



"Performance" Through Chemistry

**A Statement of Accounts**  
**For the Six Months Ended Sept. 30, 2017**  
**1st Half Fiscal Year 2017**  
**(1H-FY2017)**

**SANYO CHEMICAL INDUSTRIES, LTD.**

**Takao Ando, President**

<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. 14, 2017. 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.

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**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)

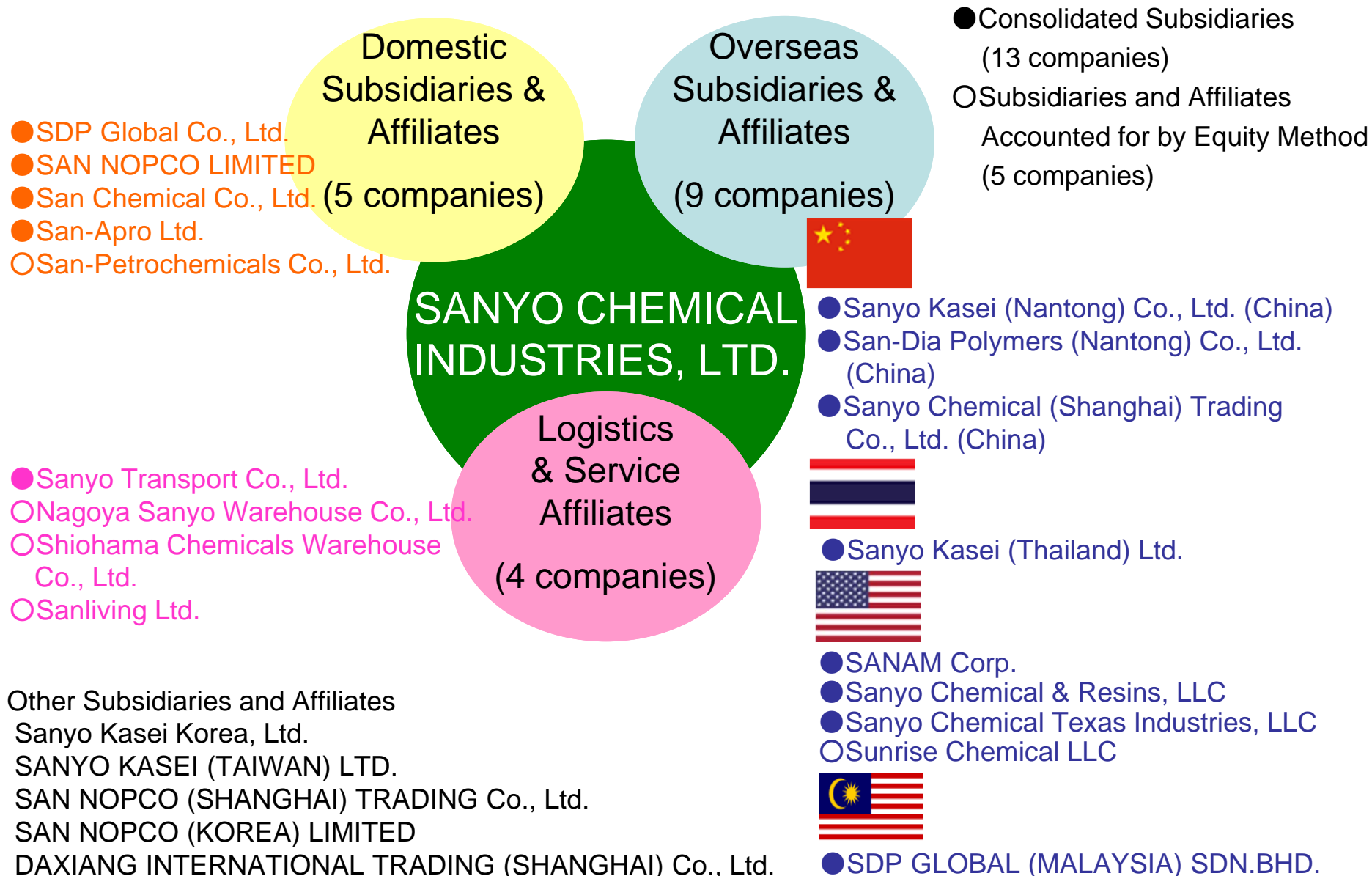
**Consolidated Number of Employees:**

2,062 (as of Sept. 30, 2017)

**Line of Business:**

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

# Sanyo Chemical Group



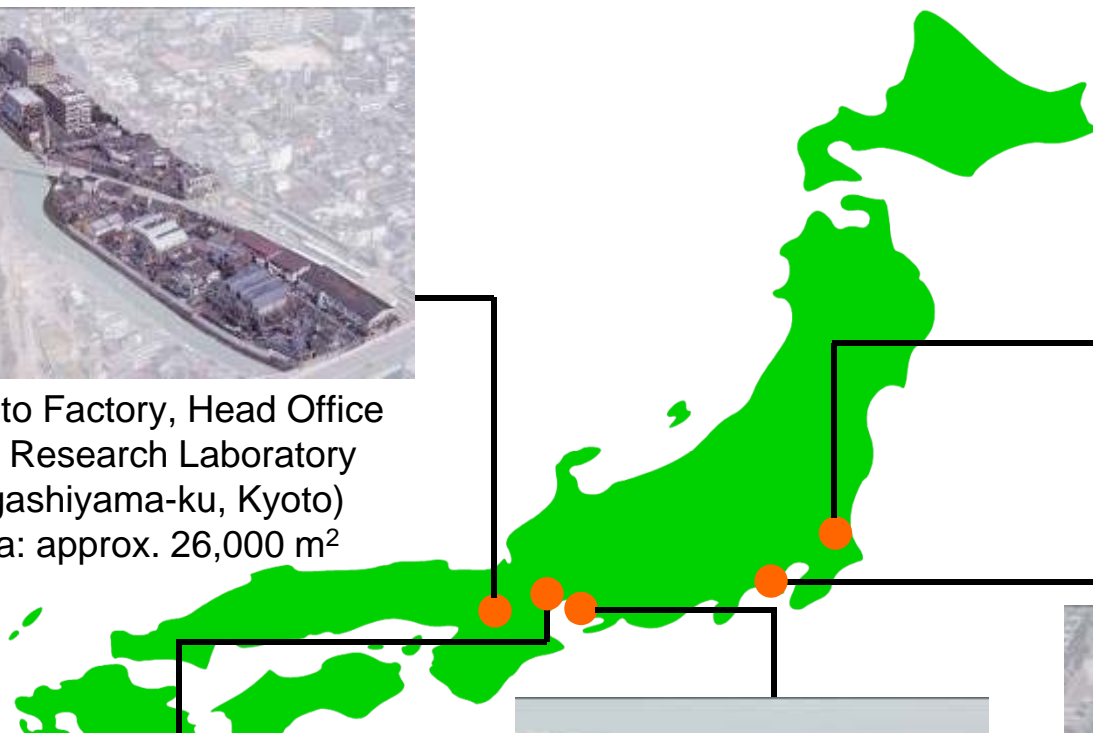
# Domestic Production Bases



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 Kasei (Thailand) Ltd.




 Under construction  
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.



