The Specialist in Filtration
YAMASHIN

Q1 FY2019 Business Results

The overall construction machinery market was strong,
though sales and profits temporarily decreased due to unique circumstances.

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

First Section of
Tokyo Stock Exchange

6240

August 6, 2019

Business environment and our actions in Q1 FY2019

Business market environment

- In the Chinese market, which accounts for about 50% of the global construction machinery market, our main customers, major Japanese construction manufacturers, saw their market shares reduced. In addition, they temporarily undertook inventory adjustments due to circumstances unique to each customer.
- Despite a concern over trade disputes between the U.S. and China, the Chinese economy remained strong as infrastructure investment was expanded.
- The demand for construction machinery in North America, Europe, and Japan was also strong.

→Using the opportunities created by the strong global demand and Chinese exhaust gas regulations, we will expand our business targeting Chinese local manufacturers.

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Company actions

- Net Sales decreased year on year due to a decline in orders as a result of the temporary inventory adjustments at construction machinery manufacturers.
- We expanded our product lineup by utilizing new materials and IoT technology with a focus on construction machinery filters.
- We accelerated our efforts to expand our business portfolio centering on the mass production technology of “YAMASHIN Nano Filter TM, or “synthetic polymer nanofibers” and to enter new business fields through M&As.
- We have launched “Project PAC 19,” a company-wide cost reduction project designed to enhance our profit generation system, and strengthened the supply chain.

Results in Q1 FY2019

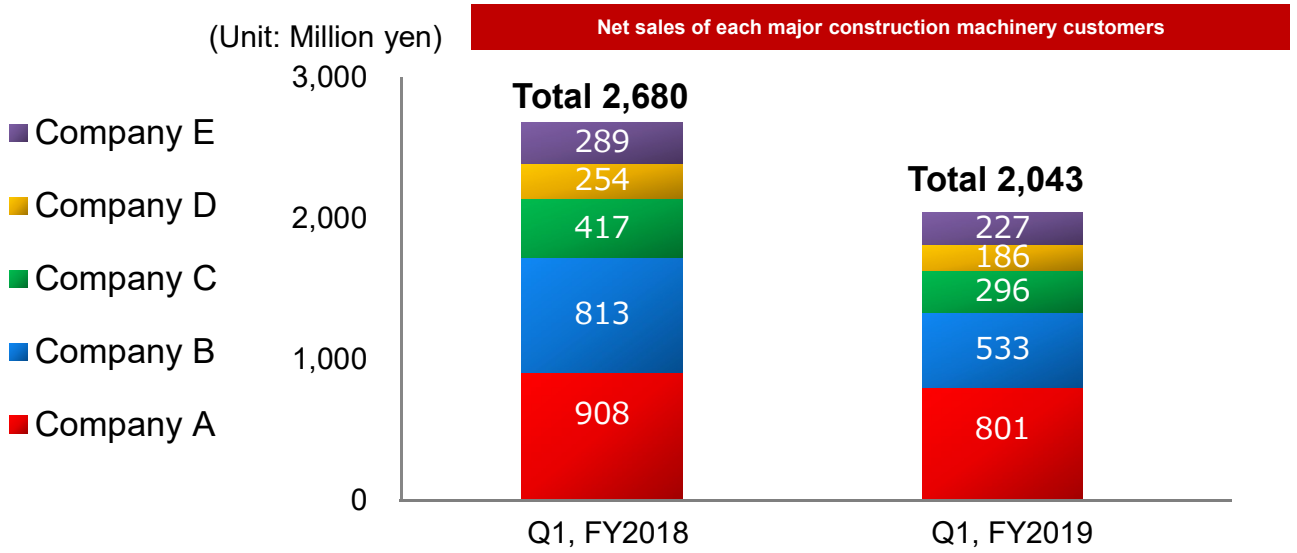
Net sales and operating income decreased year on year.

- Net sales **decreased 21.5% year on year to 2,740 million yen** due to temporary inventory adjustments associated with unique circumstances of each construction machinery manufacturer.
- Operating income **decreased 77.5% year on year to 117 million yen** in association with a decrease in net sales.

Orders recovered steadily during the quarter after the completion of each manufacturer’s inventory adjustments (P.2), and our full-year earnings forecast remains unchanged.

Q1 (Apr - Jun): Sales update　Factors Unique to Major Customers

	Line parts	Service parts
Company A	Company A's production decreased in the Chinese and Asian markets. The factor in China was the shrinking market share, and the factor in Asia was a temporary one due to the suppression of public investment influenced by national elections. Recovery is expected from Q2 in FY2019.	Our sales declined temporarily due to Company A's planned reduction of its stock level from Q3 of the previous fiscal year. After Q2 of the current year, their production cycle will return to normal and our sales will be at the same level as the previous year.
Company B	Our sales declined, due to company B's temporary inventory adjustments as a result of them shifting their production system from China to Brazil/India through factory restructuring after they reconsidered their presence in the Chinese market. Recovery is expected from Q2 in FY2019 with completion of their new supply chain structure.	From January 2019, our sales declined significantly due to company B's planned reduction of its stock level following their supply chain restructuring. After Q2 of the current year, their production cycle will return to normal and our sales will be at the same level as the previous year.
Company C	No change in Company C's production plans. Operations proceeded in accordance with the forecast.	In Q1 of the previous year, our sales increased as Company C switched its filtration media from paper to glass fibers. From Q4 of the previous year to Q1 of the current year, they carried out inventory adjustments. Sales in Asia decreased due to temporary public investment restraint associated with the national elections. From Q2 of the current year, our sales will be at the same level as the previous year.
Company D	Our sales fell slightly, due to a decrease in Company D's production plans for the Chinese market.	Our sales decreased due to Company D's excess inventory as a result of the initial supply arrangements for the Chinese market in the previous year.
Company E	Our sales decreased, due to a decline in Company E's production plans associated with a decline in their market share for the U.S.	Our sales decreased due to a 15% reduction year on year in Company E's annual order forecast for the U.S.



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Business Performance Results for Q1 FY2019 and Full-Year Forecasts for FY2019

Q1 FY2019 Business Performance (April – June 2019)

(Million yen)	Q1 FY2018 Actual	Q1 FY2019 Actual	YoY change	
	Amount	Amount	Amount	%
Net sales	3,492	2,740	△751	△21.5%
Operating income	521	117	△403	△77.5%
Operating income margin	**14.9%**	**4.3%**	**△10.6Pt**	
Net income	421	61	△360	△85.5%
Net income margin	**12.1%**	**2.2%**	**△9.8Pt**	
Exchange rates AR* USD	109.1	109.9	0.8	0.7%
EUR	130.1	123.5	△6.6	△5.1%

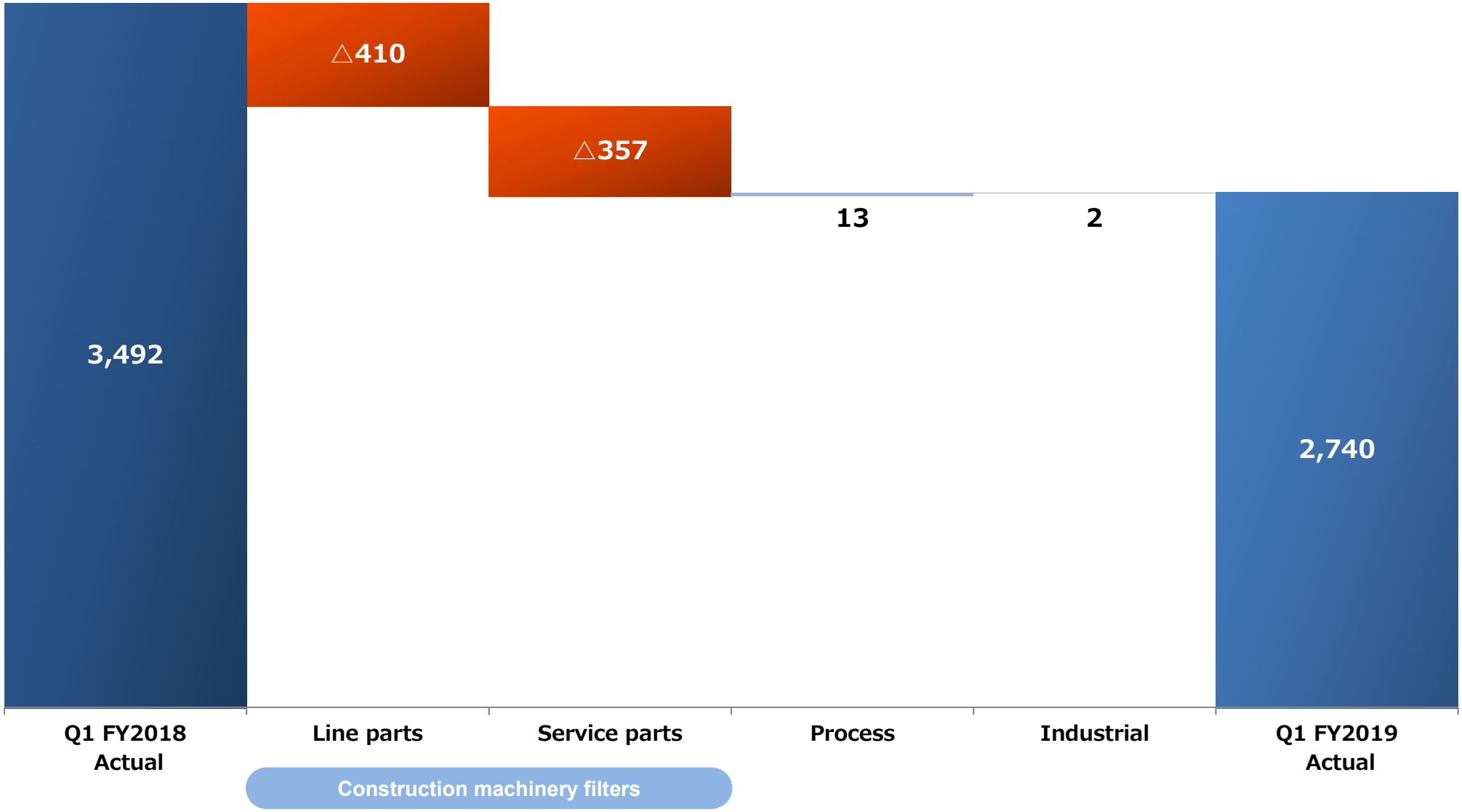
*Average rate for 3 months from April to June

(Million yen)	Q1 FY2018 Actual	Q1 FY2019 Actual	YoY change	
	Amount	Amount	Amount	%
Construction machinery filters	3,155	2,388	△767	△24.3%
Line parts	1,512	1,102	△409	△27.1%
Service parts	1,643	1,286	△357	△21.8%
Industrial filters	130	132	1	1.4%
Process filters	206	219	13	6.6%
Total sales	3,492	2,740	△751	△21.5%

