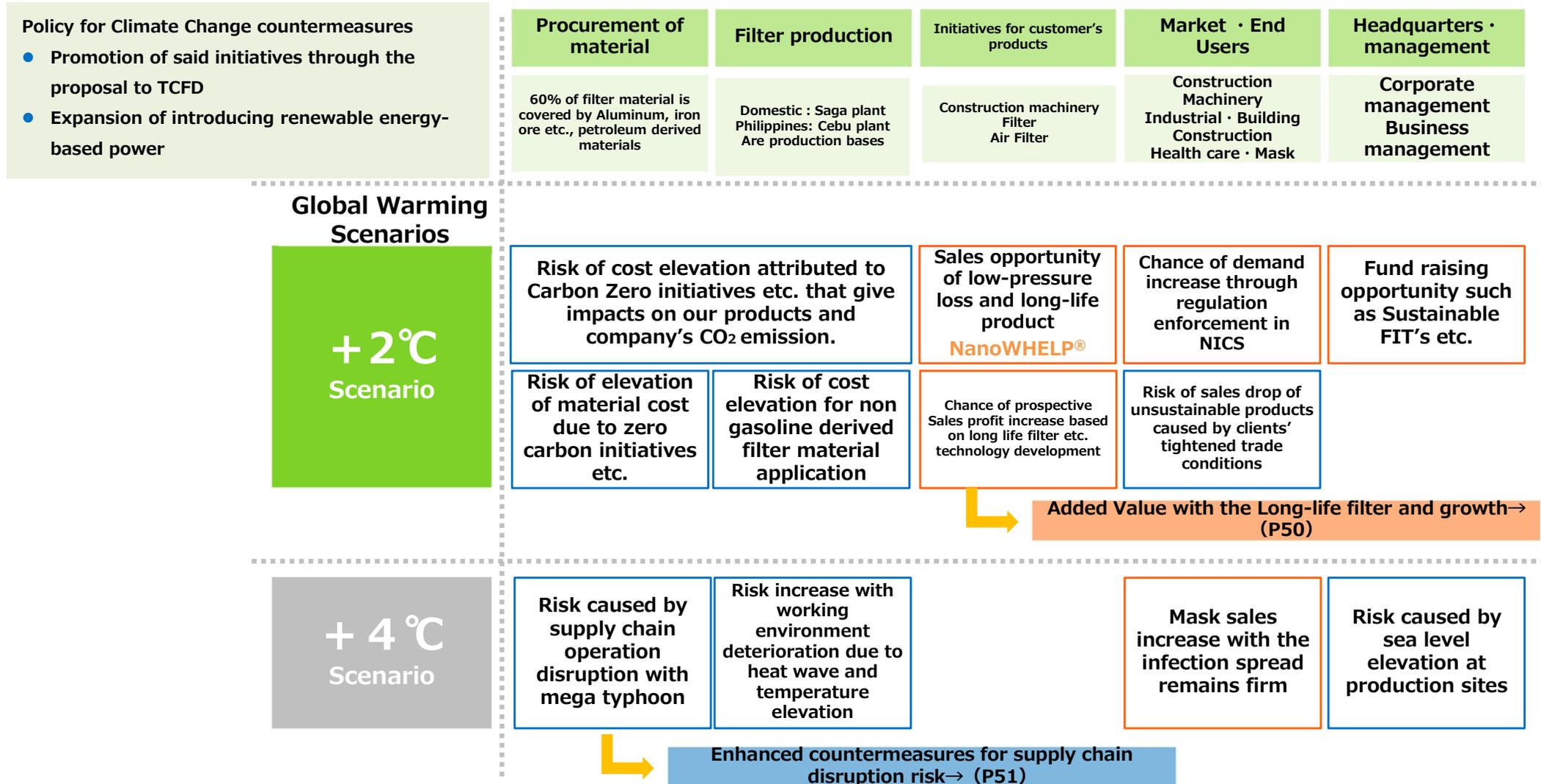
*” Roka jini tsukafuru ”*

*Contribute to society through filtration business*

- Fulfilling our social responsibility as a listed company engaged in filter manufacturing and providing sustainable value  
**Realization of our management philosophy: "Rokaji ni tsukafuru" (Contribute to society through filtration business)**



- With regard to the “Environment”, which has particularly high potential to impact our business, we have identified prospective risks and opportunities for each global warming scenario, incorporating those to our mid-long term strategical policies to implement for various initiatives



- We aim to capture opportunities by strengthening sales of environmentally friendly products and providing value unique to our company by taking advantage of our early commitment to long-life products

Long life filters, etc.  
Through technological development  
First-mover advantage opportunity



- Supply products compliant with greenhouse gas reduction standards
- Providing products that use less fossil fuels
- Long life reduces replacement opportunities

