

Q3 FY2019 Business Results

Yamashin Paradigm Shift, Full-blown expansion of the business portfolio 

YAMASHIN-FILTER CORP.
Financial Results for the Third Quarter of
the Fiscal Year Ending March 2020

First Section of
Tokyo Stock Exchange

6240

February 5, 2020

Market environment, our actions and business results in Q3 FY2019**Market environment**

- In China, which holds over 50% of the world's construction machinery market, **Chinese construction machinery manufacturers are more competitive in the improvement in quality and price, and continued to expand market share. On the other hand, the market share of our company's major clients** centered around Japanese construction machinery manufacturers **greatly shrunk.**
- The political situation in Southeast Asia remained unstable, but the demand for infrastructure was strong. Meanwhile, **the market share of our company's major clients shrunk due to the emergence of Chinese construction machinery manufacturers.**
- The demand for construction machinery in North America, Europe and Japan mostly remained strong.
- With the trade war tension between America and China reducing, and the Brexit issue coming to an end, the Chinese economy will be supported by the construction machinery market through an **increase in infrastructure investment and the special demand for new machinery in response to the fourth-phase environmental regulations.**
- With the rapid spread of the new type of coronavirus, there are increasing concerns over its impact on the world economy.

**Company actions**

Details are described in Slide 2.

- **Improvement in rate of adoption of our products by Chinese construction machinery manufacturers**
- **Advancement into the Chinese service parts market**
- **Expansion of the share in the North American market**
- **Enrichment of the filter product lineup which utilizes advanced materials and IoT technology**
- **Expansion of the air filter business**
- **Promotion of “YAMASHIN Nano Filter™” as a secondary industrial material**

Business Results in Q3 FY2019

- **Consolidated net sales: 9,186 million yen, down 13.3% year on year**
 - The sales of construction machinery filters **decreased 19.7% year on year to 8,498 million yen**, as a result of further decrease in market share of major clients in the Chinese and Southeast Asian markets as well as the effects of Typhoon Hagibis.
 - The sales of air filters started contributing in Q3, and were **687 million yen.**
- Operating income: **600 million yen, down 62.4% year on year**, due to decrease in sales and increase in expenditure for upfront investments
- **Points of the Downward Revision to the Full-year Business Forecast**
 - **Primary Factors in the Increase in Sales: Continuation of increase in adoption of genuine products by Chinese construction machinery manufacturers, adoption of new products for North America, and new product proposals resulting from technological innovation**
 - **Primary Factors in the Decrease in Sales: Further decrease in the share of several major clients in Chinese and Southeast Asian markets, further decrease in production by major clients due to the effects of Typhoon Hagibis, and increasing uncertainty in the world economy due to the rapid spread of the new type of coronavirus.**
 - **Conclusion: The primary factors in the decrease in sales had a stronger effect than that of the primary factors in the increase in sales, leading to a second downward revision to the full-year business forecast.**

Our initiatives since the forth quarter of the fiscal year ending March 2020**Hydraulic filters for construction machinery****Improvement in rate of adoption of our products by Chinese construction machinery manufacturers**

- While major clients continue to lose their shares in the Chinese market, the adoption by Chinese construction machinery manufacturers steadily increased and activities aimed at increasing adoption by Chinese construction machinery manufacturers will continue to be accelerated as a new model that will comply with the fourth-phase environmental regulations was developed.

Advancement into the Chinese service parts market

- Regarding the after-sales market after the expiration of the warranty period of Chinese construction machinery manufacturers, our company will begin the provision of service parts, and efforts will be made to further expand our market share.

Expansion of the share in the North American market

- In addition to return filters, our company's flagship products, progress is being made on new proposals for adoption of filters for fuel and transmissions.

Enrichment of the filter product lineup which utilizes advanced materials and IoT technology

- Actively offer proposals to major clients for filters boasting long life, aeration technology and sensor technology.

Improvement of the air filter business

- Start giving proposals to construction machinery manufacturers regarding the air filter products and technology developed by our group's subsidiary "AQC Corporation." Efforts will be made to strengthen the proposal offering capability and increase earnings through the enrichment of our company's filter lineup.
- For the mid-term growth of the air filter business, a new office building and a new factory were acquired with the aim of expanding the scale of production and establishing a practical technology development base.

Promotion /Utilization of YAMASHIN NANO FILTER as secondary industrial material**Promotion/Utilization for apparel**

- As our material was adopted by leading men's clothing makers, we aim to supply our products to leading apparel makers inside and outside Japan.

Promotion/Utilization for air filters

- It is expected that our products will be supplied to the largest air conditioner maker in Japan.
- We aim to differentiate our products and improve added value based on the technologies of AQC and the commercialization of the world's first 100% nano-fiber air filter utilizing the material of YAMASHIN NANO FILTER, to increase our competitiveness.

Other

- In cooperation with agricultural venture firms, we will study the possibility of using our material for keeping greenhouses warm.
- We will expand and accelerate the collaboration with enterprises in other fields, by utilizing the characteristics of materials of YAMASHIN NANO FILTER as secondary industrial material.

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and Full-Year Forecasts for FY2019**

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I Business Performance Results for Q3 FY2019 and Full-Year Forecasts for FY2019

Q3 FY2019 Business Performance (October – December 2019)



(Million yen)	Q3 FY2018 Actual	Q3 FY2019 Actual	YoY change	
	Amount	Amount	Amount	%
Net sales	3,462	3,374	△87	△2.5%
Construction machinery filters*	3,462	2,686	△775	△22.4%
Air filters	-	687	687	-
Operating income	512	212	△300	△58.6%
Construction machinery filters	512	142	△369	△72.1%
Air filters	-	69	69	-
Operating income margin	14.8%	6.3%	△8.5Pt	
Ordinary profit	482	214	△267	△55.5%
Ordinary profit margin	13.9%	6.4%	△7.6Pt	
Net income	332	158	△174	△52.4%
Net income margin	9.6%	4.7%	△4.9Pt	
Exchange rates AR* USD	112.9	108.8	△4.2	△3.7%
EUR	128.8	120.3	△8.5	△6.6%

*"Construction machinery filters" here includes industrial filters and process filters in addition to construction machinery filters.

*Average rate for 3 months from October to December

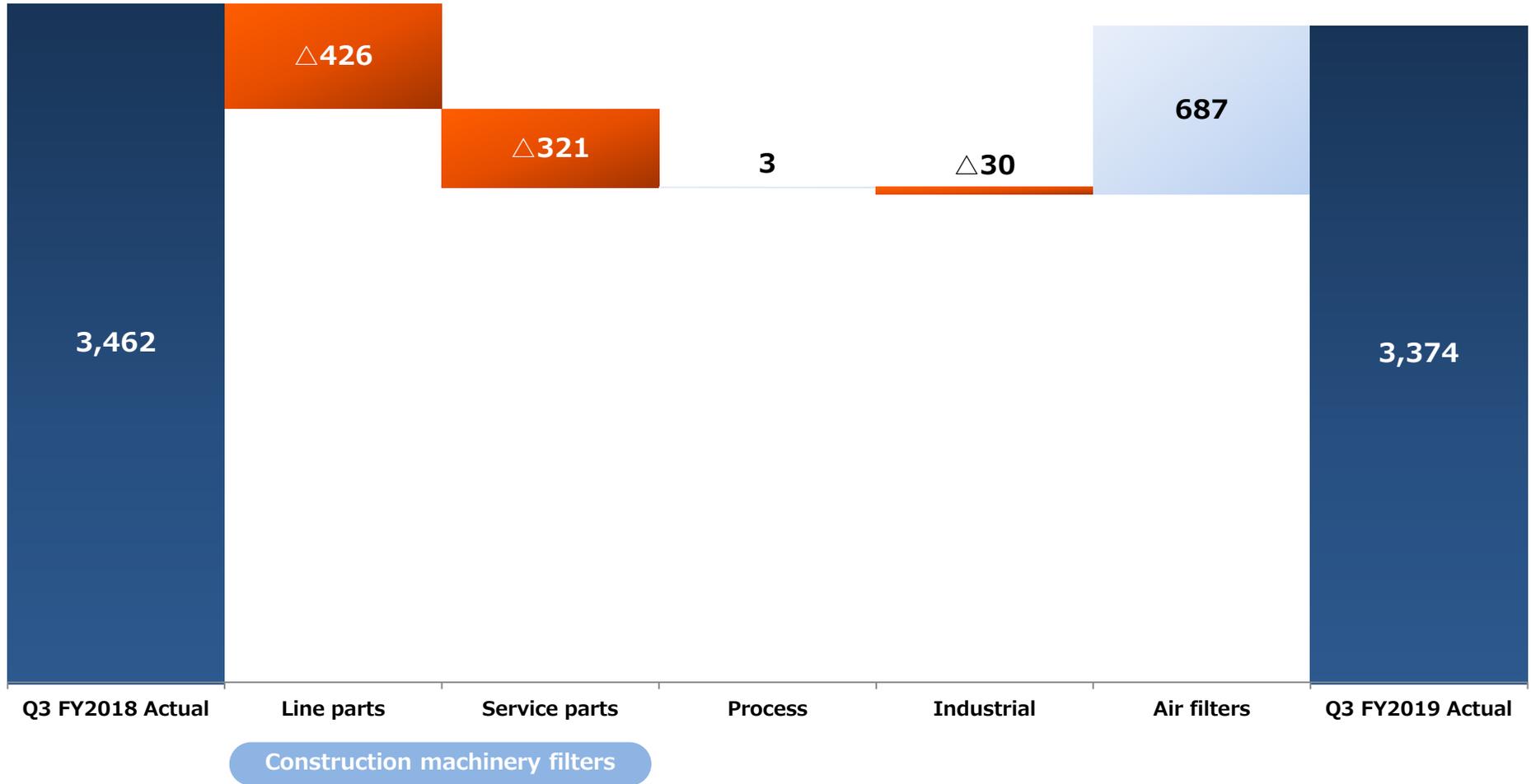
	Q2 FY2018 Actual	Q2 FY2019 Actual	YoY change	
	Amount	Amount	Amount	%
(Million yen)				
Construction machinery filters	3,084	2,336	△748	△24.3%
Line parts	1,337	910	△426	△31.9%
Service parts	1,747	1,425	△321	△18.4%
Industrial filters	146	115	△30	△21.0%
Process filters	231	235	3	1.7%
Air filters	-	687	687	-
Total sales	3,462	3,374	△87	△2.5%

(Million yen)	Q2 FY2018 Actual		Q2 FY2019 Actual		YoY change	
	Amount	Composition ratio (%)	Amount	Composition ratio (%)	Amount	Composition ratio (%)
Existing business* (Construction machinery filters) Japan	1,679	48.5%	1,230	36.5%	△449	△26.7%
North America	535	15.5%	591	17.5%	55	10.4%
China	345	10.0%	289	8.6%	△55	△16.1%
Other Asian countries	472	13.6%	311	9.2%	△160	△34.0%
Europe	427	12.4%	261	7.8%	△165	△38.7%
Others (Middle East, etc.)	1	0.0%	1	0.0%	0	△1.2%
Total of existing businesses	3,642	100.0%	2,686	79.6%	△775	△22.4%
New domestic business (Air filters)	-	-	687	20.4%	687	-
Total sales	3,462	100.0%	3,374	100.0%	△87	△2.5%

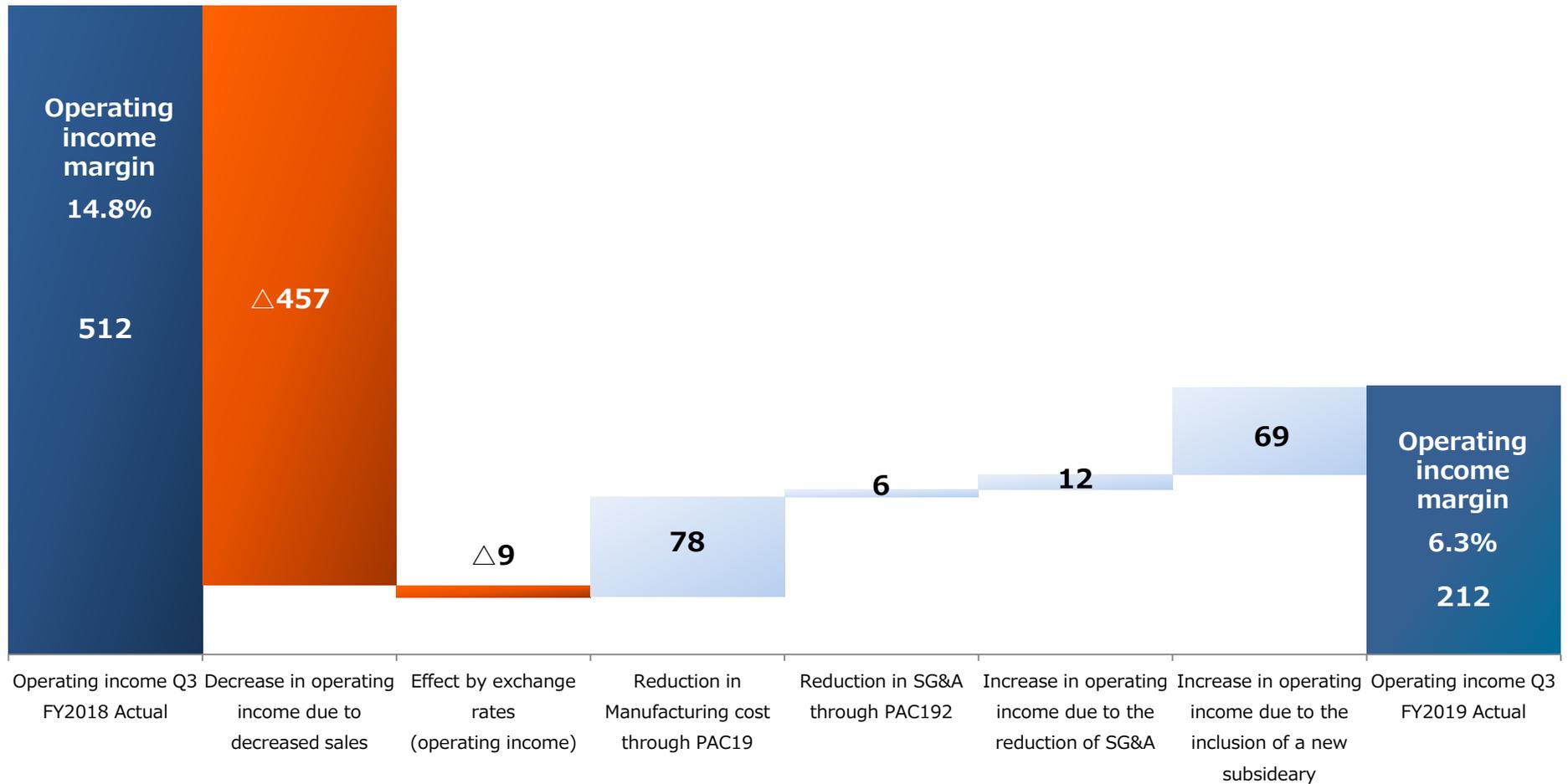
*"Existing business" here includes industrial filters and process filters in addition to construction machinery filters.

*The amounts of sales by region here are calculated based on the locations of corporations to which invoices are sent.
So actual regional market trends may be different from the numbers shown above.

