TYO : 5401
OTC : NPSCY(ADR)

NIPPON STEEL

Q1 FY2023 Earnings Summary

Aug 4th, 2023

NIPPON STEEL CORPORATION

Notes on this presentation material
- Unless otherwise noted, all volume figures are presented in metric tons.
- Unless otherwise noted, all financial figures are on consolidated basis.
- Unless otherwise noted, net profit represents net profit attributable to owners of the parent.

Agenda

1. Q1 FY2023 Earnings Summary and FY2023 Earnings Forecast

Summary / Additional Line Items, Net Profit / Dividend

2. Establishing a Business Structure that Ensures Stably High Profit Regardless of the External Environment

- Proceeding to Next Phase toward the realization of 100 Mt and ¥1 Tn. Vision -

Strategy / Domestic Steel Business / Overseas Steel Business /
Raw Material Business / Other Group Companies / Three Non-steel Segments

3. Progress in Carbon Neutral Vision 2050

4. HR and PR Initiatives to Recruit from and Retain Diverse Talent

5. Business Environment

6. Other Topics

7. Supplementary Materials for Financial Results

8. Other References

Upward revision of Earnings Forecast despite the continuity of harsh business environment

- While world steel demand remains sluggish, **Nippon Steel achieved a record-high Underlying Business profit of 250.0bn JPY in 1Q FY2023**
- However, even if Nippon Steel does not expect further spread or S&D improvement since FY2022, full-year forecasts for underlying BP for FY2023 is expected to be ¥840.0 bn. or more, surpassing the previous forecast by 40.0 bn. and reaching a new record high as long as no huge plummet of domestic and overseas steel demand happens

	FY 2022	1Q	H1(f)	Vs. prev. forecast as of May 10th	VS H2 FY22	H2(f)	Vs H1 FY23	FY 2023(f)	Vs Prev. forecast as of May 10th	Vs FY2022
Non-consol. crude steel production (Mt)	34.25	8.68	Approx. 17.50	±0	+0.29	Approx. 17.50	±0	Approx. **35.00**	±0	+0.75
Non-consol. steel shipment (Mt)	31.47	8.07	Approx. 16.00	±0	+0.21	Approx. 16.00	±0	Approx. **32.00**	±0	+0.53
FX (USD/JPY)	135	136	Approx.138	8 yen dep.	1 yen app.	Approx.140	2 yen dep.	Approx.139	9 yen dep.	4 yen dep.
Revenue (bn. JPY)	7,975.5	2,199.7	4,500.0	±0	+398.9	4,500.0	±0	9,000.0	±0	+1,024.5
Underlying BP **Excl. Inventory val. Etc.**	**734.0**	**250.0**	**430.0**	+60.0	-4.0	**410.0**	-20.0	**840.0** Record High	**+40.0**	+106.0
Inventory valuation etc.	182.4	(1.3)	(70.0)	+30.0	-10.7	(80.0)	-10.0	(150.0)	±0	-332.4
Consol. business profit (bn. JPY)	**916.4**	248.7	**360.0**	+90.0	-14.7	**330.0**	-30.0	**690.0**	**+40.0**	-226.4
ROS	11.5%	11.3%	8.0%	+2.0%	-1.1%	7.3%	-0.7%	7.7%	+0.5%	-3.8%

Additional Line Items, Net Profit

Upward revision of Net profit by 30.0bn.JPY

Bn. JPY	FY2022	1Q	H1(f)	H2(f)	FY2023(f)	*Vs prev. forecast as of May 10th*	*Vs FY2022*
Consol. Business Profit	916.4	248.7	360.0	330.0	690.0	*+40.0*	*-226.4*
Additional Line Items	**(32.8)**	**-**	**(65.0)**	**(10.0)**	**(75.0)**	***-5.0***	***-42.2***
Net Profit	**694.0** **Record high**	**177.0**	**200.0**	**200.0**	**400.0**	***+30.0***	***-294.0***
EPS (¥/share)	**754**	**192**	**217**	**217**	**434**	***+32***	***-320***
ROE(%)	**18.1%**	**16.6%**					

<Additional Line Items>

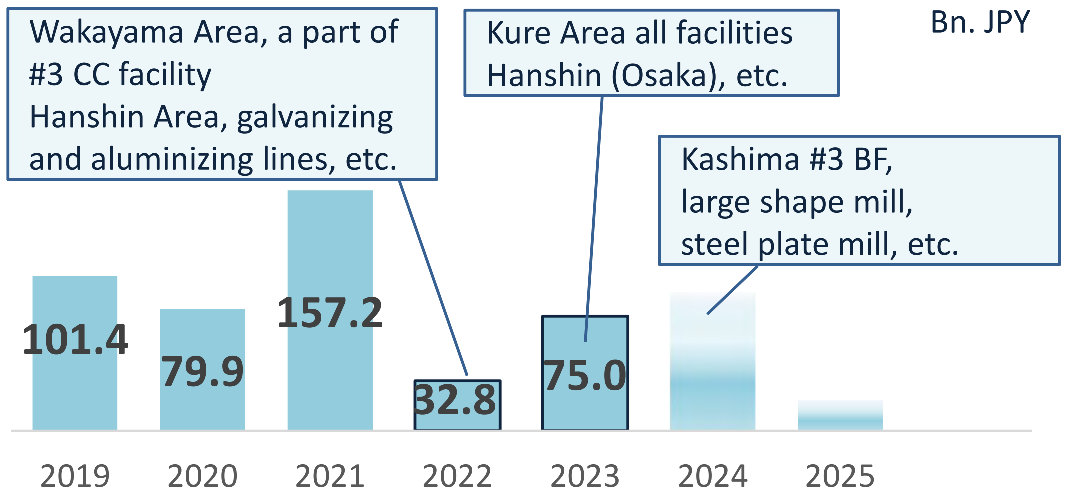
FY2022 : (32.8) bn.JPY

- Losses on inactive facilities: (23.5) bn. JPY
- Losses on business withdrawal: (9.3) bn. JPY

FY2023 : (75.0) bn.JPY

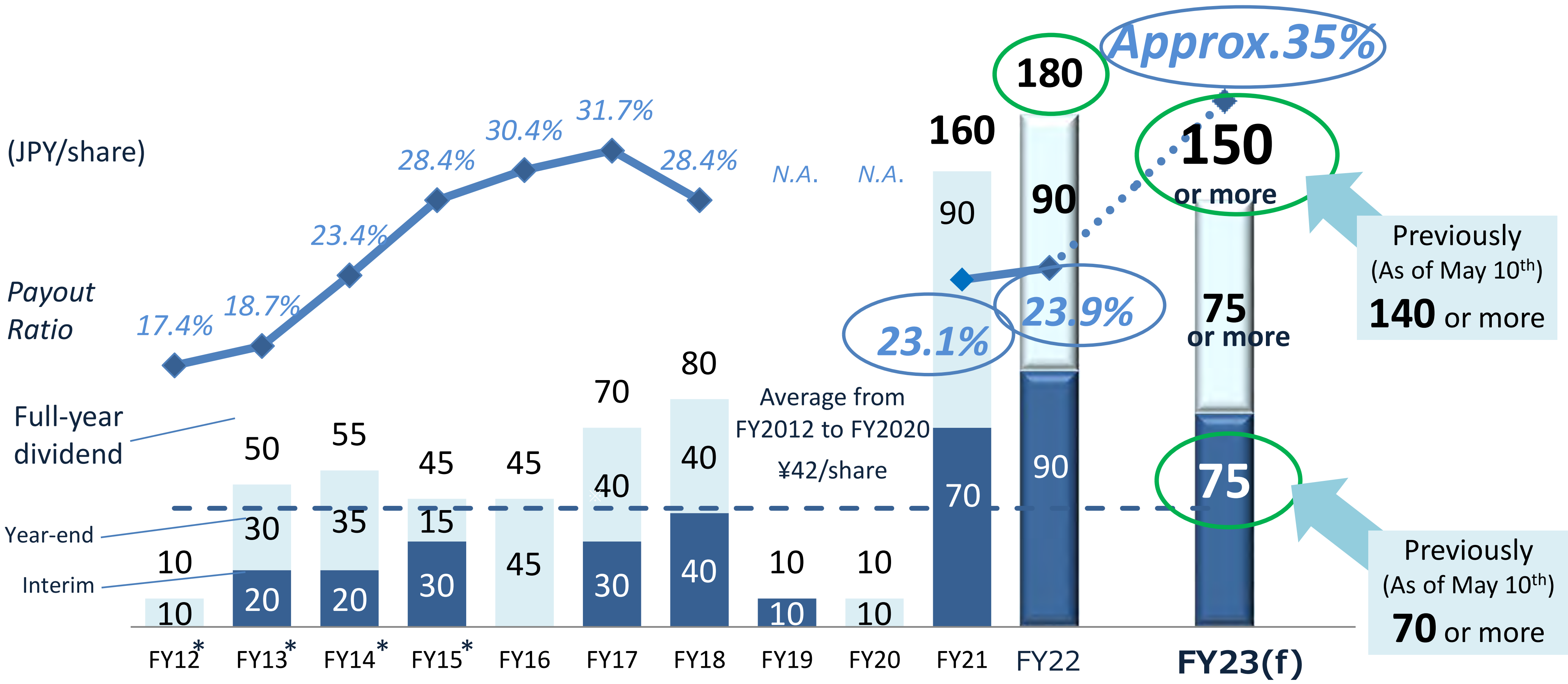
- Losses on inactive facilities: (75.0) bn. JPY

Cf. Losses on Inactive Facilities (including impairment loss (in 2019)



Full-year Dividend

Based on the Company's increase of profit in the earnings forecasts for Fiscal 2023 since the announcement of the previous earnings forecasts on May 10, 2023, **Nippon Steel plans to increase the full-year dividend for Fiscal 2023 by ¥10 from the previous dividend forecasts to ¥150 or more per share (including an interim dividend of ¥75)** with a view to achieving a continuous high-level return to shareholders.

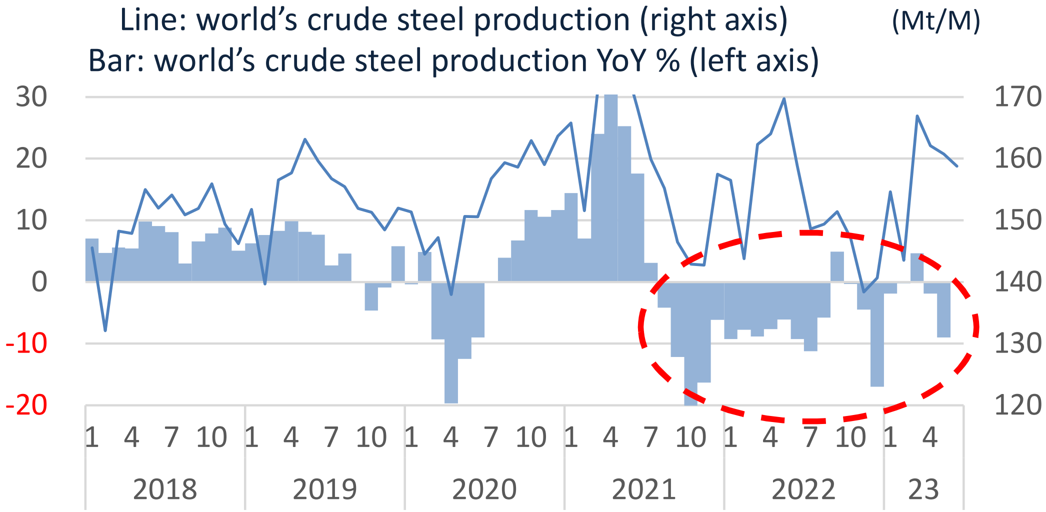


Note: FY12 ~ H1 FY15: adjusted by multiplying by ten, as reverse stock split took place in H2 FY15 (10 share to 1)