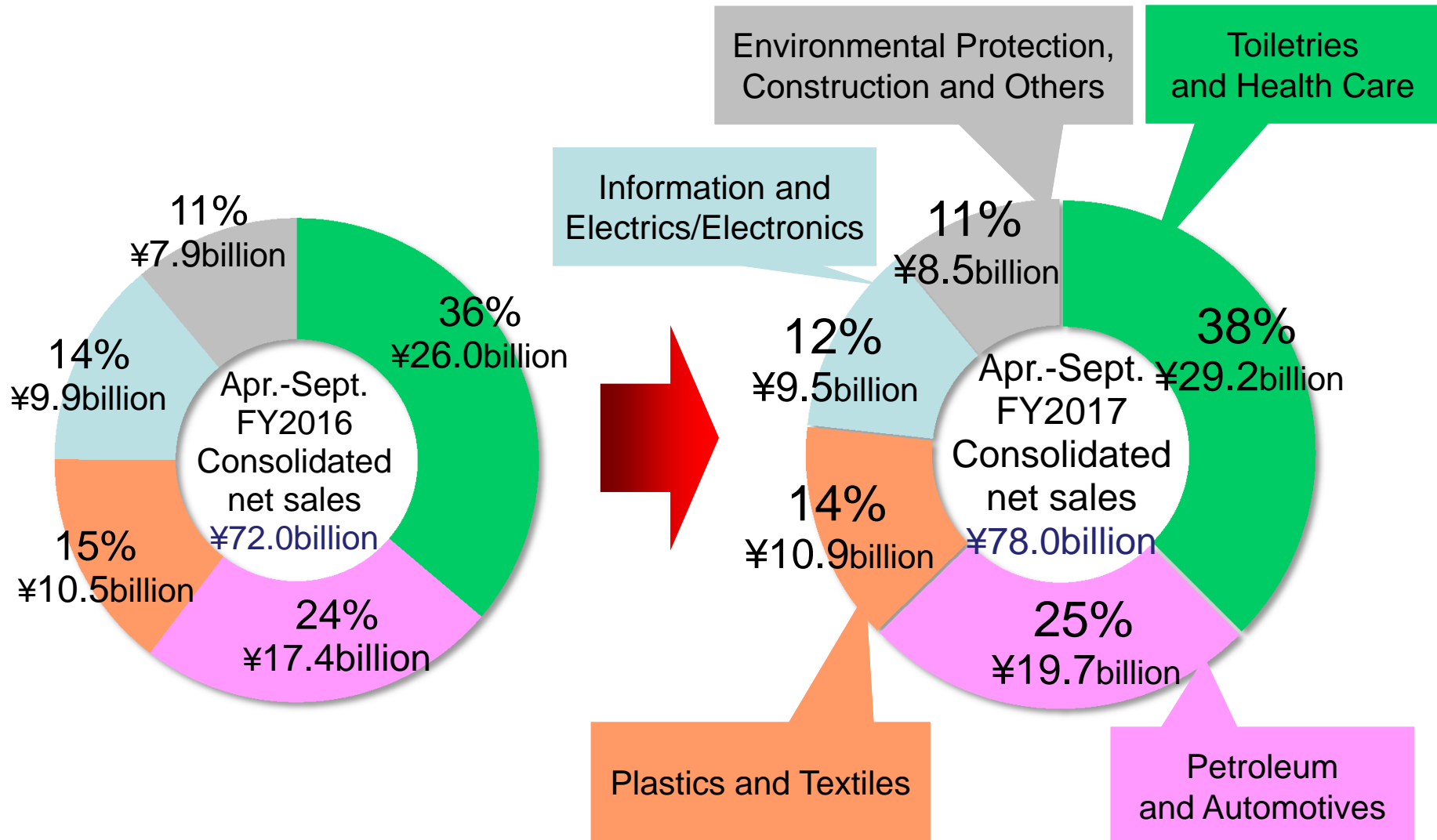
 SANAM Corp.

# 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 (SAPs), 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 (TUBs), Raw Materials for Polyurethane Foams (PPG), Lubricating Oil Additives, Additives for Fuel Oils, 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 (PEBs) 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



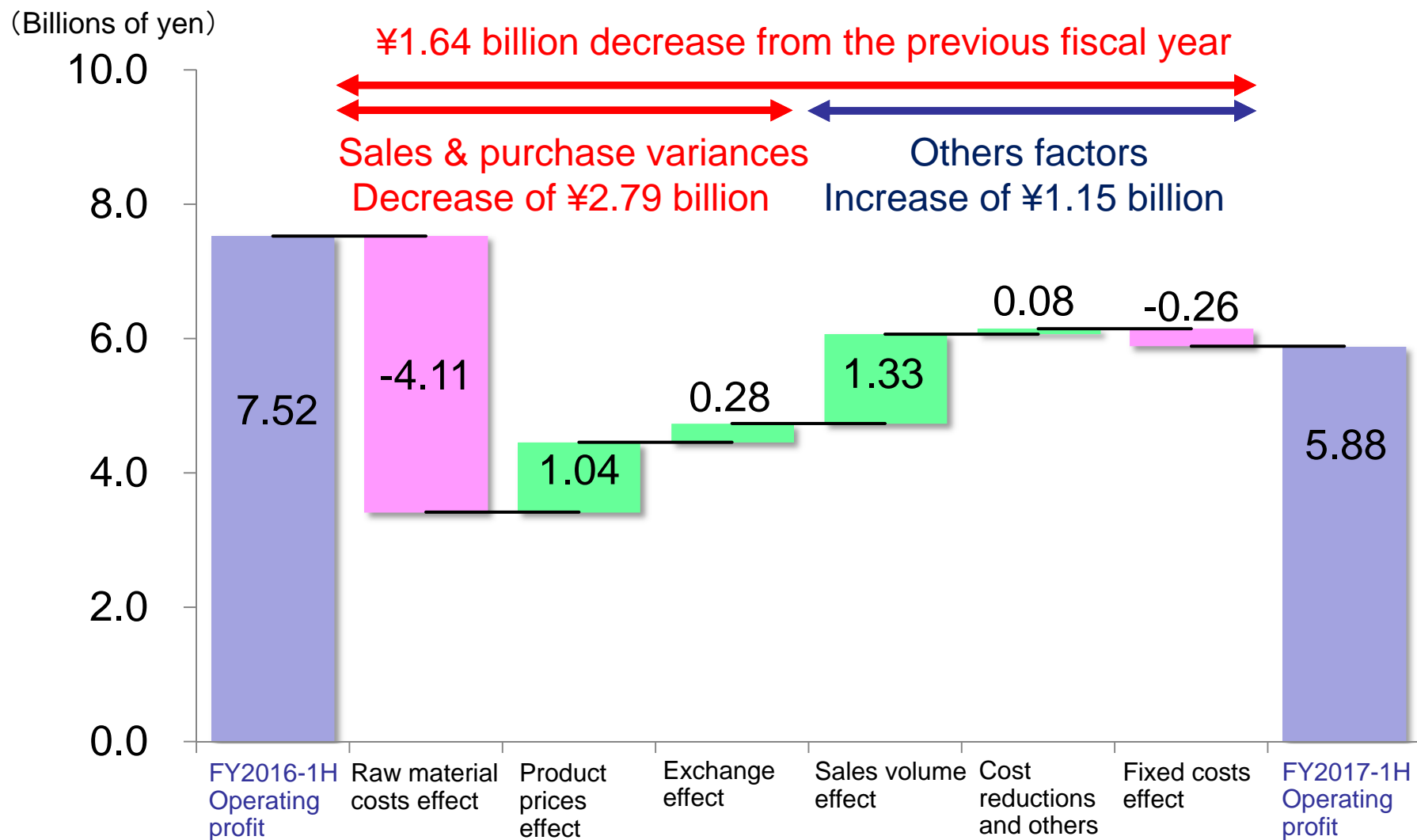
# Results of Operations for 1H in FY2017



(Billions of yen)

Consolidated	Apr.-Sept.		Year on Year Change	
	FY2016	FY2017	Amount	Ratio (%)
Net sales	72.03	78.07	6.04	8
Operating profit	7.52	5.88	(1.64)	(22)
Ordinary profit	7.46	6.93	(0.53)	(7)
Profit attributable to owners of parent	5.15	4.78	(0.37)	(7)
Comprehensive income	1.40	7.65	6.24	444

# Change in Consolidated Operating Profit by Factor



# Change in Consolidated Net Income



( Billions of yen )

	Apr.-Sept.		Year on Year Change
	FY2016	FY2017	
Operating profit	7.52	5.88	(1.64)
Equity in losses or earnings of unconsolidated subsidiaries and affiliates	0.42	0.27	(0.15)
Gain or loss on foreign exchange	(0.91)	0.29	1.20
Other non-operating profit or loss	0.42	0.48	0.05
Ordinary profit	7.46	6.93	(0.53)
Gain and Loss on disposal/sales of property, plant and equipment	(0.31)	(0.40)	(0.08)
Other extraordinary income or loss	0.00	0.00	(0.00)
Profit before income taxes	7.15	6.52	(0.63)
Income taxes, etc.	(1.56)	(1.56)	(0.00)
Profit attributable to non-controlling interests	(0.43)	(0.17)	0.25
Profit attributable to owners of parent	5.15	4.78	(0.37)

# Consolidated Balance Sheet



(Billions of yen)

	Mar. 31 2016	Sept. 30 2017	Changed amount	Main Change Factor
Current assets	85.3	87.3	2.0	Cash and deposits: (5.9), Notes and accounts receivable-trade, Electronically recorded monetary claims-operating: 5.4, Inventories: 1.7
Non-current assets	101.5	107.9	6.3	Property, plant and equipment: 3.7, Investment securities: 2.3
<b>Total assets</b>	<b>186.8</b>	<b>195.2</b>	<b>8.4</b>	
Current liabilities	44.4	46.9	2.4	Accounts payable-trade, Electronically recorded obligations-operating: 5.2, Short-term loans: (2.9)
Non-current liabilities	14.7	14.4	(0.2)	Long-term debt: (1.0), Deferred tax liabilities: 0.7
<b>Total liabilities</b>	<b>59.2</b>	<b>61.3</b>	<b>2.1</b>	
Shareholder's equity	108.1	111.7	3.5	Net income: 4.7, Cash dividends paid: (1.2)
Accumulated other comprehensive income	13.4	15.8	2.4	Valuation difference on available-for-sale securities: 1.7, Foreign currency translation adjustment: 0.7
Non-controlling interests	6.0	6.3	0.2	
<b>Total net assets</b>	<b>127.6</b>	<b>133.9</b>	<b>6.2</b>	
<b>Total Liabilities and net assets</b>	<b>186.8</b>	<b>195.2</b>	<b>8.4</b>	