## Direction of measures for long life

### YAMASHIN NANO FILTER®



Unit sales price per unit of existing products

**Approx. 2** times

Grow into a mid- to long-term earnings pillar



Eco-Friendly Filter material products



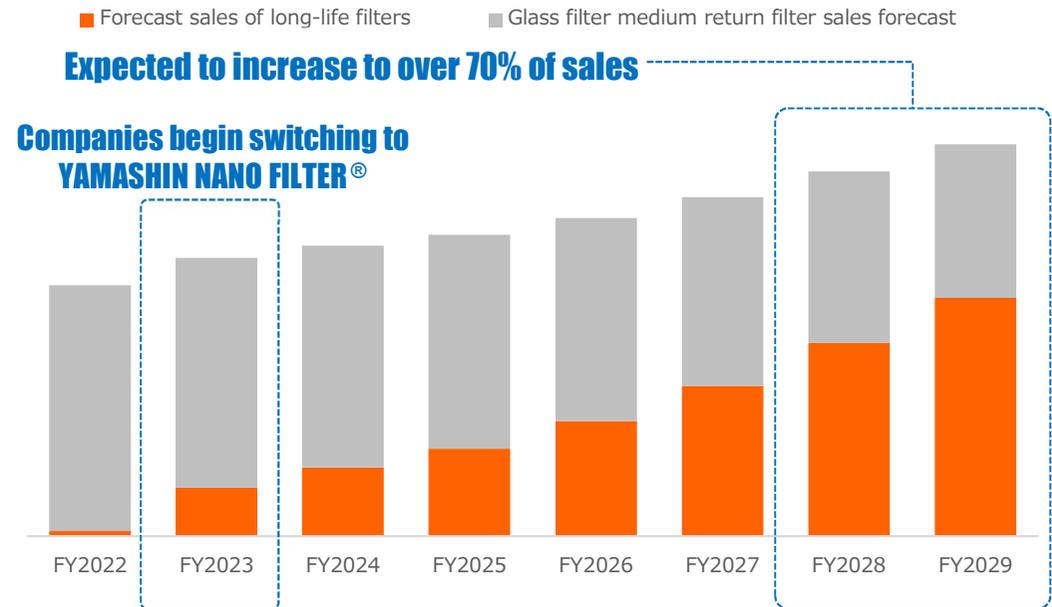
### Iot Sensors

Sensor measures filter life and hydraulic oil contamination level. Contributes to longer filter life and plays an important role in the electronic control of next-generation hydraulic systems.



Support product enhancement  
The hydraulic system focusing on computerization

## Sales forecast for filters made by Yamashin Nano Filter



- Substantially reduced risk of operational slowdown with the start of operations at the new plant in Vietnam

Due to large typhoons, etc., Supply chain fragmentation. Risk of operational slowdown



- Transition to a multiple production system in light of climate change risks
- Improvement of local parts procurement rate
- Diversification of country risk

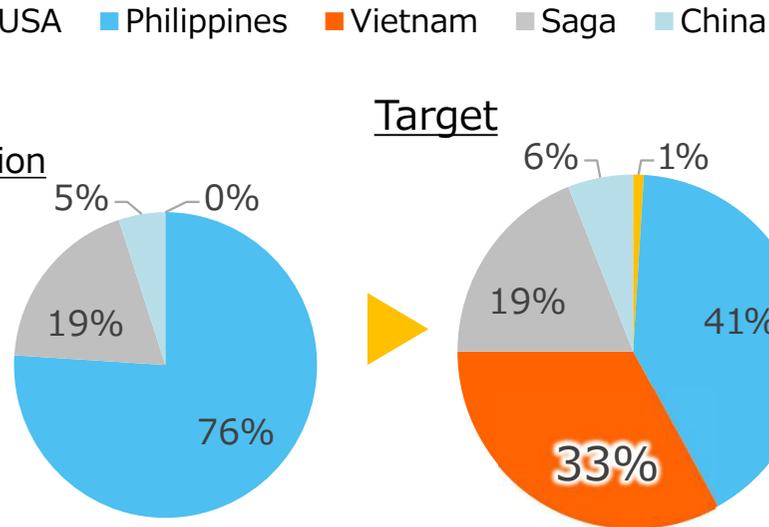
## Strengthening the supply chain

### Completed construction of a new plant in Vietnam

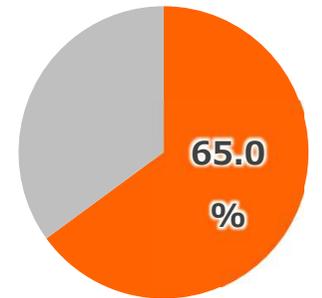
Hedging risk by shifting from a centralized production system to a multiple production system, and improved local procurement rate of materials to meet the customer's needs by more flexible response is possible



