NIPPON STEEL

SANYO SPECIAL STEEL

Overview of Business Results

for the 1st Half of Fiscal Year Ending March 31, 2020
(April 2019 → September 2019)

SANYO SPECIAL STEEL Co., Ltd.

November 21, 2019

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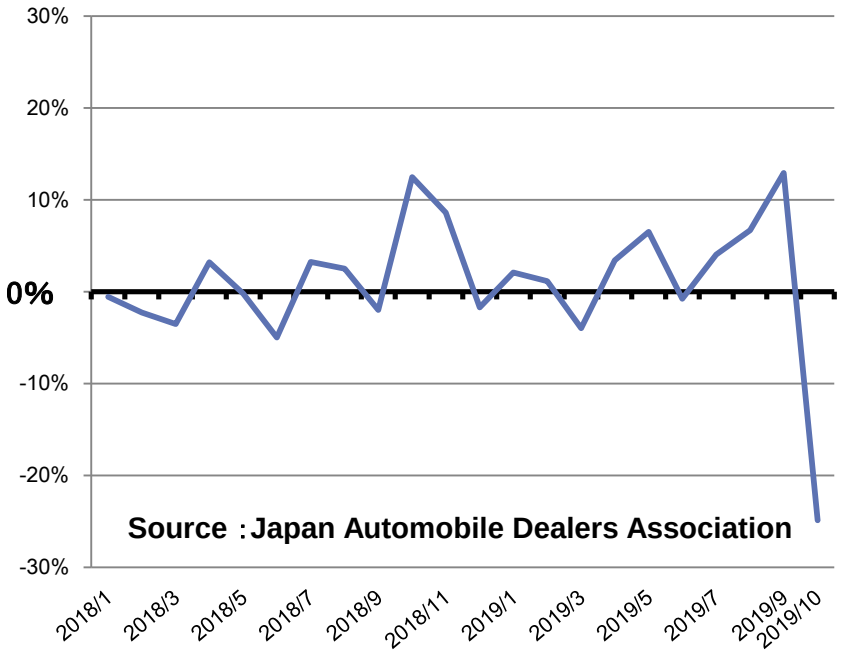
Trends in Automobile Market

Units of automobile sales in Japan

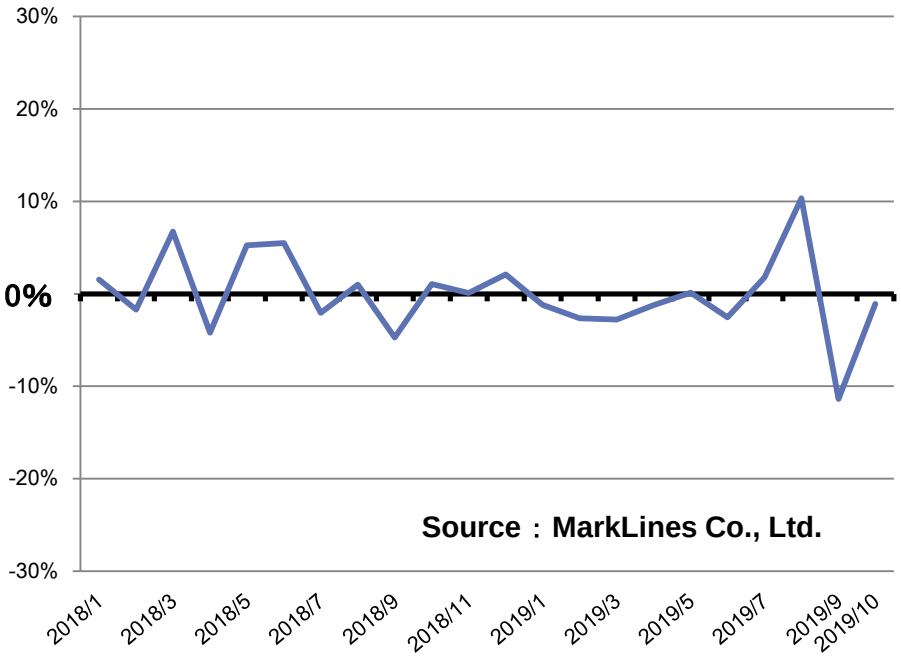
(Year-on-year rate)



No major change from the previous year.
2019/7-9; Demand rush before VAT raise.
2019/10 ; ▾25% on YoY basis after VAT raise

Units of automobile sales in U.S.

(Year-on-year rate)

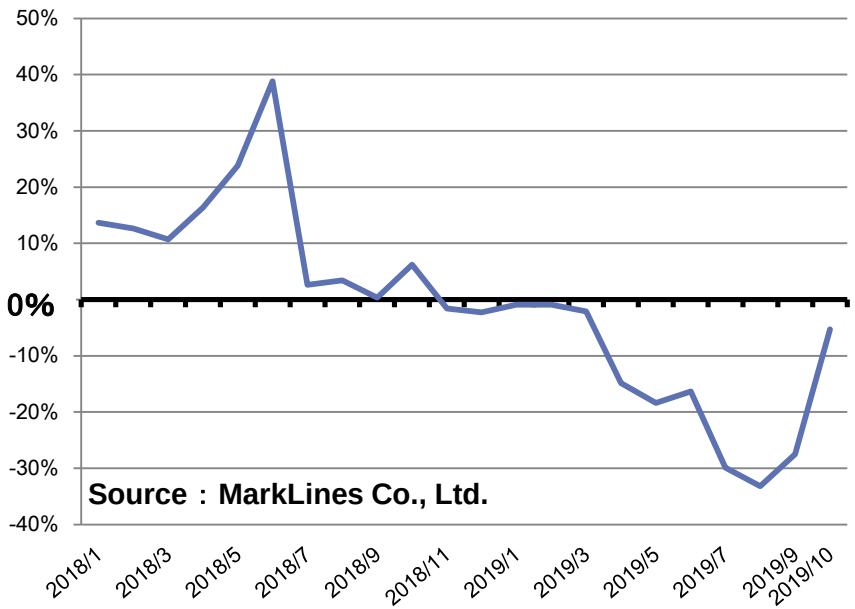


2018; Stable sales.
2019; Slight drop of sales due to the effects of the U.S.-China trade dispute.

Trends in Automobile Market

Units of automobile sales in India

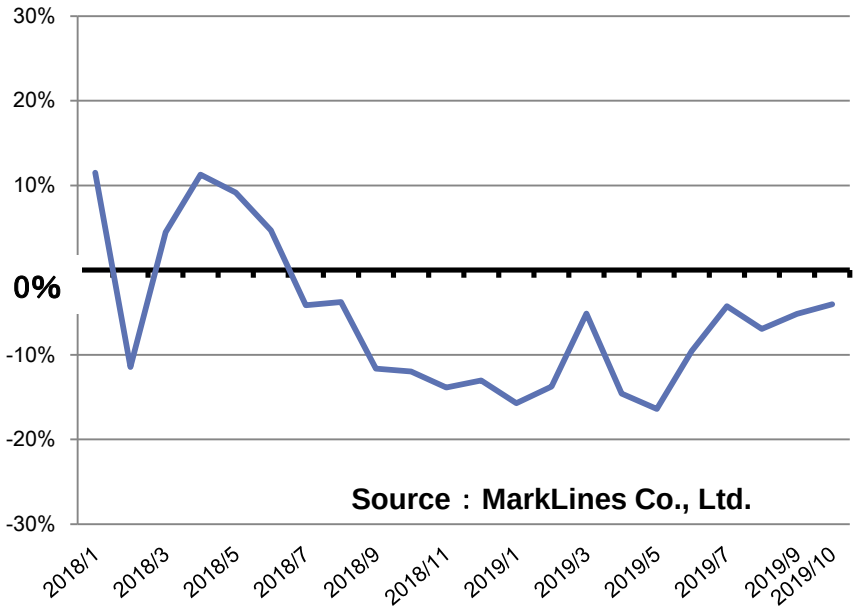
(Year-on-year rate)



Continuous drop since 2018/06 due to;
a) higher insurance premiums, b) higher fuel prices, c) tightening automobile loans, and d) deterioration of employment environment.
2019/10 ; recovering on YoY basis up to ▼5%

Units of automobile sales in China (Factory shipment base)

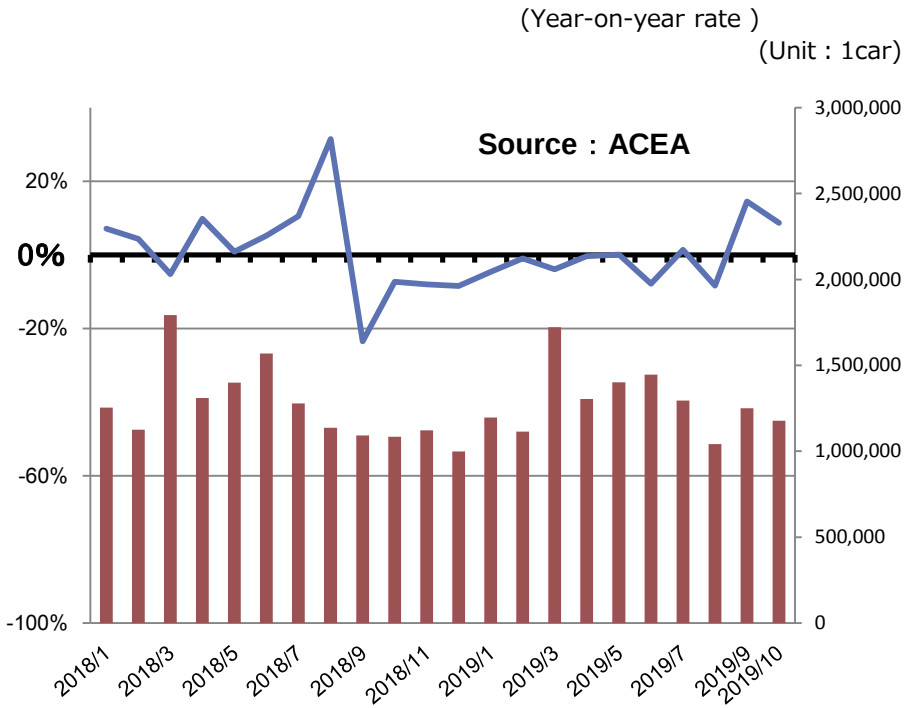
(Year-on-year rate)



Continuous drop due to; a) the effects of the U.S.-China trade dispute, and b) introduction of new emission restrictions in urban areas.

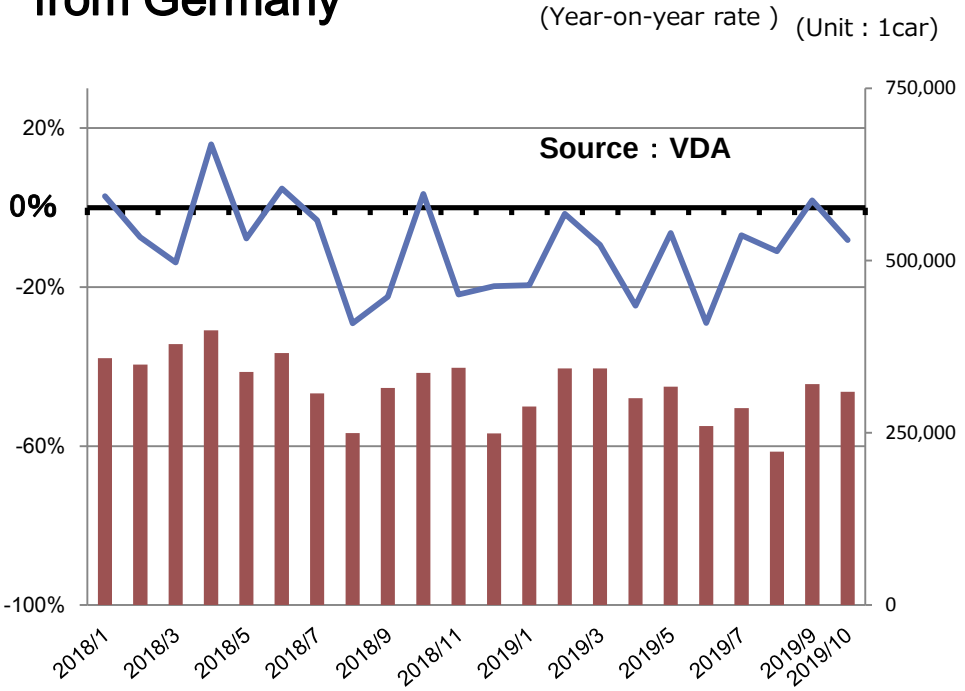
Trends in Automobile Market

Units of automobile sales in Europe



2018/09; Huge fluctuation due to WLTP.
Stagnate tendency due to concern of Brexit, and trade friction between the U.S. and Europe.
Sign of recovery in 2019/09 (14.5% increase YoY), though absolute number of units sold is mediocre.

