



"Performance" Through Chemistry

**A Statement of Accounts**  
**For the Six Months Ended Sept. 30, 2018**  
**1st Half Fiscal Year 2018**  
**(1H-FY2018)**

**SANYO CHEMICAL INDUSTRIES, LTD.**

**Takao Ando, President & CEO**

<https://www.sanyo-chemical.co.jp/>

**Code: 4471**



<Notice>

Yen amounts described in this presentation material are rounded down.  
Ratios described in this presentation material are rounded off.

<Cautionary Statement with Respect to Forward-Looking Statement>

This presentation material contains projections based on the assumptions, forward-looking statements and plans about the future of SANYO CHEMICAL INDUSTRIES, LTD. as of Nov. 15, 2018. Actual performance results may vary significantly due to a variety of factors affecting the sphere of business that include but are not limited to: the world economy, competitive position, and fluctuations in the exchange rate, raw material costs, and others.

Contact Information

Public Relations Dept.

SANYO CHEMICAL INDUSTRIES, LTD.

TEL +81-75-541-4312

FAX +81-75-551-2557

E-mail [pr-group@sanyo-chemical.com](mailto:pr-group@sanyo-chemical.com)

**Date of Establishment:** November 1, 1949

**Head Office:** Higashiyama-ku, Kyoto

**Capital:** ¥13,051 million

**Domestic Sales & Marketing Offices:**

Tokyo, Osaka, Nagoya, Hiroshima, Fukuoka, Toyama

**Domestic Factories:**

Nagoya, Kinuura, Kashima, Kyoto, Kawasaki (San Chemical)

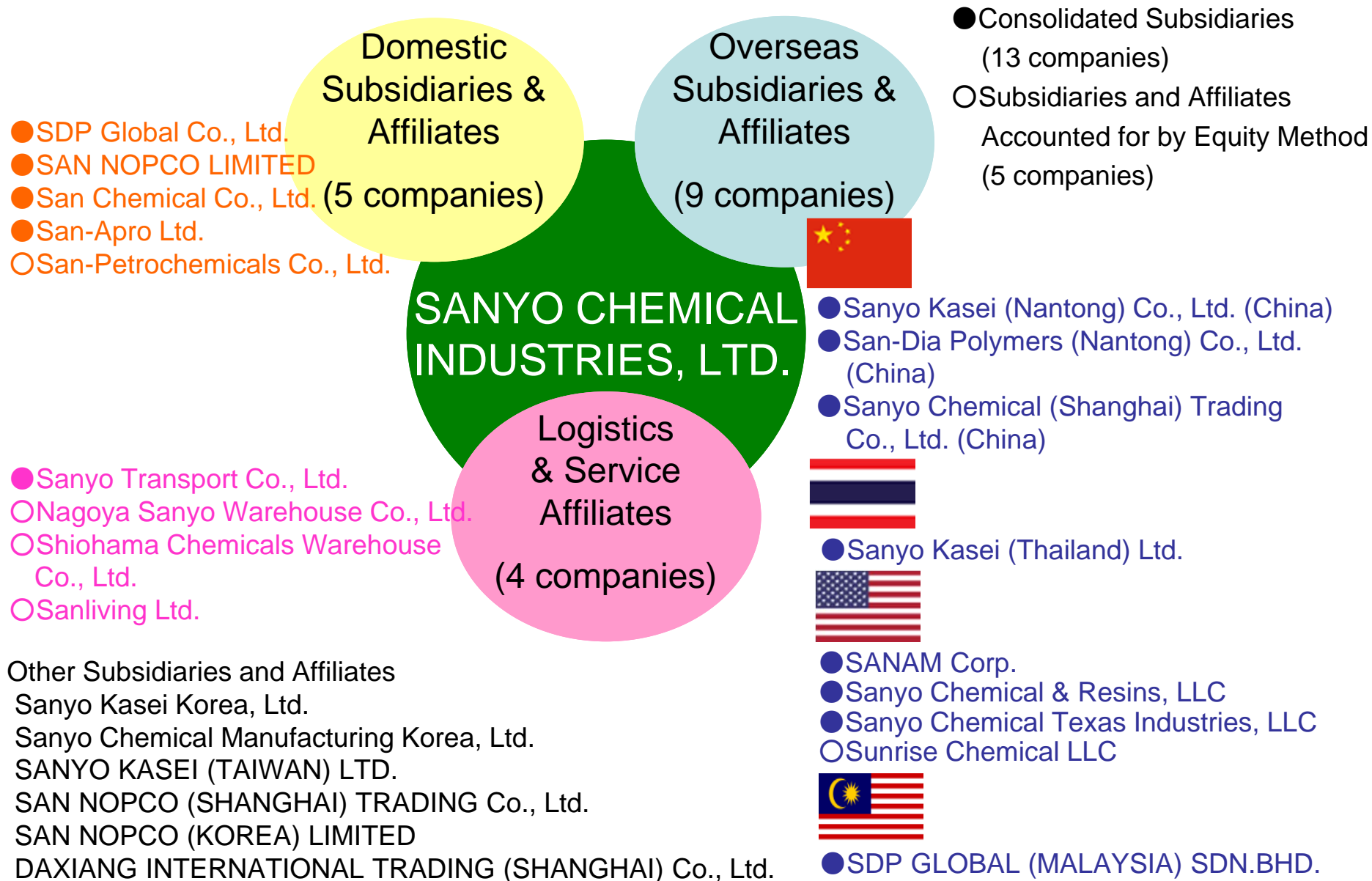
**Consolidated Number of Employees:**

2,103 (as of Sept. 30, 2018)

**Line of Business:**

Manufacture & sales of approx. 3,000 types of performance chemicals

# Sanyo Chemical Group



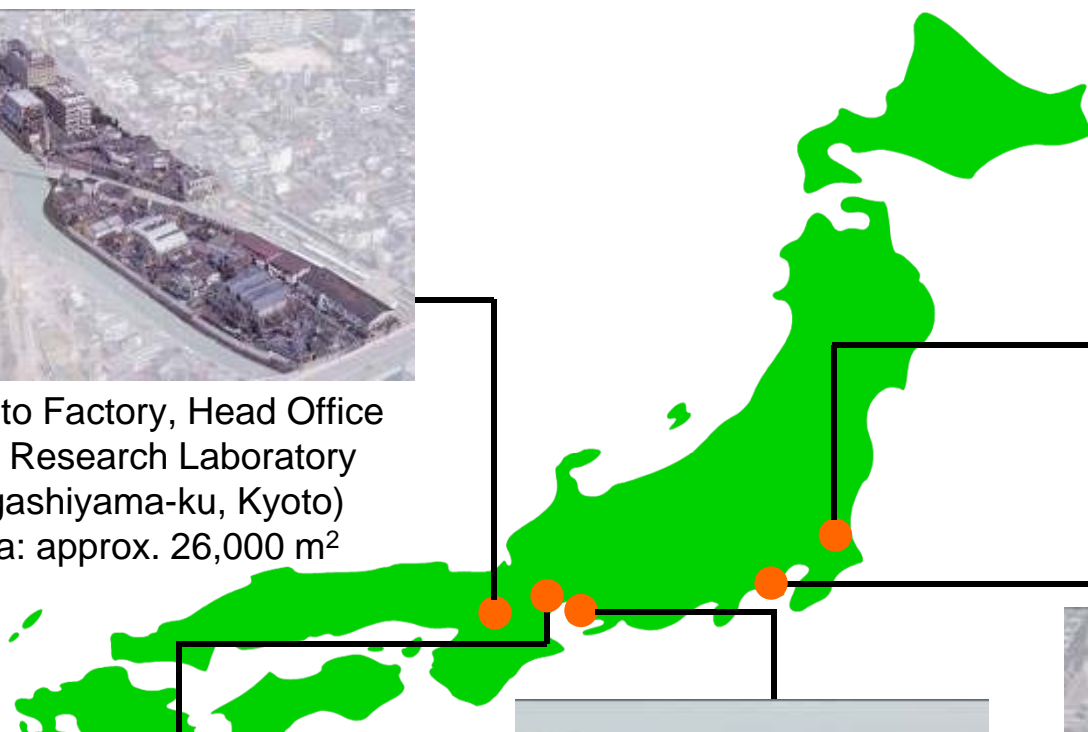
# Domestic Production Bases



Kyoto Factory, Head Office and Research Laboratory (Higashiyama-ku, Kyoto)  
Area: approx. 26,000 m<sup>2</sup>



Kashima Factory (Kamisu, Ibaraki)  
Area: approx. 130,000 m<sup>2</sup>



Nagoya Factory (Tokai, Aichi)  
Area: approx. 100,000 m<sup>2</sup>




Kinuura Factory (Handa, Aichi)  
Area: approx. 140,000 m<sup>2</sup>



San Chemical Co., Ltd. Kawasaki Factory (Kawasaki, Kanagawa)  
Area: approx. 11,000 m<sup>2</sup>

# Overseas Production Bases



 Sanyo Kasei (Nantong) Co., Ltd.



 San-Dia Polymers (Nantong) Co., Ltd.



 Sanyo Chemical & Resins, LLC



 Sanyo Chemical Manufacturing Korea, Ltd.



 Sanyo Kasei (Thailand) Ltd.



 SDP GLOBAL(MALAYSIA)SDN.BHD.



 Sanyo Chemical Texas Industries, LLC

# Overseas Sales Office



-  Sanyo Chemical (Shanghai) Trading Co., Ltd.
-  SAN NOPCO (SHANGHAI) TRADING Co., Ltd.
-  DaXiang International Trading (SHANGHAI) Co., Ltd.

-  Sanyo Kasei Korea, Ltd.
-  SAN NOPCO (KOREA) LIMITED



 Sanyo Kasei (Thailand) Ltd.



 SANYO KASEI (TAIWAN) LTD.



 SANAM Corp.

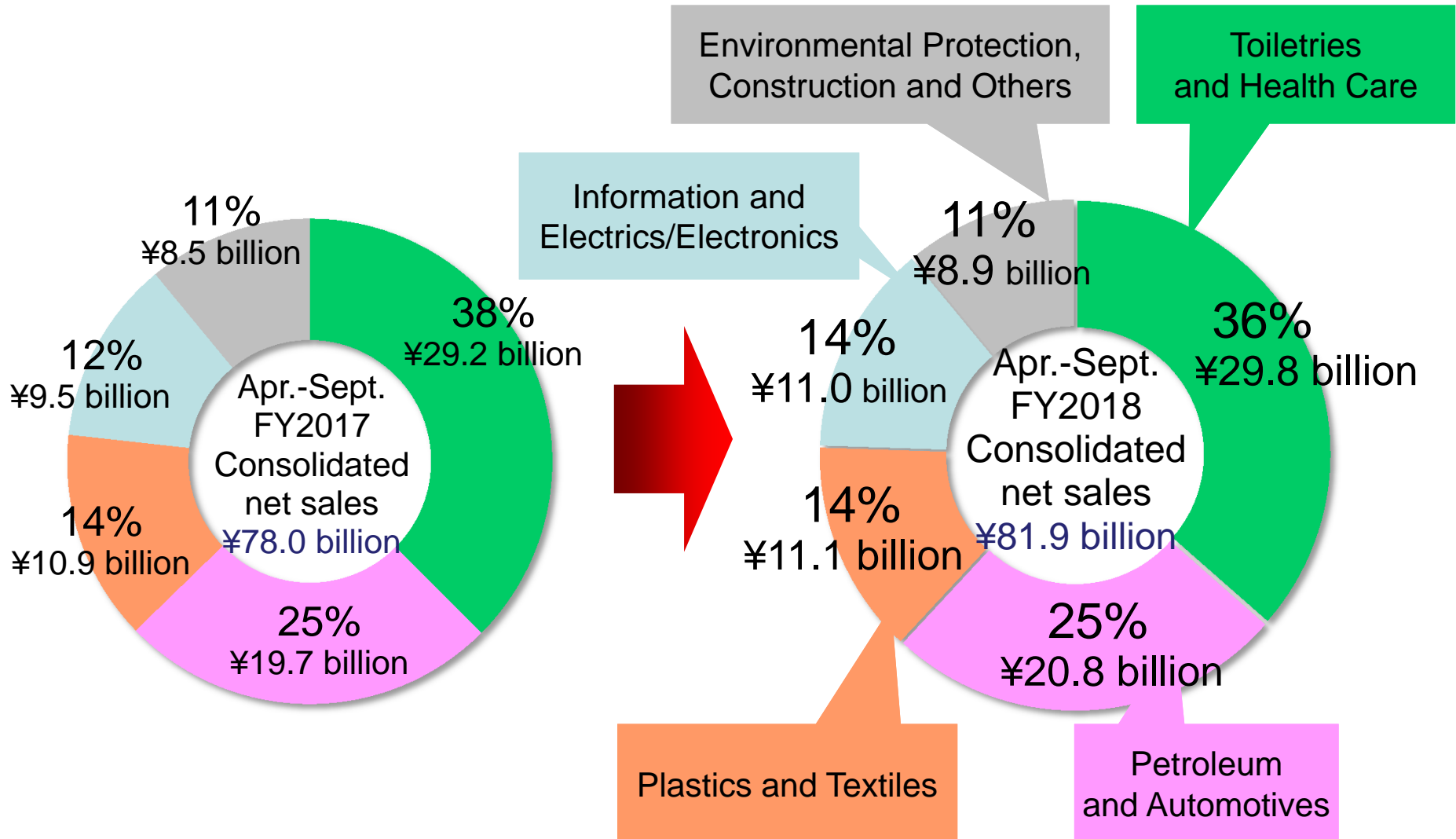
# Principal Products by Product Group (Segment)