Before construction

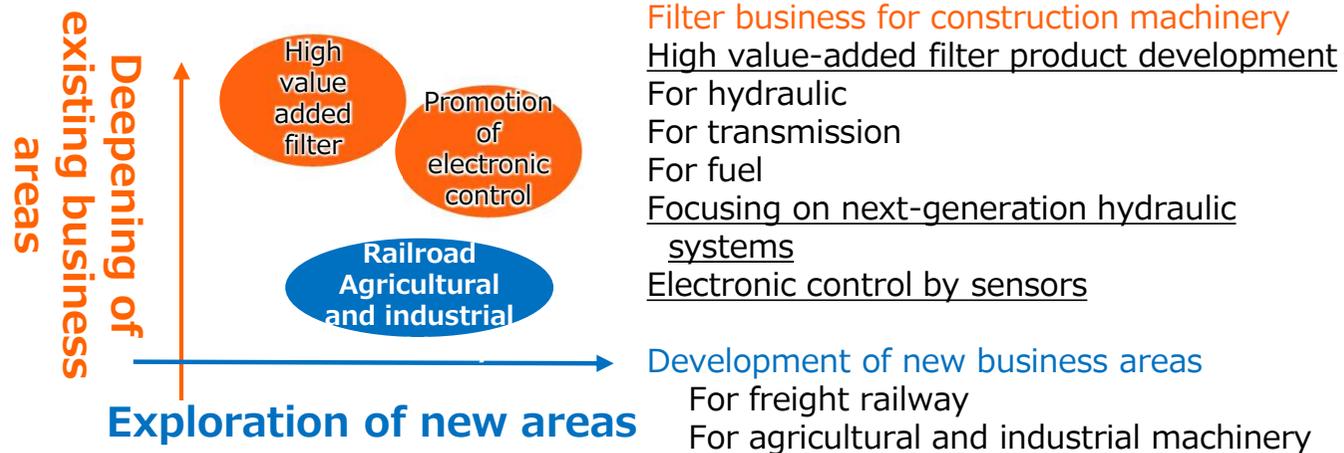


### Parts procurement rate in Vietnam



Year ending March 31, 2023

## Construction machinery filters



## Filtration media development

### Long Life/ Development of eco-friendly materials

Petroleum-derived PET resin  
 Development of Biomass PET  
 Filter Material  
 Development of biodegradable  
 materials  
 recycling circle

## Filter media

### New business domain

**YAMASHIN NANO FILTER®**  
Entering the new materials  
field by applying



Conductive material	Biomass raw materials
Sheet material	New Heat-Resistant Material

**Mergers and acquisitions**

### Air filters

## Sales strategy enhancement



Distributor business (product diversity /small lot)

For building air conditioning  
 (Pre-filter, medium-high performance filter)  
 Direct sales (high cleanliness HAPA/ULPA)

**NanoWHELP®**



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REFERENCE MATERIALS

① BASIC COMPANY INFORMATION

YAMASHIN Group purchases glass fibers and non-woven fabrics, which are the main materials to manufacture filter media (the key parts of filters). Our Group also purchases metal processed products and resin processed products used in filter components to manufacture construction machinery filters, industrial filters, process filters and air filters. From May 2020, we started to sell filter masks and mask inner sheets made from our proprietary synthetic polymer nanofibers.

Field	Products	Product Image	Composition ratio (Forecast of FY2023)
Construction Machinery Filters	Filters used for filtering hydraulic oil in hydraulic circuits, diesel oil for fuel, and lubricating oil for engine drive, which are indispensable for driving construction machinery. Applications: Various types of construction equipment		
Healthcare	Highly performance masks and replacement inner sheets that utilize the characteristics of synthetic polymer-based nanofibers, such as high filtration performance, excellent sealing performance, and high air permeability. Applications: For general consumers in Japan and around the world		
Industrial Filters	Filters used for filtration of hydraulic oil and lubricating oil in hydraulic units applied in various industries. Applications: Machine tools, refrigeration compressors, agricultural machinery, ships, railway vehicles, aircraft, and helicopters		
Process line Filters	Filters required for filtration and separation in the manufacturing process of customer products Applications: Electronic components, precision components, liquid crystal displays and food industries, etc.		
Air filters	Coarse dust removal air filters, medium- to high-performance air filters Applications: Dust removal, deodorization, etc. for general buildings, hotels, various factories, etc.		

