

Toyo Tanso Co., Ltd.

***Results for the Fiscal Year Ended December 31, 2017***

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**February 2018**  
**Toyo Tanso Co., Ltd.**

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# 1. Key Points for the Fiscal Year Ended December 31, 2017

## *Point 1*

**The market environment was positive overall. Applications for semiconductor and solar cells were key drivers, and net sales exceeded levels in the previous year as well as forecasts.**

## *Point 2*

**On the profit side, higher marginal profit due to sales growth, as well as reductions in fixed costs, were major contributors. Operating income, ordinary income, and profit attributable to owners of parent all increased significantly.**

## *Point 3*

**The inspection of graphite materials for the Chinese high-temperature reactor–pebble-bed modules (HTR-PM) is slated for completion in the first half of fiscal 2018. Sales of about 3.0 billion yen are priced into forecasts.**

## *Point 4*

**Business structure reforms have been achieved by reaching our goal of operating income of 3.0 billion yen on a consolidated basis one year earlier than planned. We will establish a new medium-term management plan to build for further growth.**

## 2. Results for the Fiscal Year Ended December 31, 2017 and Forecasts for the Fiscal Year Ending December 31, 2018

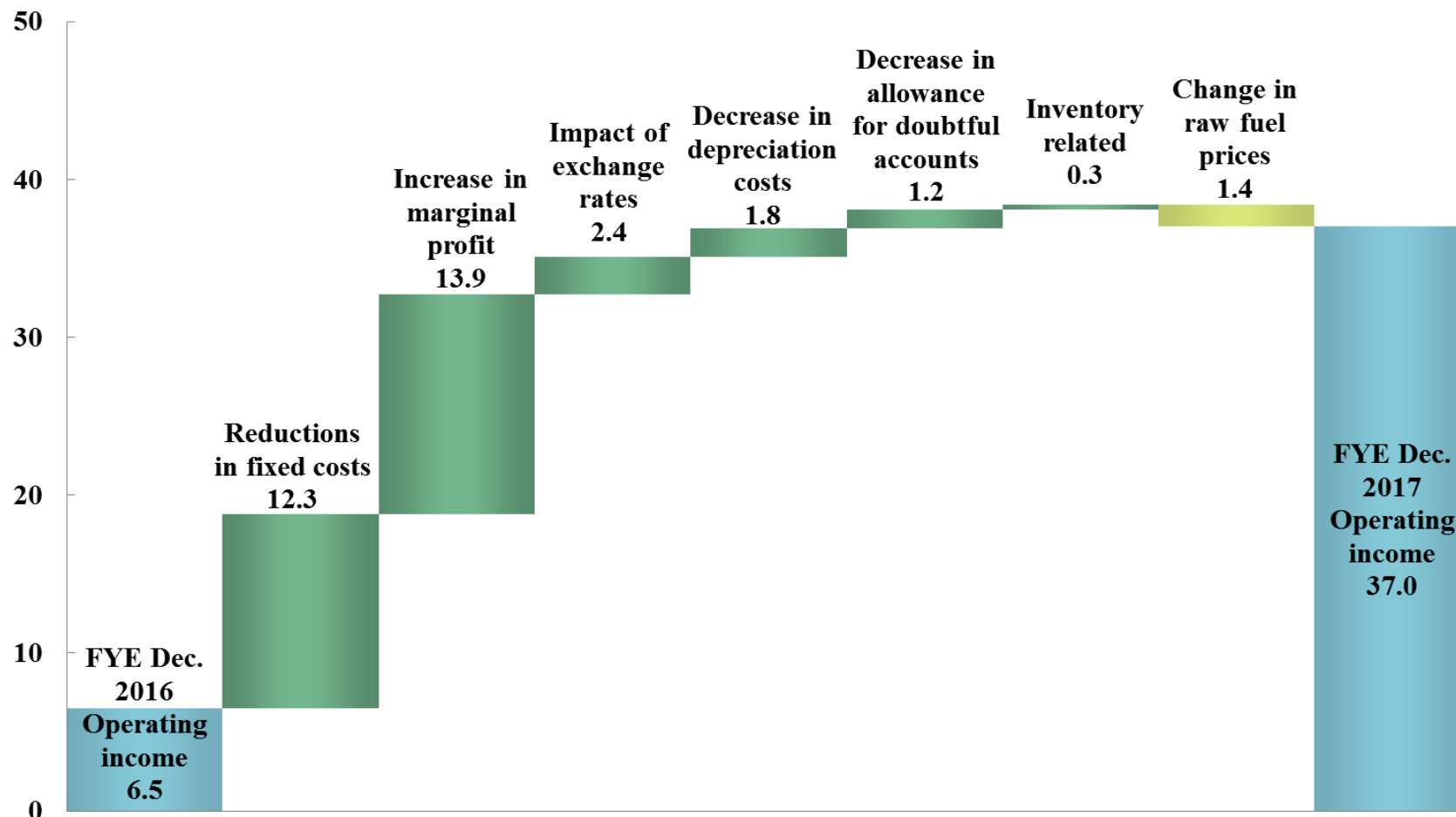
	FYE Dec. 2016	FYE Dec. 2017		FYE Dec. 2018 (forecast)		
		Year-on-year change		Breakdown		Year-on-year change
(Unit: Yen, millions)						
Net sales	32,464	35,240	2,775 / 8.6 %	39,500	H1 result 20,700 H2 result 18,800	4,259 / 12.1 %
Operating income	652	3,708	3,055 / 468.2 %	4,400	H1 result 2,200 H2 result 2,200	691 / 18.6 %
(Ratio of operating income to net sales)	2.0%	10.5%		11.1%		
Ordinary income	759	3,719	2,960 / 390.0 %	4,500	H1 result 2,300 H2 result 2,200	780 / 21.0 %
(Ratio of ordinary income to net sales)	2.3%	10.6%		11.4%		
Profit attributable to owners of parent	284	3,020	2,736 / 963.0 %	3,300	H1 result 1,700 H2 result 1,600	279 / 9.2 %
Profit attributable to owners of parent per share (basic)	13.71 yen	145.52 yen		158.29 yen	H1 result 81.54 yen H2 result 76.75 yen	
Exchange rate	108.9 yen/\$ 120.4 yen/€ 16.4 yen/CNY	112.2 yen/\$ 126.7 yen/€ 16.6 yen/CNY		110 yen/\$ 125 yen/€ 17.0 yen/CNY		