(Million yen)



(Million yen)



*PAC (Promptly Activated Cost reduction): Company-wide cost reduction project

Q3 FY2019 Business Performance (April – December 2019)



(Million yen)	FY2018 Q3 Actual	FY2019 Q3 Actual	YoY change	
	Amount	Amount	Amount	%
Net sales	10,589	9,186	△1,403	△13.3%
Construction machinery filters	10,589	8,498	△2,091	△19.7%
Air filters	-	687	687	-
Operating income	1,597	600	△997	△62.4%
Construction machinery filters	1,597	531	△1,066	△66.8%
Air filters	-	69	69	-
Operating income margin	15.1%	6.5%	△8.6Pt	
Ordinary income	1,558	501	△1,057	△67.8%
Ordinary income margin	14.7%	5.5%	△9.3Pt	
Net income	1,140	345	△795	△69.7%
Net income margin	10.8%	3.8%	△7.0Pt	
Exchange rates AR* USD	111.2	108.7	△2.5	△2.3%
EUR	129.5	121.1	△8.5	△6.5%

*"Construction machinery filters" here include industrial filters and process filters in addition to construction machinery filters.

*Average rate for 9 months from April to December

	Q3 FY2018 Actual	Q3 FY2019 Actual	YoY change	
	Amount	Amount	Amount	%
(Million yen)				
Construction machinery filters	9,531	7,429	△2,102	△22.1%
Line parts	4,237	3,124	△1,113	△26.3%
Service parts	5,294	4,304	△989	△18.7%
Industrial filters	419	370	△48	△11.7%
Process filters	639	699	59	9.4%
Air filters	-	687	687	-
Total sales	10,589	9,186	△1,403	△13.3%

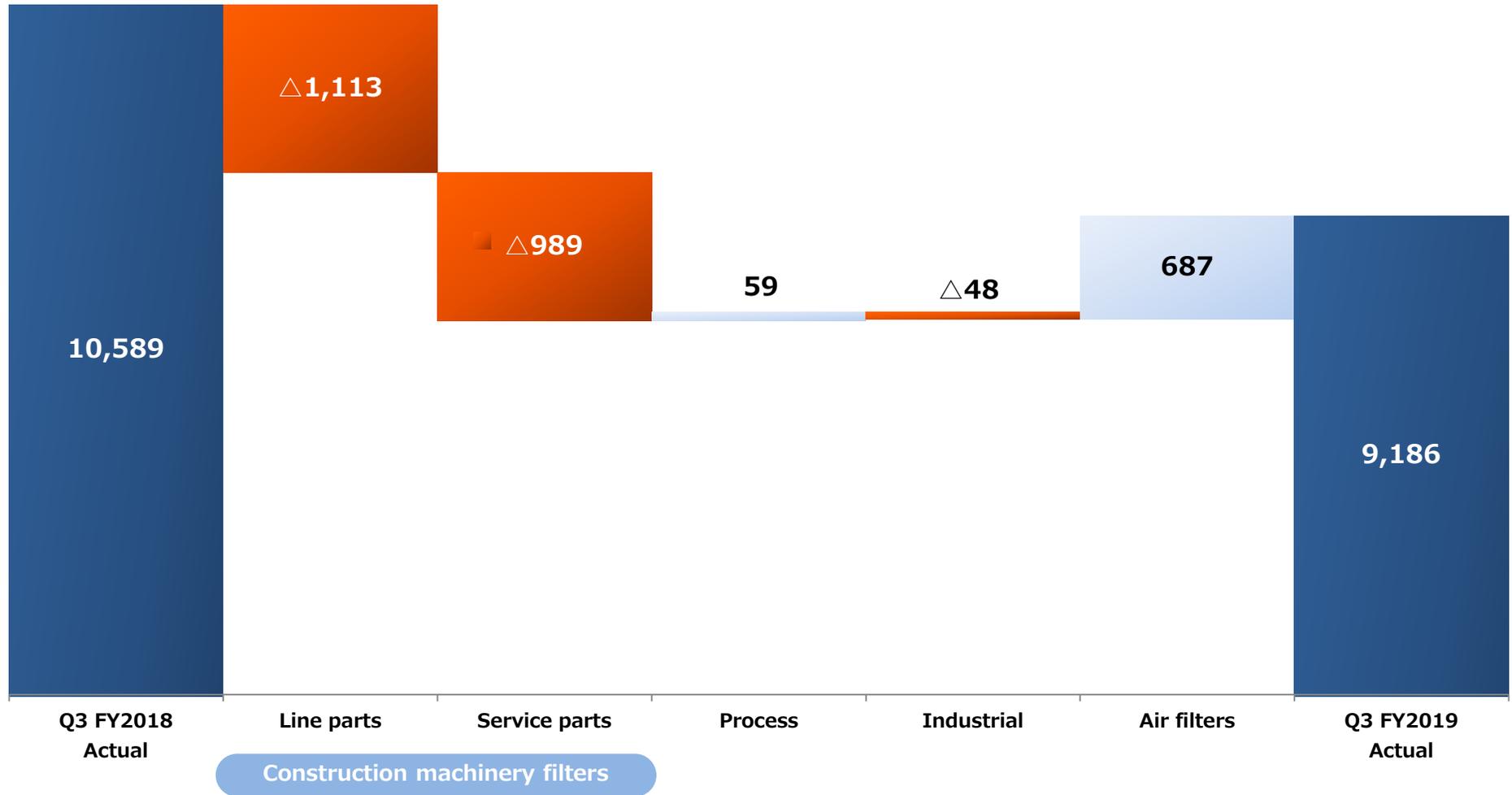
(Million yen)	Q3 FY2018 Actual		Q3 FY2019 Actual		YoY change	
	Amount	Composition ratio (%)	Amount	Composition ratio (%)	Amount	Composition ratio (%)
Existing business* (Construction machinery filters)						
Japan	5,025	47.5%	4,052	44.1%	△973	△19.4%
North America	1,700	16.1%	1,787	19.5%	86	5.1%
China	1,347	12.7%	878	9.6%	△468	△34.8%
Other Asian countries	1,390	13.1%	987	10.8%	△402	△29.0%
Europe	1,122	10.6%	789	8.6%	△332	△29.7%
Others (Middle East, etc.)	3	0.0%	3	0.0%	0	5.2%
Total of existing businesses	10,589	100.0%	8,498	92.5%	△2,091	△19.7%
New domestic business (Air filters)	-	-	687	7.5%	687	-
Total sales	10,589	100.0%	9,186	100.0%	△1,403	△13.3%

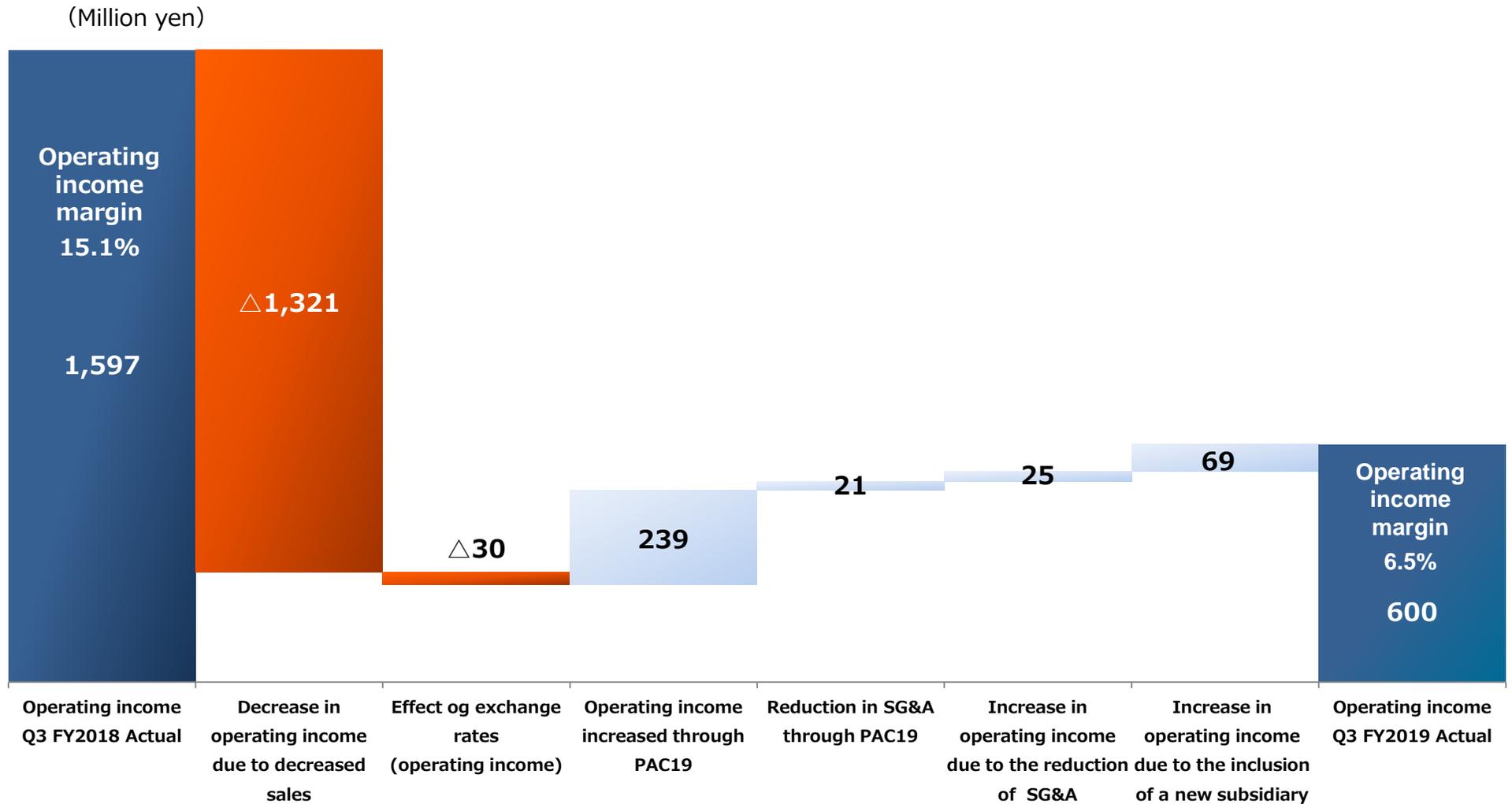
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(Million yen)

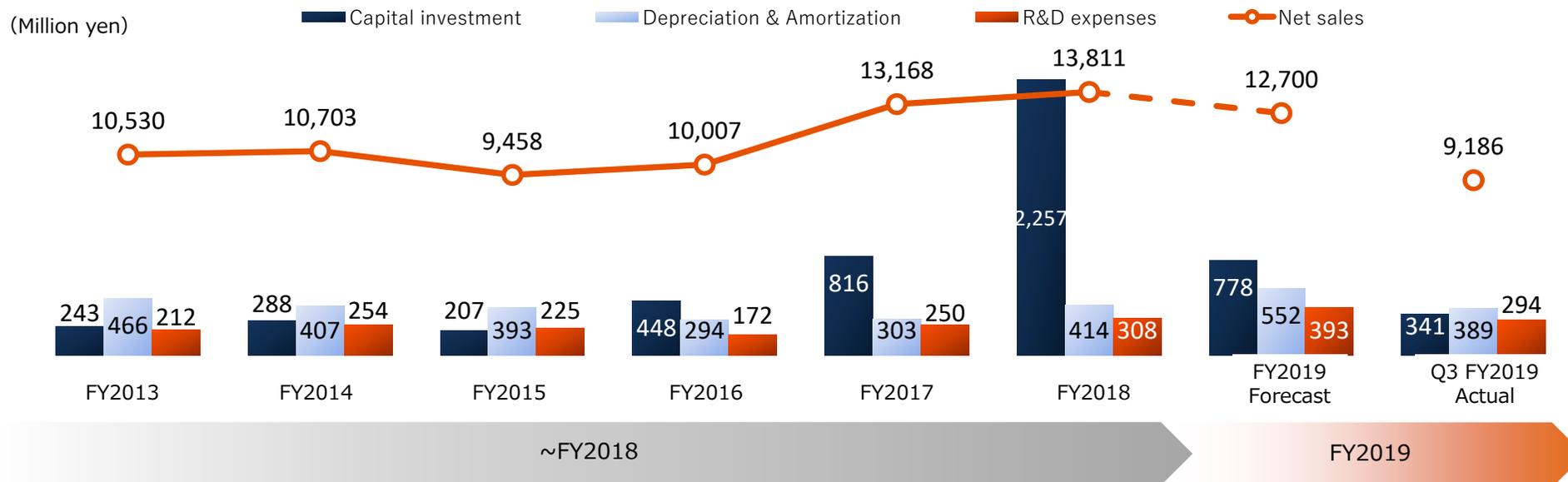




*PAC (Promptly Activated Cost reduction): Company-wide cost reduction project

	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2019 Q3
(Million yen)	Actual	Actual	Actual	Actual	Actual	Actual	Forecast	Actual
Net sales	10,530	10,703	9,458	10,007	13,168	13,811	12,700	9,186
Capital investment	243	288	207	448	816	2,257	778	341
Composition ratio	2.3%	2.7%	2.2%	4.5%	6.2%	16.3%	6.1%	3.7%
Depreciation & Amortization	466	407	393	294	303	414	552	389
Composition ratio	4.4%	3.8%	4.2%	2.9%	2.3%	3.0%	4.4%	4.2%
R&D expenses	212	254	225	172	250	308	393	294
Composition ratio	2.0%	2.4%	2.4%	1.7%	1.9%	2.2%	3.1%	3.2%

Net sales and capital investment and depreciation & amortization



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

What is MAVY'S? (ROIC – WACC)

Maximizing
Added
Value of
Yamashin Filter
Spread

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



Meet the expectations from stakeholders by improving MAVY's number (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

MAVY's: The Big Picture and the Department

*KPI figures are based on the following.
Prv : Actual value of FY2018 Q3
Cur : Actual value of FY2019 Q3+forecast:outlook

Key Goal Indicator (KGI)	Key Performance Indicator (KPI)	Key Success Factor (KSF)	Relevant Departments	Targets for FY2019 (action plan)	Q3 FY2019 progress						
MAVY's Prv: 0.0% Cur: -7.4%	Operating income margin Prv: 14.2% Cur: 6.9%	ROIC Prv: 7.8% Cur: 2.5%	WACC Prv: 7.8% Cur: 9.9%	ROE Prv: 8.1% Cur: 2.5%	ROA Prv: 6.8% Cur: 2.2%						
						Gross profit ratio Prv: 46.9% Cur: 44.8%	Sales growth ratio Prv: 4.9% Cur: -8.0%	<ul style="list-style-type: none"> New product development Enhance genuine products market share 	Sales / R&D	<ul style="list-style-type: none"> Accelerate expansion of our market share in China targeting Chinese construction machinery manufacturers Enhance product line and sales propositions due to the addition of air filters to our product lineup Enter new business areas 	<ul style="list-style-type: none"> Increased rate of adoption of new models by Chinese construction machinery manufacturers Started mass production and supply for the apparel field, and continuation of provision of proposals Progress of the proposal for hybrid filters to multiple companies Progress of commercialization of air filters for construction machinery and air conditioners
							Sales cost ratio Prv: 53.1% Cur: 56.0%	<ul style="list-style-type: none"> Enhance purchase capacity Improve yield ratio 	Production / Procurement	<ul style="list-style-type: none"> PAC19 Reform and improve purchasing methods Improve production management 	<ul style="list-style-type: none"> Revision, integration, and implementation of the evaluation standards of suppliers are expected to be completed Reduced procurement costs through joint purchase with AQC Improved yield and reduced manufacturing costs through strategic maintenance
								Depreciation and amortization ratio Prv: 2.8% Cur: 4.4%	Investment plan	Management planning / Finance and accounting	<ul style="list-style-type: none"> MA (to increase sales and stabilize business by reducing volatility) <ul style="list-style-type: none"> Acquire an air filter company (completed Aug.) Acquire nonwoven manufacturing entities (downstream) and new material development entities (upstream)
						SG&A ratio Prv: 32.7% Cur: 37.1%	R&D expense ratio Prv: 2.2% Cur: 3.1%		<ul style="list-style-type: none"> Narrowing down themes Prioritization 	R&D	<ul style="list-style-type: none"> Develop new materials Actions to achieve IoT Develop aeration and other technologies
							Personal expense ratio Prv: 13.5% Cur: 15.9%	Optimal staffing	HR and General Affairs	<ul style="list-style-type: none"> Establish and implement the talent management system 	<ul style="list-style-type: none"> Increased next-generation management personnel Increased researchers for product development Employed specialist staff members to assist company growth
						Operating capital Prv: 3.5 Cur: 5.9		AR turnover rate Prv: 4.2 Cur: 3.7	Credit management	Sales / Finance and accounting	<ul style="list-style-type: none"> Further improve AR collection rate
							Inventory turnover rate Prv: 6.6 Cur: 10.7	Set appropriate inventory level	Production / Sales	<ul style="list-style-type: none"> Reduce company-wide inventory asset 	<ul style="list-style-type: none"> Have determined appropriate inventory amounts to execute reduction plans based on the Pareto analysis of inventory assets
							AP turnover ratio Prv: 5.2 Cur: 5.2	Debt management	Procurement	<ul style="list-style-type: none"> Improve working capital 	<ul style="list-style-type: none"> Optimized AP turnover rate to improve working capital
						FA turnover rate Prv: 3.0 Cur: 2.4	Tangible FA turnover rate Prv: 5.3 Cur: 3.3	Equipment plan (R&D, production)	Management planning Administration / Production / R&D	<ul style="list-style-type: none"> Optimize investment recovery effect 	<ul style="list-style-type: none"> Prioritized R&D investments based on the analysis of appropriateness of the period for earning revenue from investments
							Intangible FA turnover rate Prv: 36.4 Cur: 35.6	Investment plan Intellectual property strategy	Management planning/Legal (IP)	<ul style="list-style-type: none"> Formulate IP strategies and action plans 	<ul style="list-style-type: none"> Formulated strategies and action plans and strengthen training of related staff Actively acquired patents in the Chinese market