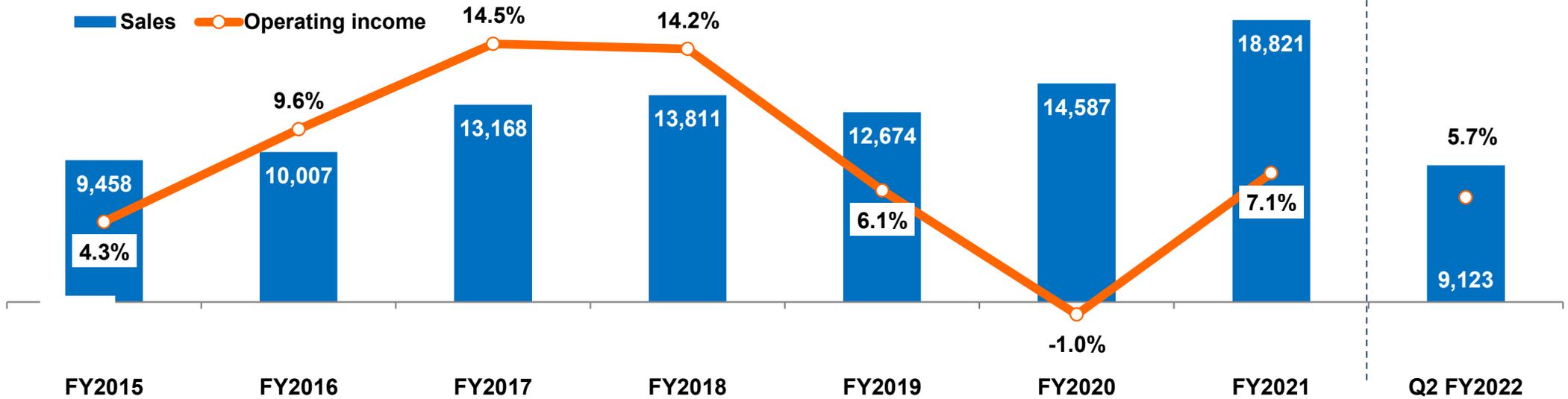
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REFERENCE MATERIALS

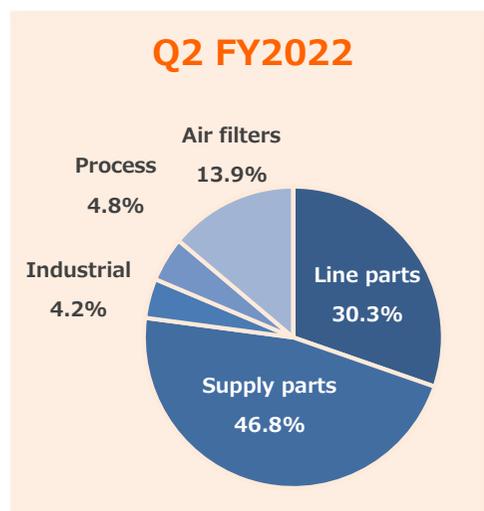
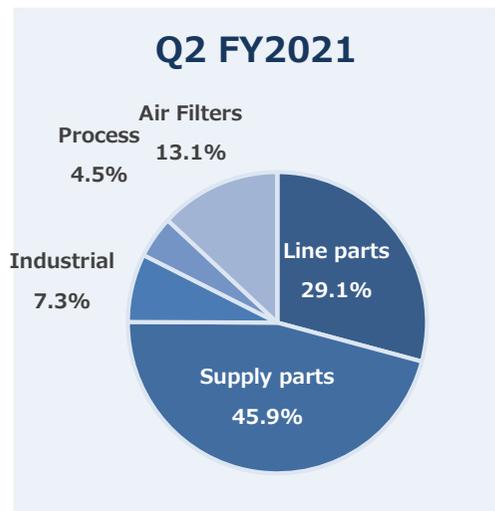
② FINANCIAL HIGHLIGHTS

## Net sales, Operating income ratio

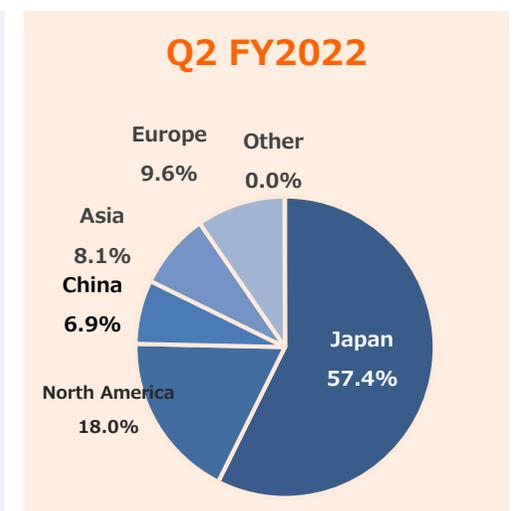
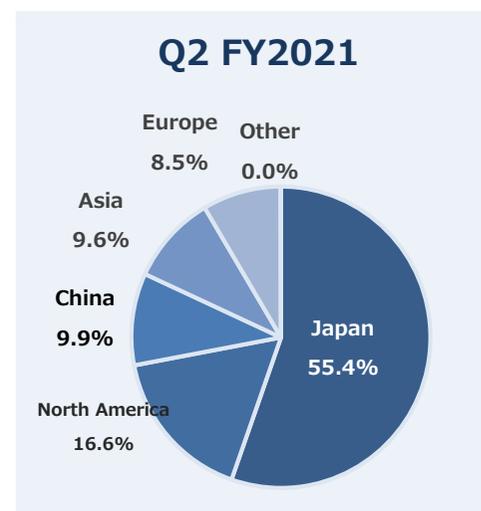
(million yen)