(Million yen)	Q1 FY2018 Actual		Q1 FY2019 Actual		Change	
	Amount (Million yen)	Composition ratio (%)	Amount (Million yen)	Composition ratio (%)	Amount (Million yen)	Composition ratio (%)
Japan	1,629	46.6%	1,357	49.6%	△ 272	△16.7%
North America	521	14.9%	463	16.9%	△ 58	△11.2%
China	565	16.2%	329	12.0%	△ 236	△41.8%
Other Asian countries	484	13.9%	325	11.9%	△ 158	△32.7%
Europe	292	8.4%	264	9.6%	△ 28	△9.8%
Others (Middle East, etc.)	0	0.0%	0	0.0%	0	—
Total sales	3,492	100.0%	2,740	100.0%	△ 751	△21.5%

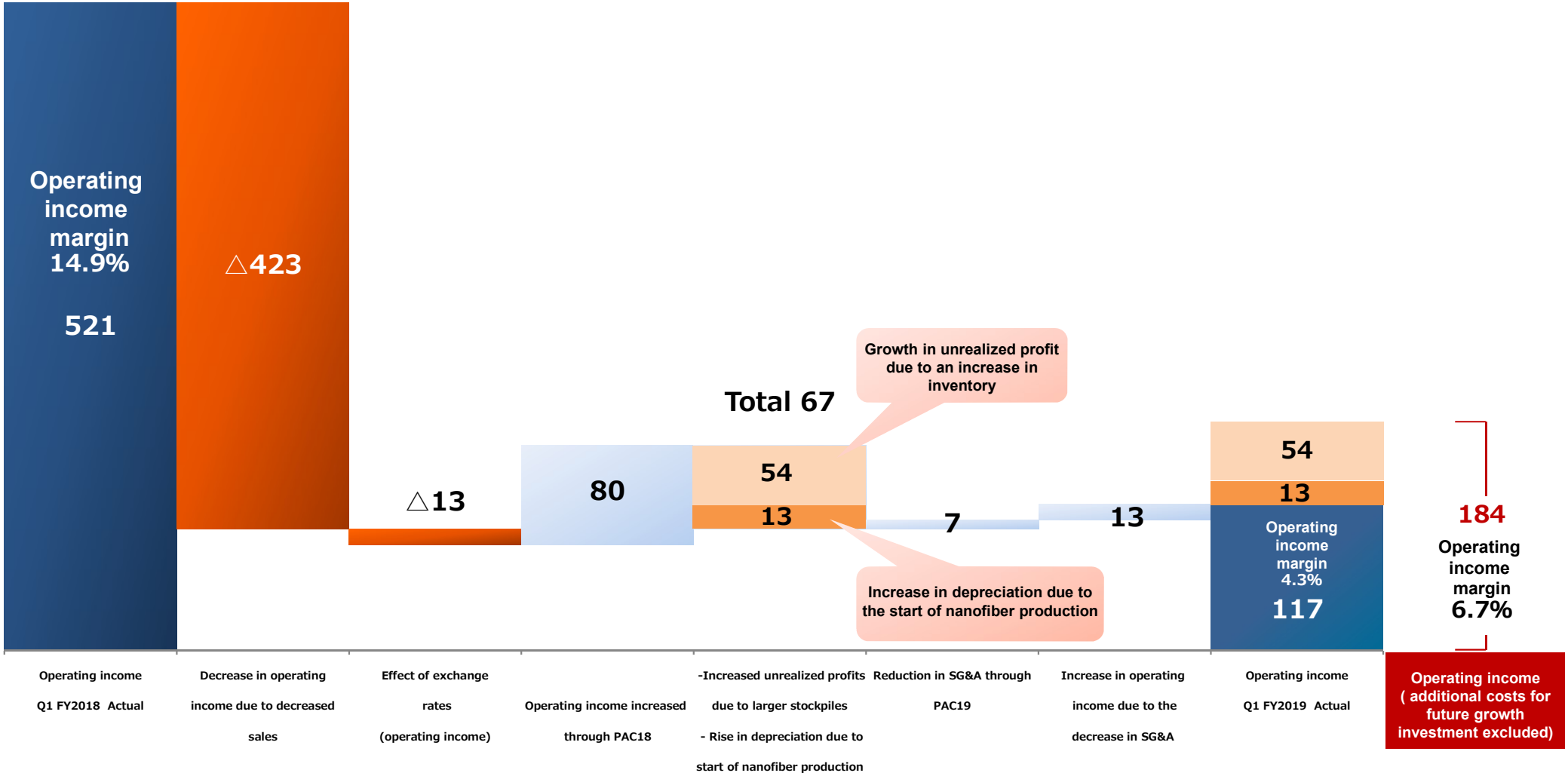
Note: The amounts of sales by region here are calculated based on the locations of corporations to which invoices are sent.
So actual regional market trends may be different from the numbers shown.

(Million yen)



Q1 (Apr - Jun) : Changes in Operating Income (YOY)

(Million yen)

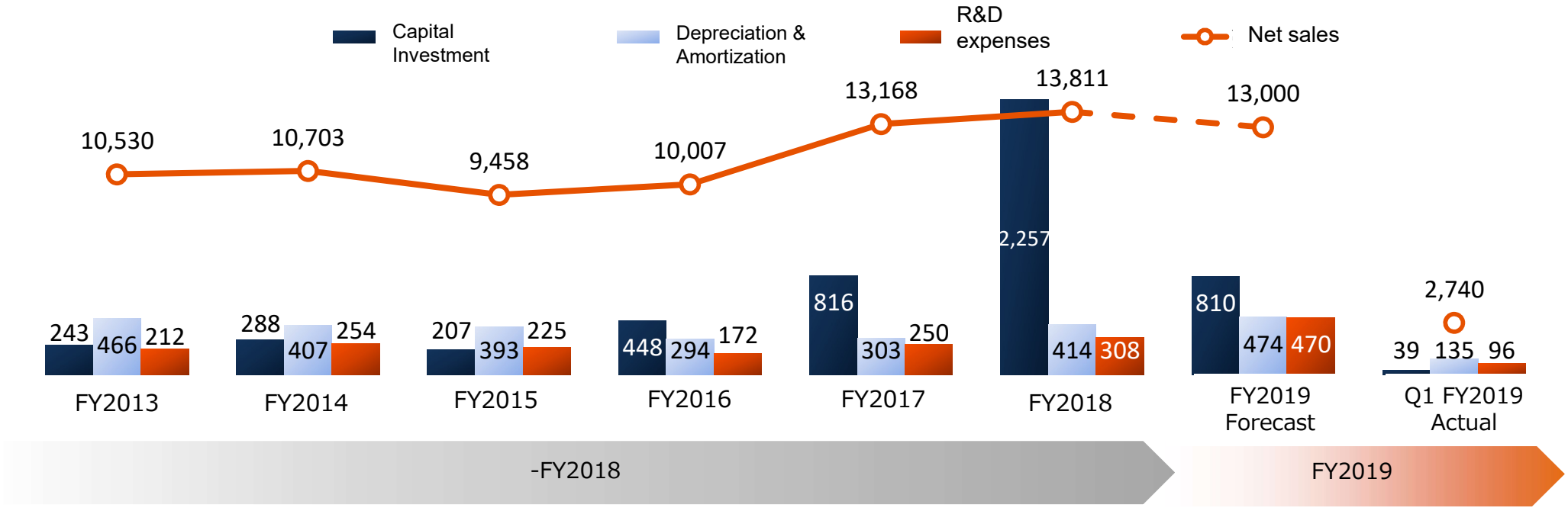


*PAC (Promptly Activated Cost reduction): Company-wide cost reduction project

Capital Investment, Depreciation & Amortization, and R&D Expenses

(Million yen)	FY2013 Actual	FY2014 Actual	FY2015 Actual	FY2016 Actual	FY2017 Actual	FY2018 Actual	FY2019 Forecast	FY2019 Q1 Actual
Net sales	10,530	10,703	9,458	10,007	13,168	13,811	13,000	2,740
Capital investment	243	288	207	448	816	2,257	811	39
Composition ratio	**2.3%**	**2.7%**	**2.2%**	**4.5%**	**6.2%**	**16.3%**	**6.2%**	**1.4%**
Depreciation & amortization	466	407	393	294	303	414	474	135
Composition ratio	**4.4%**	**3.8%**	**4.2%**	**2.9%**	**2.3%**	**3.0%**	**3.6%**	**4.9%**
R&D expenses	212	254	225	172	250	308	428	96
Composition ratio	**2.0%**	**2.4%**	**2.4%**	**1.7%**	**1.9%**	**2.2%**	**3.3%**	**3.5%**

Net sales and capital investment and depreciation & amortization



To share target figures related to improving our corporate value, in both administrative (management) and other operating departments.

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

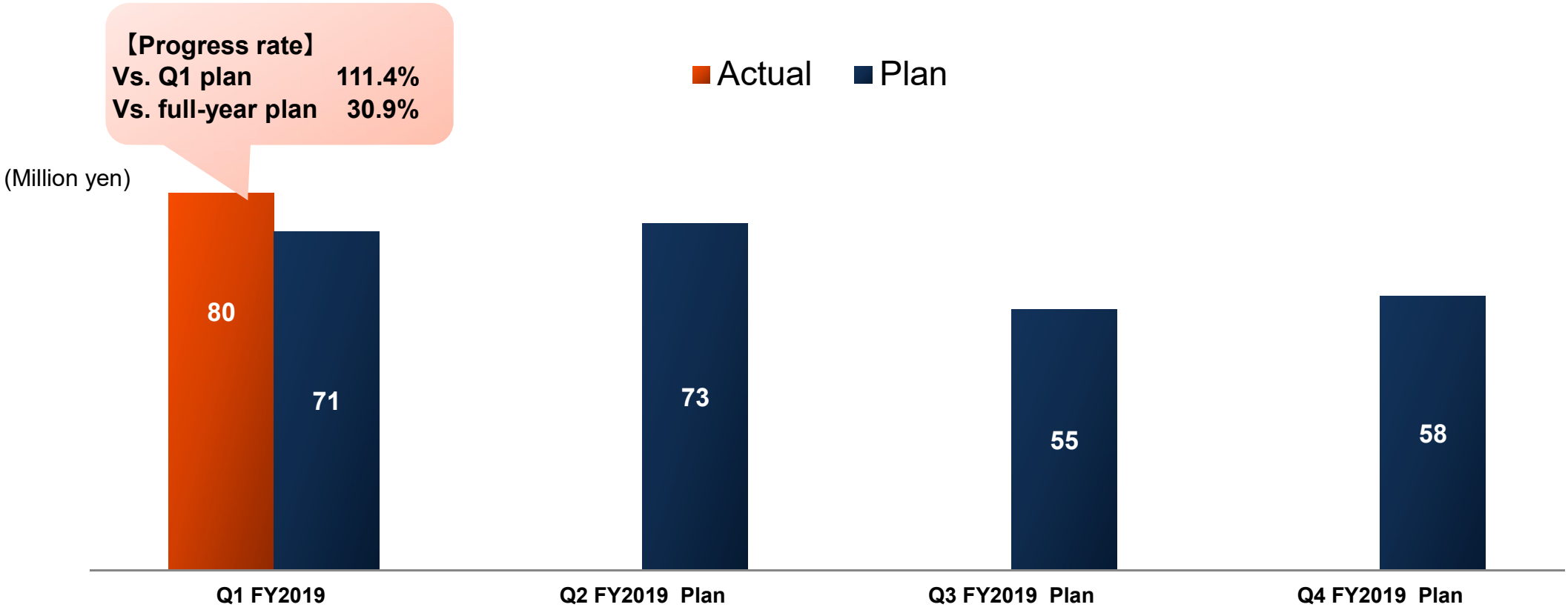
*Assumption for KPI calculation
Prv: Actual value of FY2018 Q1
Cur: Actual value of FY2019 Q1+forecast:outlook