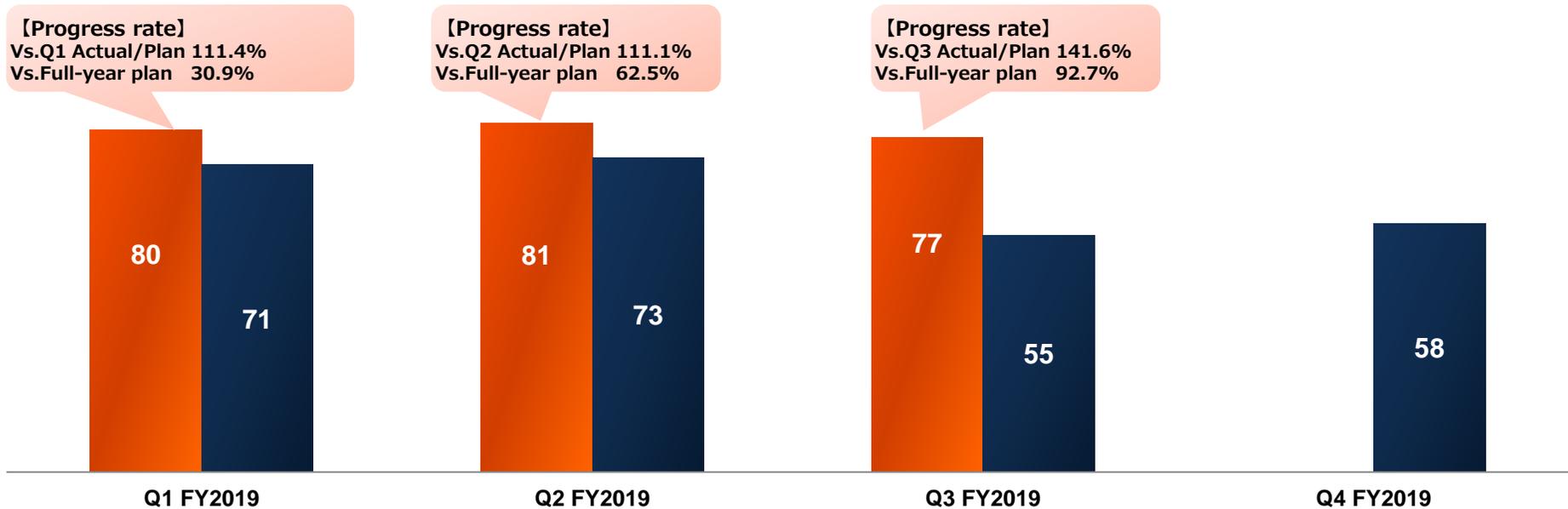
- Implement comprehensive improvements in production technology, operation management and systems to strengthen the profit structure.



Cost of raw materials decreased, through the reform of the supply chain, the improvement of manufacturing processes, etc.

(Million yen)

■ Actual ■ Plan



Full-year Forecasts for FY2019



	FY2018 Actual	FY2019 Initial forecasts	FY2019 Revised forecasts (Announced Nov.6)	FY2019 Revised forecasts (Announced Feb.5)	FY2019 Initial forecasts vs. Revised forecasts
	Amount	Amount	Amount	Amount	Amount
(Million yen)					
Net sales	13,811	13,000	13,400	12,700	△300
Construction machinery filters*	13,811	13,000	12,000	11,300	△1,700
Air filters	-	-	1,400	1,400	1,400
Operating income	1,963	1,650	1,250	880	△770
Construction machinery filters	1,963	1,650	1,120	750	△900
Air filters	-	-	130	130	130
Operating income margin	14.2%	12.7%	9.3%	6.9%	5.8Pt
Ordinary income	1,915	1,600	1,135	685	△915
Ordinary income margin	13.9%	12.3%	8.5%	5.4%	△6.9Pt
Net income	1,413	1,100	800	460	△640
Net income margin	10.2%	8.5%	6.0%	3.6%	△4.8Pt
Exchange rates AR* USD	110.9	108.0	108.0	108.0	-
EUR	128.4	130.0	130.0	130.0	-

**“Construction machinery filters” here include industrial filters and process filters in addition to construction machinery filters.

Forecasts for Segment Information (by Product)

	FY2018 Actual		FY2019 Initial forecasts		FY2019 Revised forecasts (Announced Nov.6)		FY2019 Revised forecasts (Announced Feb.5)		FY2019 Initial forecasts vs. Revised forecasts	
	Amount (Million yen)	Composition ratio (%)	Amount (Million yen)	Composition ratio (%)	Amount (Million yen)	Composition ratio (%)	Amount (Million yen)	Composition ratio (%)	Amount (Million yen)	Composition ratio (%)
Construction machinery filters	12,353	89.4%	11,543	88.8%	10,511	78.5%	9,905	78.0%	△1,637	△14.2%
Line parts	5,535	40.1%	5,062	38.9%	4,550	34.0%	4,167	32.8%	△894	△17.7%
Service parts	6,817	49.3%	6,481	49.9%	5,961	44.5%	5,738	45.2%	△742	△11.5%
Industrial filters	548	4.0%	572	4.4%	537	4.0%	479	3.8%	△92	△16.1%
Process filters	909	6.6%	883	6.8%	950	7.1%	914	7.2%	31	3.6%
Total of existing businesses	13,811	100.0%	13,000	100.0%	12,000	86.9%	11,300	89.0%	△1,700	△13.1%
New business (air filters)	-	-	-	-	1,400	10.4%	1,400	11.0%	1,400	-
Total sales	13,811	100.0%	13,000	100.0%	13,400	100.0%	12,700	100.0%	△300	△2.3%

Forecasts for Segment Information (by Region)

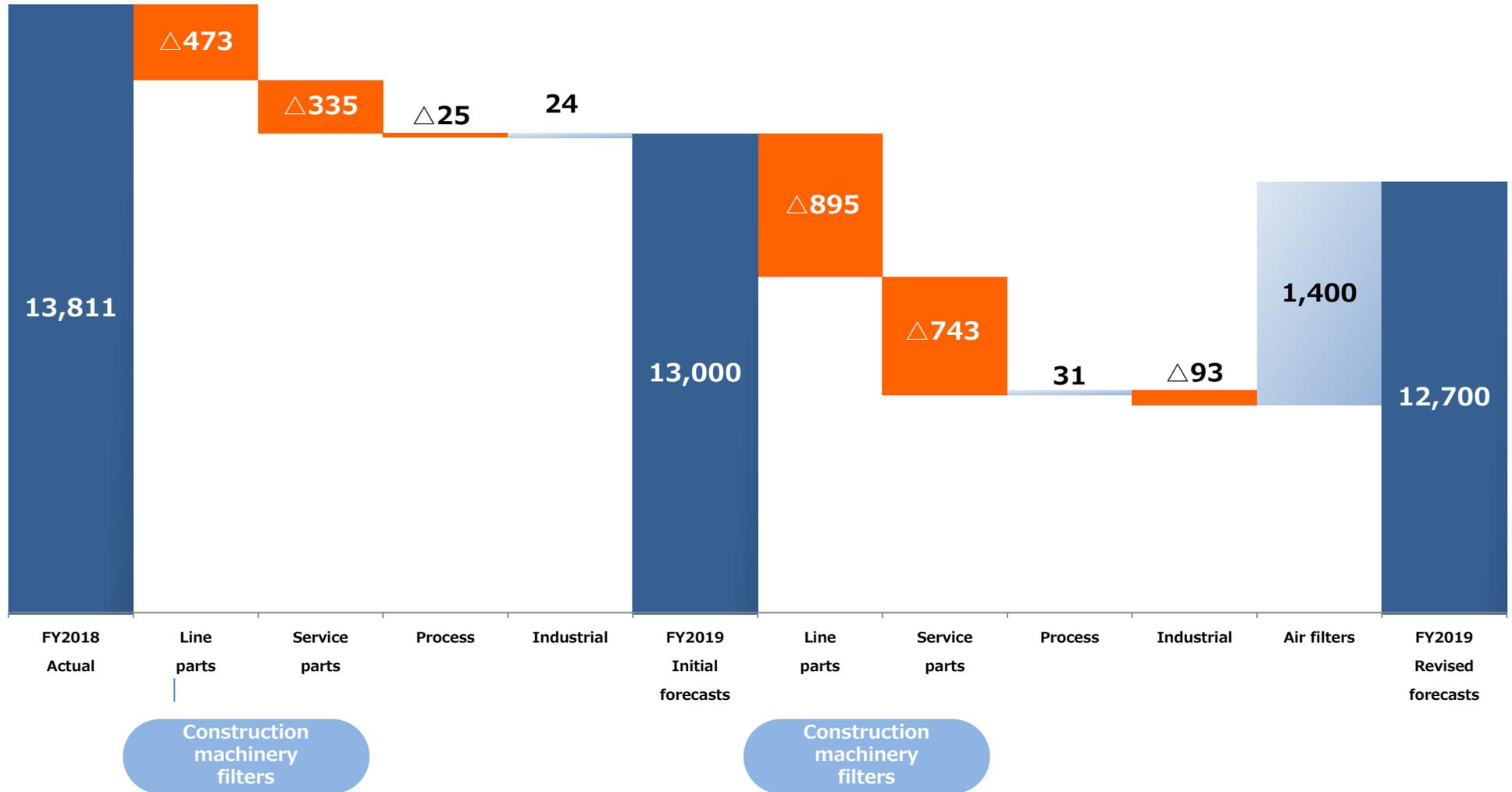
	FY2018 Actual		FY2019 Initial forecasts		FY2019 Revised forecasts (Announced Nov.6)		FY2019 Revised forecasts (Announced Feb.5)		FY2019 Initial forecasts vs. Revised forecasts	
	Amount (Million yen)	Composition ratio (%)	Amount (Million yen)	Composition ratio (%)	Amount (Million yen)	Composition ratio (%)	Amount (Million yen)	Composition ratio (%)	Amount (Million yen)	Composition ratio (%)
Existing business* (Construction machinery filters) Japan	6,541	47.5%	6,058	46.6%	5,723	42.7%	5,324	41.9%	△733	△12.1%
North America	2,253	16.3%	2,438	18.8%	2,451	18.3%	2,350	18.5%	△87	△3.6%
China	1,813	13.1%	1,480	11.4%	1,229	9.2%	1,217	9.6%	△262	△17.8%
Other Asian countries	1,741	12.6%	1,694	13.0%	1,498	11.2%	1,356	10.7%	△337	△19.9%
Europe	1,454	10.5%	1,298	10.0%	1,087	8.1%	1,036	8.2%	△261	△20.1%
Others (Middle East, etc.)	6	0.0%	29	0.2%	11	0.1%	14	0.1%	△14	△49.6%
Total of existing businesses	13,811	100.0%	13,000	100.0%	12,000	89.6%	11,300	89.0%	△1,700	△13.1%
New domestic business (Air filters)	-	-	-	-	1,400	10.4%	1,400	11.0%	1,400	-
Total sales	13,811	100.0%	13,000	100.0%	13,400	100.0%	12,700	100.0%	△300	△2.3%

*"Existing business" here include industrial filters and process filters in addition to construction machinery filters.

