

FY2018 Nine Months Financial Results (Ended November 30, 2018)

FY2018 Full-Year Forecasts (Ending February 28, 2019)

Notes:

- **The Company changed its accounting period in fiscal 2017 from March 20 to the last day of February. As a result of this change, the period for the first three quarters of the fiscal year ending February 2019 (From March 1, 2018 to November 30, 2018) is different from that of the first three quarters of the previous fiscal year (From March 21, 2017 to December 20, 2017). Therefore, the year-on-year changes of the nine months results in this material are shown as <reference>.**
- The information within this document is made as of the date of writing. Any forward-looking statements are made according to the assumptions of management and are subject to change as a result of risks and uncertainties. YASKAWA Electric Corporation undertakes no obligation to update or revise these forward-looking statements, whether as a result of new information, future events, or otherwise.
- Figures in this document are rounded off, and may differ from those in other documents such as financial results.

YASKAWA ELECTRIC CORPORATION (TSE6506)

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Business Overview

Motion Control

【Core products】

- AC servo motors and controllers
- Linear servo motors
- AC drives



AC servo motor
Σ-7 series



Yaskawa AC drive
new series

Matrix
converter
U1000

Robotics

【Core products】

- Industrial robots
 - Arc and spot welding robots, painting robots
 - FPD glass sheet transfer robots, handling robots
- Semiconductor wafer transfer robots
- Biomedical robots
- Collaborative robots



New small robot
MOTOMAN-GP8

7-axis arc-welding
robot
MOTOMAN-AR1440E

Collaborative robot
MOTOMAN-HC10DT
Hand-carry model

System Engineering

【Core products】

- Electrical systems for steel plants
- Electrical instrumentation systems for water supply plants and sewage treatment facilities
- Large-scale wind power generator and converter
- PV inverters



Generator and converter for
large-scale wind turbines

PV inverter
XGI1000



Continuous-casting machine



Electrical
instrumentation
systems for water
and sewerage

Other

【Core products】

- EV drive system
- Logistics

1. FY2018 Nine Months Financial Results

(Ended November 30, 2018)

FY2018 Nine Months Financial Results (Highlights)

- Sales and profits were record highs as nine months results, while the Chinese market has shown signs of deceleration.**

	FY2018	FY2017	Changes <small>〈Reference〉</small>	
	Mar.-Nov.	Apr.-Dec.	Amounts	%
Net sales	¥ 361.3bn.	¥ 339.8bn.	+¥ 21.5bn.	+6.3%
Operating income	¥ 41.6bn.	¥ 41.6bn.	+¥ 0.1bn.	+0.1%
Ordinary income	¥ 42.8bn.	¥ 41.6bn.	+¥ 1.2bn.	+2.9%
Profit attributable to owners of parent	¥ 37.9bn.	¥ 29.7bn.	+¥ 8.3bn.	+27.9%

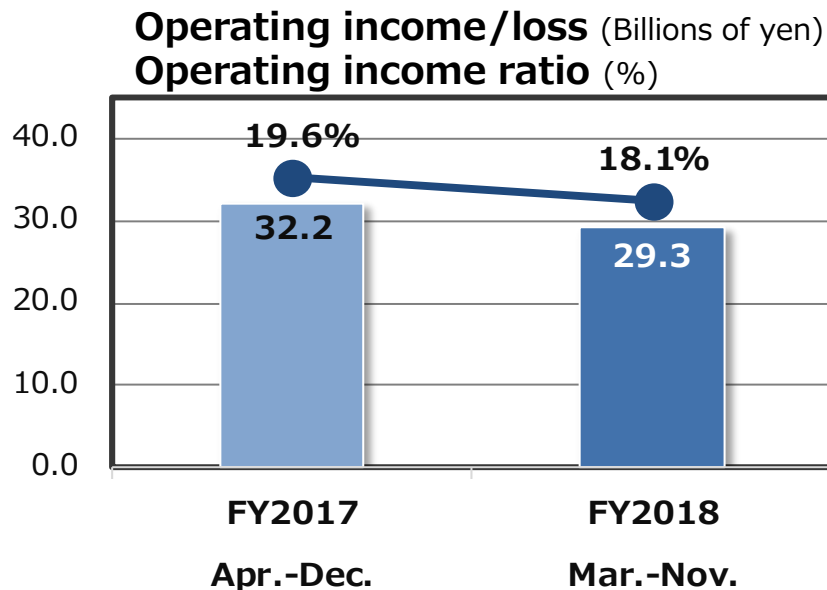
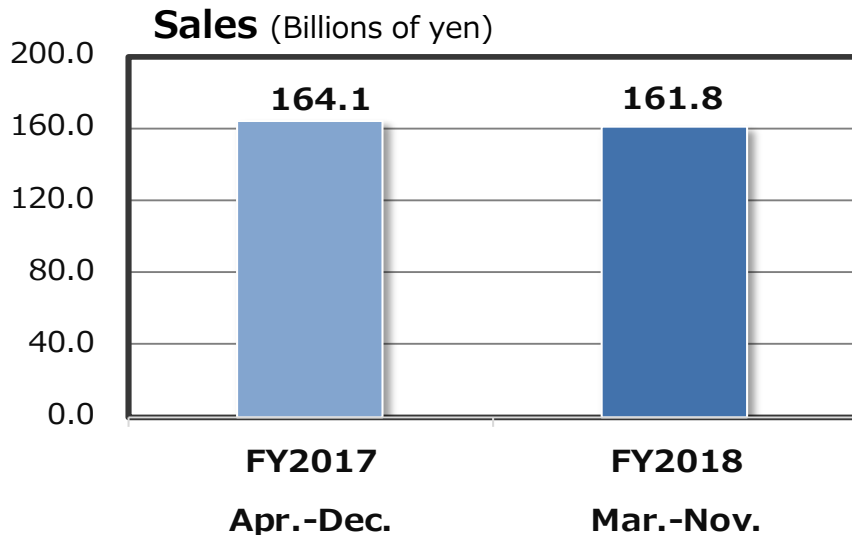
FY2018 Nine Months Financial Results by Business Segment

- (R) achieved steady performance, while (M) results stagnated.
- Profitability of (S) improved as an effect of structural reforms.
- Sales and profits of Other segment increased as an effect of reorganization and consolidation of subsidiaries.

	FY2018 Mar.-Nov.		FY2017 Apr.-Dec.		Changes <Reference>	
	Results	Income ratio	Results	Income ratio	Amounts	%
(Billions of yen)						
Net sales	361.3		339.8		+21.5	+6.3%
Motion Control	161.8		164.1		-2.3	-1.4%
Robotics	131.8		120.5		+11.3	+9.4%
System Engineering	42.1		40.9		+1.3	+3.2%
Other	25.6		14.4		+11.2	+78.0%
Operating income	41.6	11.5%	41.6	12.2%	+0.1	+0.1%
Motion Control	29.3	18.1%	32.2	19.6%	-2.9	-9.1%
Robotics	13.6	10.3%	13.5	11.2%	+0.1	+0.8%
System Engineering	-0.3	-0.6%	-3.1	-7.5%	+2.8	-
Other	0.4	1.7%	0.1	0.6%	+0.3	+416.9%
Elimination or Corporate	-1.4	-	-1.2	-	-0.3	-
Ordinary income	42.8	11.9%	41.6	12.2%	+1.2	+2.9%
Profit attributable to owners of parent	37.9	10.5%	29.7	8.7%	+8.3	+27.9%

Note: (M) = Motion Control (R) = Robotics (S)=System Engineering

Business Segment Overview: Motion Control



【Sales】

<AC servo & controller business>

- Performance stagnated due to the effect of the U.S. China trade conflict especially in China and the weak semiconductor-related capital expenditures.

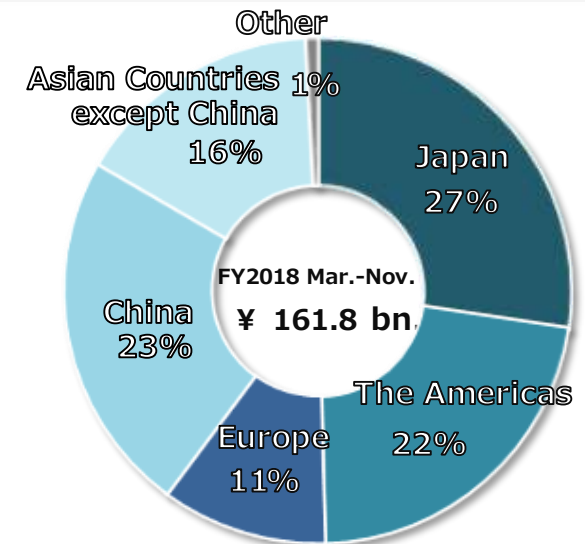
<Drives business>

- Steady performance due to infrastructure demand in Japan and U.S. oil&gas-related demand.

