

"Performance" Through Chemistry

Material for Financial Results Presentation For the Six Months Ended September 30, 2019

Sanyo Chemical Industries, Ltd.
President & CEO
Takao Ando



Securities code: 4471

<Notice>

Yen amounts described in this presentation material are rounded down to the nearest unit.
Other figures such as ratios are rounded off.

<Disclaimer>

This presentation material contains forward-looking statements including projections based on the assumptions, forecasts and plans as of November 1, 2019.
Actual results may differ significantly from such projections due to risks and uncertainties relating to changes in the global economy, state of competition, foreign currency exchange rates, trends in raw material costs and other factors.

<Inquiries about IR>

Media and Investor Relation Dept.
Corporate Communications Division
Sanyo Chemical Industries, Ltd.

E-mail: pr-group@sanyo-chemical.group

Corporate Data



Date of Establishment: November 1, 1949

Head Office: Higashiyama-ku, Kyoto-shi

Share Capital: ¥13,051 million

Domestic Branches Offices and Sales & Marketing Offices:

Tokyo, Osaka, Nagoya, Hiroshima, Fukuoka

Domestic Factories:

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

Number of Employees (Consolidated Basis):

2,076 (as of September 30, 2019)

Line of Business:

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

Sanyo Chemical Group



Sanyo Chemical Group

- Consolidated Subsidiaries: 13 Companies
- Entities Accounted for Using the Equity Method: 5 Companies

Domestic (5 Companies)

- SDP Global Co., Ltd.
- SAN NOPCO LIMITED
- San Chemical Co., Ltd.
- San-Apro Ltd.
- San-Petrochemicals Co., Ltd.

Overseas (9 Companies)



- Sanyo Kasei (Nantong) Co., Ltd.
- San-Dia Polymers (Nantong) Co., Ltd.
- Sanyo Chemical (Shanghai) Trading Co., Ltd.



- Sanyo Kasei (Thailand) Ltd.



- SANAM Corporation
- Sanyo Chemical & Resins, LLC
- Sanyo Chemical Texas Industries, LLC
- Sunrise Chemical LLC



- SDP GLOBAL (MALAYSIA) SDN. BHD.

Logistics and Service Subsidiaries (4 Companies)

- Sanyo Transport Co., Ltd.
- Nagoya Sanyo Warehouse Co., Ltd.
- Shiohama Chemicals Warehouse Co., Ltd.
- Sanliving Ltd.

Other Subsidiaries and Affiliates:

Sanyo Kasei Korea, Ltd.	Sanyo Chemical Manufacturing Korea, Ltd.	APB Corporation
SANYO KASEI (TAIWAN) LTD.	SAN NOPCO (SHANGHAI) TRADING Co., Ltd.	
SAN NOPCO (KOREA) LIMITED	DaXiang International Trading (SHANGHAI) Co., Ltd.	

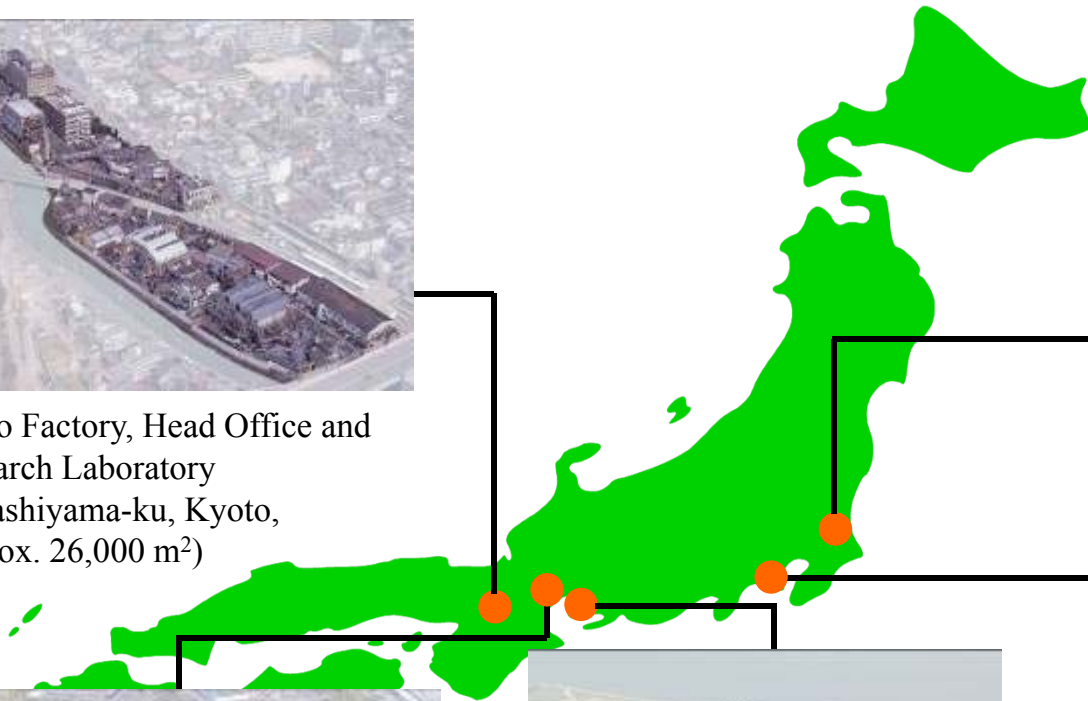
Domestic Production Bases



Kyoto Factory, Head Office and Research Laboratory (Higashiyama-ku, Kyoto, Approx. 26,000 m²)



Kashima Factory (Kamisu-shi, Ibaraki, Approx. 130,000 m²)



Nagoya Factory (Tokai-shi, Aichi, Approx. 100,000 m²)




Kinuura Factory (Handa-shi, Aichi, Approx. 140,000 m²)



San Chemical Co., Ltd., Kawasaki Factory (Kawasaki-shi, Kanagawa, Approx. 11,000 m²)

Overseas Production Bases



 Sanyo Kasei (Nantong) Co., Ltd.



 Sanyo Chemical & Resins, LLC




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



 Sanyo Chemical Manufacturing Korea, Ltd.



 Sanyo Kasei (Thailand) Ltd.




 SDP GLOBAL (MALAYSIA) SDN. BHD.



 Sanyo Chemical Texas Industries, LLC

Overseas Sales Offices



 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.



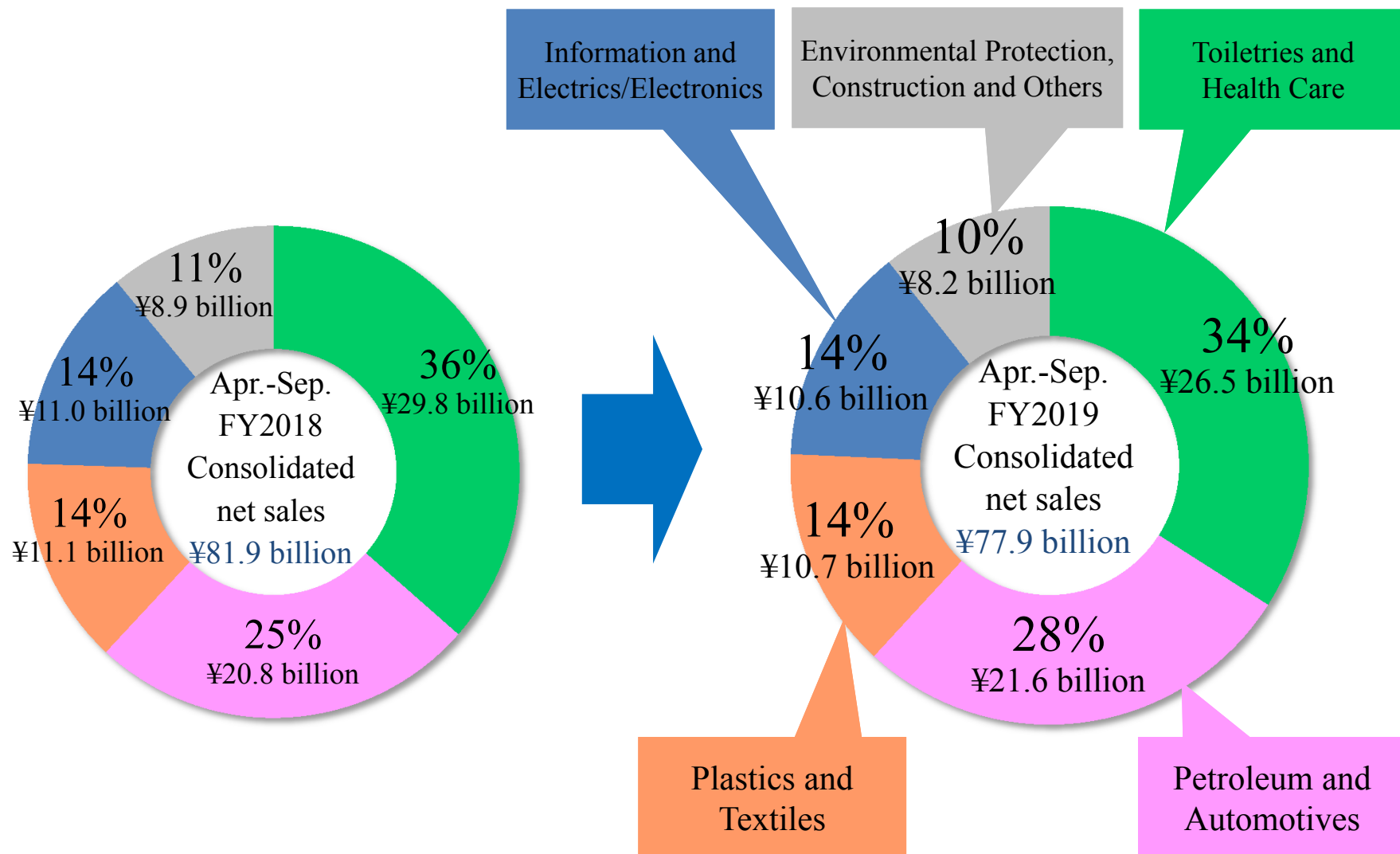
 SANAM Corporation

Principal Products by Industrial Field (Segment)



Broad category	Middle category	Principal products
Toiletries and Health Care	Toiletries	Surfactants for Detergents, Surfactants for Hair Care Products, Agents for Paper-making
	Health Care	Superabsorbent Polymers (SAP), Raw Materials for Pharmaceuticals, Germicides/Disinfectants, Surgical Hemostatic Agent, Clinical Diagnostic Reagents for Enzyme Immunoassay (EIA), Potting Resins for Artificial Kidneys
Petroleum and Automotives		Thermoplastic Polyurethane Beads (TUB) for the Interior Parts of Automobiles, Raw Materials for Polyurethane Foams (PPG), Lubricating Oil Additives, Additives for Fuel Oil, Water-Soluble Cutting Oil, 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, Raw Materials for Polyurethane Elastomers, Chemical Boards for Models
	Textiles	Chemicals for Textile Manufacturing, Chemicals for Carbon Fibers, Chemicals for Fiberglass, Polyurethane Resins for Artificial and Synthetic Leather
Information and Electrics/ Electronics	Information	Polyester Beads (PEB) Used as a Core Component of Polymerization Toners, Toner Binder
	Electrics/ Electronics	Electrolytes for Aluminum Electrolytic Capacitors, Electrolytes for Electric Double-Layer Capacitors, Adhesive for Electronic Parts, Chemicals 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 Chemicals, Reactive Hot-Melt Adhesives, Raw materials for Building Sealants, Cement Chemicals

Consolidated Net Sales by Segment



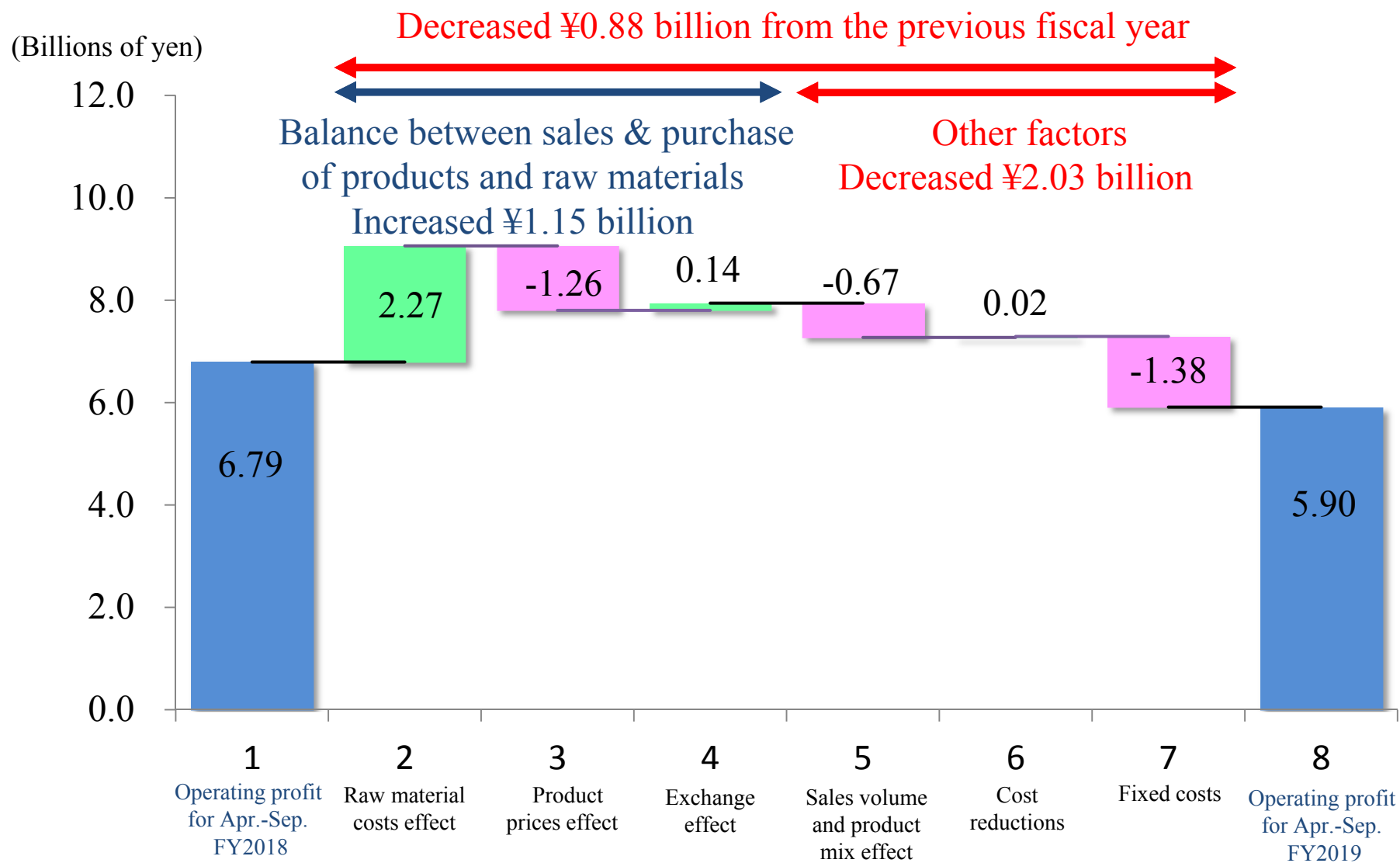
Earnings for Apr.-Sep. FY2019



(Billions of yen)