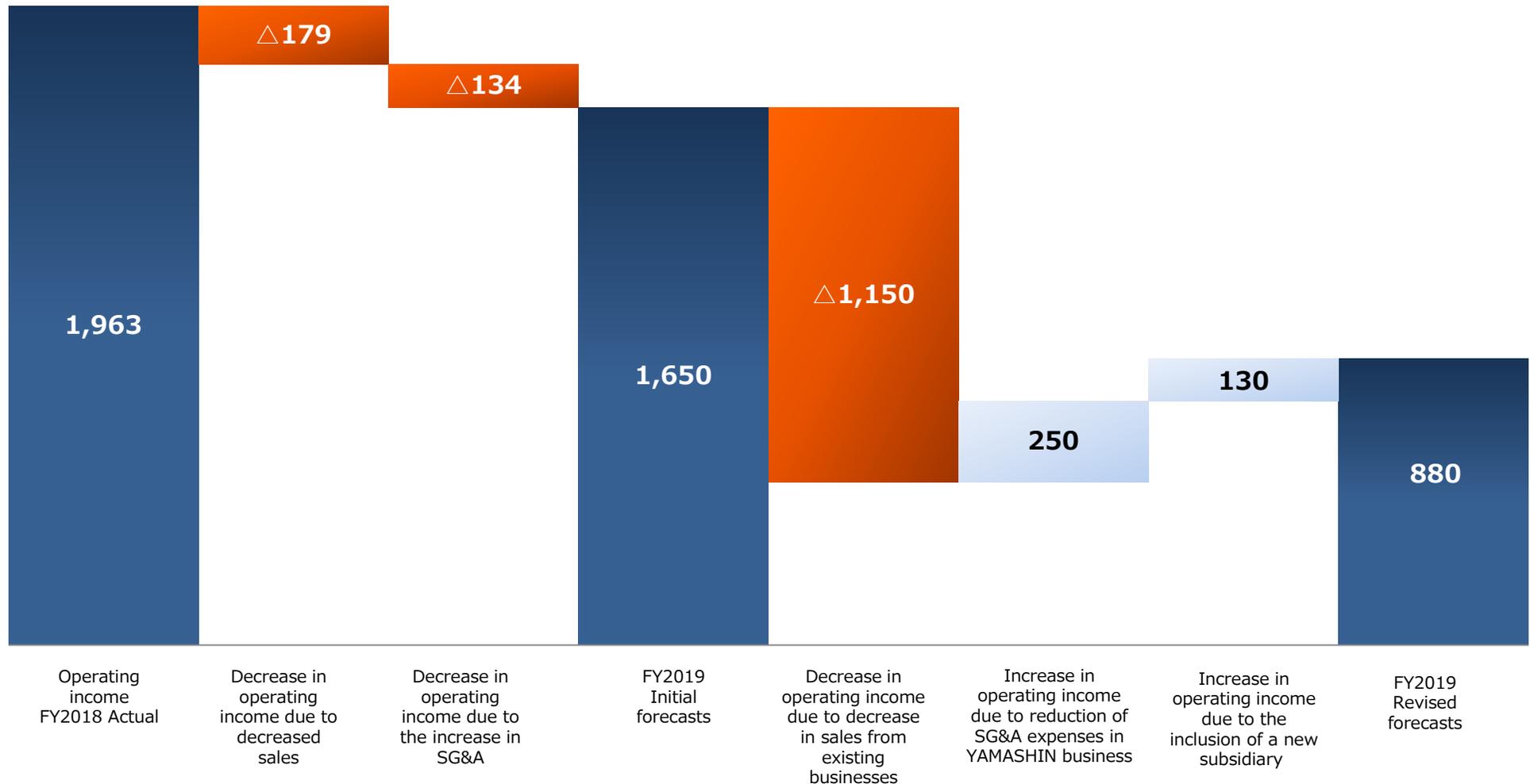
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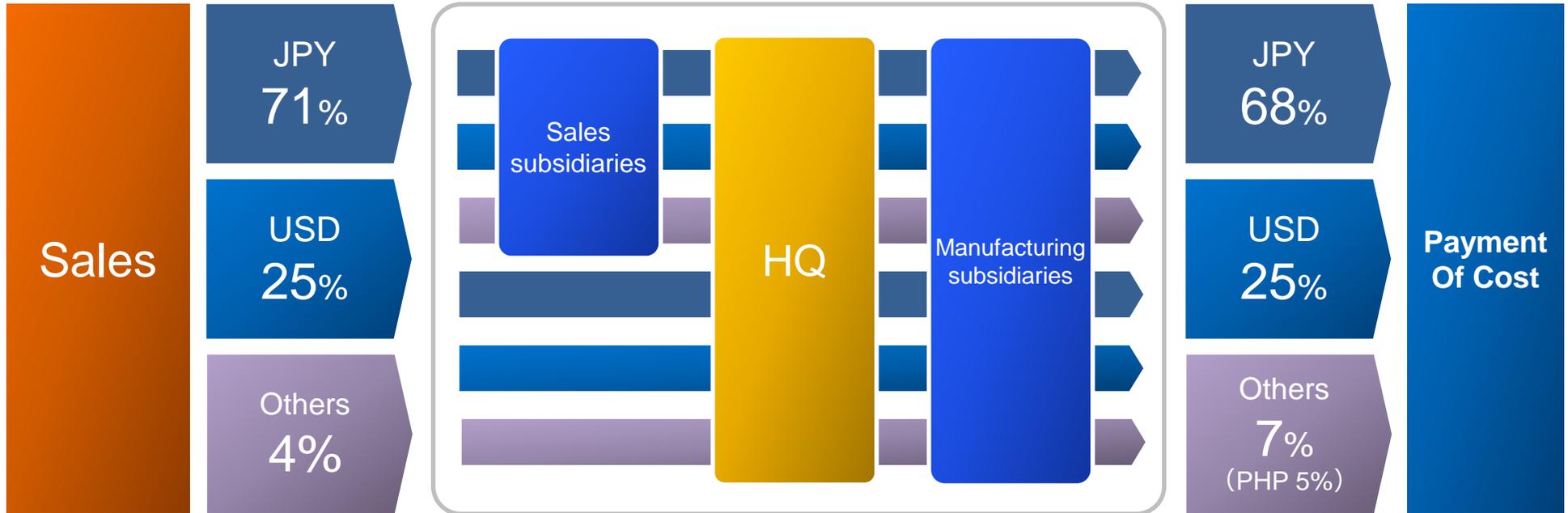
(Million yen)



(Million yen)



Operational hedge “marry and netting” was continuously conducted, achieving a foreign exchange sensitivity of 0.5%.



70% of transaction currency is JPY.

Operational hedge “marry and netting” was conducted for USD

- 1-yen appreciation of the yen would decrease operating income about 0.3 million yen.

The annual dividend, including 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.

	FY2016	FY2017	FY2018	FY2019 Forecasts
Dividend per share	2.4yen* ¹	3.6yen* ¹	6.0yen	6.0yen
DOE	2.3%	1.9%	2.4%	2.3%
Total return ratio* ²	25.6%	21.6%	31.9%	96.6%

Note) The Company conducted a 5-for-1 stock split that became effective on December 1, 2017.

*1 For the dividends for FY2016 and FY2017, the amounts shown as a reference value are calculated based on the above stock split.

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



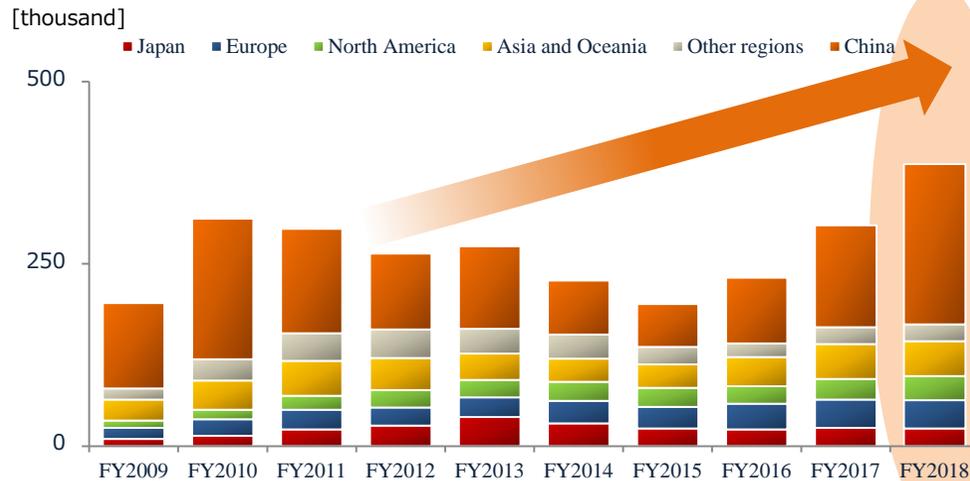
II Conditions in the Construction Machinery Market

- While the slowdown of the Chinese economy was reported, the government carried out public investment as a countermeasure.
- In the Chinese market, which occupies over 50% of the global construction machinery market, the shares of our major clients kept shrinking, the production plan for new construction machinery was revised downwardly, and the amount of stocks of service parts were adjusted to the minimum level.

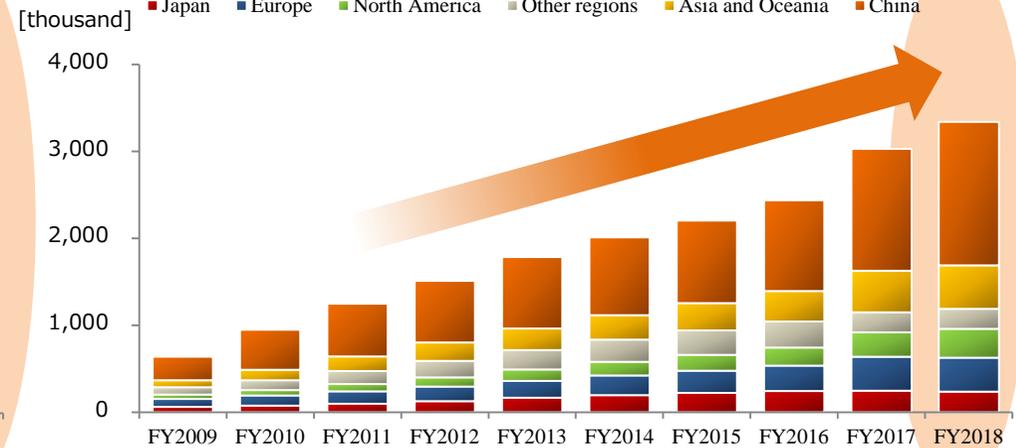
	Q2 FY2019	Q3 FY2019	Future outlook
China	<p>The economy was healthy thanks to the expansion of infrastructure investment.</p> <p>Rise in the market shares of Chinese Construction machinery manufacturers</p>	<p>The economy was healthy thanks to the expansion of infrastructure investment.</p> <p>Rise in the market shares of Chinese construction machinery manufacturers continued.</p>	<p>The government will keep supporting public investment. There will be extraordinary demand due to Tier 4 environmental regulations</p> <p>Risk of spread of nCoV</p>
Southeast Asia	<p>Demand declined temporarily due to the national elections.</p> <p>Rise in the market shares of Chinese Construction machinery manufacturers</p>	<p>The latent demand for infrastructure construction, etc. was healthy.</p> <p>Rise in the market shares of Chinese construction machinery manufacturers continued.</p>	<p>The latent demand for infrastructure construction, etc. will be healthy.</p>
North America	<p>Demand was healthy, although there are concerns over the trade friction between the U.S. and China.</p>	<p>The concerns over the U.S.-China trade friction weakened in a short period of time.</p> <p>Demand remained healthy.</p>	<p>Demand is expected to be healthy.</p>
Japan	<p>Capital investment and public investment on an upward trend.</p> <p>Demand was unchanged from the previous year.</p>	<p>Capital investment and public investment on an upward trend.</p> <p>Demand was unchanged from the previous year.</p>	<p>Demand is estimated to be unchanged from the previous year.</p>
Europe	<p>Demand was healthy, although there remained uncertainties about Brexit.</p>	<p>The uncertainty over the Brexit was dispelled.</p> <p>Demand shrank slightly.</p>	<p>Demand is expected to be healthy.</p>

Chinese exhaust gas regulations (Tier 4) and the healthy variation in demand for new construction machinery

Demand for new construction machinery



Cumulative No. of construction machinery in operation

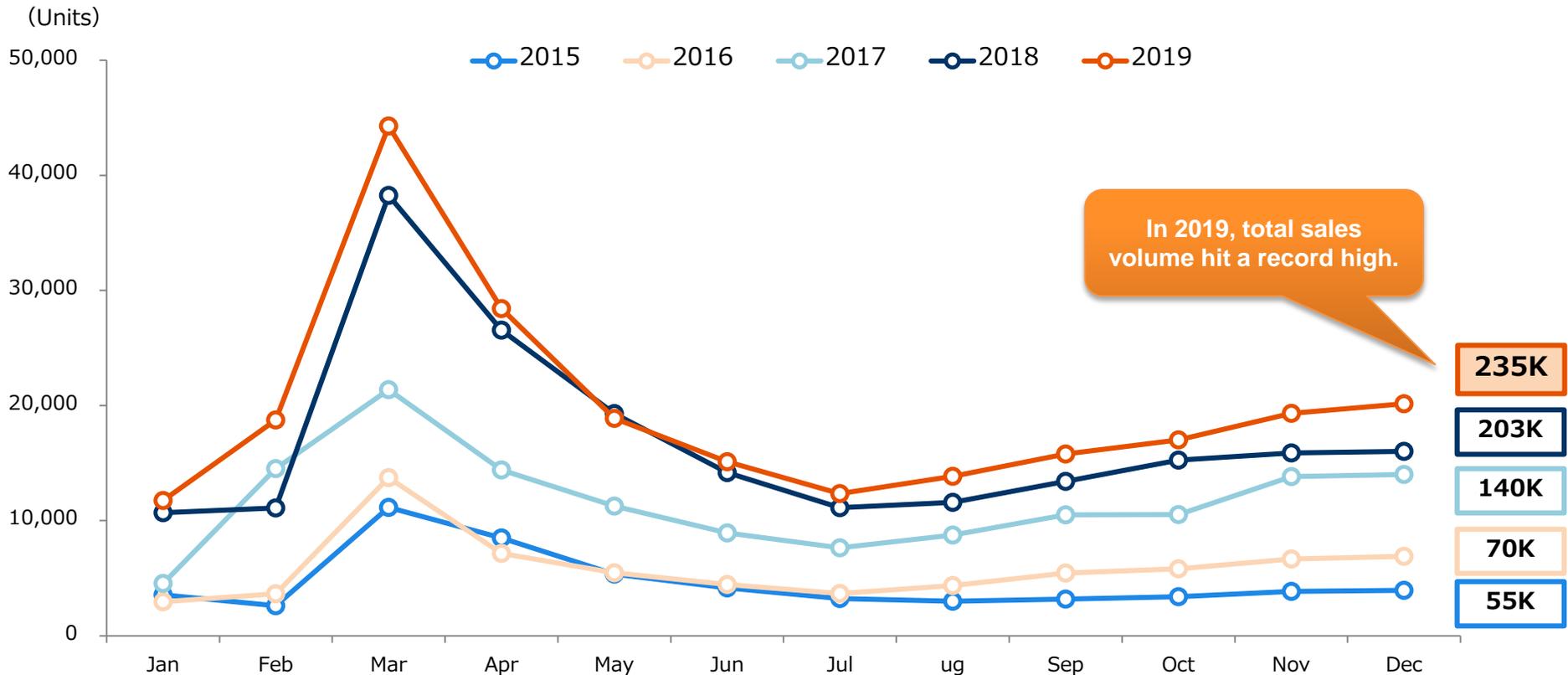


(Estimated by our company from the data announced by construction machinery manufacturers and industry associations.)

- The demand for new construction machinery in mainly China and Southeast Asia is expected to be healthy in the current and next terms, as demand for construction and resources is strong.
- As the cumulative number of construction machinery in operation will increase, it is estimated that the after-sales market will thrive.

The construction machinery demand in China remains strong this fiscal year.