### 3. Factors Affecting Changes in Operating Income

(Results for the year ended December 31, 2016 vs. results for the year ended December 31, 2017)

- ✓ An increase in sales and improved profitability contributed to higher marginal profit
- ✓ Success in thoroughly reducing fixed costs through business structure reforms

(Unit: Yen, 100 millions)

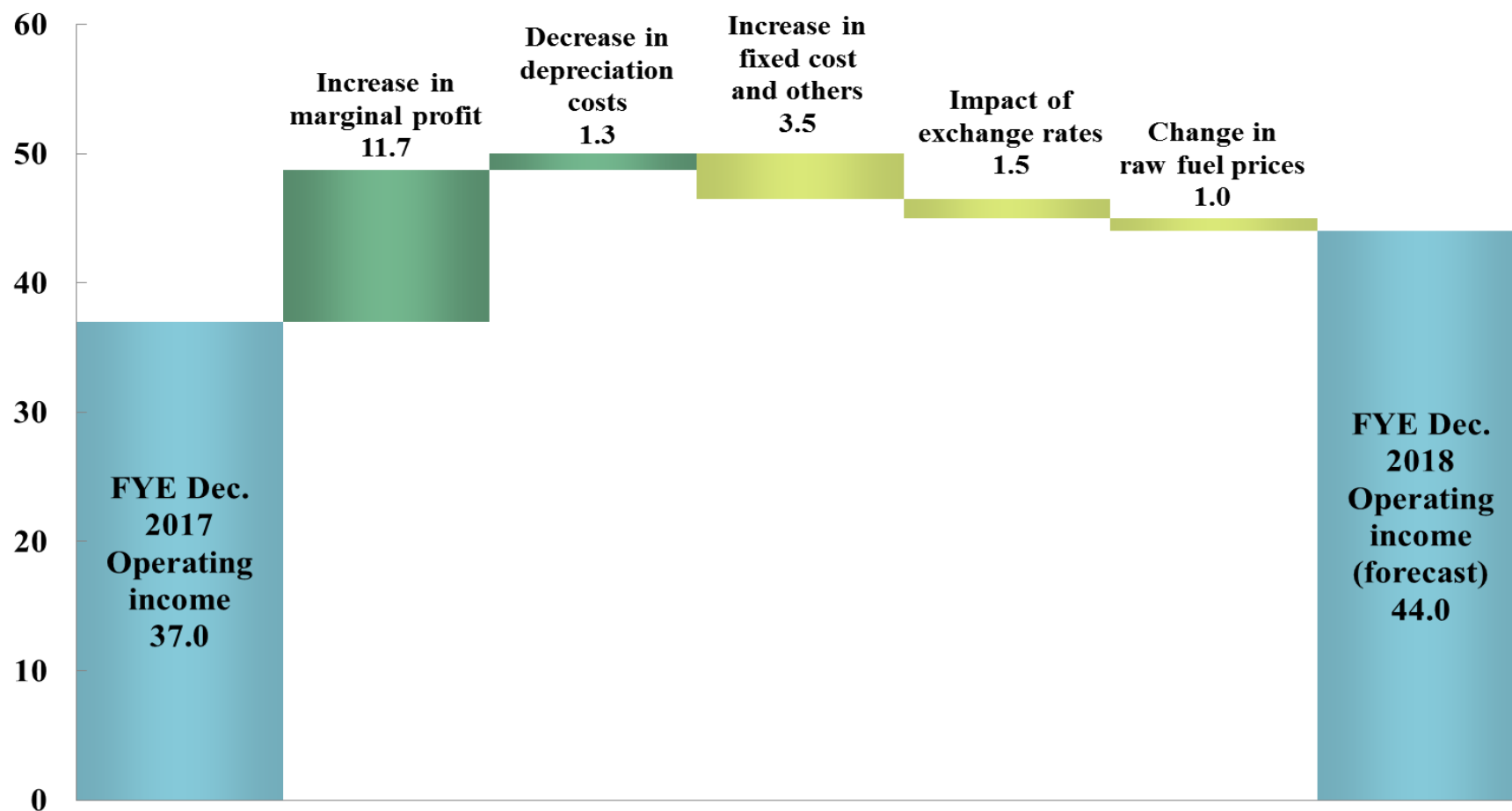


### 3. Factors Affecting Changes in Operating Income

(Results for the year ended December 31, 2017 vs. results for the year ending December 31, 2018)