Consolidated	Apr.-Sep.		Year-on-Year Change	
	FY2018	FY2019	Amount	Ratio (%)
Net sales	81.95	77.94	(4.00)	(5)
Operating profit	6.79	5.90	(0.88)	(13)
Ordinary profit	8.57	5.89	(2.68)	(31)
Profit attributable to owners of parent	5.94	3.79	(2.15)	(36)
Comprehensive income	8.59	1.75	(6.84)	(80)

Year-on-Year Change in Consolidated Operating Profit by Factor



Year-on-Year Change in Consolidated Profit by Factor

(Billions of yen)

	Apr.-Sep.		Change amount
	FY2018	FY2019	
Operating profit	6.79	5.90	(0.88)
Share of profit (loss) of entities accounted for using equity method	0.86	0.10	(0.75)
Gain (loss) on foreign exchange	0.45	(0.53)	(0.98)
Other non-operating income (loss)	0.46	0.41	(0.05)
Ordinary profit	8.57	5.89	(2.68)
Gain (loss) on sales of non-current assets, loss on retirement of non-current assets	(0.38)	(0.49)	(0.11)
Other extraordinary income (loss)	0.04	0.00	(0.04)
Profit before income taxes	8.24	5.40	(2.84)
Income taxes	(2.01)	(1.56)	0.45
Profit attributable to non-controlling interests	0.28	0.05	(0.23)
Profit attributable to owners of parent	5.94	3.79	(2.15)

Consolidated Balance Sheet



(Billions of yen)

	March 31, 2019	September 30, 2019	Change amount	Main factors for changes
Current assets	95.0	86.7	(8.3)	Cash and deposits: (0.3), Notes and accounts receivable - trade, Electronically recorded monetary claims - operating: (7.0), Inventories: (0.7)
Non-current assets	98.5	96.2	(2.2)	Property, plant and equipment: (1.4)
Total assets	193.6	183.0	(10.6)	
Current liabilities	52.5	41.8	(10.6)	Accounts payable - trade, Electronically recorded obligations - operating: (5.6), Short-term borrowings: (0.7)
Non-current liabilities	8.4	7.8	(0.6)	Long-term borrowings: (0.7)
Total liabilities	61.0	49.7	(11.2)	
Shareholders' equity	117.8	120.1	2.3	Profit: 3.7, Cash dividends paid: (1.4)
Other comprehensive income	11.5	9.7	(1.8)	Foreign currency translation adjustment: (0.9)
Non-controlling interests	3.2	3.3	0.1	
Total net assets	132.6	133.2	0.6	
Total liabilities and net assets	193.6	183.0	(10.6)	

Consolidated Statement of Cash Flows



(Billions of yen)

	Apr.-Sep.		Change amount	Special notes
	FY2018	FY2019		
Cash flows from operating activities	6.4	8.1	1.6	
Profit before income taxes	8.2	5.4	(2.8)	
Depreciation	4.3	4.4	0.1	
Share of loss (profit) of entities accounted for using equity method	(0.8)	(0.1)	0.7	
(Increase) decrease in operating capital	(3.9)	1.6	5.6	
Income taxes	(1.4)	(3.1)	(1.7)	
Other, net	0.2	(0.1)	(0.3)	
Cash flows from investing activities	(7.2)	(5.4)	1.7	Purchase of non-current assets 1H FY2018: (6.8), 1H FY2019: (4.5)
Free cash flows	(0.7)	2.6	3.4	
Cash flows from financing activities	(0.6)	(2.7)	(2.0)	Loans and Repayment 1H FY2018: 0.6, 1H FY2019: (1.6)
Effect of exchange rate change on cash and cash equivalents	0.0	(0.2)	(0.2)	
Net increase (decrease) in cash and cash equivalents	(1.4)	(0.3)	1.0	
Cash and cash equivalents at beginning of period	17.3	19.1	1.7	
Cash and cash equivalents at end of period	15.9	18.8	2.8	

Revision of Forecasts for the Consolidated Earnings (Announced on September 26)



Sep. 26, 2019 Based on the latest earnings trends, we have made the following revisions to our results forecasts.

<Assumptions for below forecasts>

Price of naphtha produced in Japan: 40.5 thousand yen/kl, Exchange rate: 108 yen/U.S. dollar

(Billions of yen)

First half	First half of FY2019			
	Revised forecast	Initial forecast	Change amount	Rate of change (%)
Net sales	78.0	83.0	(5.0)	(6.0)
Operating profit	5.5	7.1	(1.6)	(22.5)
Ordinary profit	5.5	7.9	(2.4)	(30.4)
Profit attributable to owners of parent	3.5	5.2	(1.7)	(32.7)

Full-year	Full year of FY2019			
	Revised forecast	Initial forecast	Change amount	Rate of change (%)
Net sales	160.0	170.0	(10.0)	(5.9)
Operating profit	12.5	14.5	(2.0)	(13.8)
Ordinary profit	13.0	16.0	(3.0)	(18.8)
Profit attributable to owners of parent	8.5	10.5	(2.0)	(19.0)

Earnings Forecast for FY2019 and Progress in Apr.-Sep. FY2019

<Assumptions for below forecasts>

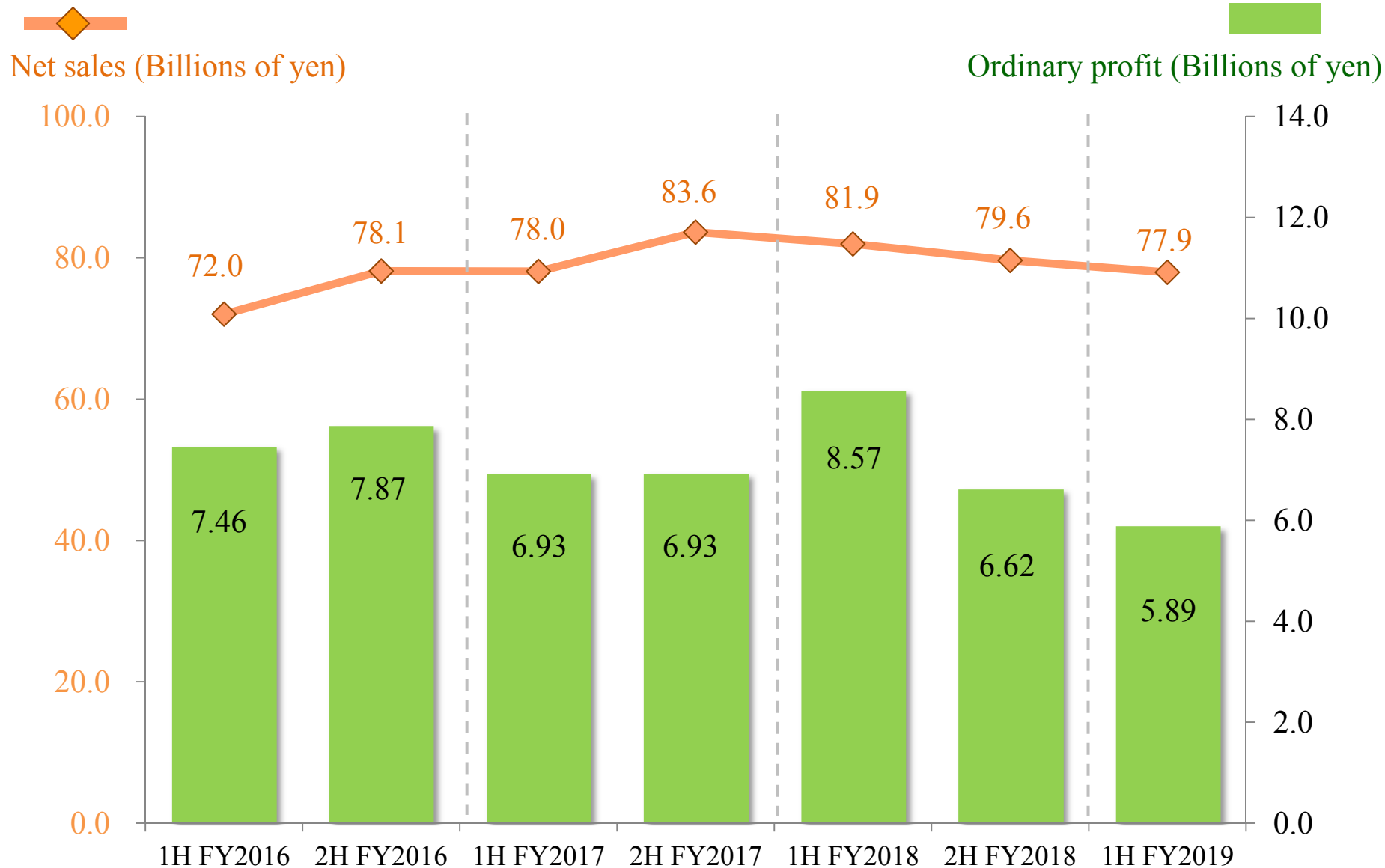
Price of naphtha produced in Japan: 40.5 thousand yen/kl, Exchange rate: 108 yen/U.S. dollar

(Billions of yen)

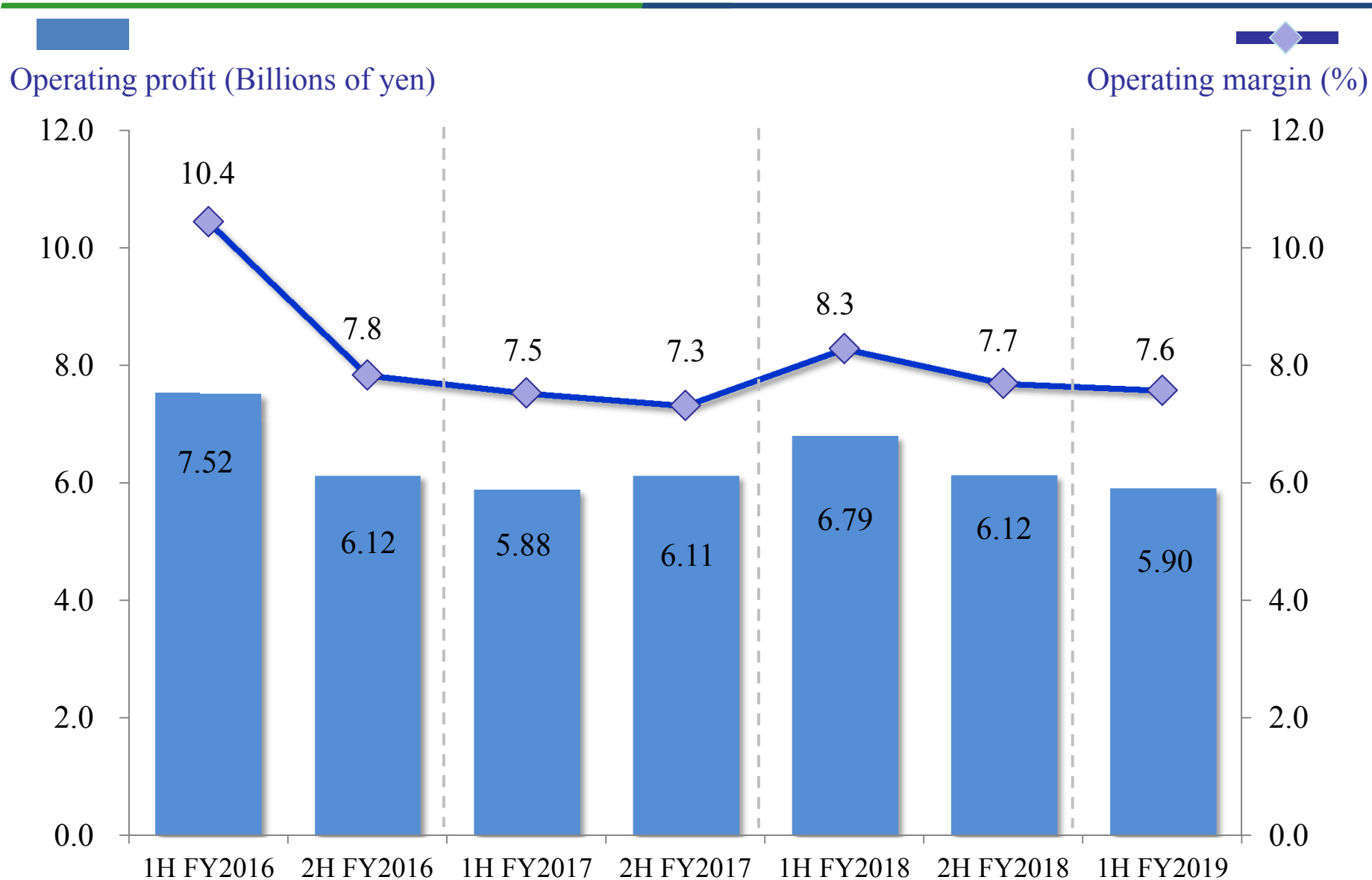
Consolidated	Full year of FY2019	Apr.-Sep. FY2019		Full year of FY2018
	Forecast*	Result	Progress (%)	Result
Net sales	160.00	77.94	48.7	161.50
Operating profit	12.50	5.90	47.3	12.91
Ordinary profit	13.00	5.89	45.3	15.20
Profit attributable to owners of parent	8.50	3.79	44.6	5.34