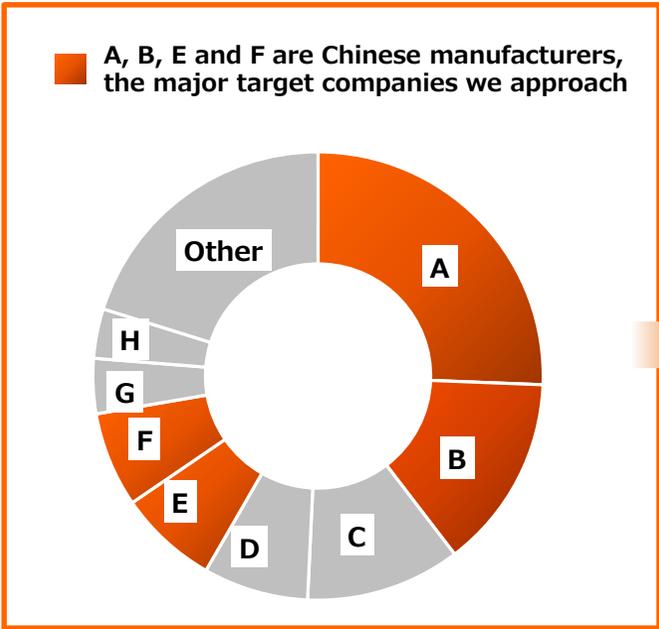
Sales by fiscal year (monthly)



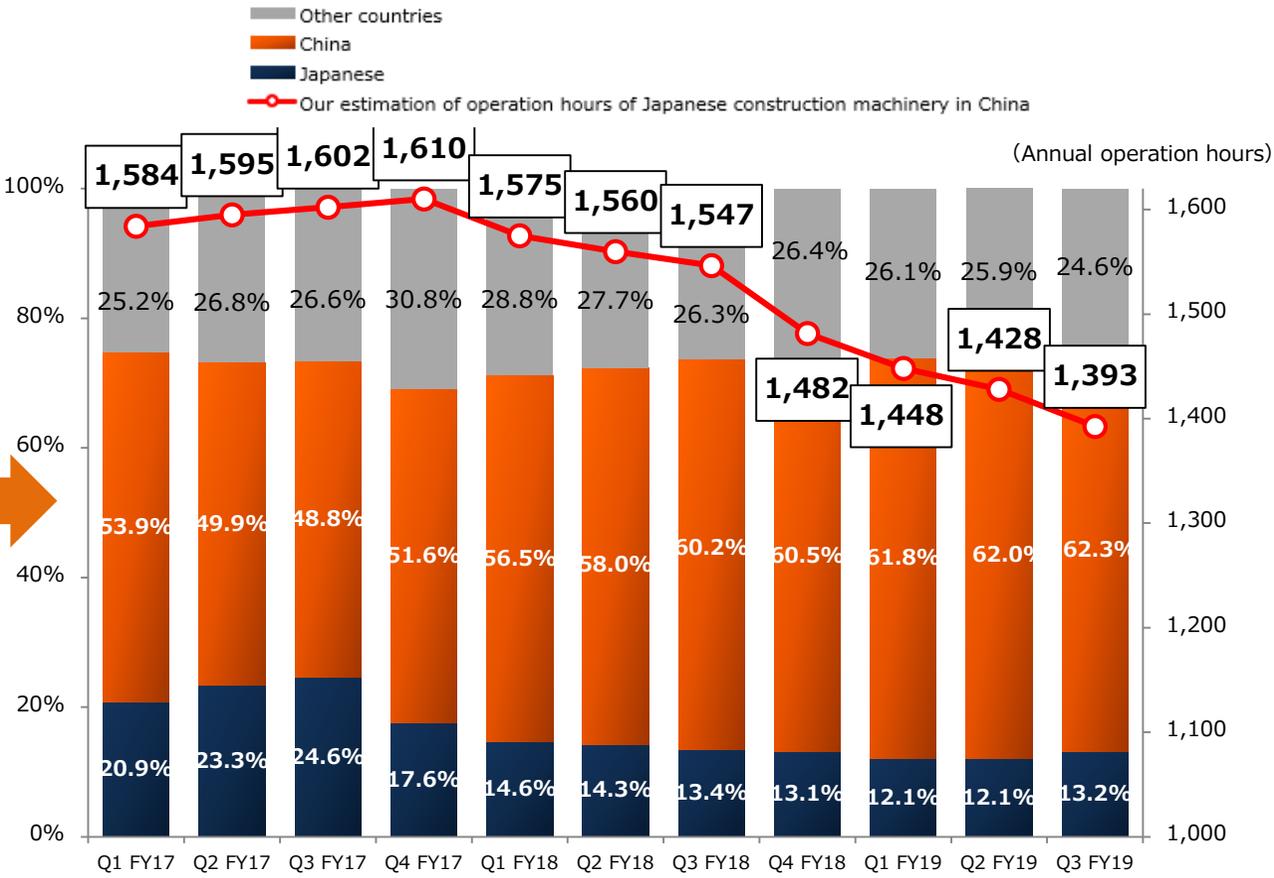
(YAMASHIN's estimates based on the data published by construction machinery manufacturers and industry associations)

Market shares of Japanese manufacturers dropped while those of Chinese manufacturers in the mainland of China increased.

Main construction machinery manufacturers' market share in the Chinese market



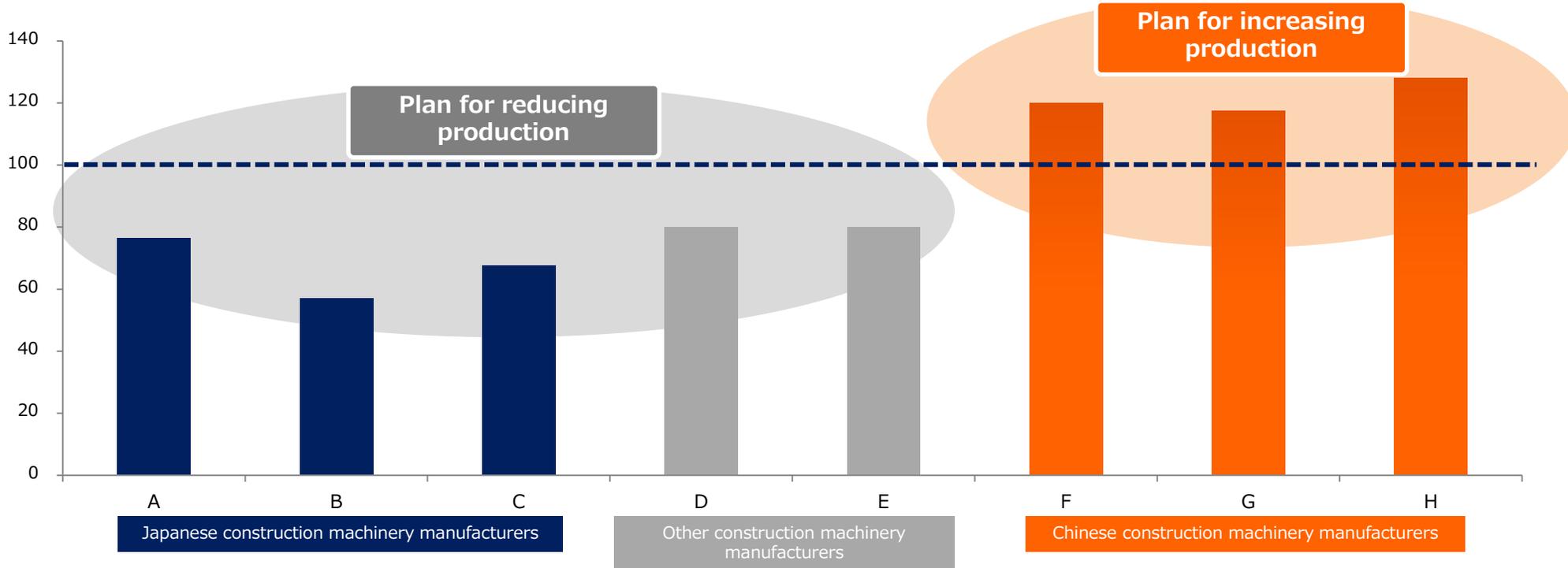
Variations of market share in China



All of Japanese and other manufacturers plan to reduce production, while Chinese construction machinery manufacturers plan to increase production considerably.

Change (%) of production plans at factories of major construction machinery manufacturers in the Chinese and other Asian markets

(Change in %)



YAMASHIN's estimates based on the data published by construction machinery manufacturers and industry associations. It is assumed that the result in the previous term is 100.

Make more proposals to Chinese construction machinery manufacturers to acquire more market shares

Plan for expanding sales of line parts

Scale of the Chinese market
About 4.4 billion yen

Plan for expanding sales of service parts

Scale of the Chinese market
About 8.4 billion yen

- Increased need for the adoption of our products
 - ◆ Trend continues on expanding infrastructure investment by the Chinese government
 - ◆ Increased need for our original technology in conjunction with 4th-phase environmental regulations (to be enforced in Dec. 2020 or later)
 - ◆ Consumer sentiment of end users are changing from price to quality
 - ◆ Significant expansion of after-sales market following an increase in the cumulative number of new machines sold
 - ◆ Increased need for global suppliers as Chinese construction machinery manufacturers are entering overseas market



Initiatives for expanding sales of line parts

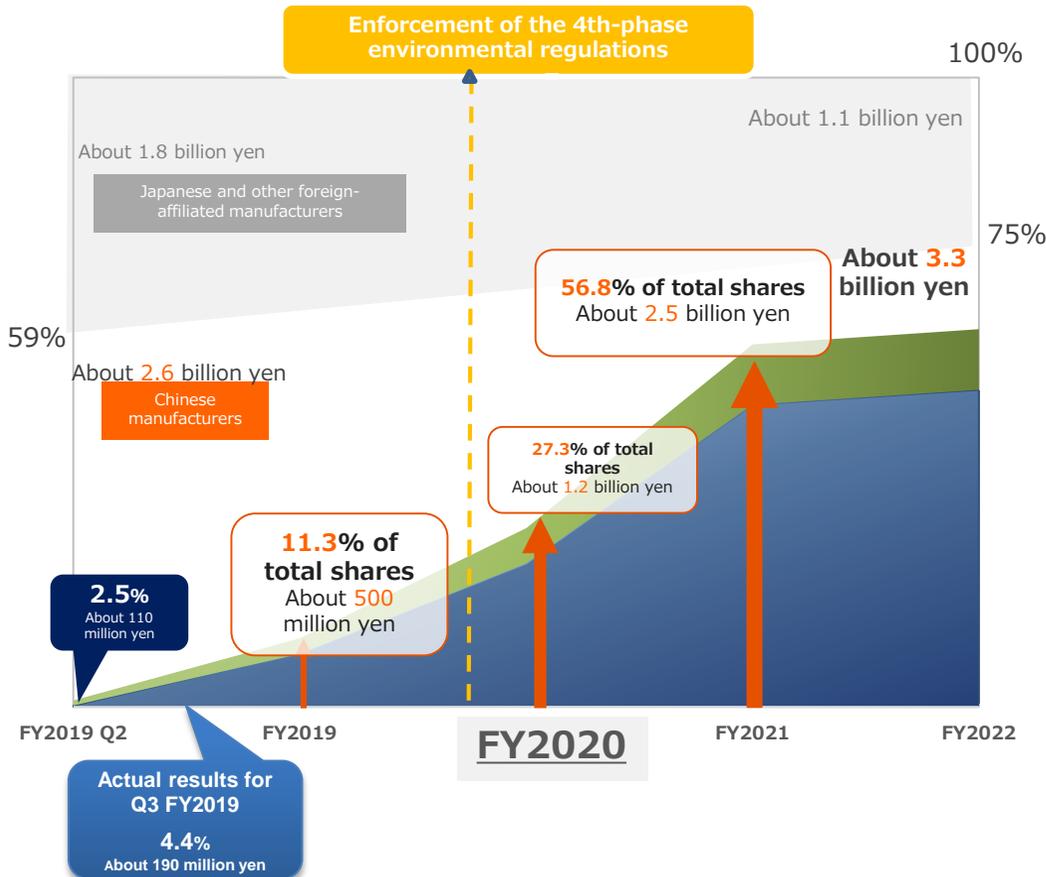
- ◆ Add more product line-up and price strategy
- Supply products with high added value (longer durability and IoT)
- Deploy price strategies to sell more existing products

Initiatives for expanding sales of service parts

- ◆ Deploy market strategies taking advantage of our brand value
- After the manufacturers' warranty periods end, we will directly trade.// with agencies.

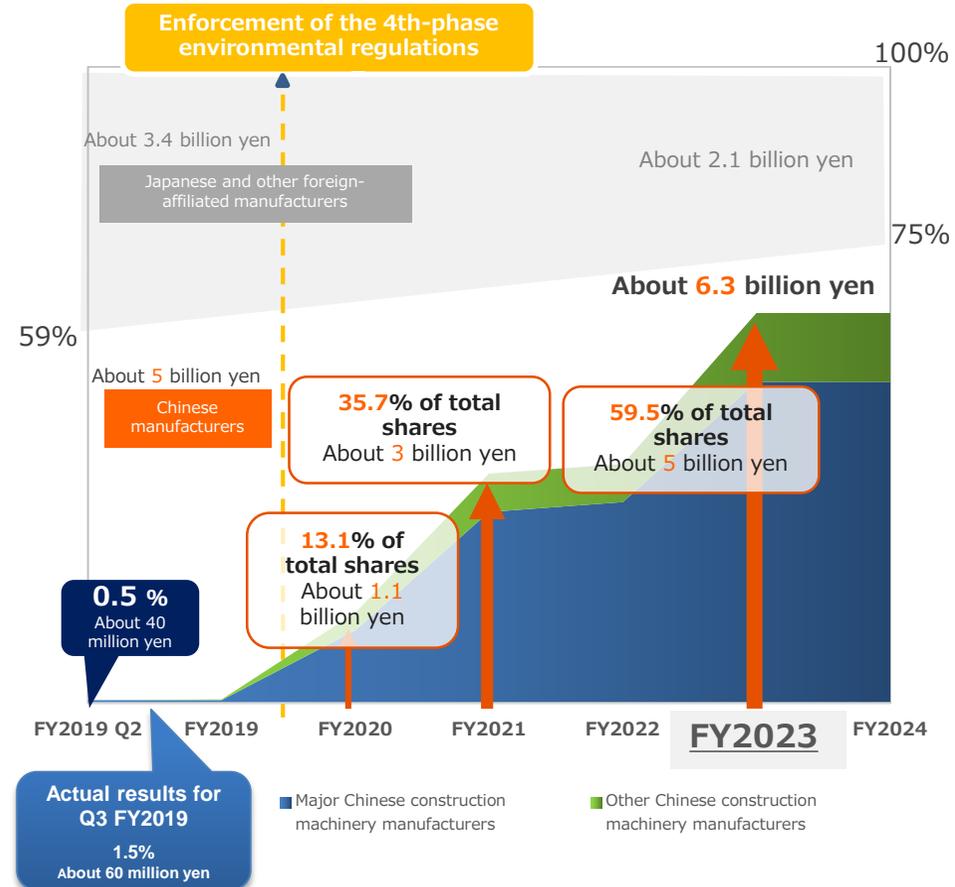
Plan for expanding sales of line parts in China

Line parts market size in China
About 4.4 billion yen



Plan for expanding sales of service parts in China

Service parts market size in China
About 8.4 billion yen



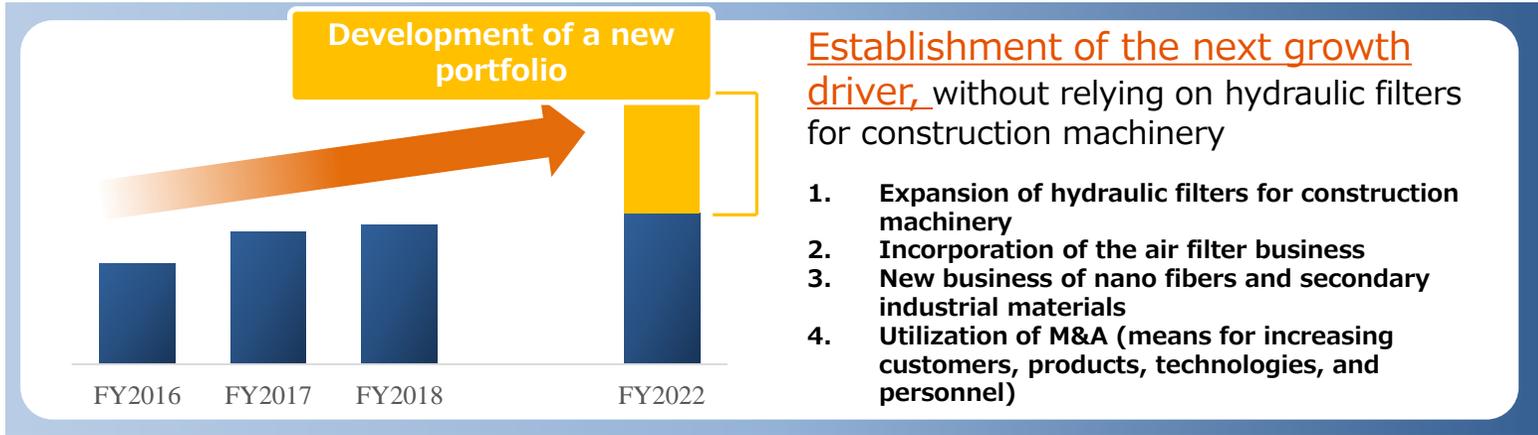
*Share: Sales ratio (to be) occupied by our products in the Chinese market



III Future Strategies

Exponential growth from a specialized filter manufacturer to a comprehensive filter manufacturer

Expansion of our business portfolio



Improvement in profitability

Establishment of multiple production systems
Reestablishment of a global supply chain

1. Cost reduction with PAC
2. Large-scale investment in R&D facilities
3. Investment in development of production facilities and optimization of distribution facilities in major markets

We aim to realize a market cap of 1 trillion yen and net sales of 100 billion yen.