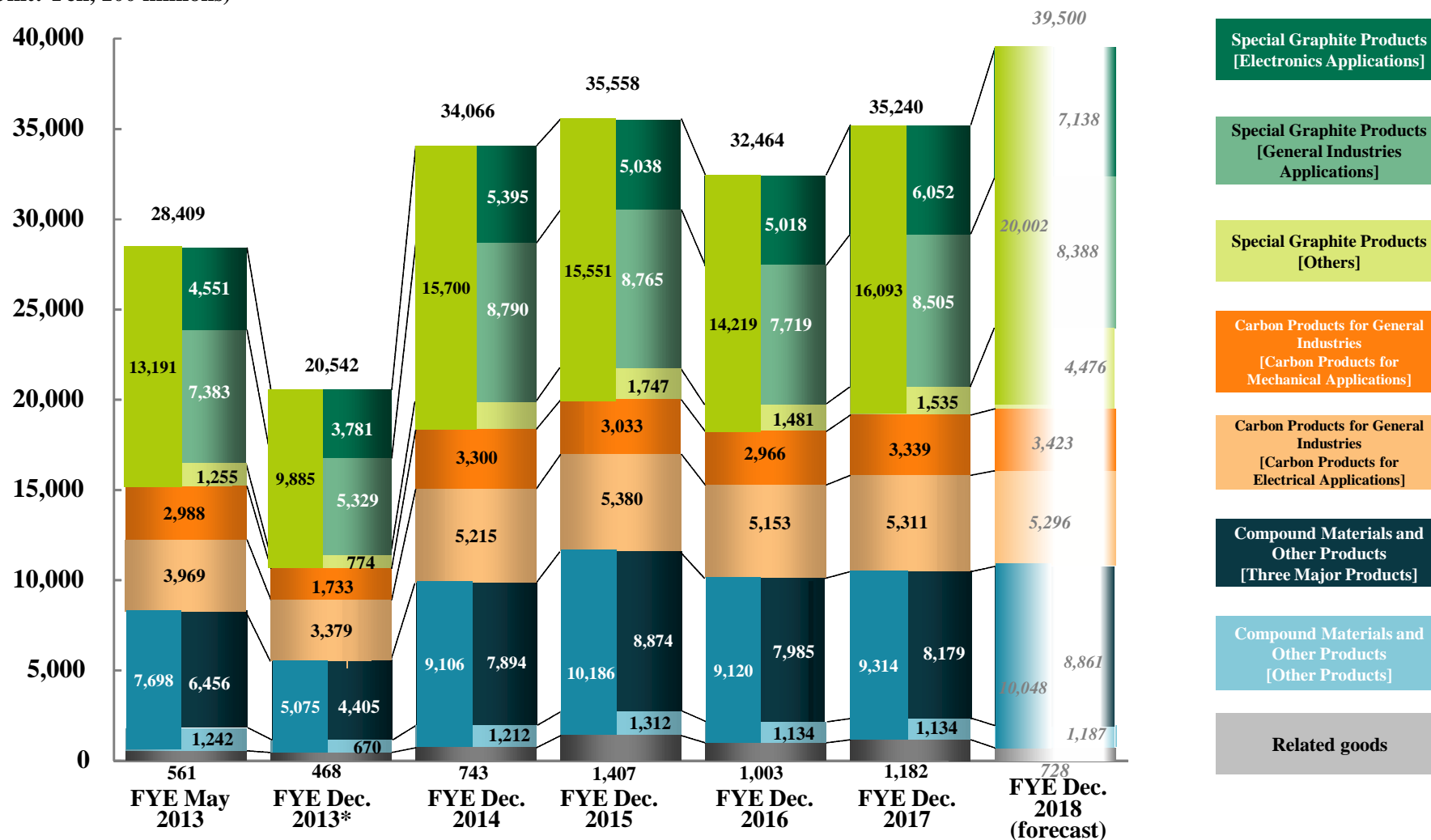
- ✓ Higher marginal profit due to sales growth (including the Chinese high-temperature reactor-pebble-bed modules [HTR-PM]) contributed
- ✓ Higher fixed costs due to an increase in personnel costs resulting from an earnings recovery

(Unit: Yen, 100 millions)