Units of automobile export from Germany

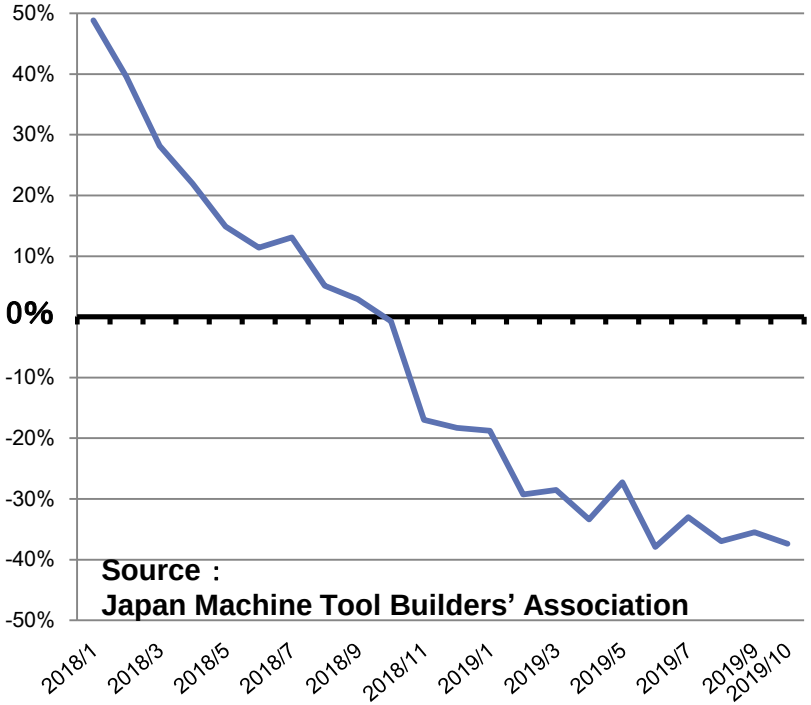


Continuous drop due to;
a) demand decrease in China affected by the trade dispute between the U.S. and China.
b) inventory adjustments.
Decrease of about -8% in 2019/10.

Trends in External Environment

Sales amount of machine tool orders (Japan)

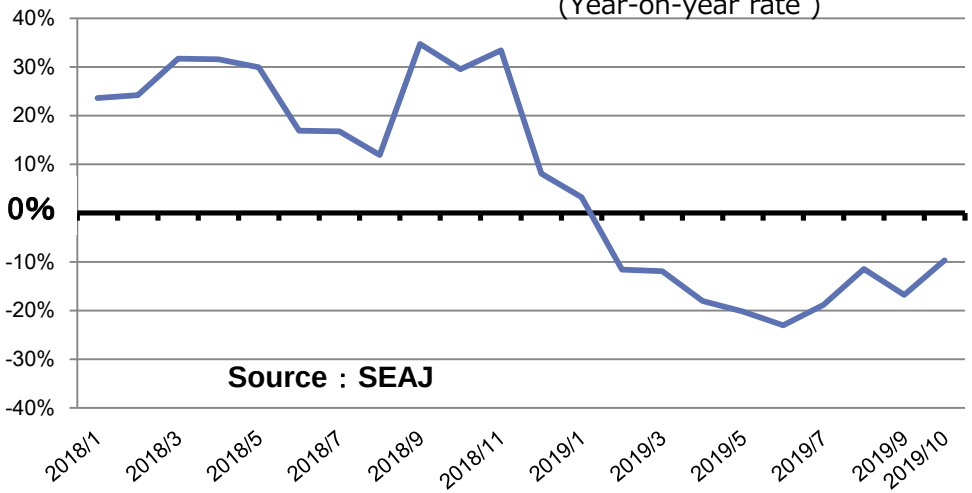
(Year-on-year rate)



2017 to 2018; strong demand due to an expanding production of smartphones in China.
2018/7-9 ~ ; continuous drop due U.S.-China trade dispute, affecting multiple industries.
Drop rate stays around ▾40% in recent months.

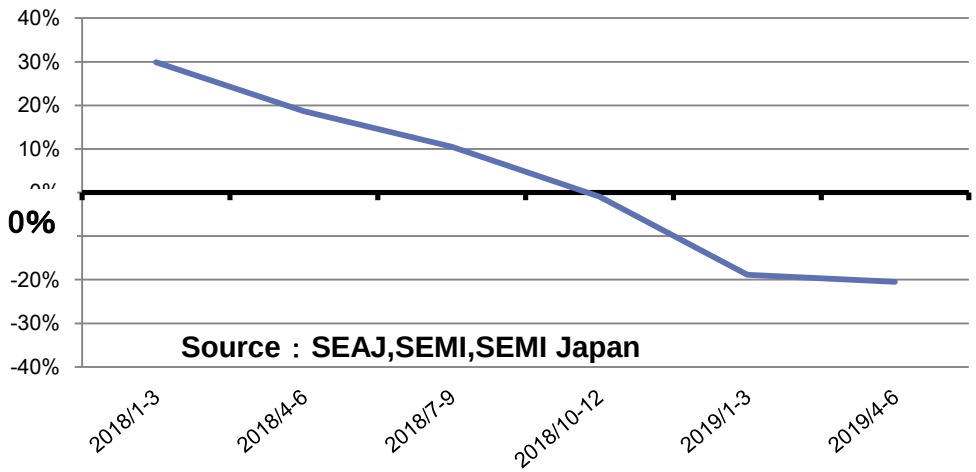
Sales amount of semiconductor manufacturing equipment (Japanese equipment)

(3 month moving average)
(Year-on-year rate)



Sales amount of world wide semiconductor equipment

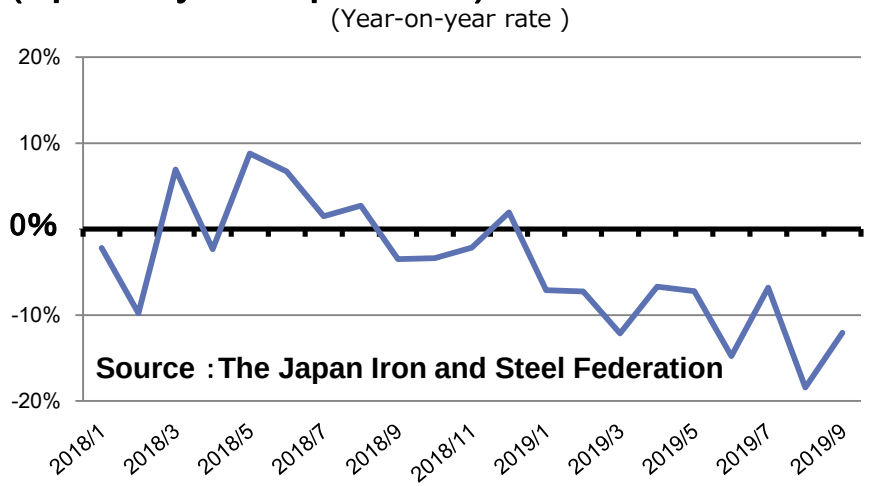
(Year-on-year rate)



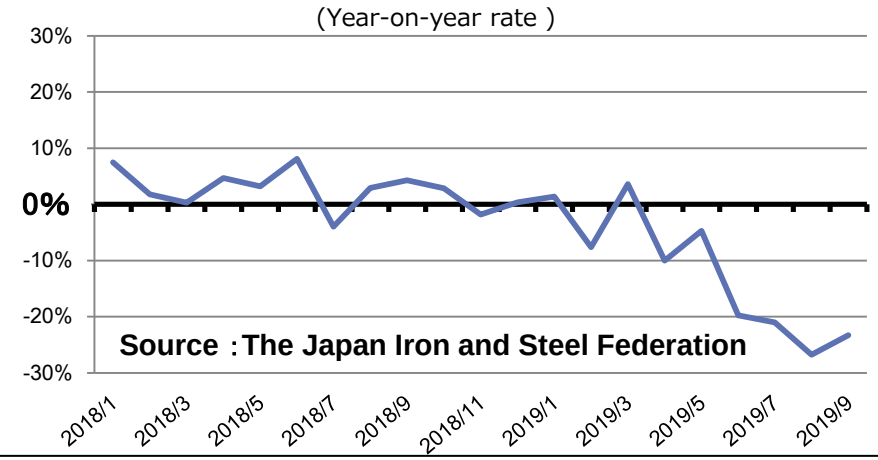
Through 2018; continuous drop due to U.S.-China trade dispute. Drop stopped recently.

Trends in Special Steel Market

Volume of order booked (Specialty steel products)

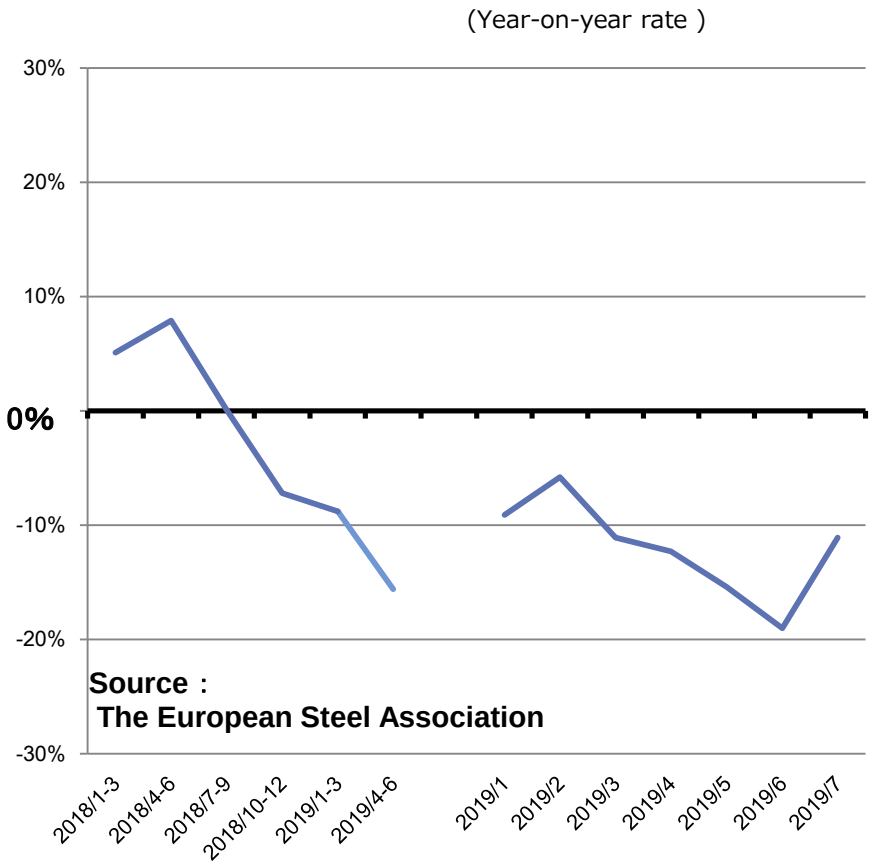


Volume of order booked (Bearing steel)



2018/10-12～; negative trend due to global sluggish demand in the domestic automotive, construction machinery, industrial machinery, and semiconductors sectors.

Volume of European deliveries :Bars and Flats / Alloy Engineering Steel



2018/7-9～; negative trend due to sluggish demand in the European automotive sector, and inventory adjustment in the supply chain.

Outline of Statements of Income

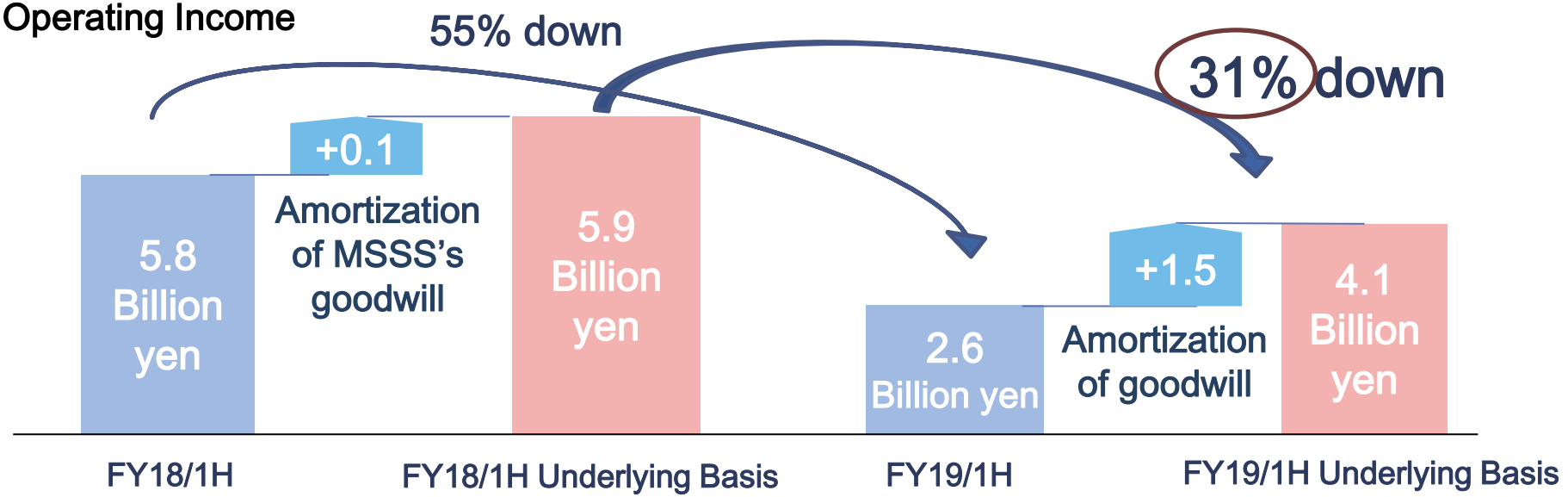
(Unit : Billion yen)