Key Goal Indicator (KGI)	Key Performance Indicator (KPI)		Key Success Factor (KSF)	Relevant departments	Targets for FY2019 (action plan)	Q1 FY2019 progress
MAVY's Prv: 0.0% Cur: -4.5%	Operating income margin Prv: 14.9% Cur: 4.3%	Gross profit ratio Prv: 47.6% Cur: 45.0%	Sales growth ratio Prv: 13.7% Cur: -21.5%	New product development Enhance genuine products market share	Sales / R&D	・Expand business by increasing our number of Chinese manufacturer customers ・Increase demand for Nano Filters ・Enter new business areas	・Our products were adopted as the standard products for new models of state-owned companies in China. ・Mass production supply for the apparel industry began. ・Progress was made to propose hybrid filters to construction machinery companies.
			Sales cost ratio Prv: 52.4% Cur: 55.0%	Enhance purchase capacity Improve yield ratio	Production / Procurement	・PAC19 ・Reform and improve purchasing methods ・Improve production management	・Supplier evaluation standards were reviewed to limit the number of suppliers. ・TQC to improve yield was reviewed. ・Inspection and maintenance plans were developed and implemented.
		SG&A ratio Prv: 32.7% Cur: 40.8%	Depreciation and amortization ratio Prv: 2.4% Cur: 4.6%	Investment plan	Management planning / Finance and accounting	・Develop and implement new materials (Nano) and product development investment plans based on growth strategies.	・A mass production investment plan for new business portfolios (apparel, etc.) was developed and implemented. ・An equipment upgrade investment plan was developed and implemented.
			R&D expense ratio Prv: 2.0% Cur: 3.5%	Narrowing down themes Prioritization	R&D	・Develop new materials ・Actions to achieve IoT ・Develop aeration and other technologies	・Nanofiber air filter development was accelerated for commercialization. ・Various sensor test prototypes were supplied to each prospective and existing customer for feedback ・New material development through industry-academia collaboration was accelerated.
			Personnel expense ratio Prv: 13.5% Cur: 15.9%	Optimal staffing	HR and General Affairs	・Establish and implement the talent management system	・Research personnel was increased for product development ・Specialist staff members were employed to assist company growth
	Investment capital turnover rate Prv: 0.8 Cur: 0.7	Operating capital turnover rate Prv: 4.0 Cur: 3.4	AR turnover rate Prv: 4.5 Cur: 4.2	Credit management	Sales / Finance and accounting	・Further improve AR collection rate	・Improved efficiency and rationalization of AR collection to improve working capital.
			Inventory turnover rate Prv: 7.1 Cur: 5.8	Set appropriate inventory level	Production / Sales	・Reduce company-wide inventory asset	・Determined appropriate inventory based on the Pareto analysis of inventory assets and the reduction plan was implemented.
			AP turnover rate Prv: 4.6 Cur: 8.4	Debt management	Procurement	・Improve working capital	・Optimized AP turnover rate to improve working capital.
		FA turnover rate Prv: 3.8 Cur: 2.7	Tangible FA turnover rate Prv: 9.5 Cur: 4.8	Equipment plan (R&D, production)	Management planning Administration / Production / R&D	・Optimize investment recovery effect	・Executed investment prioritization by analyzing the validity of the return on investment period.
			Intangible FA turnover rate Prv: 34.5 Cur: 36.3	Investment plan	Management planning / Finance and accounting	・Optimize investment recovery effect ・Utilize SAP	・Verified the adequacy of investment plans on the premise of expanding the business portfolio.
	ROIC Prv: 7.8% Cur: 5.4%						
	WACC Prv: 7.8% Cur: 9.9%						
	ROE Prv: 8.1% Cur: 5.1%						
	ROA Prv: 6.8% Cur: 4.4%						

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

PAC19 — **P**romptly **A**ctivated **C**ost reduction 20**19**

【Progress rate】
Vs. Q1 plan 111.4%
Vs. full-year plan 30.9%



Full-year Forecasts for FY2019

(Million yen)	FY2017 Actual Amount	FY2018 Actual Amount	FY2019 Forecast Amount	FY2018 Actual vs. FY2019 Forecast Amount
Net sales	13,168	13,811	13,000	△811
Gross profit	6,074	6,479	6,300	△179
Gross profit ratio	**46.1%**	**46.9%**	**48.5%**	**1.6Pt**
SG&A	4,163	4,515	4,650	134
SG&A ratio	**31.6%**	**32.7%**	**35.8%**	**3.1Pt**
Operating income	1,910	1,963	1,650	△313
Operating income margin	**14.5%**	**14.2%**	**12.7%**	**△1.5Pt**
Ordinary income	1,824	1,915	1,600	△315
Ordinary income margin	**13.9%**	**13.9%**	**12.3%**	**△1.6Pt**
Net income	1,249	1,413	1,100	△313
Net income margin	**9.5%**	**10.2%**	**8.5%**	**△1.7Pt**
Exchange rates (Avg.) USD	110.9	110.9	108.0	△2.9
EUR	129.7	128.4	130.0	1.6

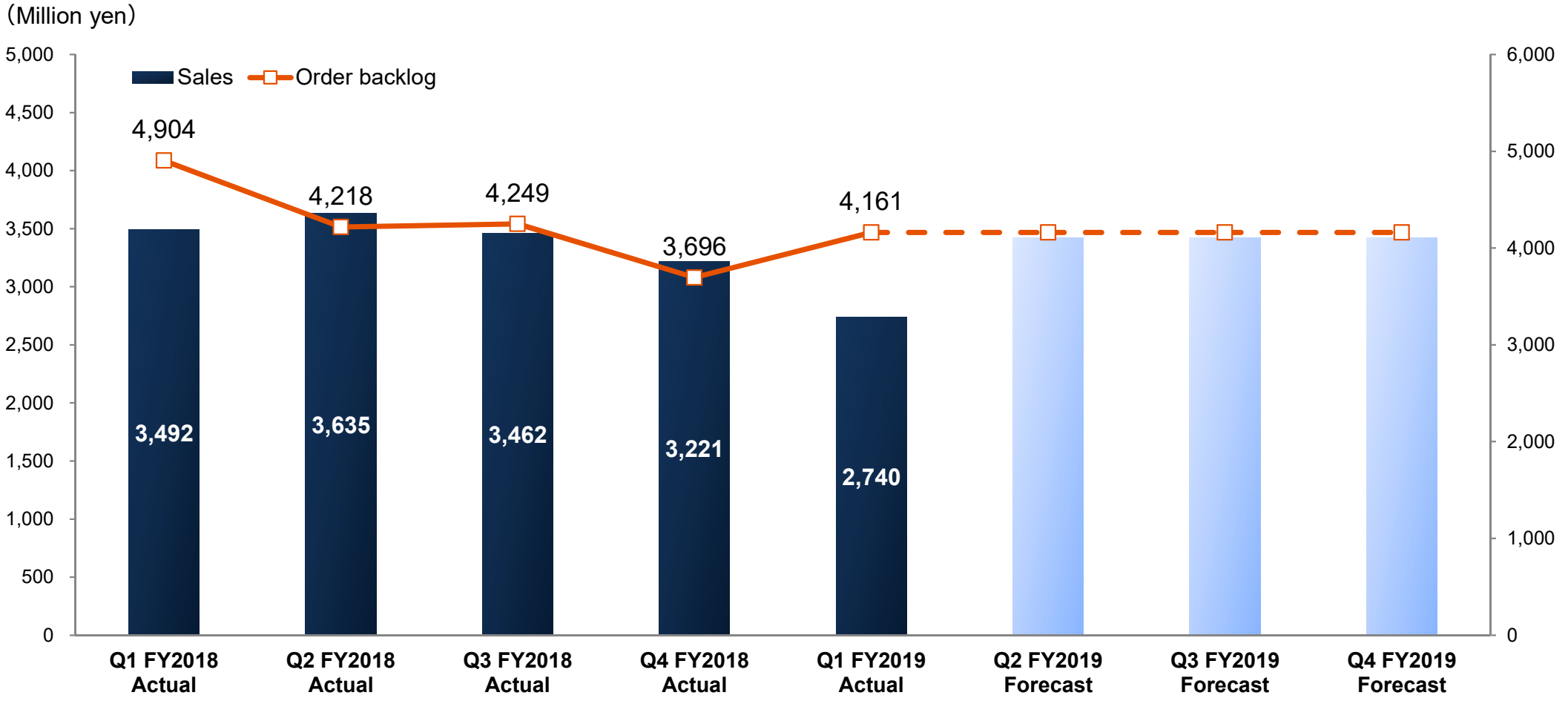
	FY2018 Actual		FY2019 Forecasts		FY2018 Actual vs. FY2019 Forecast	
	Amount (Million yen)	Composition ratio (%)	Amount (Million yen)	Composition ratio (%)	Amount (Million yen)	Change in ratio (%)
Construction machinery filters	12,353	89.4%	11,543	88.8%	△809	△6.6%
Line parts	5,535	40.1%	5,062	38.9%	△473	△8.6%
Service parts	6,817	49.3%	6,481	49.9%	△335	△4.9%
Industrial filters	548	4.0%	572	4.4%	24	4.4%
Process filters	909	6.6%	883	6.8%	△25	△2.8%
Total sales	13,811	100.0%	13,000	100.0%	△811	△5.9%

Forecasts for Segment Information (by Region)