## 4. Net Sales by Product and Segment (full year)

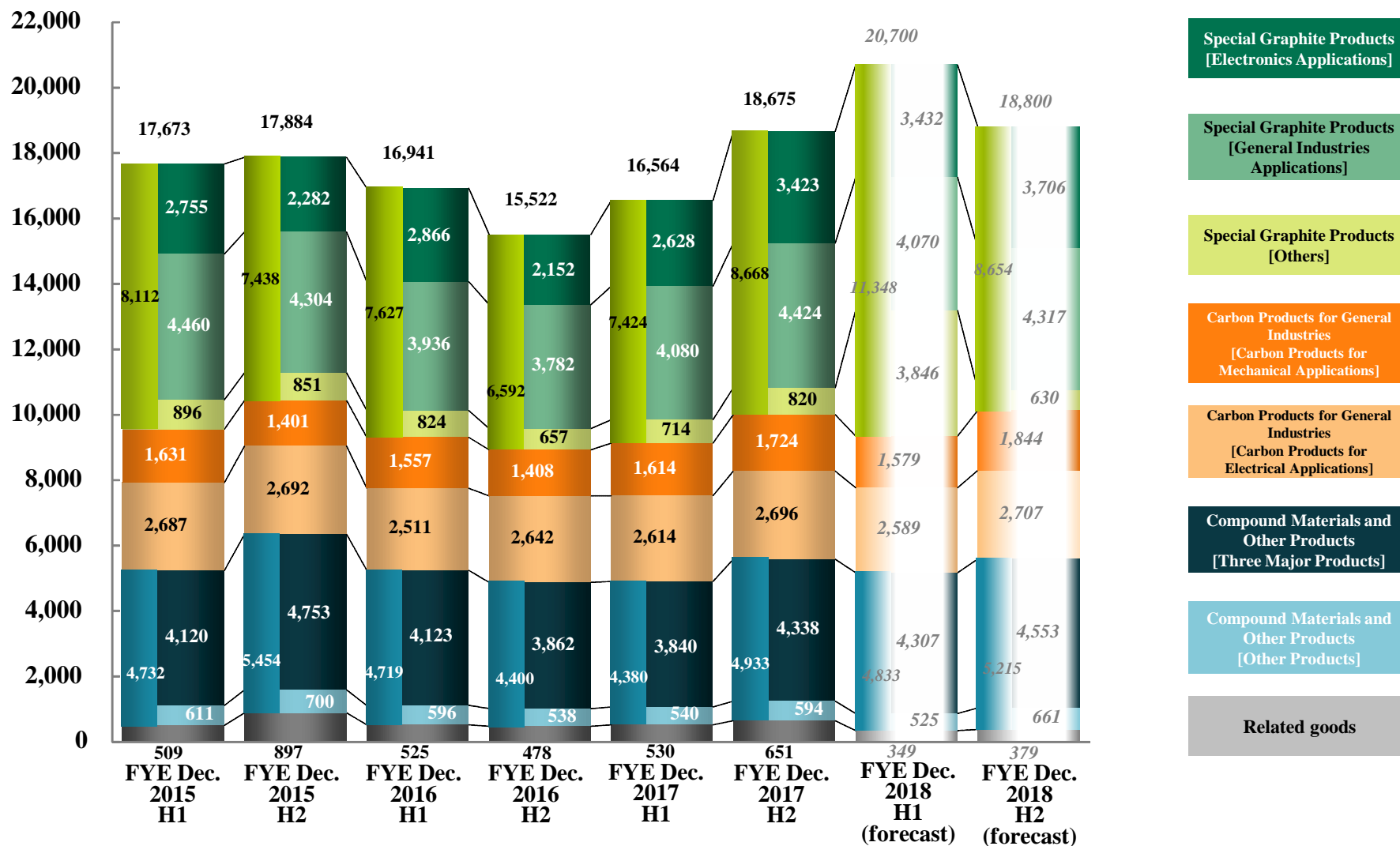
(Unit: Yen, 100 millions)



\* The final day of the fiscal period was changed from May 31 to December 31 as of the fiscal year ended December 31, 2013.  
For this reason, the fiscal year ended December 31, 2013 was an irregular seven-month fiscal period (nine months for some subsidiaries).

## 4. Net Sales by Product and Segment (six-month period)

(Unit: Yen, 100 millions)

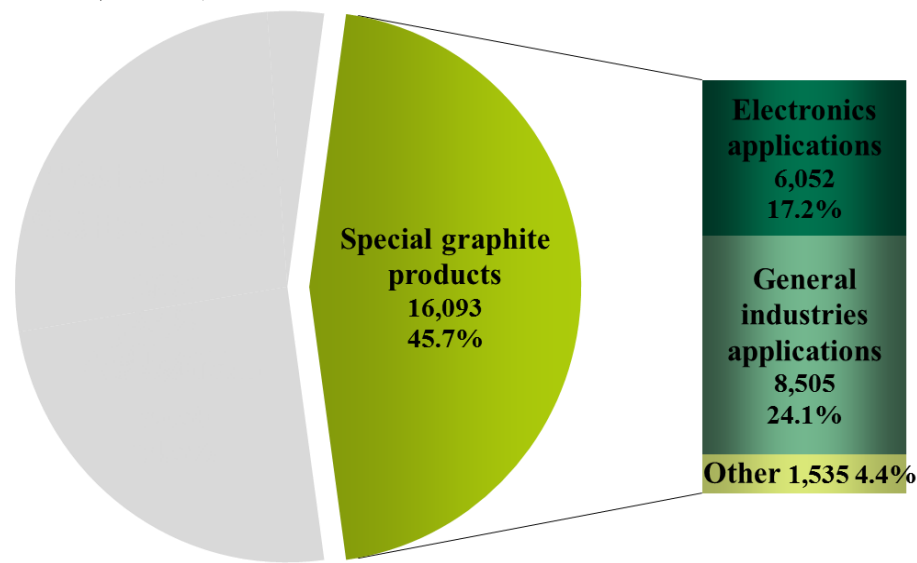




## 4. Key Points for Net Sales by Product and Segment (1)

### <Special Graphite Products>

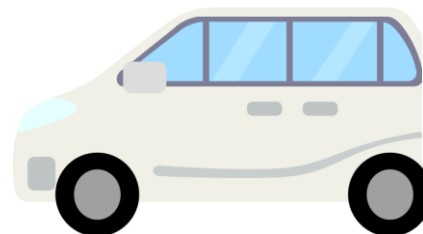
(Unit: Yen, millions)



Hot press molds  
(cut model)



Devices for single-crystal  
silicon manufacturing



EDM electrodes

#### Key point

##### [Electronics applications]

**Applications for single-crystal silicon manufacturing:** Demand for semiconductors will remain solid. Manufacturers plan to increase production by about 10,000-100,000 wafers per month as they respond to the expansion of crystal-growing furnaces and upgrades (increasing the diameter). In the near term, we estimate that production will increase in stages, and that demand for graphite will be high, particularly for large materials.

**Solar cell applications:** Manufacturers will begin making capital investments in the second half of fiscal 2017 and we expect the supply of large graphite materials to become increasingly tight due to the increase in the diameter of crystal-growing furnaces. We expect utilization rates to remain high in fiscal 2018, particularly among manufacturers in China, South Korea and Taiwan.