# Consolidated Cash Flows



(Billions of yen)

	Apr.-Sept.		Changed amount	Special Instruction
	FY2016	FY2017		
Operating activities	9.0	6.2	(2.8)	
Profit before income taxes	7.1	6.5	(0.6)	
Depreciation and amortization	3.5	4.0	0.5	
Equity in earning of unconsolidated subsidiaries and affiliates	(0.4)	(0.2)	0.1	
(Increase) decrease in operating capital	(0.5)	(1.7)	(1.1)	
Income taxes	(1.7)	(1.7)	(0.0)	
Others	1.0	(0.5)	(1.6)	
Investing activities	(6.6)	(7.5)	(0.8)	Purchase of non-current assets 1H in FY2016: (6.5), 1H in FY2017 : (6.9)
Free cash flows	2.4	(1.2)	(3.7)	
Financing activities	0.2	(4.8)	(5.0)	Loans, Repayment 1H in FY2016: 1.4, 1H in FY2017 : (3.4)
Effect of exchange rate changes on cash and cash equivalents	(1.1)	0.0	1.2	
Net increase (decrease) in cash and cash equivalents	1.5	(5.9)	(7.5)	
Cash and cash equivalents at beginning of period	19.3	23.1	3.8	
Increase (decrease) in cash and cash equivalents resulting from changes in the fiscal year-end of subsidiaries	(0.6)	—	0.6	
Cash and cash equivalents at end of period	20.3	17.1	(3.1)	

# Forecast for FY2017 and Progress in 1H-FY2017

<Precondition for the forecast>

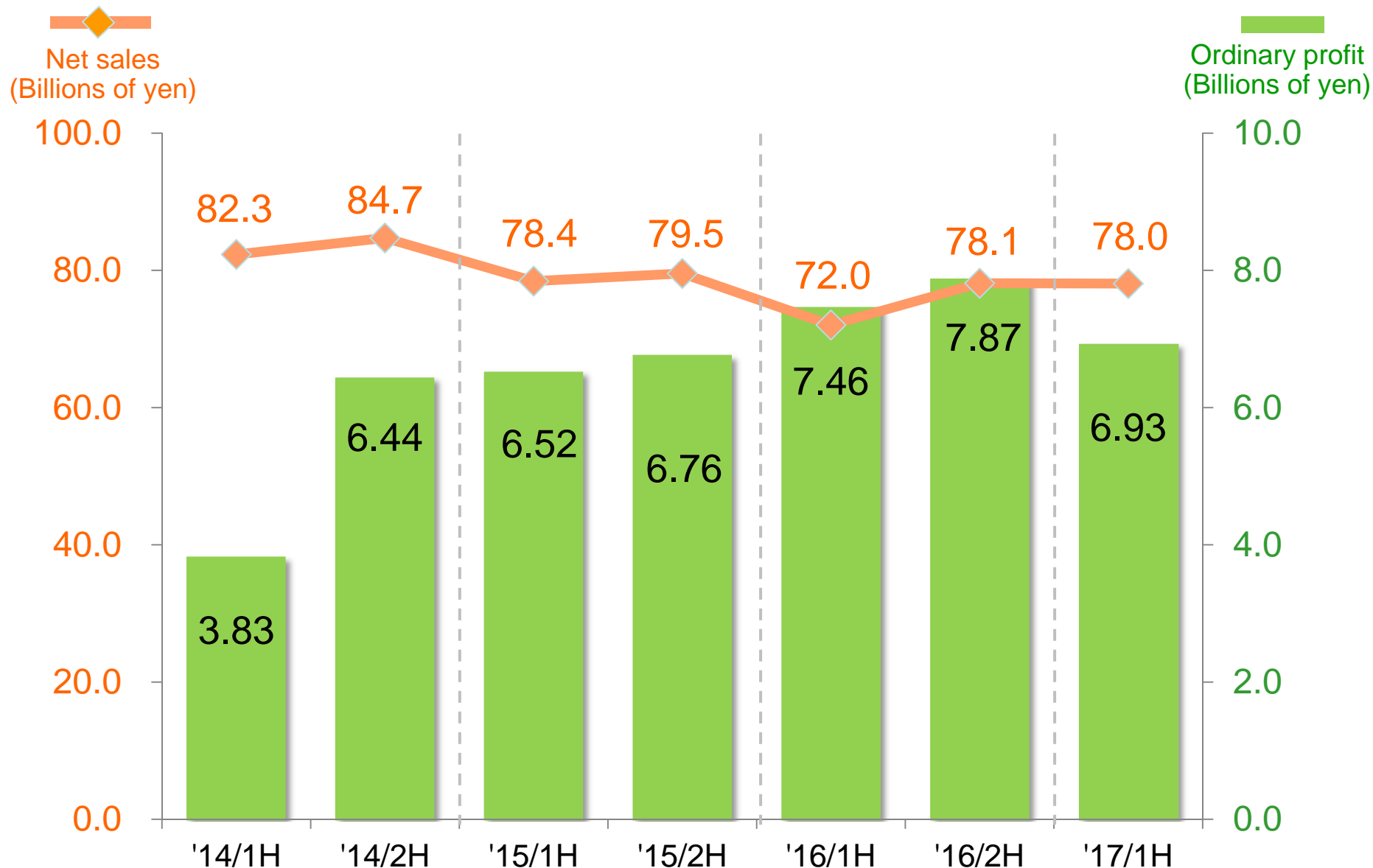
Domestic naphtha price: 40 thousands of Yen/kl, Exchange rate: 110 Yen/US\$

(Billions of yen)

Consolidated	FY2017 Annual	Apr.-Sept. FY2017		FY2016 Annual
	Forecast*	Result	Progress to Forecast(%)	Result
Net sales	167.00	78.07	47	150.16
Operating profit	14.00	5.88	42	13.64
Ordinary profit	15.50	6.93	45	15.34
Profit attributable to owners of parent	11.00	4.78	43	10.19