	FY19 1st Half(A)		FY18 1st Half(B)		Change(B) → (A)	
	Amount	*Ratio(%)*	Amount	*Ratio(%)*	Amount	*Ratio(%)*
Net Sales	146.1	*100.0*	89.7	*100.0*	+56.4	*+62.8*
Operating Income	2.6	*ROS 1.8*	5.8	*ROS 6.5*	-3.2	*-55.1*
(Sanyo)	3.0	-	5.5	-	-2.5	*-45.3*
(Ovako) *1	1.7	-	-	-	+1.7	-
(MSSS) *1,4	-0.4	-	0.1	-	-0.5	-
(Amortization of goodwill)	-1.5	-	-0.1	-	-1.4	-
Ordinary Income	2.2	*1.5*	5.7	*6.4*	-3.5	*-61.2*
Net Income*2	1.4	*0.9*	5.1	*5.6*	-3.7	*-72.7*
Net Income (Underlying Basis) *3	2.9	*2.0*	3.7	*4.1*	-0.8	*-22.3*
Sales Volume (Thousands of ton)	*902*	*150.3 /month*	*571*	*95.2 /month*	*+331*	*+55.1 /month*
(Sanyo)	*463*	*77.1 /month*	*532*	*88.6 /month*	*-69*	*-11.5 /month*
(Ovako)	*387*	*64.5 /month*	–	–	*+387*	*+64.5 /month*
(MSSS) *4	*52*	*8.7 /month*	*40*	*13.2 /month*	*+13*	*-4.5 /month*

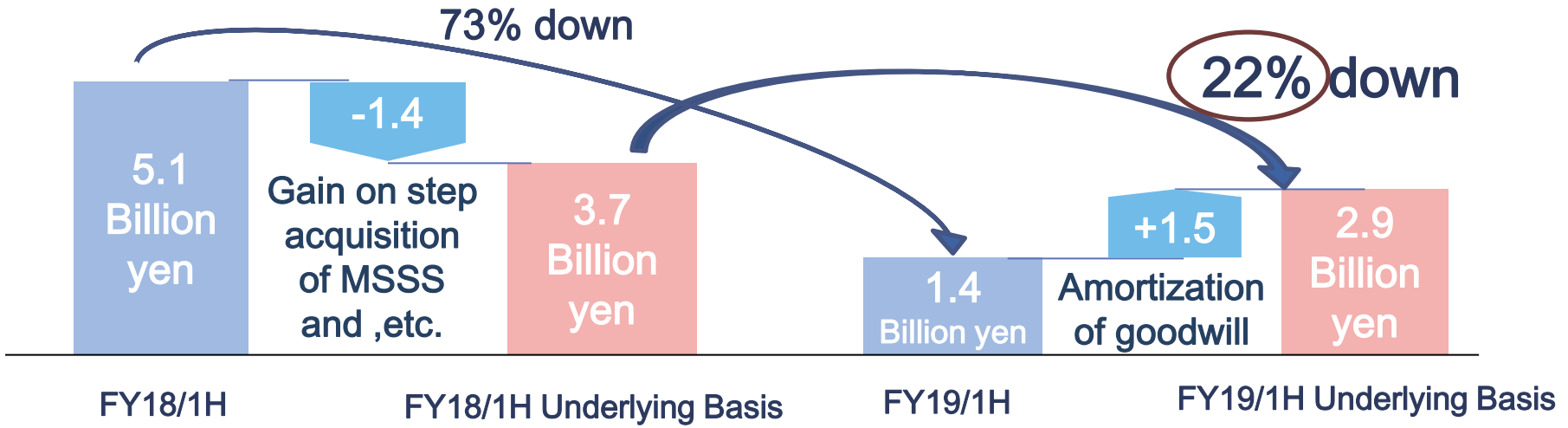
*1 The consolidated accounting period for Ovako and MSSS is Jan 2019 to Dec 2019 *2 Profit attributable to owners of parent
*3 Adjusted by following transactions *4 Figure(t/month) are adjusted for FY18 1H (Consolidation starts FY18/2Q)
FY18: Net Income – (Gain on step acquisition of MSSS+ Goodwill amortization) (=5.1 –1.4 billion yen)
FY19: Net Income + Goodwill amortization(=1.4+1.5 billion yen)

Income(Underlying Basis)

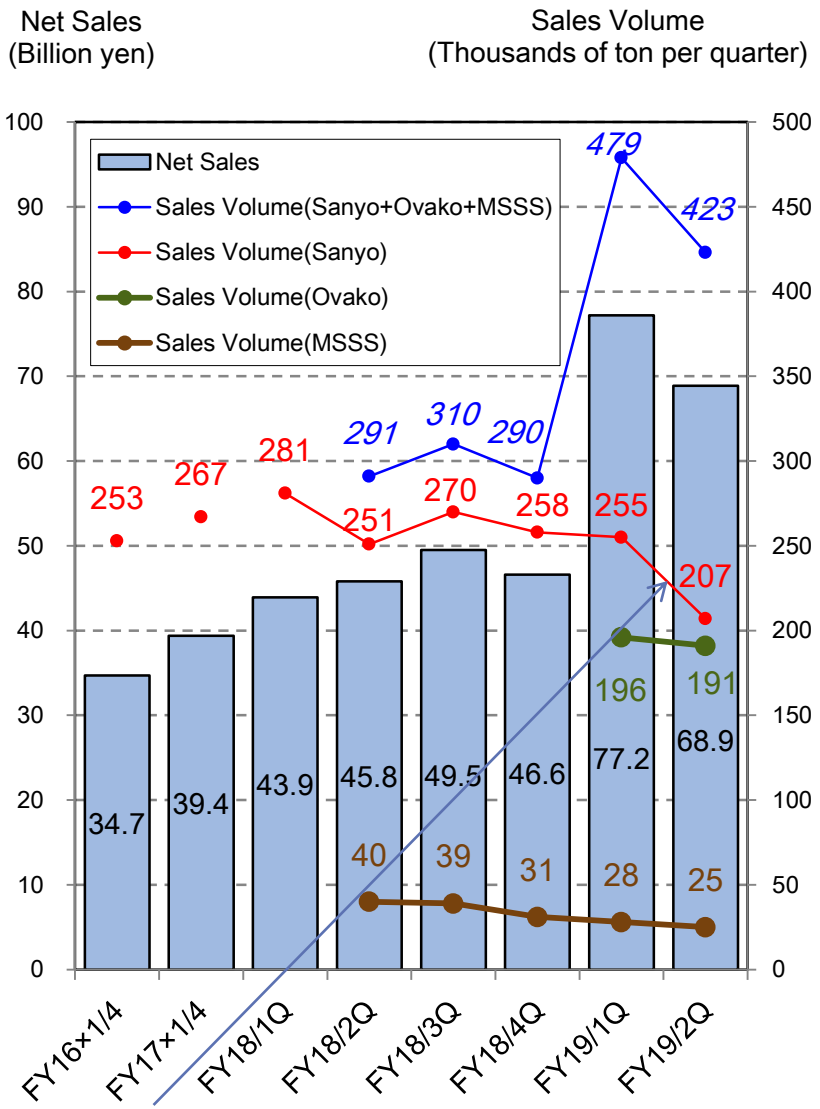
Operating Income

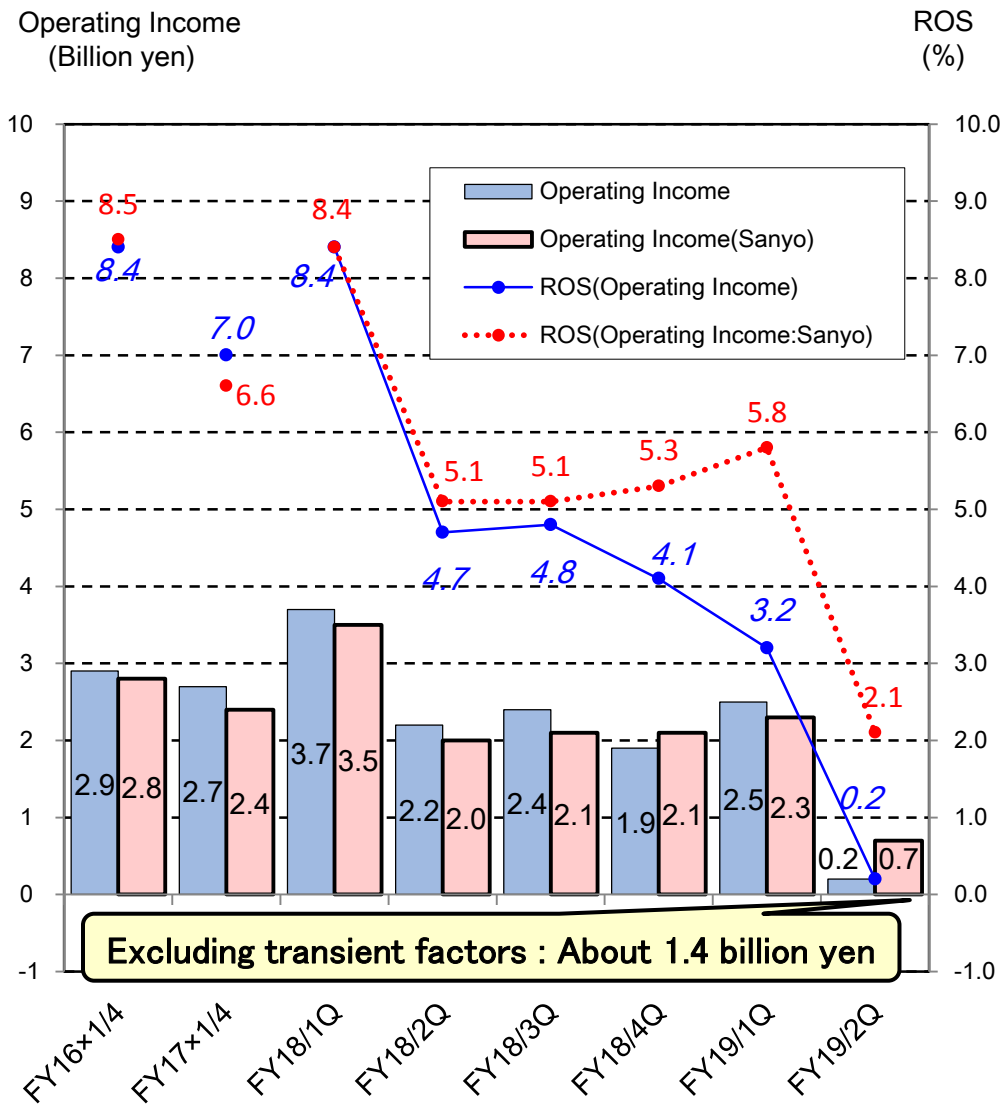


Net Income



Net Sales and Income (quarterly)

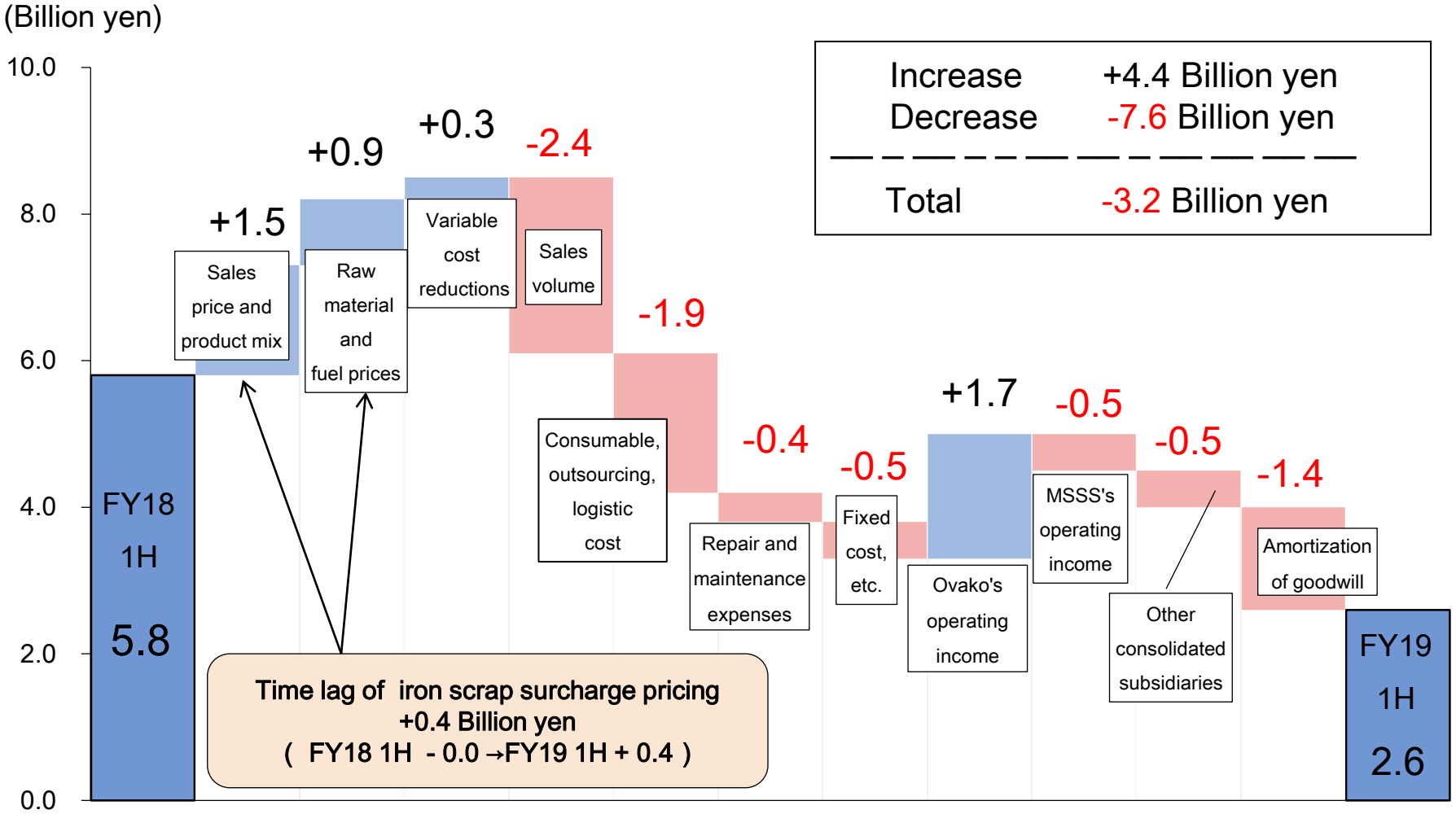




Volume decrease due to the unfavorable changes in the external environment and the impact of summer outage.