## Sales breakdown by product category

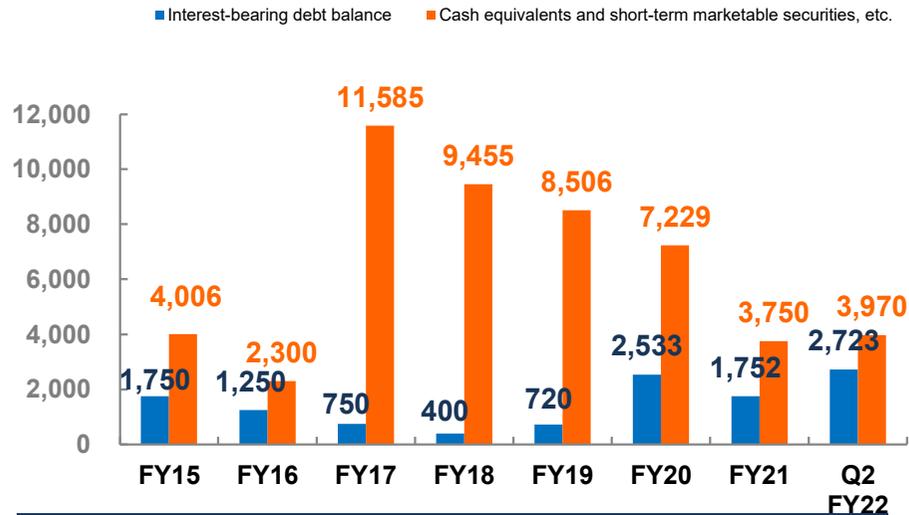


## Sales breakdown by region

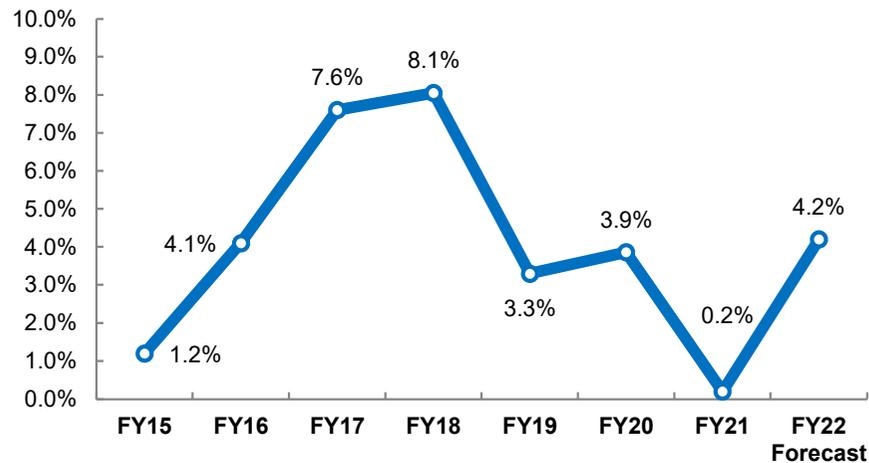


## Interest-bearing debt, cash equivalents short-term investment securities, etc.

(million yen)

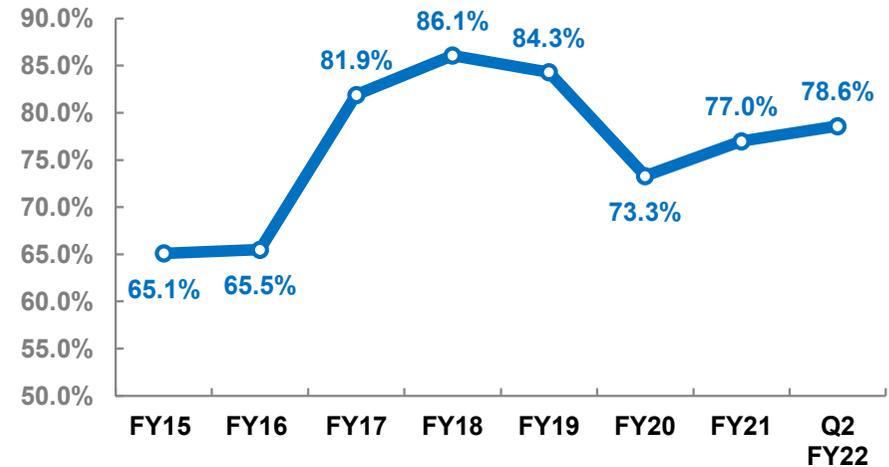


## ROE

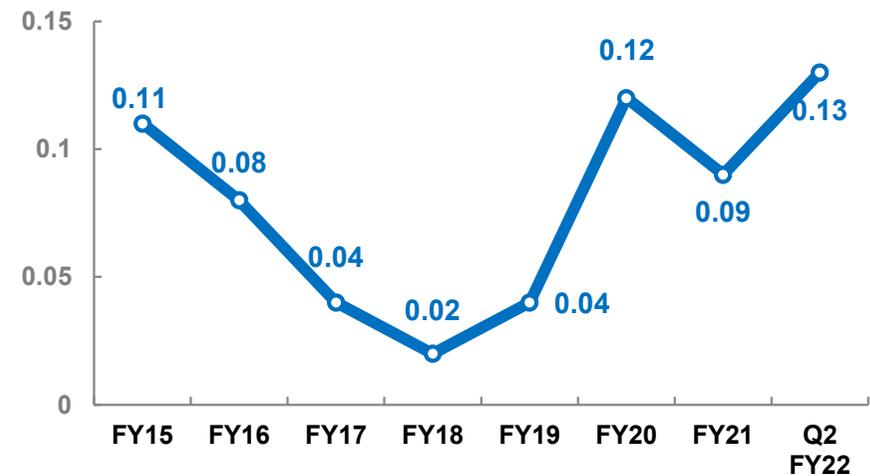


- Calculated based on the assumption that the capital increase through third-party allotment in FY2017 was implemented in FY15.