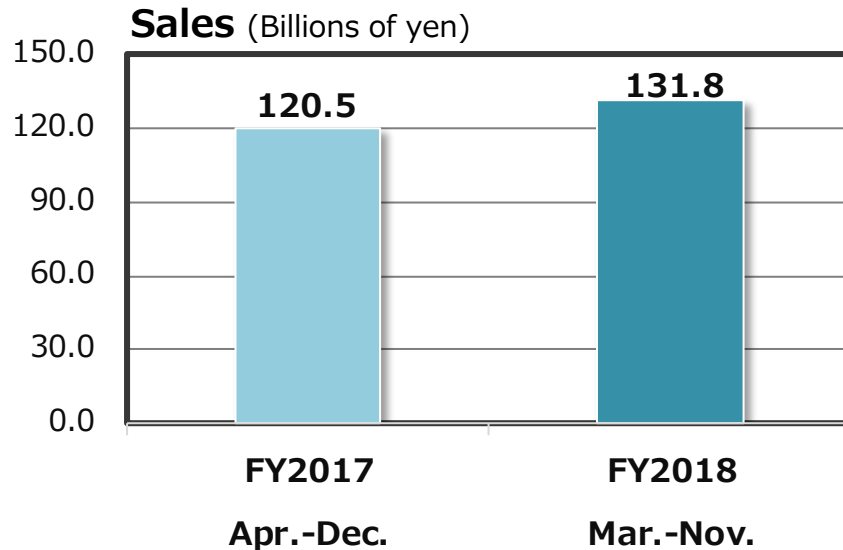
【Operating income】

- Although drives business was solid globally, AC servo & controller business saw a slowdown in China, which led to a stagnant profit.

Sales breakdown by region



Business Segment Overview: Robotics

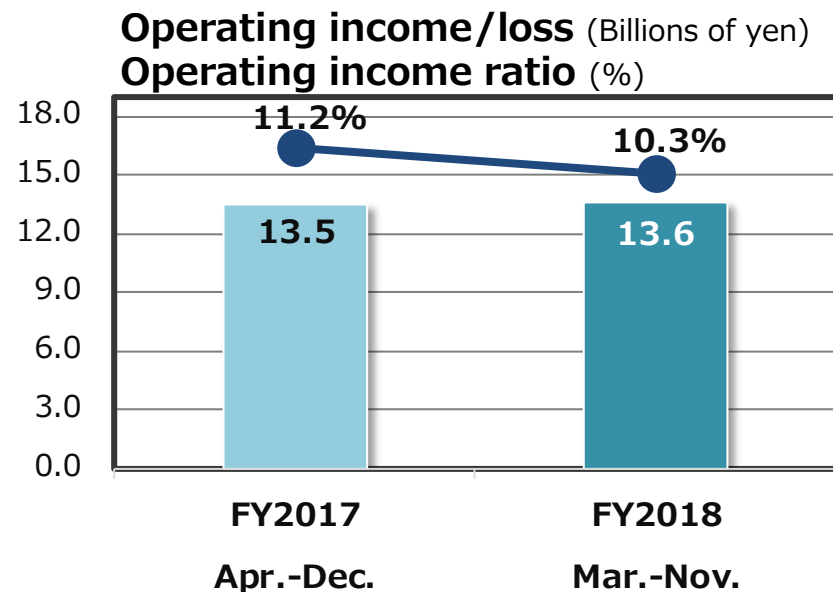


【Sales】

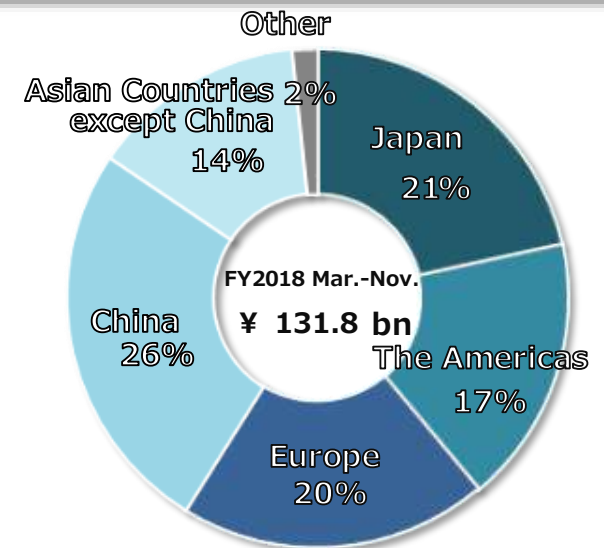
- Automobile-related sales were strong globally, especially in Europe.
- In the general industry sector, the smartphone-related demand, which was strong in the previous year, slowed down.

【Operating income】

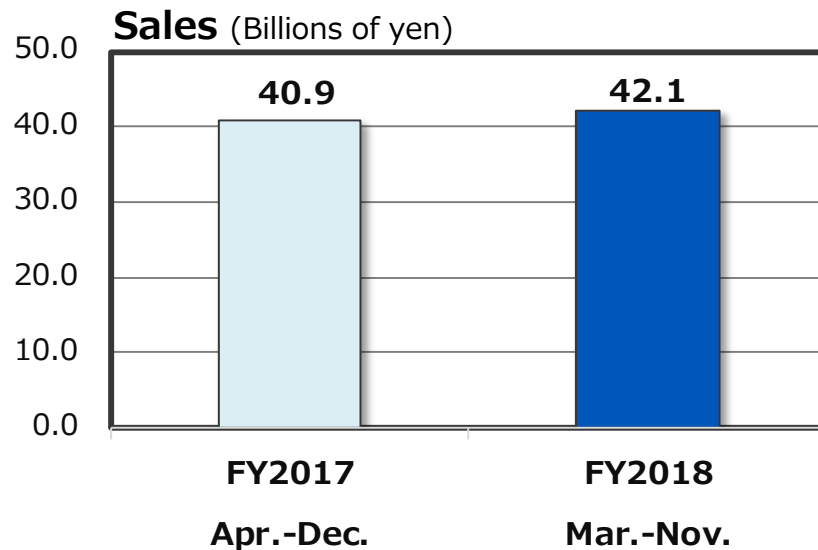
- Operating income ratio remained at a 10% level.



Sales breakdown by region



Business Segment Overview: System Engineering

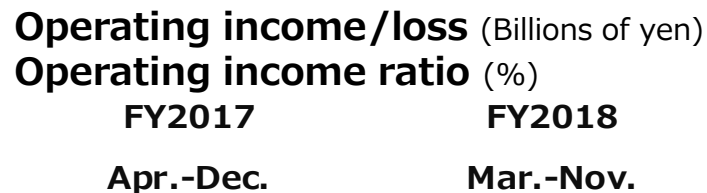


【Sales】

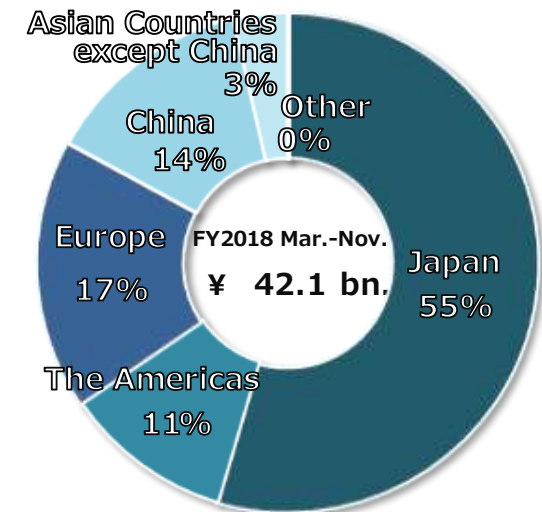
- Steel plant and social system businesses remained solid.
- As for the clean power business, sales related to large-scale wind turbines in Europe grew, while the PV inverter sales were sluggish.

【Operating income/loss】

- Profitability improved due to the sales increase in the steel plant and social system businesses, and cost reduction through the structural reforms in the clean power business.