*Forecasts announced on September 26, 2019

Trends in Consolidated Earnings (Half Period)



Trends in Consolidated Operating Profit and Operating Margin (Half Period)



Earnings by Segment for Apr.-Sep. FY2019

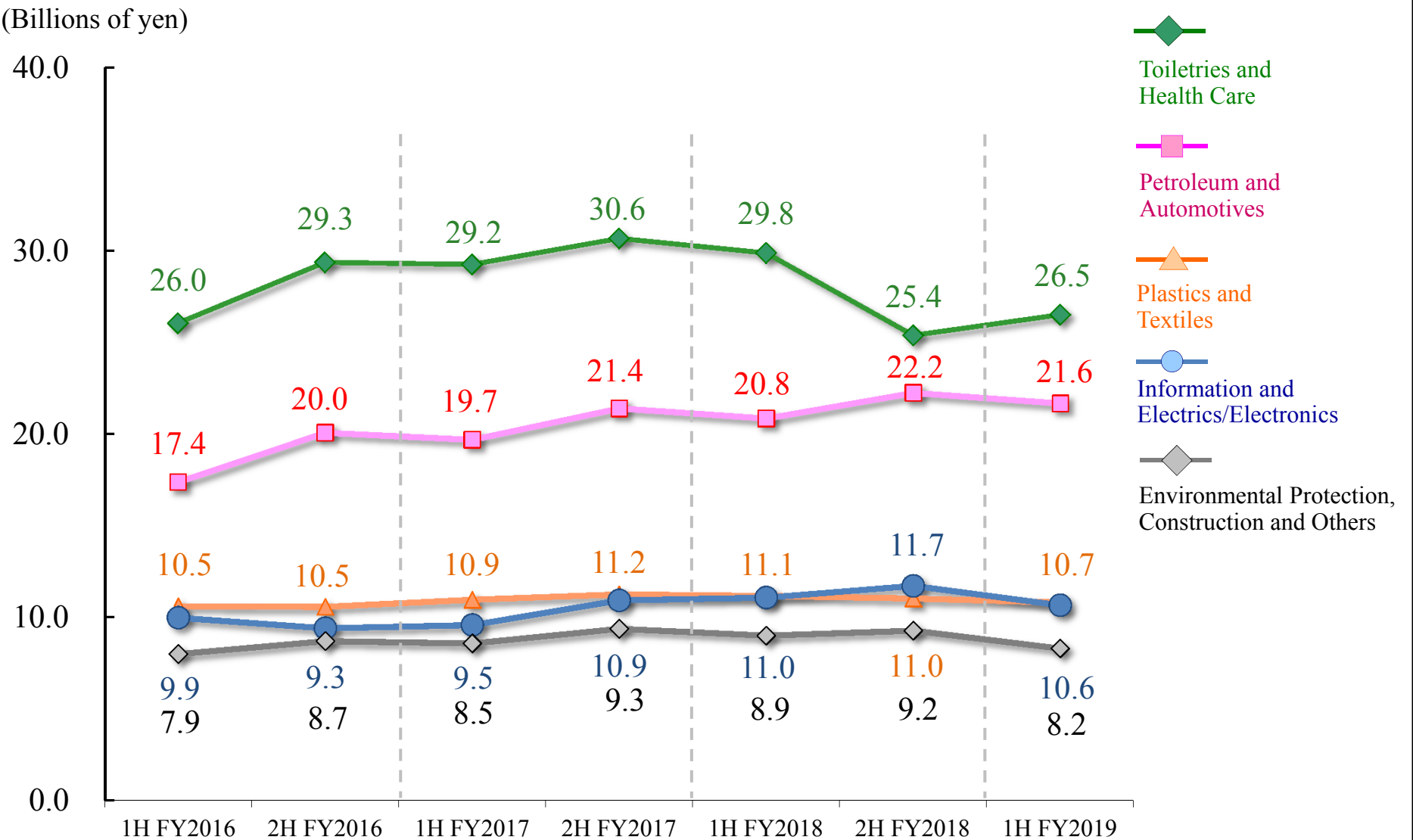


(Billions of yen)

Segment	Net sales			Operating profit		
	Apr.-Sep. FY2018	Apr.-Sep. FY2019	Change amount	Apr.-Sep. FY2018	Apr.-Sep. FY2019	Change amount
Toiletries and Health Care	29.88	26.52	(3.36)	1.25	0.75	(0.50)
Toiletries	7.12	6.80	(0.31)			
Health Care	22.76	19.71	(3.04)			
Petroleum and Automotives	20.85	21.67	0.81	1.28	1.78	0.49
Plastics and Textiles	11.15	10.79	(0.35)	1.78	1.44	(0.34)
Plastics	7.72	7.82	0.09			
Textiles	3.43	2.97	(0.45)			
Information and Electrics/ Electronics	11.06	10.64	(0.41)	1.94	1.45	(0.49)
Information	7.38	7.11	(0.26)			
Electrics/ Electronics	3.67	3.52	(0.14)			
Environmental Protection, Construction and Others	8.99	8.29	(0.69)	0.51	0.47	(0.03)
Total	81.95	77.94	(4.00)	6.79	5.90	(0.88)

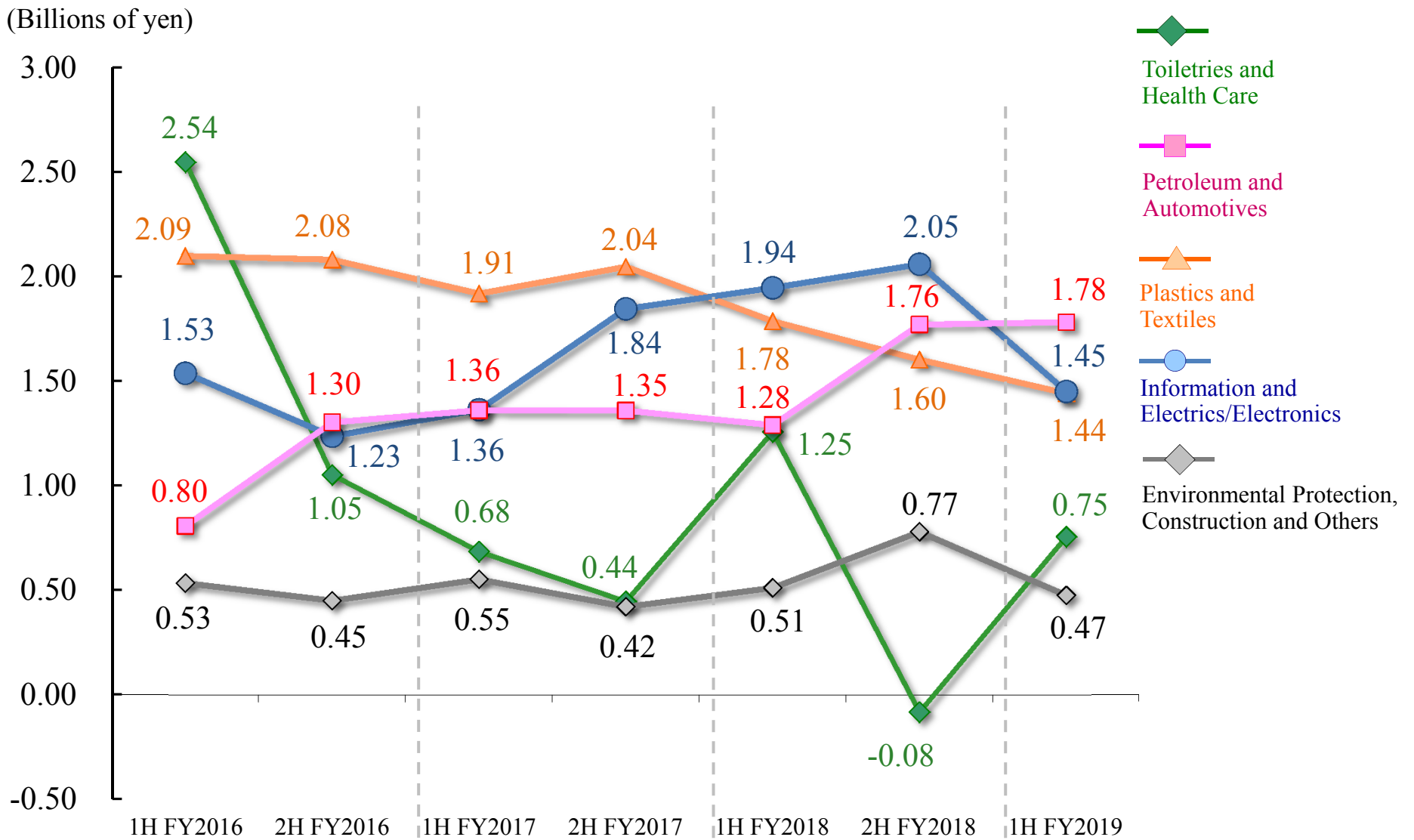
Trends in Consolidated Net Sales by Segment (Half Period)

(Billions of yen)



Trends in Consolidated Operating Profit by Segment (Half Period)

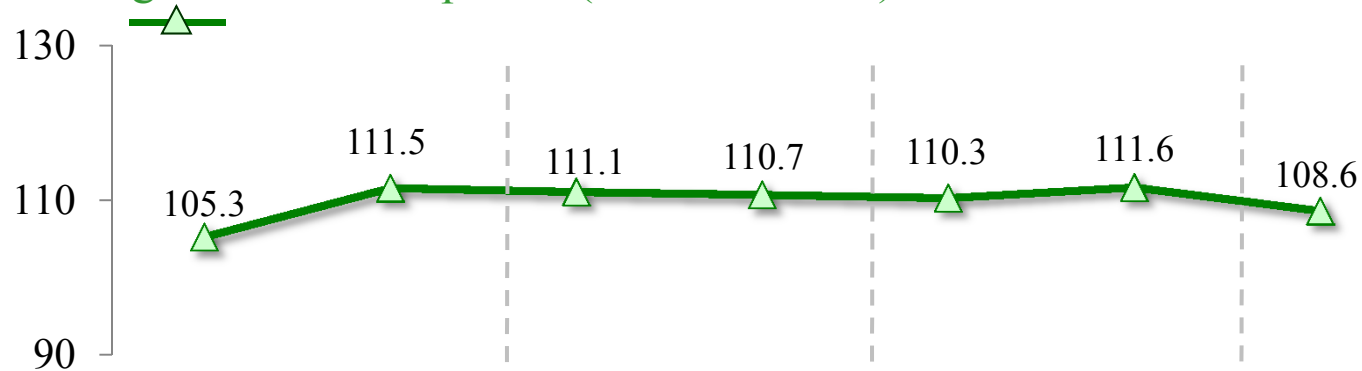
(Billions of yen)



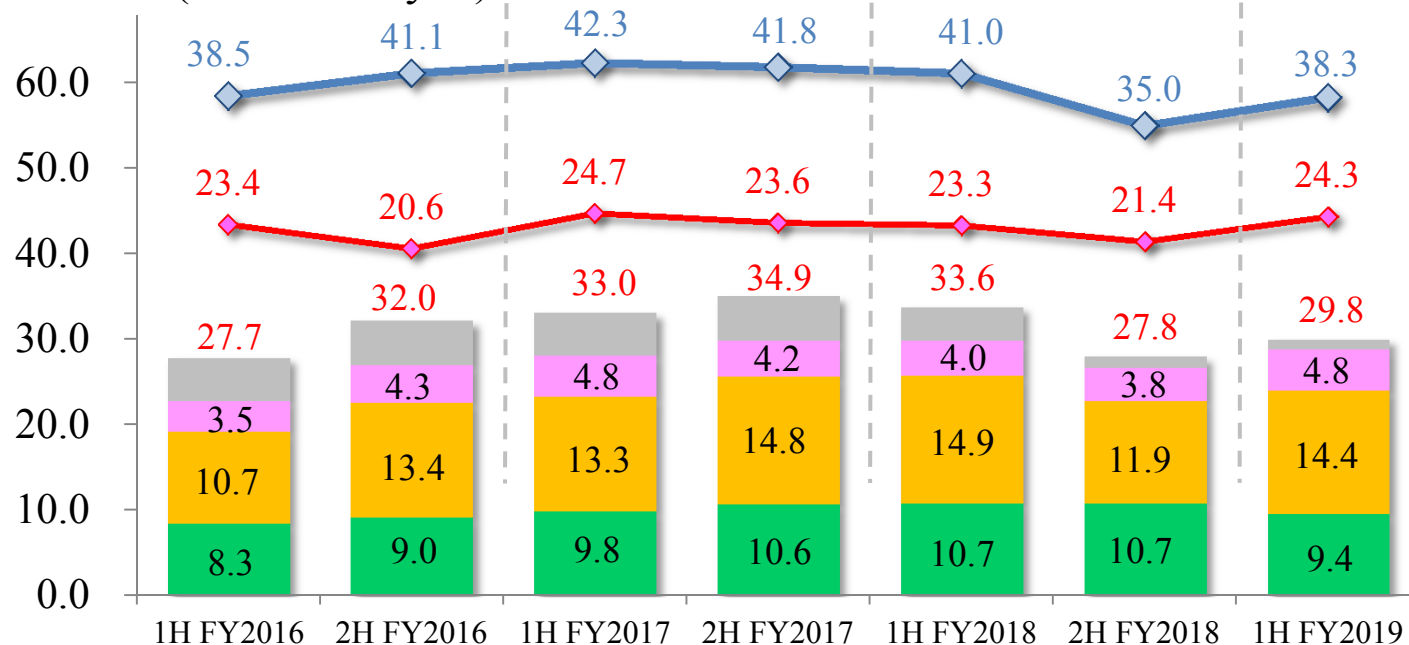
Trends in Overseas Net Sales



Exchange rate for each period (Yen/U.S. dollar)