\*Forecasts announced on April 28, 2017

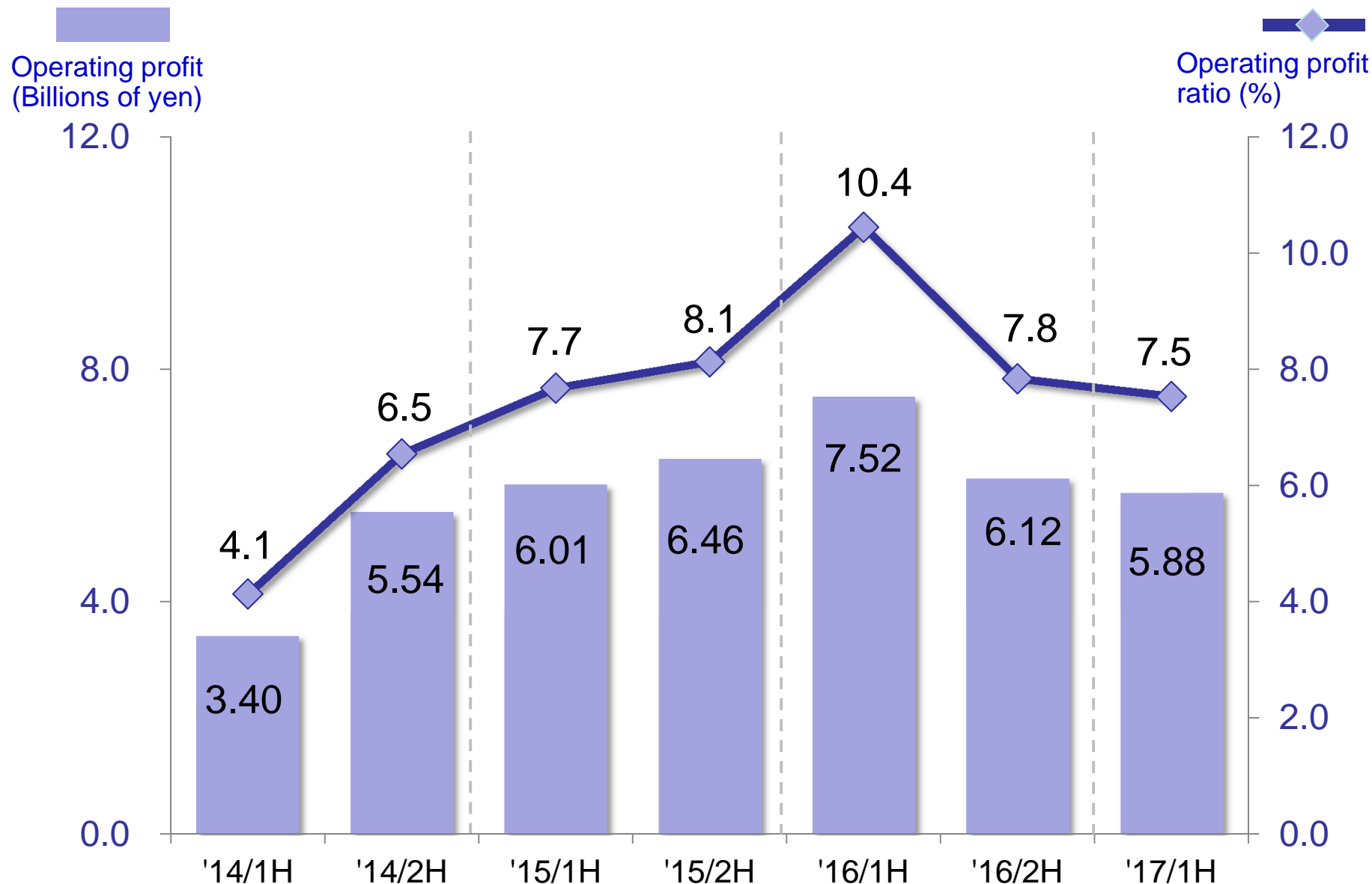
# Consolidated Business Result Trend



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

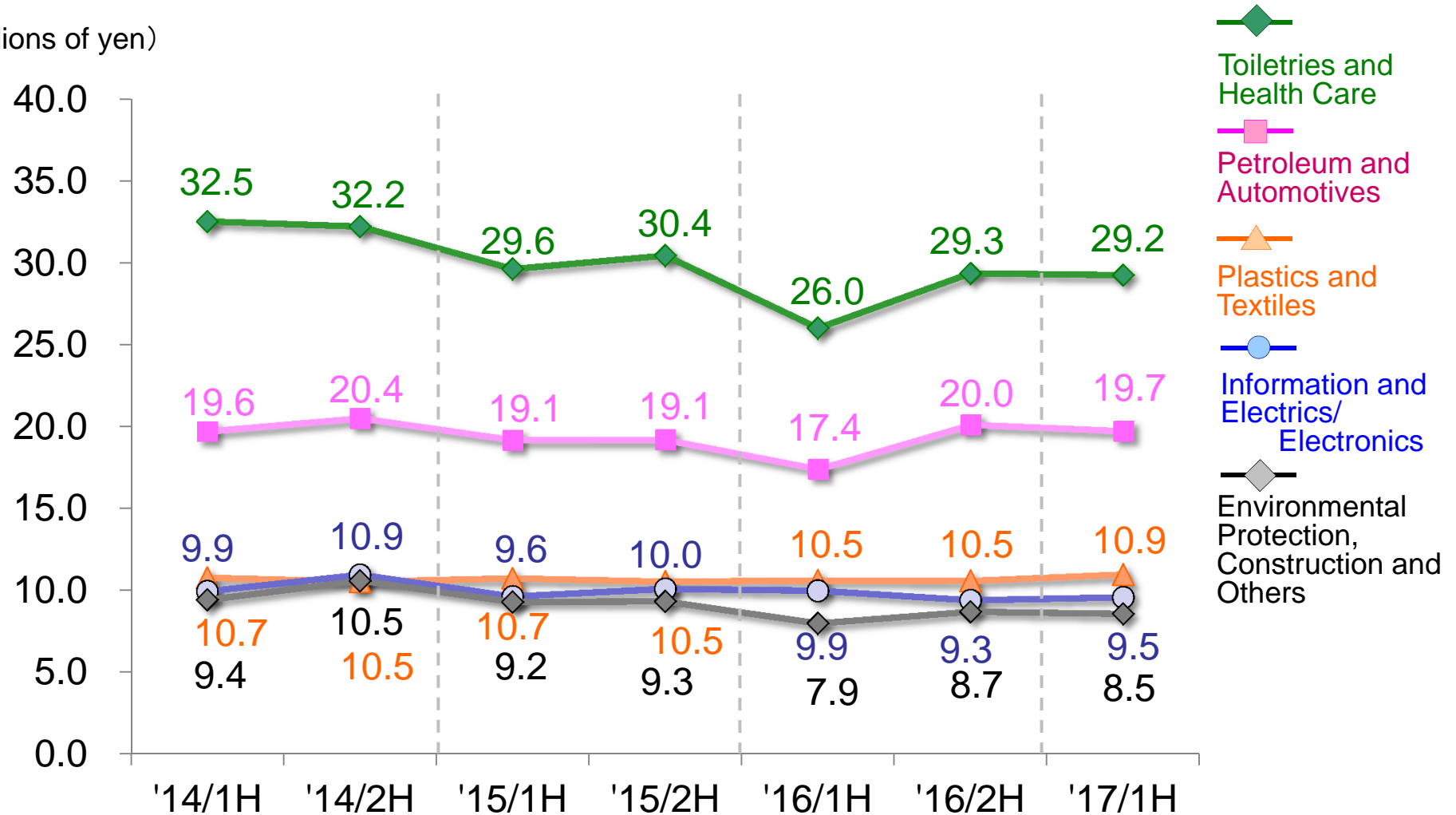
(Billions of yen)

Segment	Net Sales			Operating Profit		
	Apr.-Sept. FY2016	Apr.-Sept. FY2017	Changed Amount	Apr.-Sept. FY2016	Apr.-Sept. FY2017	Changed Amount
Toiletries and Health Care	26.06	29.26	3.20	2.54	0.68	(1.86)
Toiletries	6.47	6.44	(0.02)			
Health Care	19.59	22.81	3.22			
Petroleum and Automotives	17.40	19.70	2.30	0.80	1.36	0.55
Plastics and Textiles	10.59	10.95	0.35	2.09	1.91	(0.17)
Plastics	7.11	7.43	0.32			
Textiles	3.48	3.51	0.03			
Information and Electrics/Electronics	9.97	9.57	(0.39)	1.53	1.36	(0.17)
Information	6.58	5.91	(0.67)			
Electrics/Electronics	3.38	3.66	0.27			
Environmental Protection, Construction and Others	7.99	8.57	0.57	0.53	0.55	0.01
<b>Total</b>	<b>72.03</b>	<b>78.07</b>	<b>6.04</b>	<b>7.52</b>	<b>5.88</b>	<b>(1.64)</b>

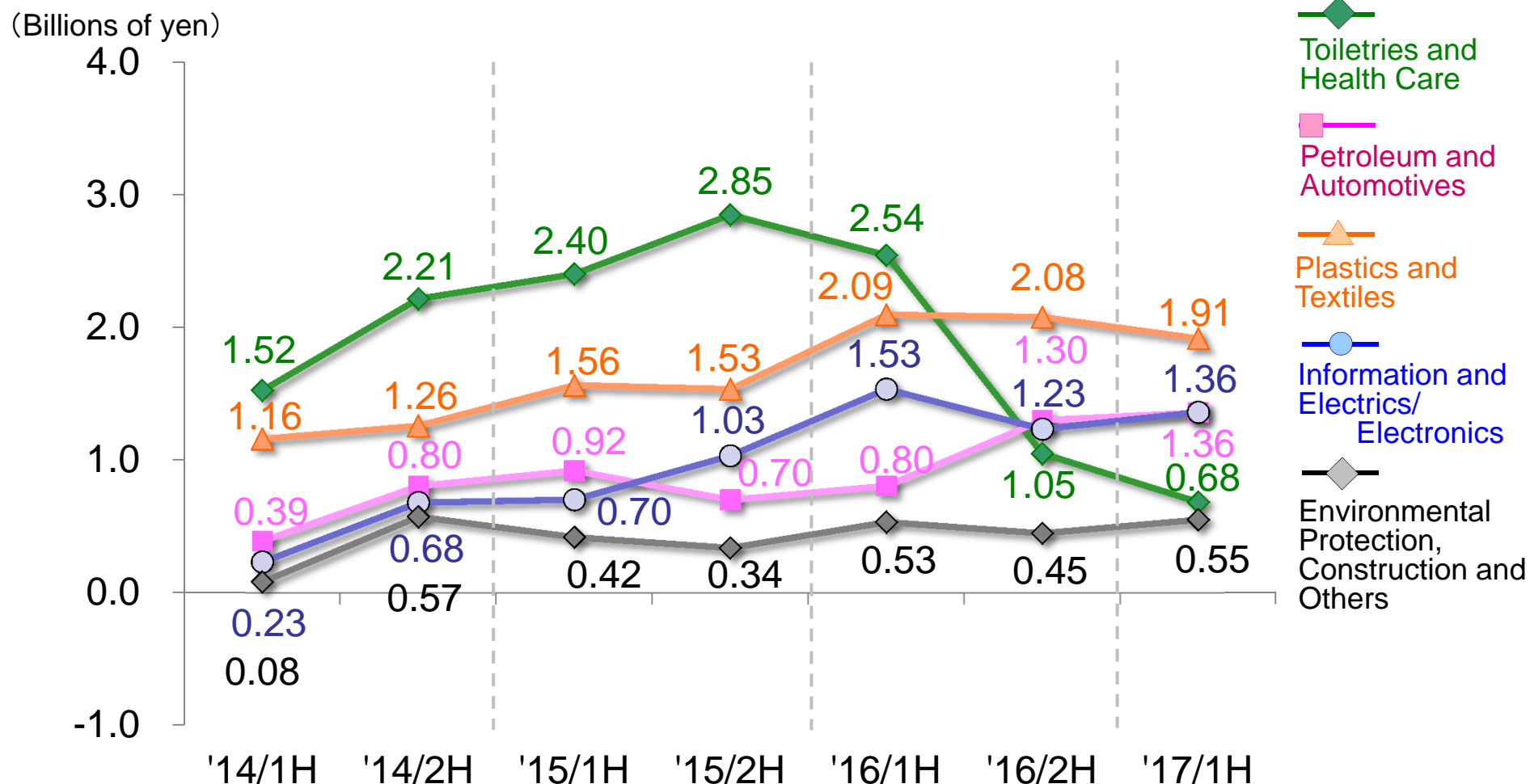
# Consolidated Net Sales Trend by Segment