Segment		Principal Products
Toiletries and Health Care	Toiletries	Surfactants for Detergents, Surfactants for Hair Care Products, Agents for Papermaking
	Health Care	Superabsorbent Polymers (SAP), Base Materials for Pharmaceuticals, Germicides/Disinfectants, Surgical Hemostatic Agent, Enzyme immunoassay (EIA) Diagnostic Reagents, Potting Resins for Artificial Kidneys
Petroleum and Automotives		Thermoplastic Polyurethane Beads for the Interior Parts of Automobiles (TUB), Raw Materials for Polyurethane Foams (PPG), Lubricating Oil Additives, Fuel Oil Additives, Water-Soluble Cutting Fluids, Halogen-Free Cleaning Agents, Base Materials for Synthetic Lubricants, Paste Resins for Design Models, Resins for Automobile Paints
Plastics and Textiles	Plastics	Permanent Antistatic Agents, Pigment Dispersants, Resin Modifiers, Paint Resins, Defoaming Agents, Base Materials for Polyurethane Elastomers, Chemical Boards for Models
	Textiles	Agents for Textile Manufacturing, Chemicals for Carbon Fibers, Agents for Fiberglass, Polyurethane Resins for Synthetic Leather
Information and Electrics /Electronics	Information	Polyester Beads (PEB) Used as a Core Component of Polymerization Toners, Toner Resins
	Electrics /Electronics	Electrolytes for Aluminum Electrolytic Capacitors, Electrolytes for Electric Double-Layer Capacitors, Adhesives for Electronic Parts, Agents for Use in Electronic Parts Manufacturing, UV/EB Curing Resins
Environmental Protection, Construction and Others		Polymer Flocculants for Wastewater Treatment, Cationic Monomer PPG for Furniture and Heat Insulating Materials, Slurry Agents, Reactive Hot-Melt Adhesives, Raw Materials for Building Sealants, Cement Agents



# Net Sales by Segment



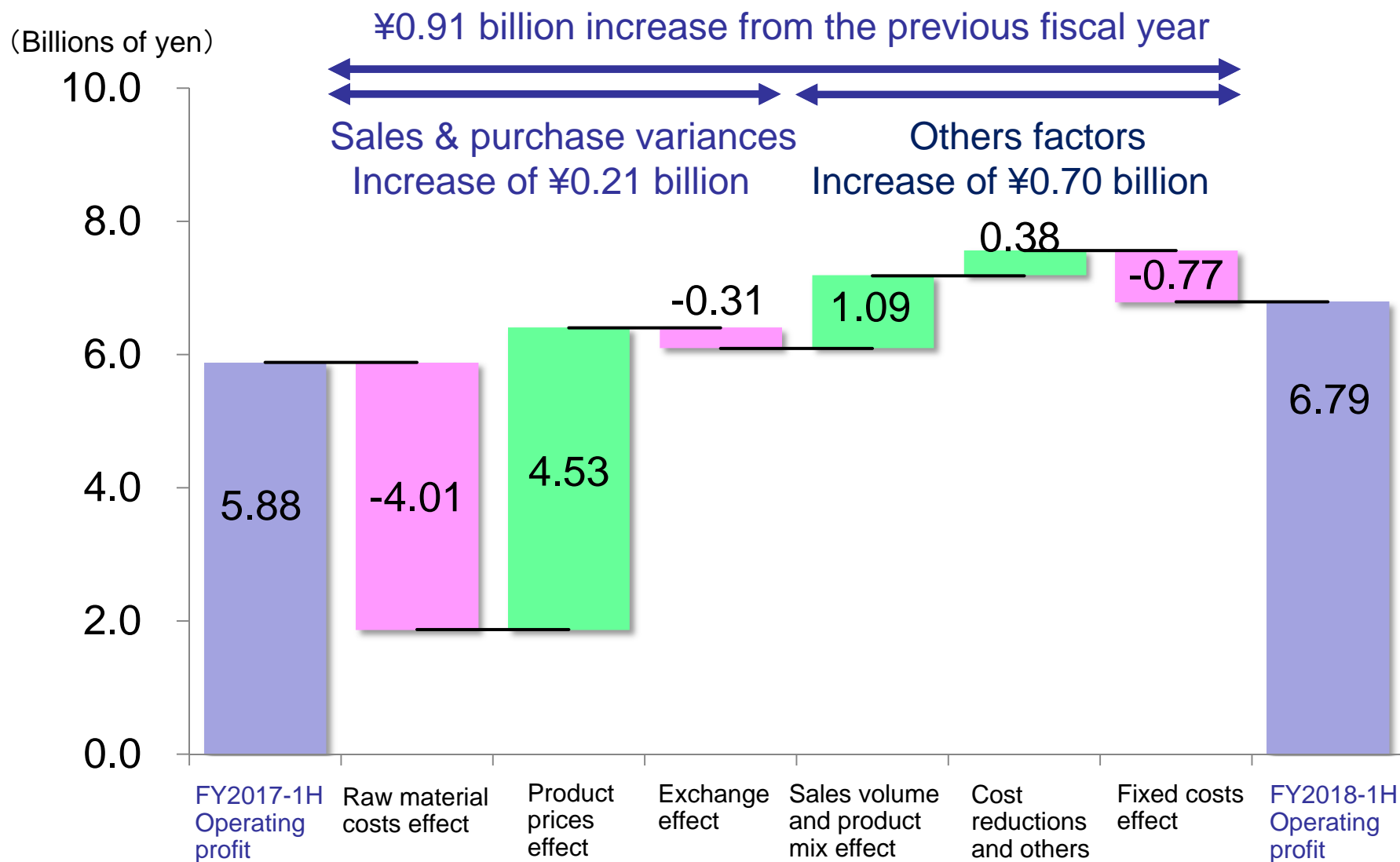
# Results of Operations for 1H in FY2018



(Billions of yen)

Consolidated	Apr.-Sept.		Year on Year Change	
	FY2017	FY2018	Amount	Ratio (%)
Net sales	78.07	81.95	3.88	5
Operating profit	5.88	6.79	0.91	15
Ordinary profit	6.93	8.57	1.64	24
Profit attributable to owners of parent	4.78	5.94	1.16	24
Comprehensive income	7.65	8.59	0.93	12

# Change in Consolidated Operating Profit by Factor



# Change in Consolidated Net Income



( Billions of yen )

	Apr.-Sept.		Year on Year Change
	FY2017	FY2018	
Operating profit	5.88	6.79	0.91
Equity in losses or earnings of unconsolidated subsidiaries and affiliates	0.27	0.86	0.59
Gain or loss on foreign exchange	0.29	0.45	0.16
Other non-operating profit or loss	0.48	0.46	(0.02)
Ordinary profit	6.93	8.57	1.64
Gain and Loss on disposal/sales of property, plant and equipment	(0.40)	(0.39)	0.00
Other extraordinary income or loss	0.00	0.06	0.06
Profit before income taxes	6.52	8.24	1.71
Income taxes, etc.	(1.56)	(2.01)	(0.44)
Profit attributable to non-controlling interests	(0.17)	(0.28)	(0.01)
Profit attributable to owners of parent	4.78	5.94	1.16

# Consolidated Balance Sheet



(Billions of yen)

	Mar. 31 2018	Sept. 30 2018	Changed amount	Main Change Factor
Current assets	88.9	90.5	1.5	Cash and deposits: (1.4), Notes and accounts receivable-trade, Electronically recorded monetary claims-operating: 0.7, Inventories: 2.0
Non-current assets	110.2	115.4	5.2	Property, plant and equipment: 1.2, Investment securities: 3.6
<b>Total assets</b>	<b>199.1</b>	<b>205.9</b>	<b>6.7</b>	
Current liabilities	50.1	50.0	(0.1)	Accounts payable-trade, Electronically recorded obligations-operating: (1.2), Short-term loans: 1.7
Non-current liabilities	12.7	12.4	(0.2)	Long-term debt: (0.9), Deferred tax liabilities: 0.7
<b>Total liabilities</b>	<b>62.9</b>	<b>62.4</b>	<b>(0.4)</b>	
Shareholder's equity	115.0	119.7	4.7	Profit attributable to owners of parent: 5.9, Cash dividends paid: (1.2)
Accumulated other comprehensive income	15.0	17.3	2.3	Valuation difference on available-for-sale securities: 2.1, Foreign currency translation adjustment: 0.2
Non-controlling interests	6.1	6.3	0.1	
<b>Total net assets</b>	<b>136.2</b>	<b>143.4</b>	<b>7.2</b>	
<b>Total Liabilities and net assets</b>	<b>199.1</b>	<b>205.9</b>	<b>6.7</b>	

Our Group applied Partial Amendments to Accounting Standard for Tax Effect Accounting from the first quarter for fiscal year 2018. Therefore the previous fiscal year is applied retroactively.

# Consolidated Cash Flows



(Billions of yen)

	Apr.-Sept.		Changed amount	Special Instruction
	FY2017	FY2018		
Operating activities	6.2	6.4	0.2	
Profit before income taxes	6.5	8.2	1.7	
Depreciation and amortization	4.0	4.3	0.2	
Equity in earning of unconsolidated subsidiaries and affiliates	(0.2)	(0.8)	(0.5)	
(Increase) decrease in operating capital	(1.7)	(3.9)	(2.2)	
Income taxes	(1.7)	(1.4)	0.3	
Others	(0.5)	0.2	0.7	
Investing activities	(7.5)	(7.2)	0.3	Purchase of non-current assets 1H in FY2017: (6.9), 1H in FY2018 : (6.8)
Free cash flows	(1.2)	(0.7)	0.5	
Financing activities	(4.8)	(0.6)	4.1	Loans, Repayment 1H in FY2017: (3.4), 1H in FY2018 : 0.6
Effect of exchange rate changes on cash and cash equivalents	0.0	0.0	(0.0)	
Net increase (decrease) in cash and cash equivalents	(5.9)	(1.4)	4.5	
Cash and cash equivalents at beginning of period	23.1	17.3	(5.7)	
Cash and cash equivalents at end of period	17.1	15.9	(1.2)	

# Forecast for FY2018 and Progress in 1H-FY2018

<Precondition for the forecast>

(Current forecast)

Domestic naphtha price: 54 thousands of Yen/kl, Exchange rate: 110 Yen/US\$

(Forecast at the beginning of FY2018)

Domestic naphtha price: 47 thousands of Yen/kl, Exchange rate: 110 Yen/US\$

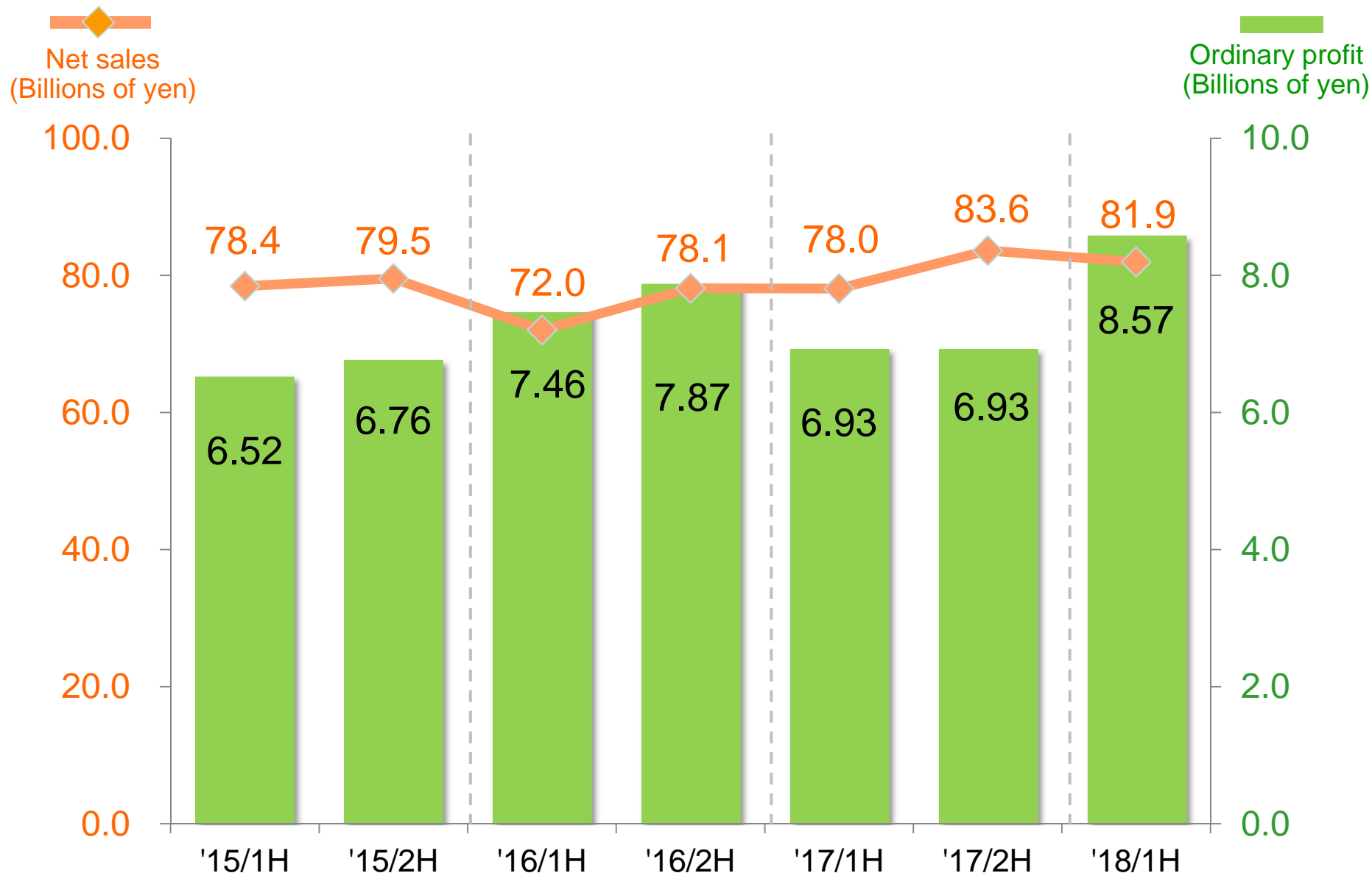
(Billions of yen)

Consolidated	FY2018 Annual	Apr.-Sept. FY2018		FY2017 Annual
	Forecast*	Result	Progress to Forecast(%)	Result
Net sales	172.0	81.9	47.6	161.6
Operating profit	13.0	6.7	52.2	11.9
Ordinary profit	14.5	8.5	59.2	13.8
Profit attributable to owners of parent	10.0	5.9	59.5	9.2
ROE	7.5%	8.9%**	+1.4pt	7.4%

\* Forecasts announced on May 8, 2018

\*\*ROE for 2Q of FY 2018 is annualized.