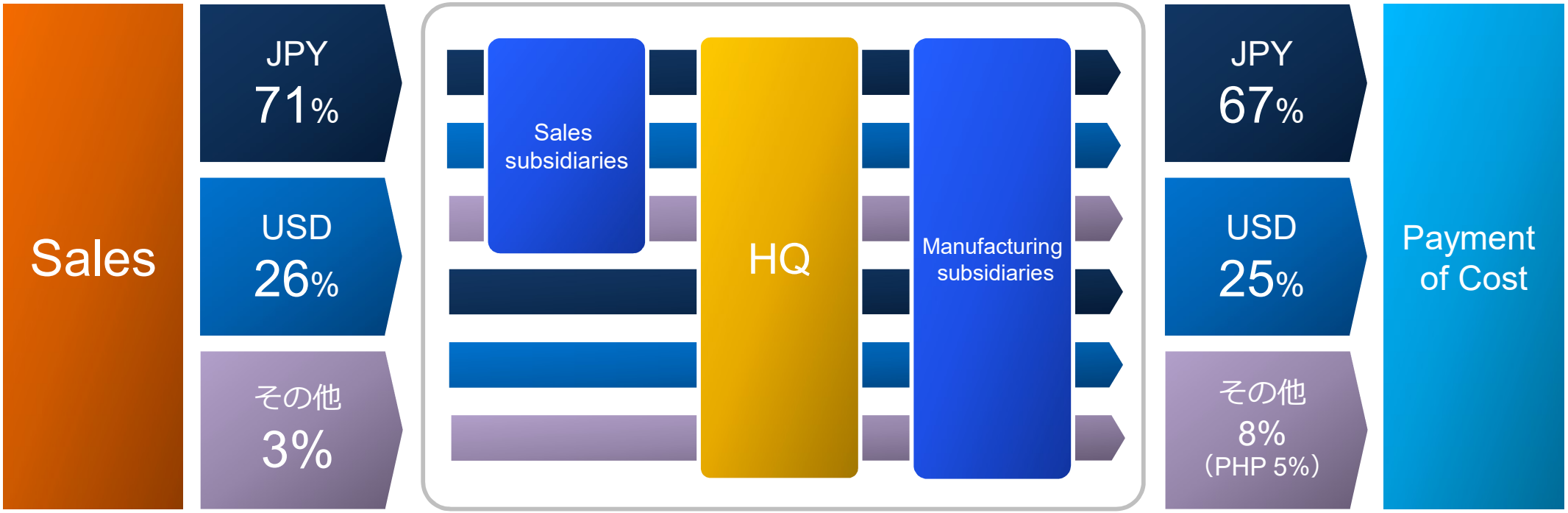
	FY2018 Actual		FY2019 Forecast		FY2018 Actual vs. FY2019 Forecast	
	Amount (Million yen)	Composition ratio (%)	Amount (Million yen)	Composition ratio (%)	Amount (Million yen)	Change in ratio (%)
Japan	6,541	47.5%	6,058	46.6%	△482	△7.4%
North America	2,253	16.3%	2,440	18.8%	186	8.3%
China	1,813	13.1%	1,480	11.4%	△333	△18.4%
Other Asian Countries	1,741	12.6%	1,694	13.0%	△46	△2.7%
Europe	1,454	10.5%	1,298	10.0%	△155	△10.7%
Others (Middle East, etc)	6	0.0%	27	0.2%	20	341.7%
Total sales	13,811	100.0%	13,000	100.0%	△811	△5.9%

Note: 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.

Order backlog will contribute to net sales in H2.



- Operational hedge “marry and netting” was continuously conducted, achieving a foreign exchange sensitivity of 0.1%.



70% of transaction currency is JPY.

Operational hedge “marry and netting” was conducted for USD

- 1-yen appreciation of the yen would increase operating income about 0.8 million yen.

The annual dividend will be increased to 6.0 yen per share,
including an interim dividend of 3.0 yen and year-end dividend of 6.0 yen per share.

	FY2016	FY2017	FY2017	FY2019 Forecasts
Dividend per share	2.4 yen*1	3.6 yen*1	6.0 yen	6.0 yen
DOE	2.3%	1.9%	2.4%	2.3%
Total return ratio*2	25.6%	21.6%	31.9%	42.9%

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

Overview of the External Conditions in the Construction Market

[Summary]

- Despite concerns about the trade war between the U.S. and China, as China has continued public investment, the Chinese economy is healthy as a whole.
- In the Chinese construction machinery market, which constitutes around 50% of the world market, the major Japanese manufacturers (our regular clients), decreased their market shares, lowered the production of new machinery than planned and kept the inventory level of service parts to a necessary minimum.

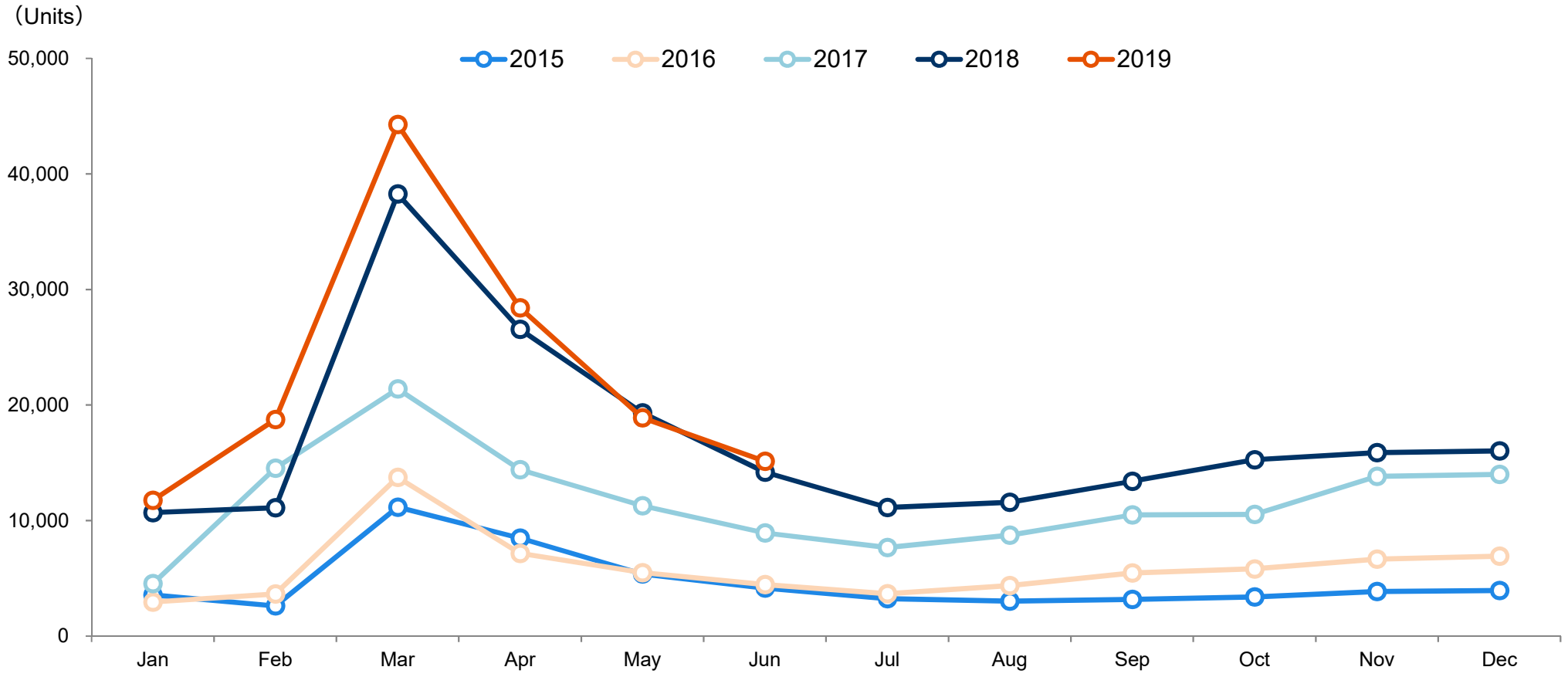
	Past	Current term	Future outlook
China	Significant production cutback due to slowdown of real estate investment	- Strong demand due to expansion of infrastructure investment. - A significant decline in the market share of our customers, major Japanese construction machinery manufacturers.	- Strong demand expected to continue due to the Chinese government's public investment. - Aiming to expand sales to local Chinese manufacturers in response to stricter exhaust gas regulations.
Southeast Asia	Investment in mining machinery is sluggish, but investment in infrastructure is strong.	- A temporary decline in demand due to the influence of national elections in Indonesia, Thailand and the Philippines.	Potential demand for infrastructure development is strong.
North America	Demand recovery due to infrastructure investment	- Demand was increasing year on year mainly for infrastructure investment.	Healthy demand anticipated
Japan	Demand increase due to strong domestic infrastructure investment	- Recovery in capital investment and public investment Demand was nearly equal to that in the previous year	Demand estimated to be unchanged
Europe	Business was sluggish.	Despite the uncertainties about Brexit, demand was healthy	Healthy demand anticipated

In the Chinese markets, an increase in demand is still anticipated.

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

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

Sales by fiscal year (monthly)

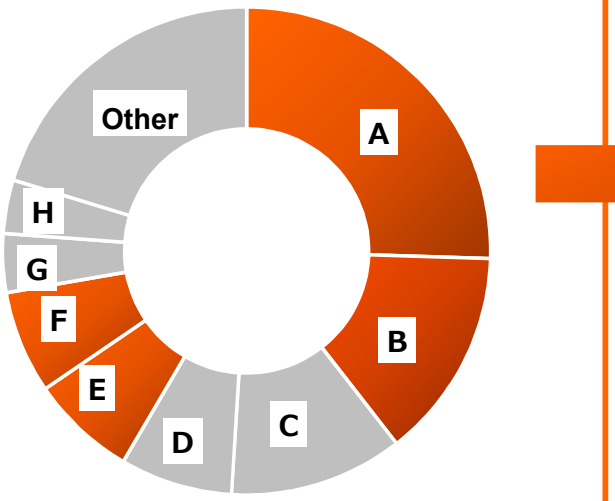


(YAMASHIN's estimates based on the data published by construction machinery manufacturers and industry associations)

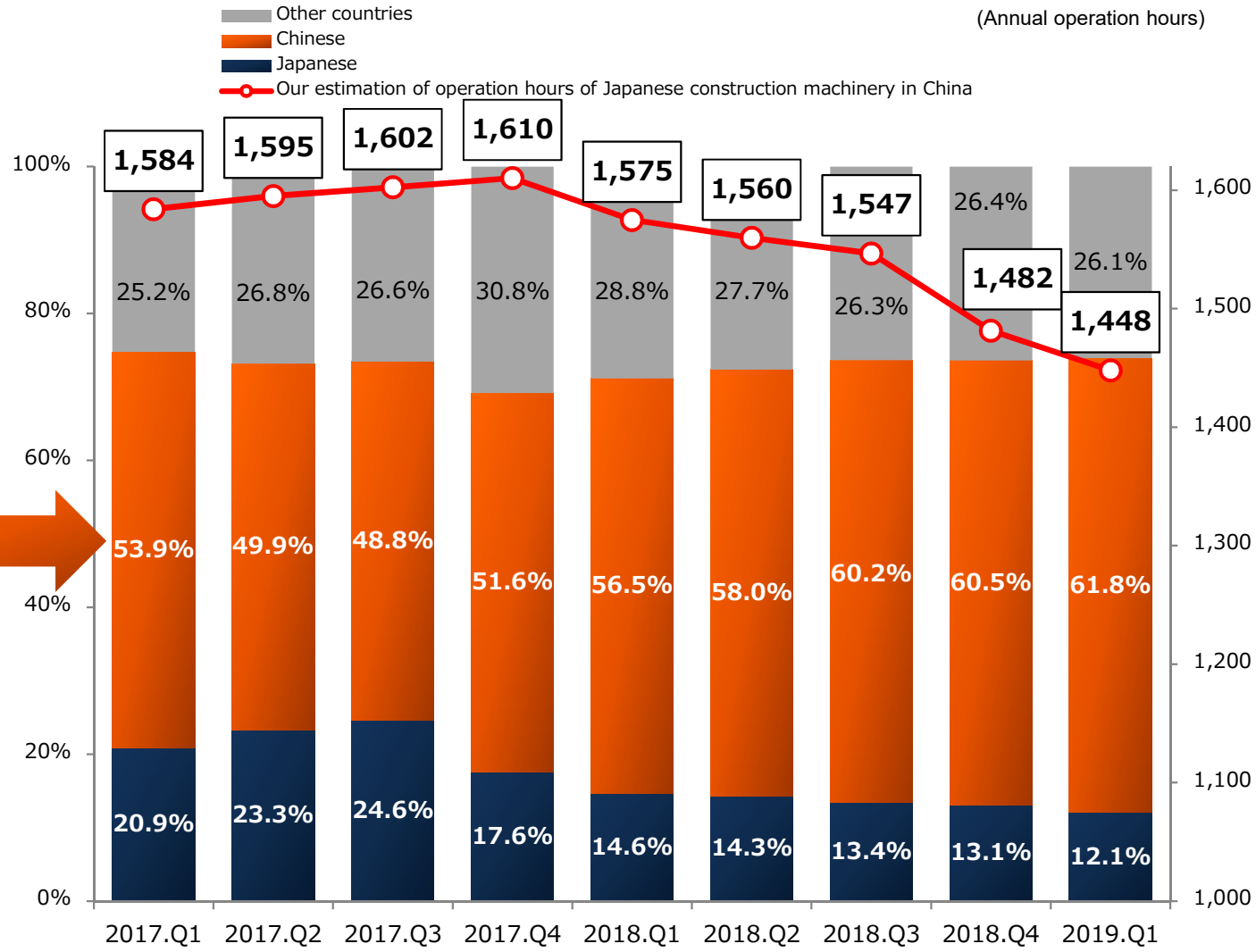
Shares of Japanese manufacturers dropped while those of Chinese manufacturers in the mainland of China increased.