Harsh Business Environment Unlikely to Recover

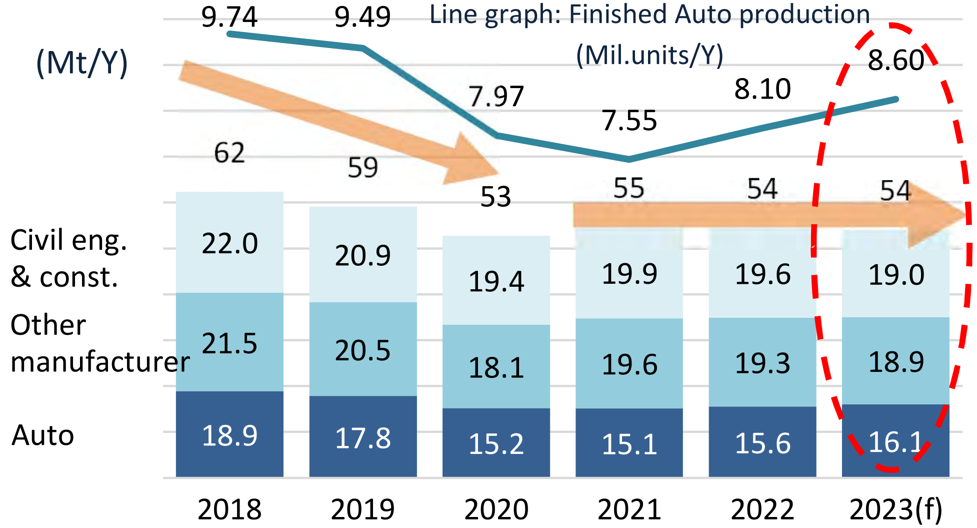
World's crude steel production trend

YoY decline trend continuing since Aug. 2021

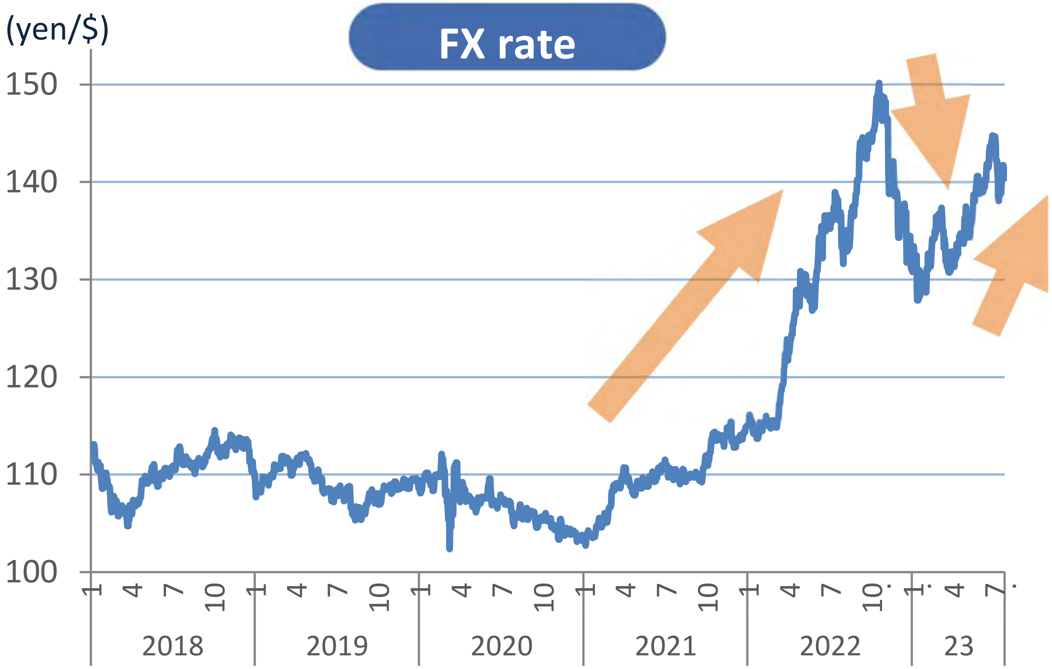


Domestic steel demand

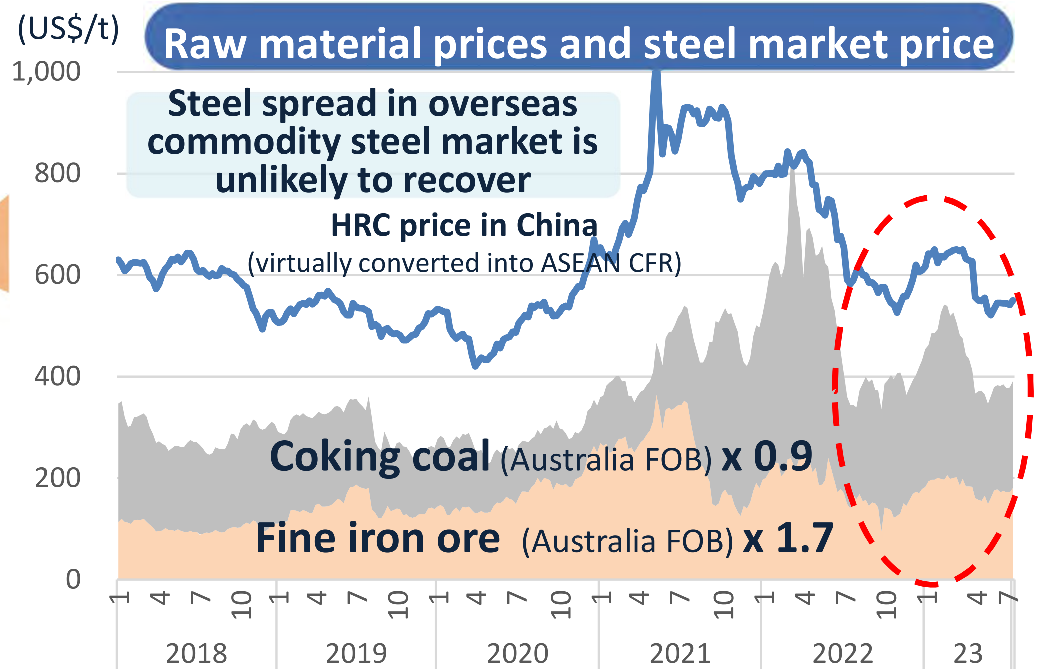
Remains sluggish



FX rate

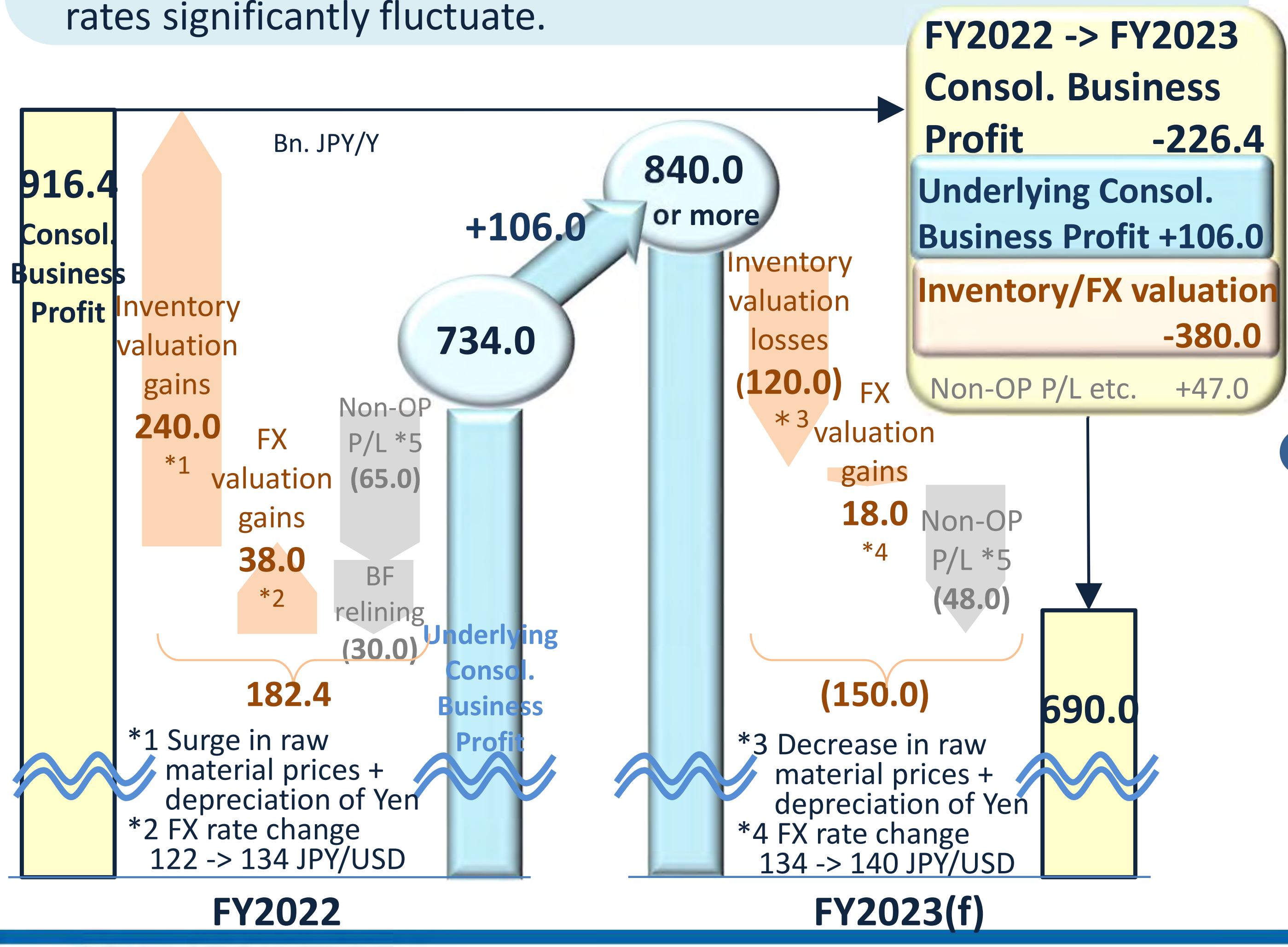


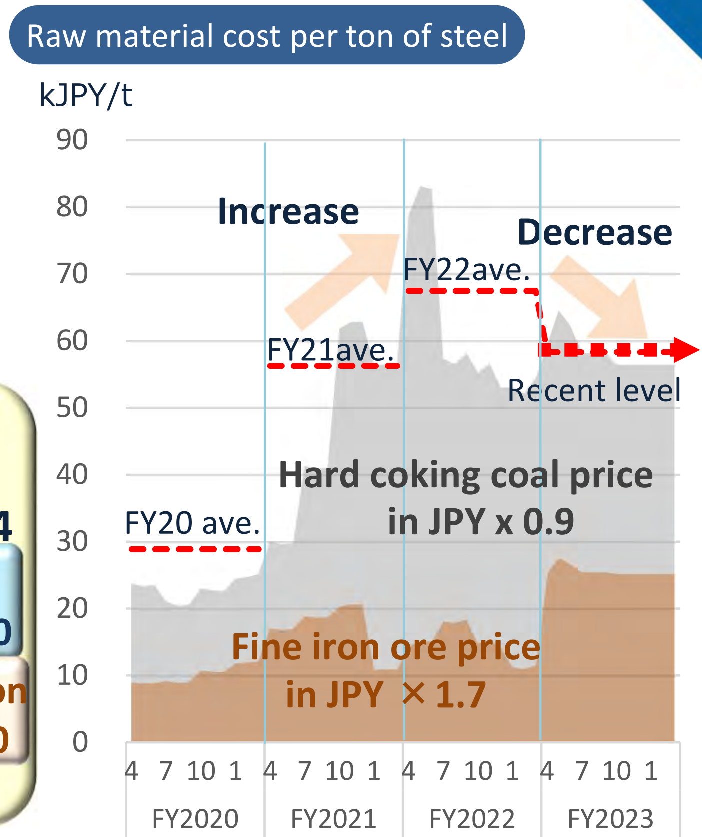
Raw material prices and steel market price

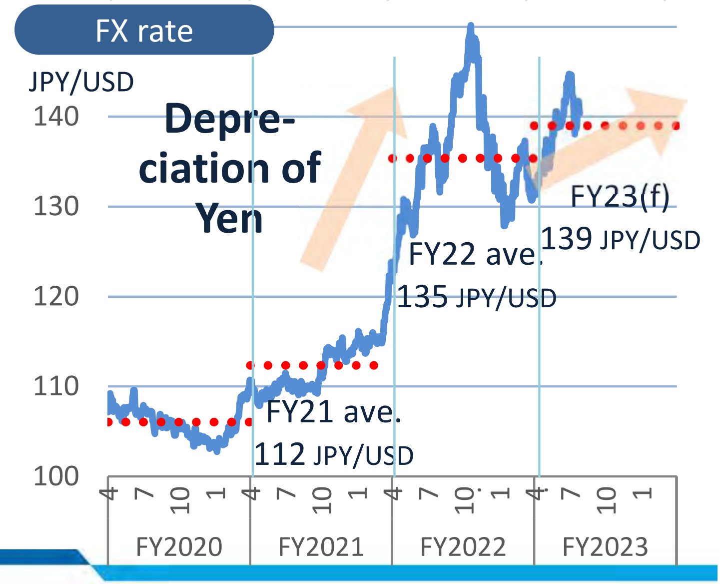


Underlying Profit Growth and the Impact of Inventory Valuations etc.

FY2023 forecast assumes that raw material prices after two years of soaring (mainly of hard coking coal) and sharp appreciation of Yen are expected to be eased. (However, medium-term trend of raw material price increase is not likely to change.)
-> Followed by significant amount of valuation losses aside of companies' underlying profitability (YoY impact of inventory/FX valuations is expected to amount to negative ¥380.0 bn.)
-> **It is more important to manage underlying profit** rather than superficial profit in a situation where raw material prices and FX rates significantly fluctuate.



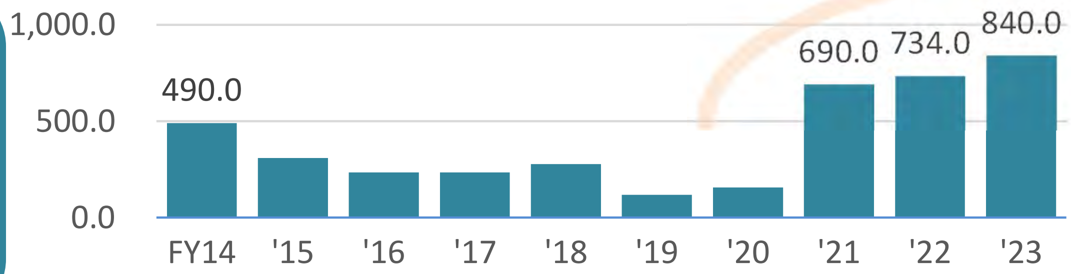




*5 Non-OP P/L: Fixed asset retirement and demolition etc.

P/L Trend Breakdown

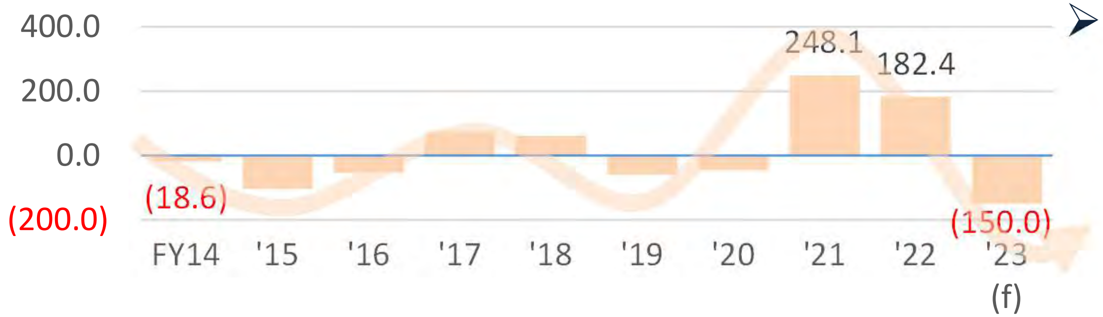
Underlying Business Profit *1



*1 Underlying Ordinary Profit (~FY17 JGAAP)

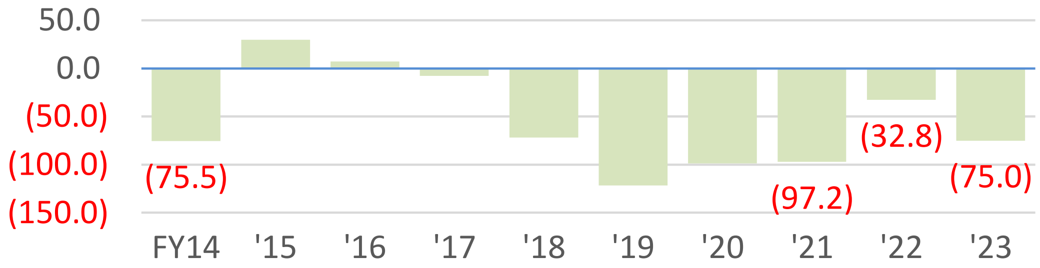
- Established stably and highly profitable structure
- Promoting additional measures to realize further growth

Inventory Valuation etc.



- Non-cash items such as valuation gains/losses on inventories and foreign currencies that offset themselves in the long term have varied drastically in these three years

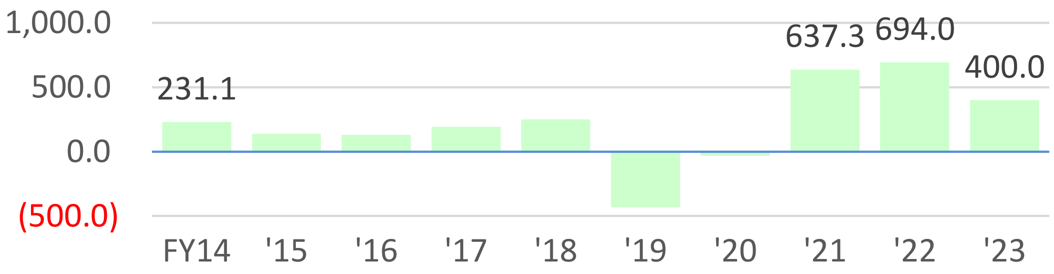
Additional Line Items *2



*2 Extraordinary Profit/Loss (~FY17 JGAAP)

- Certain amounts of one-off losses on structural measures continue to be incurred until FY2024

Profit/Loss Attributable to Owners of the Parent*3



*3 ~FY17 JGAAP : Net profit or loss

(FY14 to FY17: JGAAP, From FY18: IFRS)

(FY14 to FY16: Ex-Nisshin Steel included)

FY2023 Underlying Consol. Business Profit Variance

*1 excluding effect of BF relining
*2 including impact from FX rate fluctuation

Unit: bn. JPY

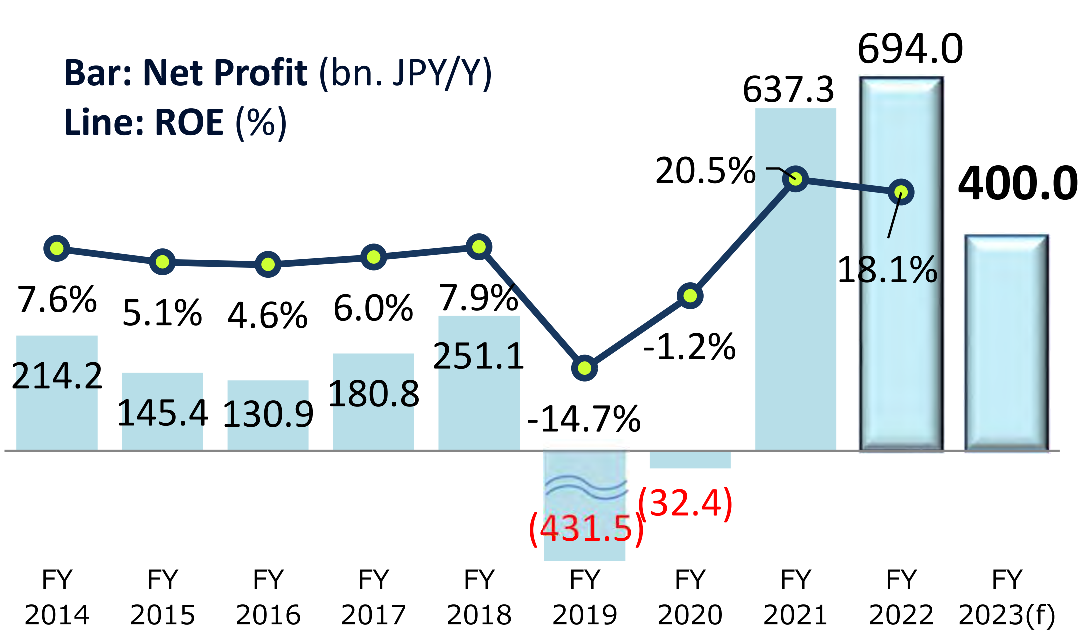
	FY2023(f) as of May. 10 to FY2023(f)	H2 FY2022 to H1(f) FY2023	H1(f) FY2023 to H2(f) FY2023	FY2022 to FY2023(f)
Consol. Business Profit Variance	**+40.0** <650.0 to 690.0>	**-14.7** <374.7 to 360.0>	**-30.0** <360.0 to 330.0>	**-226.4** <916.4 to 690.0>
Inventory Valuation etc.	-	-10.7	-10.0	-332.4
Underlying Business Profit Variance	**+40.0** <800.0 to 840.0>	**-4.0** <434.0 to 430.0>	**-20.0** <430.0 to 410.0>	**+106.0** <734.0 to 840.0>
Domestic Steel Business	+50.0	+8.0	-40.0	+108.0
Volume *1 [in(de)crease of shipment volume]	- [- Mt }	+10.0 [+0.21Mt]	- [- Mt]	+5.0 [+0.13 Mt]
Spread *2 (Sales price, mix, raw material price) <per ton of steel> [FX rate]	+50.0 <+2 kJPY/t> [9 yen dep.]	-20.0 <-1 kJPY/t> [1yen app.]	-60.0 <-4 kJPY/t> [2 yen dep.]	+50.0 <+2 kJPY/t> [4 yen dep.]
Cost Reduction	-	+10.0	+10.0	+50.0
Others	-	+8.0	+10.0	+3.0
Overseas Steel Business	-	+33.0	-10.0	+25.0
Raw Material Business	-10.0	-15.0	-5.0	-27.0
Other Group Companies	+5.0	-16.0	+15.0	+10.0
Three Non-steel Segments	-9.0	-9.0	+13.0	-11.0
Others	+4.0	-5.0	+7.0	+1.0