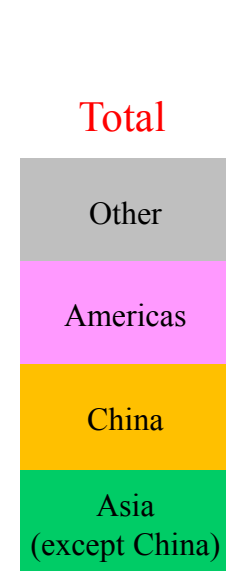


Net sales (Billions of yen)



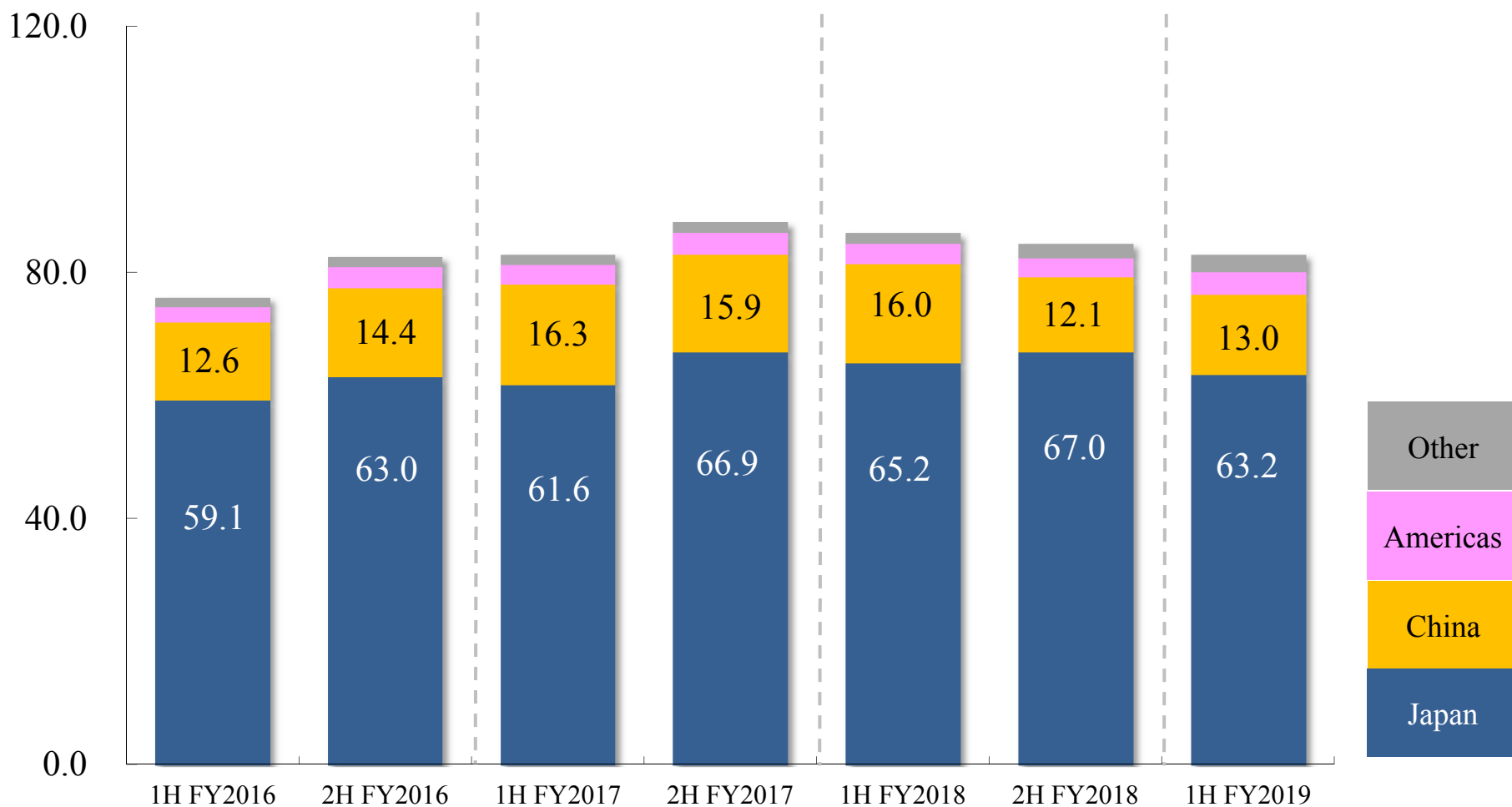
Overseas net sales ratio (%)

Overseas production volume ratio (%)



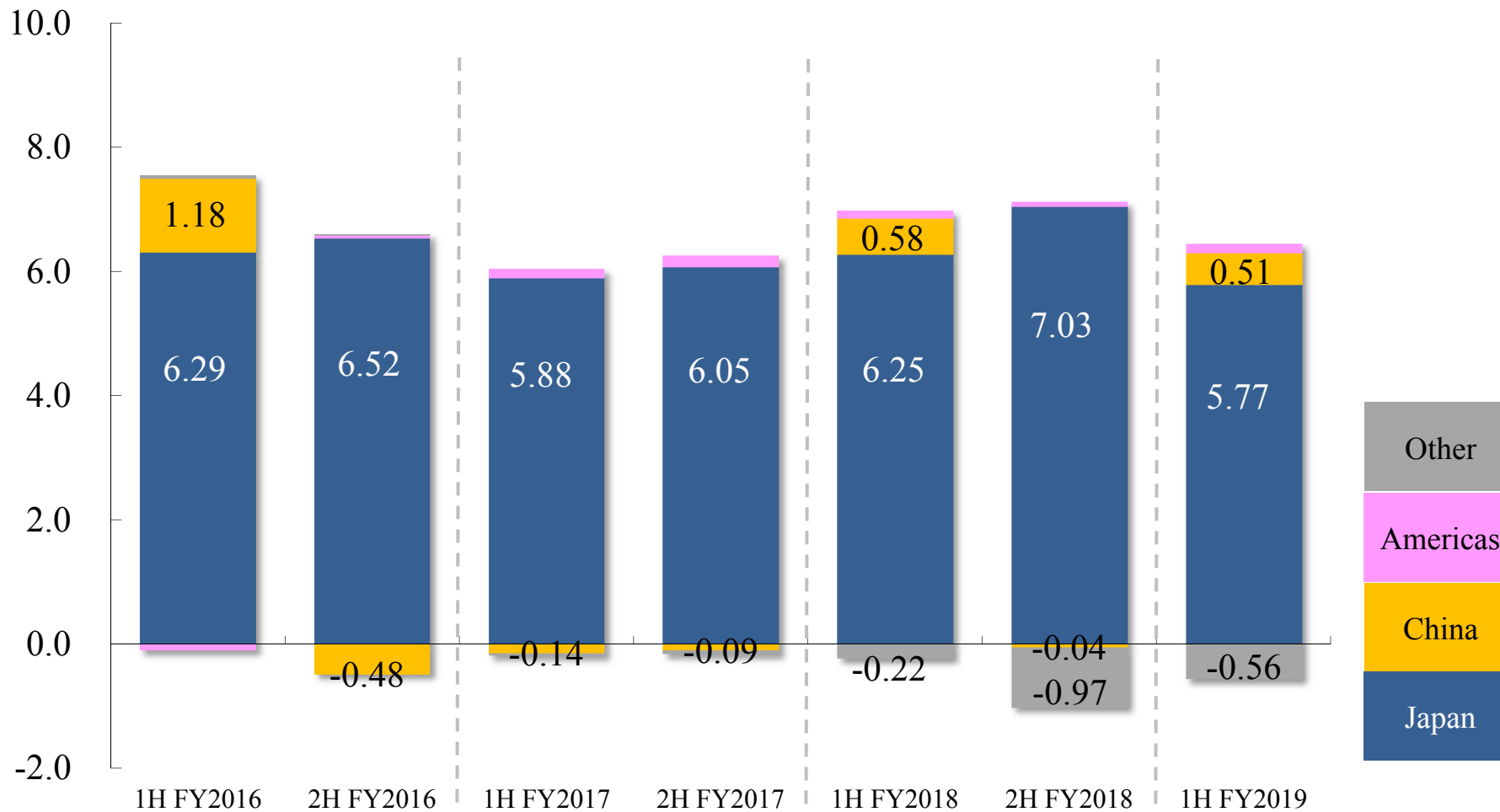
Trends in Consolidated Net Sales by Geographic Segment (Simple Addition)

(Billions of yen)

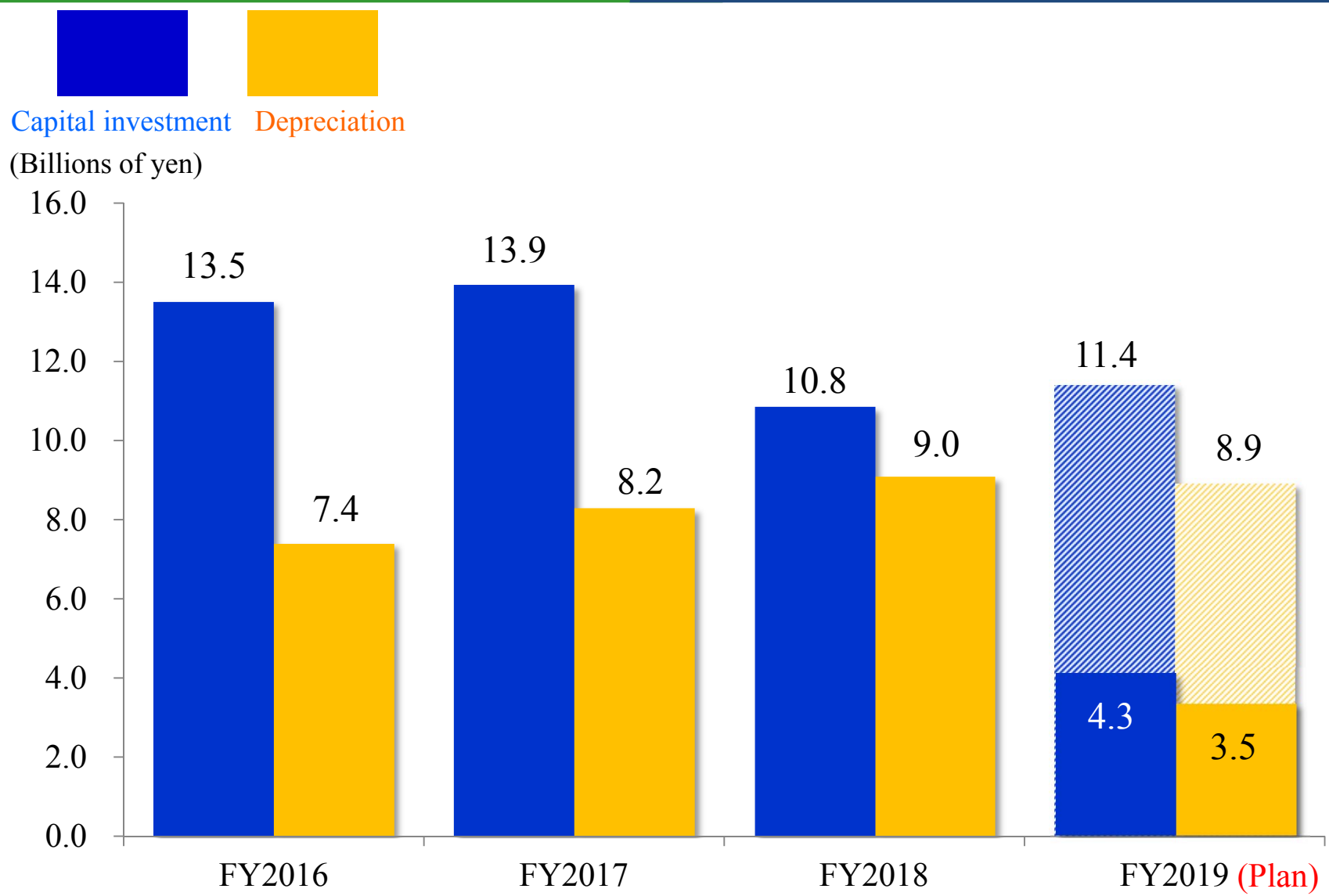


Trends in Consolidated Operating Profit by Geographic Segment (Simple Addition)

(Billions of yen)