Main construction machinery manufacturers' market share in the Chinese market

: A, B, E and F are Chinese manufacturers, the major target companies we approach



Variations of market share in China



New Product Development and Enhancement of Genuine Products' Market Share

		Major actions	Q1 FY2019 Progress
Construction machinery filters	Line parts	・Propose failure prediction features, IOT and ICT technology	・Pitching SWIFTROCK and Life Sensor installation to major manufacturers; testing in actual equipment continues.
		・Propose a return filter made from new materials	・Starting mass production of return filters with new materials
		・Expand sales to Chinese construction machinery manufacturers	・ Starting introduction of hybrid filters for new models compliant with Tier 4 regulations
	Service parts	・Recapture market share lost due to counterfeit products by holding seminars to rise awareness	・ Starting provision of our replacement filters to Chinese construction machinery manufacturers
Industrial and Process filters		・Expand and strengthen product lineups	・Proposing SWIFTROCK installation, etc. ・Cultivating existing customers and identifying new customers by developing products using new materials
Nano Filter	Apparel	・Propose products using our nano fiber technologies to several major apparel manufacturers	・Starting mass production of new materials for major men's apparel manufacturers ・Developing bespoke prototypes for companies including the largest apparel manufacturer and making a proposal for commercialization in the next fiscal year
	Air Filter	・Develop next-generation air filter and establish a mass production system	・ Developing new material air filters to start its mass production during FY2019 ・ Proposing our new material products to major domestic appliance makers
	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.	・ Progress toward adoption of our new material heat insulation sheets as standard products by next-generation agricultural ventures that use AI, etc. ・ Progress toward mass production of automotive sound-absorbing materials
Strategies for business area expansion		・ Expand new business domains	・ Approaching companies in the air filter and non-woven fabric business areas as well as companies with nano technologies in order to expand domestic and overseas business areas

Ⅲ
Future Strategies

- **Beyond this, New Materials × IoT × Aeration Measure System to increase added value and grow market share**

Service life increased threefold

New materials

YAMASHIN Nano Filter

+

Aeration countermeasure system

SMART TANK

- Controlling aeration/bubble generation inside the hydraulic circuits of construction machinery
- Currently implementing actual machine tests in cooperation with our customers

+

IoT Enabling failure prediction

Purity sensors

- ✓ Measure purity of oil and water
- ✓ Low cost
- ✓ Compact design

SWIFTROCK™

Life Sensors

Monitor particle accumulation in filters, stage by stage

Filters for construction machinery

We began mass production and sales of filters using new materials in January 2019.

Hybrid filters

Glass fibers and nanofibers

These materials help reduce more waste by enhancing filter performance, and extend the service life of filters (threefold) and construction machinery

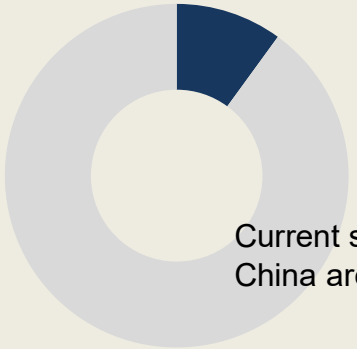
Helps reduce environmental impact

Now proposing its use in the next generation of models from each construction machinery manufacturer

M M M M

M anufacturing company

Before

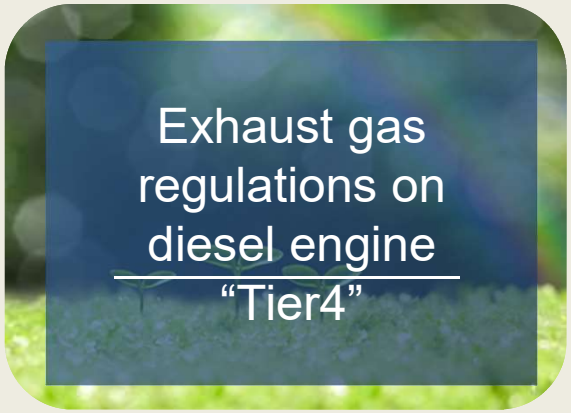


Current shares in China are low…

After

Approximately 70% shares

YAMASHIN



- **Regulations to be enforced on December 1, 2020**
- **Each company developing new models to cope with the stricter regulations**

YAMASHIN Nano Filter

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IoT, aeration countermeasure system

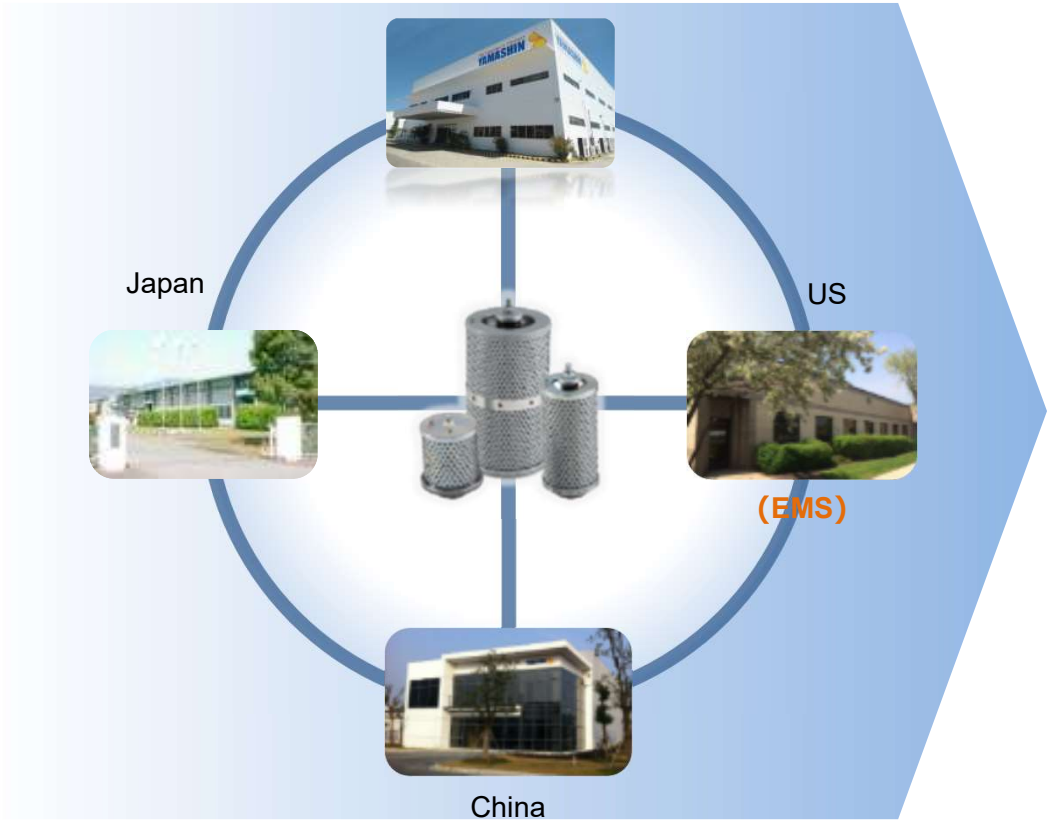
Started putting importance on quality rather than cost
Releasing high quality products into Chinese markets as well

By taking advantage of the regulation change as an opportunity, we will achieve the largest share in the Chinese market as well.

- To establish multiple production bases by reviewing and reorganizing production bases and build a safe and optimized supply chain
- To strengthen the purchasing power and re-establish the global supply chain.

Multiple Sourcing

Philippines



PURPOSES and GOAL

To establish a cross-sourcing productions system

To flexibly respond to customers' needs

To strengthen purchase capacity

To make business continuity plan (BCP)

- To develop a new R&D center to establish an integrated R&D system (Yokosuka, Kanagawa)
- To develop a machine testing site, to promptly meet customers' requests

Yokohama Development Center

Saga Business Establishment

Yokosuka Media Lab

New Development Base
that covers existing bases
(Scheduled for completion in 2022)

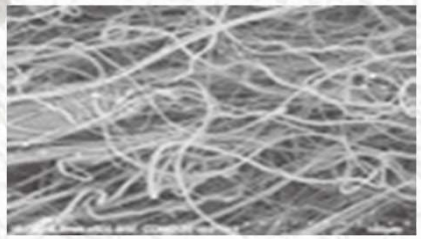
Construction cost:
3.0 billion yen

Existing fields

New fields

Construction machinery hydraulic filters

Industrial/process filters



Nano fibers

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.

Reference Materials
① Basic Company Information

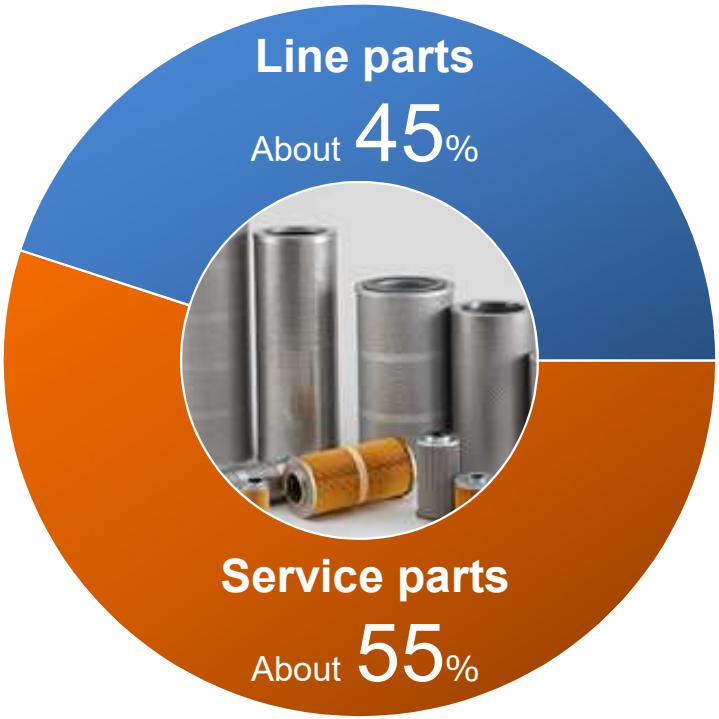
Overview of Our Corporate Group

Our Corporate Group has continued to yield solid business results consistently as a manufacturer specializing in filters since the foundation.
Our Corporate Group has manufactured filters for construction machinery, industrial filters, and process filters 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.
Our Corporate Group provides one-stop filter services, including the development, product design, and manufacture of filter media for various filters. We sell our products to customers active in construction machinery, industrial machinery, and other various field.