FY2023 Earnings Forecast

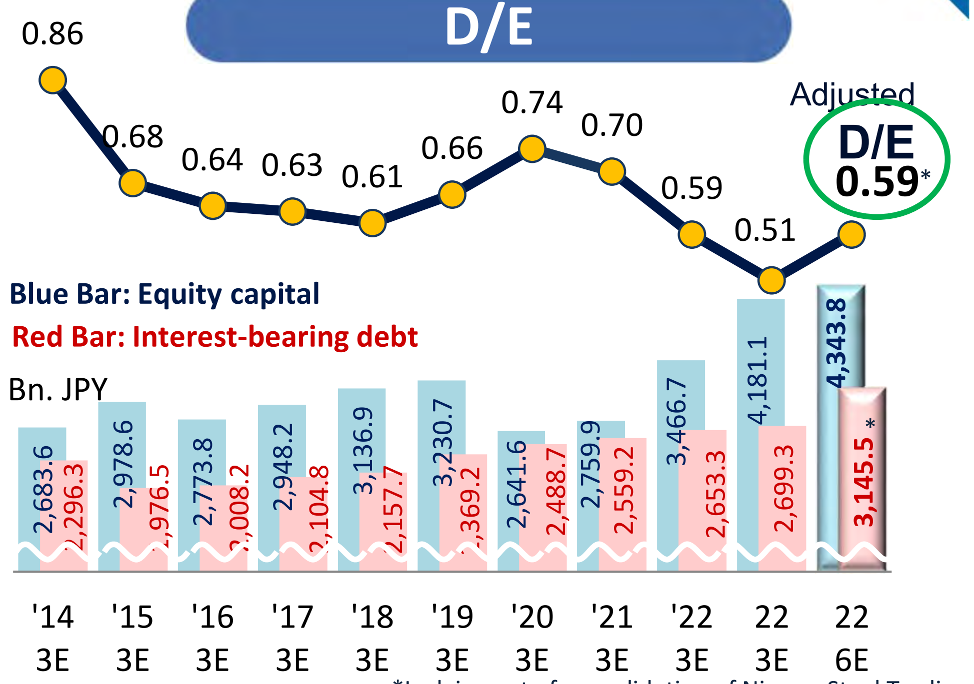
(Bn. JPY)	FY2022	H1 (f)	H2 (f)	FY2023 (f)	Vs. Prev. forecast as of May 10th	Vs FY2022
Consol. business profit	**916.4**	**360.0**	**330.0**	**690.0**	*+40.0*	*-226.4*
ROS	11.5%	8.0%	7.3%	7.7%	*+0.5%*	*-3.8%*
Underlying business profit	**734.0**	**430.0**	**410.0**	**840.0**	*+40.0*	*+106.0*
ROS	**9.2%**	**9.6%**	**9.1%**	**9.3%**	*+0.4%*	*+0.1%*
1) Domestic steel business	222.0	**185.0**	**145.0**	**330.0**	*+50.0*	*+108.0*
2) Overseas steel business	95.0	**65.0**	**55.0**	**120.0**	-	*+25.0*
3) Raw material business	142.0	**60.0**	**55.0**	**115.0**	*-10.0*	*-27.0*
4) Other group companies	205.0	**100.0**	**115.0**	**215.0**	*+5.0*	*+10.0*
5) Three Non-steel segments	60.0	**18.0**	**31.0**	**49.0**	*-9.0*	*-11.0*
Inventory valuation, etc.	182.4	(70.0)	(80.0)	(150.0)	-	*-332.4*

Net Profit, ROE, Financial Health Indicators

Net Profit, ROE

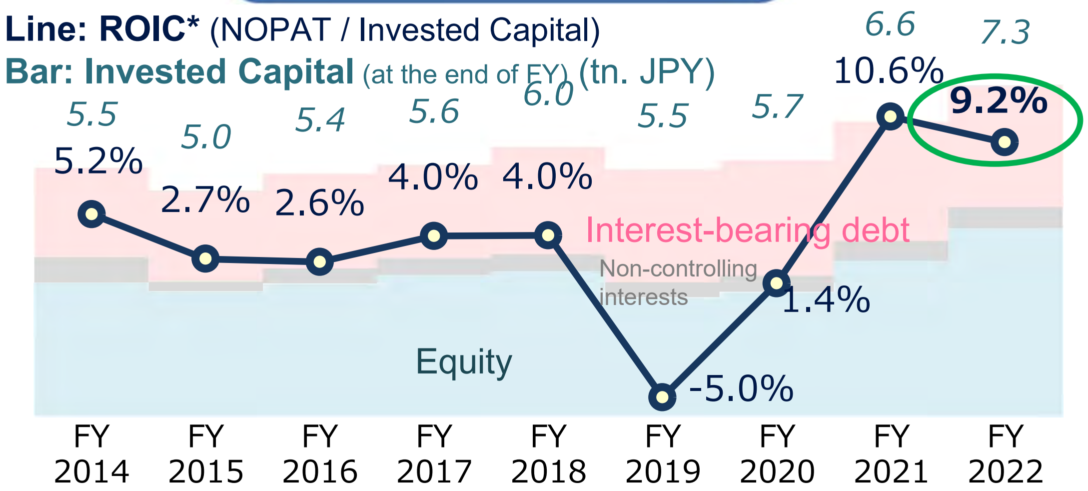


D/E



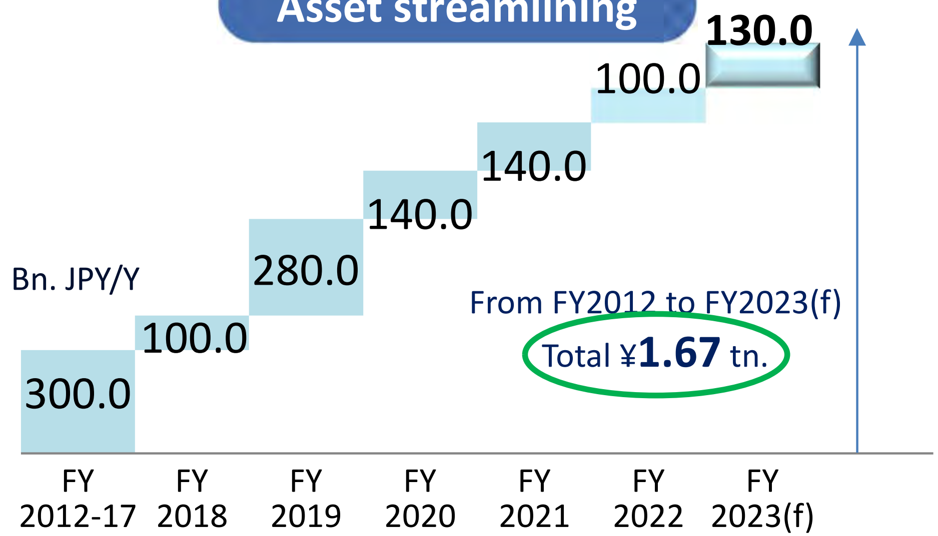
*Incl. impact of consolidation of Nippon Steel Trading
->Interest-bearing-debt:+430.0bn.JPY / D/E : +0.10

ROIC, Invested Capital



* NOPAT= business profit x (1 – effective tax rate)
Invested Capital(*1) = Total equity attributable to owners of the parent + Non-controlling interests + Interest bearing debt
(*1) the average of the beginning and end of the period

Asset streamlining

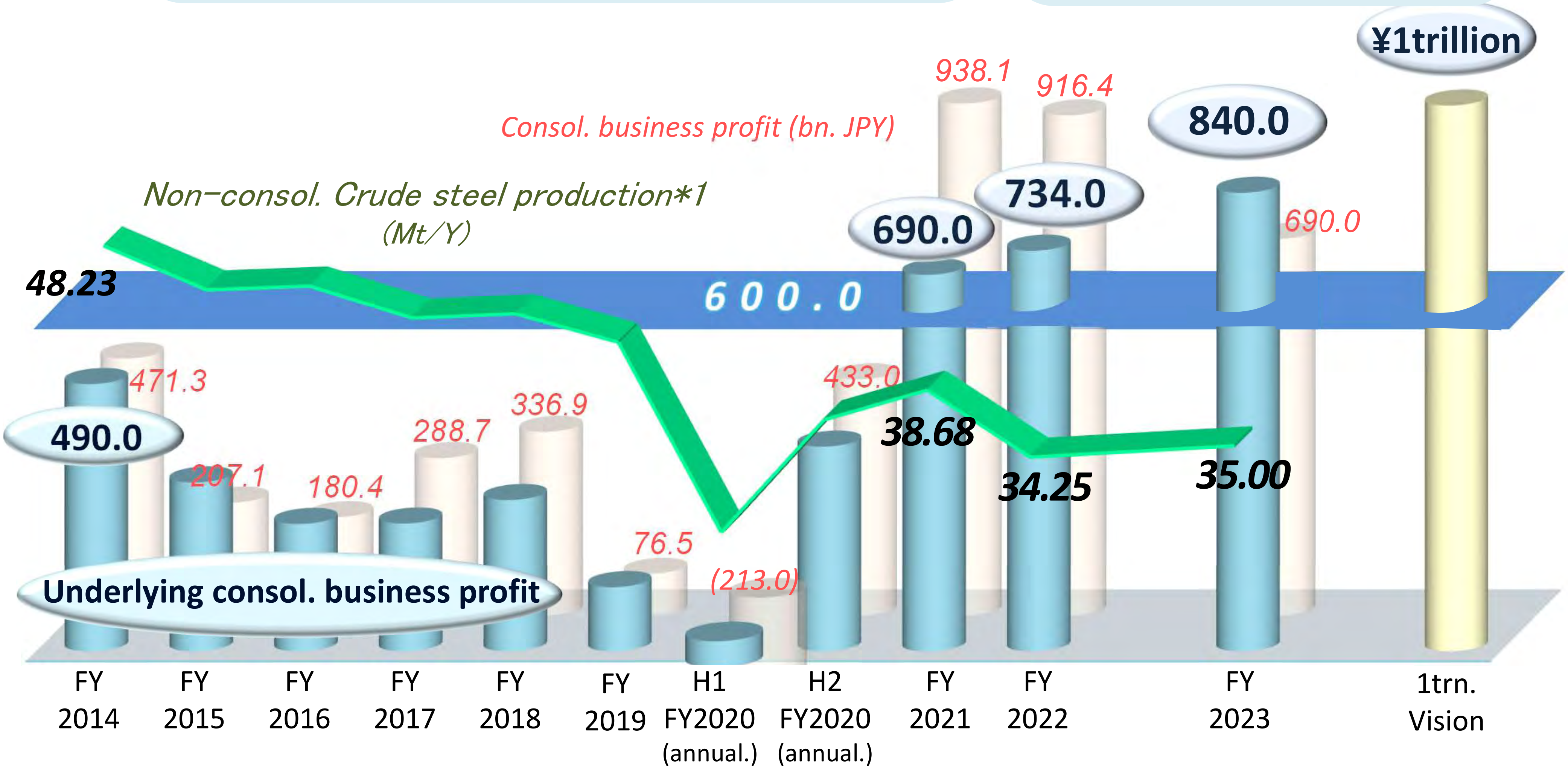


Agenda

Toward the realization of ¥1 trillion underlying consol. business profit and 100 Mt/Y of global crude steel capacity

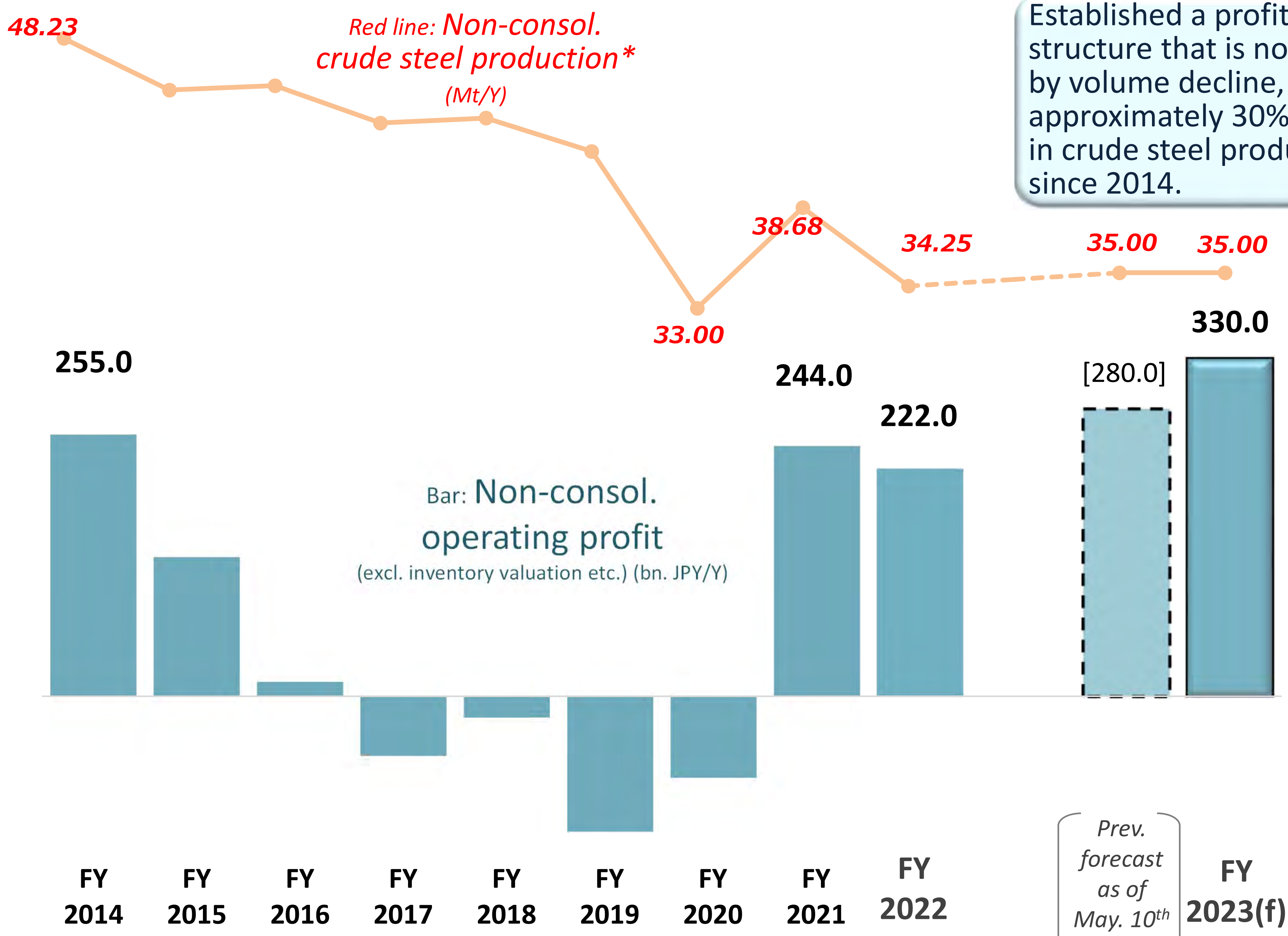
Nippon Steel has already secured a profit structure that ensures **underlying business profit of ¥600.0 bn.** regardless of the externalities

Proceeding to the next phase toward the realization of 100 Mt and ¥1 tn. model



Establishment of a Resilient Business Portfolio that Ensures Sustainable Growth

Domestic Steel Business P/L Trend (Underlying Basis)



Established a profitable structure that is not affected by volume decline, amid approximately 30% decline in crude steel production since 2014.