Capital Investment and Depreciation (Consolidated)



Trends in Dividend per Share and Dividend Payout Ratio (Consolidated)



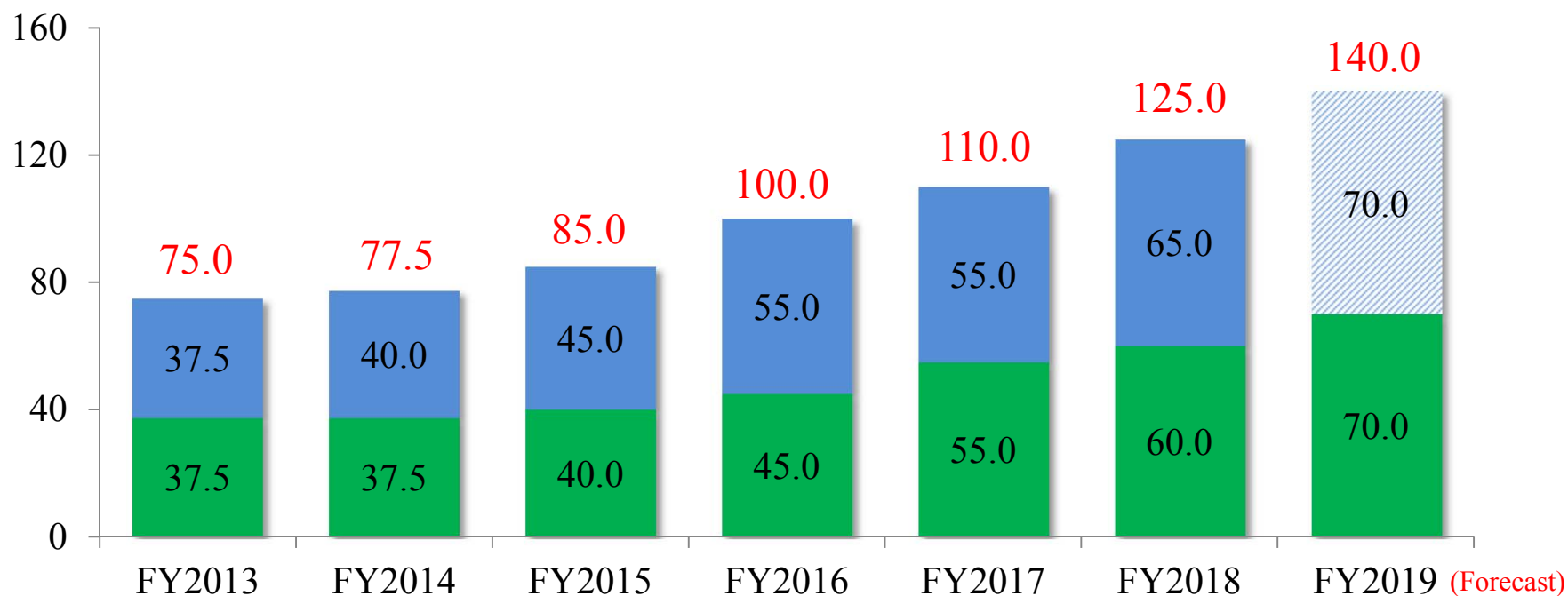
Total



Sanyo Chemical conducted a reverse stock split of common stock at a ratio of one share for every five shares on October 1, 2016.

The figures below for dividends per share are converted after Sanyo Chemical conducted the reverse stock split.

Dividend (Yen/Share)



Dividend
payout ratio
(%)

FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019 (Forecast)
33.6	29.1	27.1	21.6	26.2	51.5	36.3

Execution of a Basic Agreement Concerning the Consideration of Business Integration



Nippon Shokubai Co., Ltd.
**President and Representative
Director**
Yujiro Goto



**Sanyo Chemical Industries,
Ltd.**
President & CEO
Takao Ando

Significance of the Business Integration

**Group Mission/
Company
Motto**

**Medium-Term
Business Plan**

Business

Basic chemicals



High-performance
functional chemicals



Creation of
New Business

Nippon Shokubai

TechnoAmenity

Providing affluence and comfort to people and society, with our unique technology

Reborn Nippon Shokubai 2020

NEXT Innovative chemical company that provides new value for people's lives

E.g. acrylic acid, ethylene oxide and superabsorbent polymers (SAP)

E.g. electronic and information materials

E.g. high-performance electrolyte for lithium batteries, cosmetics materials

The Companies' philosophies share close affinities.

The Companies' strengths and business challenges are complementary.

Sanyo Chemical

Let us contribute to building a better society through our corporate activities

New Sanyo for 2027

We have grown to be a unique, global, and highly profitable company, in which all our employees take pride and find meaning in their work, and contribute to society

E.g. SAP, raw materials for polyurethane foams (PPG)



E.g. lubricating oil additives, permanent antistatic agents

E.g. new lithium-ion battery (LIB) system, cosmetics materials

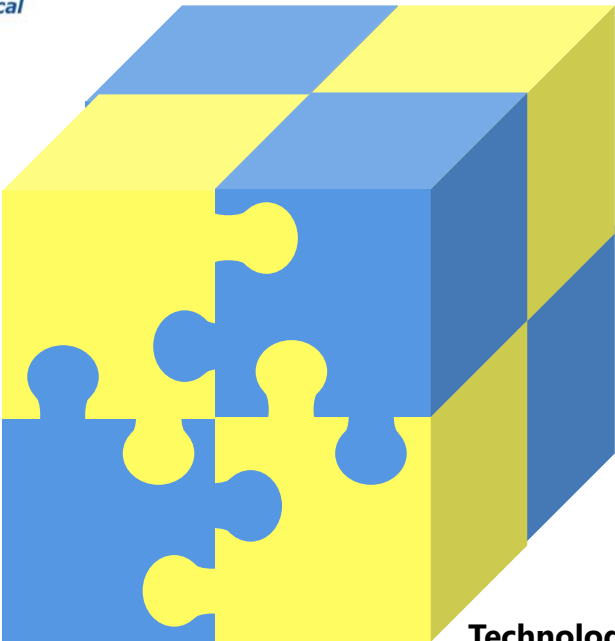
Concept for the Business Integration

We will work to create a sustainable society and solve social problems, thereby providing affluence and comfort to people and society, through the creation of products and services to meet people's wishes for "something more..."



Business

 Manufacturing of basic chemicals, as well as high-performance functional chemicals and environmental and catalyst products using these basic chemicals as raw materials
 ×
 Approximately 3,000 types of sophisticated performance chemicals



Producing synergetic effects by leveraging the Companies' strengths and corporate cultures



Philosophy/ value

 Providing affluence and comfort to people and society, with our unique technology
 ×
 Aiming to become a unique and global company that will contribute to society

Technology

 Catalyst, polymer and organic synthesis technology
 ×
 Surface activity control technology

Basic Strategies for Realizing Synergies

1

Strengthening of business base

- Achieve the effects of integration in terms of technology and cost through the integration of the Companies' management base

2

Strengthening of competitiveness and profitability through scale expansion

- Achieve further growth of existing businesses by pursuing cost cutting and the like, while harnessing demand for chemicals in emerging countries

3

Diversification of portfolio

- Realize diversification of businesses by combining the Companies' businesses
- Meanwhile, constantly examine such diversified businesses from the perspective of selection and concentration and cultivate multiple highly-profitable businesses with strengths

4

Acceleration of new business development

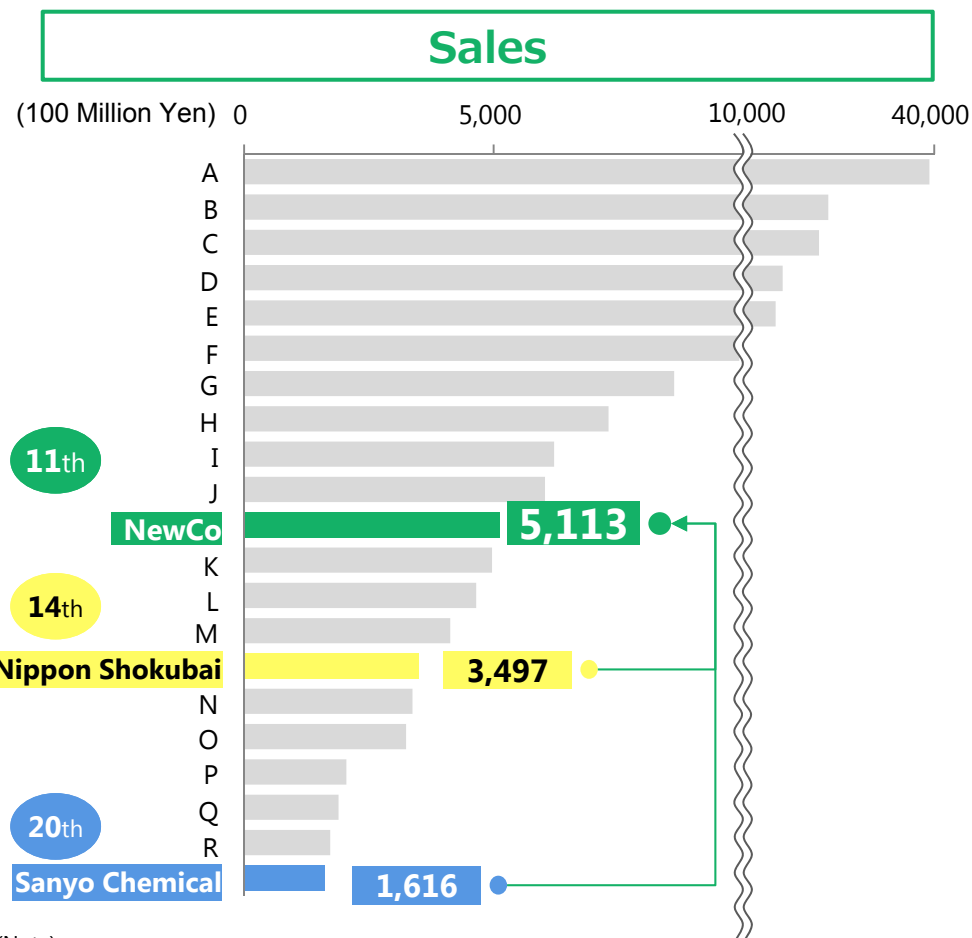
- Aim to contribute to profitability at an early stage by concentrating the two Companies' management resources in focus areas

Strengthening of Business Base

Positioning of NewCo: To become one of the leading functional chemical manufacturers in Japan

(100 Million Yen)

	Nippon Shokubai	Sanyo Chemical	Simple sum
Sales	3,497	1,616	5,113
Operating profit	261	129	390
Ordinary profit	331	152	483
Operating CF	312	146	458
Employees	4,276	2,078	6,354
R&D cost	129	56	185



- 1 Proactive investment of resources in growth businesses**
- 2 Achievement of quality improvement, cost reduction and other measures**

(Note)

- These rankings of top 20 chemicals manufacturers have been prepared based on the disclosure materials for the most recent fiscal years of the companies in the chemicals sector of the TSE 33 Sector Classification, after excluding companies whose non-chemicals products, such as energy, textiles, foods and resin finish products, constitute a large proportion of their products overall.
- For Nippon Shokubai and Sanyo Chemical, figures in the earnings releases for the fiscal year ended March 2019 are rounded to the nearest 10 million yen.

Acceleration of New Business Development

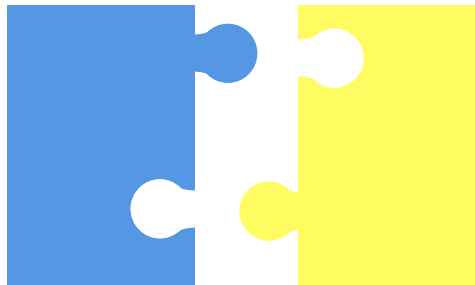
Concentrating the two Companies' management resources in focus areas

Examples of the Company's Initiatives in New Areas

New Energy e.g. Batteries



Developed and is preparing mass production of new lithium-ion battery

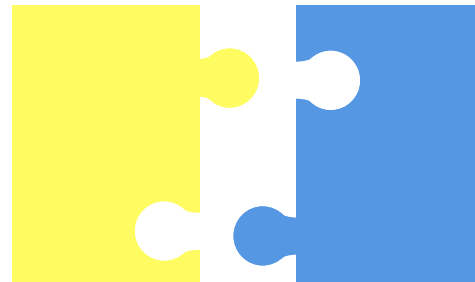


Introduce high-performance electrolyte for lithium batteries (IONEL®, LiFSI)

Cosmetics Materials



Develop materials using its products and technology
Collaboration with natural cosmetics material manufacturers