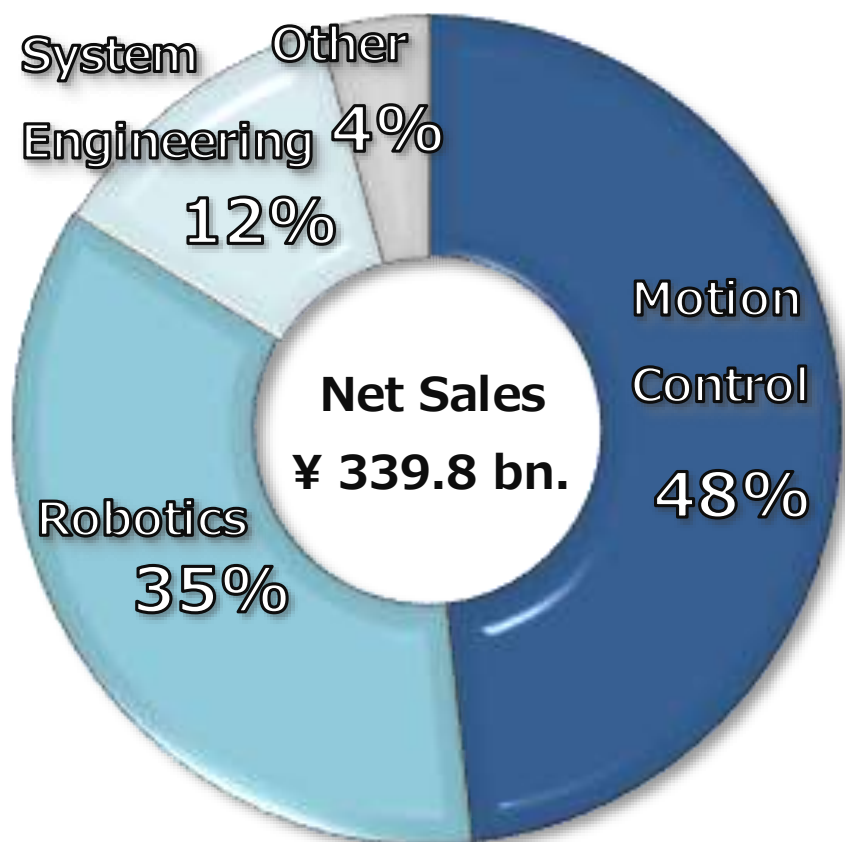


Sales breakdown by region

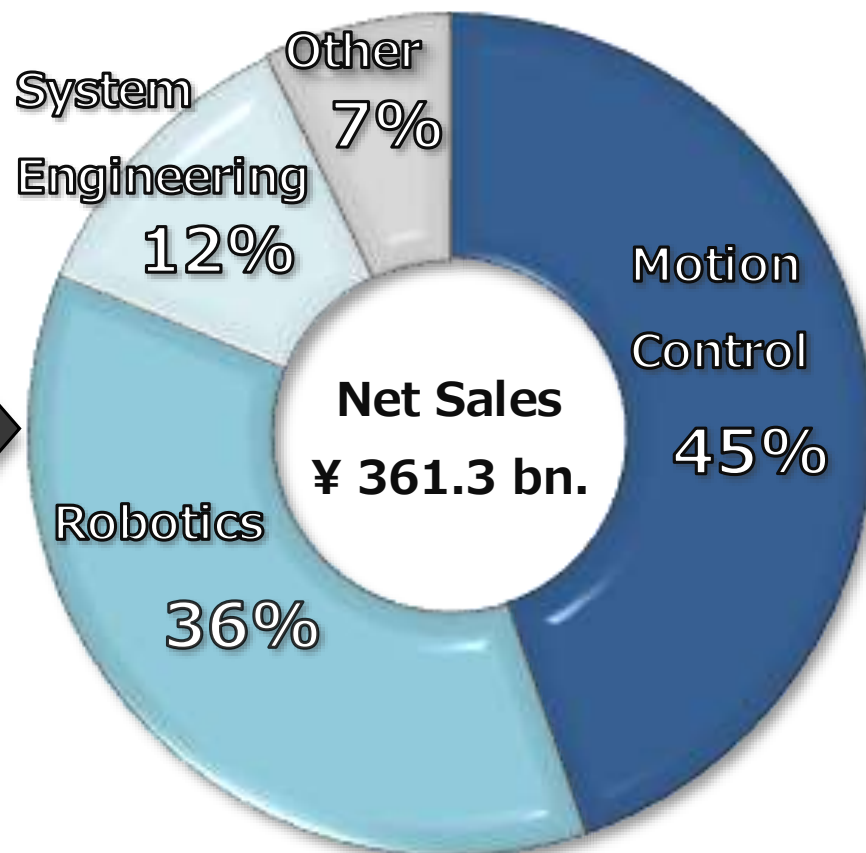


Sales Breakdown by Business Segment

FY2017 Apr.-Dec.



FY2018 Mar.-Nov.



Sales Breakdown by Destination (1)

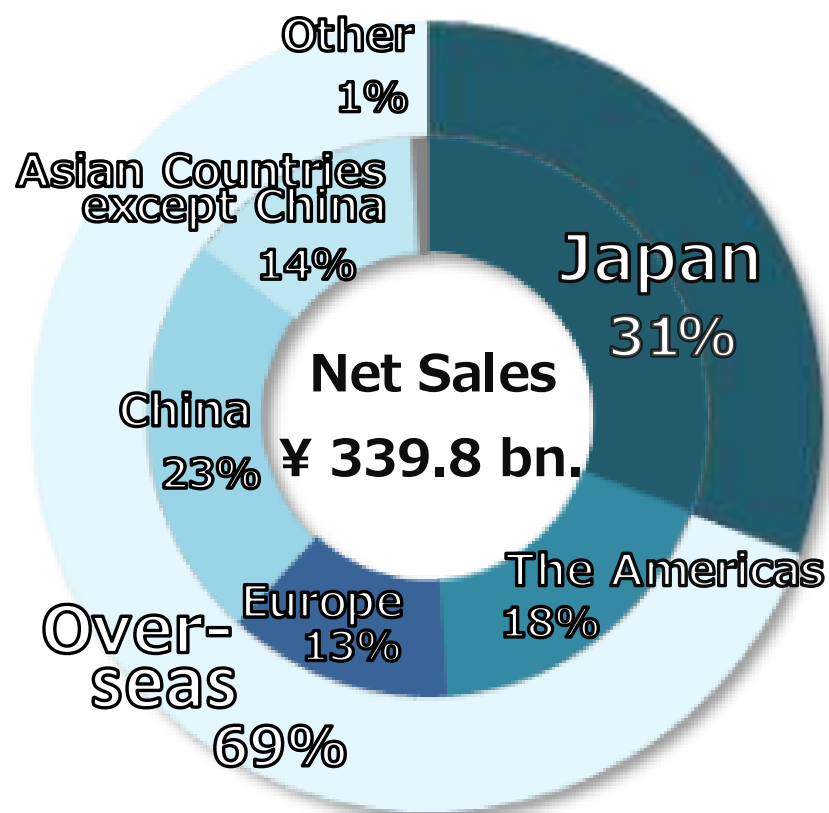
- Sales increased in all regions, especially in Japan and Europe.

	FY2018 Mar.-Nov.	FY2017 Apr.-Dec.	Changes 〈Reference〉	
			Amounts	%
(Billions of yen)				
Net sales	361.3	339.8	+21.5	+6.3%
Japan	113.9	104.2	+9.7	+9.3%
Overseas	247.4	235.7	+11.7	+5.0%
The Americas	63.3	62.2	+1.1	+1.8%
Europe	50.8	43.9	+6.9	+15.8%
China	81.3	79.8	+1.4	+1.8%
Asian Countries except China	48.7	46.6	+2.1	+4.5%
Other	3.3	3.1	+0.2	+7.1%

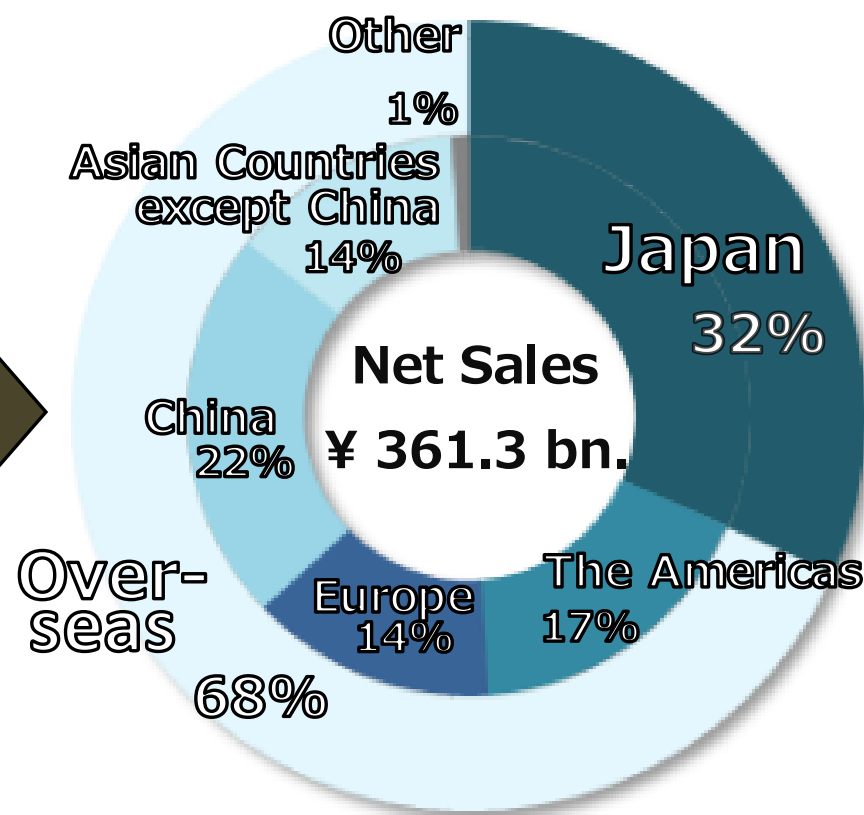
Note: Other includes Australia and South Africa, etc.

Sales Breakdown by Destination (2)

FY2017 Apr.-Dec.