*Before and in FY2019: ex-Nisshin Steel Kure Area and Hanshin Area included

Drastic improvement in Break Even Point

To establish a business structure that ensures stably high profit regardless of the external environment by drastically lowering the break even point

1) Sophistication of order mix

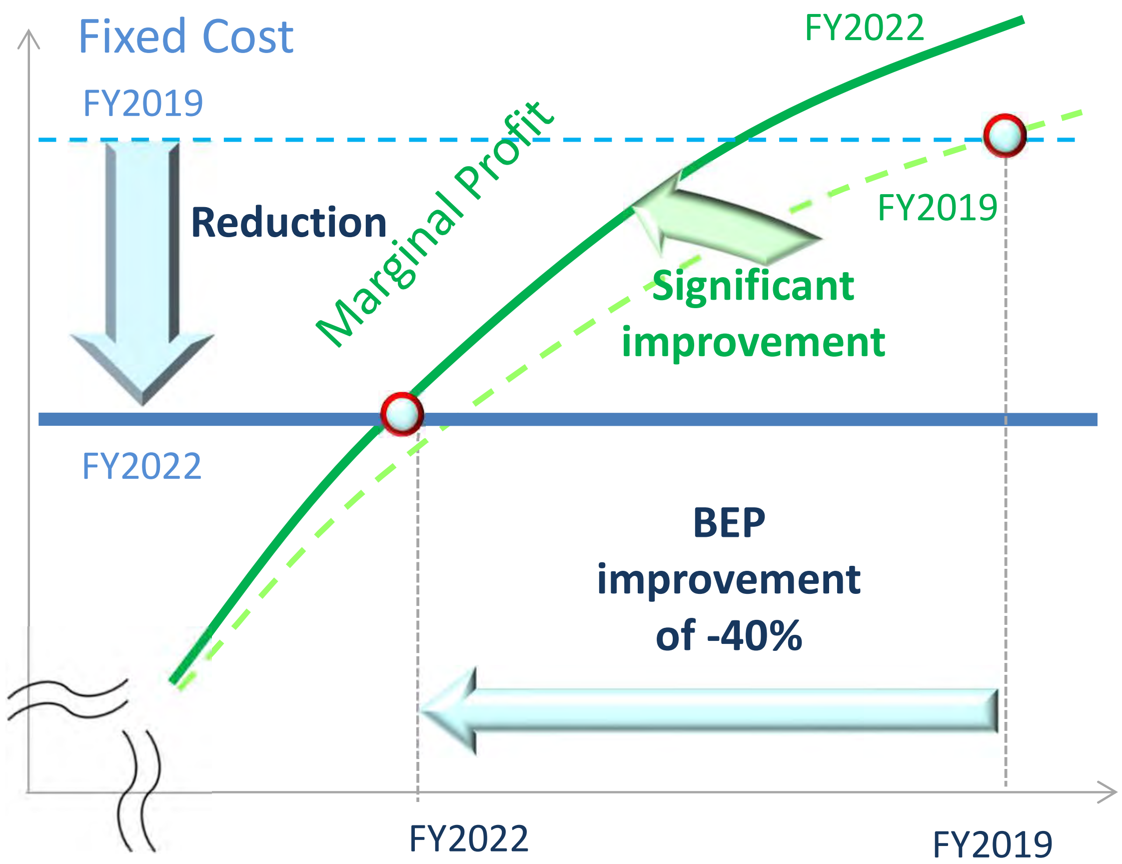
2) Margin improvement in direct contract sales

3) Facility structural measures

Improvement in marginal profit

Significant reduction in fixed cost

Drastic improvement in BEP



Drastic improvement in Break Even Point

1) Sophistication of Order Mix

Response to increasing demand for high grade steel including Electric Steel Sheet or Ultra High-tensile steel Sheet

- Improvement of production capacity and product quality of Electrical Steel Sheets
  ->Full-capacity operation: starts in H1 FY2023
- Establishment of next-generation hot strip mill
  ->Start of operation: Q1 FY2026 (planned)

High-value added products | **Commodities**

High-value added products | **Commodities**

Production Capacity approx. -20%
->Selective concentration on certain products

2) Margin improvement in direct contract sales

FY 2021

Realized appropriate level of margin by continuously asking customers for;
- **Substantial correction of steel prices** which had been relatively low revel compared with international peers
- **A fair allocation of cost burden** for raw materials and commodities
- **Reflection in steel prices of our high value-added product qualities and solutions**

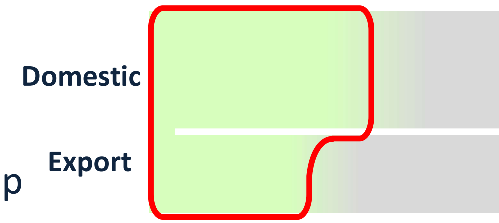
FY 2022

Changed in price negotiation system for direct contract-based sales;
- from retroactive basis to **pre-fixed basis**
- **Renovation in contract terms** in direct contract sales

FY 2023

Secure appropriate prices and margins while raw material prices drop

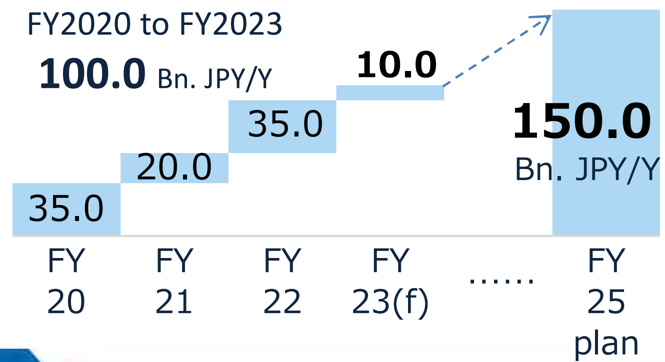
cf. Outline of shipment mix



3) Facility Structural Measures

	At the end of FY2022	At the end of FY2024	
Total number of domestic BFs	**15 -> 11 ->**	**10** Units	**-5** Units
Annual crude steel production capacity (Non consol. + Nippon Steel Stainless Steel)	**50 -> 43 ->**	**40** Mt/Y	**-20%**

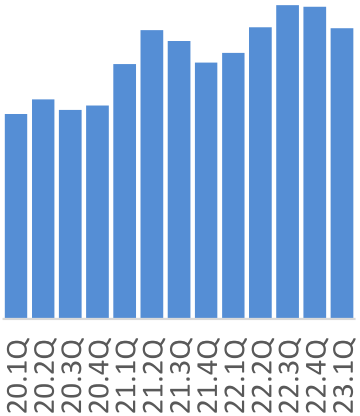
Cost reduction



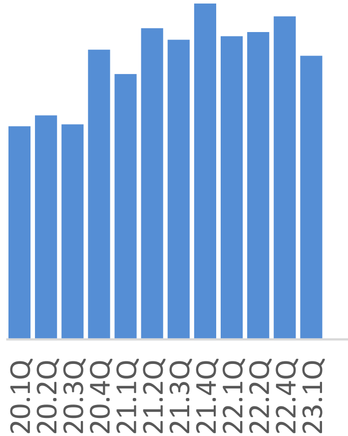
Sophistication of Order Mix (Examples of High-value Added Products)

Steadily increasing the number of high value-added products

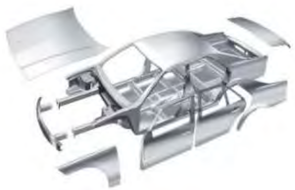
GO Hi-B (High grade grain-oriented electrical steel sheet)

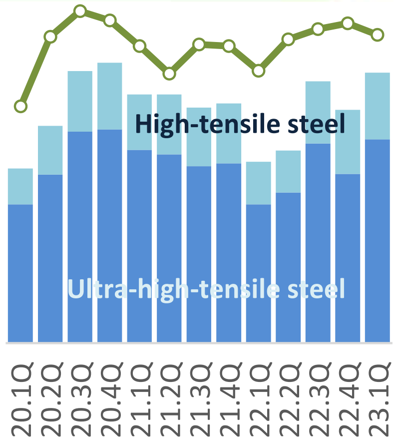


NO-H, M (High or Middle grade non-oriented electrical steel sheet)

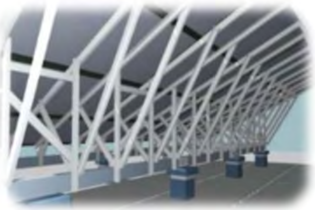


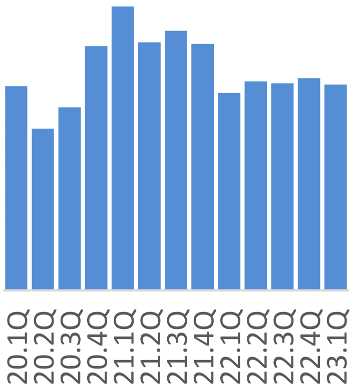
High-tensile GA (Alloyed & galvanized steel sheet)



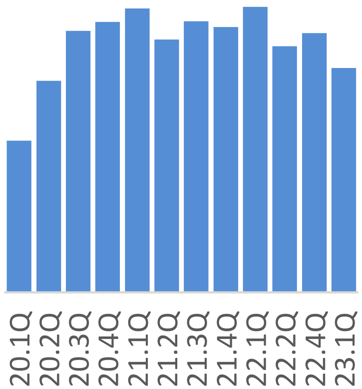


ZEXEED™, ZAM®, SuperDyma™ (Corrosion resistant coated steel sheet)

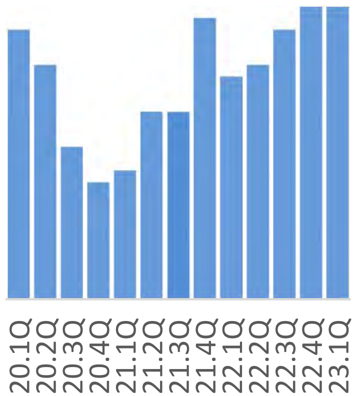




ALSHEET™ (Hot-dipped Al/Si alloy steel sheet)

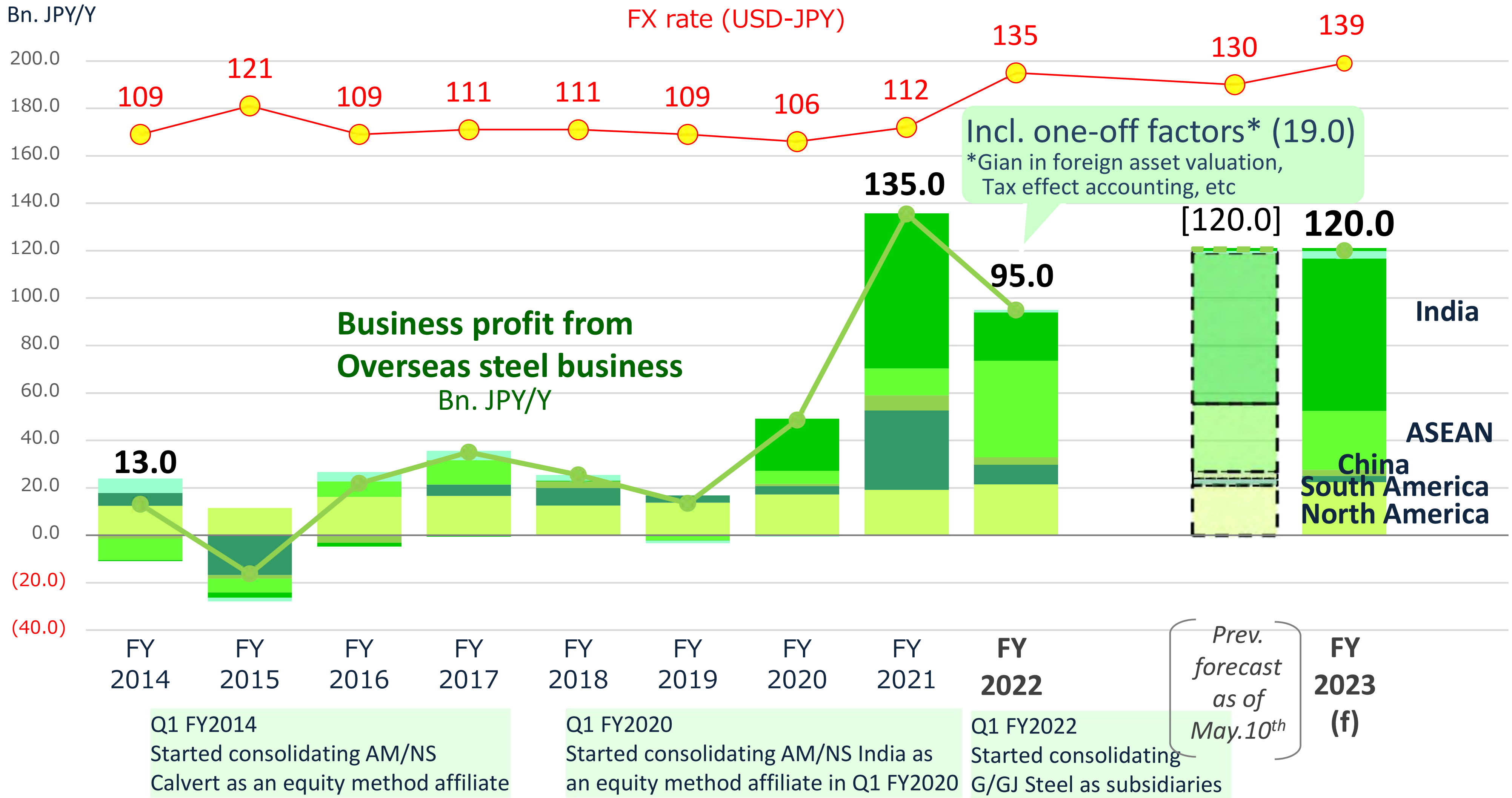


13Cr, high alloy seamless pipe



Overseas Steel Business P/L Trend (Underlying Basis)

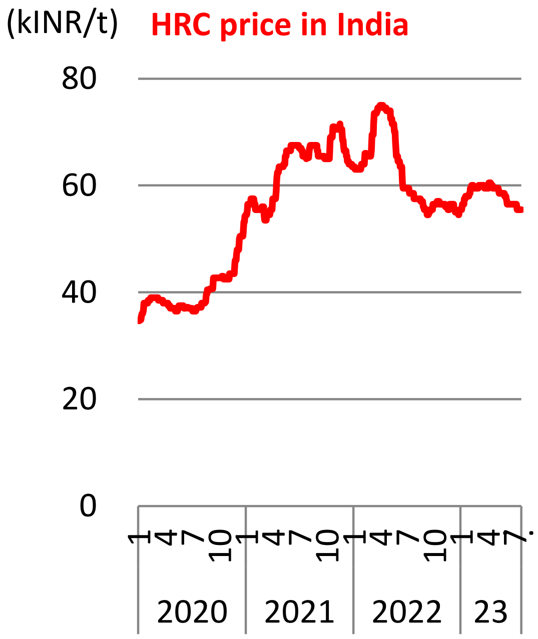
Underlying Business Profit is expected to increase due to Indian market recovery and cost reduction by use of key infrastructure assets acquired by AM/NS India as well as removal of one-off factors in FY2022

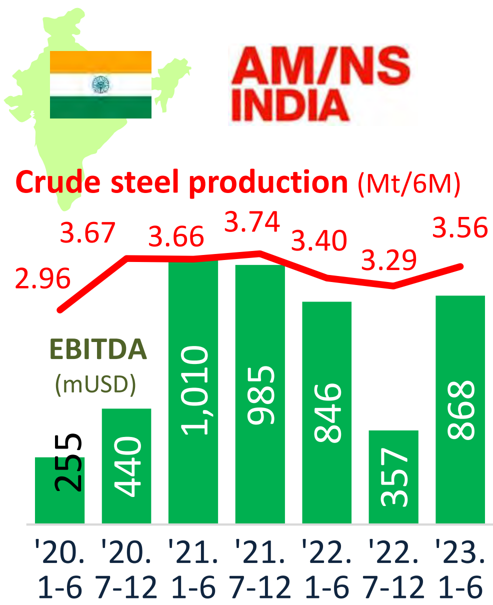


Ordinary profit (subsidiaries) + share of profit in investments accounted for using equity method (equity method affiliates), both underlying profit excl. inventory valuation

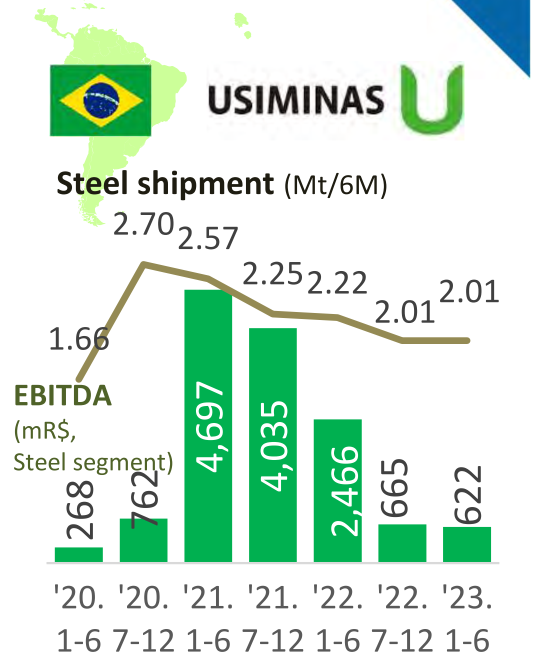
Note. Most of overseas businesses are operated in Jan.-Dec. term and consolidated to Nippon Steel's Apr. -Mar.

EBITDA Trends of Main Overseas Businesses

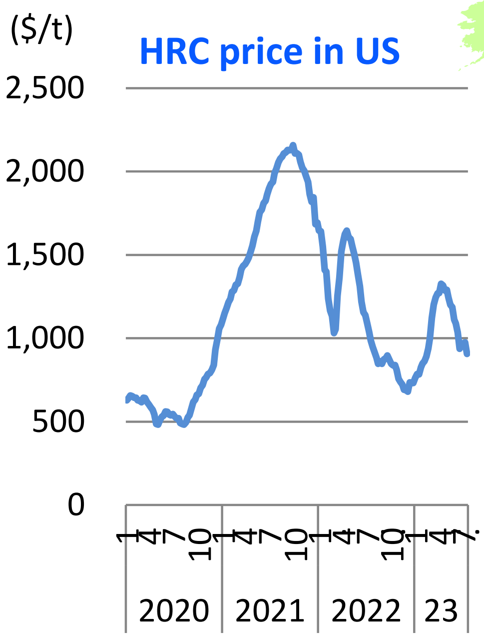


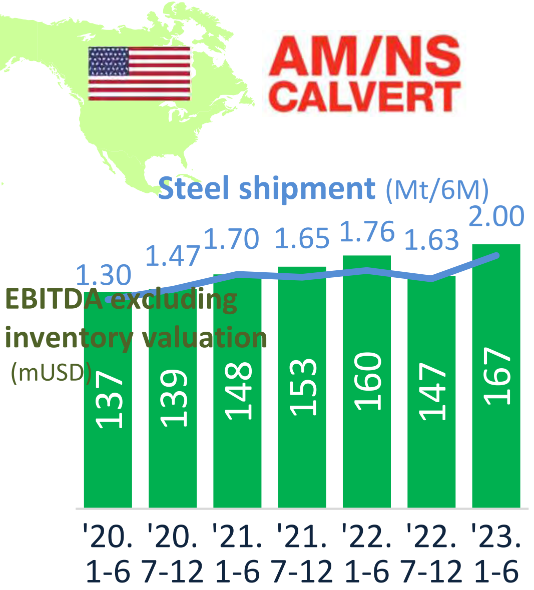


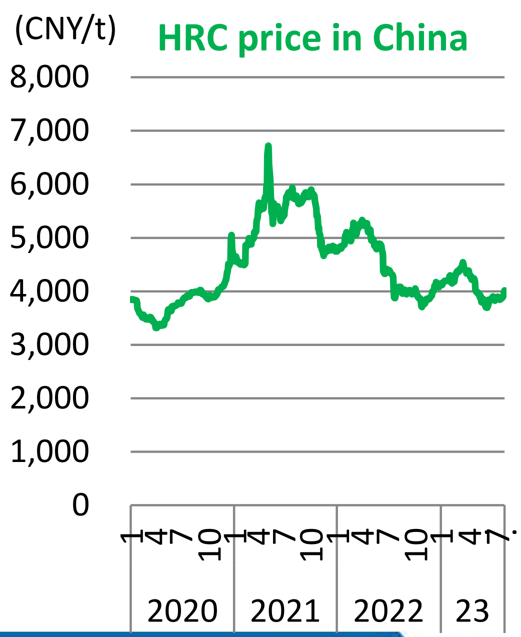
- Recovery in demand and market prices
- Gain in sale of excess inventory of natural gas (in hedged price)
- Cost reduction by use of key infrastructure assets acquired

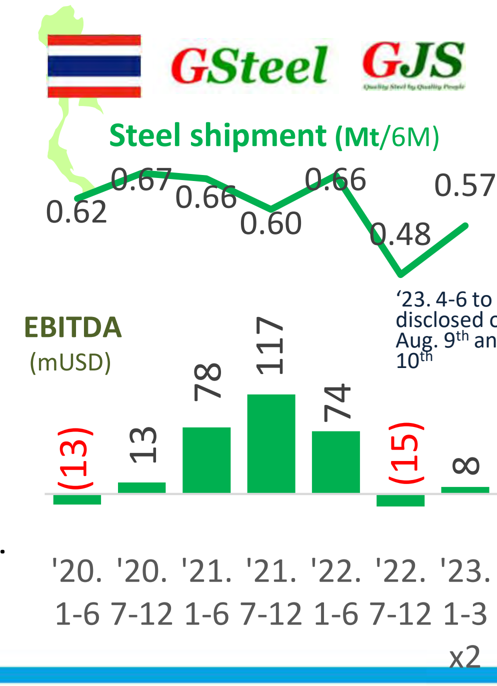


'21.1-6 and '21.7-12 include 1,414 and 666 tax refund etc., respectively.