Improvement in added value with new materials and technologies

<Construction machinery market>
Increase of our market share by improving added value

Operation hours, 3 times

Hybrid filter
Glass fiber × Nano fiber



- Lifespan 3 times longer than conventional products'
- Reduction of waste and lengthening of lifespan of construction machinery

System for preventing aeration

Smart Tank

- To inhibit the formation of air bubbles inside hydraulic circuits of construction machinery
- Tests with actual devices are being held in cooperation with clients.

Actualization of failure prediction with IoT

Purity level sensor

- Measurement of purity levels of oil and water
- Low cost
- Compact design

SWIFTROCK™

Life sensor

- Stepwise monitoring of clogging of filters

Effects of integration

Air filters for construction machinery



- To not only supply filters for construction machinery, but also air filters for construction machinery

<Other business categories>
Promotion of new materials



A mass production method established in 2017

- We possess the original technology of forming a 3D structure or a sheet with fibers that are 10 times thinner than general synthetic fibers.
- Excellent in (1) thinness, (2) heat retention, and (3) moisture control, and it is possible to expand the business domain by supplying materials.

Establishment of a specialized sales division and increase of manufacturing lines, to cultivate new markets

We will enrich our product lineup through close communication with clients,

strive to improve the satisfaction level and trust of clients, and stir demand for products.

① A material for clothes



[Results]

- Adopted as the lining material of coats by 2 leading men's clothing makers in Japan

[Targets in development]

- Improvement in comfort by enhancing the stretch property
- Prevention of heat-caused shrinkage
- Pursuit of lightness

② Domestic appliance makers



[Requirements]

- Replace glass fiber filters

[Targets in development]

- Pursuit of further improvement in more dense collections of fibers and fiber fineness (smaller diameter)
- Improvement in ambient temperatures during fiber production
- Electric processing for long-life air filters

③ Major auto interior parts makers



[Requirements]

- Development of materials that exceed the performance of the existing products only effective for lower frequencies

[Targets in development]

- Strengthening cost competitiveness
- Developing a mass production supply system
- Considering specific processes and management methods for product development

④ Major building materials makers



[Requirements]

- Heat insulating and cooling properties superior to existing materials

[Targets in development]

- Pursuit of lightness
- Addition of added value, including antibacterial and deodorant features
- Production of prototypes and continuous collection of experiment data

Establishment of an integrated R&D system and multiple production systems

Construction of a new R&D center (Yokosuka City)



R&D functions of Yokohama Development Center, Saga Office, and Yokosuka Media Lab will be integrated.

(to be completed in 2022)

To establish facilities for tests with actual devices, to respond to customer needs swiftly



Review and restructuring of production facilities

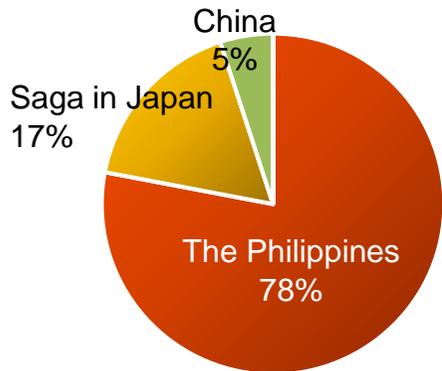


We will review the production structure that considerably relies on the facility in the Philippines, and conduct restructuring to achieve a structure for supplying products stably and efficiently.
We will link the functions for development, production and product supply appropriately, while reviewing existing facilities.

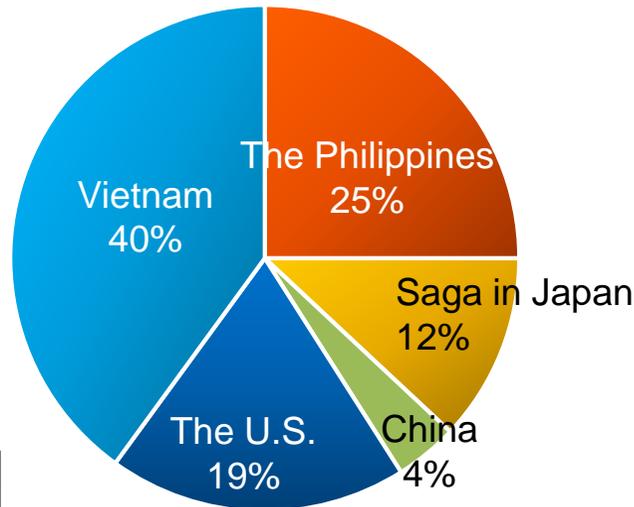
Establishment of a multi-production structure

Plan for revising the production output ratio of each factory

Actual results for FY2018



Plan for FY2023



Production capacity will increase about three times.



[Vietnam]
Thang Long Industrial Park 3 in Hanoi
To be completed in Apr. 2021.
Mass-production is scheduled to start in Oct. 2021.



[Saga]
Plan is in progress to enlarge the factory to start mass production in Jul. 2021.



[The U.S.]
Mass-production with EMS is scheduled to start in Mar. 2020.



[China]
In operation

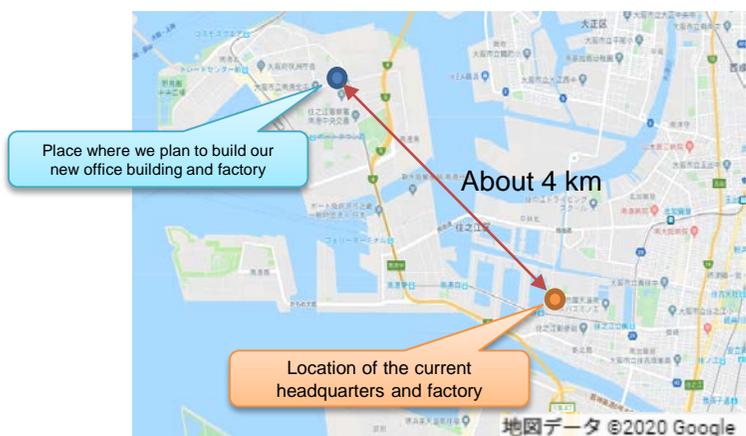


[The Philippines]
In operation

- We aim to improve the ratio of local procurement of materials and optimize manufacturing cost, to maximize profits.
- We will deconcentrate production sites as part of our business continuity plan (BCP).

Acquisition of a new foothold for the air filter business

- To increase the production of new products and develop applied technologies using YAMASHIN NANO FILTER™
- To contribute to the increase of revenue in AQC and stable performance of the Yamashin Group



Full view of Sakishima
(Source: Port and Harbor Bureau of Osaka City)

Location	1-2-29 Nanko-kita, Suminoe-ku, Osaka-shi, Osaka
Land	11,900.02m ²
Building	Five-story reinforced concrete structure (Total floor area) 11,180.25m ²
Date of conclusion of the contract for real estate sale	Tuesday, February 4, 2020
Date of handover of real estate	Scheduled on Friday, February 28, 2020
Acquisition price	Not disclosed (less than 30% of the consolidated net assets as of the last day of FY2018; determined considering the market price)

*For details, please see "Notice Regarding Acquisition of Fixed Assets by Consolidated Subsidiary" dated Jan. 28, 2020.

Accelerating evolution from our status as the specialist in filters for construction machinery toward a multi-field filter manufacturer



Air filters



(sales, production)

Construction machinery

YCF
(production)

YAI
(sales, production)

YTL
(sales)

YEB
(sales)

YST
(sales, R&D)

**Nanofiber industrial
Subsidiary materials**

Apparel

Home electronics

Automotive Interiors

Living products

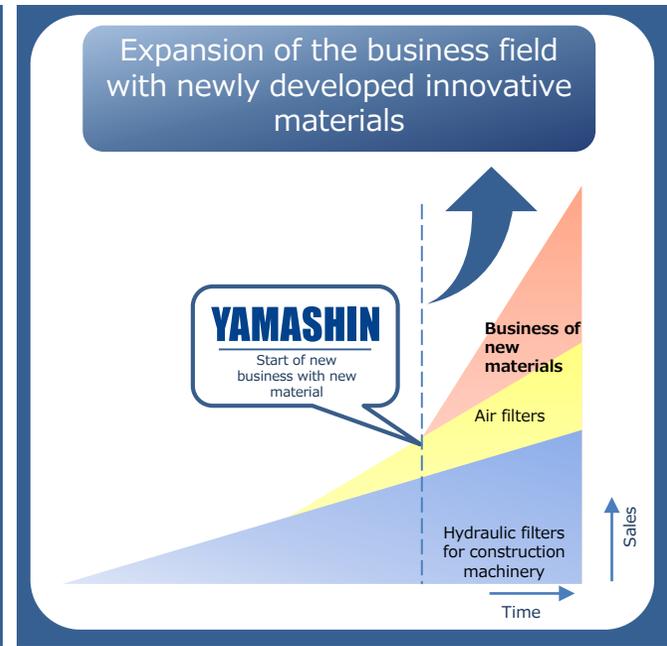
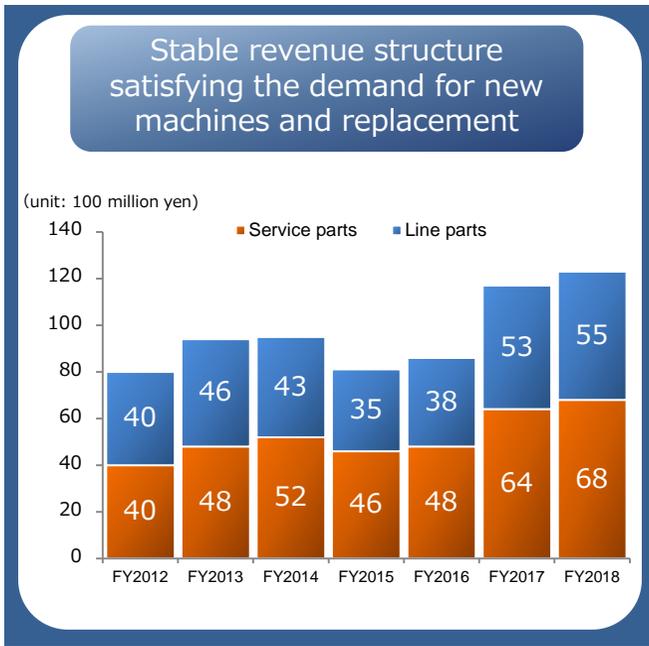
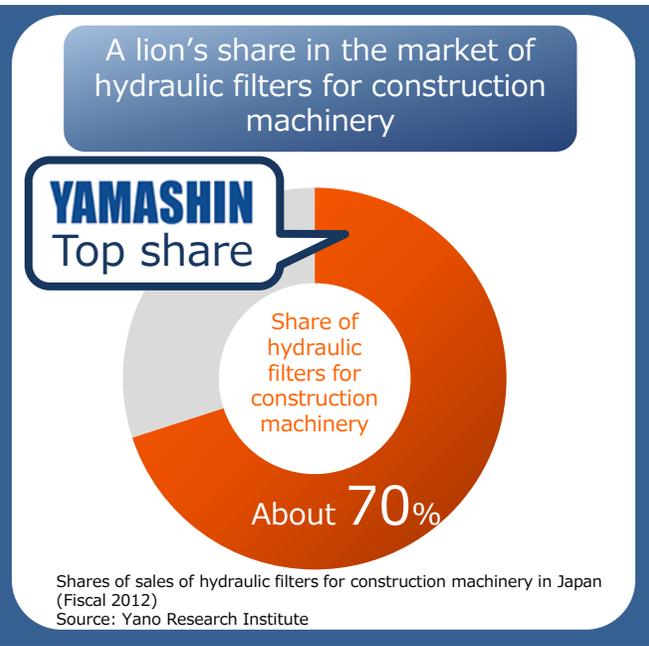
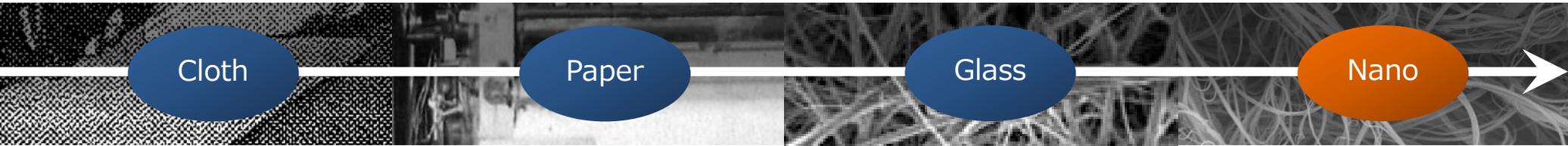




Reference Materials

① Basic Company Information

Capability of researching and developing innovative filter media according to the evolution of construction machinery



- Our company has contributed to the development of infrastructure efficiently.
- As we handle high-quality products and have plenty of experience, many products have been adopted by leading construction machinery manufacturers from Japan, Europe, the U.S., and China, which operate business globally.

Overview of Our Corporate Group

Our Corporate Group has manufactured filters for construction machinery (hydraulic), various industrial fields other than construction machinery (hydraulic), and manufacturing processes (water) by purchasing glass-fiber and non-woven fabrics to produce filter media (the key component of any filter), and resin goods and processed metal for filter components. Air filters are newly added to our product portfolio.

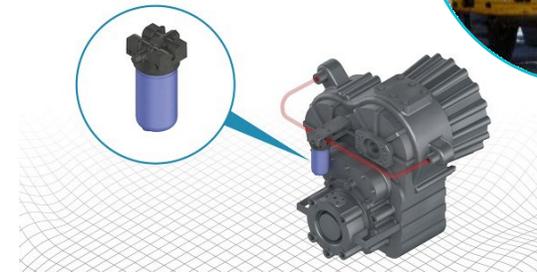
<p>Filters for construction machinery</p>	<p>A construction machinery filter is used to filter the fluids used in the hydraulic circuits central to the operation of construction machinery.</p>	
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<p>Filters for various industrial fields beyond construction machinery</p>	<p>An industrial filter is a filter used for filtrating operating fluid and lubricants of hydraulic units applied in various industries other than the construction machinery industry. This filter is used in multitudinous kinds of industrial machinery, such as machine tools, refrigerating compressors, agricultural machinery, vessels, railway vehicles, airplanes, and helicopters.</p>	
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<p>Filters for process lines</p>	<p>A process filter is used for filtration and separation in processes for manufacturing customer products. These filters are used in various industries, including electronic parts, precision parts, liquid crystal displays, and food.</p>	
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<p>Air filters</p>	<p>Air filters used for dust removal and odor elimination in buildings, hotels and factories.</p>	
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YAMASHIN provides an extensive lineup of filters essential to operating construction machinery.