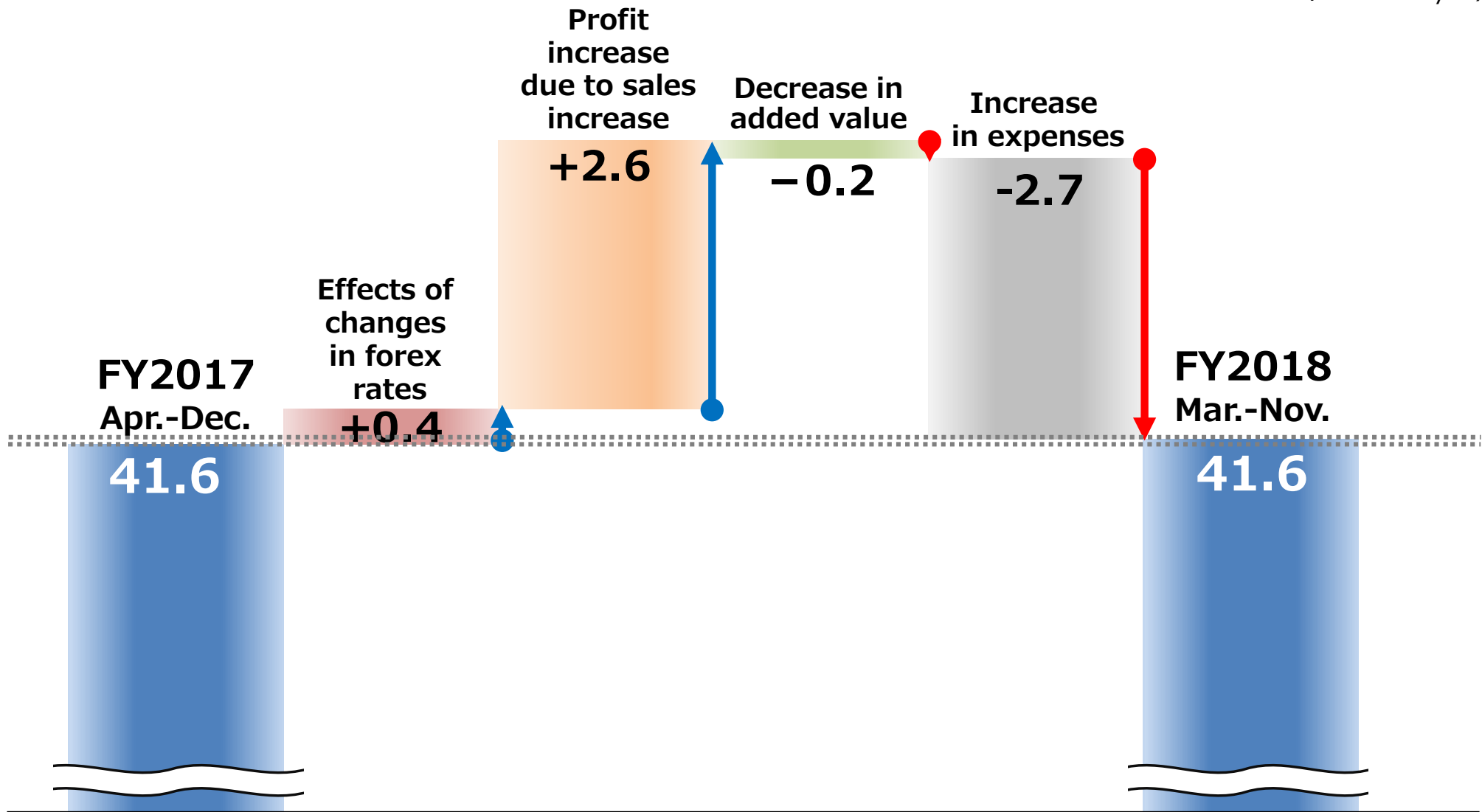
FY2018 Mar.-Nov.



Breakdown of Changes in Operating Income

(FY2017 Nine Months → FY2018 Nine Months)

(Billions of yen)



Measures for FY2018 3Q (1)

➤ Enhancement of production capability

➔ Full-scale operation of Yaskawa Solution Factory, realizing i³-Mechatronics

- Realized high-mix, variable volume production, as well as the smooth-flowing production without generating in-process inventory
- Realized triple production speed, one-sixth lead time, triple production efficiency*

*Compared with Yaskawa's conventional factory



Factory exterior



Motor assembly line



Control room where visualization of data is realized

➤ Enhancement of sales capability

➔ Business reorganization for the purpose of sales expansion and management efficiency

- Integrated steel plant engineering business and general industrial motor business into Yaskawa Automation & Drives Corp.
- Integrated servomotor and EV motor production function of Yaskawa Motor Co., Ltd. into Motion Control business, PM motor business of Yaskawa Motor Co., Ltd. into Drives business

Measures for FY2018 3Q (2)

➤ **Expansion of new businesses**

➔ **Entry into the food production market**

- Provided automated systems to a dedicated vegetable plant for products of a major convenience store chain in Japan

➔ **Launch of a MOTOMAN-GP series robot applicable to food production**

- Achieved higher cleanliness and safety standards required for food production lines by applying grease for food machines as lubricant

➔ **Launch of XGI1000 65kW, a new PV inverter product**

- Released a universal model in the U.S. and Japan for commercial and utility applications



XGI1000 65kW

2. FY2018 Full-Year Financial Forecasts (Ending February 28, 2019)

FY2018 Full-Year Financial Forecasts (Highlights)

- Forecast figures are revised down on the back of slowdown in the semiconductor-related investments and weakness in the Chinese market.
(Forecasts for sales and profit attributable to owners of parent are record high.)

	FY2018 Forecasts	FY2017 〈Reference basis〉 Results	Changes 〈Reference〉		<u>FY2018</u> <u>Previous forecasts</u>
			Amounts	%	
Net sales	¥ 482.0bn.	¥ 464.5bn.	+¥ 17.5bn.	+3.8%	¥ 498.0bn.
Operating income	¥ 53.0bn.	¥ 57.1bn.	-¥ 4.1bn.	-7.2%	¥ 59.0bn.
Ordinary income	¥ 54.4bn.	¥ 58.3bn.	-¥ 3.9bn.	-6.7%	¥ 60.0bn.
Profit attributable to owners of parent	¥ 45.5bn.	¥ 41.7bn.	+¥ 3.7bn.	+9.0%	¥ 47.0bn.

Note: FY2017 figures are reference-basis, which are based on an assumption that the accounting period remained unchanged
(from March 21, 2017 to March 20, 2018)

FY2018 Full-Year Financial Forecasts by Business Segment

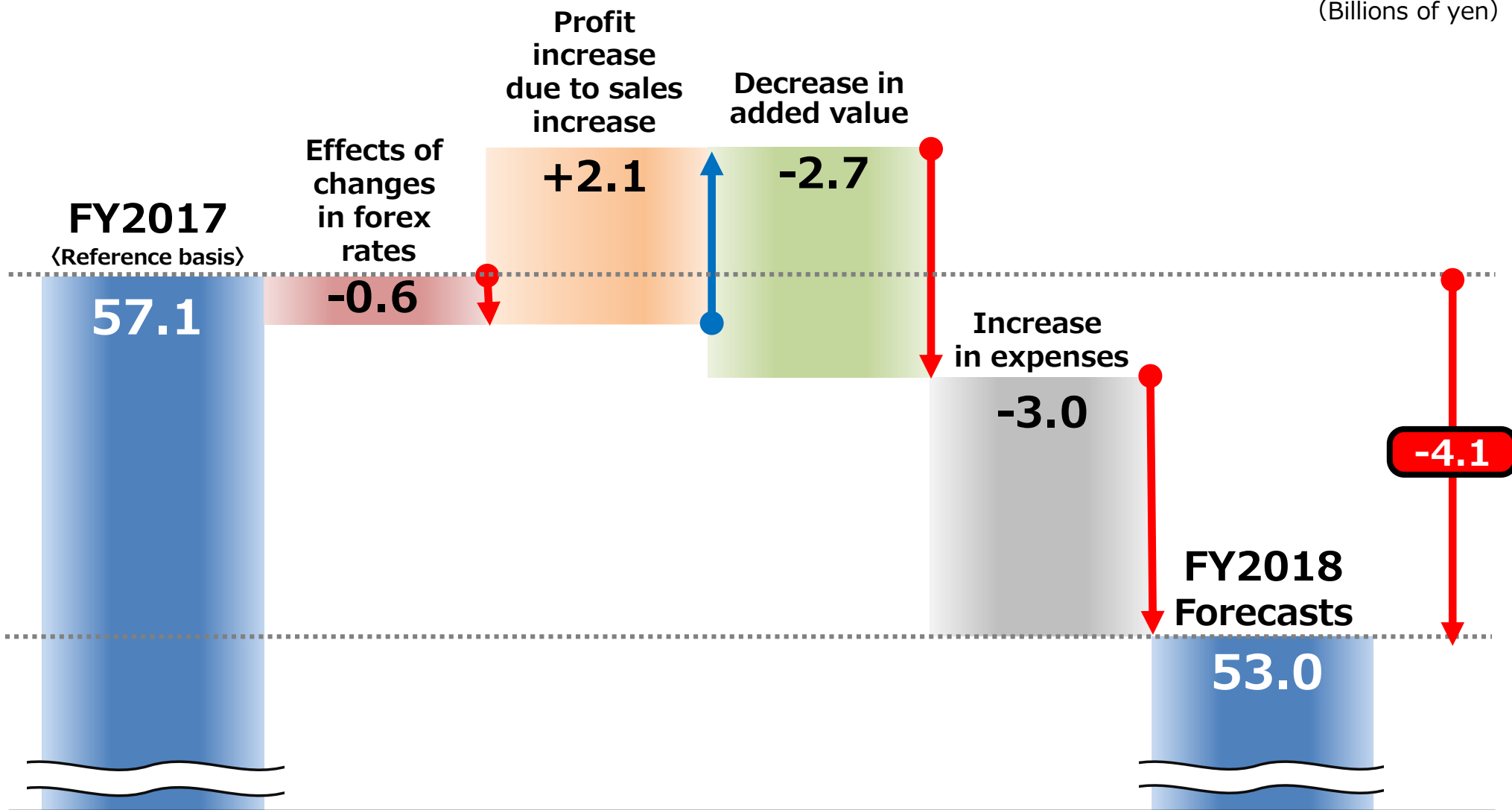
- Forecast figures are revised down in Motion Control and Robotics.
- System Engineering is forecast to turn positive.