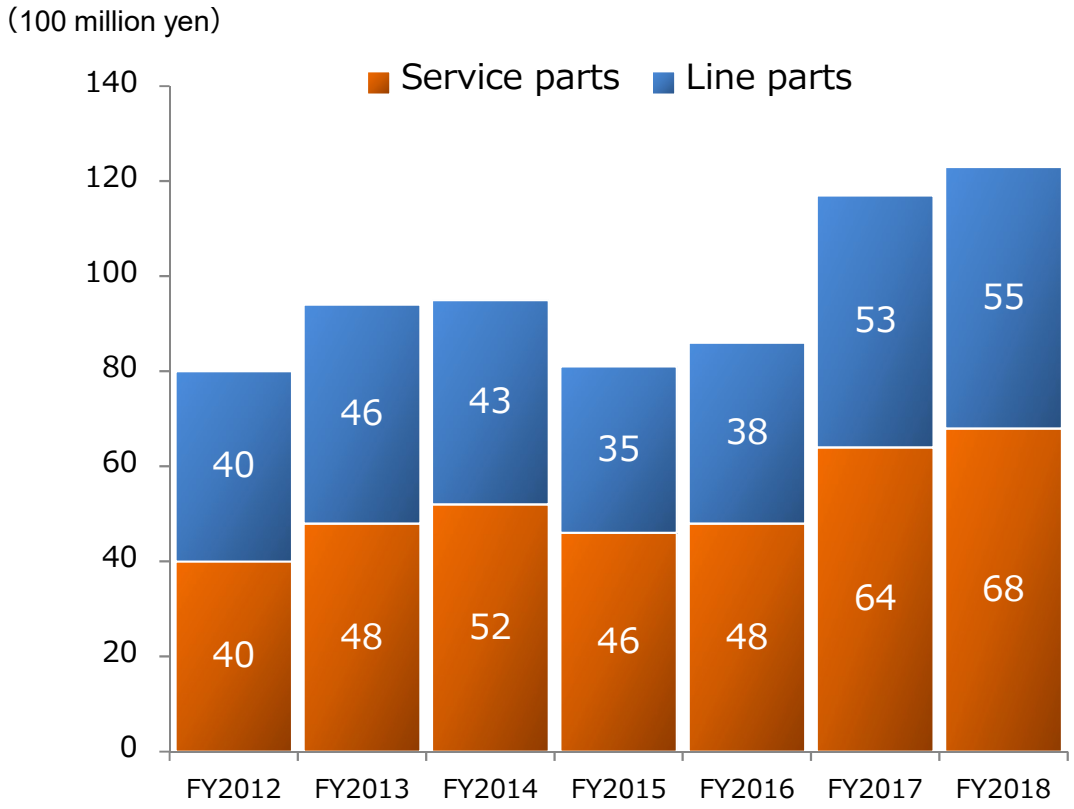
Filters for construction machinery	A construction machinery filter is used to filter the fluids used in the hydraulic circuits central to the operation of construction machinery.	 Filter elements (for construction machinery)
Filters for various industrial fields beyond construction machinery	An industrial 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.	 Line filters (for vessels)
Filters for process lines	A process filter is used or 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.	 Non-woven filters (for electronic parts)

The demand for service parts is expected to expand gradually with increased numbers of construction machines.

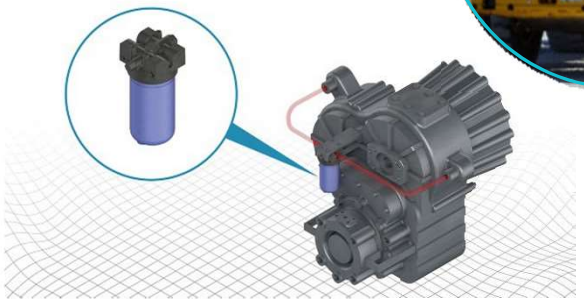
FY2018 Sales composition of filters for construction machinery



Changes in sales of service parts and line parts



YAMASHIN provides an extensive lineup of filters essential to operating construction machinery.

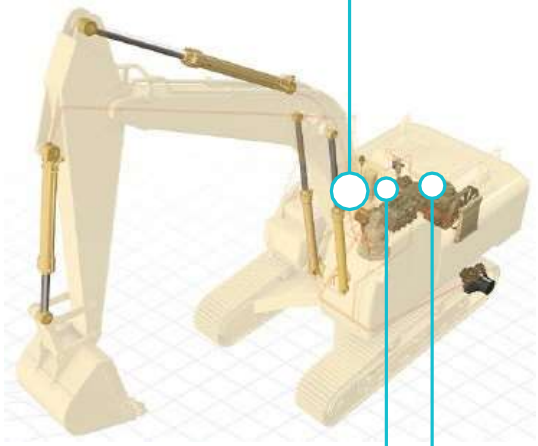


For hydraulic systems

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 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.

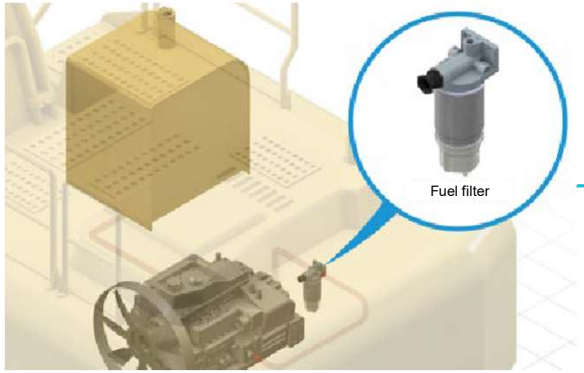


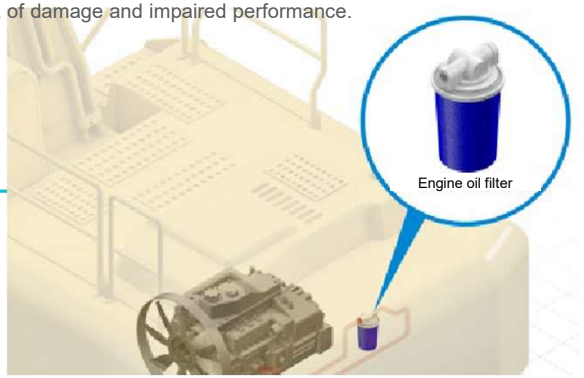
For fuel

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 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

- **PAC18 （Promptly Activated Cost reduction 2018）**

  Our company-wide cost reduction project.

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

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

Before the development of new materials

STRENGTH

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

WEAKNESS

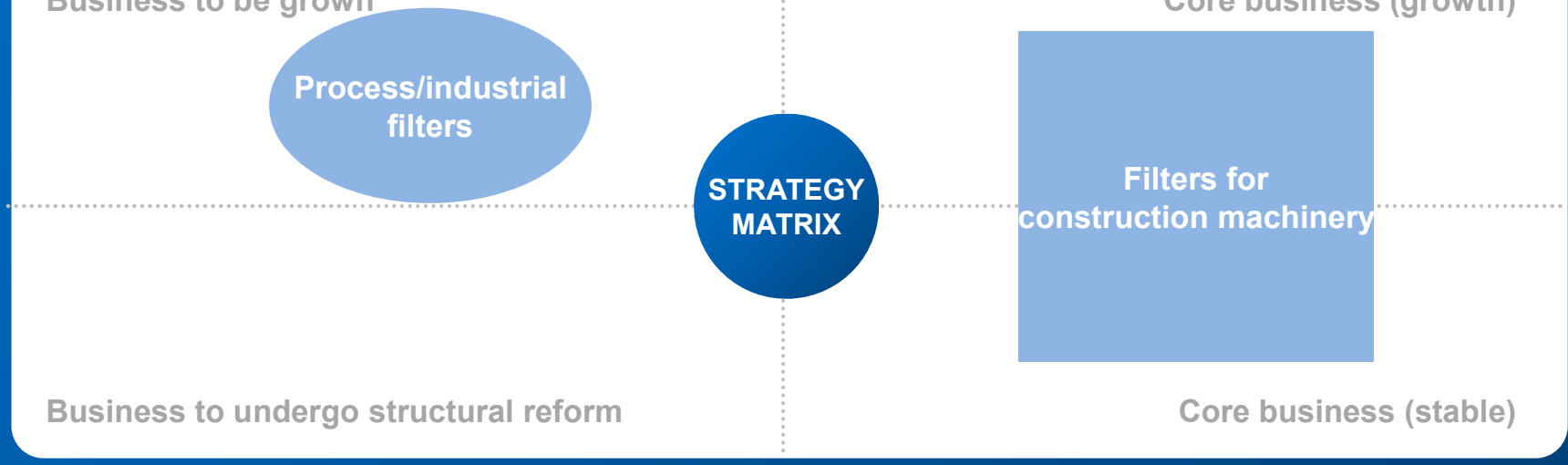
- Limited business domain
- Filters for construction machinery account for 90% of total sales.
- Overconcentration of production sites

OPPORTUNITIES

- To increase our share in the growing Chinese market
- To enhance our presence in the markets for process/industrial filters

THREAT

- Decrease of our market share, due to the proliferation of counterfeit filter products for construction machinery
- Change in the construction machinery market
- Sluggish sales growth of process/industrial filters



After development of new material

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

WEAKNESS

- Filters for construction machinery account for 90% of total sales.