(Billions of yen)



# Consolidated Operating Profit Trend by Segment

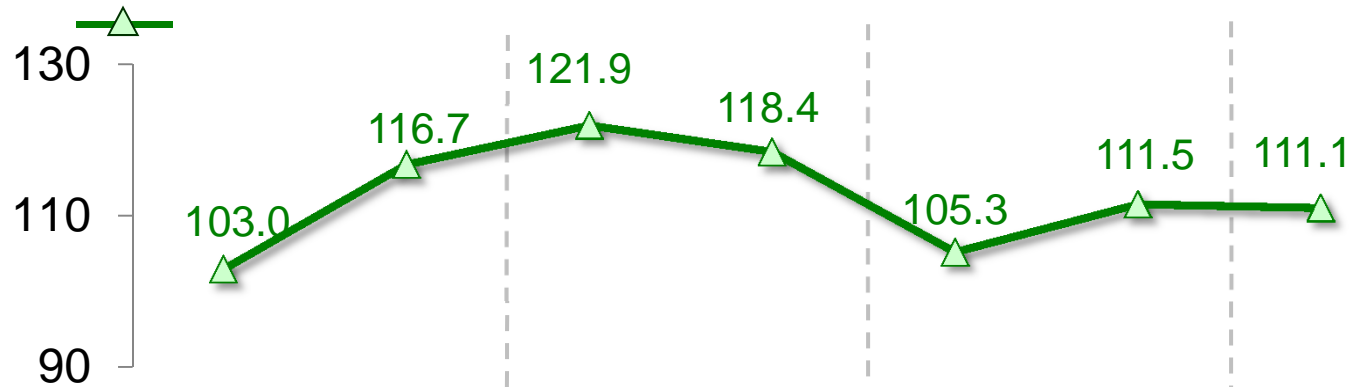


Sanyo Chemical and its Japanese consolidated subsidiaries, which had mostly been using the declining balance method for depreciation of property, plant and equipment, adopted the straight-line method from FY2016.

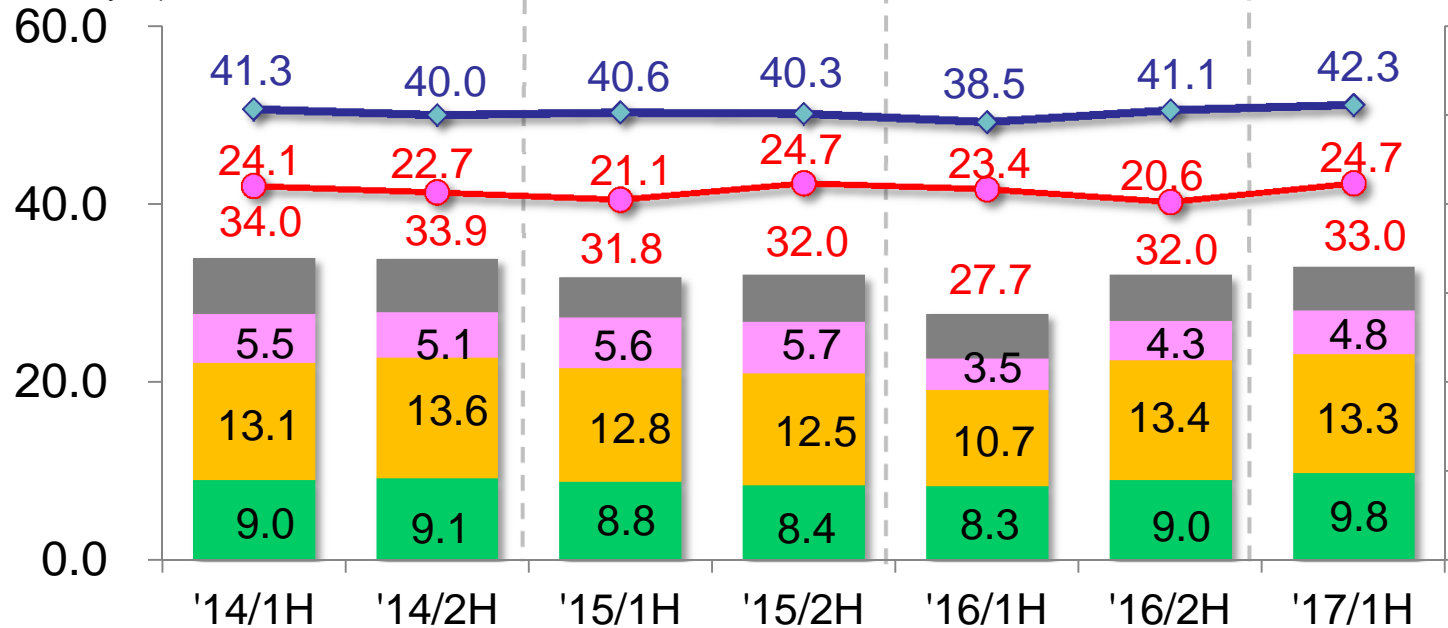
# Consolidated Overseas Sales Trend



Average exchange rate  
(Yen/US\$)

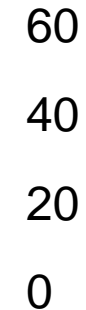


Overseas sales  
(Billions of yen)



Overseas sales ratio (%)

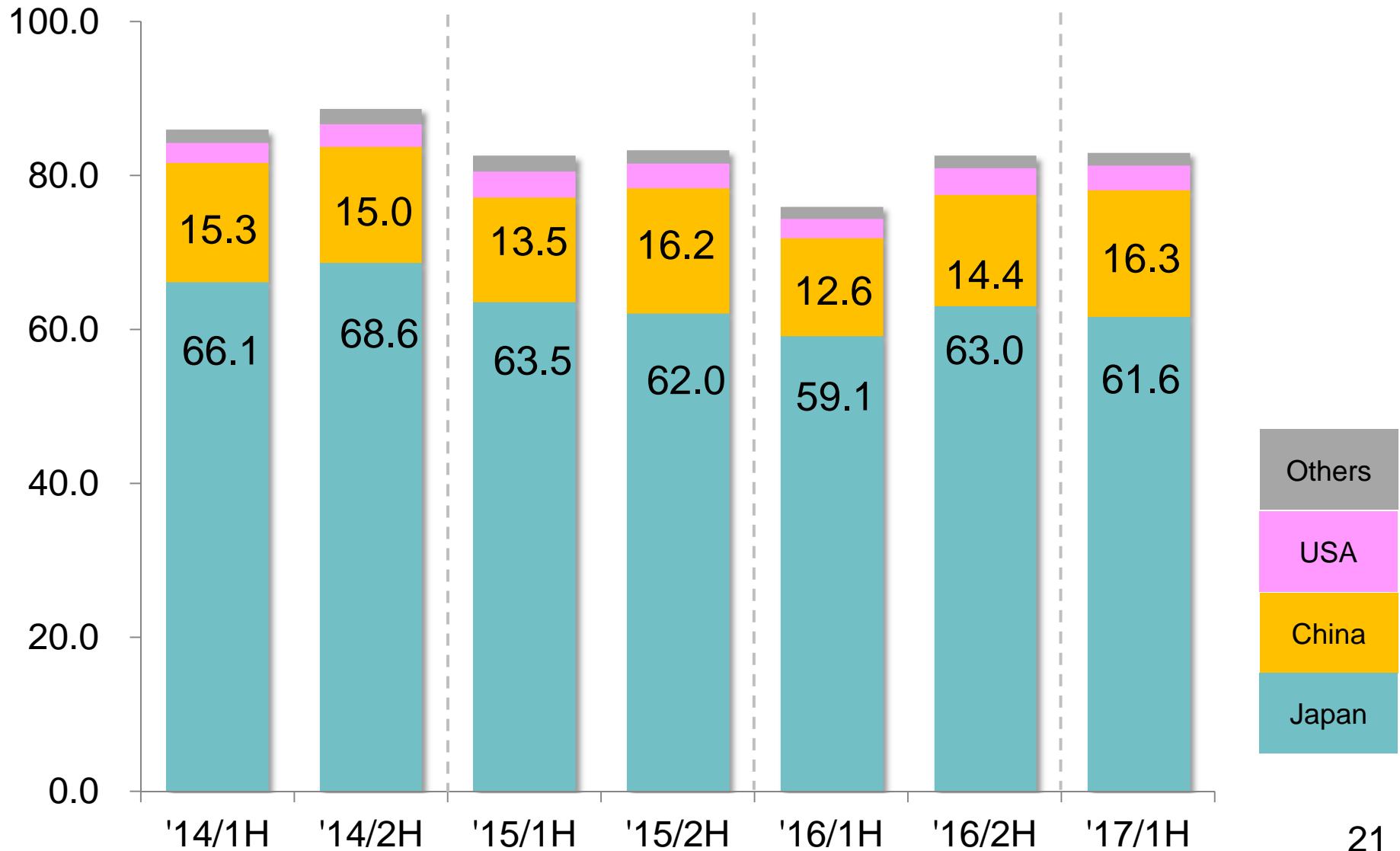
Overseas production ratio (%)