	FY2018		FY2017		Changes (Reference)		FY2018	
	Forecasts	Income ratio	Results (Reference basis)	Income ratio	Amounts	%	Previous forecasts	Income ratio
(Billions of yen)								
Net sales	482.0		464.5		+17.5	+3.8%	498.0	
Motion Control	209.5		215.2		-5.7	-2.6%	218.0	
Robotics	178.7		166.8		+11.9	+7.1%	185.0	
System Engineering	60.8		61.3		-0.4	-0.7%	61.0	
Other	32.9		21.1		+11.8	+55.6%	34.0	
Operating income	53.0	11.0%	57.1	12.3%	-4.1	-7.2%	59.0	11.8%
Motion Control	35.9	17.1%	42.3	19.6%	-6.4	-15.1%	41.0	18.8%
Robotics	18.5	10.4%	18.5	11.1%	+0.1	+0.4%	19.8	10.7%
System Engineering	0.1	0.2%	-2.1	-3.4%	+2.2	-	-0.4	-0.7%
Other	0.5	1.5%	-0.2	-0.7%	+0.7	-	0.6	1.9%
Elimination or Corporate	-2.1	-	-1.4	-	-0.7	-	-2.1	-
Ordinary income	54.4	11.3%	58.3	12.6%	-3.9	-6.7%	60.0	12.0%
Profit attributable to owners of parent	45.5	9.4%	41.7	9.0%	+3.7	+9.0%	47.0	9.4%

Note: FY2017 figures are reference-basis, which are based on an assumption that the accounting period remained unchanged (from March 21, 2017 to March 20, 2018)

Breakdown of Changes in Operating Income (FY2017 → FY2018 Forecasts)

(Billions of yen)



Note: FY2017 profit figure is reference-basis, which is based on an assumption that the accounting period remained unchanged (from March 21, 2017 to March 20, 2018)

3 . Reference

Capital Expenditure, R&D Investment, Forex Rates

Capital expenditure, R&D investment

(Unit : Billions of Yen)

	F Y 2 0 1 6	F Y 2 0 1 7	F Y 2 0 1 8 (Plan)
Capital expenditure	14.91	19.69	35.00
Depreciation and Amortization	12.08	12.69	14.00
R&D investment	17.98	19.07	21.00

Forex rates

Note: Average rate during the period

(Unit : Yen)

	F Y 2 0 1 6				F Y 2 0 1 7				F Y 2 0 1 8 (Forecasts)			
	Apr.-Dec.	4Q	2H	Full-Year	Apr.-Dec.	4Q	2H	Full-Year	Mar.-Nov.	4Q	2H	Full-Year
U.S. dollar	106.3	114.5	109.6	108.4	111.7	110.7	111.5	111.5	110.4	110.0	111.4	110.4
Euro	118.5	121.5	118.4	119.2	127.1	134.2	133.3	128.8	129.8	125.0	127.3	128.6
Yuan	16.03	16.67	16.09	16.19	16.56	17.16	17.08	16.71	16.65	16.00	16.16	16.49
Won	0.093	0.098	0.095	0.094	0.099	0.103	0.101	0.100	0.100	0.100	0.100	0.100

Forex sensitivity

(Unit : Billions of Yen)

	Impact of 1% fluctuation (full-year, forecasts)	
	Net sales	Operating income
U.S. dollar	approx. 0.94	approx. 0.24
Euro	approx. 0.74	approx. 0.21
Yuan	approx. 1.02	approx. 0.26
Won	approx. 0.31	approx. 0.18

Financial Indices

As of February 28, 2018

➤ Shareholders' equity ratio	53.5%
➤ Shareholders' equity	235.9 billion yen
➤ Interest-bearing debt	32.2 billion yen
➤ D/E ratio	0.14
(Net D/E ratio)	-0.04
➤ Inventory	100.1 billion yen
Turnover	2.7 months
➤ ROE	18.3%

As of November 30, 2018

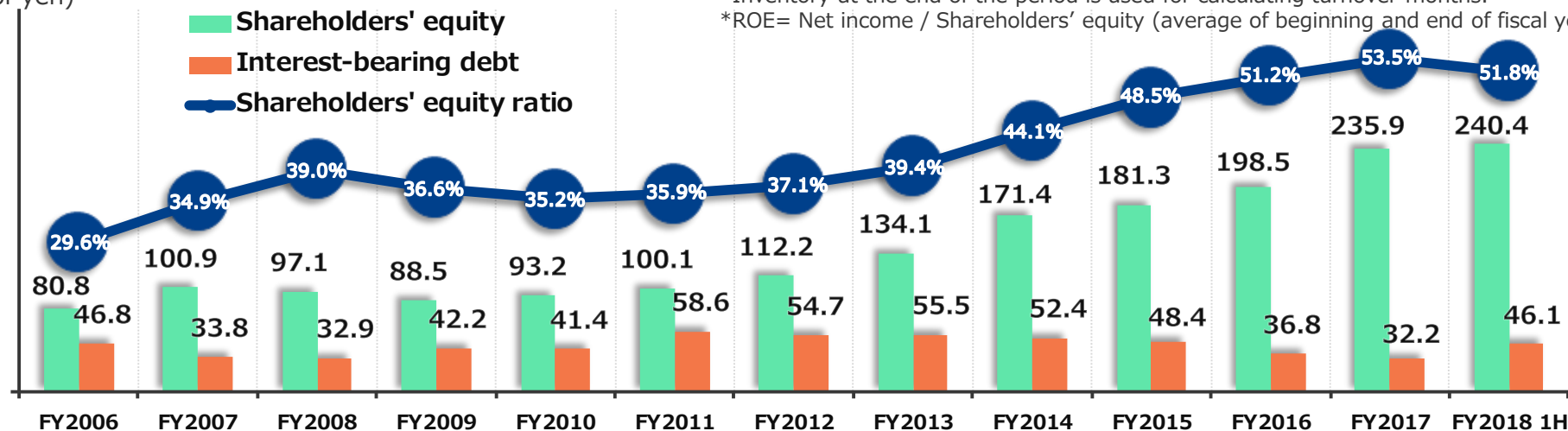
➤ Shareholders' equity ratio	51.5%
➤ Shareholders' equity	245.4 billion yen
➤ Interest-bearing debt	51.3 billion yen
➤ D/E ratio	0.21
(Net D/E ratio)	0.02
➤ Inventory	116.5 billion yen
Turnover	2.9 months

*Interest-bearing debt includes lease obligations.

*Inventory at the end of the period is used for calculating turnover months.

*ROE= Net income / Shareholders' equity (average of beginning and end of fiscal year)

(Billions of yen)