'23. 4-6 to be disclosed on Aug. 9th and 10th

Overseas Steel Business

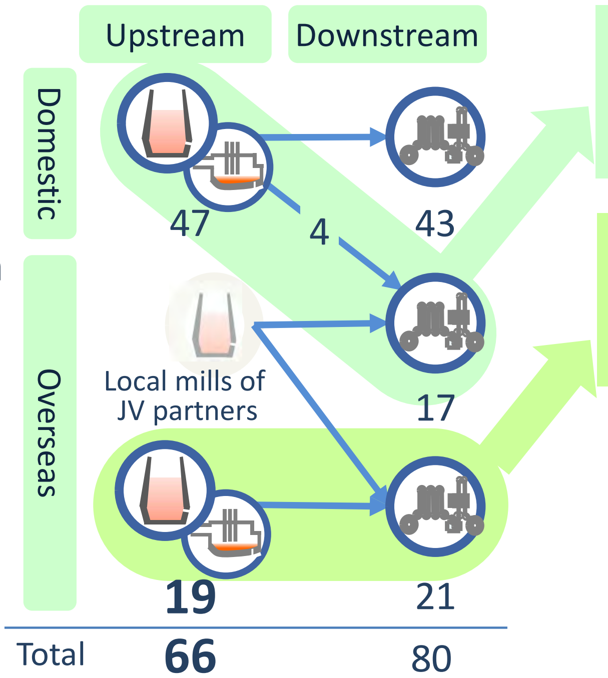
Improvement of profitability by deepening and expanding overseas business

- Completed withdrawal from unprofitable businesses
- Established integrated steel mills in five major overseas markets
  -> toward the vision of "Global Crude Steel Capacity 100Mt"

Global Steel Production Capacity*

As of Mar. 2023

Unit: Mt/Y

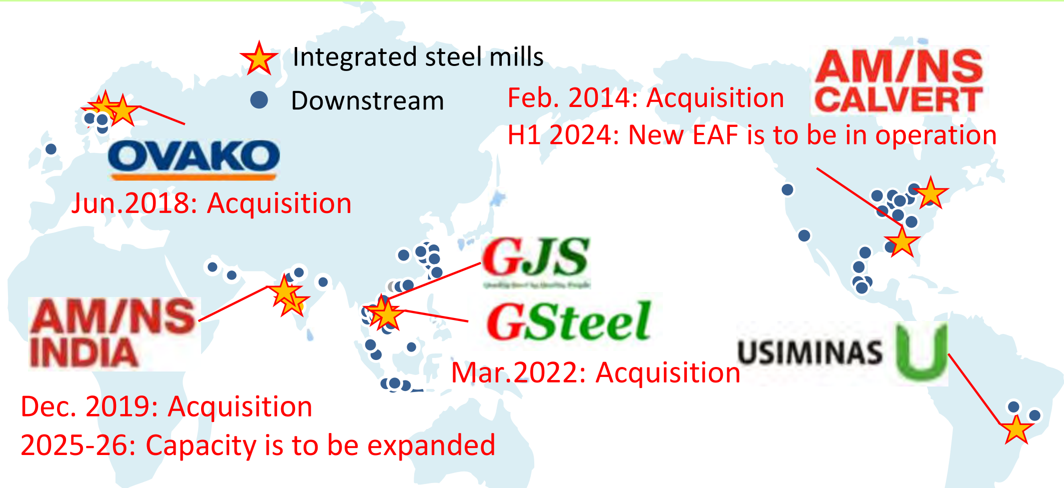


Downstream

Responding to local demand for high-grade steel products from Japanese customers extending their business overseas

Integrated steel mills

Aiming at thoroughly capturing overseas local demand for steel and added-value of the integrated steel-making process



Shift of Global crude steel capacity

	2014	2022	Long-term Vision
Domestic	52	47	
Overseas	6	19	Approx. 60
Total	58	66	Approx. 100

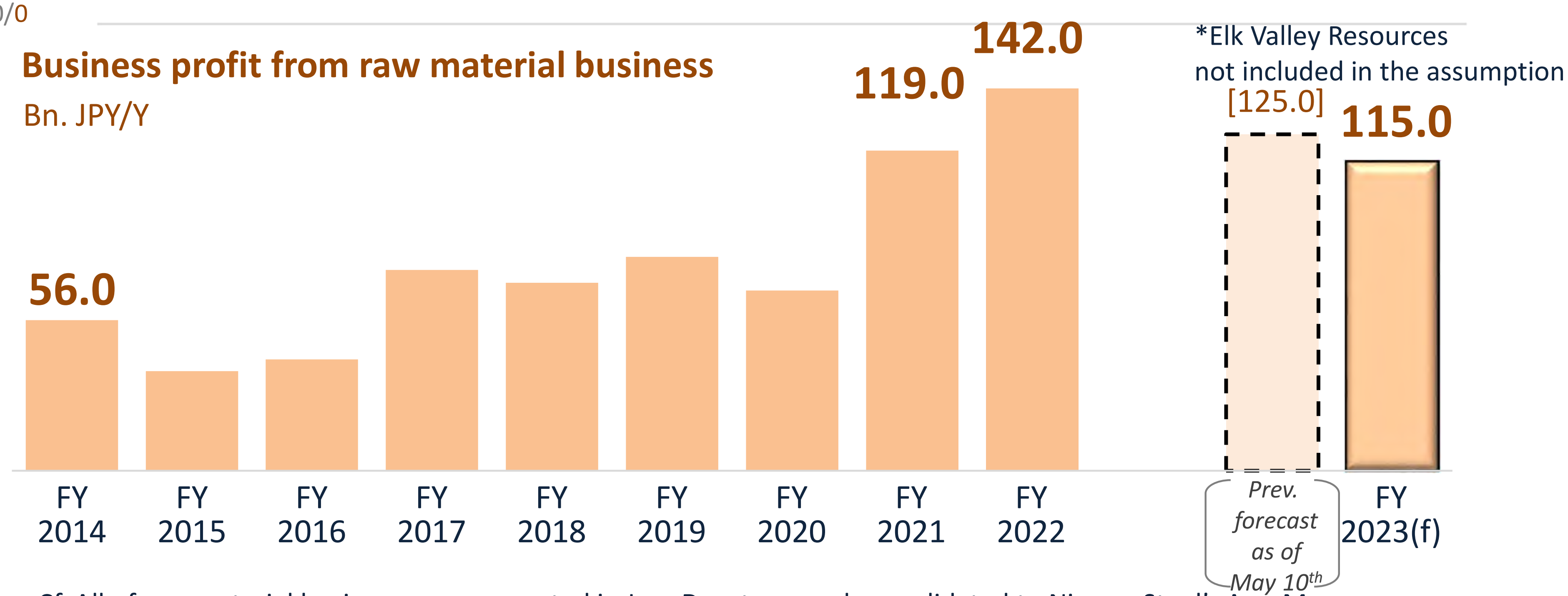
Further progress toward the vision of Global Crude Steel Capacity 100Mt

- Further capacity expansion in AM/NS India
- Further vision of M&A, equity participation or expansion of existing steel mills

*In addition to capacities of 30-50% ownership companies(incl. USIMINAS) as defined by Worldsteel Association, equity method affiliates less than 30% ownership (AGIS) are both included on a 100% capacity basis.

Raw Material business P/L Trend (Underlying Basis)

- Profit has remained high due to high raw material prices and enhanced cost competitiveness associated with depreciated AUD to USD etc.
- Profit of FY2023 forecast is expected to drop due to lower coking coal price than estimated in the previous forecast



Cf. All of raw material businesses are operated in Jan.-Dec. term and consolidated to Nippon Steel's Apr.-Mar.

Vertical Expansion of the Core Businesses

- Establishing stable procurement structure and easing fluctuation in operating profit of domestic steel business caused by raw material cost variance
- Aiming further growth in the ratios of raw materials procured from invested mines

Currently Investing Mines

			Year participated	Equity ratio	Major shareholder	Capacity Mt/Y
Iron ore, pellet	Australia	Robe River	1977	14.0%	Rio Tinto 53.0%	70
	Brazil	NIBRASCO	1974	33.0%	VALE 51.0%	10
Coal	Australia	Moranbah North *1	1997	6.25% *2	Anglo American 88.0%	12
		Warkworth	1990	9.5%	Yancoal 84.5%	8
		Bulga	1993	12.5%	Glencore 85.9%	7
		Foxleigh	2010	10.0%	Middlemount South70.0%	3
		Boggabri	2015	10.0%	Idemitsu Kosan 80.0%	7
		Coppabella and Moorvale	1998	2.0% *2	Peabody 73.3%	5
	Canada	Elkview	2005	2.5%	Teck Coal 95.0%	7
Others(Niobium)	Brazil	CBMM	2011	2.5%	Moreira Salles 70.0%	0.15

Carbon Neutral production processes will require a certain amount of coking coal

	Ratios of raw materials procured from invested mines	Total procurement (FY2021)
Iron ore	Approx. 20%	58 Mt
Coal	Approx. 20%	27 Mt

-> Aiming further growth in the ratios of raw materials procured from invested mines

*1 Grosvenor mine was integrated with Moranbah North in 2020
*2 Incl. the following increase in Equity ratio of Nippon Steel Trading Moranbah North 1.25%, Coppabella and Moorvale 2.00%

Current Status toward Acquisition of Equity of Elk Valley Resources

- Feb. 21st, 2023: Nippon Steel decided to acquire par of the common shares of Elk Valley Resources (EVR), a steelmaking coal company which would be listed after spin-off from Teck Resources, the second largest producer of high-quality steelmaking coal in the world

- April 11th, 2023: Glencore proposed an acquisition of Teck Resources

- April 26th, 2023: Teck withdrew the separation proposal for the shareholders meeting and expressed its plan to “pursue a simpler and more direct separation.”
- Nippon Steel will continue to discuss with Teck Resources on revision of the separation plan

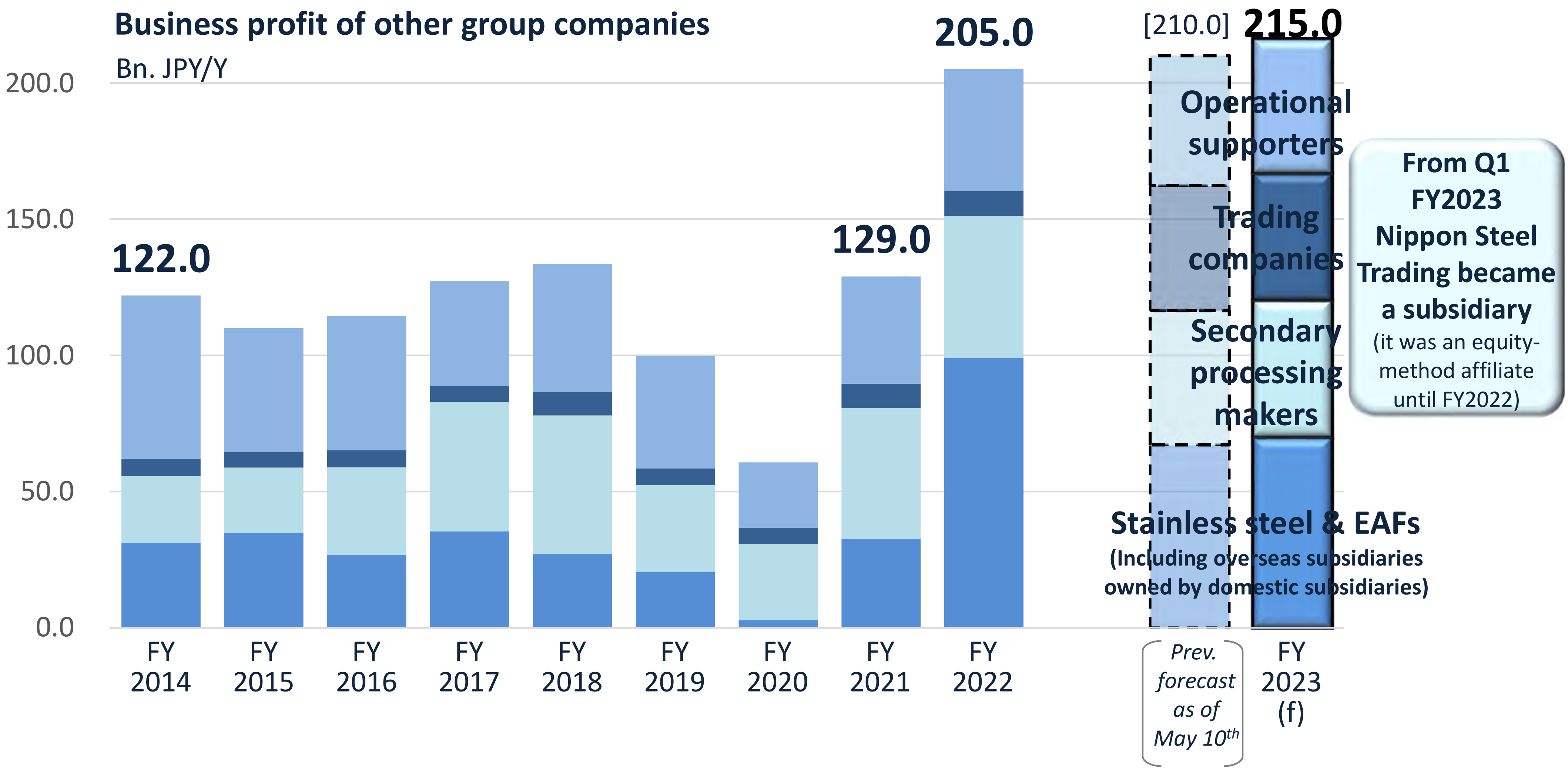
<Purposes of the investment>

Securing high-quality steelmaking coal that is essential to Nippon Steel’s carbon neutral strategy

Stabilizing Nippon Steel’s consolidated profit by increasing investment in high-quality raw materials

Other Group Companies P/L Trend (Underlying Basis)

- Businesses that cover the value chain of steel business, from upstream to downstream, have contributed to improvement in steel business value.
- Reinforcement of businesses by restructuring of companies and facilities and improving spread resulted in stability in profit trend

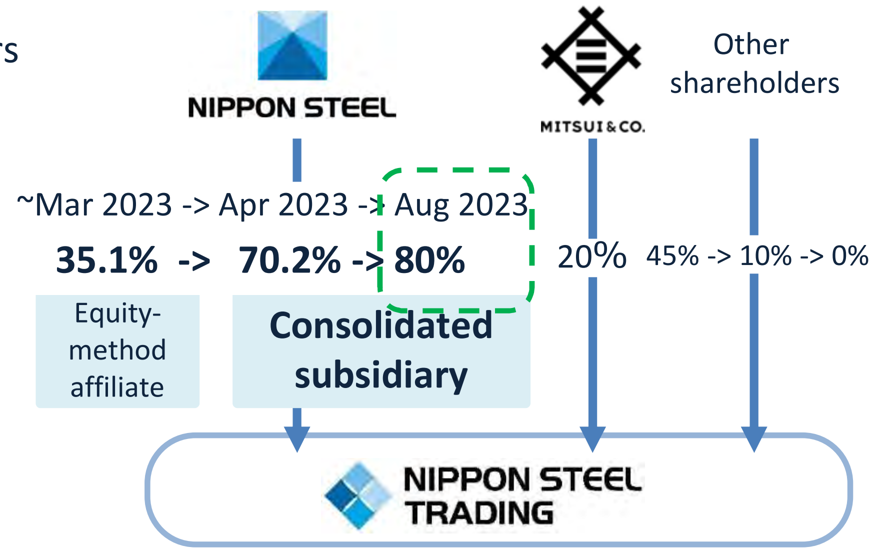


Excluding inventory valuation, and including group companies of ex-Nisshin Steel and stainless steel business of ex-Nisshin Steel