# Consolidated Net Sales Trend by Geographic Segments

Internal sales among Sanyo Chemical Group are not eliminated.

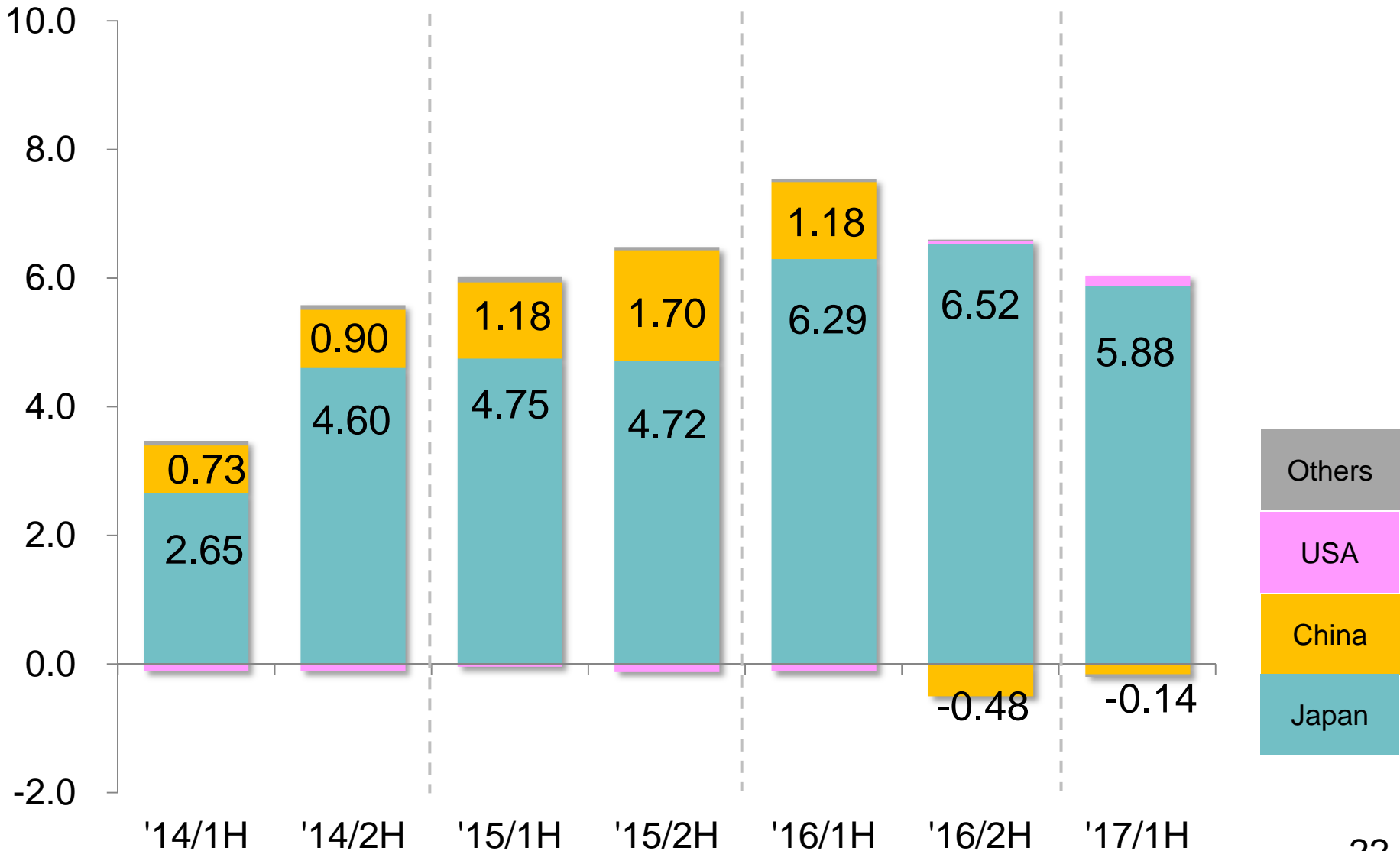
(Billions of yen)



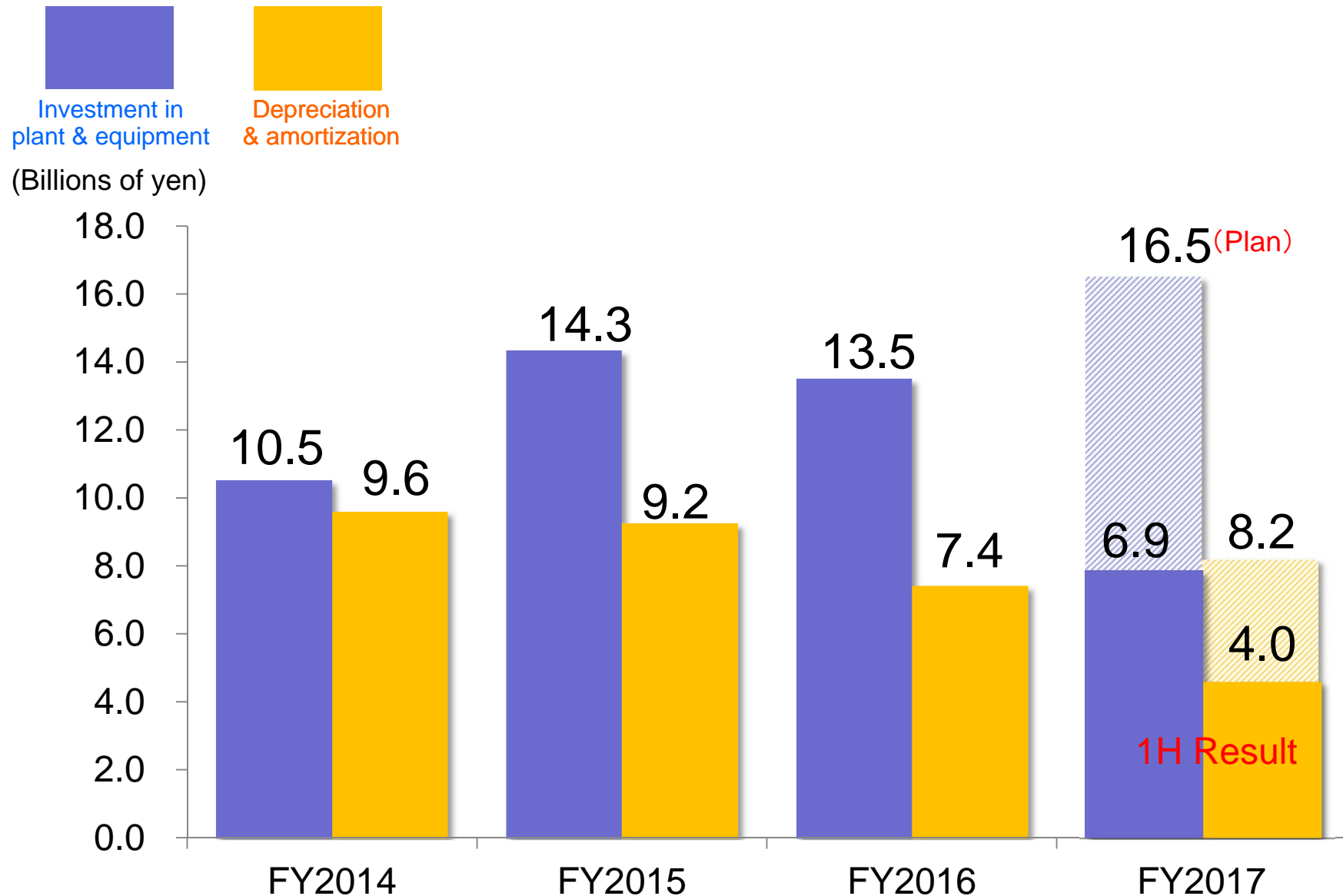
# Consolidated Operating Profit Trend by Geographic Segments