Plans to obviate the weakness by realizing a comprehensive filter manufacturer

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"**

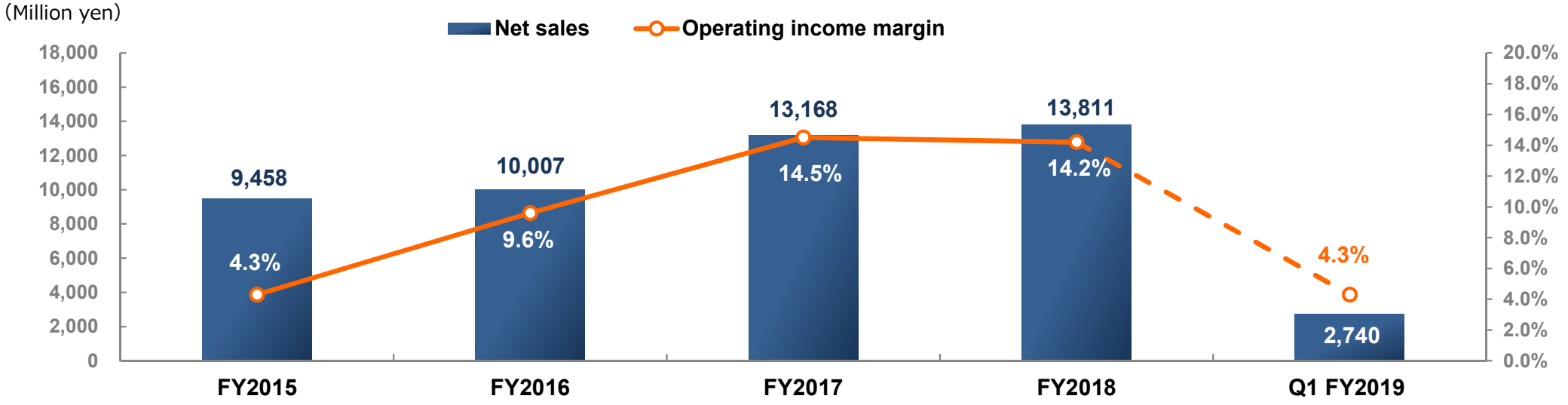
THREAT

- 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**

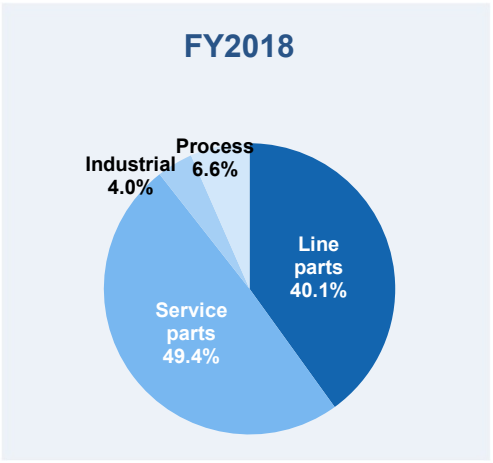
Eliminates counterfeits by using a new material

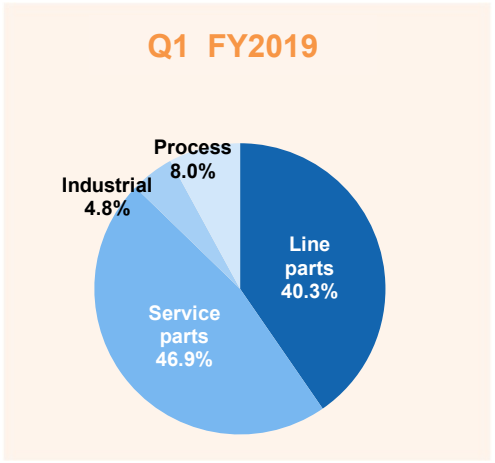
Reference Materials
② Financial Highlights

Net sales, Operating income

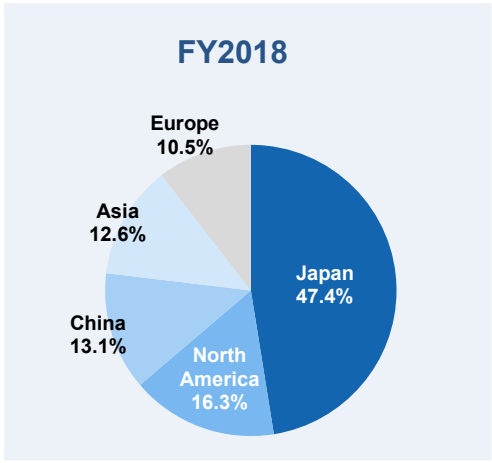


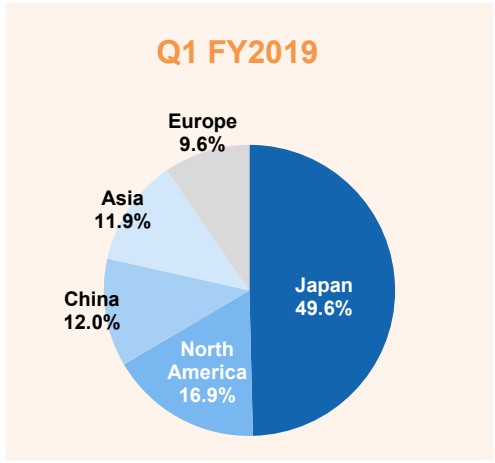
Sales by product



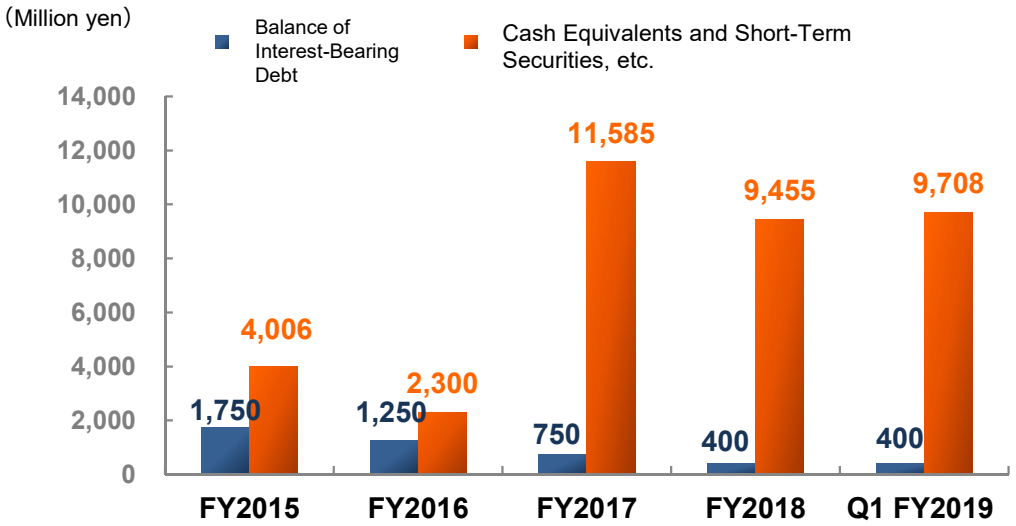


Sales by region

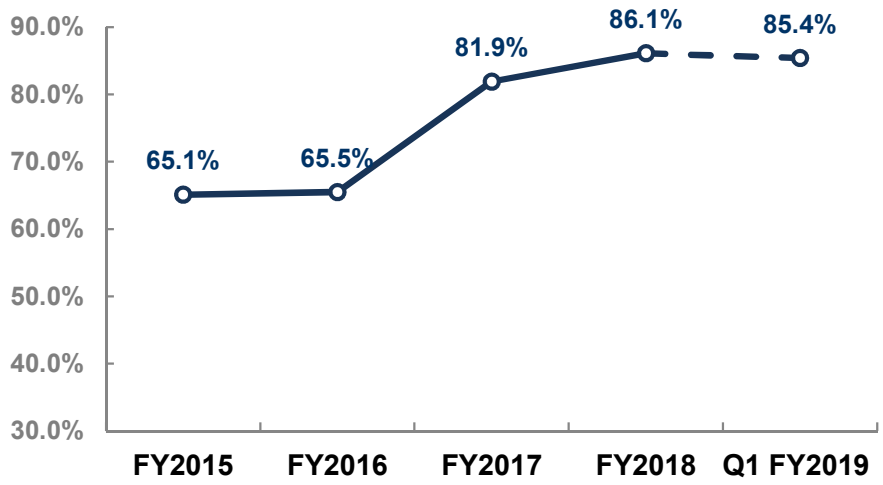




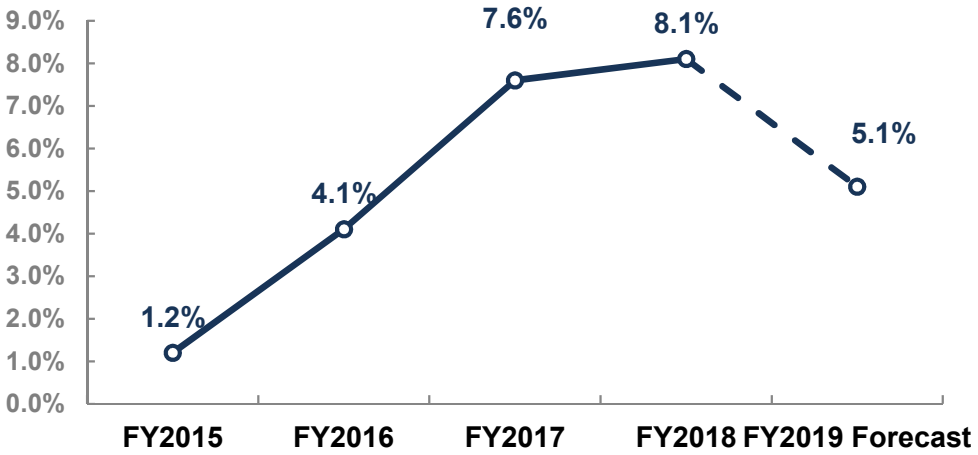
Interest-bearing debt, Cash equivalents, Short-term securities, etc.