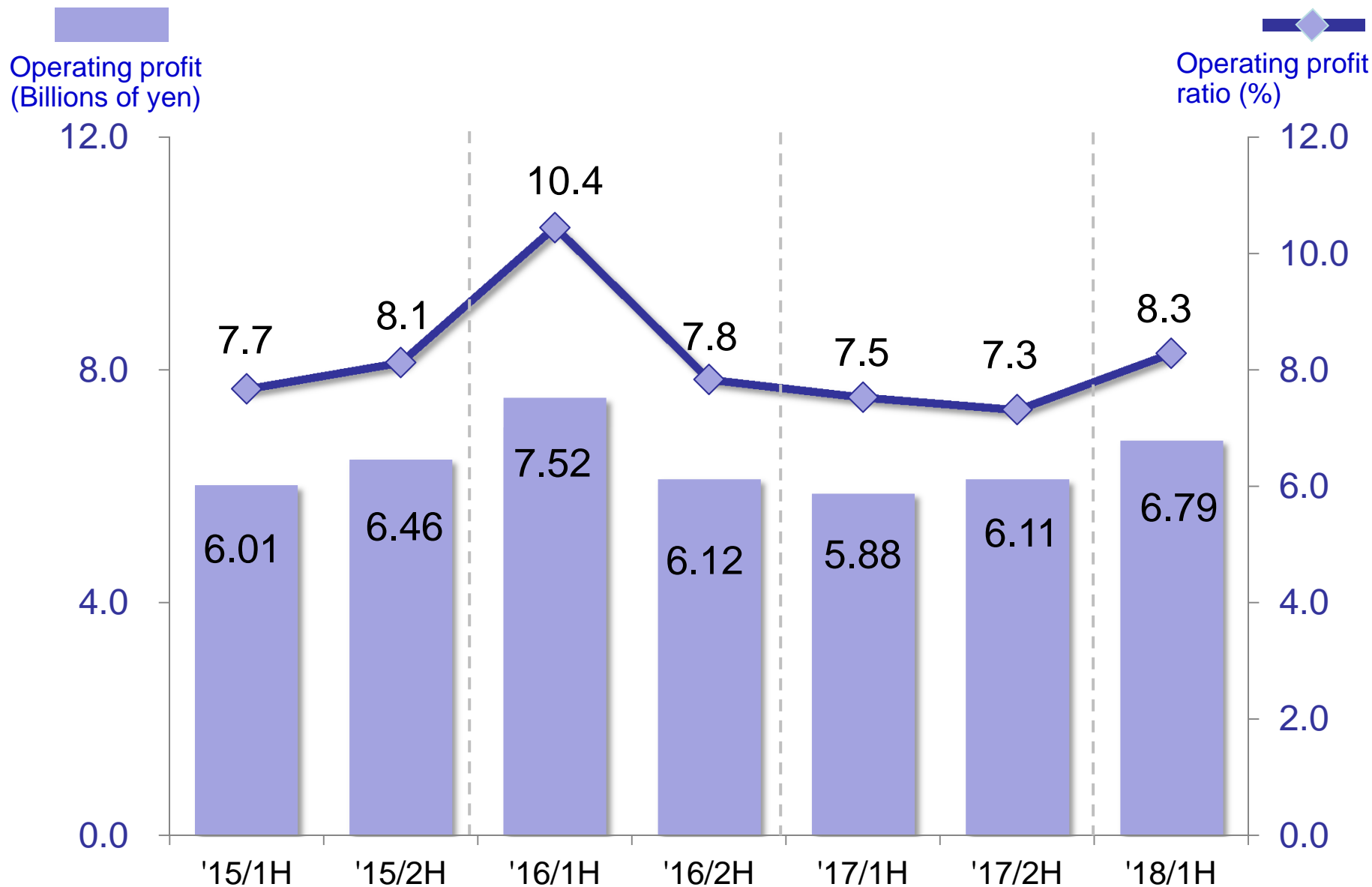
# Consolidated Business Result Trend



Sanyo Chemical and its Japanese consolidated subsidiaries, which had mostly been using the declining balance method for depreciation of property, plant and equipment, adopted the straight-line method from FY2016.



# Consolidated Operating Profit Trend



Sanyo Chemical and its Japanese consolidated subsidiaries, which had mostly been using the declining balance method for depreciation of property, plant and equipment, adopted the straight-line method from FY2016.

# Results of Operations by Segment for 1H in FY2017

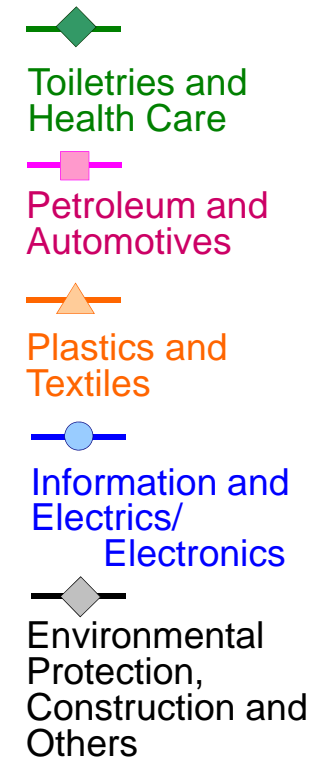
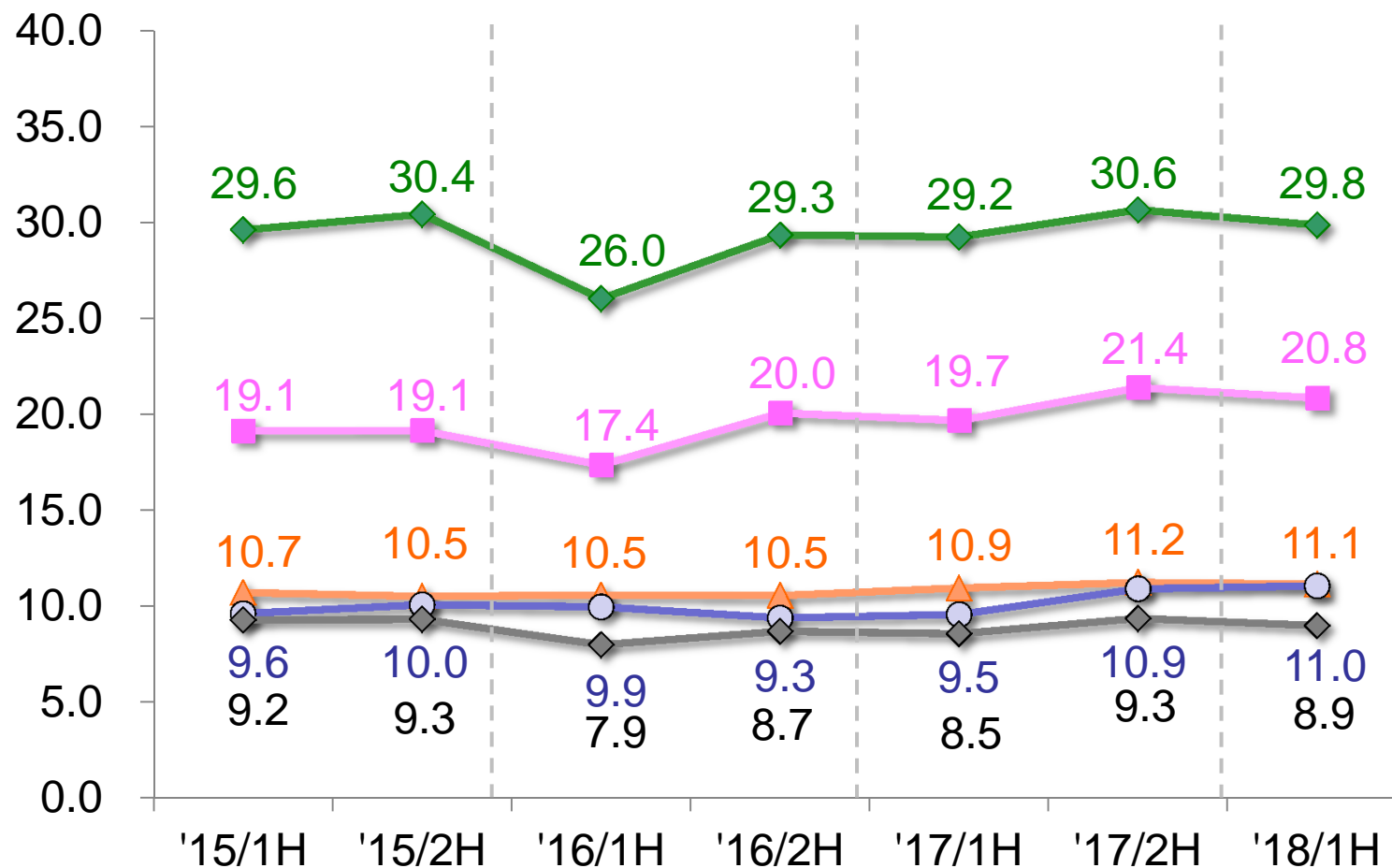
(Billions of yen)

Segment	Net Sales			Operating Profit		
	Apr.-Sept. FY2017	Apr.-Sept. FY2018	Changed Amount	Apr.-Sept. FY2017	Apr.-Sept. FY2018	Changed Amount
Toiletries and Health Care	29.26	29.88	0.62	0.68	1.25	0.57
Toiletries	6.44	7.12	0.67			
Health Care	22.81	22.76	(0.04)			
Petroleum and Automotives	19.70	20.85	1.15	1.36	1.28	(0.07)
Plastics and Textiles	10.95	11.15	0.20	1.91	1.78	(0.13)
Plastics	7.43	7.72	0.28			
Textiles	3.51	3.43	(0.08)			
Information and Electrics/Electronics	9.57	11.06	1.48	1.36	1.94	0.58
Information	5.91	7.38	1.47			
Electrics/Electronics	3.66	3.67	0.01			
Environmental Protection, Construction and Others	8.57	8.99	0.41	0.55	0.51	(0.04)
<b>Total</b>	<b>78.07</b>	<b>81.95</b>	<b>3.88</b>	<b>5.88</b>	<b>6.79</b>	<b>0.91</b>