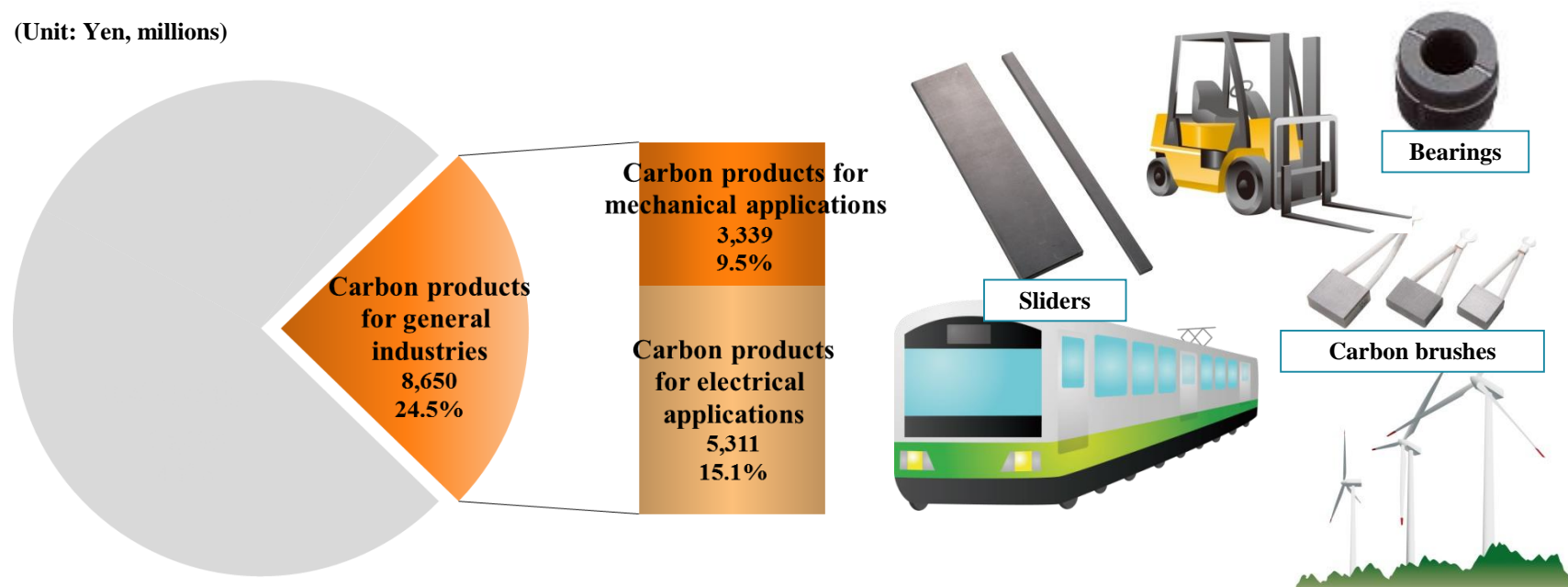
##### [General industries applications]

**Applications for EDM electrodes** are currently solid due to signs of a recovery in demand for automotive applications in Thailand. Utilization remains high for products for continuous casting, primarily among construction-related and semiconductor companies in Japan.

## 4. Key Points for Net Sales by Product and Segment (2)

### <Carbon Products for General Industries>

(Unit: Yen, millions)



#### Key points

##### [Carbon products for mechanical applications]

The performance of core products in Japan such as bearings and sealing rings will remain strong overall, with the exception of some applications. Sales of pantograph sliders are expanding steadily, and will remain firm without any impact from the economy. In addition, the Company has ramped up public relations activities to bring in new orders for overseas projects on transportation systems.

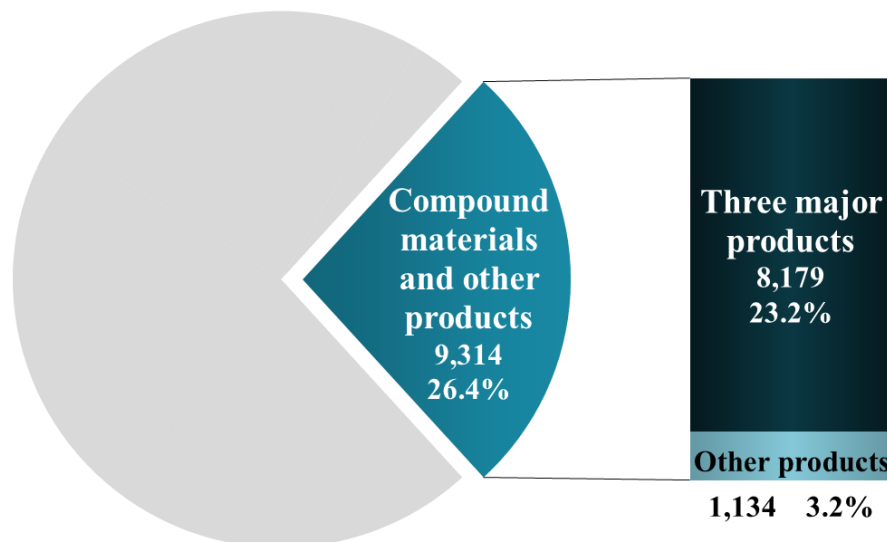
##### [Carbon products for electrical applications]

Conditions for small motor applications remain extremely harsh for both home appliance applications (vacuum cleaners and washing machines) due to the trend for brushless motors and competition with cheap products from local manufacturers in China. The Company is accelerating the optimization of global manufacturing and sales chains, including ongoing cost-cutting and the consolidation of manufacturing bases.