Promotion of measures to strengthen the business structure

Completion of Nippon Steel Trading Corporation(NST) into a subsidiary and going private

- April 10: Tender Offer closed
- June 2 : Squeeze-out approved at a special meeting of shareholders meeting of NST
- June 21: Delisting



Measures applicable after consolidation and delisting its shares

1) **Streamline and strengthen the trading company's functions across the group**
2) **Strengthen direct sales capabilities by integrally utilizing sales know-hows and infrastructure**
3) **Further sophisticate the supply chain** (establishment of a new business model)

Refurbishment of continuous casting equipment for slabs at Hikari Area of Yamaguchi Works, NIPPON STEEL Stainless Steel Corporation

(Announced on August 4, 2023)

Production capacity: approx. 500,000 tons/year Start of full-scale operation: H1 of FY2026 Investment: Approx. 32 billion yen

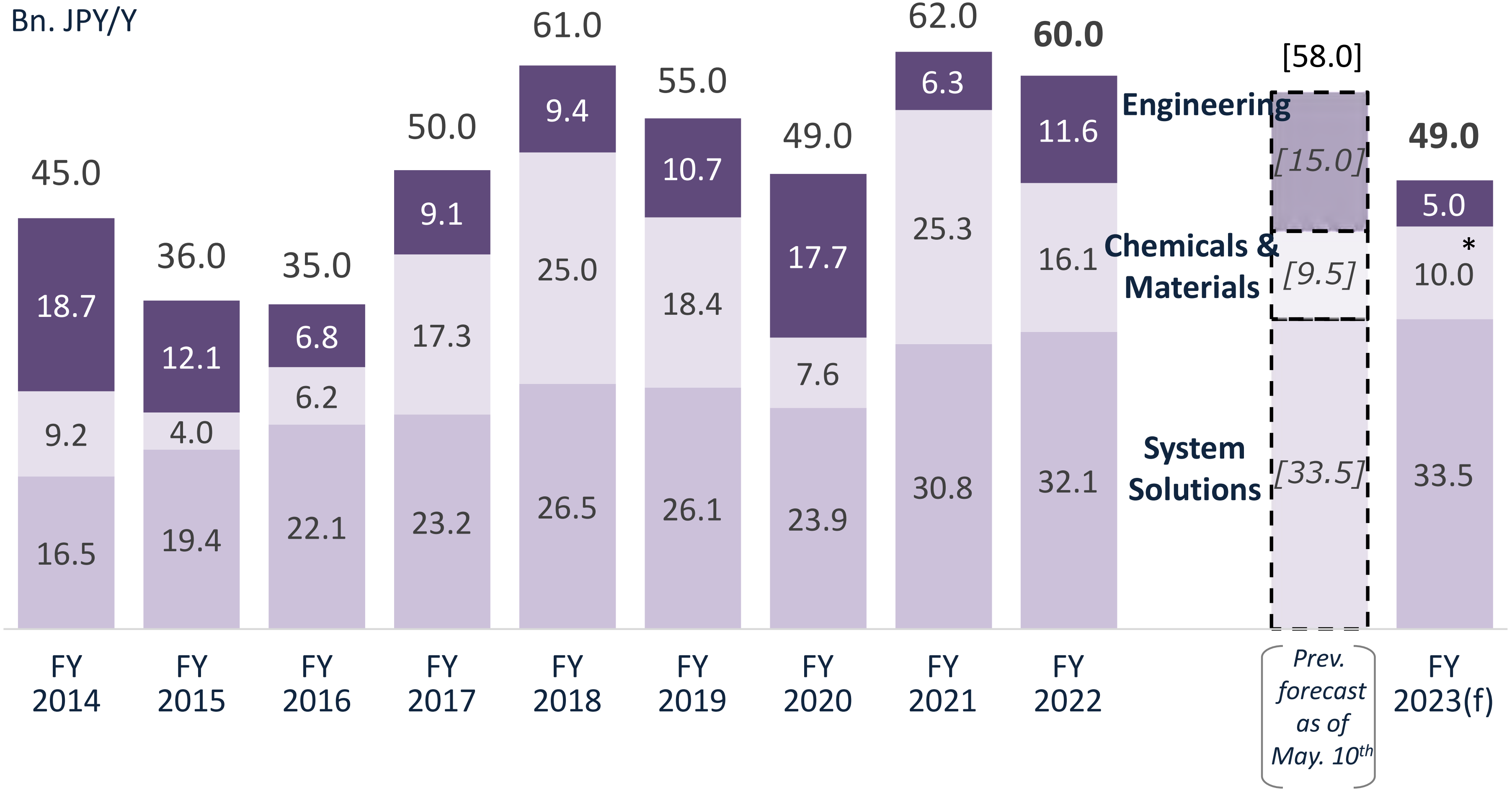
Further improvement both of the surface quality and internal quality of slab
⇒It will be possible to manufacture products that require higher cleanliness than before or products that were difficult to manufacture in the past.

Contribute to the realization of a decarbonized society in the fields of new energy and next-generation automobiles

3 Non-steel Segments P/L Trend (Underlying Basis)

While supporting and generating synergy with steel business, each segment aims to achieve top-class profit level in respective business field by leveraging its technology strengths and by providing excellent products and services to society

Business profits of three non-steel segments



*excl. inventory valuation from FY2023(f)

3 Non-steel Segments Earnings Summary

Nippon Steel Engineering

Bn. JPY	H2	FY 2022	Q1	H1 (f)	*previous forecast*	H2 (f)	FY 2023 (f)	*Prev. forecast*
Order intake	259.3	431.4	84.3	200.0	[210.0]	150.0	350.0	[350.0]
Revenue	188.1	352.2	82.4	200.0	[200.0]	200.0	400.0	[400.0]
Business profit	6.3	11.6	3.1	0.0	[7.0]	5.0	5.0	[15.0]

H1 FY2023; While the revenue is expected to increase, compared with H2 FY2022 due to the progress of projects, such as offshore wind power plants, waste to energy plants, logistics facilities etc., the profit to decrease due to crane breakdown on owned offshore work vessels

FY2023; Like in H1 FY2023, the revenue is to increase but the profit is to decrease.

Order intake is expected to decrease, compared with that in FY2022 when NSE got large project orders

Nippon Steel Chemical & Material

Bn. JPY	H2	FY 2022	Q1	H1 (f)	*Prev. Forecast*	H2 (f)	FY 2023 (f)	*Prev. forecast*
Revenue	129.6	274.5	64.4	130.0	*[140.0]*	140.0	270.0	*[280.0]*
Business profit	2.4	16.1	2.7	3.5	*[2.5]*	5.5	9.0	*[9.5]*
Underlying	*4.0*	*11.0*	*0.5*	*4.0*	*[3.0]*	*6.0*	*10.0*	*[11.0]*

H1 FY2023; The revenue and the profit are expected to decrease due to decline in demand that has been continuing from H2 FY2022 and market slump in each business, resulting in sales decrease deriving from inventory adjustments in the supply chain.

FY2023; While some businesses in H2 FY2022 are expected to recover, the revenue and the profit are to decline in FY2023.

NS Solutions

Bn. JPY	H2	FY 2022	Q1	H1 (f)	*Prev. forecast*	H2 (f)	FY 2023 (f)	*Prev. forecast*
Revenue	157.4	292.5	68.8	140.0	[140.0]	165.0	305.0	[305.0]
Business profit	18.0	32.1	7.0	14.0	[14.0]	19.5	33.5	[33.5]

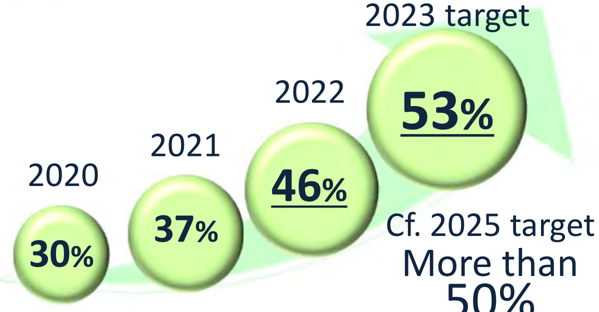
H1 FY2023; The revenue is expected to decrease due to seasonal factors and a pull-back from large scale infrastructure construction projects for public sector clients. Additionally, compared with H2 FY2022, the profit is expected to decrease due to G&A cost increase deriving from sales force enhancement and in-house DX initiatives.

FY2023; While G&A cost is expected to increase, the revenue and the profit are expected to increase, capturing robust DX demand from platformers and manufacturing industry including Nippon Steel.

Maximizing Synergies with Non-Steel Segments and Expanding Businesses in Growing Market

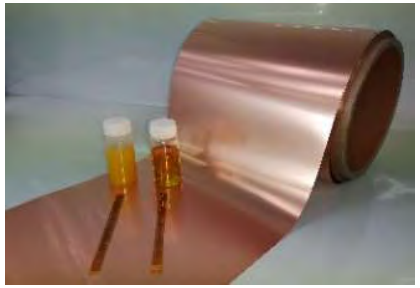
supporting and generating synergy with steel business, and increasing profit in promisingly growing fields

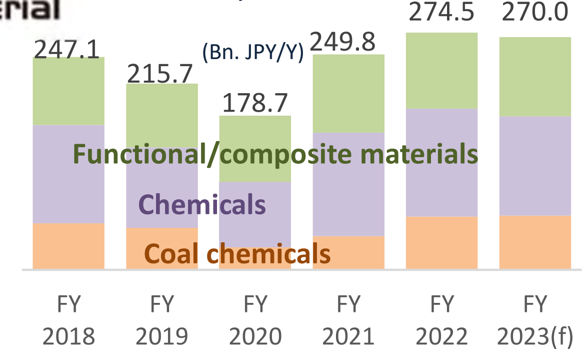
NIPPON STEEL ENGINEERING



- Expansion of decarbonization and low-carbon related businesses
  <Focus areas and products>
  Offshore wind power, CCUS, hydrogen infrastructure, geothermal energy, sewage sludge fueling, biomass energy, Coke Dry Quenching (CDQ), EPC for waste power generation etc., high-efficiency energy supply service (natural gas co-generation system), etc.

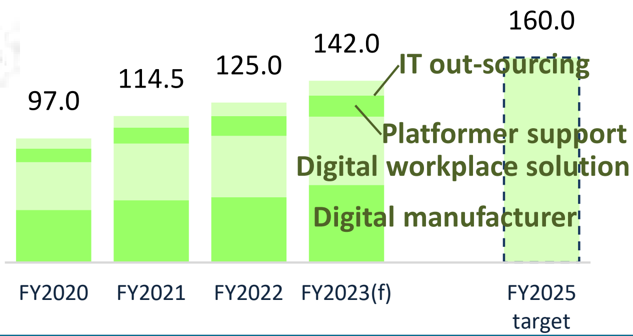
NIPPON STEEL Chemical & Material





- Establishment of optimal framework for production and sales through facility improvement, and cost reduction through manufacturing process improvement and reduction of fuel and energy use.
- Development of new technologies and new products aimed at the expansion in sales of products related to growing semi-conductor demand, especially for high-grade products for high-speed telecommunication and automobiles

NS Solutions



FY2020->FY2025 CAGR* target: **+5~6%/year**
Incl. CAGR in focus area: **Over +10%/year**

(*Compound annual growth rate for revenue growth)

Agenda

Providing two types of values by progressing toward carbon neutrality

NIPPON STEEL

NSCarbolex™
Innovative action for sustainability

Nippon Steel + Carbon dioxide less + X

Nippon Steel offers | Products and technical solutions that contribute to reducing CO_2 emissions | For realizing a sustainable future

NSCarbolex™ Solution

Advanced products and technical solutions that contribute to reducing CO_2 emissions in society

- Reduce CO_2 emissions at the time of production and processing by customers
- Reduce CO_2 emissions at the time of use of customers' products made from our steel
- Contribute to energy conversion in society

NSCarbolex™ Neutral

steel products CO2 emissions savings in the steelmaking process are allocated.

- Reduce CO_2 emissions as a steel supplier for our customers

To start provision in H1 FY2023,
300 kt/y(annualized) for the first year

By providing the two types of values, we support international competitiveness of our customers (including approx. 6,000 companies in Japan)

Expansion of NSCarbolex Solution

NSCarbolex™ Solution

First in the world to systematize and brand "Providing high-performance steel products and solutions that contribute to reducing CO_2 emissions in society" in November 2022.

Expanded over 100 product lineups that qualify for the NSCarbolex Solution.

Product types × **Applications** × **Four Contributions to CO2 Reduction**

Product types	Applications
Steel plate	Automotive
Steel sheet	Electrical Appliances, office equipment
Construction product	Shipbuilding
Bars & wire rods	Construction equipment
Pipe & tube	Energy
Railway, automotive & machinery parts	Civil engineering and construction
Titanium	Railway
	Containers

Four Contributions to CO2 Reduction	
Material (Scope3)	Contribute to reduction of CO_2 emissions from materials used by customers (lighter weight and longer life of parts, etc.)
Manufacture (Scope1+2)	Contribute to reduction of CO_2 emissions during manufacturing and construction by customers (omission of manufacturing processes, etc.)
Use (Scope3)	Contribute to the reduction of CO_2 emissions when customers' products are used in society (energy savings through weight reduction, higher efficiency, etc.)
Energy	Contribute to society's energy transition as a material that supports the spread of renewable energy and the hydrogen society

Renewed dedicated website to enhance convenience for customers to select the most suitable product

(Announced on July 27, 2023)

■ **NSCarbolex Solution website location(Japanese only)：https://www.nipponsteel.com/product/nscarbolex/solution/**

In the future, we will quantify the CO_2 emission reduction effects of each product and disclose them on our website.

NSCarbolex Solution examples

Steel Pipes for Fuel Cell Vehicles

HYDEREXEL™

Conventional steel SUS316L   Developed steel HYDEREXEL™

Hydrogen station
Iwatani Corporation

Pipe × Auto ×

Use [SCOPE3] | Energy transition

- ✓ World's highest level of high-pressure hydrogen resistance
- ✓ 1.6 times stronger than conventional steel
- ✓ Welding construction work available

Adopted for hydrogen stations and fuel cell vehicles

Contributes to safety, compactness, and long life

Cf. HYDEREXEL™ at approximately 60% of 167 commercial hydrogen stations in Japan (as of June 2023)

Nickel precoated steel sheets

SUPERNICKEL™

Prismatic lithium ion battery

Various cylindrical batteries

Sheet × Auto Containers ×

Material [SCOPE3] | Use [SCOPE3]
Manufacture [SCOPE1+2] | Energy transition

- ✓ Developed press technology of Nickel-plated steel sheet with high workability and high corrosion resistance. Due to its thinness, the weight is equivalent to that of aluminum.
- ✓ High-temperature strength of iron (melting point: 1540°C) can reduce fire spread due to melting of cell case at abnormal heat generation of battery.

Used for cell cases of lithium-ion batteries for electric vehicles, etc.