# Consolidated Net Sales Trend by Segment

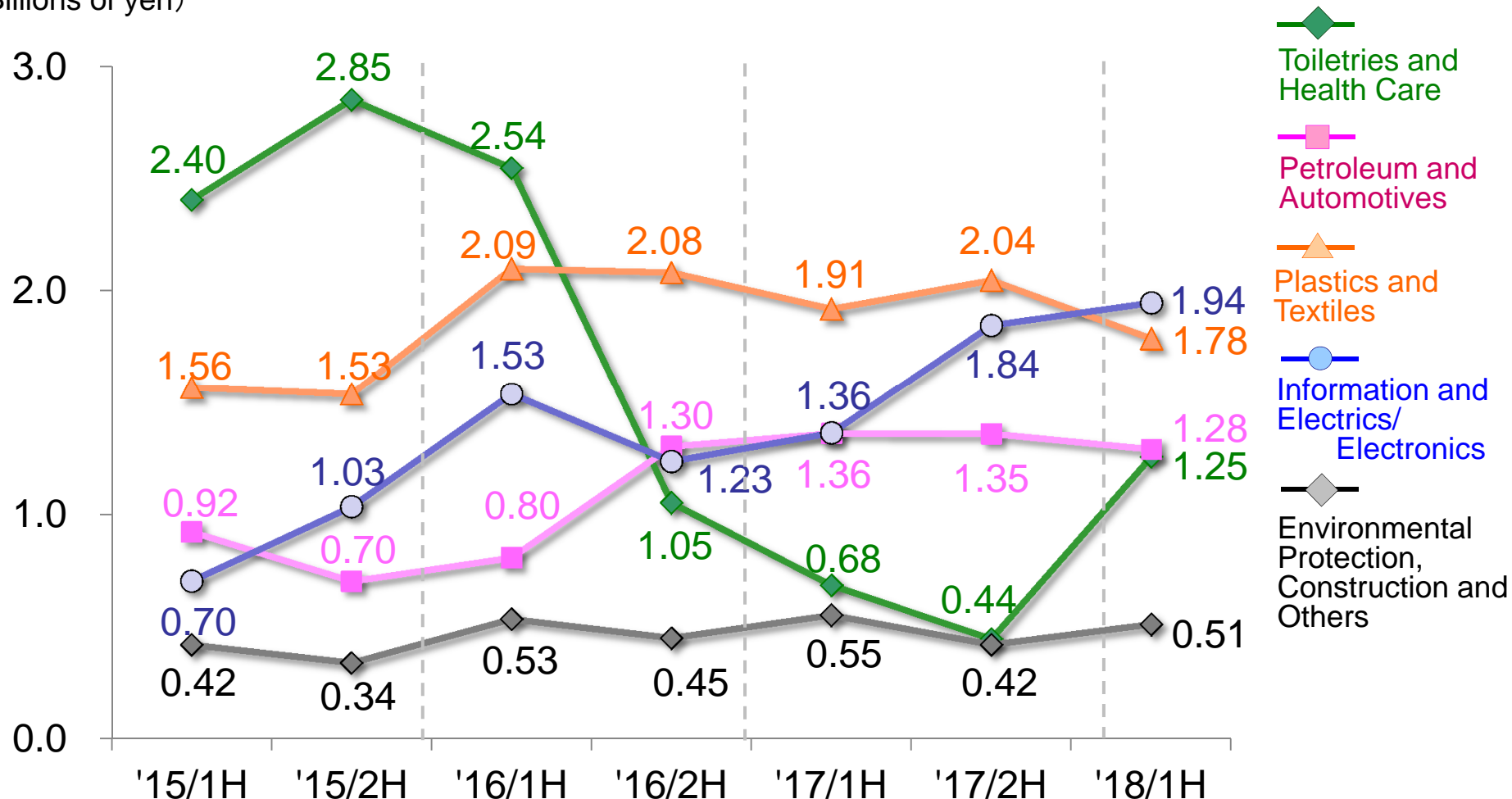


(Billions of yen)



# Consolidated Operating Profit Trend by Segment

(Billions of yen)

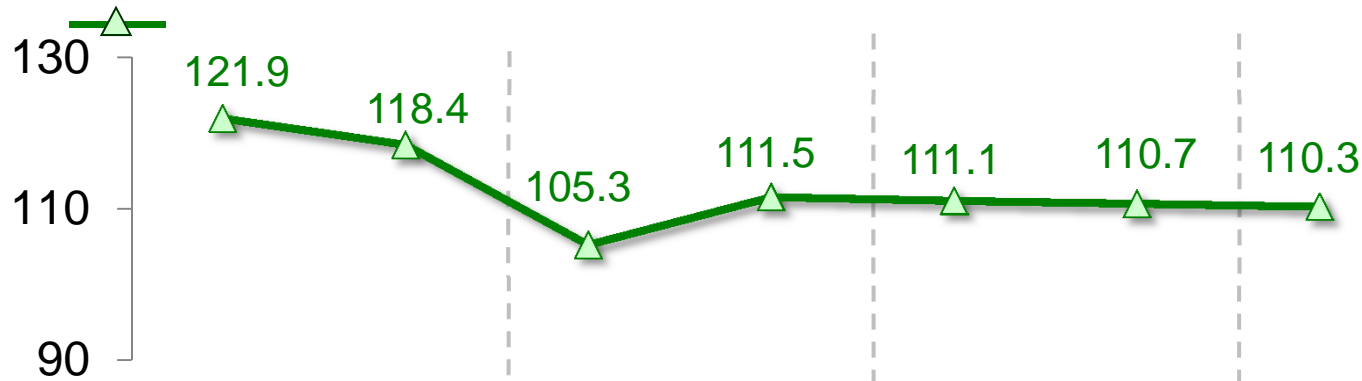


Sanyo Chemical and its Japanese consolidated subsidiaries, which had mostly been using the declining balance method for depreciation of property, plant and equipment, adopted the straight-line method from FY2016.

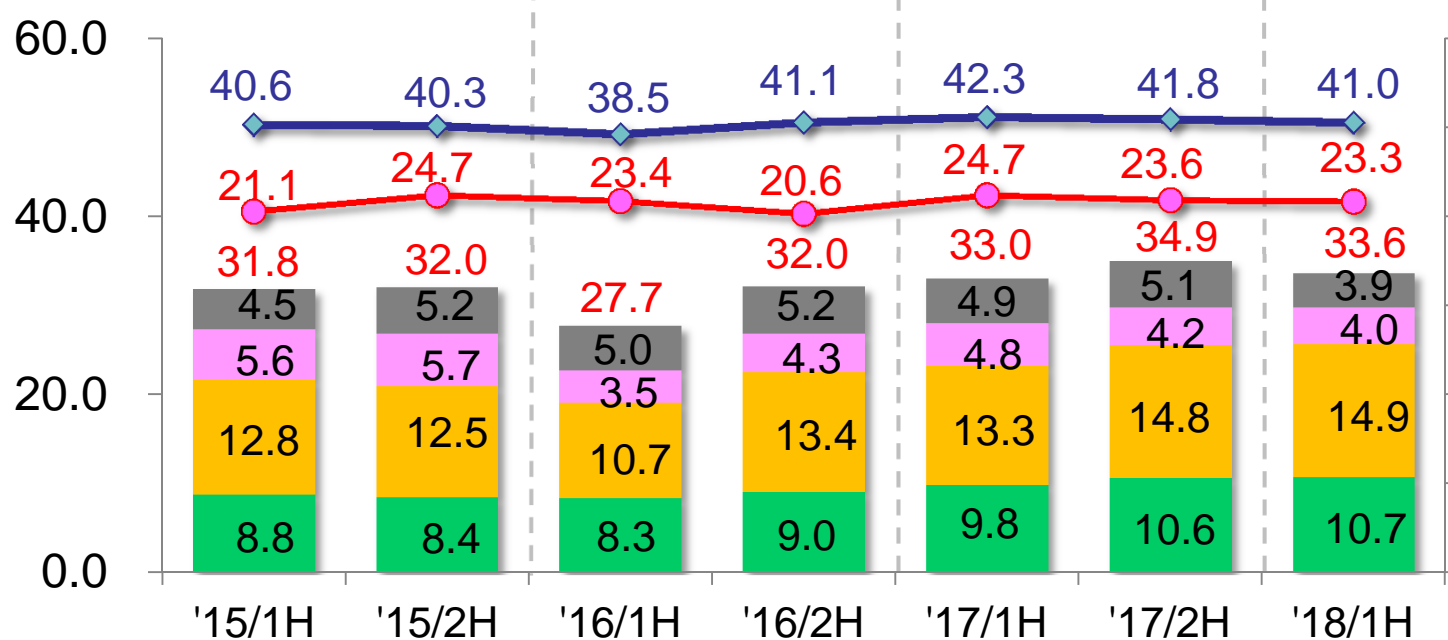
# Consolidated Overseas Sales Trend



Average exchange rate  
(Yen/US\$)



Overseas sales  
(Billions of yen)



Overseas sales ratio (%)

Overseas production ratio (%)

60

40

20

0

Total

Others

Americas

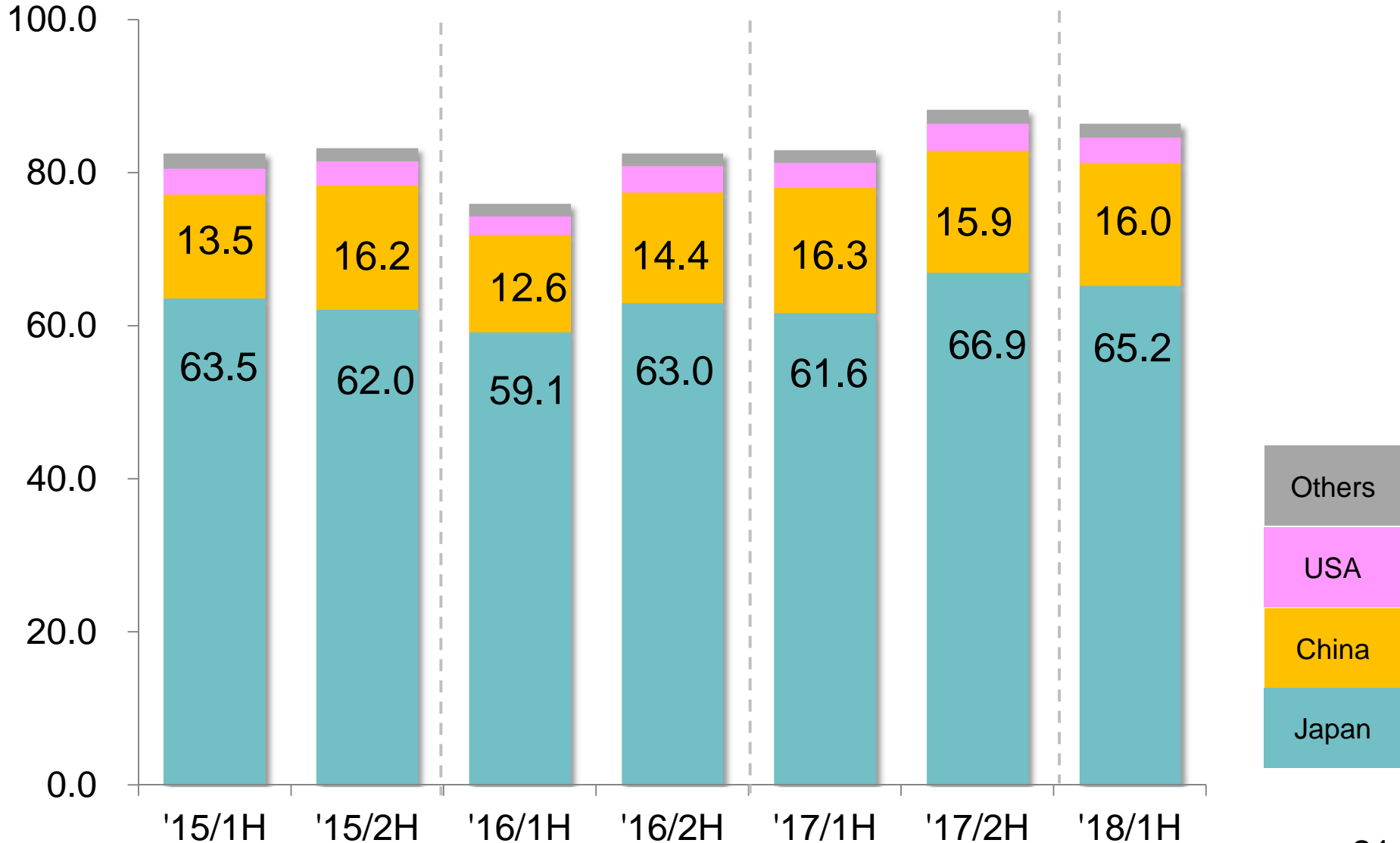
China

Asia  
(except China)

# Consolidated Net Sales Trend by Geographic Segments

Internal sales among Sanyo Chemical Group are not eliminated.

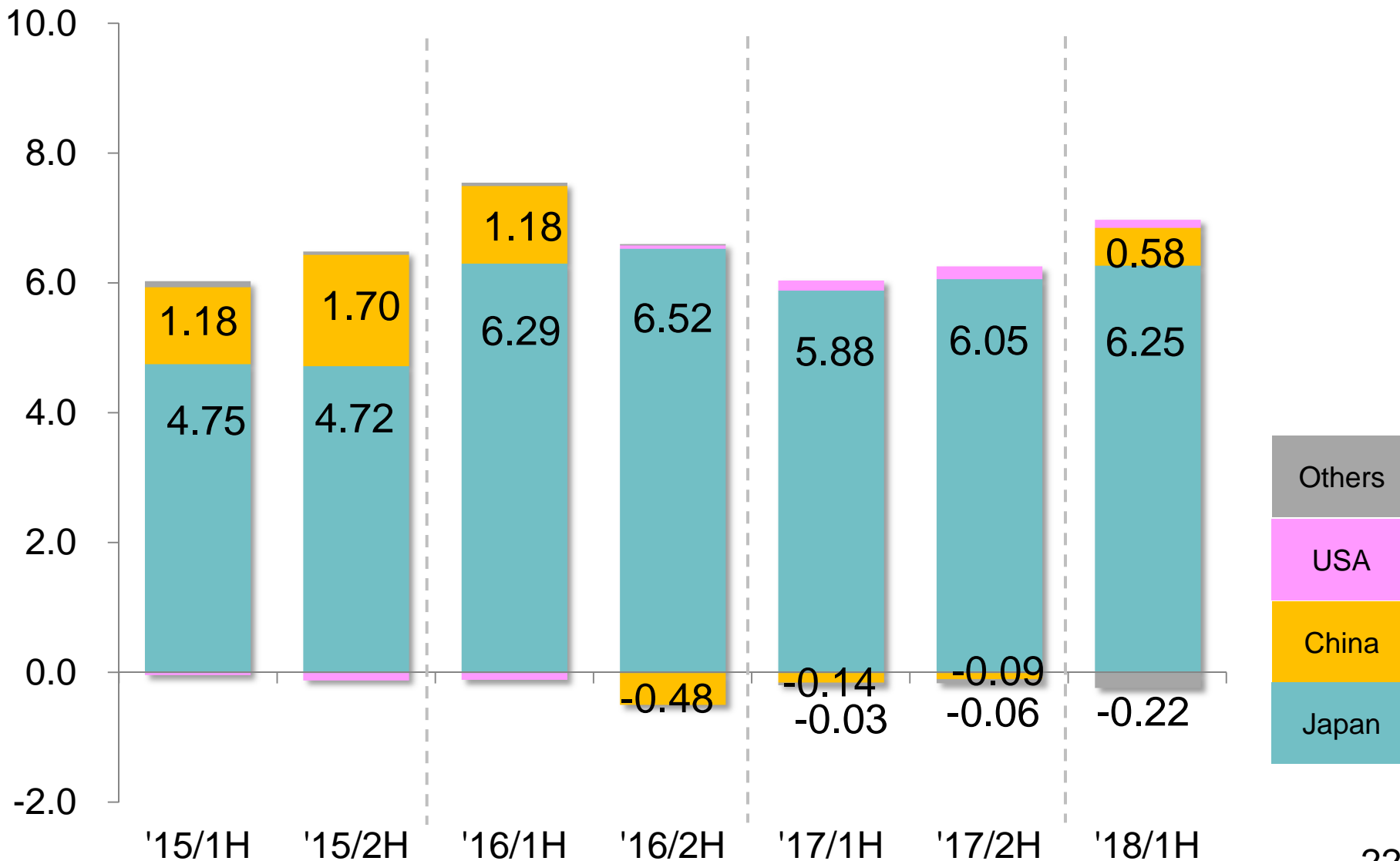
(Billions of yen)