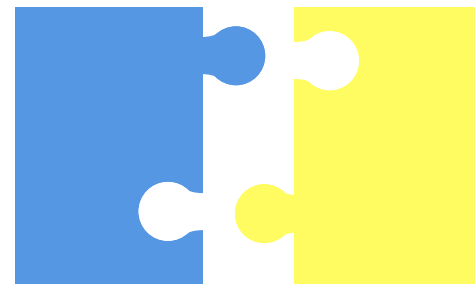


Develop cosmetics materials and consumer cosmetics

Life Science



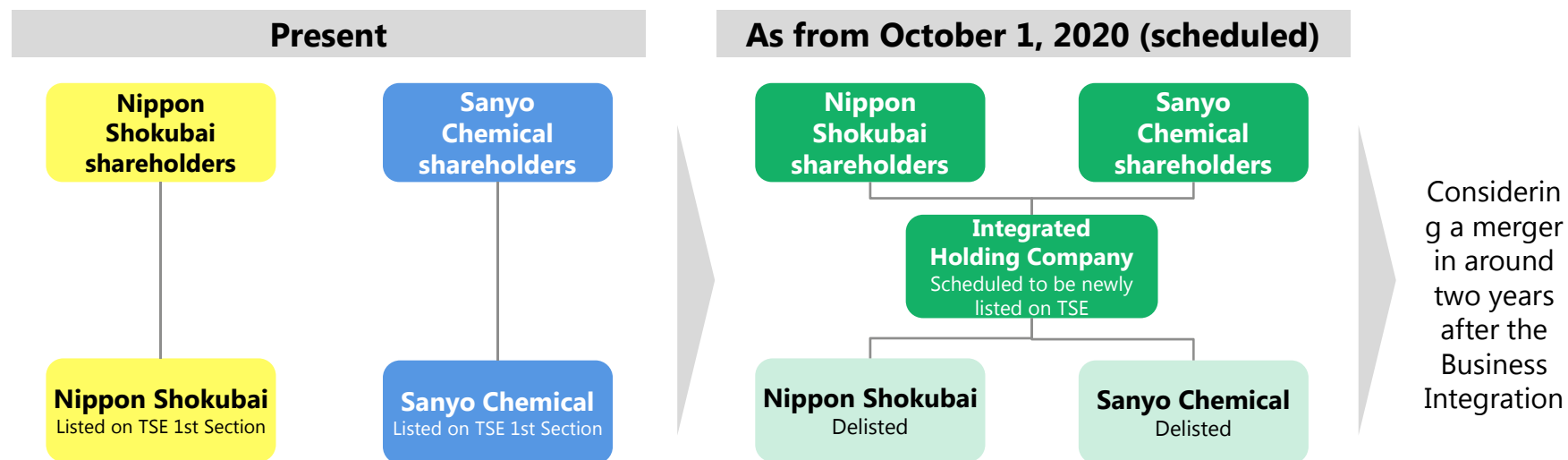
Develop silk-elastin and materials related to new pharmaceuticals (DDS)



Provide consistent drug-development support service in the areas of peptide medicine, DDS development and nucleic acid medicine

Summary of the Business Integration

The basic policy is to conduct a joint share transfer and establish an integrated holding company



Timeline (Scheduled)

Execution of the Basic Agreement	May 29, 2019 (today)
Execution of the Final Agreement	December 2019 (scheduled)
Annual meetings of shareholders of Nippon Shokubai and Sanyo Chemical	June 2020 (scheduled)
Effective date of the Share Transfer	October 1, 2020 (scheduled)

* The above timeline may be changed based on discussions between the Companies when necessary due to the progress status of procedures for the Share Exchange or other reasons.

Spirit of Equality

No unfair changes will be made

We will continue our spirit of
“KAERU (Committed to Change).”

- i) Promotion of diversity
- ii) Promotion of work style reforms (eliminating Waste, Impracticality and Inconsistency)
- iii) Promotion of globalization
- iv) Shift to high-value-added products

Regardless of which organization each company belonged to, everyone will work as one to create a new company

70th
Anniversary

Topics

Acquisition of CE Marking



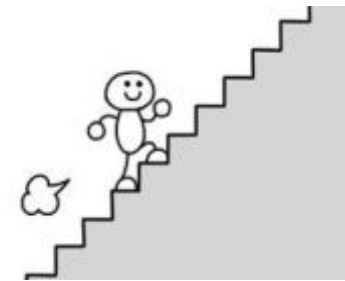
“Hydrofit®,” a medical device originating in Japan, has acquired CE marking in Europe



Press conference (left), certificate awarded by DEKRA (top right), certificate (bottom right)

<Coffret Project's Main Businesses>

- 1) Developing new cosmetics raw materials
- 2) Reconfirming the performance of existing cosmetics raw materials and proposing formulas to customers
- 3) Selling "Seki Sisters" brand cosmetics in China



Road Map

FY2018 to FY2019

FY2019 to FY2020

- Existing product and technology inventory of 7 items or more
- 3 new materials or more
- Member education
- Joint research with universities
- Announcements at trade shows and in technical journals
- Increasing name recognition in the industry

- Additional expansion of the materials lineup
- Overseas approach

- Proposing a Coffret brand series
- Appealing to and developing business for OEM and cosmetics companies

Coffret Project



<Beauty & Personal Care Dept.>

“A materials creator in pursuit of greater comfort, happiness, and beauty”

Sales & Marketing G

Sales T/ Planning T

Streamlining through selection and concentration and focusing on customer satisfaction

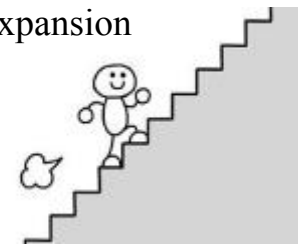
- 1) Market expansion for new high-value-added developed products
 - 2) Business expansion measures (business expansion for existing products and overseas development)
 - 3) Streamlining sales (employing new sales tools such as digital marketing, using strong distributors, etc.)
 - 4) Thorough customer satisfaction (low volume high unit price, formulary, technical service, etc.)
 - 5) Utilizing planning and marketing
- ★ The ability to move quickly combined with customer-first ideas

Research G

Planning & Development T/
Research T/ Meister T

High-quality materials development capabilities and customer-focused proposal capabilities

- 1) Effective design of developed products (bringing developed products to market)
 - 2) Technical support for customers and timely sales support
 - 3) Improving the formulary for raw materials undergoing sales expansion
 - 4) Acquiring knowledge of cosmetics raw materials
 - 5) Establishing safety indicators
- ★ Broad curiosity and creativity in a wide range of fields



Coffret Project



Cheriage

B E A U T Y



“Cheri” comes from cherry blossoms, which the sisters love, plus “age” (“Cheri” in French means “beloved,” and “age” means “age”)



Scheduled to be launched in spring 2020

A cosmetics brand that supports women living their best lives with glowing skin like the Seki sisters



All Polymer Batteries



Policy: Cooperate with APB Corporation (Professor Horie) in promoting the commercialization of all polymer batteries

We aim to capture users who recognize the value of all polymer batteries and to establish business using the Blue Ocean Strategy

Goal: Launch sales of prototypes in FY2021



Cooperate with APB Corporation and aim to produce results

We are evaluating various business models for the future

All Polymer Batteries



	All polymer battery		Conventional type LiB	Semi-solid-state battery*	All-solid-state battery*
Energy density		Estimated maximum: 560 Wh/L			
Output power (charge-discharge characteristics)		Energy density and output adjustments possible			
Durability		High durability possible			
Reliability during abnormal situations		The possibility of ignition or explosion is extremely low			
Costs		Significantly fewer required materials, types, and quantities			
Speed of market introduction and ease of creating large-scale batteries		We aim to begin mass producing large-scale batteries in 2021			

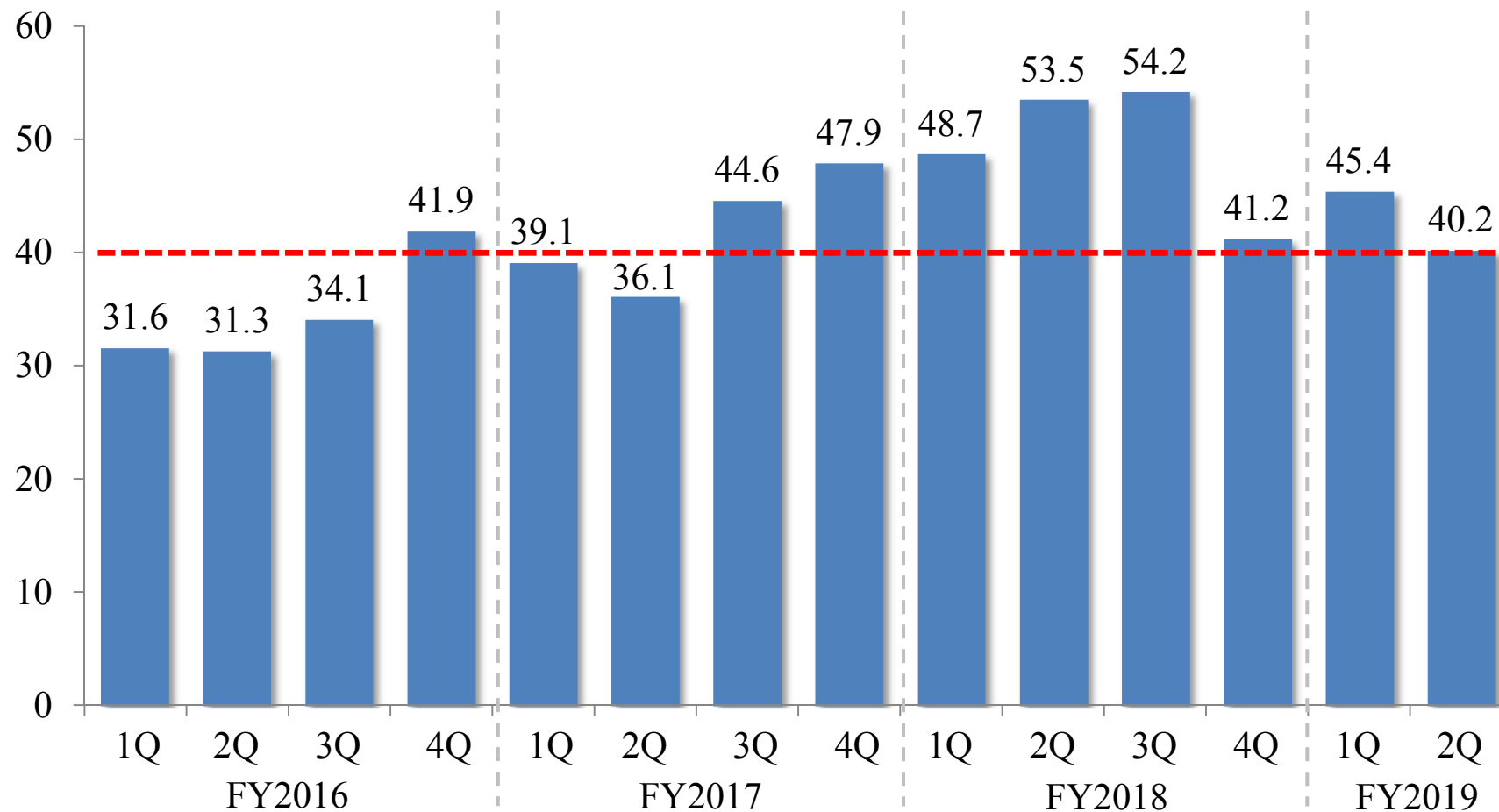
*Sanyo Chemical's estimates

Reference

Trends in Price of Naphtha Produced in Japan

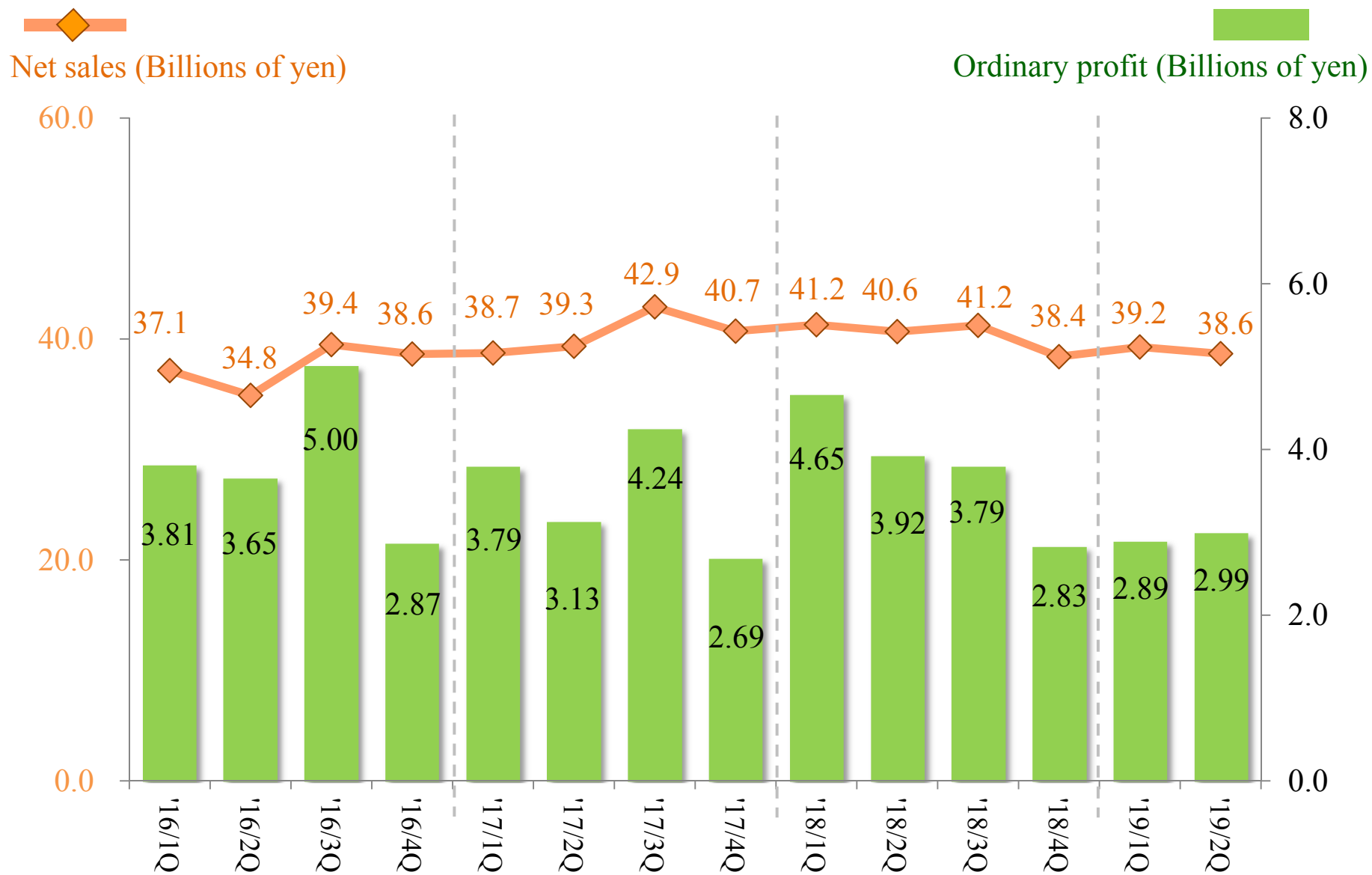


Price of Naphtha
(Thousands of yen/kl)