## Shareholders' Equity Ratio



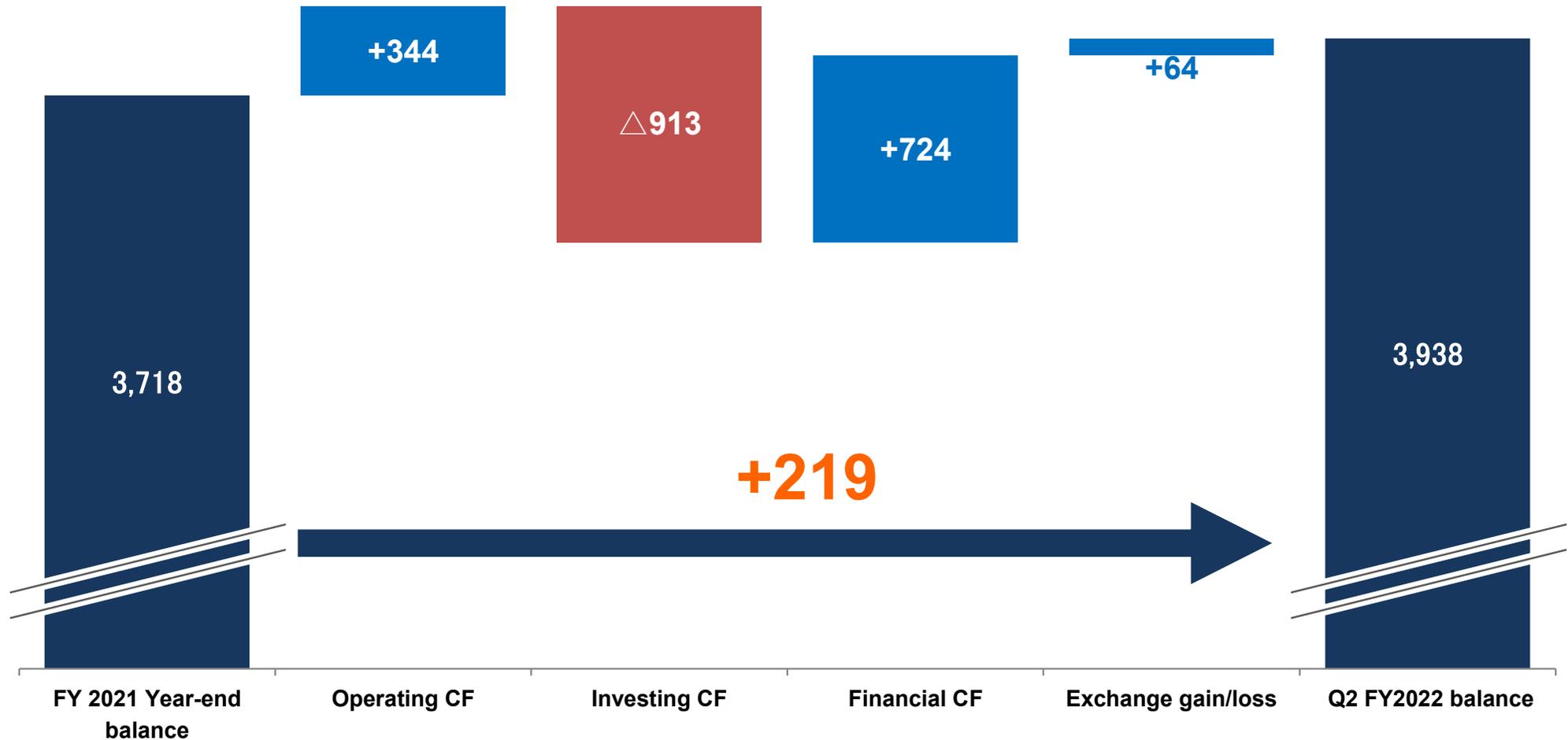
## D/E Ratio



- Calculated based on the assumption that the capital increase through third-party allotment in FY2017 was implemented in FY15.

# Changes in Cash Balance

(million yen)



\*Long-term deposits with maturities of less than one year (¥32 million at the end of FY3/2022 and ¥32 million at the end of Q2 FY3/2023)

Cash and cash equivalents are not included in the ending balance of cash and cash equivalents.