Shareholders' equity ratio

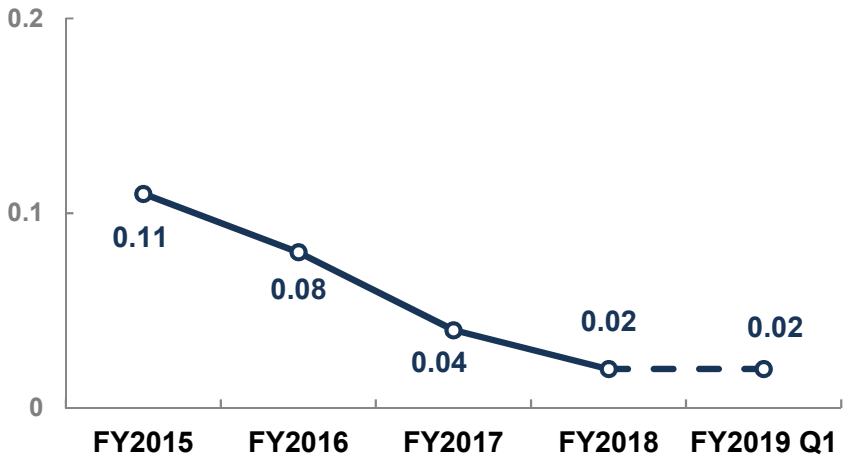


ROE



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

D/E ratio

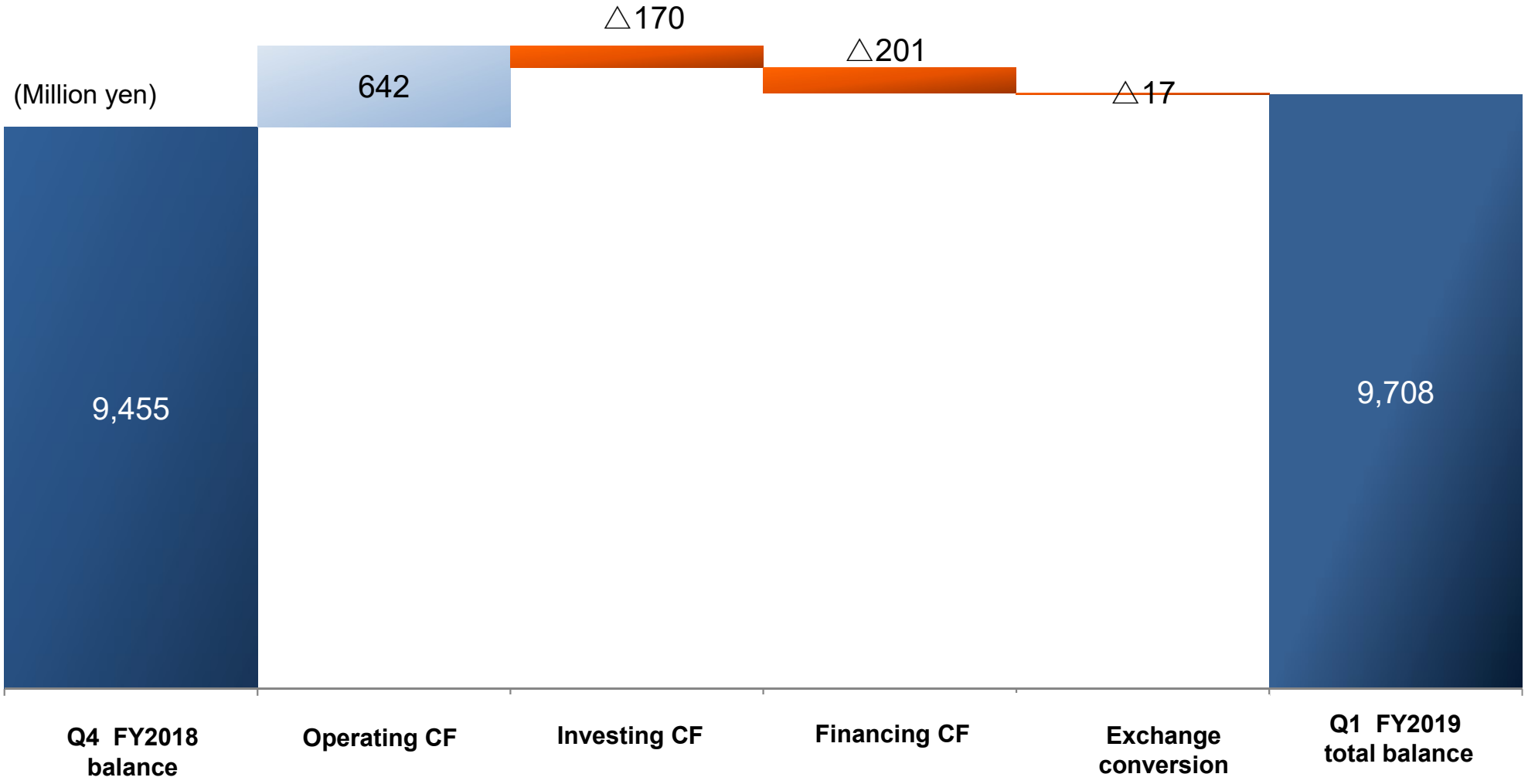


*Calculated based on the assumption that the capital increase through third-party allotment in FY2017 was implemented from the previous fiscal year.

(Million yen)

	End of FY2018	End of Q1 FY2019	Change amount	Change in ratio
Current assets	15,391	15,106	△284	△1.8%
Cash and deposits	9,489	9,743	253	2.7%
Notes and accounts receivable-trade	3,252	2,735	△517	△15.9%
Merchandise and finished goods, Raw materials and supplies	2,370	2,312	△58	△2.5%
Other	278	315	37	13.5%
Fixed assets	5,641	5,848	206	3.7%
Tangible fixed assets	3,540	3,782	242	6.8%
Intangible fixed assets	346	329	△17	△5.0%
Investments and other assets	1,754	1,736	△18	△1.0%
Total assets	21,032	20,955	△77	△0.4%

	End of FY2018	End of Q1 FY2019	Change amount	Change in ratio
Current liabilities	2,353	2,332	△21	△0.9%
Notes and accounts payable-trade	1,288	1,294	5	0.5%
Short-term loans payable, Current portion of long-term loans payable and corporate bonds	200	200	0	—
Other	865	837	△27	△3.2%
Fixed liabilities	565	723	157	27.8%
Corporate bonds	200	200	0	—
Net defined benefits liability	190	193	3	1.7%
Other	175	329	154	88.0%
Total net assets	18,113	17,899	△213	△1.2%
Total of liabilities and net assets	21,032	20,955	△77	△0.4%
* Shareholders' equity ratio	86.1%	85.4%		

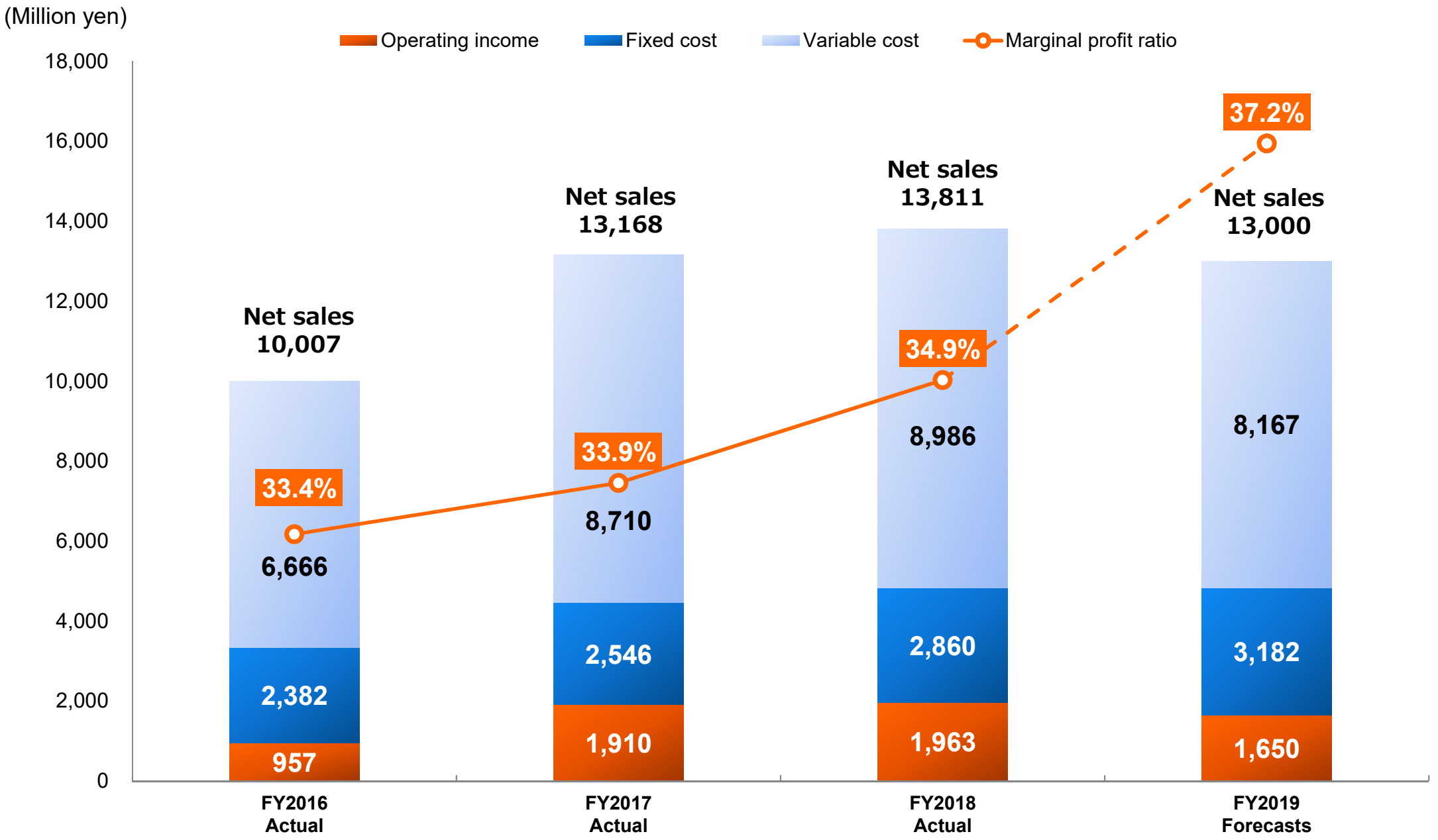


Conditions of Operational Hedge - ”Marry and Netting”

（単位：百万円）

Currency	Incoming			Outgoing			Net	Average rate during the term (JPY)	In case of yen appreciation (10%)			In case of yen depreciation (10%)		
	Each currency	Yen equivalent (JPY)	Composition ratio	Each currency	Yen equivalent (JPY)	Composition ratio	Each currency		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	¥3,800.0	¥3,800.0	71%	¥3,300.0	¥3,300.0	67%	¥500.0	-	-	-	-	-	-	-
USD	$12.5	¥1,373.9	26%	$10.9	¥1,198.0	25%	$1.6	¥109.9	¥98.92	¥-10.99	¥-17.59	¥120.90	¥10.99	¥17.59
EUR	€ 1.0	¥123.5	2%	€ 0.9	¥111.1	2%	€ 0.1	¥123.5	¥111.14	¥-12.3	¥-1.23	¥135.84	¥12.35	¥1.23
PHP	PP0.0	¥0.0	0%	PP119.4	¥251.9	5%	PP-119.4	¥2.1	¥1.90	¥-0.2	¥25.19	¥2.32	¥0.21	¥-25.19
THB	฿19.50	¥67.9	1%	฿8.00	¥27.8	1%	฿11.50	¥3.5	¥3.13	¥-0.3	¥-4.00	¥3.83	¥0.35	¥4.00
Total	-	¥5,365.2	100%	-	¥4,888.9	100%	-	-	-	-	¥2.37	-	-	¥-2.37

Variation in Marginal Profit Ratio



Drawing on mass-production technologies to deploy YAMASHIN Nano Filters in various sectors.

Considering M&A activities in appropriate fields

Phase 3
Medium term

Deployment to fields like building materials and biosciences (examples)

Phase2
FY2019

Deployment to automotive

Phase1
FY2018

Advancing into the fields of construction machinery, air filters, agricultural materials and apparel

Paradigm Shift

Contamination
Light
Heat
Noise
Bio

Nano Filter

Control of fiber structures enables mass-production of high-quality precision filters.

① Major customer A

【Requirements】
- Innovative apparel materials
- Ultra-thin, super heat retention, and high humidity control functions

【Current status】
- Mass production and supply has begun
- A supply system for each apparel manufacturer is being established.

② Major customer B

【Requirements】
- Replace glass fiber filters

【Current status】
- Now producing samples to meet specification values
- Increasing performance of prototypes in leadup to product introduction
- Improving equipment to enable stable production
- Preparing for mass production next year

Air filters

Control of fiber structures enables mass-production of high-quality precision filters.

① Domestic appliance makers

【Requirements】
- Replace glass fiber filters

【Current status】
- Need to further improve fiber density and fineness
- Need to increase ambient temperatures during fiber production
- Separate plans call for evaluation of electret materials for air filters with extended life

② Major auto interior parts makers

【Requirements】
・Development of materials that exceed the performance of the existing products (sound absorption/soundproof)

【Current status】
・Strengthening cost competitiveness
・Developing a mass production supply system
・Considering specific processes and management methods for product development

③ Major building materials makers

【Requirements】
- Higher thermal insulation and cooling performance than current products

【Current Status】
- Collecting data on the thermal insulation properties of nanofibers
- Producing prototypes and collecting test data

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.

For any inquiries regarding this material, please contact below:
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