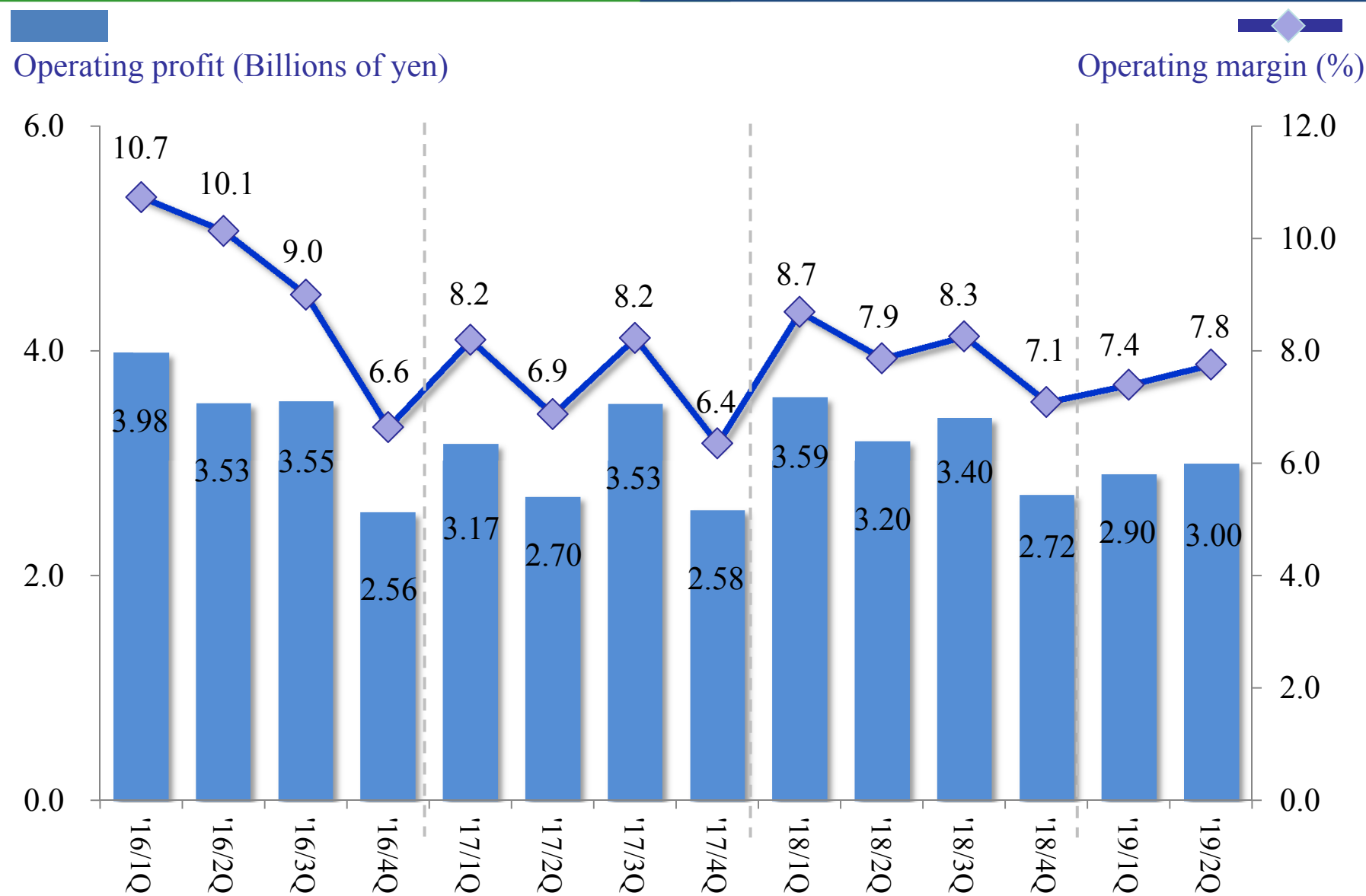


(Researched by Sanyo Chemical from newspaper articles)

Trends in Consolidated Earnings (Quarter Period)

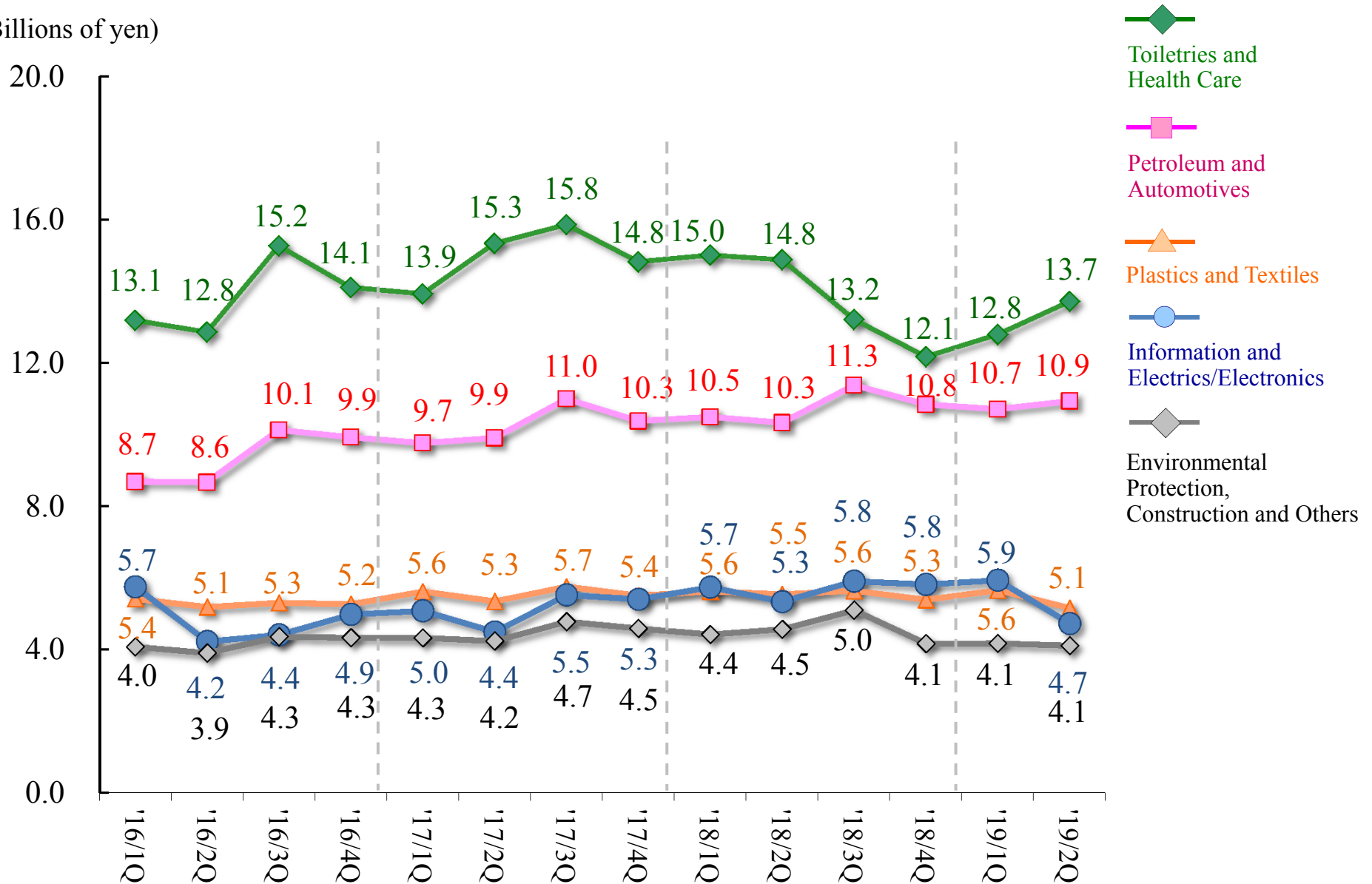


Trends in Consolidated Operating Profit and Operating Margin (Quarter Period)



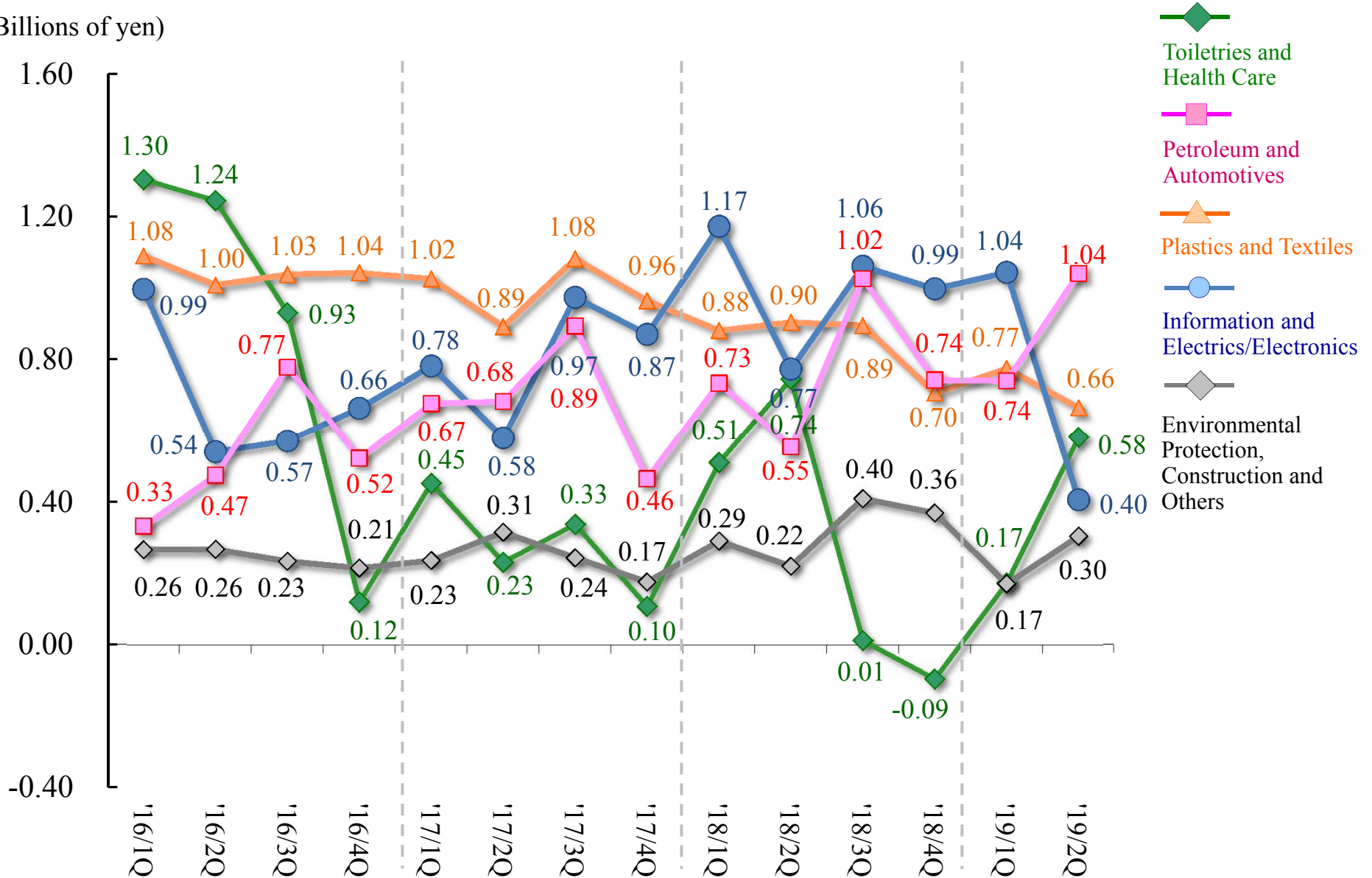
Trends in Consolidated Net Sales by Segment (Quarter Period)

(Billions of yen)



Trends in Consolidated Operating Profit by Segment (Quarter Period)

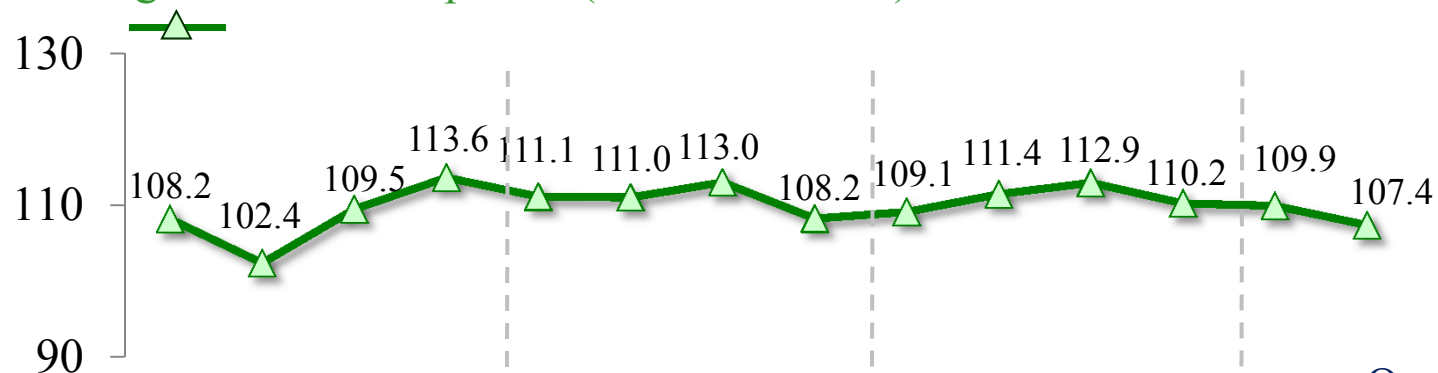
(Billions of yen)