Enhance safety due to high heat resistance

Reduce fire spread prevention materials and Increase battery cells and EV cruising distance

NIPPON STEEL

NSCarbolex™ Solution

Product line-up ①

Steel Plates

Product	Automotive	Consumer Electronics	Ships	Machinery	Energy	Construction	Railway	Container	material	Manufacturing	usage	Energy
High HAZ Ductile Steel **HTUFF™**						●			●			
High-yield-point steel plates for bridges **SBHS**						●			●			
High-Strength steel plates for ship with Excellent Brittle Crack Arrestability			●						●			
Thermo-Mechanical Control Process(TMCP) steel plates			●	●	●	●			●			
Abrasion-resistant Steel Plates **ABREX™**			●						●		●	
STEEL deck Composite, Adjustable to Plate girder Method						●				●		
Highly Corrosion-resistant Steel Plates for Crude Oil Tankers **NSGP™-1,2**			●						●		●	
Highly Weather-resistant Steel **COR-TEN™**				●							●	
Coating Cycle Extension Steel **CORSPACE™**						●					●	
Sulfuric Acid and Hydrochloric Acid Dew-Point Corrosion-resistant Steel **S-TEN™**				●							●	
Highly corrosion-resistant thick plates for smoke stacks **7%/9% Ni steel plate for LNG storage tank**					●							●
Low-Temperature Steel Plates for Ship					●							●
Steel plates for line pipes (LNG,Hydrogen)					●					●		●
Steel for Offshore wind power					●							●

Structural Steel

Product	Automotive	Consumer Electronics	Ships	Machinery	Energy	Construction	Railway	Container	material	Manufacturing	usage	Energy
Fixed external dimension H-section steel **NSHYPER BEAM™ MEGA NSHYPER BEAM™**						●				●		
Welded light gauge steel H sections						●				●		
Welded light gauge steel H sections made of Super Dyma™						●					●	
High strength steel pipe piles						●			●			
Hat type steel sheet piles						●			●	●		
150 meters rails							●		●		●	
Rails for heavy-load railway **「HE Rail™」**							●				●	
Double steel sheet pile wall method (for Hat type steel sheet pile)						●				●		
Self-walking rotary press-in method for tubular piles with tip bits **Gyropress Method™**						●				●		
A method in which steel pipes with helical blades installed at the tips are rotated and pressed in **NS ECO-PILE™**						●				●		
The composite piles that can be designed as friction piles **Gantetsu pile™**						●				●		
Steel diaphragm wall method for narrow and deep construction works(for NS-BOX)						●				●		
Lateral stiffener omission construction method （for NSHYPER BEAM™)						●				●		
Stiffened beam-end web construction method （for NSHYPER BEAM™)						●				●		
Non-widening steel beam flange section at welded beam-to-column connectio （for NSHYPER BEAM™)						●				●		
Efficient welding method with high inter-pass temperaturn （for NSHYPER BEAM™)						●				●		
Welding wire for high heat input welding(for High HAZ Ductile Steel HTUFF™)						●				●		
Beam-to-king post column connection without continuity plate (for NSHYPER BEAM™)						●				●		
Hybrid steel column with fire protection using timber (for Cold forming column)						●				●		
High capacity steel piling method (TN-X method, Hybrid steel pipe pile, Enlarged pile cap system) for Steel-pipe piles						●				●		

Product line-up ②

Steel Sheets

Steel Sheets	Automotive	Consumer Electronics	Ships	Machinery	Energy	Construction	Railway	Container	material	Manufacturing	usage	Energy
Highly corrosion-resistant coated steel sheets **SuperDyma™、ZAM™、ZEXEED™**	●	●			●	●			●	●	●	●
High strength,high corrosion resistant coated steel sheets **SuperDyma™、ZAM™、ZEXEED™**	●	●				●			●	●	●	●
SuperDyma with an anti-counterfeiting function **SuperDyma™Crystal**		●			●	●				●		
Black ZAM		●							●	●		
A Hairline finished electrolytic zinc-nickel alloy plated steel sheet **FeLuce™**		●							●	●		
Prepainted steel sheets **VIEWKOTE™**		●				●			●	●		
Steel house **NS Super Frame™ method**						●				●	●	
"Katachi" solution	●	●				●			●	●		
Products/solutions designing the future automobiles **NSafe™-AutoConcept**	●								●	●	●	●
Polymer Laminated Tin free steel								●		●		
Nickel Coated Steel Sheets **SUPERNICKEL™**	●							●	●	●	●	●
High Formability DR Material								●	●		●	
NON-ORIENTED ELECTRICAL STEEL SHEETS **THINNER GAUGE HIEXCORE™**	●	●									●	●
GRAIN-ORIENTED ELECTRICAL STEEL SHEETS **ORIENTCORE・HI-B™**					●						●	●

Bar & wire

Bar & wire	Automotive	Consumer Electronics	Ships	Machinery	Energy	Construction	Railway	Container	material	Manufacturing	usage	Energy
High strength non-refining steel for hot forging	●								●	●	●	
Steel for cracking connecting rods	●								●		●	
Wire rods for high strength valve suspension	●								●		●	
Steel for high strength gears **CM201**	●								●		●	
Steel for high strength gears **XG5**	●								●	●	●	
Low-distortion and high durability steel for soft nitriding	●								●	●	●	
Coarse grain prevention steel **NSACE™**	●									●		
Mild alloy, Super Mild Alloy	●									●		
Steel for high strength suspension springs	●								●		●	
Steel for high strength and high frequency quenching	●								●	●	●	
Steel for high strength bolts **MB series, ADS series**	●								●		●	
Non-refining steel for cold forging **NHF™**	●								●	●	●	
Non-refining steel for cold forging **SUC80D**	●								●	●	●	
Fine Flex Wire-rod	●								●	●	●	
Multi Free Non-heat Treated Steel Wire Rod	●								●	●	●	
SHTB™,steel for high-tension bolt						●			●			
Zinc Alloy-coated Wire with High Corrosion Resistance **ToughGuard™ series**						●			●			
Wire rods for saw wires **SPURKS™**					●							●
Steel for Offshore wind power (For Bearings・Tower flanges・Mooring chains etc)					●							●
Thin wire rods	●				●					●		●
DLP™ wire rods	●					●			●	●		
Steel for direct normalizing treatment **FG, DN**	●									●		
New soft wire rods **DS, DL**	●									●		
Simplified annealing wire rods **ED, EC, ES**	●									●		
Thermo-Mechanical Control Process(TMCP) steel bar	●									●		

Product line-up ③

Pipe & Tubes

Product	Automotive	Consumer Electronics	Ships	Machinery	Energy	Construction	Railway	Container	material	Manufacturing	usage	Energy
Steel tubes for hollow drive shafts	●								●		●	
High durability crushed-tube torsion beams	●								●		●	
Steel tubes for hollow stabilizer	●								●		●	
Steel tubes for hollow stabilizer (High strength As-ERW)	●								●	●	●	
High tensile strength steel tubes for mechanical structure **SUMISTRONG**				●					●		●	
Steel tubes for hollow rack bar	●								●		●	
Steel tubes for EV mortor shaft	●								●	●	●	
Airbag inflator tubes	●								●		●	
High Strength pipes for automotive prop shaft with resistance to softening of welded zone	●								●		●	
1.8GPa Steel tube for Door beam	●								●		●	
Thin-Walled and High-Strength Welded Steel Tube	●								●		●	
New specialty material for high-pressure hydrogen environments **HYDEREXEL™**	●										●	●
Hot Extruded Steel Shapes						●			●	●		
1% Cr Steel for cargo oil and water ballast pipes **MARILOY™ S-400 Pipes**			●							●	●	
High corrosion steel pipes for construction						●					●	
Stepped steel pipes **NS-SUPERGRIP™**						●				●		
High-strength train pole							●		●			
Slip joint train pole							●		●		●	
Advansed hydroforming technology	●								●	●	●	

Pipe & Tubes

Product	Automotive	Consumer Electronics	Ships	Machinery	Energy	Construction	Railway	Container	material	Manufacturing	usage	Energy
Press bending with cross sectional deformation	●								●		●	
Three dimensional hot bending and quenching (3DQ) tubes	●								●		●	
Tube with different wall thickness	●								●		●	
YUS™2120、YUS™2351 (Lean Duplex Stainless Steel Series)					●				●		●	
13CR					●						●	●
Ni-based Alloys					●						●	●
25CRU、25CRW (Duplex Stainless Steel)					●						●	●
DINO VAM®					●							●
Seamless Steel Tube and Pipes for Boilers **SUPER304H™、Alloy625 etc**					●						●	●
NEXAGE™ 347Alpha					●						●	●
Stainless Steel pipe for liquid hydrogen **HYDLIQUID™**					●							●

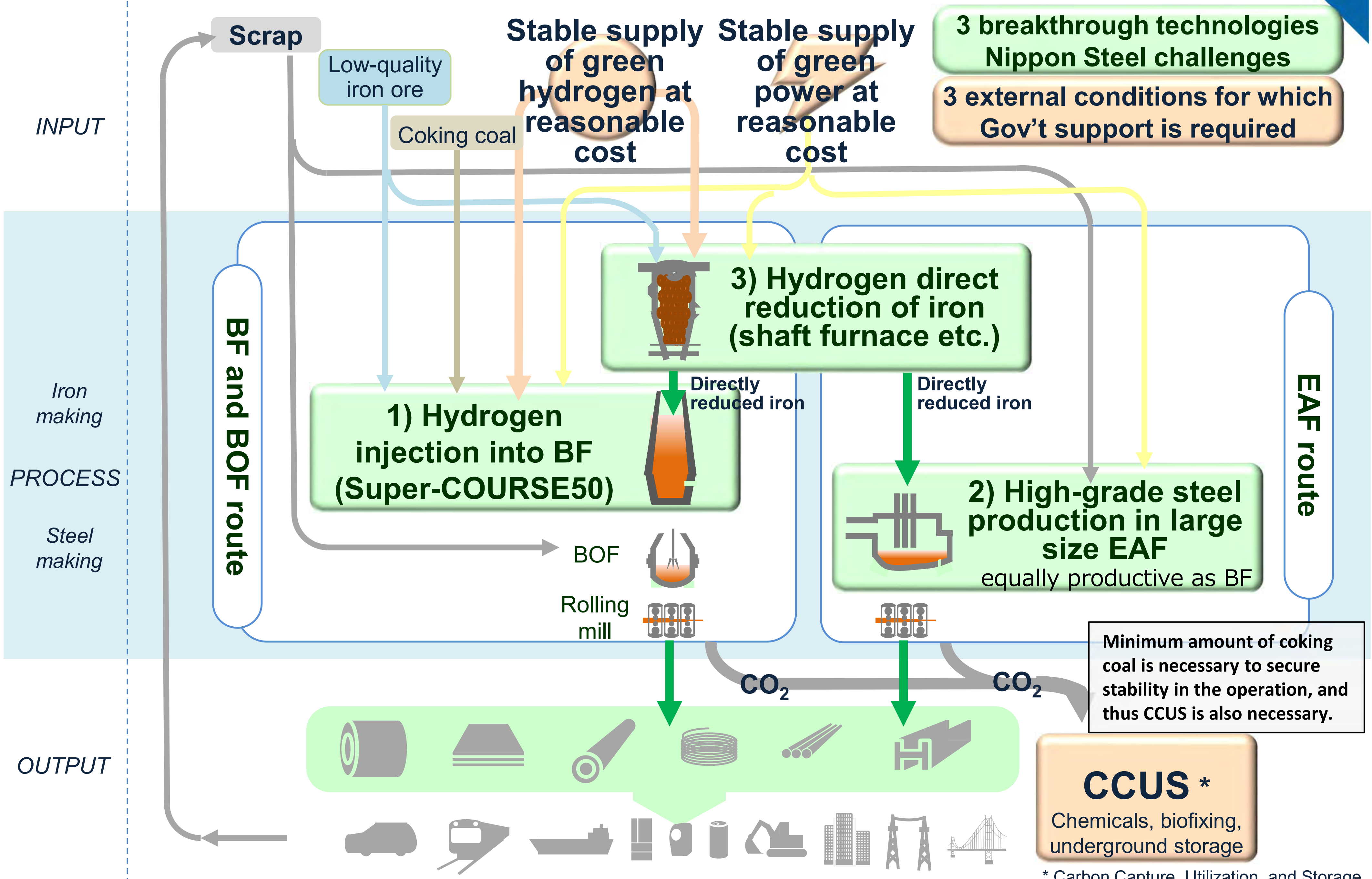
Railway, Automotive, Machinery Parts

Product	Automotive	Consumer Electronics	Ships	Machinery	Energy	Construction	Railway	Container	material	Manufacturing	usage	Energy
Light weight wheels and axles for high-speed railway							●		●		●	
Light weight crankshaft	●								●	●	●	
Bogies equipped with steering devices for metro							●				●	
Permanent magnet retarder	●										●	

Titanium

Product	Automotive	Consumer Electronics	Ships	Machinery	Energy	Construction	Railway	Container	material	Manufacturing	usage	Energy
Alloyed titanium **Super-TIX™ series 10CU series、51AF,523AFM**	●										●	
TranTixxii、TranTixxii-ECO						●		●	●		●	
Titanium and Nickel sheets for water electrolyzers					●							●

Carbon Neutral Process



* Carbon Capture, Utilization, and Storage

Progress in Carbon Neutral Vision 2050

High-grade steel production in large size EAF

2022 Hirohata EAF started commercial operation

2023 Start studies on shift to EAF

Accumulate knowledge of high-grade steelmaking in EAF

~2030 Hirohata EAF expansion

Establish Electric Furnace Project

Develop both large sized EAF and technology to produce its raw material, DRI at Hasaki R&D Center

2024 Set up a small EAF (of 10t/ch size) in the Hasaki R&D Center and start experiment

~2030 Yawata EAF (replacement of BF)

Hydrogen direct reduction of iron

2025 Set up a small DRI furnace in the Hasaki R&D Center and start experiment

2027 Start study for scale-up

Hydrogen injection into BF

2025 Start demonstration at the Kimitsu #2 BF

~2030 COURSE50 implementation

2022 Started R&D by using a pilot plant in Kimitsu Area

Tested injection of high-temperature hydrogen
Verified 22% reduction in CO2 emissions

~2050 Super-COURSE50 implementation

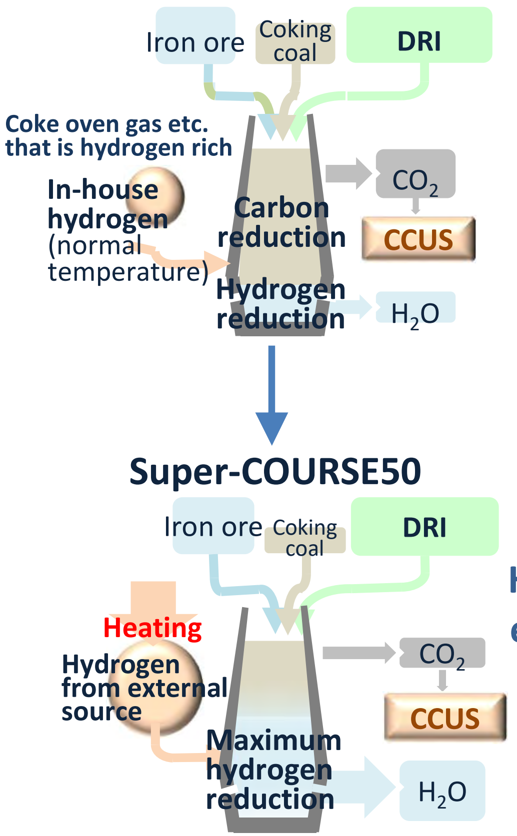
Hydrogen injection into BF Progress of Super COURSE50 Technology Development

Super COURSE50 development test in a small test furnace at Kimitsu area in East Nippon Works verified <u>the world's highest level of CO2 emissions reduction effect of heated hydrogen injection at 22%.</u>

Work on early establishment of Super-COURSE50 technology (CO_2 emissions reduction of 50% or more)

(Announced on August 4, 2023)

Approx. 400 times scale



Development and test furnace ($12m^3$) — **Demonstration actual sized BF** — **Implementation**

COURSE50 In-house hydrogen

Started testing in FY2008
Complete testing in FY2022

Started to launch a demonstrative facility to inject gas containing hydrogen to the #2 BF in Kimitsu area in East Nippon Works in Feb. FY2022

Start demonstration at the Kimitsu #2 BF in Jan. FY2026

Start actual implementation by 2030

Modified test furnace

Super COURSE50 Hydrogen from external source

Started testing from May 2022

Verified 22% reduction in CO2 emissions

Conducts a test by the end of 2023aiming for a reduction of 30% or more.

Demonstration

Complete actual implementation by 2050

50% decrease in CO2 emissions

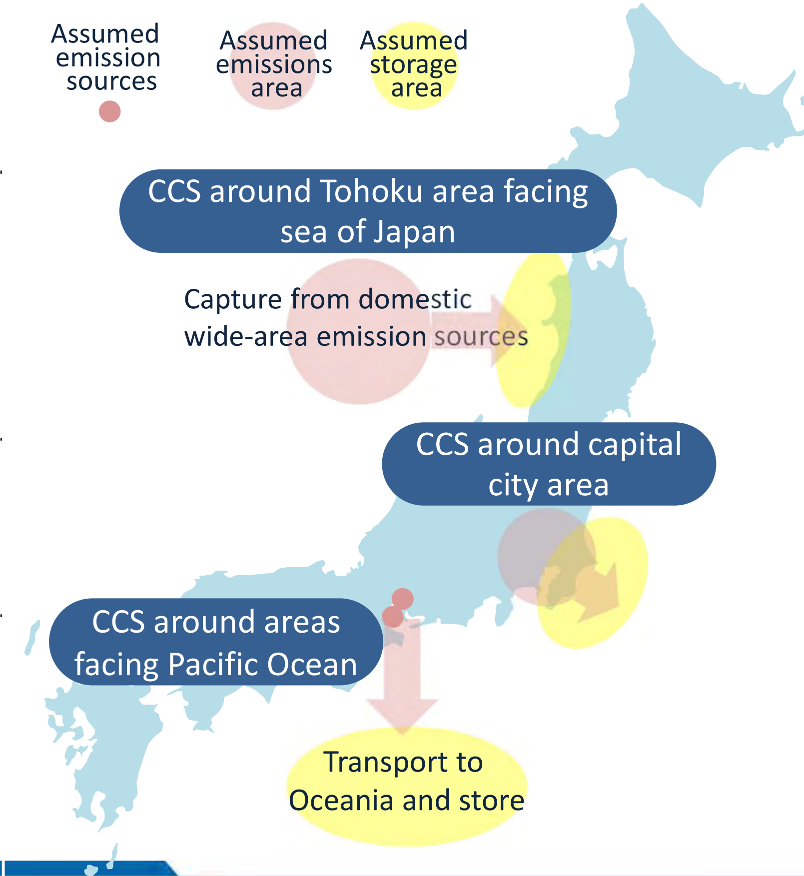
Demonstration of Hydrogen injection into BF using heated hydrogen is a very advanced approach

Participated in advanced CCS projects

Participated in three leading joint projects coordinated by JOGMEC, "Survey on the Implementation of Advanced CCS Projects" (released Aug. 2nd and 3rd ,2023)

- Nippon Steel and other companies have been commissioned with other companies to conduct a feasibility study on the three advanced CCs project in 2023 coordinated by JOGMEC, Japan Organization for Metals and Energy Security
- Promote with each company the development of external conditions such as securing storage sites, development of storage infrastructure, and development of laws and regulations.
- Nippon Steel is proactively involved in studies related to CO_2 separation and capture, liquefaction, and shipping terminals, based on location restrictions of each steelworks.