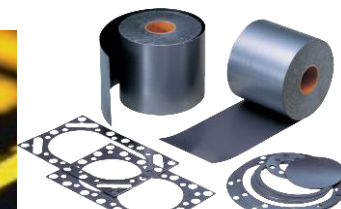
## 4. Key Points for Net Sales by Product and Segment (3)

### <Compound Materials and Other Products>

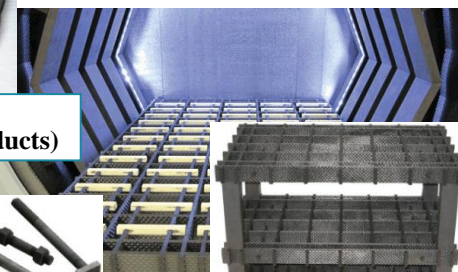
(Unit: Yen, millions)



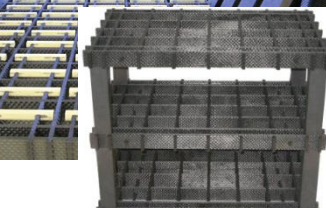
MOCVD susceptor  
(SiC-coated graphite products)



Graphite sheet products



Bolts and nuts  
(C/C composite products)



Three-layered trays  
(C/C composite products)

#### Key points

##### [Three major products]

**SiC-coated graphite products:** In addition to MOCVD (LED and power device) and Si-Epi, which have been mainstay applications up to this point, SiC-Epi applications have grown rapidly. Both device manufacturers and Epi manufacturers are performing well, with capital investment picking up further.

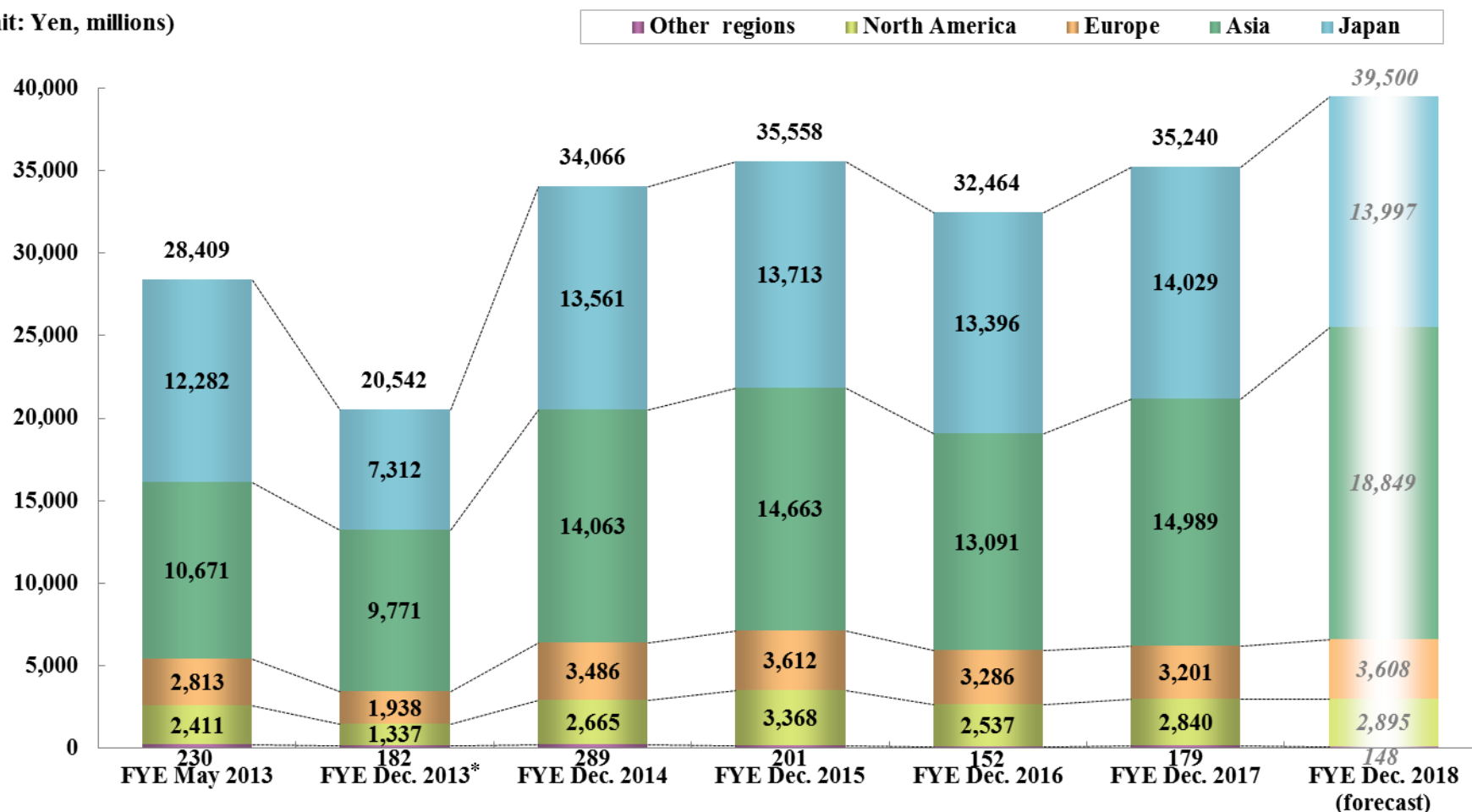
**C/C composite products:** Semiconductor applications remained strong performers. In addition, inquiries and orders related to heat treatment, a key focus thus far, are gradually increasing, and are expected to increase in fiscal 2018 as well. Moreover, the supply of graphite (isotropic) is tight, which is increasing demand for replacement with C/C composites in various applications.