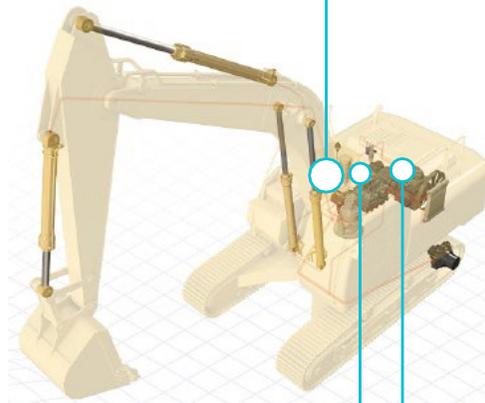
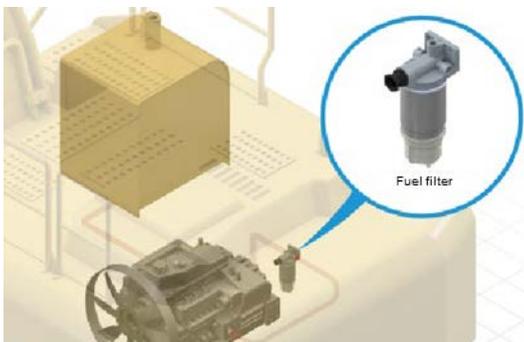


For hydraulic systems

These filters are installed at several locations of each piece of construction machinery to protect hydraulic equipment, including cylinders. Some 70% of all malfunctions affecting construction machinery are believed to be caused by dust in oil, the presence of which leads to mechanical breakdowns. We provide filters ideal for every need based on the know-how cultivated since our founding

For fuel

Fuel filters remove particulates from diesel fuel. Increasingly stringent regulations worldwide have strengthened purity requirements for fuel. Demand for this filter is expected to grow, particularly in emerging nations, where fuel quality tends to be lower..

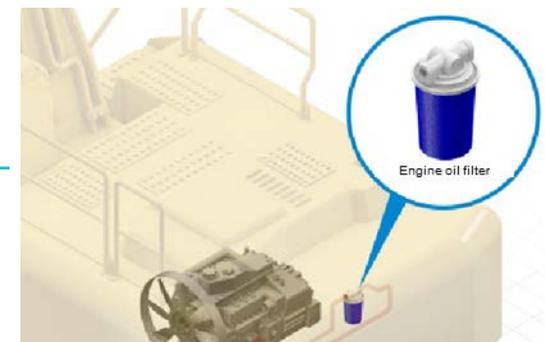


For transmissions

These filters are found in the transmissions of construction machinery. Transmissions are composed of multiple gears. Friction between these gears produces metal powder and particulates. Our company's filters employ proprietary filter elements and materials to remove these particulates and minimize equipment wear.

For engine oil

These filters are in various construction machinery engines. Engines contain pistons and other components moving at high speed that generate power. The engine oil filter removes the metal powders and sludge (sediment), caused by abrasion, that accumulate in engine oil during power generation, mitigating the risk of damage and impaired performance.



**Segments
and
KPI**

- Filters for construction machinery are classified as “line parts” or “service parts”
- Line parts refer to filters installed in new construction machines.
The primary indicator is “the number of new construction machines in demand”
- Service parts refer to replacement filters. The primary indicator is “the number of units in operation” × “hours of operation”.

**Sales methods,
Regional trends,
and
Cost reduction
measures**

- **Sales format**
Filters for construction machinery are sold to construction machinery makers (100%). In principle, we do not sell the products directly to end users.
- **Regional trends**
Sales calculations are based on invoice destinations. Our data may differ from the actual regional market trends
- **PAC19 (Promptly Activated Cost reduction 2019)**
Our company-wide cost reduction project

Term	Formula
MAVY's	ROIC - WACC
ROIC	$\text{NOPAT} \div \text{Capital investment}$
Rate of return on capital investment	$(\text{Ordinary income} + \text{Interests paid}) \div \text{Capital investment}$
Turnover rate of working capital	$\text{Net sales} \div (\text{Accounts receivable} + \text{Inventory asset} - \text{Accounts payable})$
Turnover rate of fixed assets	$\text{Net sales} \div \text{Fixed assets}$
Turnover rate of accounts receivable	$\text{Net sales} \div \text{Accounts receivable}$
Turnover rate of inventory asset	$\text{Net sales} \div \text{Inventory asset}$
Turnover rate of accounts payable	$\text{Sales cost} \div \text{Accounts payable}$
Turnover rate of tangible fixed assets	$\text{Net sales} \div \text{Tangible fixed assets}$
Turnover rate of intangible fixed assets	$\text{Net sales} \div \text{Intangible fixed assets}$

*The figures in the balance sheet are the averages of the initial and term-end figures.

STRENGTH

- Overwhelming share of market for construction machinery filters
- **Continuing expansion of market share for new materials**
- Advanced R&D capabilities
- Robust management base based on PAC and MAVY's

OPPORTUNITIES

- To increase our share in the growing Chinese market
- To enhance our presence in the markets for process/industrial filters
- **Expanding business areas by a leap to status as "comprehensive filter manufacturer"**

WEAKNESS

- About 80% of net sales are from construction machinery filters
- Concern over the shortage of human resources

Plans to obviate the weakness by realizing a comprehensive filter manufacturer

THREAT

- Decrease of our market share, due to the proliferation of counterfeit filter products for construction machinery
- Changes in the construction machinery market
- Sluggish sales growth of process/industrial filters
- **Delays in development of new material products**

Eliminates counterfeits by using a new material

Business to be grown

Process/industrial filters

New material business

Business selected as growth target

STRATEGY MATRIX

Core business (growth)

Filters for construction machinery

Core business (stable)

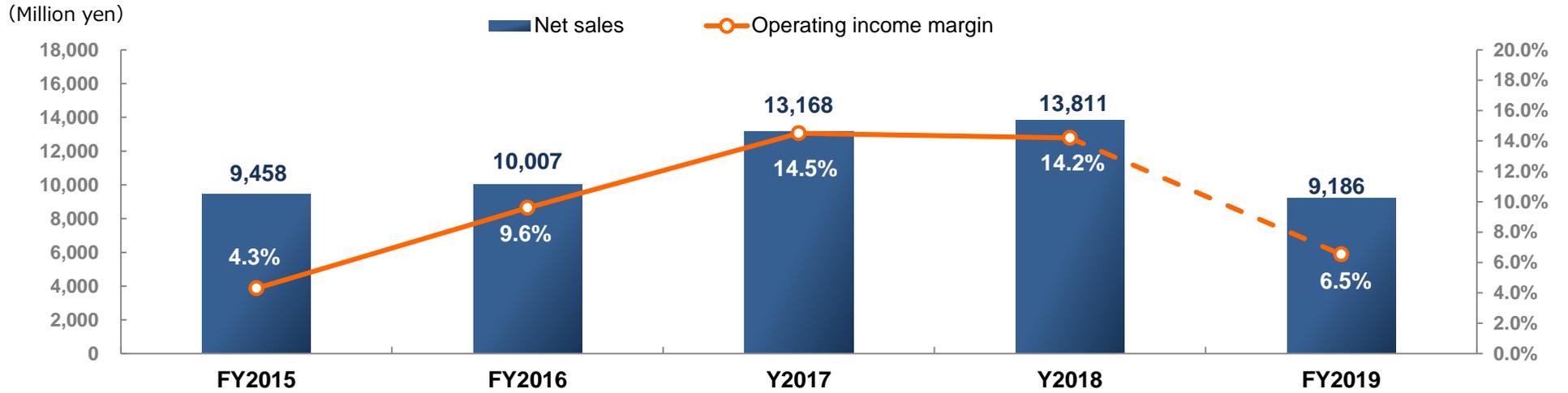
		Major actions	Q3 FY2019 Progress
Construction machinery filters	Line parts	Propose failure prediction features, IOT and ICT technology	We are promoting leading manufacturers to install SWIFTROCK and life sensors. Experiments with actual devices are ongoing.
		Propose a return filter made from new materials	<ul style="list-style-type: none"> •Start of mass production and supply of return filters made of new materials •Full-scale supply to major clients from the next term
		Expand sales to Chinese construction machinery manufacturers	<ul style="list-style-type: none"> •Increased adoption of our products (hybrid filters) by mainly two national companies for producing new models that comply with Tier4 regulations •Adoption of our products for existing models is increasing steadily.
	Service parts	Recapture market share lost due to counterfeit products by holding seminars to rise awareness	<ul style="list-style-type: none"> •Our products adopted as service parts of Chinese construction machinery manufacturers •Started to enter the market of service parts for Chinese construction machinery manufacturers
Industrial and Process filters		Expand and strengthen product lineups	Proposal for the installation of SWIFTROCK, etc.
Nano Filter	Apparel	Propose products using our nano fiber technologies to several major apparel manufacturers	<ul style="list-style-type: none"> •Start of mass production and supply of new materials to major men's clothing makers •Proposals for trial products and plans for commercialization from the next term, in response to the requests from many enterprises, including the largest apparel maker
	Air Filter	Develop next-generation air filter and establish a mass production system	<ul style="list-style-type: none"> •Development is underway, for the mass production and supply of air filters made of new materials in FY2019 •To promote leading domestic appliance makers to use our new materials •Continued activities for exerting synergy with AQC, which has been acquired
	Agricultural Materials, etc.	Proposal for nanofiber materials and products to respond to a wide range of industrial material demands such as building materials and vehicles.	<ul style="list-style-type: none"> •Progress of standardization of our heat-retention sheets made of new material among next-generation agricultural venture firms utilizing AI, etc. •Progress of mass production and supply of sound-absorbing materials for automobiles
Strategies for business area expansion		Expand new business domains	<ul style="list-style-type: none"> •For the mid-term growth of the air filter business in the second business portfolio, we acquired a new office building and a factory for expanding production output and establishing a foothold for application development. •Approach to enterprises in the fields of air filters and non-woven cloth and enterprises that possess the nano technology to expand business inside and outside Japan



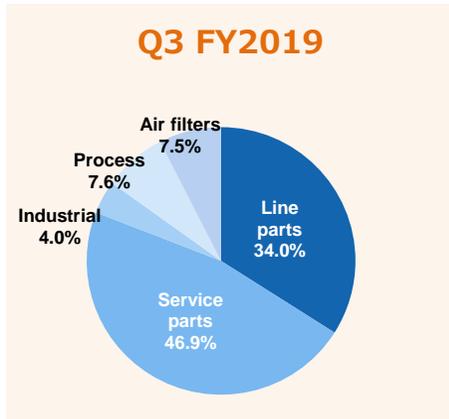
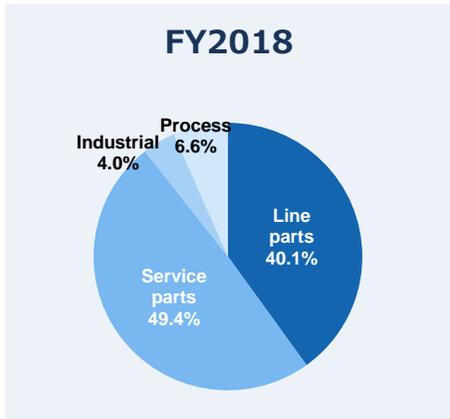
Reference Materials

② Financial Highlights

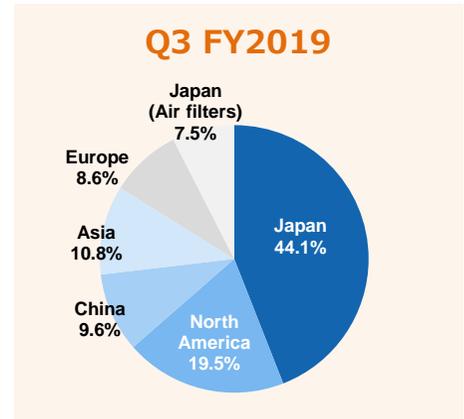
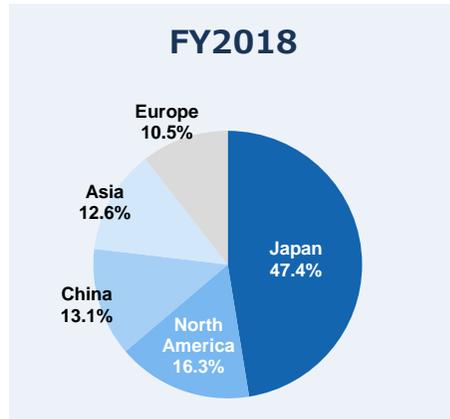
Net sales, Operating income



Sales by product



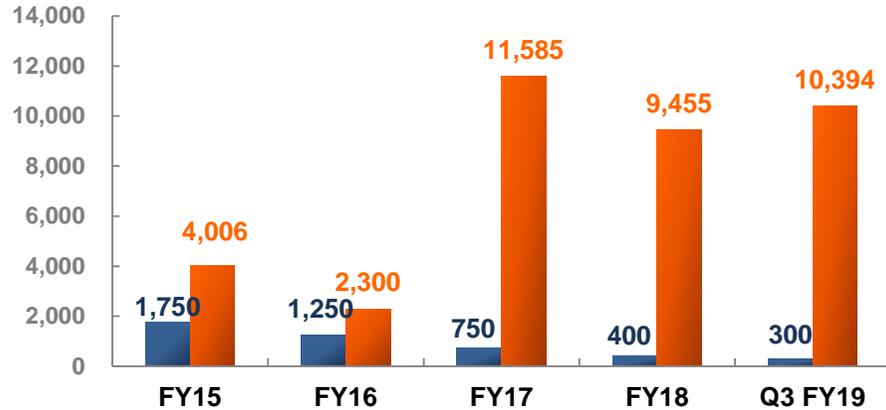
Sales by region



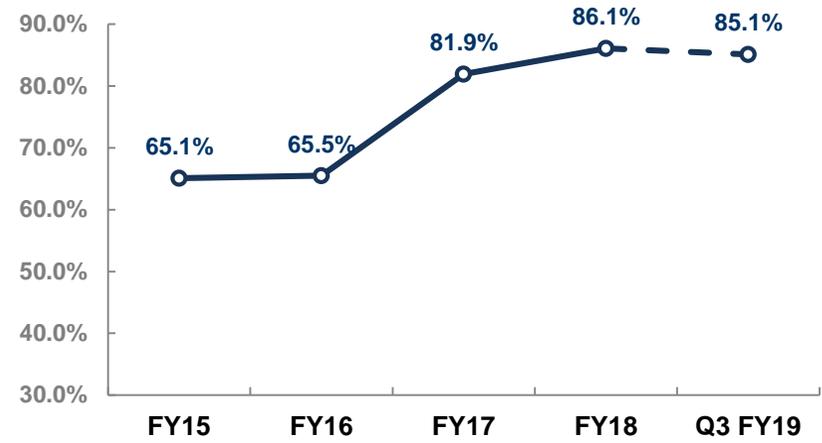
Interest-bearing debt, Cash equivalents, Short-term securities, etc.