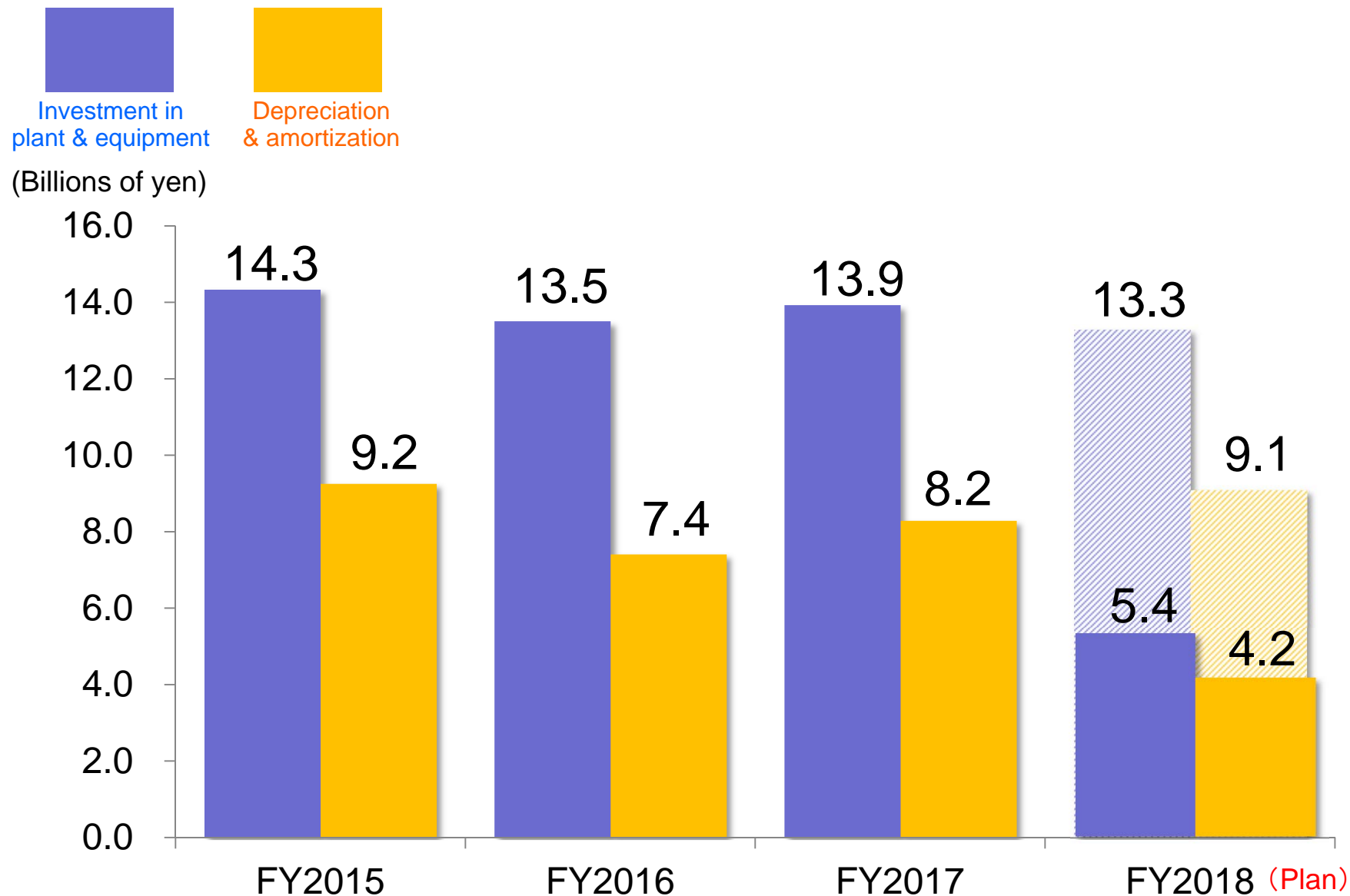
# Consolidated Operating Profit Trend by Geographic Segments

Internal sales among Sanyo Chemical Group are not eliminated.

(Billions of yen)



# Consolidated Investment in Plant & Equipment, and Depreciation & Amortization



Sanyo Chemical and its Japanese consolidated subsidiaries, which had mostly been using the declining balance method for depreciation of property, plant and equipment, adopted the straight-line method from FY2016.



# Consolidated Dividends per Share & Payout Ratio Trend

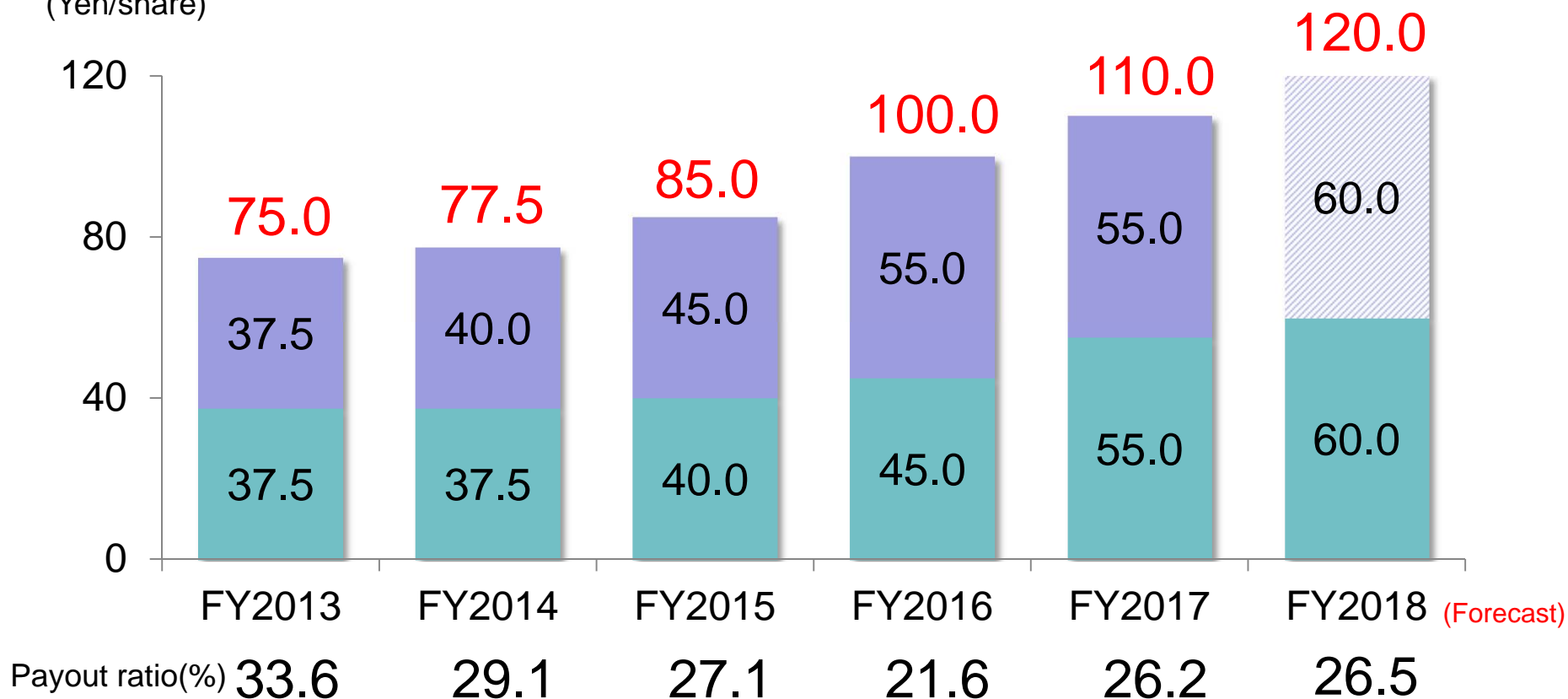
Total

Year-end

Interim

Sanyo Chemical conducted a reverse stock split at a ratio of one share for every five shares on October 1, 2016. The figures above for consolidated dividends per share are converted after Sanyo Chemical conducts the reverse stock split.

Dividends  
(Yen/share)



# Activity for the Tenth Medium-Term Management Plan

## New Sanyo for 2027

Period: FY2018-FY2020

Slogan: "KAERU"

"Each employee will personally commit to changing our corporate culture."

Change ourselves for next 3 years to realize our vision

FY2020 (Goal) (Consolidated, billion yen)	
Net sales	180 billion
Operating profit	18 billion
Operating profit ratio	10%
ROE	10%

FY2027 (Vision) (Consolidated, billion yen)	
Net sales	250 billion
Operating profit	35 billion
Operating profit ratio	14%
ROE	12%

*Going Beyond "KAERU"*

The tenth plan is the first step to the next ten years.

We have grown to be a unique, global, and highly profitable company, where all employees proud themselves, find meaning in their work, and contribute to society.

[Guiding Principles]

A unique global company that contributes to society through performance chemicals that play an active role in various surfaces.

Aiming at our Vision

New Sanyo for 2027

FY2020

From FY2021 onwards

FY2027

# Guiding Principles, Source of Strengths and Business Areas

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## Guiding Principles

A unique global company that contributes to society through performance chemicals that play an active role in various surfaces

## Source of Strengths

- Extensive technical knowledge centered on surface activity control technology
- Fast translation of the customer's values and needs to functions, from functions to physical properties, and from physical properties to composition and synthesis process
- Timely solution-based proposal through customer experience
- A corporate culture that encourages challenges
- A reliable company that fulfills social responsibility

## Business Areas

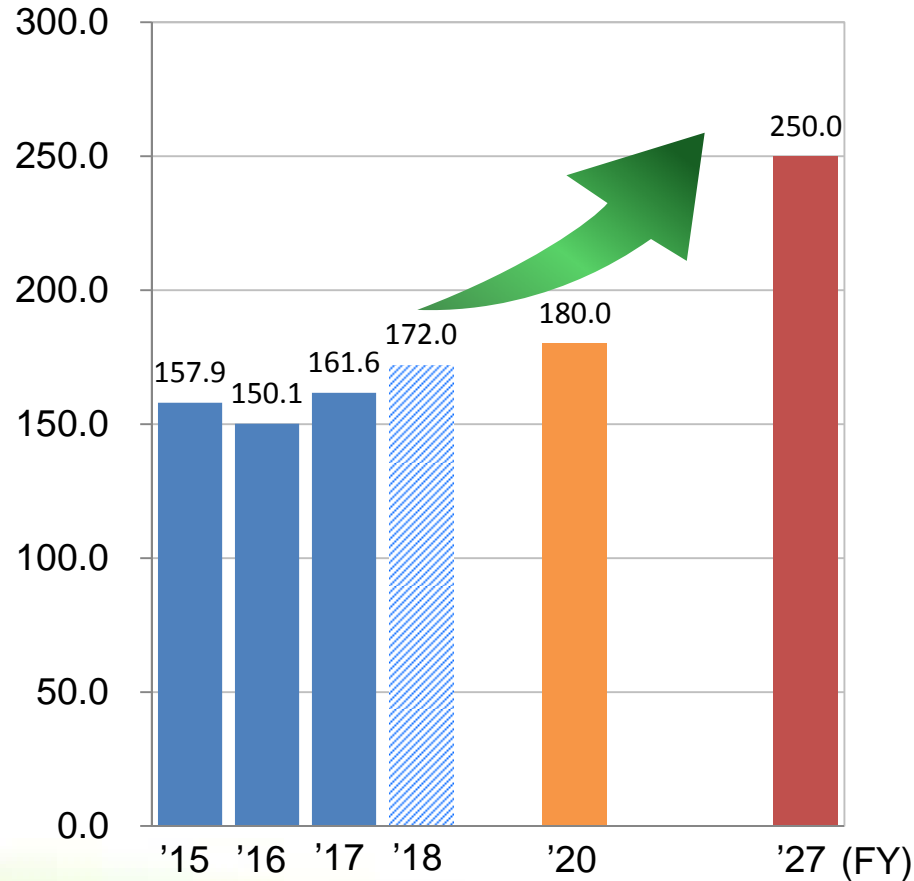
- Performance chemicals business that play an active role in various surfaces
- New business will be developed in the "Energy & Electronics" area and "Biotechnology & Medical" area.