**Graphite sheet products:** Metallurgical, automotive, and electronics applications remained stable overall. Demand for graphite sheets is increasing in new applications as well. However, the cost of raw materials is increasing significantly, forcing the Company to transfer the higher costs onto prices.

## 5. Sales by Region

- ✓We expect conditions to remain strong in Japan and Asia's electronics field in fiscal 2018 as well.
- ✓We expect sales in Asia to increase significantly in FY18 due to the posting of sales for the Chinese high-temperature reactor-pebble-bed modules (HTR-PM).

(Unit: Yen, millions)



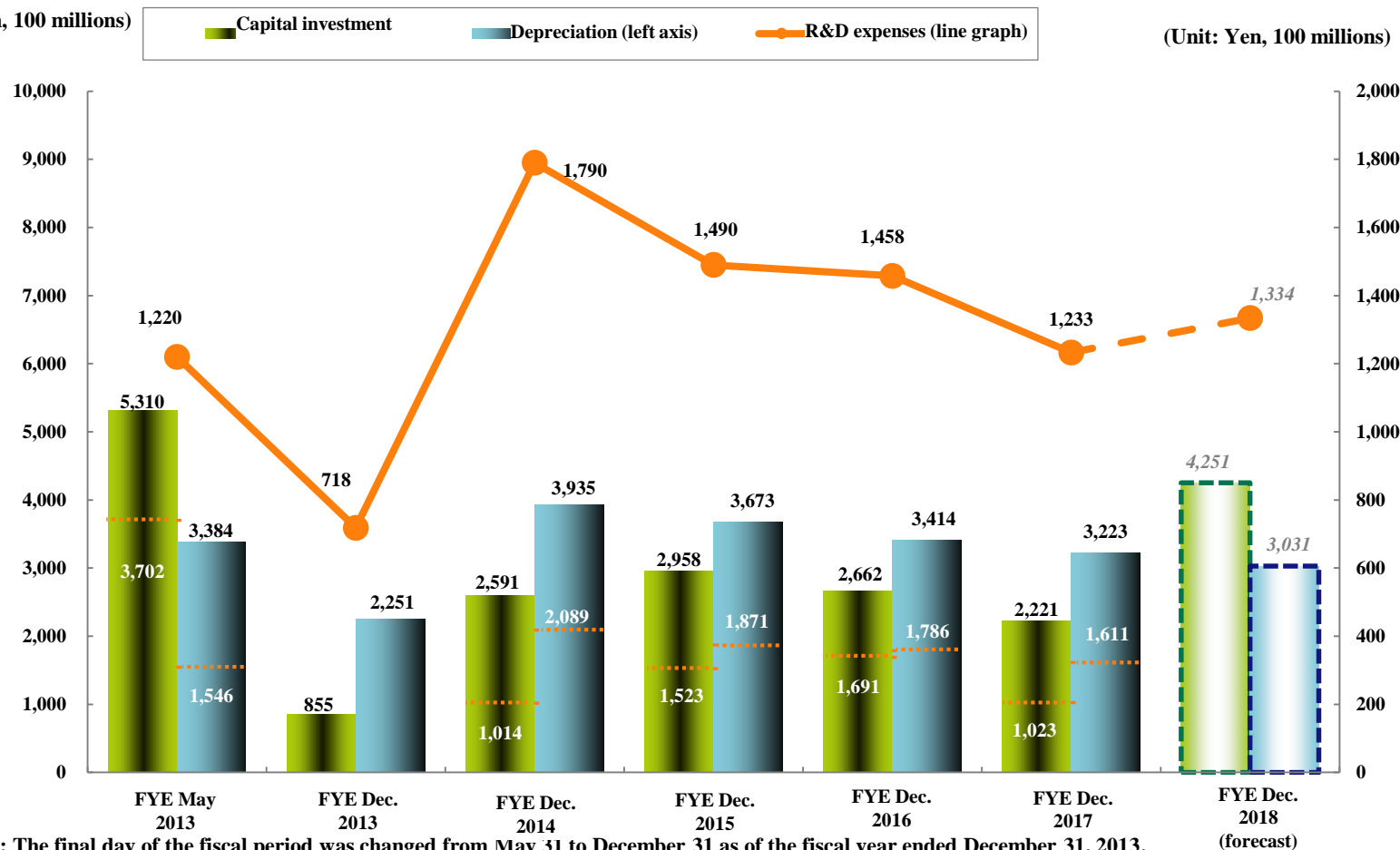
Note: The final day of the fiscal period was changed from May 31 to December 31 as of the fiscal year ended December 31, 2013.

For this reason, the fiscal year ended December 31, 2013 was an irregular seven-month fiscal period (nine months for some subsidiaries).

## 6. Capital Investment, Depreciation, and R&D Expenses

- ✓ About 40% of capital investment made in this fiscal year was for strategic investment aimed at expanding production capacity for carbon for mechanical applications
- ✓ We will strengthen strategic investments in fiscal 2018 to expand the existing core businesses and develop two strategic businesses for the next fiscal year.