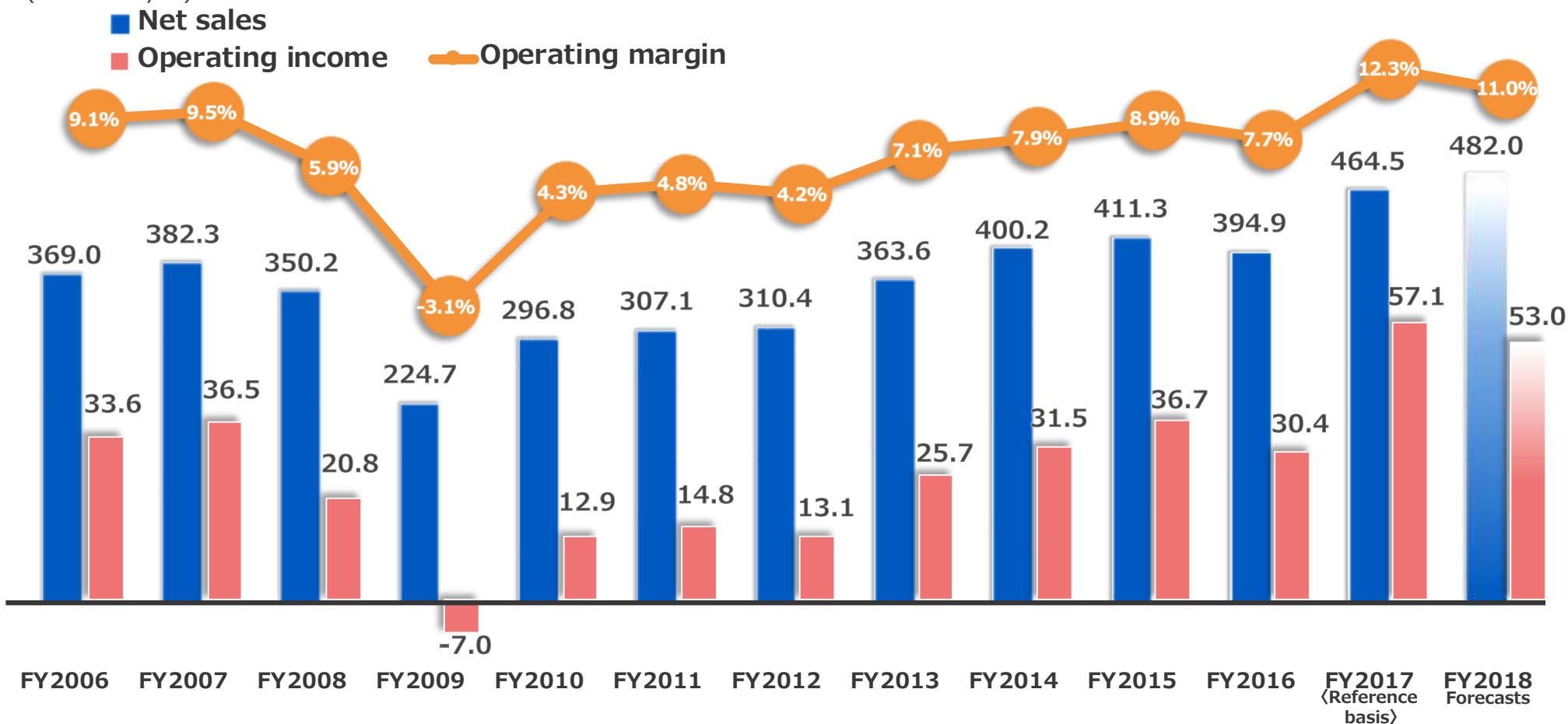


(Aug.)

Operating CF	15.0	17.7	12.5	4.0	2.5	6.4	24.6	24.0	29.0	32.0	33.8	46.1	22.3
Investment CF	- 6.1	- 9.9	- 10.7	- 6.5	- 6.7	- 11.9	- 18.1	- 16.9	- 27.9	- 22.4	- 18.9	- 18.9	- 8.8
Free CF	8.9	7.8	1.8	- 2.4	- 4.3	- 5.5	6.6	7.0	1.1	9.5	14.8	27.2	13.5

Net Sales/Operating Income (FY2006-2018 Forecasts)

(Billions of yen)



Dash 100

Challenge 100

Realize 100

Dash 25

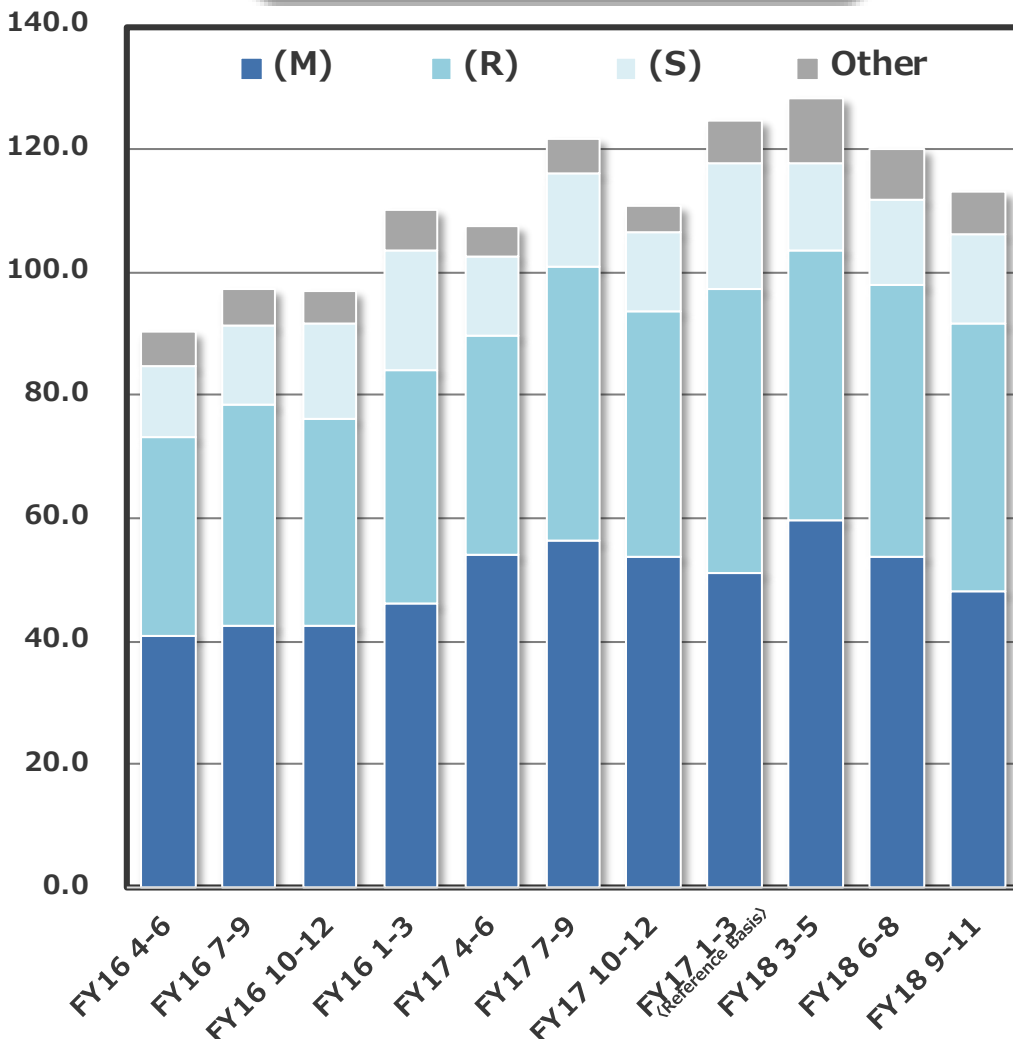
Mid-term business plans

Note: The data for FY2017 are made on a reference basis. (March 21, 2017 – March 20, 2018)

Quarterly Sales Trends (1)

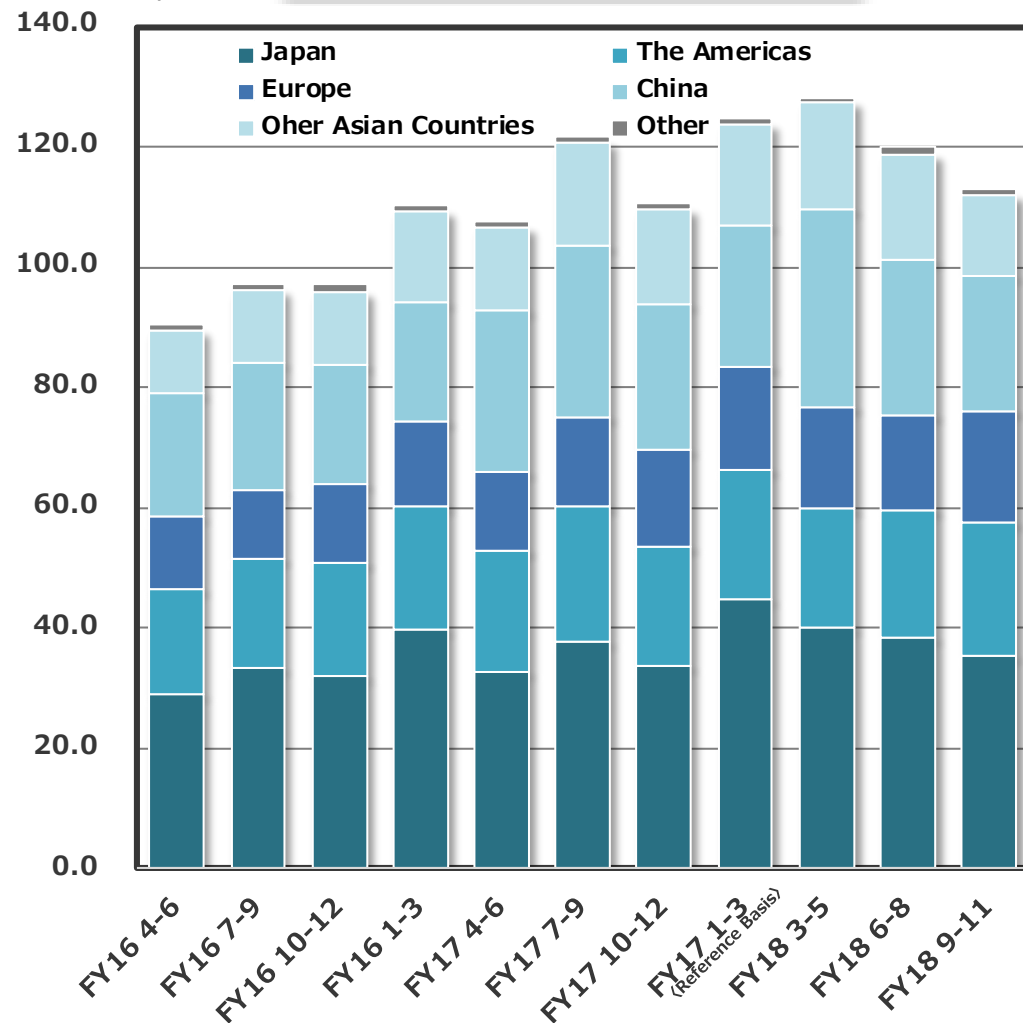
Business segment

(Billions of yen)