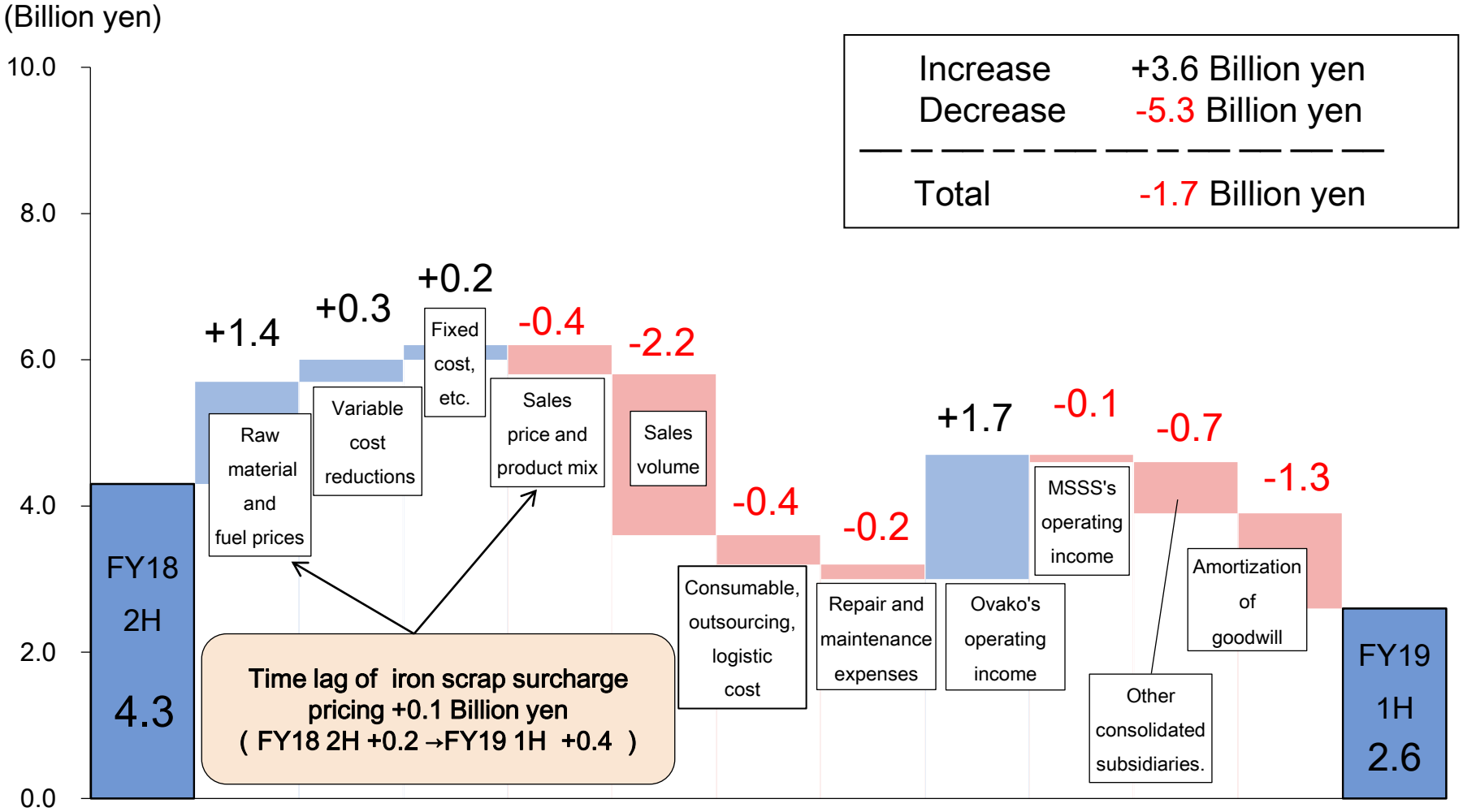
Operating Income Variance Analysis

FY18 1st Half (5.8) → FY19 1st Half (2.6) (-3.2 Billion yen)



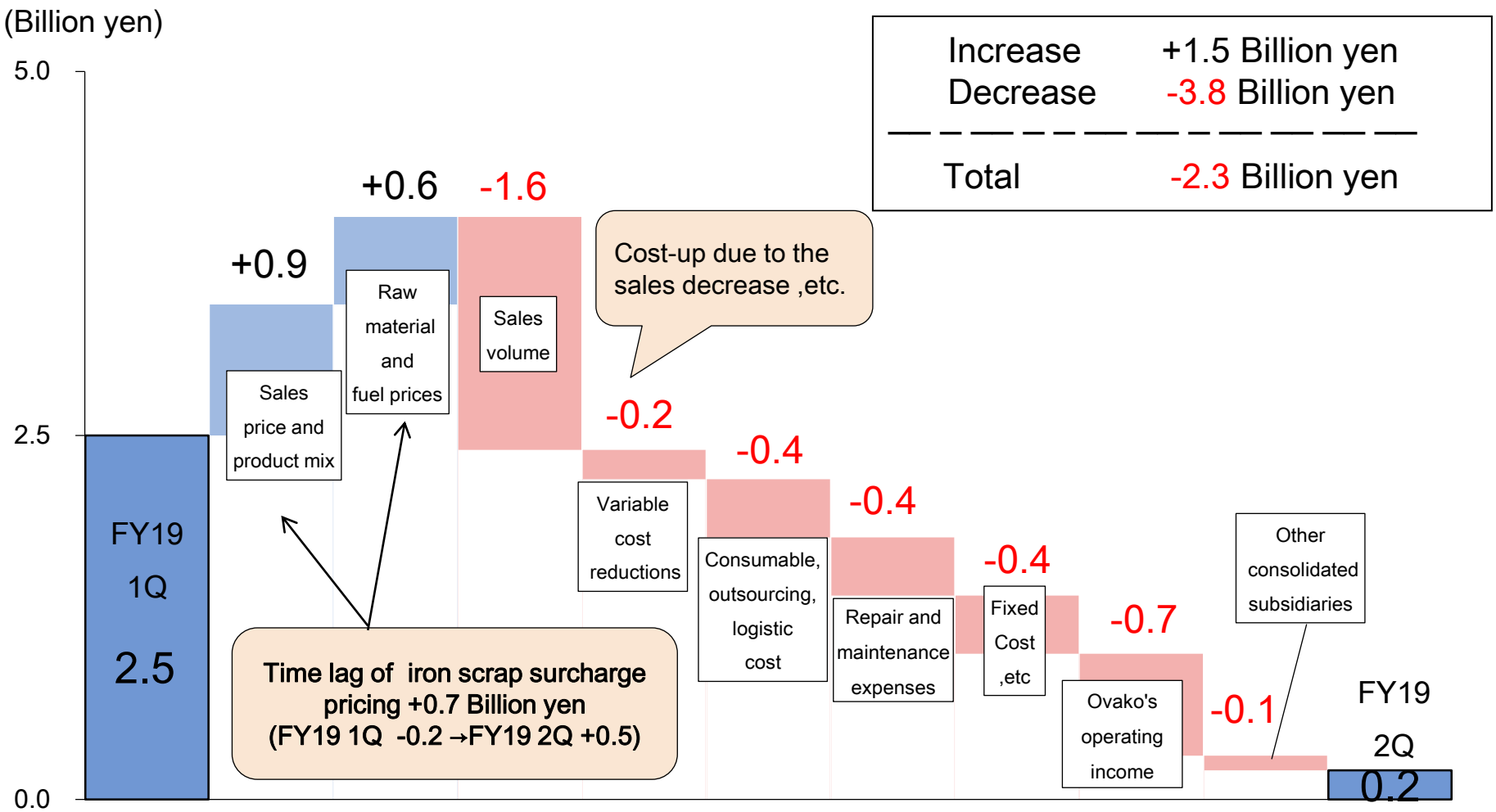
Operating Income Variance Analysis

FY18 2nd Half (4.3) → FY19 1st Half (2.6) (-1.7 Billion yen)



Operating Income Variance Analysis

FY19 1Q (2.5) → FY19 2Q (0.2) (- 2.3 Billion yen)

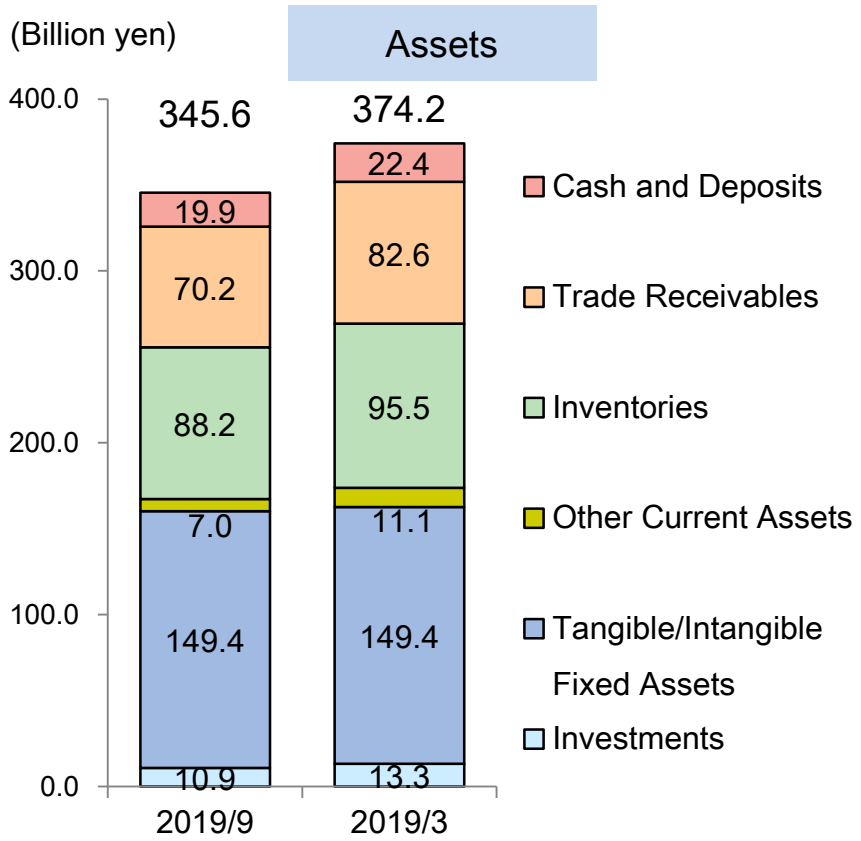


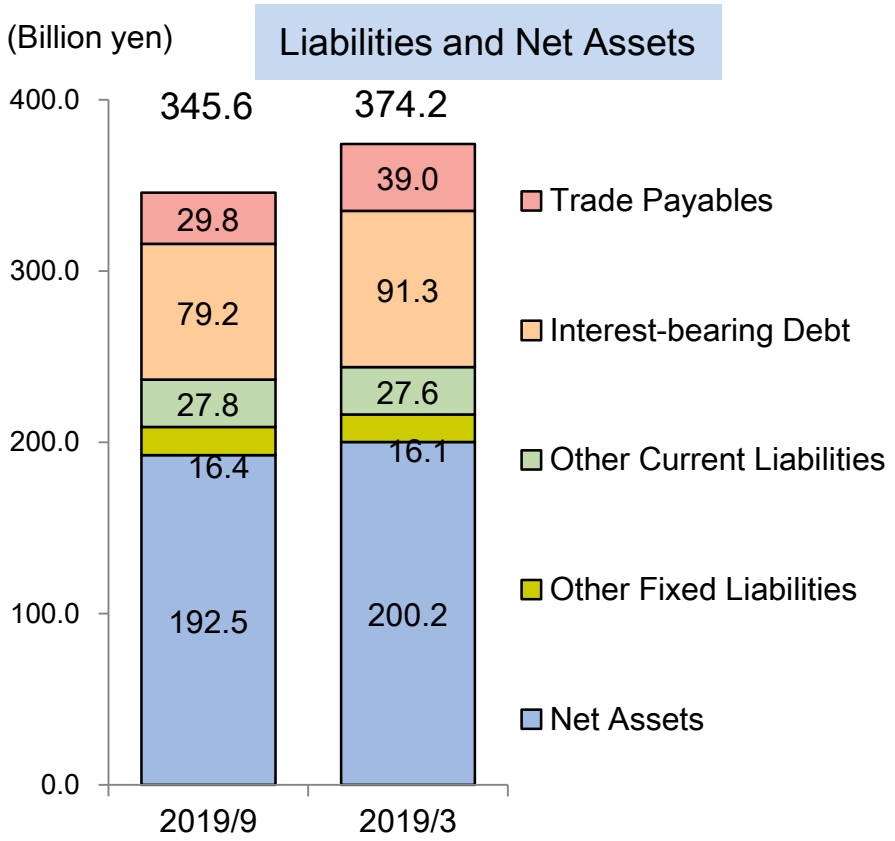
Earnings by Business Segment

(Unit : Billion yen)