# Conditions of Operational Hedge – “Marry and Netting” and Foreign Exchange Sensitivity (2022 April to September)

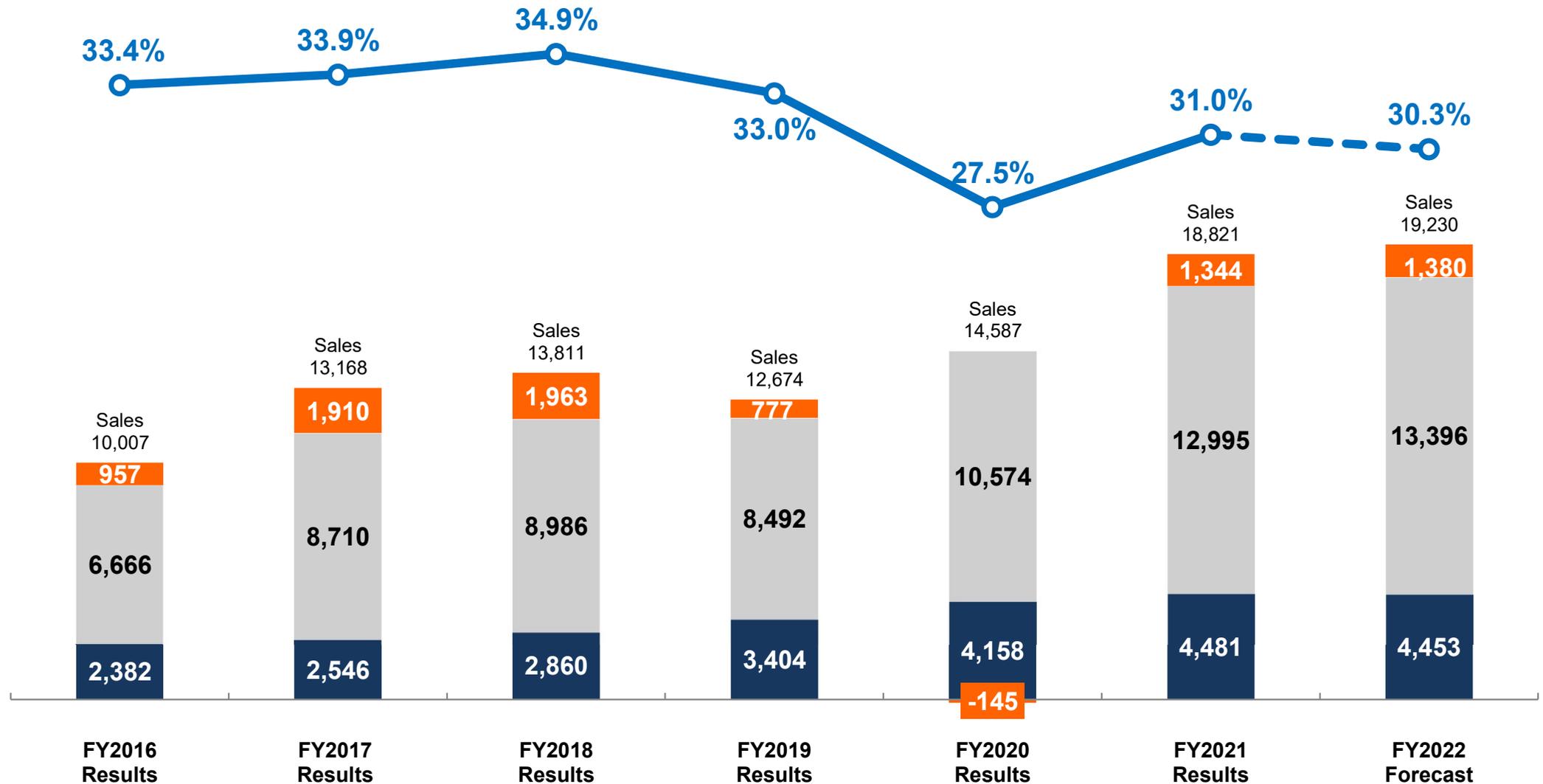
(million yen)

Currency	Incoming		Outgoing		Net	Average rate during the term (JPY)	In case of yen appreciation (10%)			In case of yen depreciation (10%)		
	Amount by currency	Composition ratio	Amount by currency	Composition ratio	Amount by currency		If yen is appreciated ▲10% (JPY)	Difference	Affected amount (YTD)	If yen is depreciated +10% (JPY)	Difference	Affected amount (YTD)
JPY	¥9,700	66%	¥9,100	58%	¥600	-	-	-	-	-	-	-
USD	\$31.1	28%	\$39.7	34%	\$△8.6	¥134.0	¥120.58	¥△13.40	¥115.22	¥147.38	¥13.40	¥△115.22
EUR	€3.8	4%	€2.4	2%	€1.4	¥138.7	¥124.87	¥△13.9	¥△19.42	¥152.61	¥13.87	¥19.42
PHP	PP0.0	0%	PP291.4	5%	PP△291.4	¥2.5	¥2.21	¥△0.2	¥71.68	¥2.71	¥0.25	¥△71.68
THB	฿60.90	2%	฿21.00	1%	฿39.90	¥3.8	¥3.41	¥△0.4	¥△15.12	¥4.17	¥0.38	¥15.12
VND	0.00 đ	0%	228.40 đ	1%	△228.40 đ	¥0.6	¥0.52	¥△0.1	¥13.13	¥0.63	¥0.06	¥△13.13
<b>Total</b>	-	<b>100%</b>	-	<b>100%</b>	-	-	-	-	¥165.49	-	-	¥△165.49