Destination

(Billions of yen)



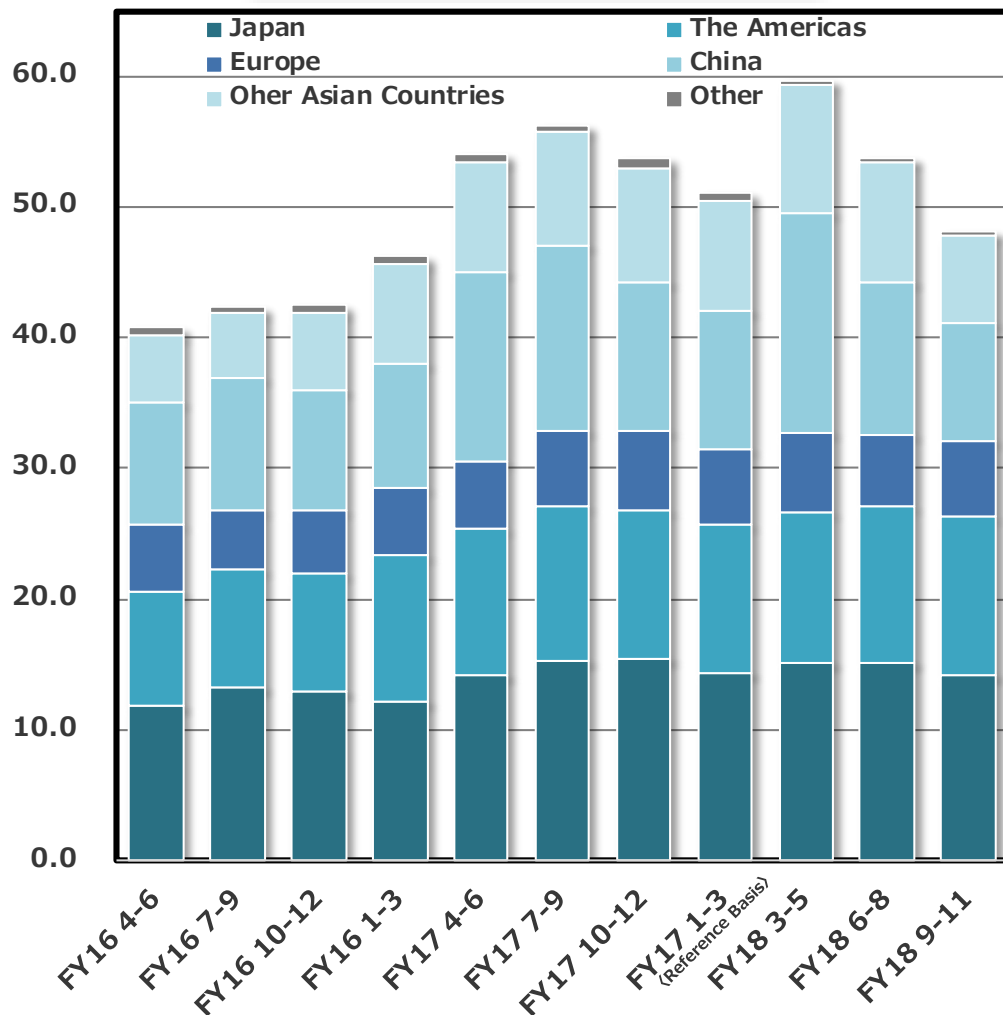
Note1: The data for FY2017 4Q(1-3) are made on a reference basis. (December 21, 2017 – March 20, 2018)

Note2: (M) = Motion Control (R) = Robotics (S) = System Engineering

Quarterly Sales Trends (2)

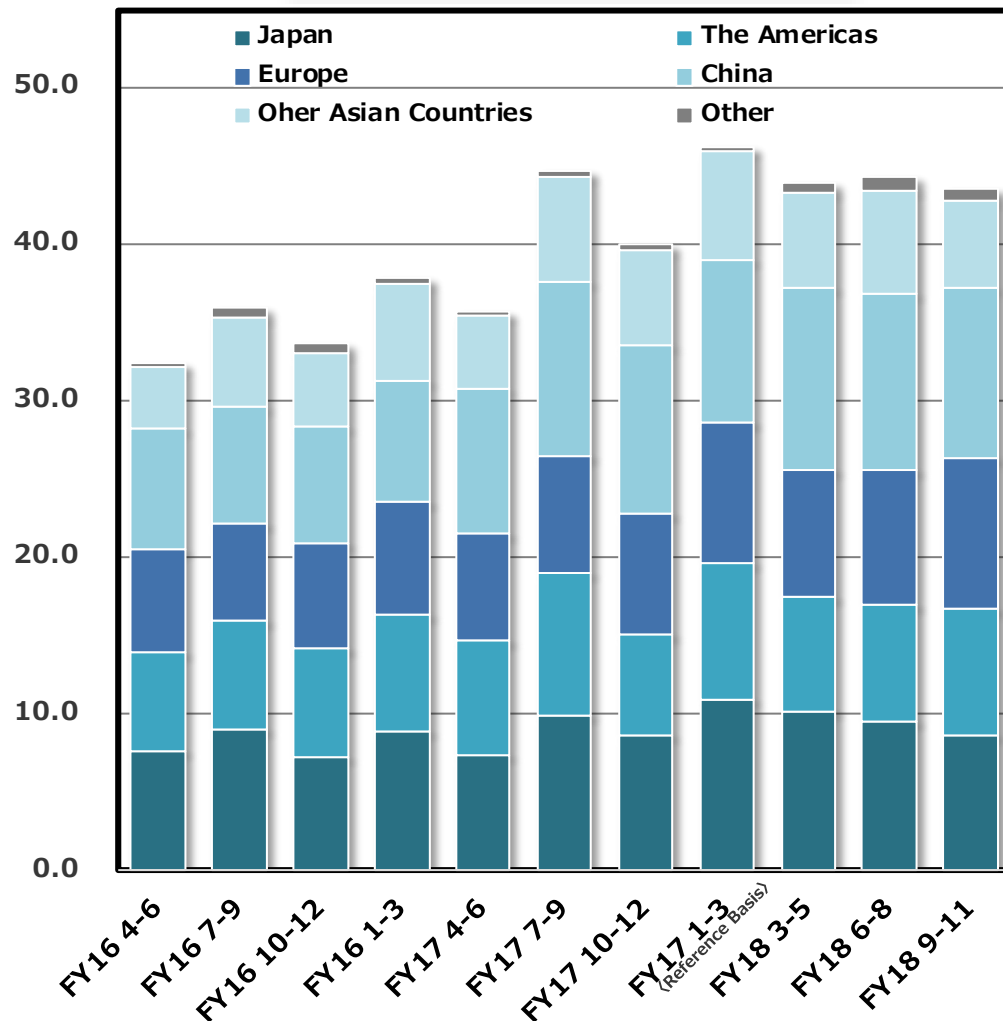
Motion Control

(Billions of yen)



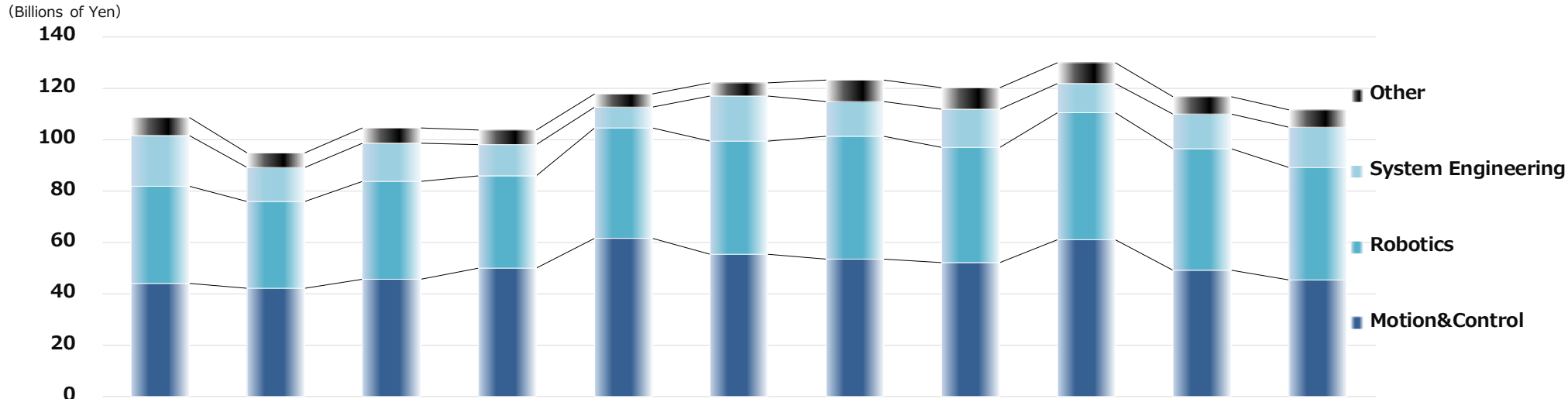
Robotics

(Billions of yen)



Note: The data for FY2017 4Q(1-3) are made on a reference basis. (December 21, 2017 – March 20, 2018)