(Million yen)

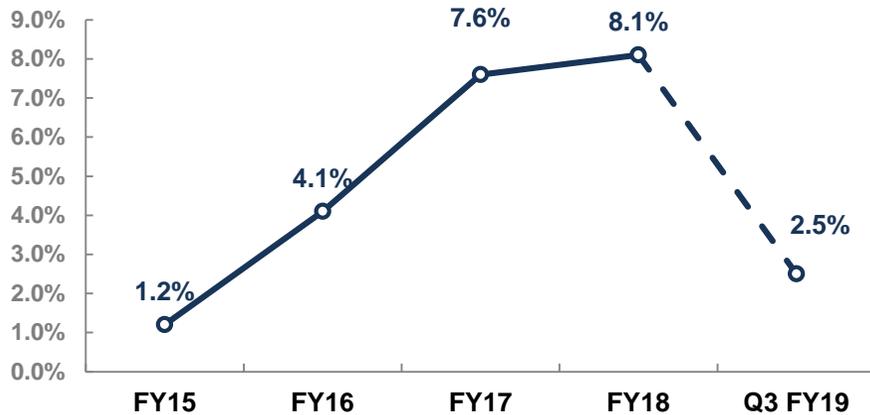
■ Balance of Interest-Bearing Debt ■ Cash Equivalents and Short-Term Securities, etc



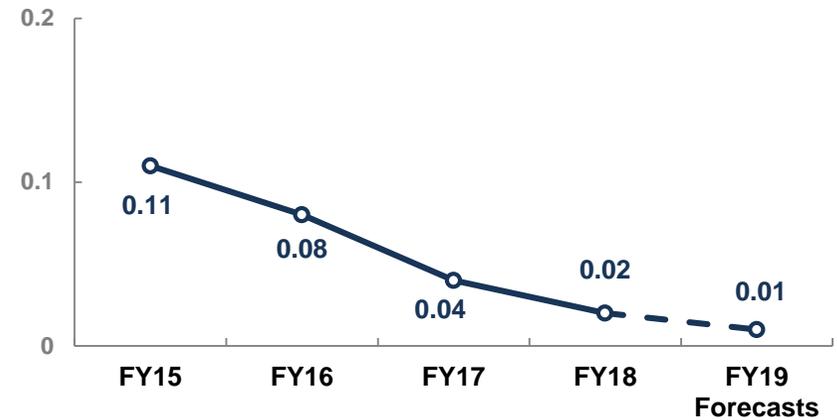
Shareholders' equity ratio



ROE



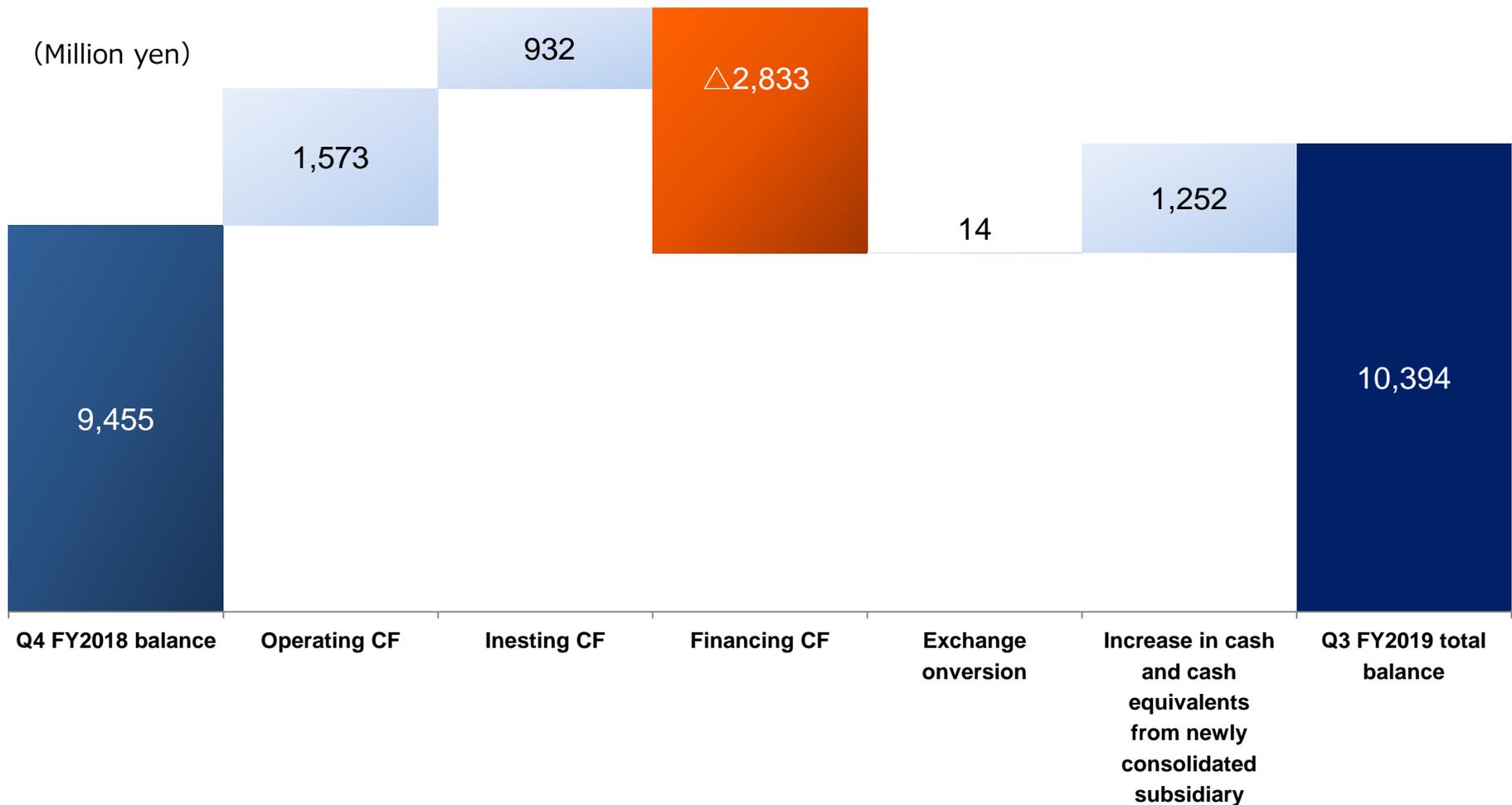
D/E ratio



*Calculated based on the assumption that the capital increase through third-party allotment in FY2017 was implemented from the previous fiscal year.

(Million yen)	End of FY2018	End of Q3 FY2019	Change Amount	Change in ratio		End of FY2018	End of Q3 FY2019	Change Amount	Change in ratio
Current assets	15,391	16,332	943	6.1%	Current liabilities	2,353	2,509	156	6.7%
Cash and deposits	9,489	10,431	942	9.9%	Notes and accounts payable-trade	1,288	1,479	191	14.9%
Notes and accounts receivable-trade	3,252	3,557	305	9.4%	Short-term loans payable, Current portion of long-term loans payable and corporate bonds	200	200	0	0.0%
Merchandise and finished goods, Raw materials and Supplies	2,370	2,096	△273	△11.5%	Other	865	830	△34	△4.0%
Other	278	246	△31	△11.3%	Fixed liabilities	565	644	79	14.1%
Fixed assets	5,641	4,823	△816	△14.5%	Corporate bonds	200	100	△100	△50.0%
Tangible fixed assets	3,540	4,051	511	14.5%	Net defined benefits liability	190	226	36	19.0%
Intangible fixed assets	346	366	20	5.9%	Other	175	318	143	81.9%
Investments and other assets	1,754	405	△1,348	△76.9%	Total net assets	18,113	18,001	△111	△0.6%
Total assets	21,032	21,155	126	0.6%	Total of liabilities and net assets	21,032	21,155	124	0.6%

* Shareholders' equity ratio 86.1% 85.1%

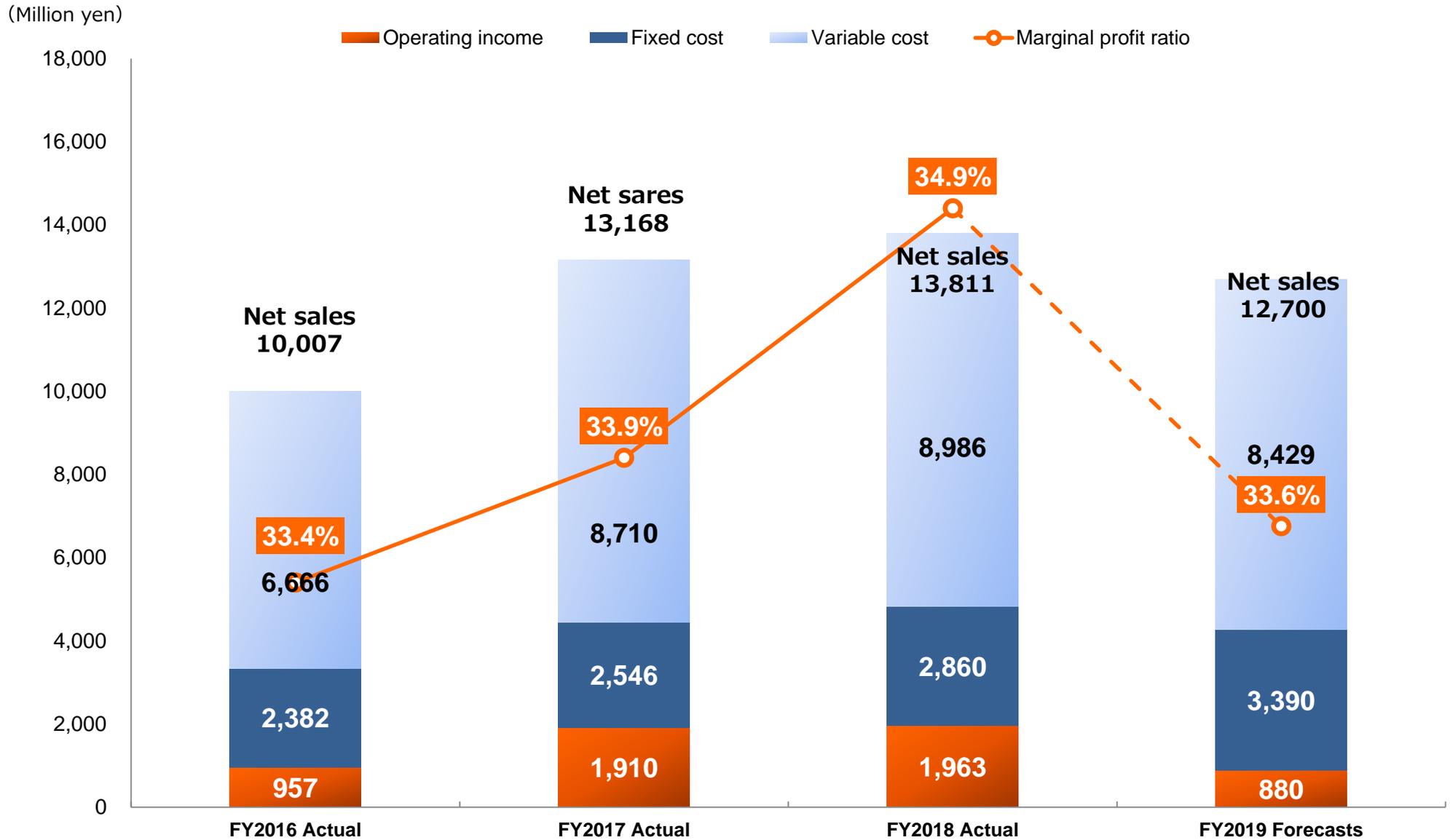


Conditions of Operational Hedge - "Marry and Netting"

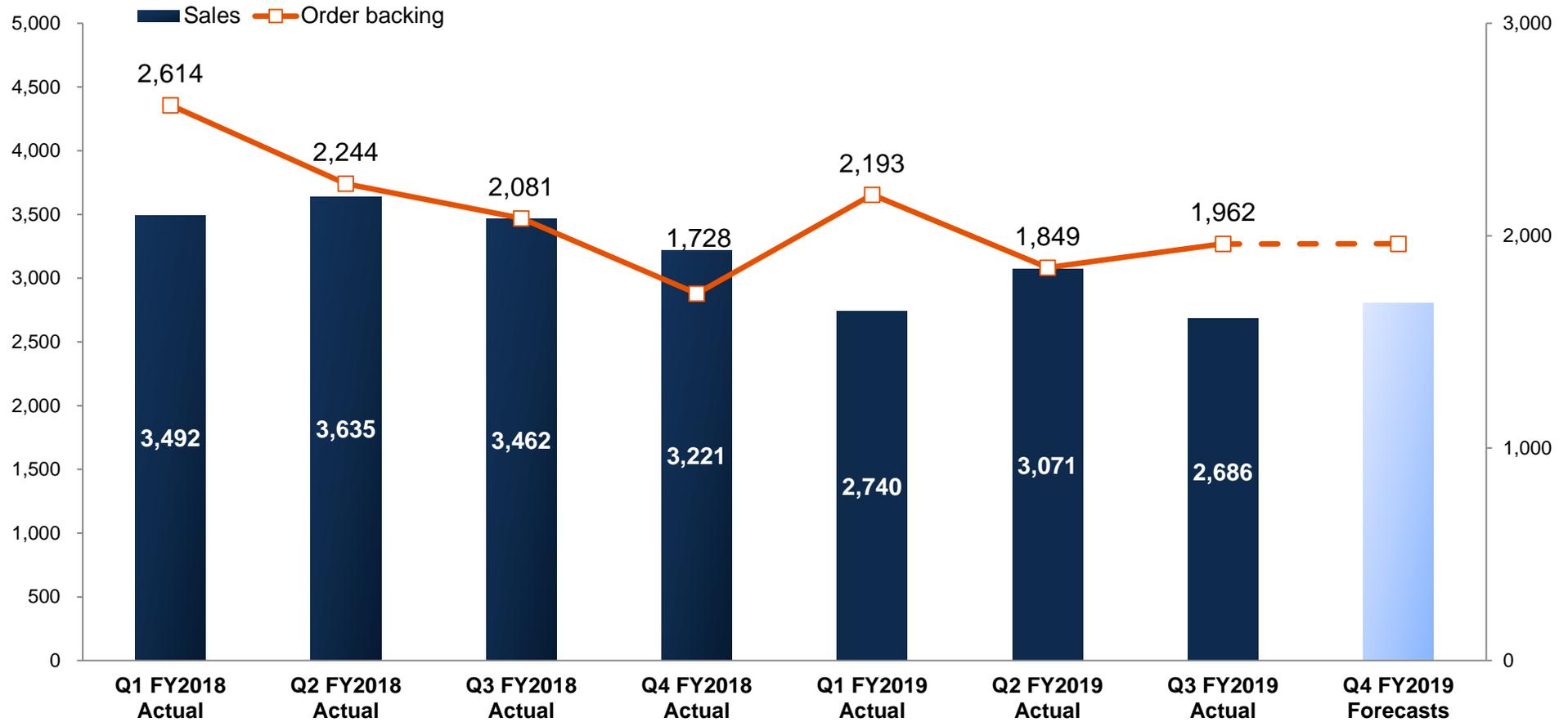
(Million yen)

Currency	Incoming		Outgoing		Net Each Currency	Average rate during the term (JPY)	In case of yen appreciation (10%)			In case of yen depreciation (10%)		
	Each Currency	Compositi on ratio	Each Currency	Compositi on ratio			Average rate during the term ▲10% (JPY)	Rate difference	Affected amount (QTD)	Average rate during the term +10% (JPY)	Rate difference	Affected amount (QTD)
JPY	¥11,000.0	71%	¥9,800.0	68%	¥1,200.0	-	-	-	-	-	-	-
USD	\$35.90	25%	\$32.60	25%	\$3.30	¥108.68	¥97.81	¥-10.87	¥-35.86	¥119.55	¥10.87	¥35.86
EUR	€ 2.80	2%	€ 2.40	2%	€ 0.40	¥121.05	¥108.95	¥-12.11	¥-4.84	¥133.16	¥12.11	¥4.84
PHP	0	0%	329	5%	-329	¥2.11	¥1.90	¥-0.21	¥69.42	¥2.32	¥0.21	¥-69.42
THB	55.7	1%	29.8	1%	25.9	¥3.53	¥3.18	¥-0.35	¥-9.14	¥3.88	¥0.35	¥9.14
Total	-	100%	-	100%	-	-	-	-	¥19.57	-	-	¥-19.57

Variation in Marginal Profit Ratio



(Million yen)



We hold a world-leading share in the construction machinery filter business.

Backed by increasing investment in infrastructure improvements and aftermarket strengths in most regions, we expect sustained growth in our construction machinery filter business.

New business is expected to make significant contributions to both sales and profits.

YAMASHIN Nano Filters will drive growth, with emerging use for diverse applications.



Forecasts regarding future performance presented in this material are based on information that was available at the time this material was released. Actual results may differ from the forecasts due to various factors such as market trends and business conditions etc.

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