# Variation in Marginal Profit Ratio

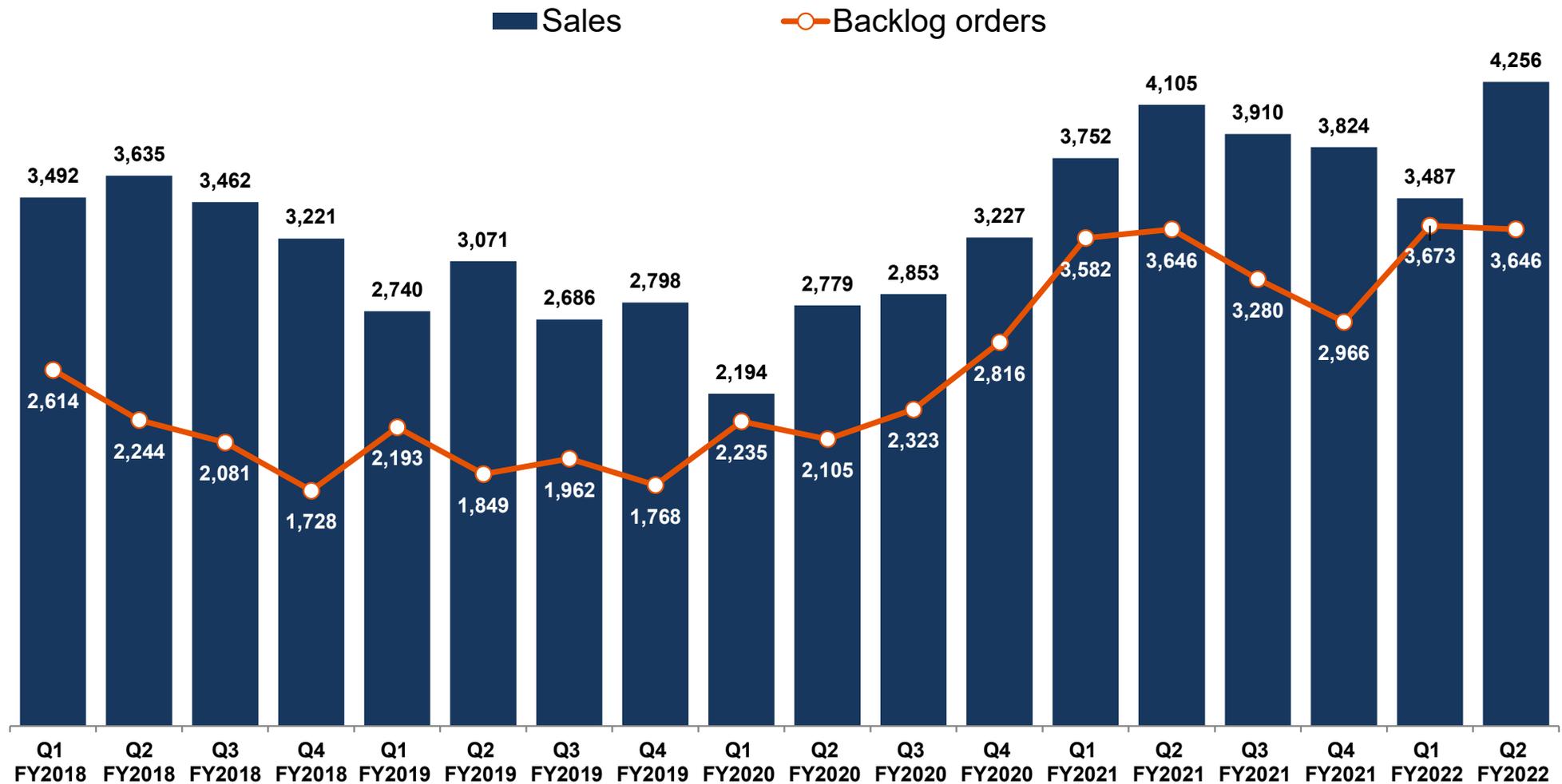
(million yen)

■ Fixed cost    ■ Variable cost    ■ Operating income    ○ Marginal profit ratio



# Construction Machinery Filters Changes in Backlog Orders (Quarterly)

(million yen)



\*Sales do not include healthcare sales.



The forward-looking statements in this document, including the forecast of results of operations, are based on information currently available to YAMASHIN. Actual results may differ from these forecasts due to a variety of factors, including market trends and business conditions.

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