# Numerical Goal

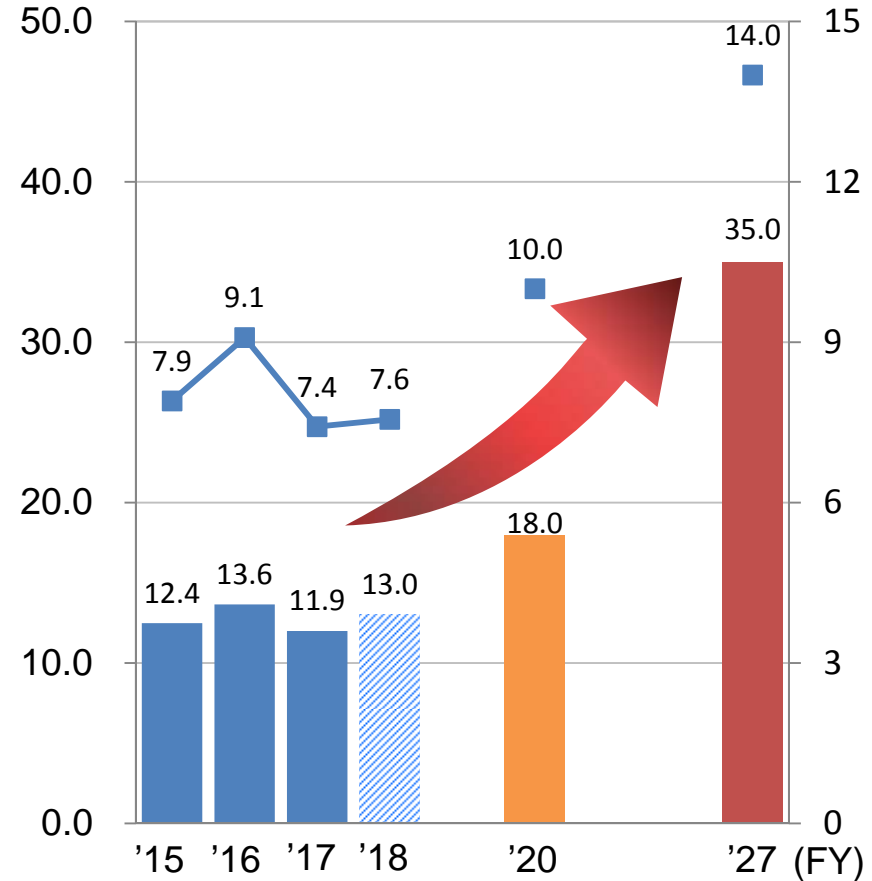


<Precondition for the forecast> Price of naphtha produced in Japan: 47 thousand of Yen/kl, Exchange rate: 110 Yen/US\$

Net sales  
(Billions of yen)



Operating profit  
(Billions of yen)



FY2020 (Consolidated)

Net Sales: ¥180.0 billion

Operating profit (Operating profit ratio): ¥18.0 billion (10%)

ROE: 10%

## Topics-1 Business Group Organization and Work Style Reforms

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### **【Construction of a business group organization】**

Speed-up of decision making by enhancement of cooperation of Sales, R & D and Production departments as one business group

Further reinforcement of cross-functions for acquirement of cooperation of each business group



### **【Work style reforms project】**

Work style reforms project promoted mainly by members from in-house applicants

Promotion of personnel system reforms (telework, flextime system set without core time, etc.), business process re-engineering (implemented with a sense of initiative by 43 employees from in-house applicants) and introduction of AI & IT

Actions to be an ideal corporate group to create an inclusive work space where all employees respect various identities and values, and work actively through work style reforms and diversification of human resources

### Initiatives to support LGBT

Establishment of diversity promotion office and consultation service for LGBT

Conduction of in-house study session for deep understanding to LGBT

Re-examination of company regulation and benefit programs

Development of the new lithium-ion battery (LIB) with joint partners including Ph.D. Hideaki Horie of Keio University. This LIB is epoch-making and completely different from known one.



Prototype manufacturing plant  
in the Kinuura factory

- ◇ Establishment of the elemental technologies
- ◇ For commercialization in 2020, conduction of concept testing and technical feasibility study toward practical use of large batteries for stationary systems, etc.
- ◇ Starting laboratory sample work for verification to accelerate development toward various practical applications

## Topics-4 Overseas Business Expansion of Lubricating Oil Additives

Establishment of new production facility in Korea to respond to brisk demand for lubricating oil additives, ACLUBE products

The Kyoto & Kashima Factory  
(Japan)

SCR (USA)  
SKN (China)



Newly established  
Sanyo Chemical Manufacturing Korea, Ltd.  
(scheduled to start commercial production  
in 2020)

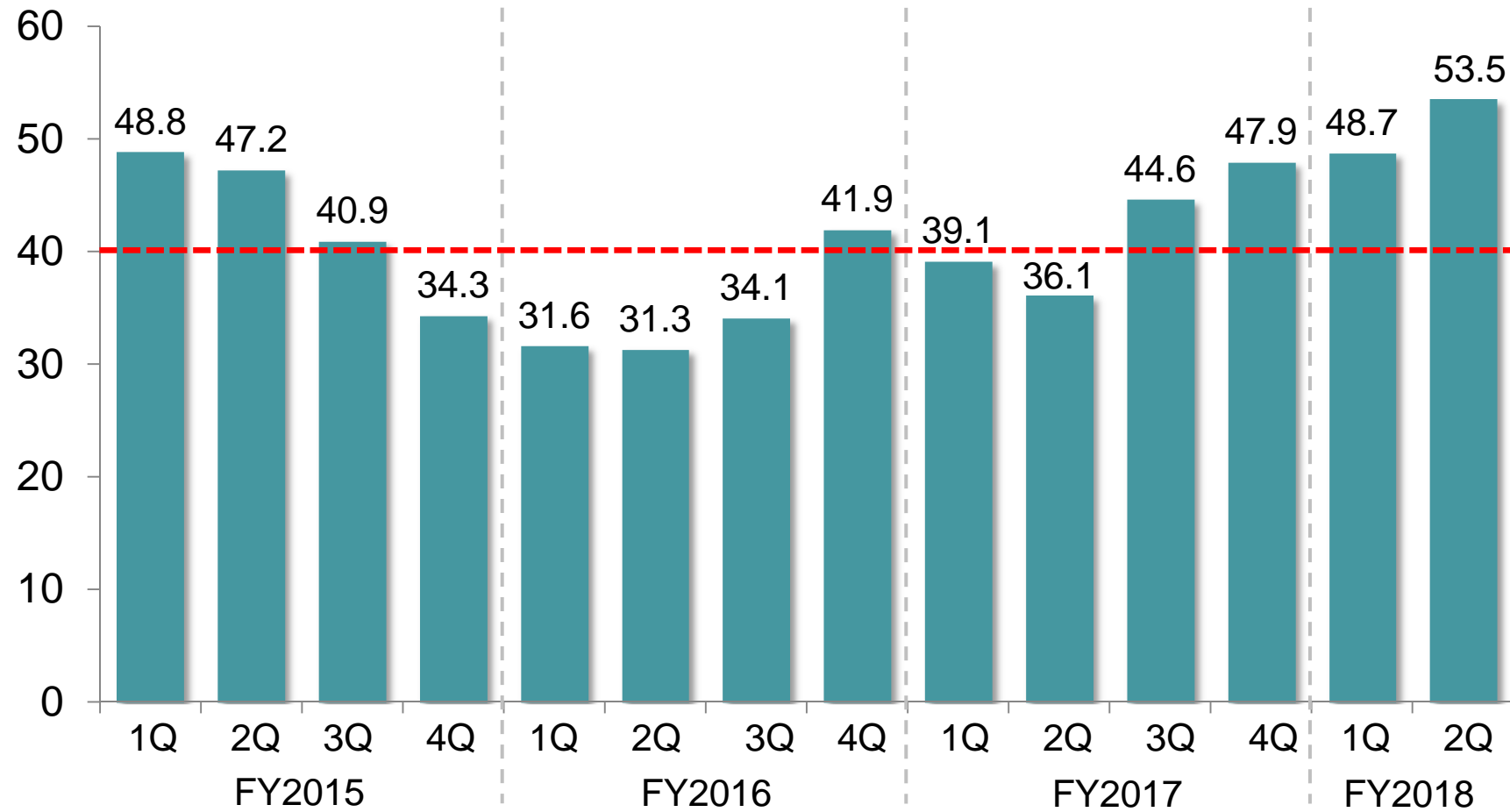




# Reference

# Transition of Price of Naphtha produced in Japan

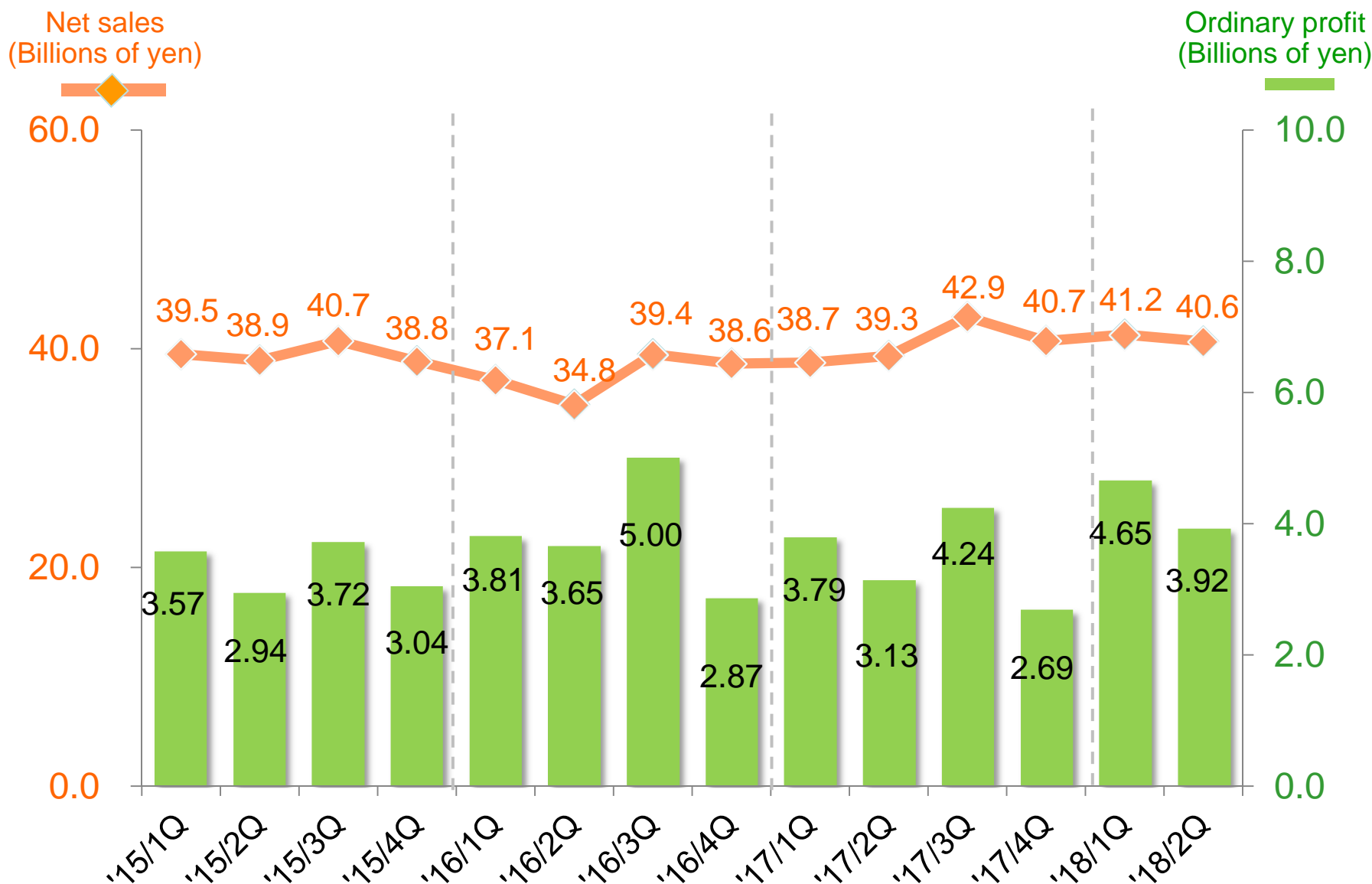
Naphtha price  
(Thousands of yen/kl)



(Reference: Japanese newspapers, etc)

(Ref.-1)