(Unit: Yen, 100 millions)

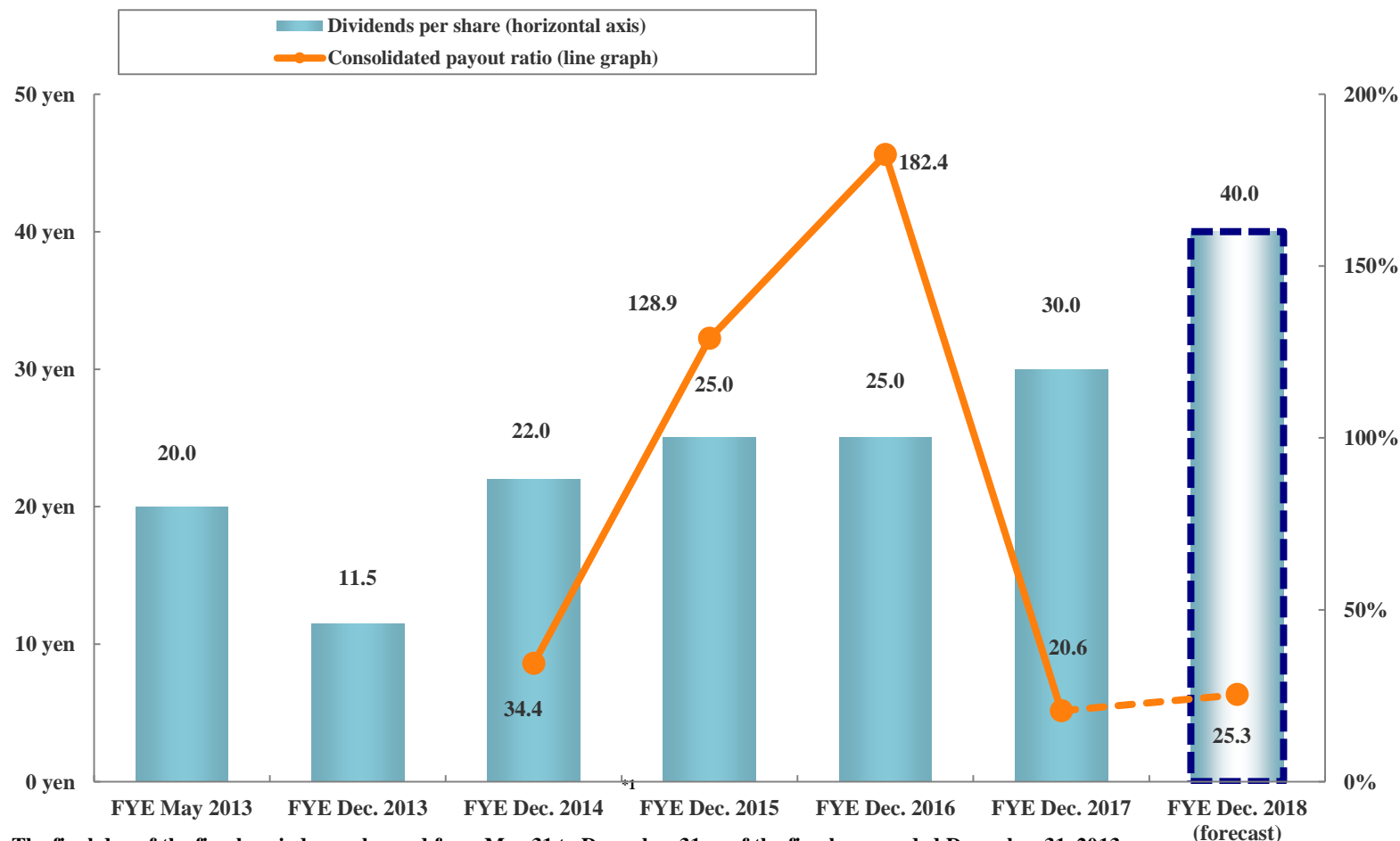


(Unit: Yen, 100 millions)

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For this reason, the fiscal year ended December 31, 2013 was an irregular seven-month fiscal period (nine months for some subsidiaries).

## 7. Dividend

- ✓ Strengthen returns to shareholders while considering balance with capital efficiency and strategic investment
- ✓ We plan to increase dividends by 5 yen in fiscal 2017 and by 10 yen in fiscal 2018.



Note 1. The final day of the fiscal period was changed from May 31 to December 31 as of the fiscal year ended December 31, 2013.

For this reason, the fiscal year ended December 31, 2013 was an irregular seven-month fiscal period (nine months for some subsidiaries).

2. Since profit was negative in the fiscal year ended May 31, 2013 and the fiscal year ended December 31, 2013, information on consolidated payout ratio is excluded here.

## 8. Consolidated Balance Sheet and Statement of Cash Flows for the Fiscal Year Ended December 31, 2017

Consolidated Balance Sheet	(Unit: Yen, millions)		Consolidated Statement of Cash Flows	(Unit: Yen, millions)	
	December 31, 2016	December 31, 2017		FYE Dec. 2016	FYE Dec. 2017
Total assets	69,797	74,223	Cash and cash equivalents at end of period	6,424	6,361
Notes and accounts receivable - trade	12,083	14,255	Net increase (decrease) in cash and cash equivalents	(722)	(63)
Inventories	16,131	15,471	Cash and cash equivalents at beginning of period	7,147	6,424
Property, plant and equipment	25,421	24,642	Net cash provided by (used in) operating activities	5,120	6,972
Total liabilities and net assets	69,797	74,223	Net cash provided by (used in) investing activities	(4,127)	(5,951)
Interest-bearing liabilities	1,965	1,194	Net cash provided by (used in) financing activities	(1,270)	(1,216)
Capital stock	7,692	7,810			
Net assets	58,182	60,986			
Equity ratio	81.4%	81.0%			



**Note: This presentation contains “forward-looking statements” and forecasts of business results. These statements are not historical facts but instead represent the Company’s beliefs regarding future events, many of which, by their nature, are inherently uncertain and beyond the Company’s control. It is possible that the Company’s actual results may differ, possibly materially, from the anticipated results and financial condition indicated in these forward-looking statements.**

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