	FY19 1st Half (A)			FY18 1st Half(B)			Change (B) → (A)		
	Net Sales	Operating Income	*ROS* (%)	Net Sales	Operating Income	*ROS* (%)	Net Sales	Operating Income	*ROS* (%)
Steel Products	139.2	2.4	*1.7*	82.1	5.0	*6.1*	+57.1	-2.6	*-4.4*
Metal Powders	2.1	0.1	*3.2*	2.4	0.4	*15.1*	-0.3	-0.3	*-11.9*
Formed and Fabricated Materials	9.1	0.1	*1.1*	9.9	0.4	*3.9*	-0.7	-0.3	*-2.8*
Sub-total	150.4	2.6	*1.7*	94.3	5.8	*6.1*	+56.1	-3.2	*-4.4*
Other	0.8	0.0	*3.3*	0.7	0.0	*1.4*	+0.1	+0.0	*+1.9*
Adjustments	-5.1	0.0	–	-5.3	0.0	–	+0.2	-0.0	–
Consolidated Total	146.1	2.6	*1.8*	89.7	5.8	*6.5*	+56.4	-3.2	*-4.7*

Balance Sheets





Major changes in Assets	- 28.7 billion yen
Cash and Deposits	- 2.5
Trade Receivables	- 12.4
Inventories	- 7.3
Intangible Fixed Assets(Goodwill)	- 3.3

Major changes in Liabilities and Net Assets	- 28.7 billion yen
Trade Payables	- 9.2
Interest-bearing Debt	- 12.2
Net Assets	- 7.7

(Reference) Each assets for Sanyo,Ovako,MSSS(before consolidated adjustment)

Sanyo	258.8	billion yen
Ovako	94.5	billion yen
MSSS	17.2	billion yen

Equity Ratio	2019/09	2019/03
	54.5%	52.3%

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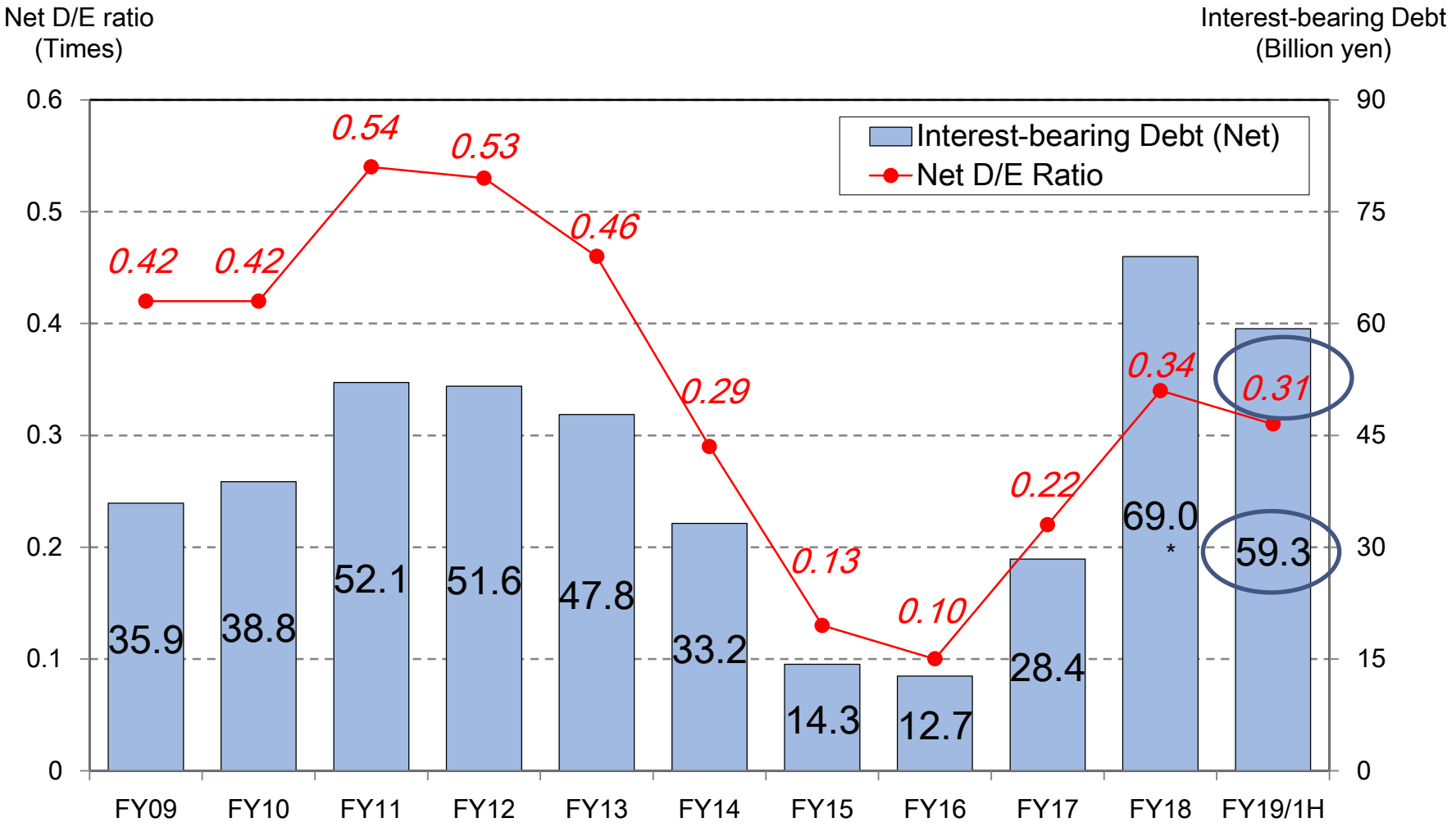
Statements of Cash Flows

(Unit : Billion yen)

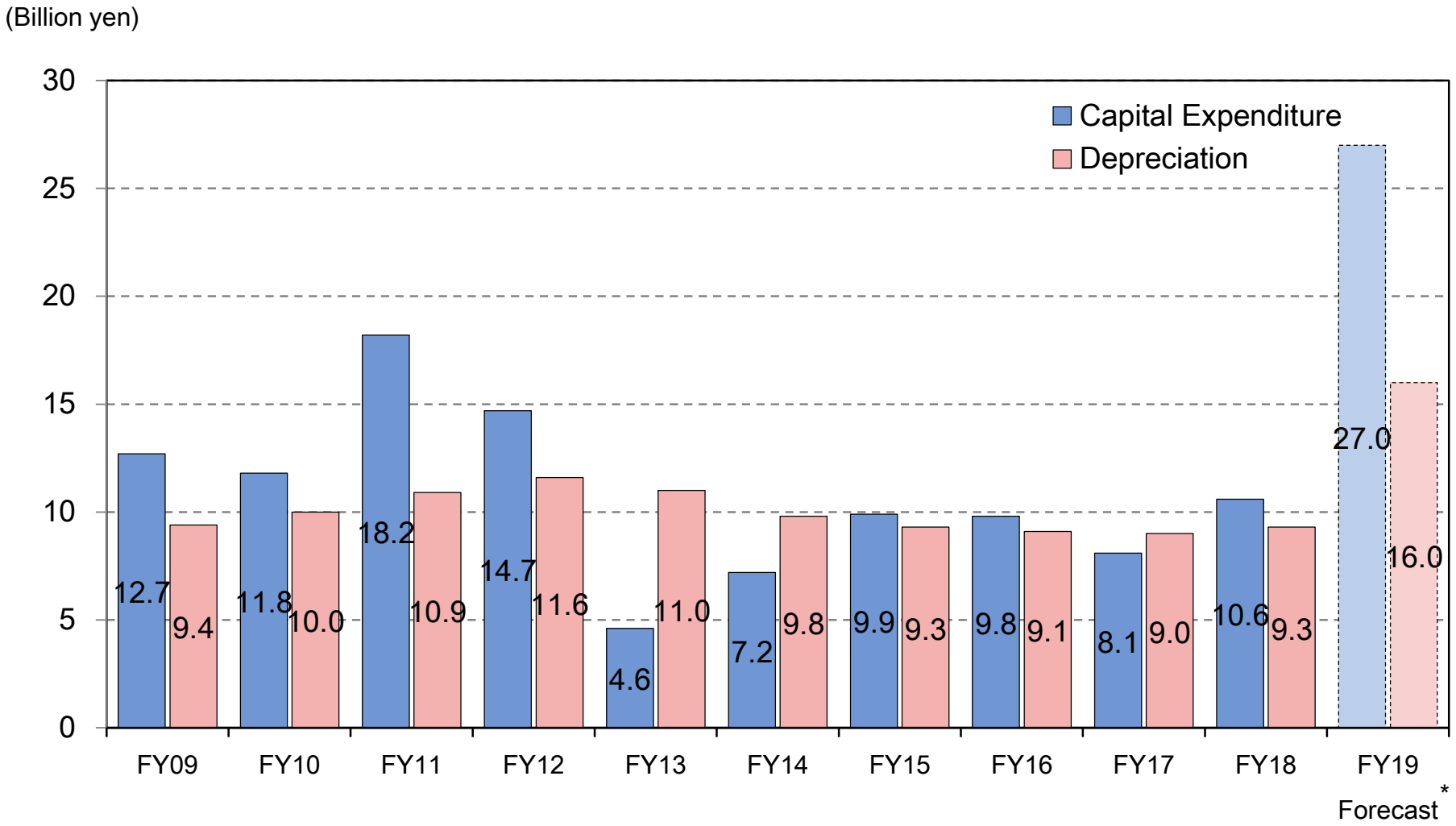
	FY18 1H	FY18 2H	FY19 1H
Cash flows from operating activities (A)	3.3	7.5	16.4
Net income before income taxes	11.4	8.7	10.9
Depreciation & Amortization of goodwill	6.8 / 4.5	3.5 / 5.1	2.1 / 8.8
Income taxes	-1.5	-1.7	-1.9
Working capital, etc.	-6.5	0.6	7.4
Cash flows from investing activities (B)	-5.5	-63.5	-1.0
Capital expenditure	-3.8	-5.3	-6.6
Purchase of shares of subsidiaries	-2.2	-58.3	4.7
Proceeds from sale of securities	–	0.1	1.1
Others	0.4	0.0	-0.3
Free Cash Flows (A+B)	-2.2	-56.0	15.3
Cash flows from financing activities (C)	-2.0	67.9	-17.2
Increase/Decrease in borrowings/bonds/commercial papers/lease obligations	-1.2	1.7	-12.8
Proceeds from issuance of common shares	–	67.1	–
Purchases or Sales of treasury stock	-0.0	-0.0	-3.0
Cash dividends	-0.8	-1.5	-1.4
Others	-0.0	0.6	-0.0
Translation Difference (D)	-0.2	-0.0	-0.6
Net Increase/Decrease in Cash and Cash Equivalents (A+B+C+D)	-4.4	11.9	-2.4

D/E Ratio



* Interest-bearing Debt(Net) of 69.0 billion yen in FY18 includes 33.6 billion yen for Ovako and 2.8 billion yen for MSSSPL respectively.

(Reference) Capital Expenditure and Depreciation



*Capital Expenditure of 27.0 billion yen in FY19 includes 13.5 billion yen for Sanyo Factory Renovation to solve bottlenecks at No.2 Bar &Wire Rod Mill, 4.8 billion yen for Ovako and 1.0 billion yen for MSSS.
Depreciation of 16.0 billion yen in FY19 includes 5.3 billion yen for Ovako and 0.5 billion yen for MSSS.