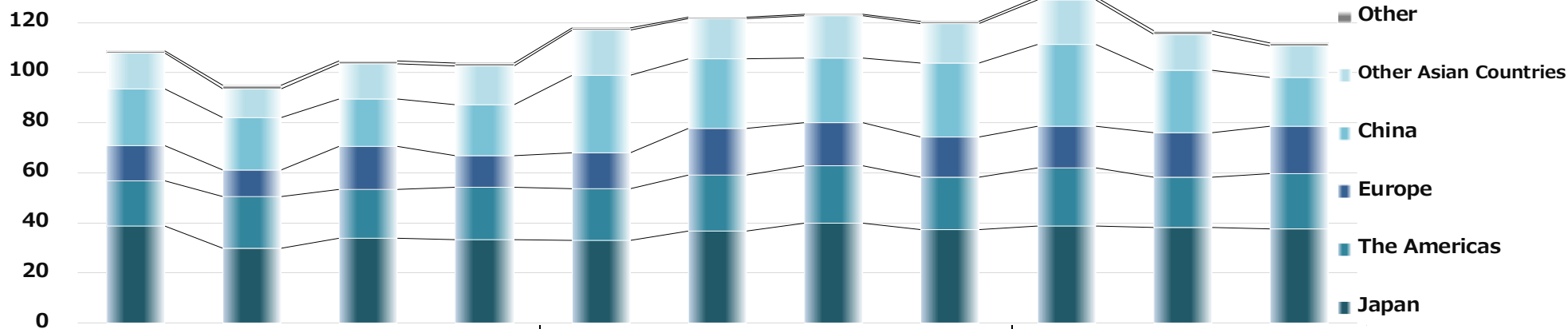
Quarterly Order Trends by Business Segment *Average forex rates during period used



FY2016						FY2017				FY2018		
		Apr.-Jun.	Jul.-Sep.	Oct.-Dec.	Jan.-Mar.	Apr.-Jun.	Jul.-Sep.	Oct.-Dec.	Jan.-Mar. <small>(Reference basis)</small>	Mar.-May	Jun.-Aug.	Sep.-Nov.
Total	YoY	-1%	-8%	-2%	+13%	+8%	+29%	+18%	+16%	+10%	-4%	-9%
	QoQ	+18%	-13%	+10%	-1%	+13%	+4%	+1%	-2%	+8%	-10%	-4%
YoY	(M)	-12%	-12%	+5%	+17%	+39%	+31%	+17%	+5%	-1%	-11%	-15%
	(R)	-9%	-11%	+5%	+7%	+14%	+31%	+25%	+24%	+15%	+7%	-8%
	(S)	+106%	+31%	-24%	+43%	-59%	+33%	-10%	+24%	+42%	-24%	+16%
QoQ	(M)	+3%	-4%	+8%	+9%	+23%	-10%	-3%	-2%	+17%	-19%	-8%
	(R)	+12%	-11%	+13%	-5%	+19%	+2%	+8%	-6%	+11%	-4%	-7%
	(S)	+134%	-33%	+14%	-20%	-33%	+118%	-23%	+11%	-23%	+16%	+16%
Forex rates	U.S. dollar	110.8	103.5	104.8	114.5	111.9	111.1	112.2	110.7	107.8	110.8	112.7
	Euro	124.5	115.6	115.3	121.5	120.9	127.9	132.4	134.2	130.9	128.9	129.6

Quarterly Order Trends by Destination *Average forex rates during period used

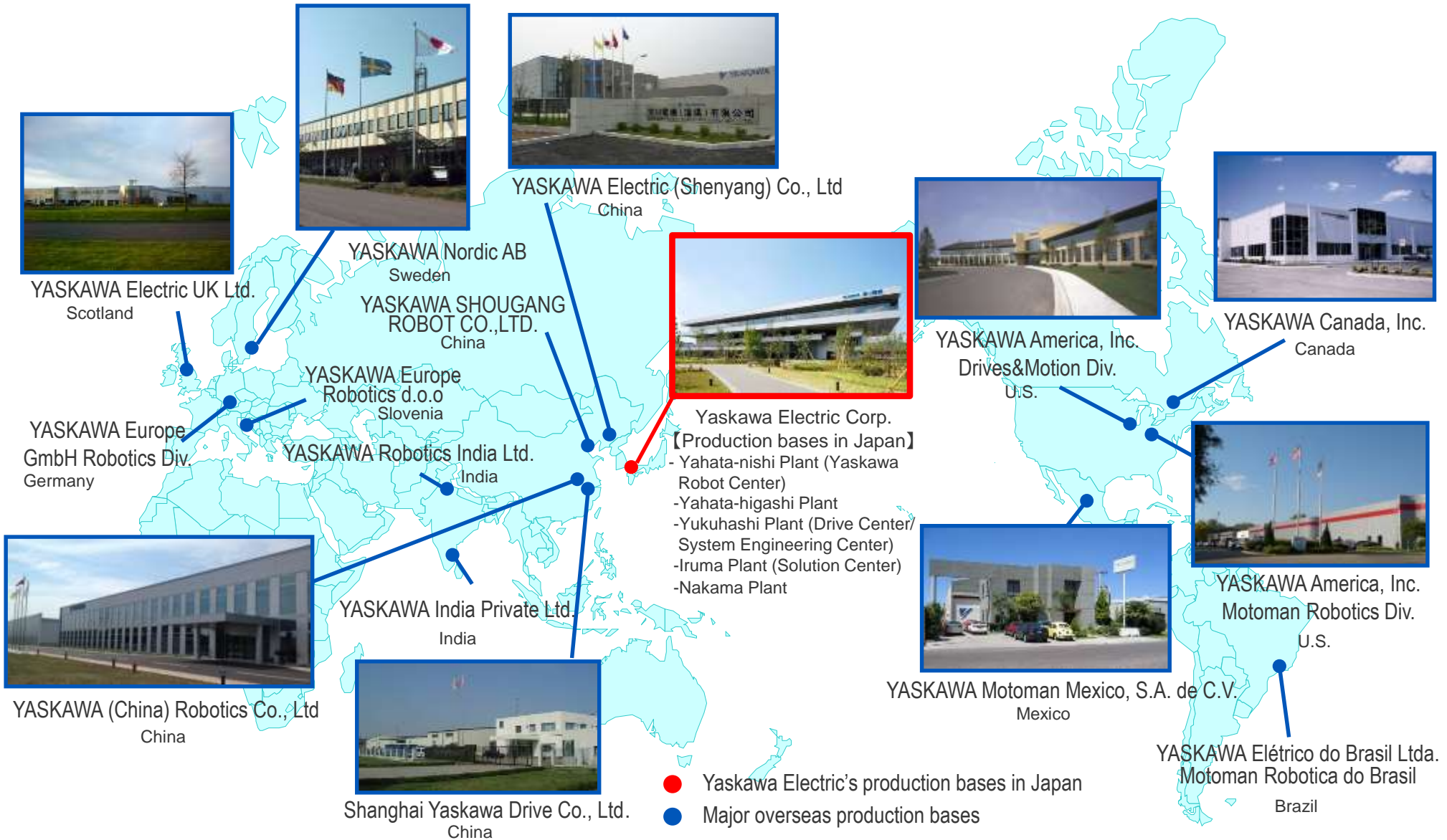
(Billions of Yen)
140



		FY2016				FY2017				FY2018		
		Apr.-Jun.	Jul.-Sep.	Oct.-Dec.	Jan.-Mar.	Apr.-Jun.	Jul.-Sep.	Oct.-Dec.	Jan.-Mar. (Reference basis)	Mar.-May	Jun.-Aug.	Sep.-Nov.
Total	YoY	-1%	-8%	-2%	+13%	+8%	+29%	+18%	+16%	+10%	-4%	-9%
	QoQ	+18%	-13%	+10%	-1%	+13%	+4%	+1%	-2%	+8%	-10%	-4%
YoY	Japan	+9%	-15%	-6%	+11%	-15%	+23%	+18%	+12%	+18%	+4%	-6%
	The Americas	-17%	-1%	-2%	+7%	+15%	+9%	+17%	+0%	+11%	-10%	-5%
	Europe	-3%	-18%	+2%	+6%	+2%	+73%	-0%	+25%	+16%	-6%	+11%
	China	+10%	-2%	-12%	+21%	+36%	+34%	+38%	+47%	+6%	-9%	-25%
	Other Asian Countries	-13%	-10%	+17%	+15%	+27%	+40%	+20%	+1%	-2%	-11%	-26%
QoQ	Japan	+29%	-23%	+14%	-2%	-1%	+12%	+9%	-7%	+4%	-2%	-1%
	The Americas	-8%	+14%	-5%	+7%	-1%	+8%	+2%	-8%	+10%	-12%	+8%
	Europe	+17%	-23%	+58%	-25%	+13%	+30%	-9%	-6%	+5%	+5%	+8%
	China	+37%	-9%	-9%	+7%	+53%	-11%	-6%	+15%	+10%	-24%	-22%
	Other Asian Countries	+4%	-19%	+23%	+10%	+15%	-10%	+5%	-7%	+12%	-18%	-13%

Note: The data for FY2017 4Q(Jan.-Mar.) are made on a reference basis. (December 21, 2017 – March 20, 2018)

Major Production Bases



YASKAWA