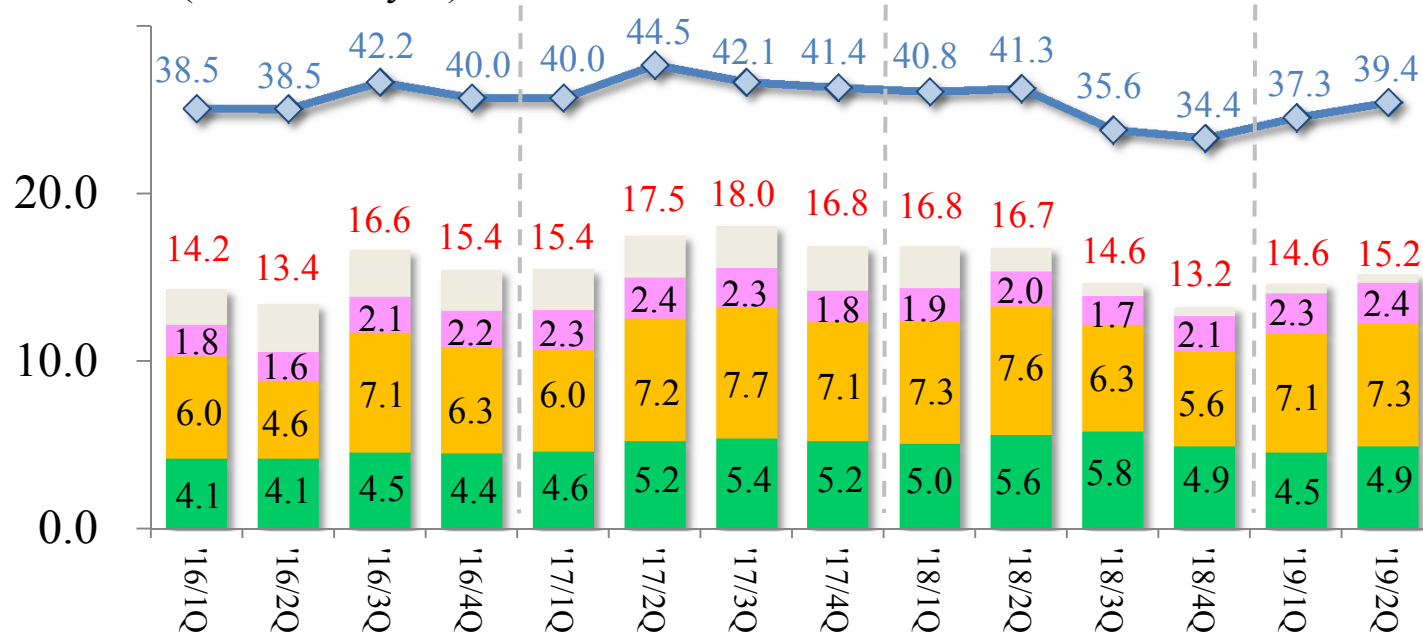
Trends in Overseas Net Sales



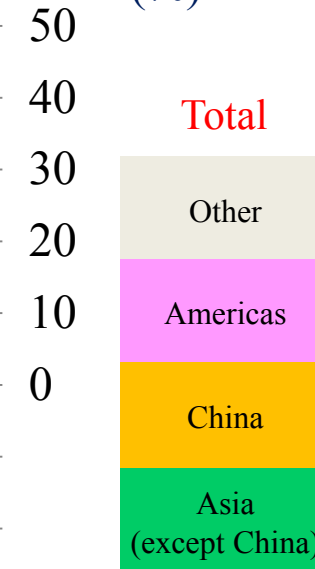
Exchange rate for each period (Yen/U.S. dollar)



Net sales (Billions of yen)

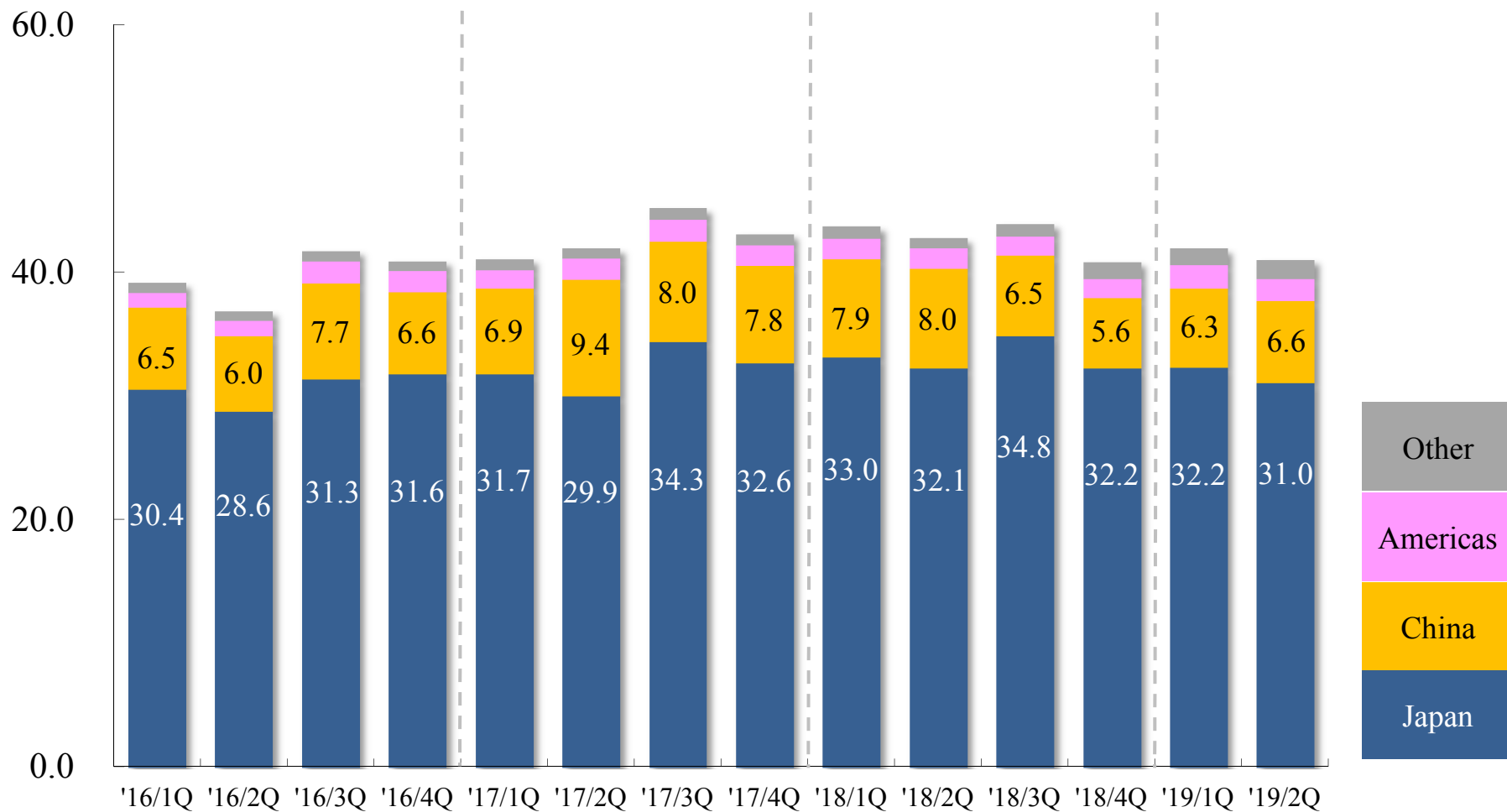


Overseas net sales ratio (%)



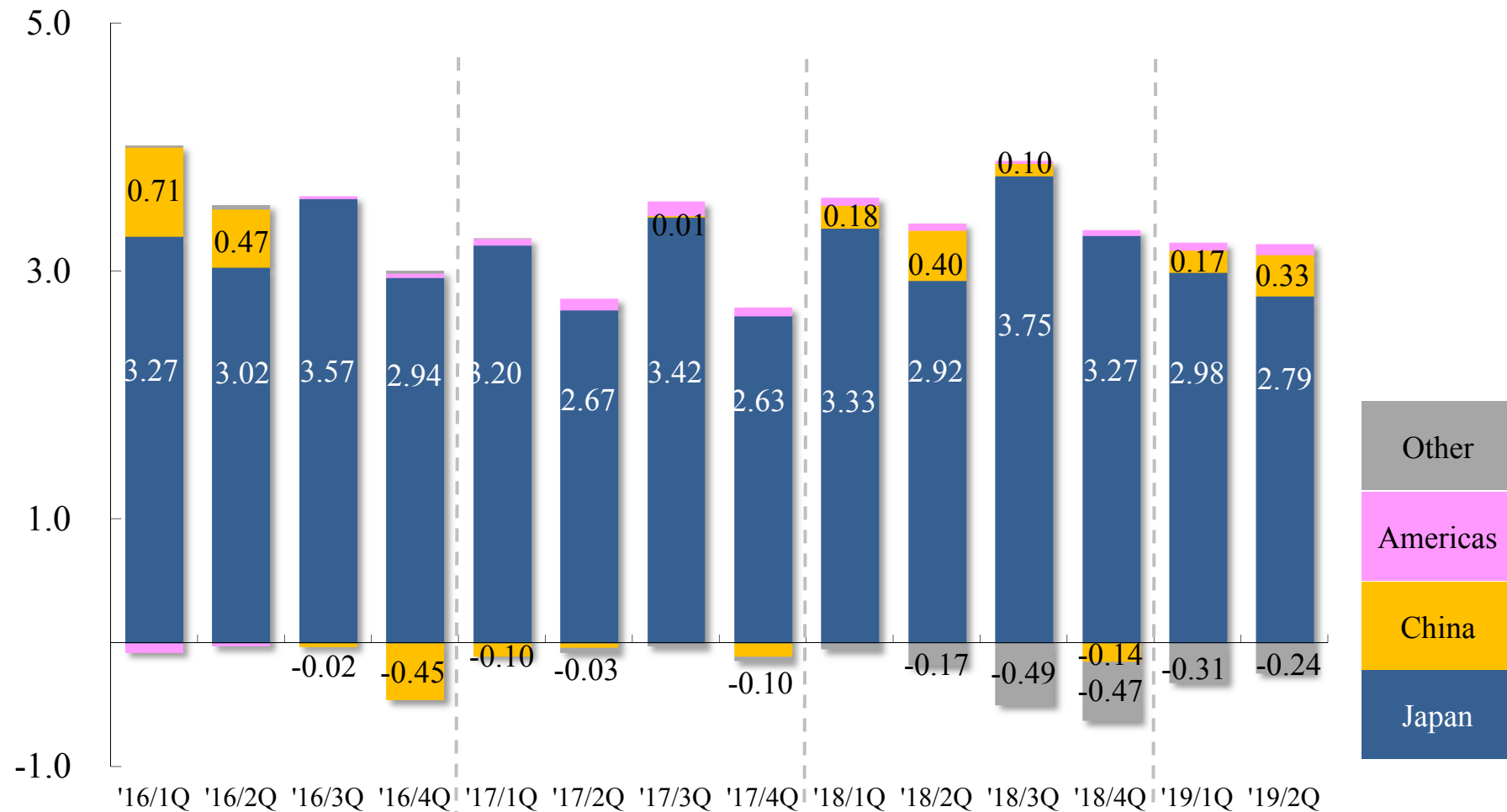
Trends in Consolidated Net Sales by Geographic Segment (Simple Addition)

(Billions of yen)



Trends in Consolidated Operating Profit by Geographic Segment (Simple Addition)

(Billions of yen)



Domestic Consolidated Subsidiaries (5 Companies)



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

Overseas Consolidated Subsidiaries (8 Companies)



Company Name	Country of incorporation	Abbr.	Share of Voting Rights	Line of Business
Sanyo Kasei (Nantong) Co., Ltd.	China	SKN	Sanyo Chemical Industries, Ltd. 100%	Manufacture of surfactants, polyurethane resins, etc.
San-Dia Polymers (Nantong) Co., Ltd.	China	SDN	SDP Global Co., Ltd. 100%	Manufacture and sales of superabsorbent polymers
Sanyo Chemical (Shanghai) Trading Co., Ltd.	China	SCST	Sanyo Chemical Industries, Ltd. 100%	Sales of surfactants, polyurethane resins, etc.
Sanyo Kasei (Thailand) Ltd.	Thailand	SKT	Sanyo Chemical Industries, Ltd. 79% VIV Interchem Co. Ltd., Toyota Tsusho Corporation, etc. 21%	Manufacture and sales of surfactants, polyurethane resins, etc.
SANAM Corporation	USA	SANAM	Sanyo Chemical Industries, Ltd. 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 Co., Ltd. 100%	Manufacture and sales of superabsorbent polymers

Entities Accounted for Using the Equity Method (5 Companies)



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