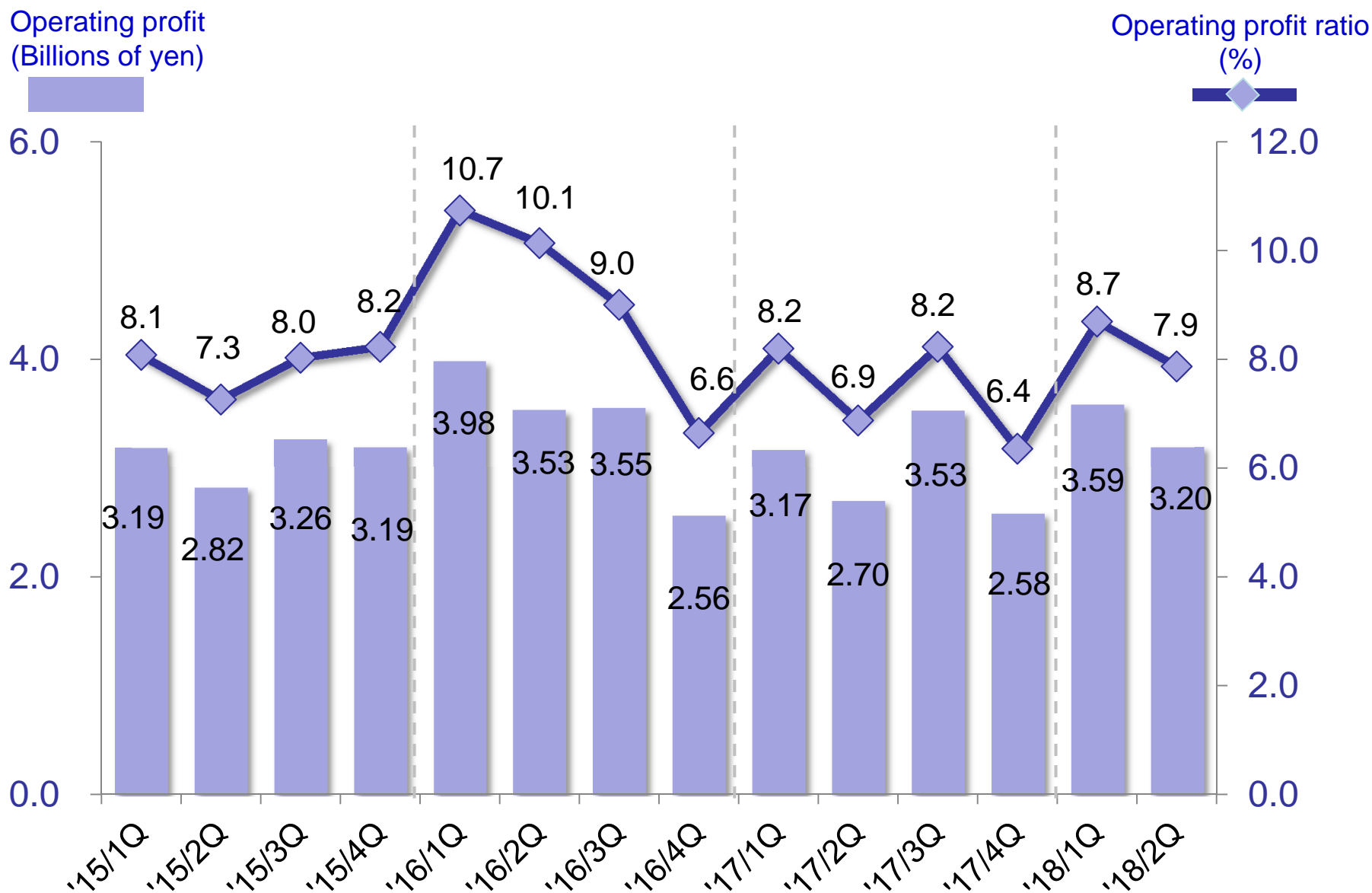
# Consolidated Business Result Trend



Sanyo Chemical and its Japanese consolidated subsidiaries, which had mostly been using the declining balance method for depreciation of property, plant and equipment, adopted the straight-line method from FY2016.

(Ref.-2)

# Consolidated Operating Profit Trend



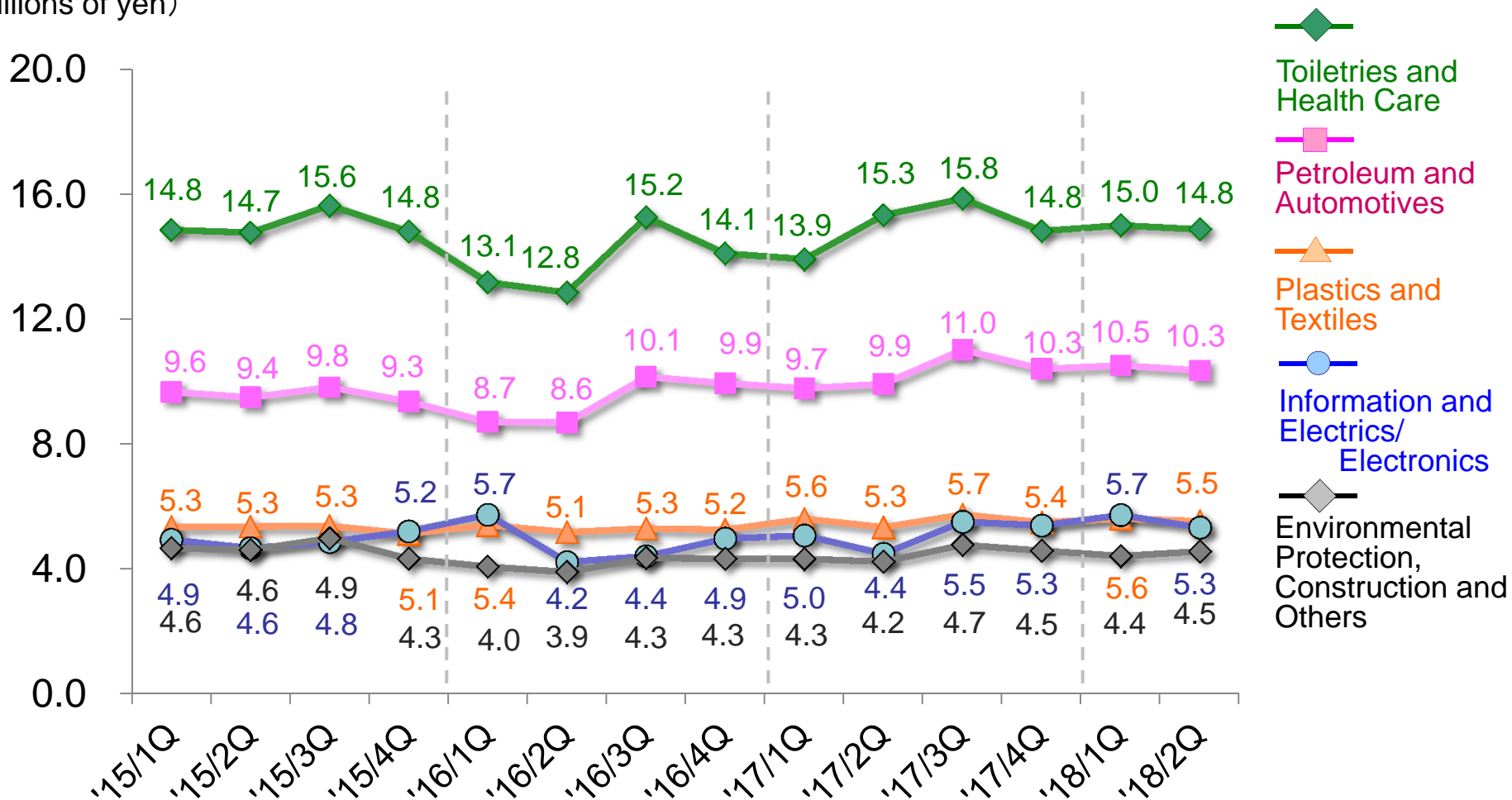
Sanyo Chemical and its Japanese consolidated subsidiaries, which had mostly been using the declining balance method for depreciation of property, plant and equipment, adopted the straight-line method from FY2016.

(Ref.-3)

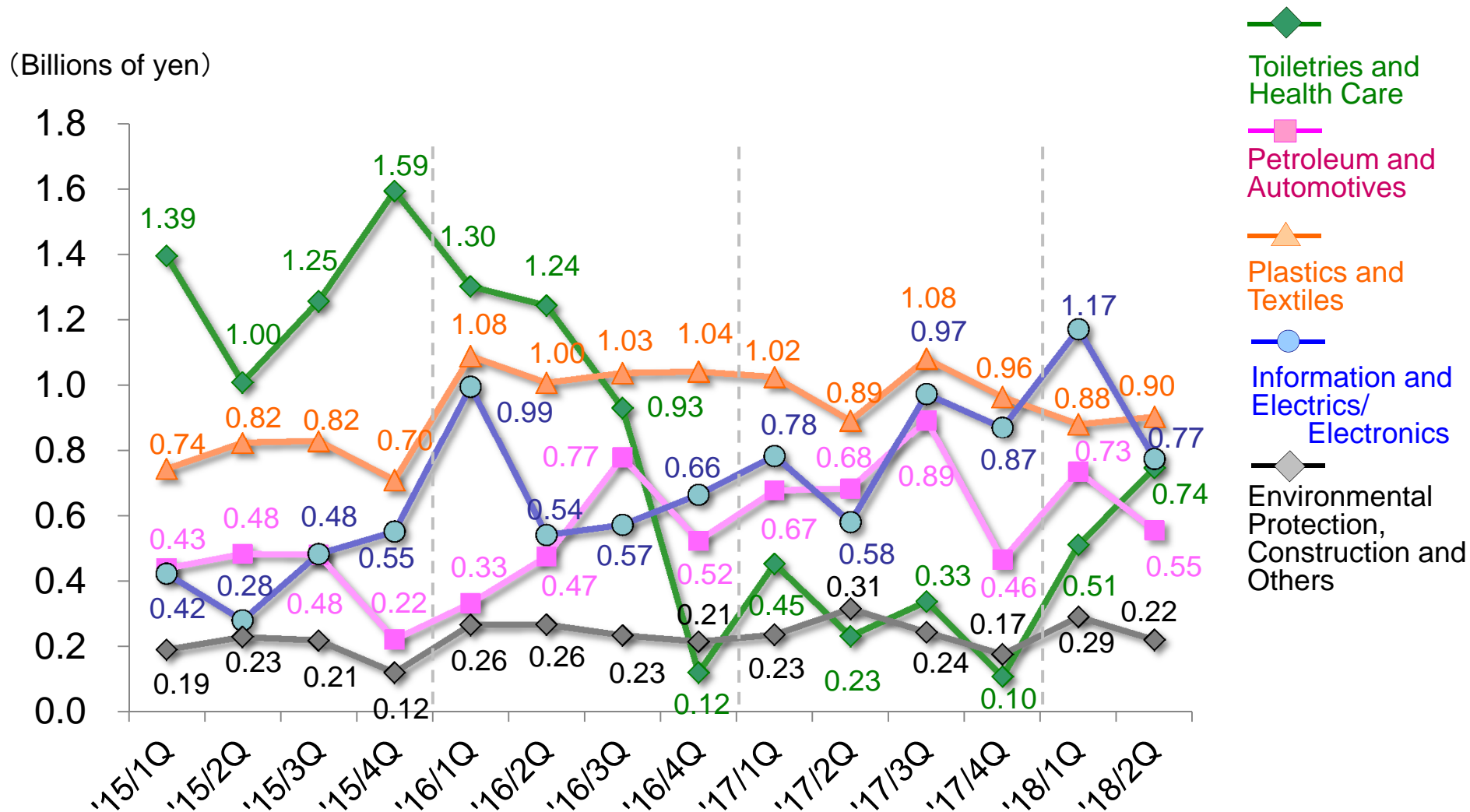
# Consolidated Net Sales Trend by Segment



(Billions of yen)