Revision of Business Forecast for FY19

(Unit : Billion yen)

	Revised forecast (A)			Previous forecast (B)			Change(B) → (A)		
	FY19 1st Half	FY19 2nd Half	FY19	FY19 1st Half	FY19 2nd Half	FY19	FY19 1st Half	FY19 2nd Half	FY19
Net Sales	146.1	130.9	277.0	150.0	150.0	300.0	-3.9	-19.1	-23.0
Operating Income	2.6	1.4	4.0	4.5	6.5	11.0	-1.9	-5.1	-7.0
(Sanyo)	3.0	5.0	8.0	4.5	5.6	10.1	-1.5	-0.6	-2.1
(Ovako) *1	1.7	-1.7	0.0	1.7	1.6	3.3	0.0	-3.3	-3.3
(MSSS) *1	-0.4	-0.5	-0.9	-0.4	0.5	0.1	0.0	-1.0	-1.0
(Amortization of goodwill) *2	-1.5	-1.5	-3.0	-1.3	-1.3	-2.6	-0.2	-0.2	-0.4
Ordinary Income	2.2	0.8	3.0	4.0	6.0	10.0	-1.8	-5.2	-7.0
Net Income	1.4	0.2	1.6	3.0	4.0	7.0	-1.6	-3.8	-5.4

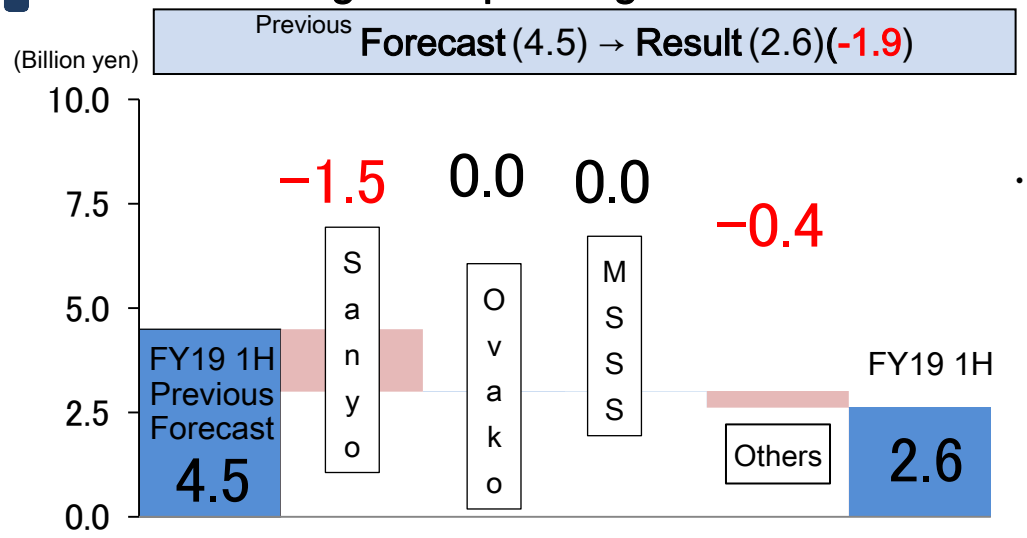
Sales Volume (Thousands of ton)	*902*	*823*	*1,725*	*934*	*944*	*1,878*	*−32*	*−121*	*−153*
(Sanyo)	*463*	*478*	*941*	*495*	*513*	*1,008*	*−32*	*−35*	*−67*
(Ovako)	*387*	*298*	*685*	*387*	*349*	*736*	*0*	*−51*	*−51*
(MSSS)	*52*	*47*	*99*	*52*	*82*	*134*	*0*	*−35*	*−35*

*1 The consolidated accounting period for Ovako and MSSS is Jan 2019 to Dec 2019
*2 Amortization of goodwill related to Ovako and MSSS. The previous forecast describes the amortization of Ovako's goodwill only.
*3 Previous forecast is as of July 30, 2019.

Major assumptions after October 2019
- Scrap iron 20,300 yen/t (H2 market price in Himeji area)
- Crude oil(Dubai) 65$/BL
- Exchange rate 105 yen/US$, 120 yen/€

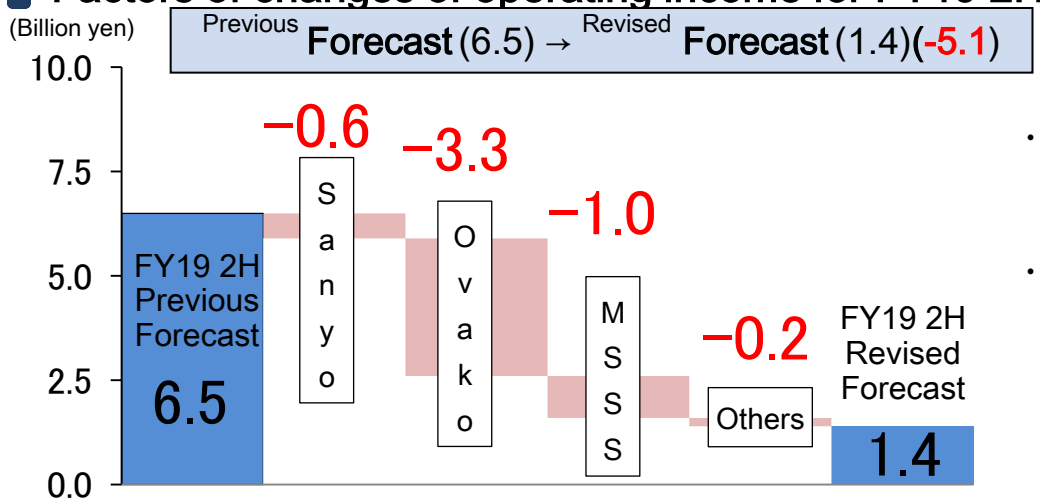
Revision of Business Forecast for FY19

Factors of changes of operating income for FY19 1H



- Sanyo's income deteriorated due to;
  a) Sales volume decrease.
  b) Cost increase due to the volume decrease.
  c) Delay of reflecting scrap purchase price drop to actual production cost, etc.

Factors of changes of operating income for FY19 2H



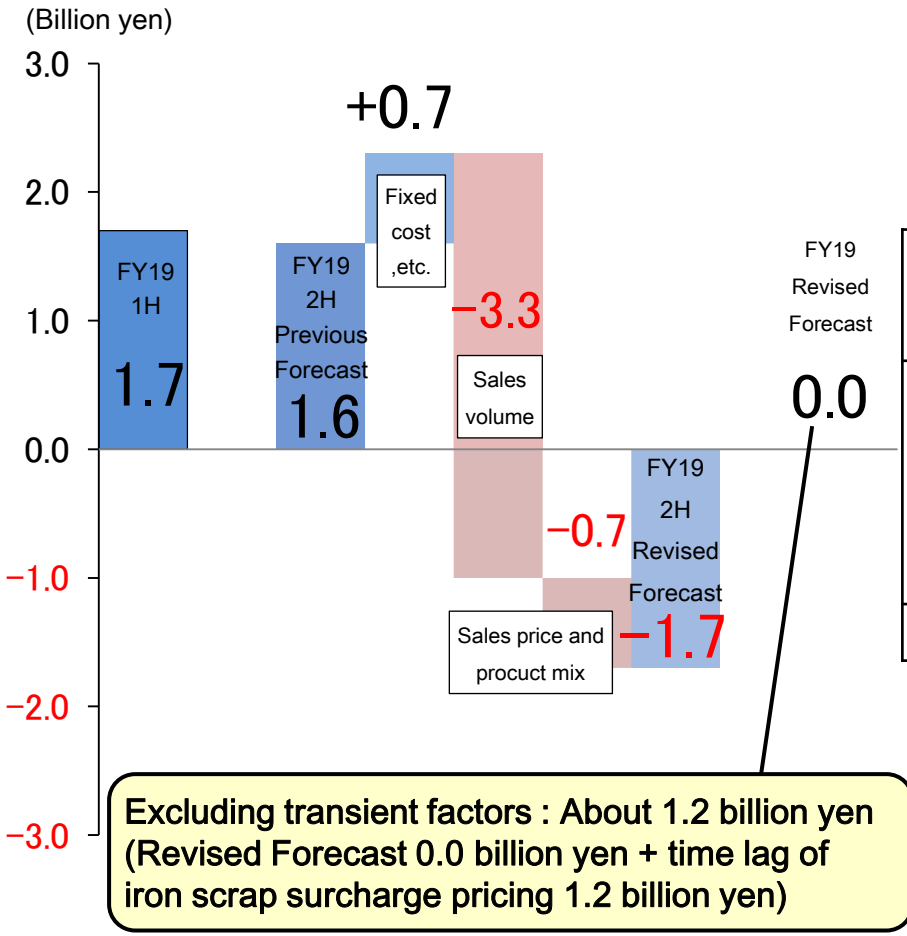
- For Sanyo, sales volume is expected to decline compared to the previous forecast.
- For Ovako and MSSS, sales volume is expected to substantially decline compared to the previous forecast, significantly affecting the income, despite continuous execution of improvement measures.

Ovako Review

Headquarter : Stockholm, Sweden Manufacture and sale of special steel, steel pipes, rings, etc. with plants in Sweden and Finland & Our subsidiary since March 2019

Operating Income Variance Analysis

Previous Forecast 2nd Half (1.6)
→ Revised Forecast 2nd Half (-1.7)(-3.3)



Excluding transient factors : About 1.2 billion yen
(Revised Forecast 0.0 billion yen + time lag of iron scrap surcharge pricing 1.2 billion yen)

Overview of FY 2019

The EU economy is continuing to be sluggish, mainly due to US-China trade dispute and the uncertainty of Brexit. In particular, business confidence in the EU manufacturing industry is deteriorating. Demand for special steel in the EU does not show signs of recovery after falling sharply in 2018/10-12, mainly due to supply chain inventory adjustments and WLTP.

<Changes from previous forecast>

Fixed cost ,etc.	Favorable reduction of fixed cost, mainly by shift down and sale of assets, etc.
Sales price	Price drop due to the scrap surcharge system, affected by decline of scrap prices. Ovako applies the first-in, first-out method for cost, resulting in precedent sales prices decline to the cost decline.
Sales volume	Decline of demand mainly in the EU

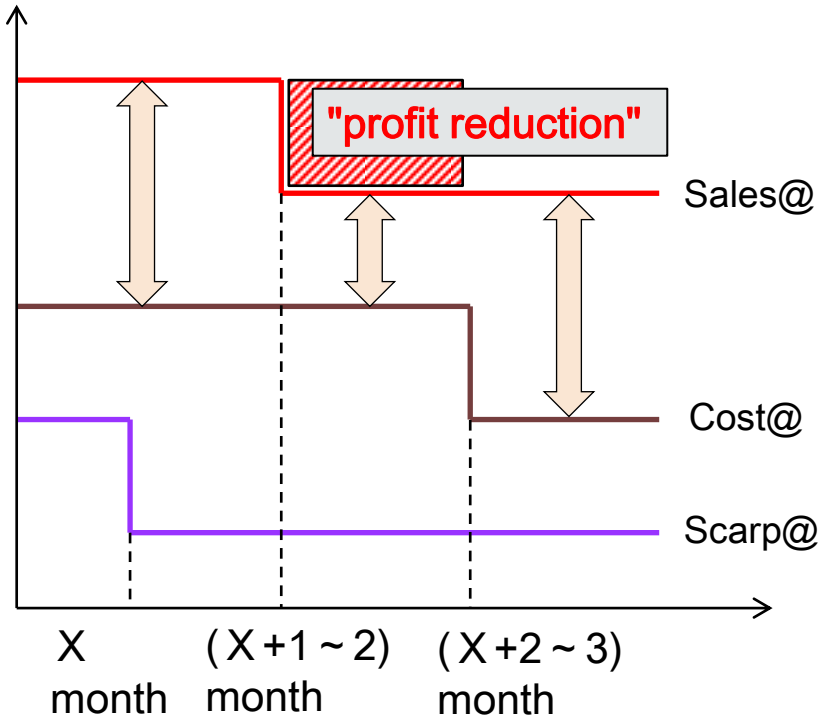
< Profit improvement measures >

- Maximizing synergies among 3 companies
  - a)Sales promotion activities
  - b)Reduction of operational cost
  - c)Reduction of procurement cost
- Reduction of fixed cost, mainly by optimizing number of personnel

Mechanism of Ovako's iron scrap surcharge pricing

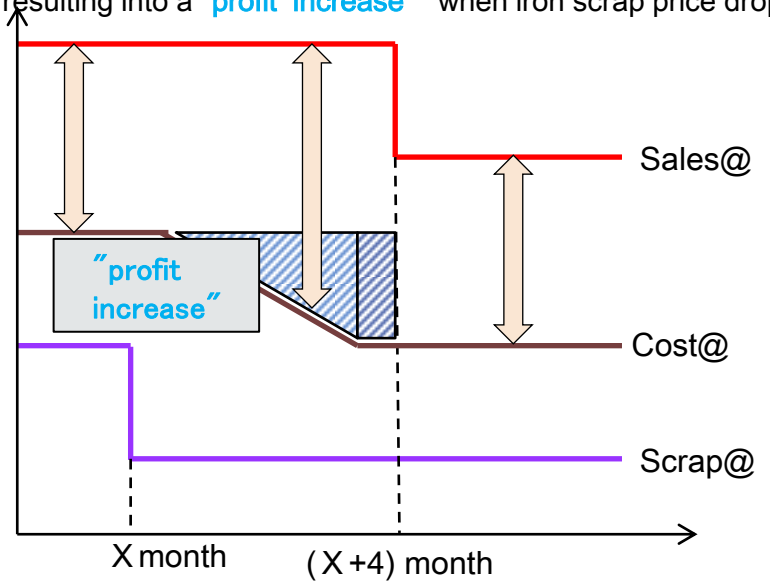
Fluctuations in Scrap Prices and Impact on Profit and Loss (Outline of Time Lag)

- The sales price follows the change of the iron scrap price, after one to two months. (In general, the indicative iron scrap price fluctuations of the precedent two months are reflected to the current month's sales price.)
- The cost is calculated by the first-in first-out method. When the iron scrap price drops, the time lag effect results into **"profit reduction"** , since the reflection of the scrap price drop to the actual production cost is being delayed.



(Reference) Sanyo's iron scrap surcharge pricing

The sales price is changed after approx. four months of the iron scrap price change. Actual production cost change precedes the sales price change, resulting into a "profit increase" when iron scrap price drops.