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

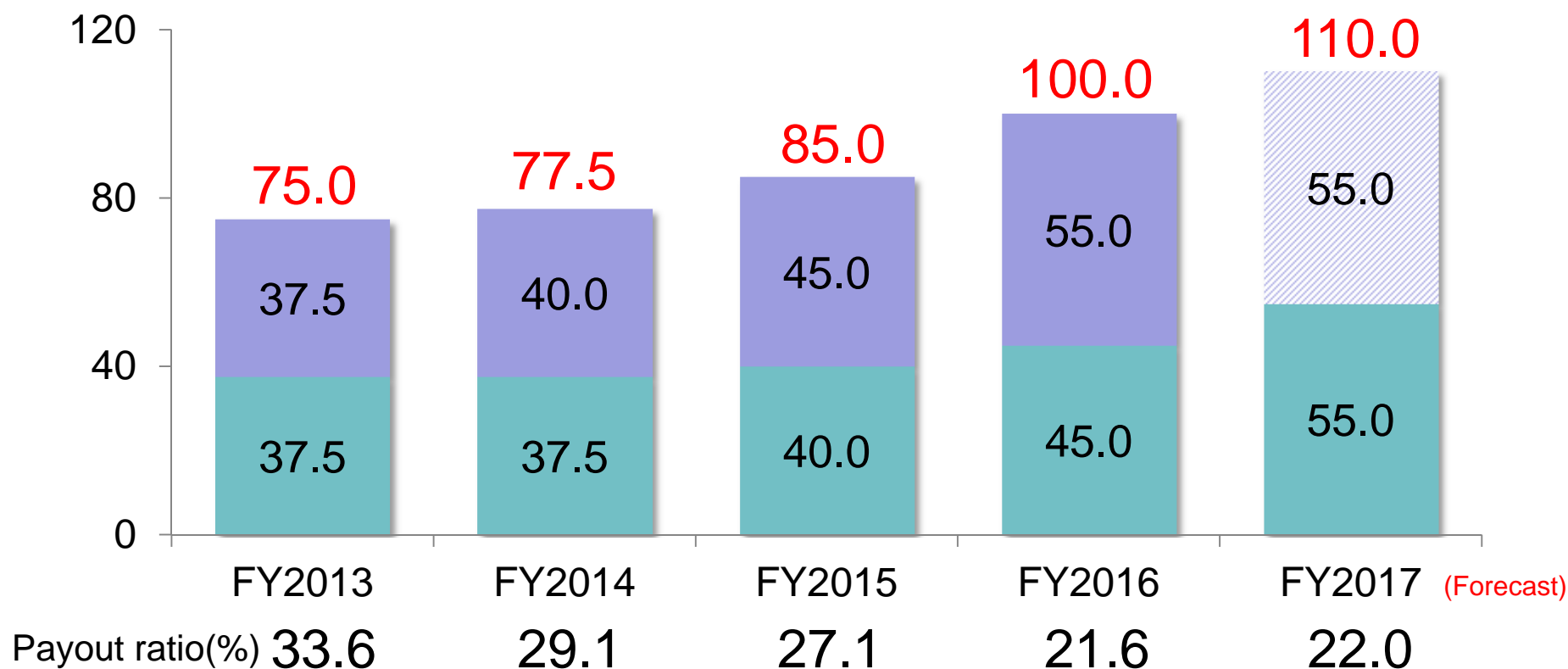
Total

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)



## Topics (1) Development of Elemental Technologies for New Lithium-Ion Batteries is in Sight

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Our technology enables to increase the thickness of the electrodes more than a couple of times and reduce the risk of problems caused by the parts.

We prepare to commercialize a more compact and safer new lithium-ion battery system.

On Sept. 20: Opening ceremony of prototype manufacturing plant in the Kinuura factory of energy business promotion project



Prototype manufacturing plant in the Kinuura factory

Steadily heading for commercialization in 2020

## Topics (2) Strengthened Global Supply Systems of PPG (Raw Materials for Polyurethane Foams) Business

Signing of a joint venture agreement with PTT Global Chemical Public Company Limited (Thailand), and Toyota Tsusho Corporation to manufacture and sell polyols.



New joint venture: GC Polyols Co., Ltd.

Head office: Bangkok  
Factory: Rayong

Production capacity:

PPG : 130,000 t/y

PPG premix: 20,000 t/y

Scheduled to start operating in 2020

**Aiming for strength of  
global supply systems**



## Topics (3) Polyurethane Beads (TUBs) Adopted for the First Time Ever to an American EV

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THERPUS®'s polyurethane beads for skin material in automotive interiors has been adopted for the first time ever to an Electric Vehicle (EV) produced by a Californian car manufacturer (USA).



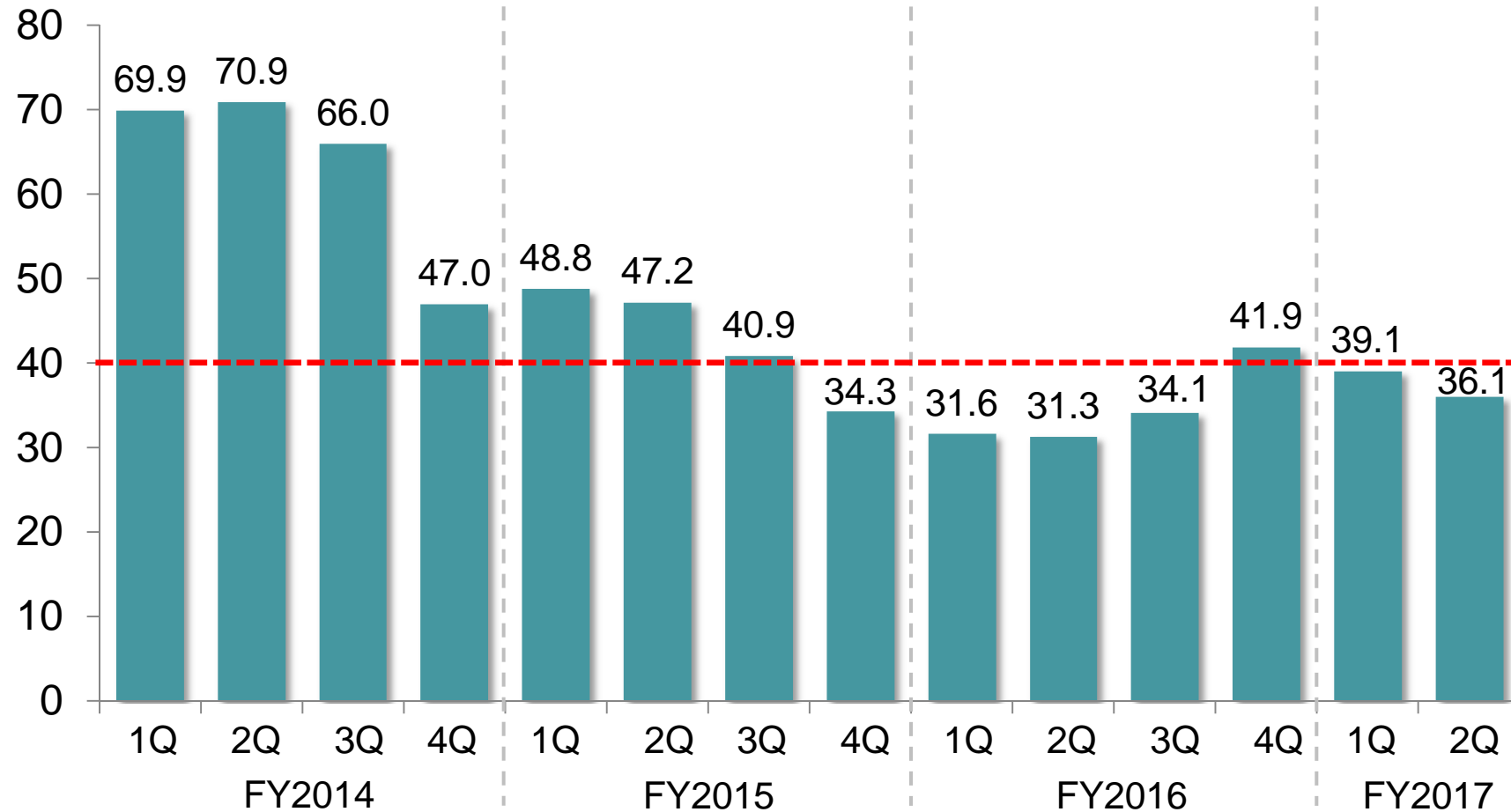
“THERPUS®”  
adopted for the first time ever  
to an American electrical vehicle