# Consolidated Operating Profit Trend by Segment

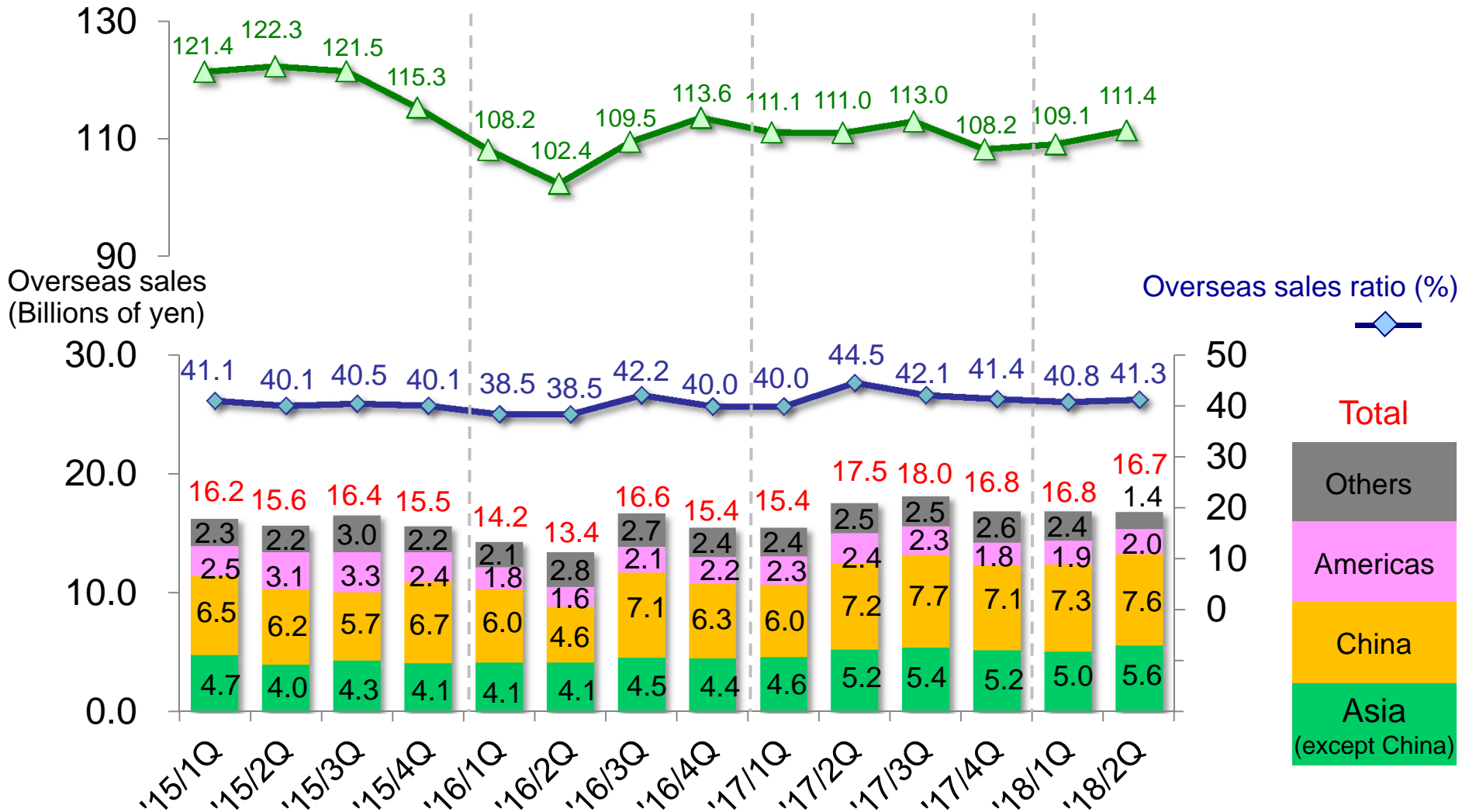


Sanyo Chemical and its Japanese consolidated subsidiaries, which had mostly been using the declining balance method for depreciation of property, plant and equipment, adopted the straight-line method from FY2016.

# Consolidated Overseas Sales Trend



Average exchange rate  
(Yen/US\$)

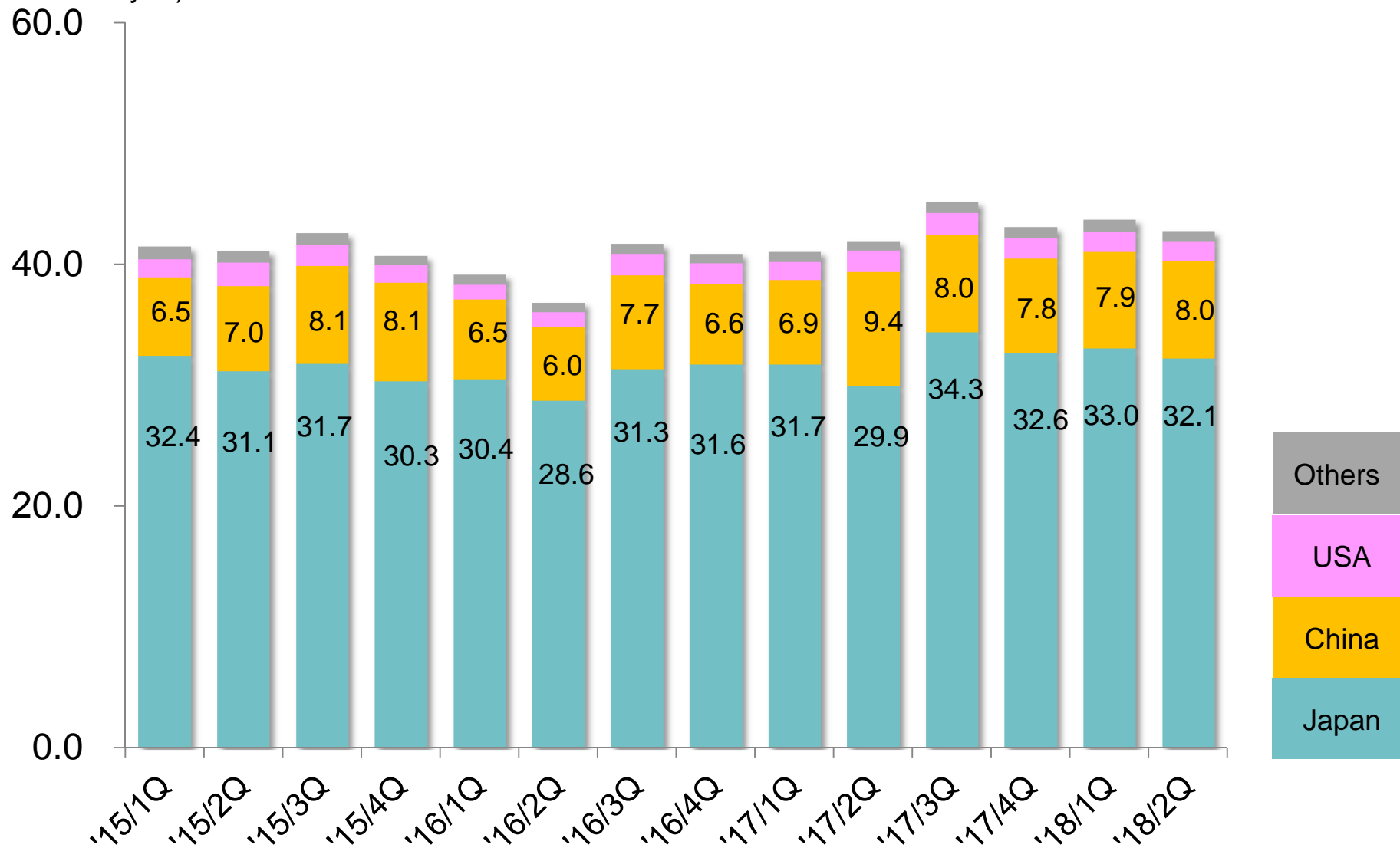


(Ref.-6)

# Consolidated Net Sales Trend by Geographic Segments

Internal sales among Sanyo Chemical Group are not eliminated.

(Billions of yen)



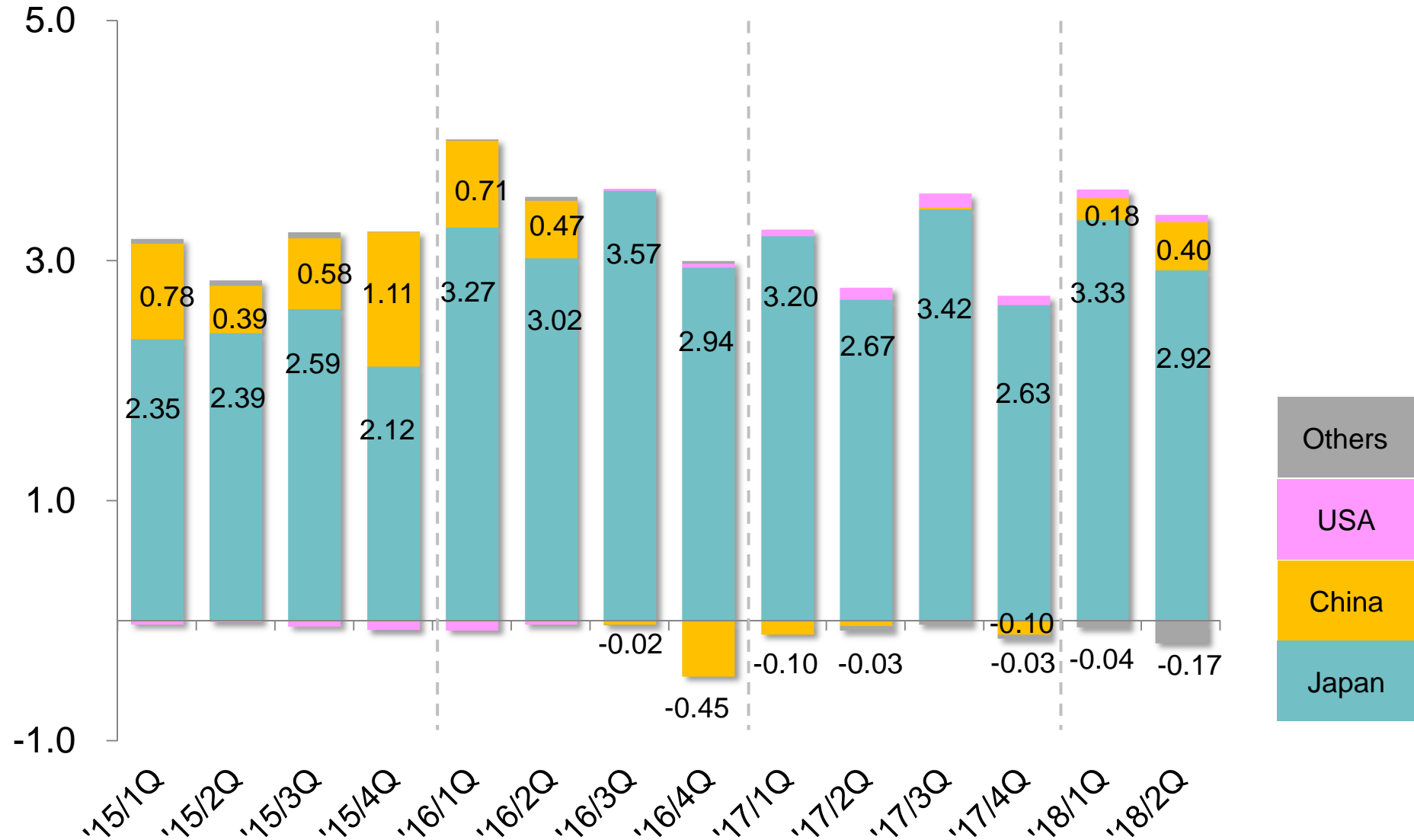
(Ref.-7)



# Consolidated Operating Profit Trend by Geographic Segments

Internal sales among Sanyo Chemical Group are not eliminated.

(Billions of yen)



(Ref.-8)

## Japanese Consolidated Subsidiaries (5 companies)

Company Name	Abbr.	Equity Ownership	Line of Business	
SDP Global Co., Ltd.	SDP	Sanyo Chemical Toyota Tsusho	70% 30%	Manufacture and sales of superabsorbent polymers
SAN NOPCO LIMITED	SNL	Sanyo Chemical	100%	Manufacture and sales of agents for pulp & paper, coating agents, a wide range of industrial agents, etc.
San Chemical Co., Ltd.	SCC	Sanyo Chemical JXTG Nippon Oil & Energy	50% 50%	Manufacture of raw materials for polyurethane foams, etc.
San-Apro Ltd.	SA	Sanyo Chemical Evonik International Holding B.V.	50% 50%	Manufacture and sales of curing accelerators for epoxy resins, urethane catalysts, etc.
Sanyo Transport Co., Ltd.	—	Sanyo Chemical	100%	General trucking

## Overseas Consolidated Subsidiaries (8 companies)

Company Name	Abbr.	Equity Ownership		Line of Business
Sanyo Kasei (Nantong) Co., Ltd. [China]	SKN	Sanyo Chemical	100%	Manufacture of surfactants, polyurethane resins, etc.
San-Dia Polymers (Nantong) Co., Ltd. [China]	SDN	SDP Global	100%	Manufacture and sales of superabsorbent polymers
Sanyo Chemical (Shanghai) Trading Co., Ltd. [China]	SCST	Sanyo Chemical	100%	Sales of surfactants, polyurethane resins, etc.
Sanyo Kasei (Thailand) Ltd. [Thailand]	SKT	Sanyo Chemical Toyota Tsusho and others	89% 11%	Manufacture and sales of surfactants, polyurethane resins, etc.
SANAM Corporation [USA]	SANAM	Sanyo Chemical	100%	Holding company of U.S. consolidated subsidiaries. Sales of lubricating oil additives, polyurethane beads, etc.
Sanyo Chemical &Resins, LLC [USA]	SCR	SANAM Corporation	100%	Manufacture of lubricating oil additives
Sanyo Chemical Texas Industries, LLC [USA]	SCTI	SANAM Corporation	100%	Manufacture of polyurethane beads
SDP GLOBAL (MALAYSIA) SDN.BHD. [Malaysia]	SDPM	SDP Global	100%	Manufacture and sales of superabsorbent polymers

# Subsidiaries and Affiliates Accounted for by Equity Method

(5 companies)

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Company Name	Abbr.	Equity Ownership	Line of Business
San-Petrochemicals Co., Ltd.	SPCC	Sanyo Chemical 50% JXTG Nippon Oil &Energy 50%	Manufacture of raw materials for synthetic rubbers
Sunrise Chemical LLC [USA]	SRC	SANAM Corporation 50% JX Nippon Chemical Texas 50%	Manufacture of raw materials for synthetic rubbers
Nagoya Sanyo Warehouse Co., Ltd.	—	Sanyo Chemical 100%	Warehousing
Shiohama Chemicals Warehouse Co., Ltd.	—	Sanyo Chemical 50% JXTG Nippon Oil &Energy 50%	Warehousing
Sanliving Ltd.	SL	Sanyo Chemical 100%	Real estate, insurance and agency