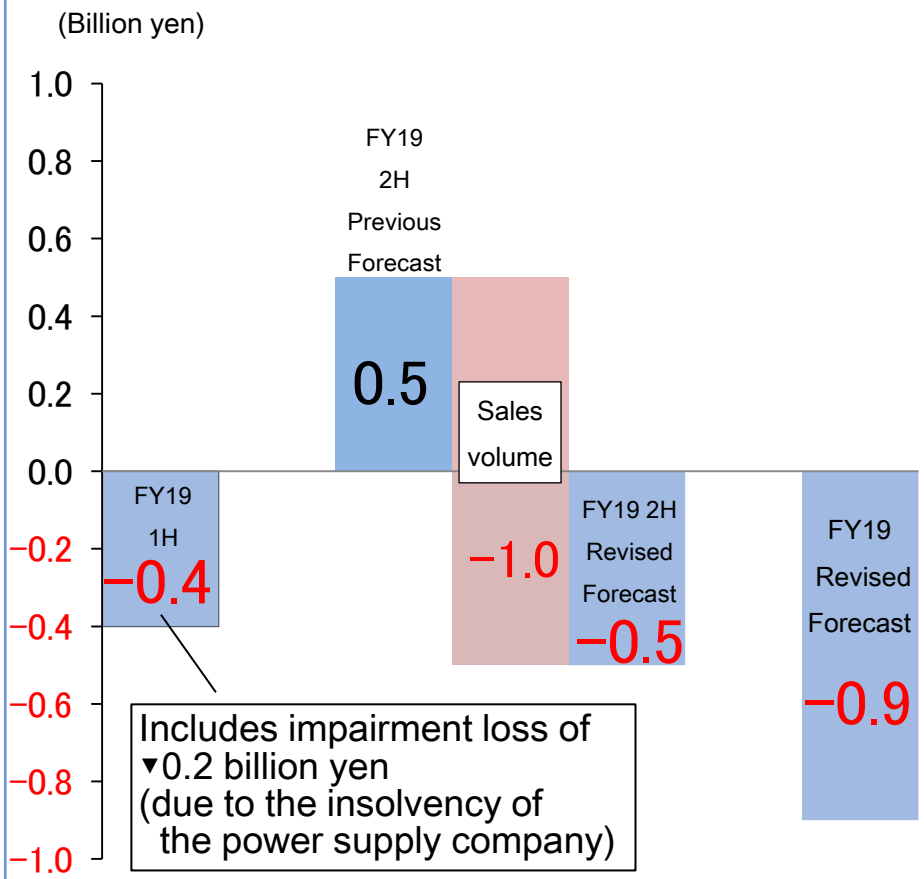


MSSS Review

Mahindra Sanyo Special Steel Pvt. Ltd. Headquarter : Mumbai, India
Manufacturing and sales of special steel & Our subsidiary since June 2018

Operating Income Variance Analysis

Previous Forecast 2nd Half (0.5)
→ Revised Forecast 2nd Half (-0.5)(-1.0)



Overview of FY 2019

Domestic car sales in India have unexpectedly decreased on YoY basis for eleven consecutive months since November 2018, and decreased around ▼30% in absolute numbers.
The demand drop in the steel industry exceeds that of the automotive sector, due to the amplifying effect of inventory adjustments in the supply chain.

<Changes from previous forecast>

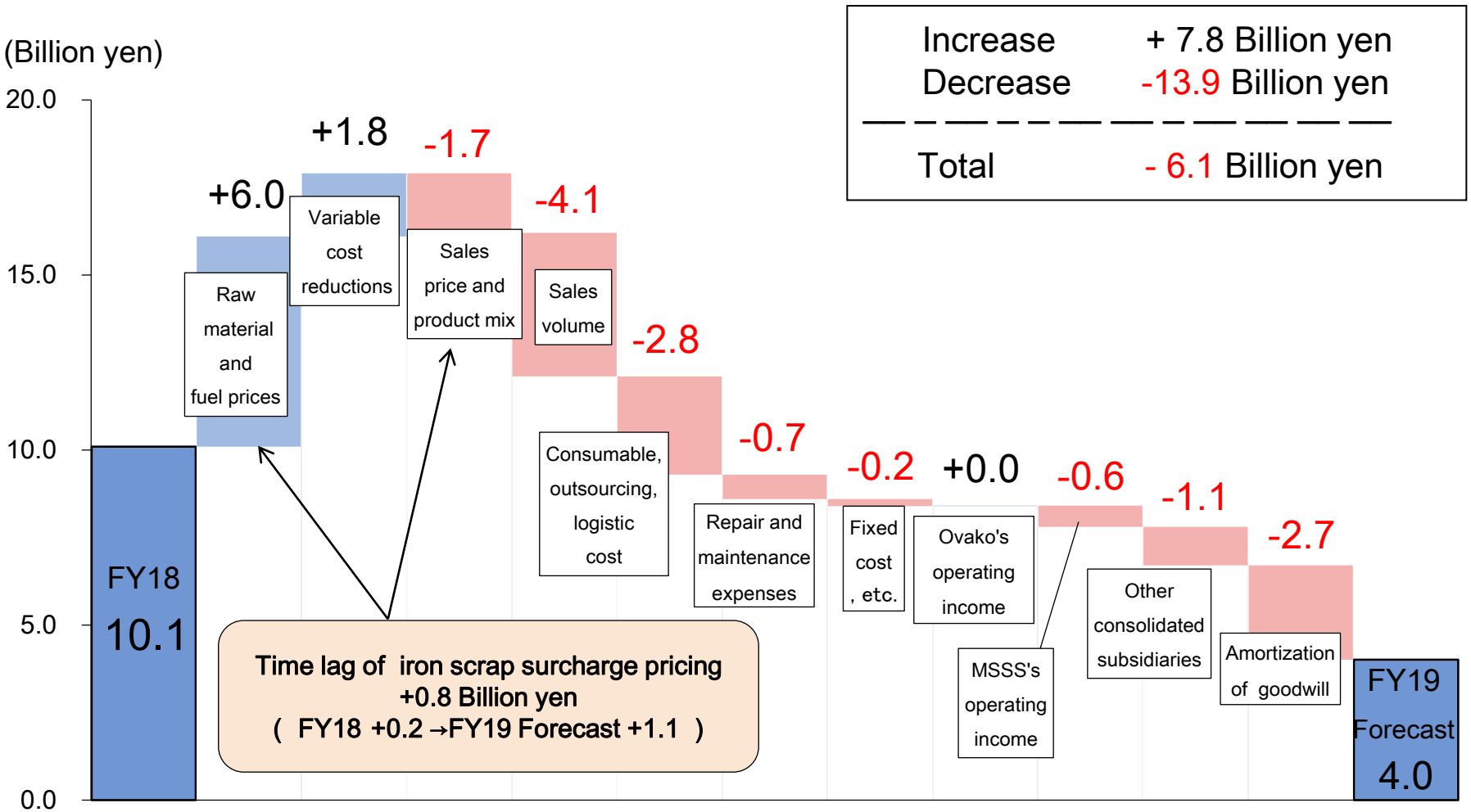
Sales volume	Demand reduction due to inventory adjustment in the supply chain

<Profit improvement measures>

1. Executed
   - Reducing operating cost by improving energy intensity and efficiency.
   - Reducing procurement cost by use of Chinese Electrodes.
   - Securing orders for National Railway (2,000t/month).
   - Reducing outsourcing costs by optimizing number of personnel.
2. Under Review
   - Increasing orders of high-margin products through expansion of sales network etc.
   - Increasing sales order for railways.
   - Further reduction of energy (power and gas) costs.

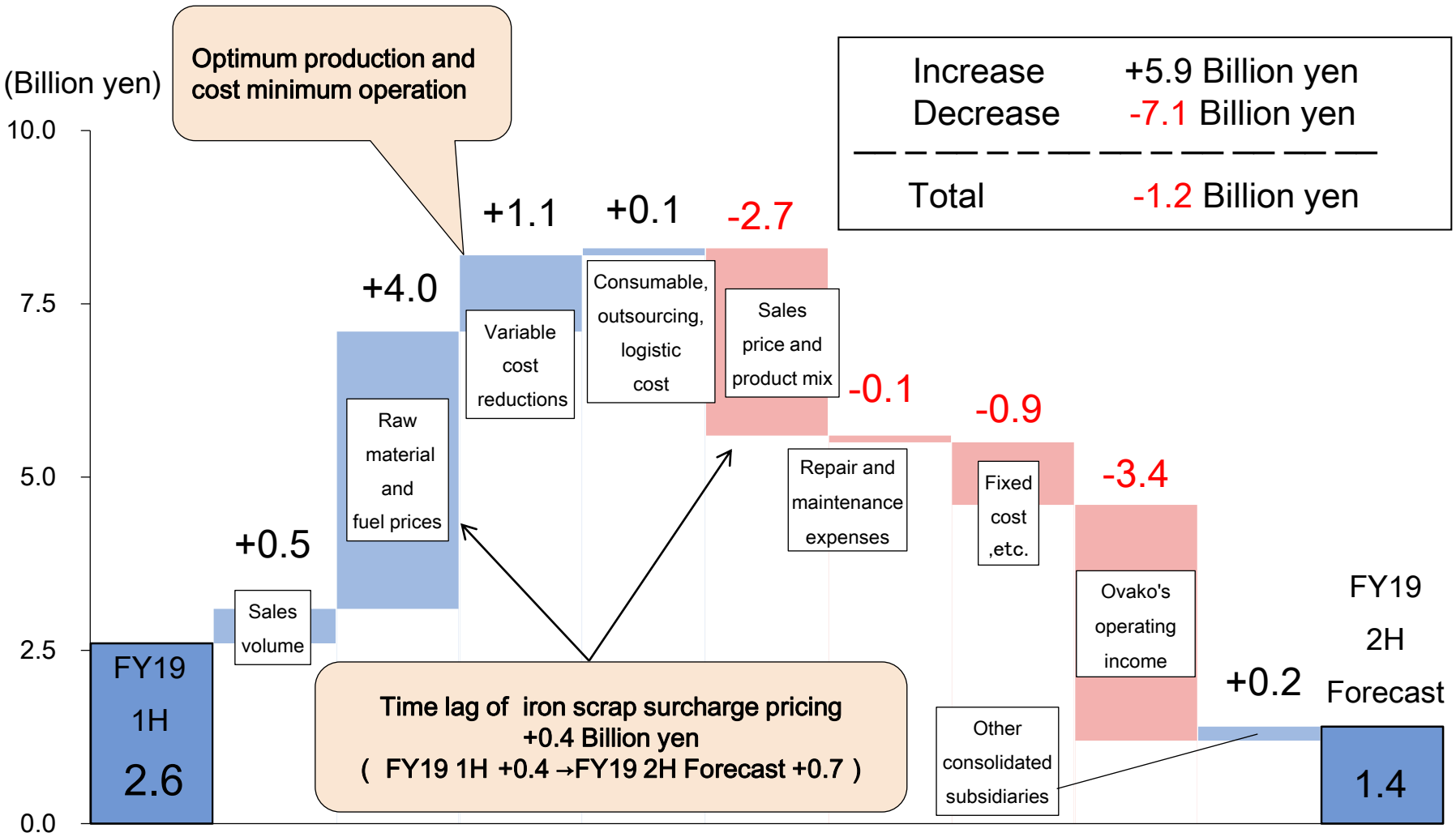
Operating Income Variance Analysis

FY18(10.1) → FY19 Revised Forecast (4.0)(-6.1 Billion yen)



Operating Income Variance Analysis

FY19 1st Half (2.6) → FY19 2nd Half Revised Forecast (1.4)(-1.2 Billion yen)



Interim Dividend and Revision of Dividend Forecast for FY19

			Revised forecast (A)			Previous forecast (B)			Change(B) → (A)			(Reference) FY18 Result
			FY19 1st Half Result	FY19 2nd Half Forecast	FY19	FY19 1st Half	FY19 2nd Half	FY19	FY19 1st Half	FY19 2nd Half	FY19	
Earnings Per Share	A	¥/share	24.6		28.9	53.6		126.5	-28.9		-97.6	237.8
Earnings Per Share (*3) before amortization of goodwill	B	¥/share	51.4		83.1	76.8		173.4	-25.4		-90.4	
Dividend	C	¥/share	**15.5**	**9.5**	**25.0**	**23.0**	**29.0**	**52.0**	**-7.5**	**-19.5**	**-27.0**	Interim 69.0 Year-end 45.0 24.0
Payout Ratio (*4)	C / A	%	*63.0*		*86.5*	*43.0*		*41.1*	**+20.0**		**+45.4**	*29.0*
	C / B	%	*30.2*		*30.1*	*30.0*		*30.0*	+0.2		+0.1	

*1 The previous forecast for FY19 was announced on July 30, 2019.
*2 Scheduled date to pay dividends : December 2, 2019
*3 The revised forecast is calculated before goodwill amortization of Ovako and MSSS.
The previous forecast is calculated before goodwill amortization of Ovako.
*4 Payout Ratio・・・ Dividend / Earnings Per Share

Repurchase of shares and cancellation of treasury stock

①Details of the repurchase

(1) Number of shares to be repurchased	Common stock 1,730,000 shares (maximum) (3.1% of the number of issued shares excluding treasury stock)
(2) Total value of shares to be repurchased	3.0 billion yen (maximum)
(3) Repurchase period	From June 20,2019, to December 23, 2019
(4) Current progress (as of 2019/10/31)	1,360,000 shares (78.6%)

②Details of cancellation of treasury stock

We will cancel 2,930,000 shares in January 31,2020. (5.1% of the number of issued shares before cancellation)

③Total Return

		FY18	FY19 Forecast	
Dividend	Billion yen	2.8	1.4	
Repurchase of Shares		-	2.5(*)	
Total Return to Shareholders		2.8	3.8	
Net Income		7.7	(After amortization of goodwill) 1.6	(Before amortization of goodwill) 4.6
Total Return Ratio	%	36.2	240.1	83.5