Contributing to car's lightness (by making thinner skin) and  
energy saving (by molding at the lower temperature)

# Reference

# Transition of Price of Naphtha produced in Japan

Naphtha price  
(Thousands of yen/kl)



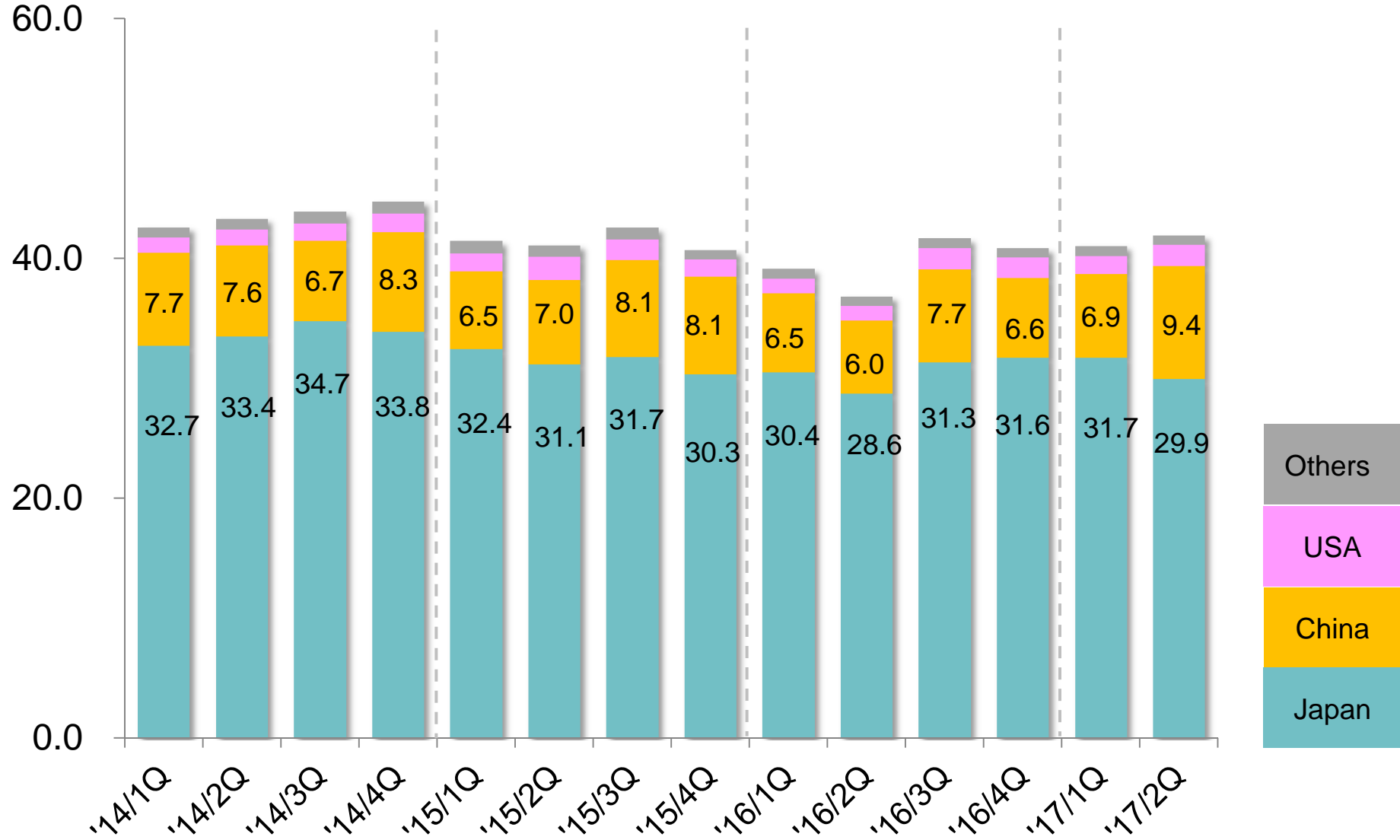
(Reference: Japanese newspapers, etc)

(Ref.-1)

# Consolidated Net Sales Trend by Geographic Segments

Internal sales among Sanyo Chemical Group are not eliminated.

(Billions of yen)

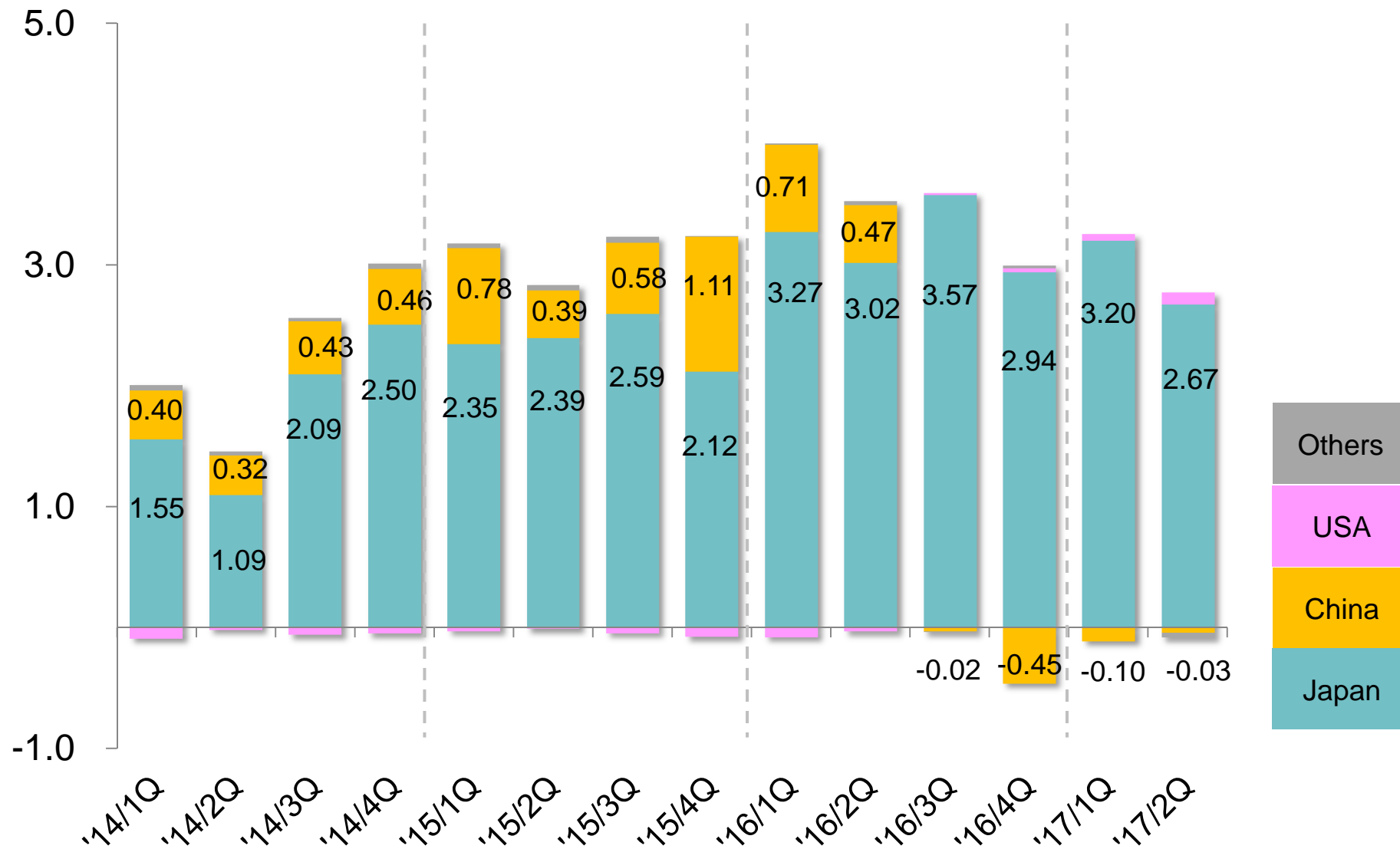


(Ref.-2)

# Consolidated Operating Profit Trend by Geographic Segments

Internal sales among Sanyo Chemical Group are not eliminated.

(Billions of yen)



(Ref.-3)



## 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 JXTG Nippon Oil &Energy	50% 50%	Manufacture of raw materials for synthetic rubbers
Sunrise Chemical LLC [USA]	SRC	SANAM JX Nippon Chemical Texas	50% 50%	Manufacture of raw materials for synthetic rubbers
Nagoya Sanyo Warehouse Co., Ltd.	—	Sanyo Chemical	100%	Warehousing
Shiohama Chemicals Warehouse Co., Ltd.	—	Sanyo Chemical JXTG Nippon Oil &Energy	50% 50%	Warehousing
Sanliving Ltd.	SL	Sanyo Chemical	100%	Real estate, insurance and agency