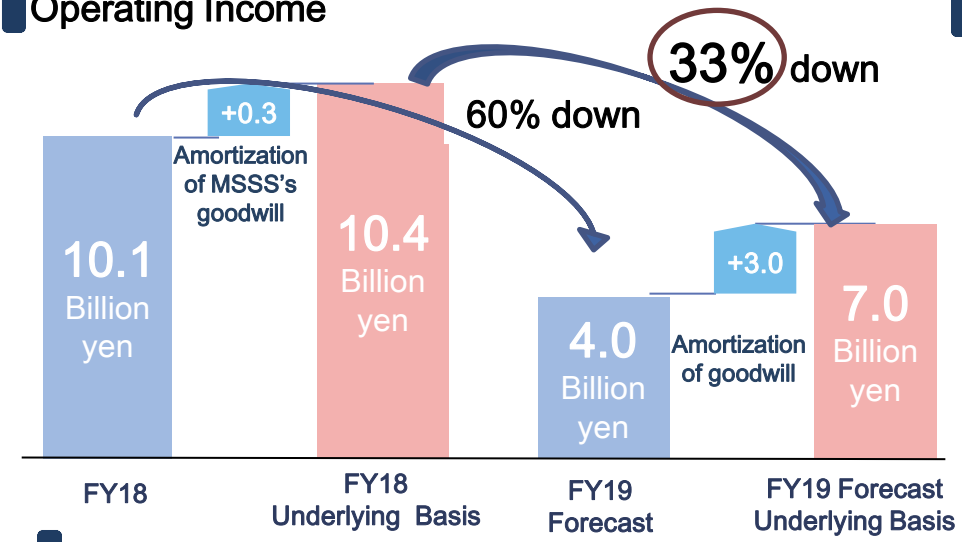
(*) The amount is calculated by a+b

a) the amount paid to be repurchased by the end of October 2019

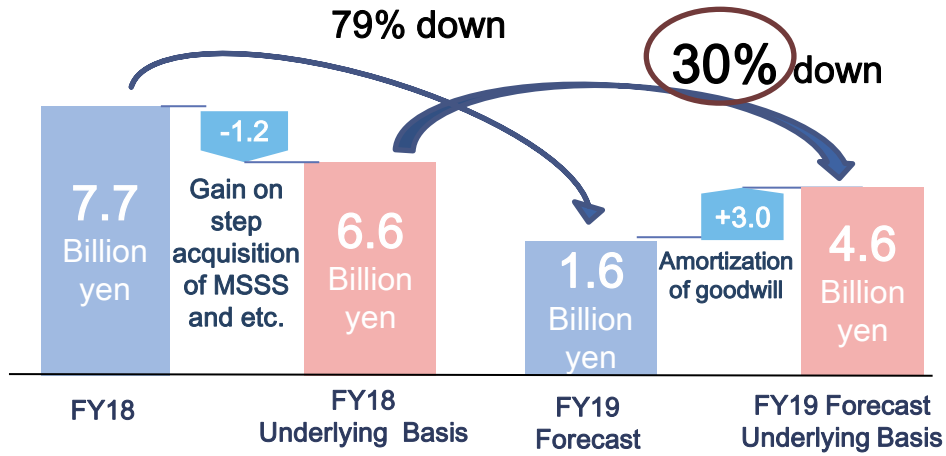
b) 370,000 shares times the stock price at the end of October

E P S & D P S

Operating Income

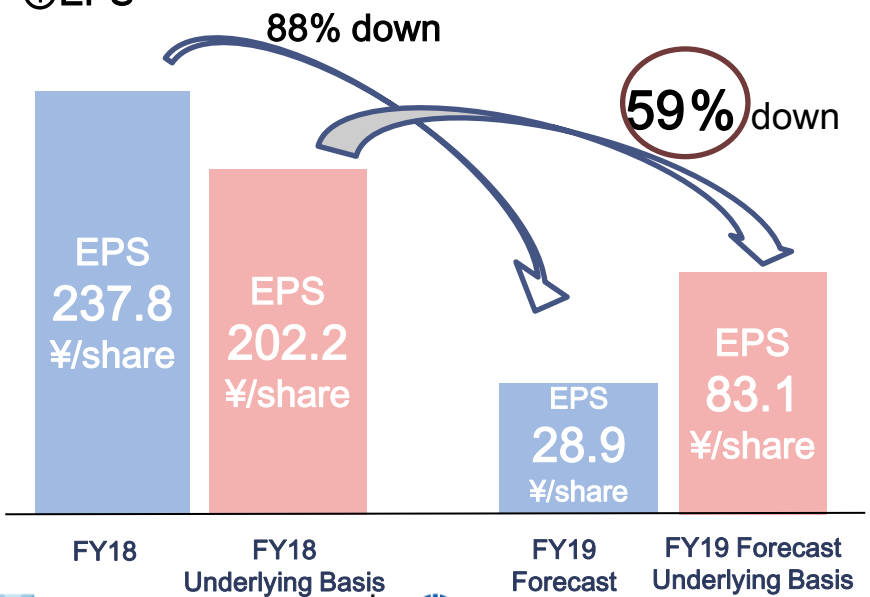


Net Income

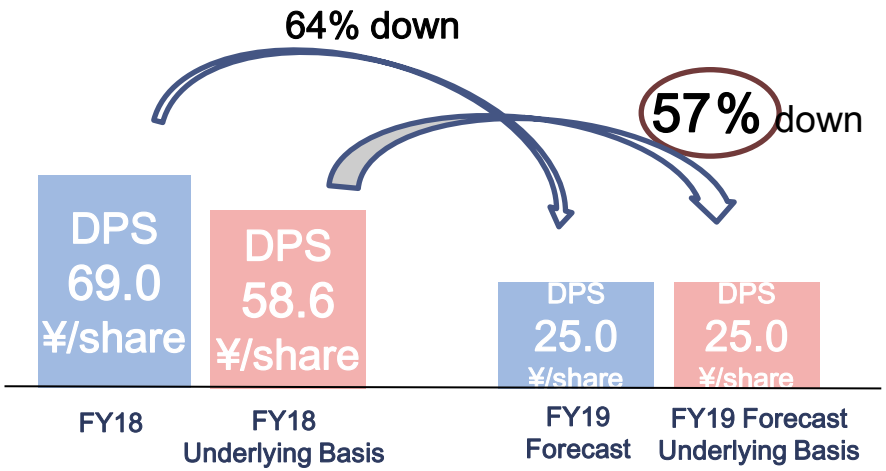


EPS & DPS

①EPS



②DPS



NIPPON STEEL | SANYO SPECIAL STEEL

Sanyo Factory Renovation at No.2 Bar &Wire Rod Mill

We are executing our renovation to eliminate bottlenecks at No.2 Bar &Wire Rod Mill that rolls round steel bars of 16mm to 95mm

Capital Expenditure　FY19：13.5 billion yen　FY20 ：6.0 billion yen

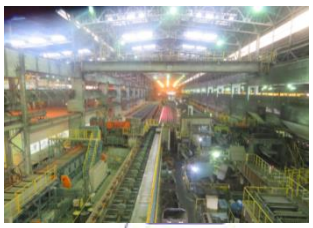
1．Improving productivity at No.2 Bar &Wire Rod Mill
- a) Introduction of RSB rolling mill
- b) Addition of cooling bed and cold shear
- c) Renewal of heating furnace

2．Increasing inspection capability
- d) Making bundling line 2 from 1

Our integrated capacity 12 % increase
90,000 t/month → 100,000 t/month

From 2019/07　3 % increase
From 2020/01　9 % increase
From 2021/01　12 % increase

b) Addition of cooling bed and cold shear from 2020/01



a) Introduction of RSB rolling mill from 2019/07

c) Renewal of heating furnace from 2021/01

d) 2 bundling lines from 2019/07

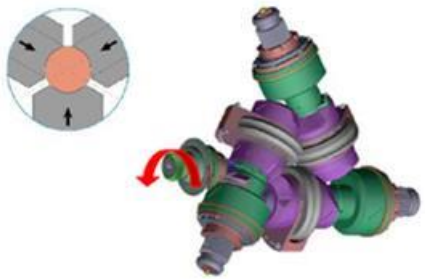
Sanyo Factory Renovation at No.2 Bar &Wire Rod Mill

Introduction of RSB rolling mill from 2019/07

※ RSB(Reducing and Sizing Block) rolling mill manufactured by Kocks in Germany

- Free size rolling at 0.1mm pitch
- Quality improvement by high reduction
  - ⇒ Responding to demand such as heat treatment omission
    Reducing hardness as rolled
    Excellent grain size characteristics
- Decrease of rolling stands due to high reduction and free size rolling reduces process downtime and improves productivity

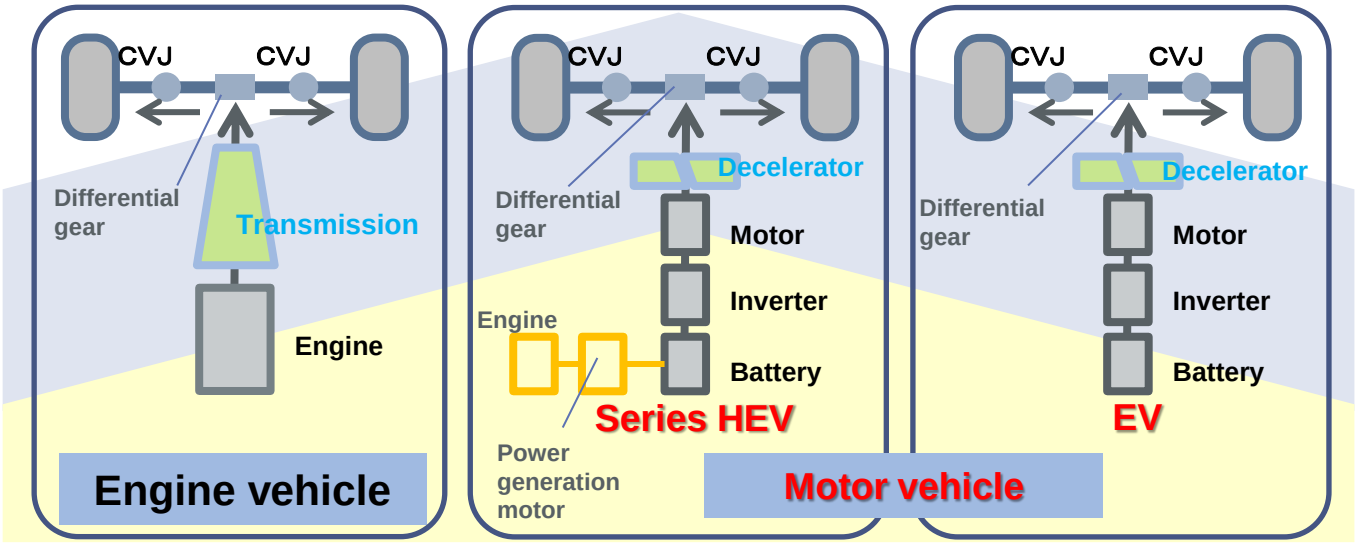
RSB rolling mill



RSB rolling mill roll stand

Our activities to automobile electrification

● Changes and needs in automotive powertrain



Engine driving (engine and transmission type)
⇒Needs arising from the shift to motor driving (motor and decelerator type)

- **Improvement of quietness**
  : Development of steel that contributes to improving gear accuracy
- **Improvement of electricity consumption**
  : Development of highly durable steel that contributes to compact and lightweight design

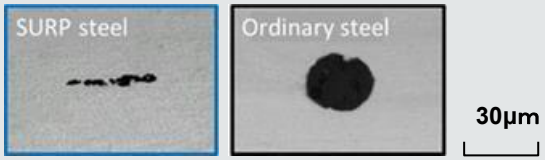
Our activities to automobile electrification

Development of SURP(Sanyo Ultra Refining Process) Steel

Defects (non-metallic inclusions) control technology
in steel cultivated with our original bearing steel
manufacturing technology

↓

★Unprecedented high durability



Comparative example of non-metallic inclusions in case-hardened alloy steel (Maximum diameter observed in 100mm²)

Development of ECOMAX Steel

High performance by alloy design that does not use rare metal such as Ni and Mo

↓

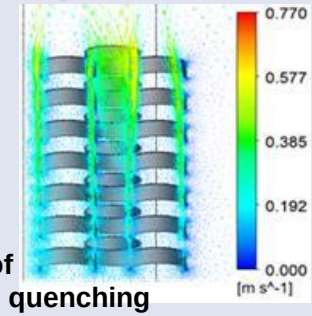
★High durability ⇒Compatible with compact and lightweight design and use in harsh environments
★Reduction of heat treatment distortion ⇒ Improved gear accuracy
⇒ Contributes to improvement of quietness

Development of Heat Treatment Distortion Simulation System

Provide solutions to customers for heat treatment distortion problems
by a combination of heat treatment experiments (using our furnace)
and computer simulations

↓

★Improved gear accuracy
⇒Contributes to improvement of quietness



Simulation example of
oil flow in furnace oil quenching

(Cautionary Statement)

Business forecasts contained in this document are based on the information available at the time of the release of this document, and actual results may differ from these forecasts due to various factors that may occur in the future. The business forecasts should not be interpreted as any commitment to or guarantee of future performance.