		Storage kt/Y	Company	Characteristics
CCS around Tohoku area facing sea of Japan	Domestic	2,000	ITOCHU Corporation Nippon Steel Taiheiyo Cement Corporation Mitsubishi Heavy Industries, Ltd. ITOCHU Oil Exploration Co., Ltd. INPEX Corporation Taisei Corporation	➢ Ship transportation of liquefied CO_2 ➢ Storage in the aquifer in the Tohoku region off the Sea of Japan
CCS around capital city area	Domestic	1,000	INPEX Corporation Nippon Steel Kanto Natural Gas Development Co., Ltd.	➢ Transporting CO_2 through pipelines ➢ Storing the CO_2 in offshore coastal zones of the Tokyo metropolitan area
CCS around areas facing Pacific Ocean	Overseas	2,000	Mitsubishi Corp. Nippon Steel ExxonMobil Asia Pacific Pte.Ltd.	➢ Collect and liquefy CO2 emissions from multiple industries in the Ise Bay/Chubu region ➢ Transport and storage to offshore depleted oil and gas field oversea



Agenda

1. Q1 FY2023 Earnings Summary and FY2023 Earnings Forecast
   Summary / Additional Line Items, Net Profit / Dividend
2. Establishing a Business Structure that Ensures Stably High Profit Regardless of the External Environment
   - Proceeding to Next Phase toward the realization of 100 Mt and ¥1 Tn. Vision -
   Strategy / Domestic Steel Business / Overseas Steel Business / Raw Material Business / Other Group Companies / Three Non-steel Segments
3. Progress in Carbon Neutral Vision 2050
4. **HR and PR Initiatives to Recruit from and Retain Diverse Talent**
5. Business Environment
6. Other Topics
7. Supplementary Materials for Financial Results
8. Other References

HR and PR Initiatives to Recruit from and Retain Diverse Talent

Progress in Nippon Steel's corporate strategy

Promoting various strategies toward 100 Mt and ¥1 tn. Vision

- Rebuild domestic steel business
- Promote a global strategy to deepen and expand overseas business

Evolution to further vertically-integrated business structure

Involving "raw material business" not just as procurement activity

Insourcing steel distribution as a new business domain

Take on the challenge of carbon neutral steel

Promote digital transformation strategies

Change in the labor market

- Intensified competition in recruitment due to population decline
- Diversification of individuals' career targets and higher mobilization of labor market
- Sluggish degree of recognition to steelmaking industry

To secure and support workforce, Nippon Steel will promote various HR and PR measures as one of the highest-priority management challenges

<Major initiatives already taken>

Recruitment	•Increasing the mandatory retirement age to 65 (since FY2021) •Recruitment of post doctors (since FY2006)
Employee support	•24-hour available as necessary childcare centers at steelworks (Oita, Kimitsu, Yawata, Nagoya, Hirohata, Kashima, and Muroran as of end of FY2021)
Working hour	•Accompany leave system for employees whose spouse is transferred to other countries (since FY2016) •Working from home system and core-flextime system (since FY2019) •Temporary exemption from the transfer (since FY2020) •Recommendation to all male employees to take child-care leave (since FY2021) •Temporary leave system for employees who wish to take a re-education (since FY2022) •Increasing maximum capacity for "Family holidays" (reserved paid holidays) to 100 days (since FY2022)
Human capital development	•Digital transformation training (since FY2021) •Reinforcement of English language training programs (since FY2021)

<Major initiatives going forwards>

- **Public relations activities aimed to enhance recognition of Nippon Steel from not only job applicants such as students but also wide range of generation**
- **Promotion of mid-career recruitment (including alumni hiring) on top of stable recruitment of fresh graduates**
- **Increasing starting salary**
- **Promoting employee engagement (e.g. promotion of open feedback culture, creating opportunities for challenge and development such as overseas assignment for mid-career and junior employees, etc.)**

HR and PR Initiatives

HR Initiatives

Recruitment of experienced personnel

⇒ Plan to open a channel for Alumni on our recruitment website

In-house entrepreneurship

⇒ Implementing a trial of entrepreneurship by utilizing the system of METI

PR Initiatives

Currently developing PR measures to increase awareness among a wide range of generations

1. **Advertisement of carbon neutral video commercials in various media (July and August 2023).**
   - **Broadcasting of TV commercials** on various programs linked to SDGs projects of TV Tokyo affiliate stations
   - **Vision ads in JR trains in the Tokyo metropolitan area** (12 major lines including Yamanote Line, Keihin Tohoku Line, Chuo Line, Yokosuka and Sobu Rapid Lines, etc.)
   - **YouTube video ads** mainly targeting young people
   - **Vision ads in the Tokyo Dome** during Intercity Baseball Tournament

2. **New TV commercials are scheduled to air this fall.**

Vision ads in JR trains in the Tokyo metropolitan area

YouTube Video Ads

Vision ads in Tokyo Dome

Topics - Contribution to society in support of music culture

Renewal of Kioi Hall, for promoting support of music

Our Support of Music

Promoting music through support for the NIPPON STEEL Arts Foundation (*)
(*) Established in 1994 for the purpose of fostering musicians and supporting excellent musical activities.

KIOI HALL

- Built in 1995 as a center for supporting music.
- The hall for Western music is “shoebox style“ medium size (800 seats) hall in which all seats can enjoy the best acoustics.
- Small hall is for traditional Japanese music.
- A wide range of domestic and international musicians, including young musicians, give performances.
- Since its opening in 1995, 3.95 million people have visited the museum.
- Conducting activities such as inviting neighborhoods and young generations to public rehearsals, and inviting elementary, junior high and high school students to all performances sponsored by the Nippon Steel Foundation.

Kioi Hall Chamber Orchestra Tokyo

- Founded in 1995 (former Kioi Sinfonietta Tokyo).
- Many performances, especially subscription concerts at Kioi Hall

Nippon Steel Music Awards

- Founded in 1990, 33 times so far. Have been Supporting musicians for many years.
- Fresh Artist Award: Selects an outstanding musician with great promise for the future.
- Special Award: Selects people from a wide range of fields who have made significant contributions to the development of music culture.

- Scheduled to undergo a large-scale renewal of the facilities and equipment of Kioi Hall on the occasion of the 30th anniversary of its opening.
- Proactively continue to support music culture, which is the core of our policy "Harmony with local communities and society".

Investment: Approx. 10 billion yen
Closed period: From Aug 2025 to the end of Dec 2026
Resume operation: Scheduled for Jan 2027

Agenda

World Economy, Steel Demand

- Western countries: Continued downward pressure on the economy due to prolonged inflation and interest rate hikes
- China: Prolonged real estate market slump due to insufficient effects of economic stimulus measures
- India/ASEAN: Growth slows YoY, but demand for steel products continues to increase

Outlook for GDP growth rate (As of July 2023)

Source: IMF, released on July 24th, 2023

	Unit:%	CY22	CY23(f) As of July 2023	CY23(f) Vs. CY22	CY23(f) VS.as of Apr. 2023
	World	3.5	3.0	-0.5	+0.2
Developed Nations	Japan	1.0	1.4	+0.4	+0.1
Developed Nations	US	2.1	1.8	-0.3	+0.2
Developed Nations	Europe	3.5	0.9	-2.6	+0.1
Developed Nations	Korea	2.6	1.4	-1.2	-0.1
Emerging Nations	China	3.0	5.2	+2.2	±0
Emerging Nations	ASEAN*	5.5	4.6	-0.9	+0.1
Emerging Nations	India	7.2	6.1	-1.1	+0.2
Emerging Nations	Brazil	2.9	2.1	-0.8	+1.2
Emerging Nations	Russia	-2.1	1.5	+3.6	+0.8

Steel Demand Outlook (As of April 2023)

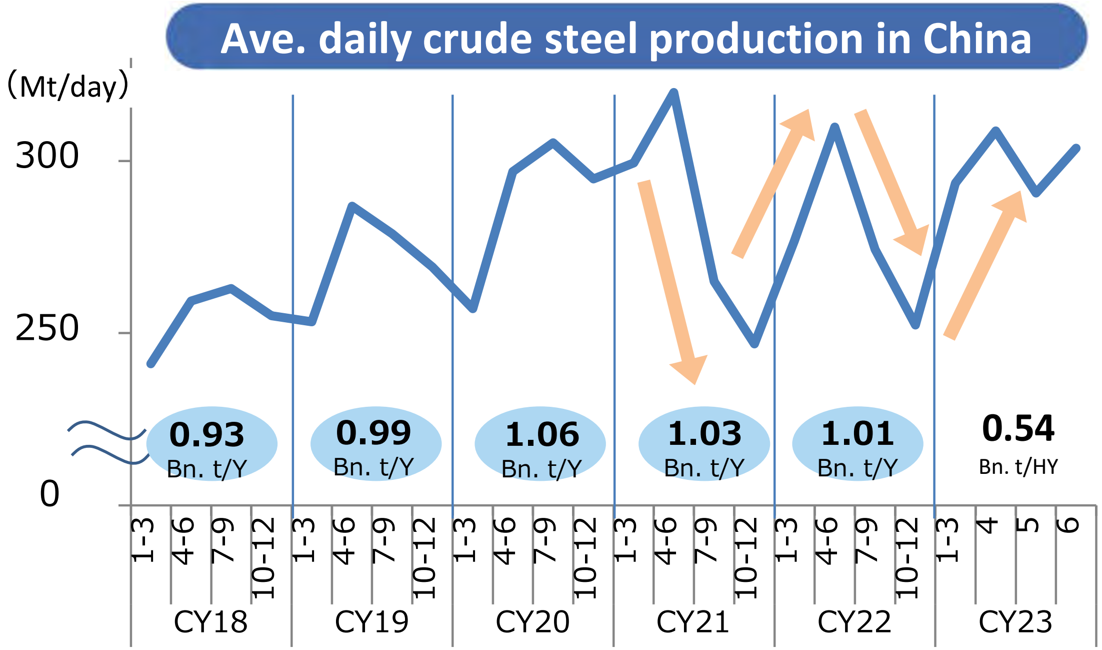
Source: World Steel Association, estimated on April 18th, 2023

Unit: Mt/Y	CY22(f) Steel demand	CY22(f) Vs. CY2021	CY22(f) Vs. CY2021 (%)	CY23(f) Steel demand	CY23(f) Vs. CY2022	CY23(f) Vs. CY2022 (%)	CY23(f) Vs. as of Oct. 2022
World	1,781	-60	-3.2%	1,822	+41	+2.3%	+8
Japan	55	-2	-4.2%	57	+2	+4.0%	-1
US	95	-2	-2.6%	96	+1	+1.3%	-5
Europe	152	-13	-8.0%	151	-1	-0.4%	-6
Korea	51	-5	-8.6%	53	+2	+2.9%	-2
China	921	-33	-3.5%	939	+18	+2.0%	+25
ASEAN*	73	-0	-0.3%	77	+4	+6.2%	-4
India	115	+9	+8.2%	123	+8	+7.3%	+3
Brazil	23	-4	-11.0%	24	+1	+1.0%	-2
Russia	42	-2	-5.0%	40	-2	-5.0%	+3

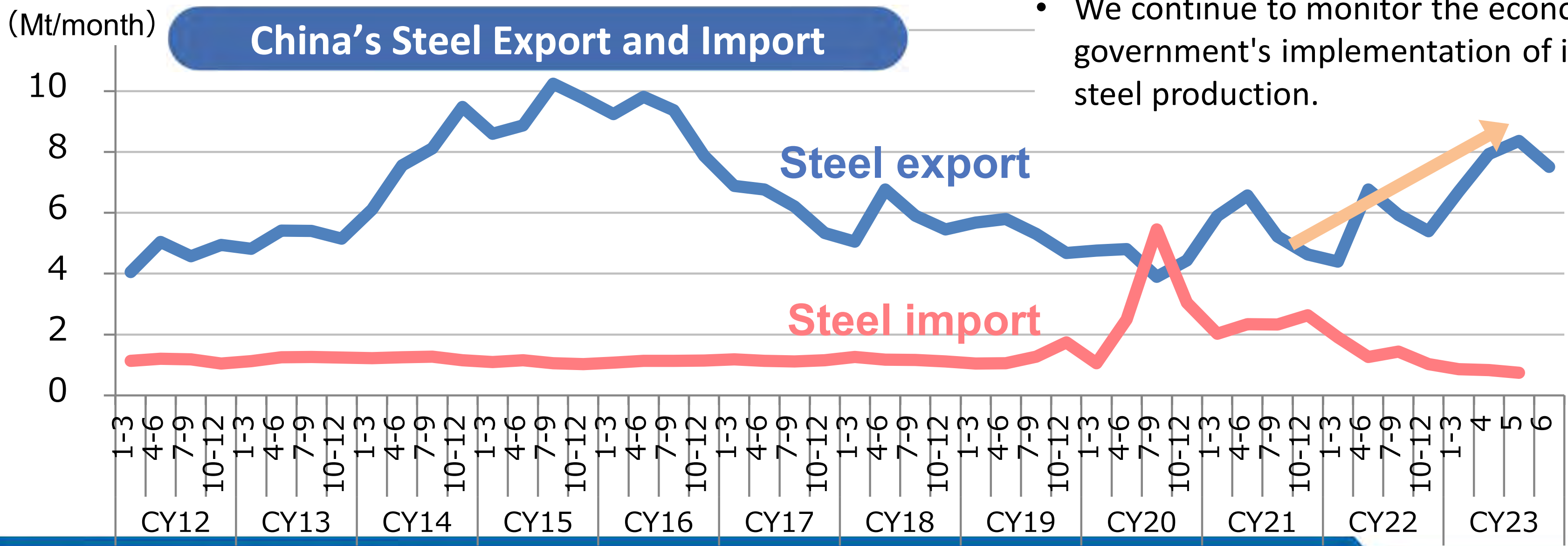
(*)GDP growth rate: Indonesia, Malaysia, Philippines, Thailand and Singapore
Steel Demand: Indonesia, Malaysia, Philippines, Thailand and Vietnam

Steel Demand in China

Despite sluggish steel demand, high crude steel production continues and steel exports are increasing



- Insufficient effect of the government's economic stimulus measures and prolonged slump in the real estate market. No signs of demand recovery, especially in the construction sector.
- Crude steel production remains at a high level due to a lack of adjustment to a production scale commensurate with demand. Steel exports to neighboring countries are also at a high level, affecting market conditions in ASEAN and other neighboring countries. According to a news report, National Development and Reform Commission required steel companies in China to curtail steel production
- Under these circumstances, it was reported that National Development and Reform Commission issued an order on July 24th to reduce production.
- We continue to monitor the economic recovery and the government's implementation of its policy to reduce crude steel production.

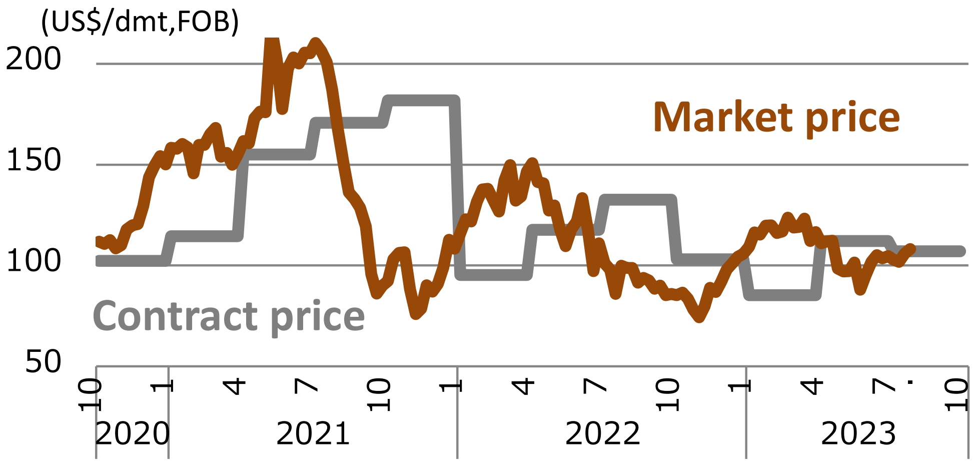


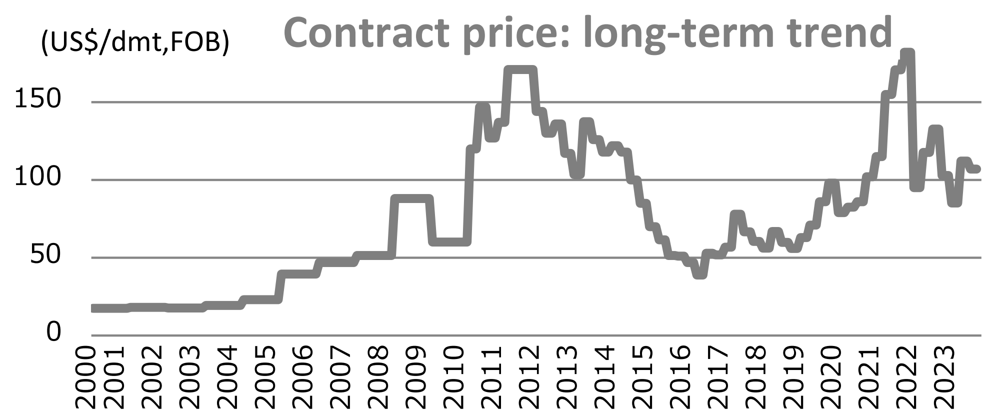
(Nippon Steel estimate)

Business Environment Raw Materials Market Prices

Fine iron ore price

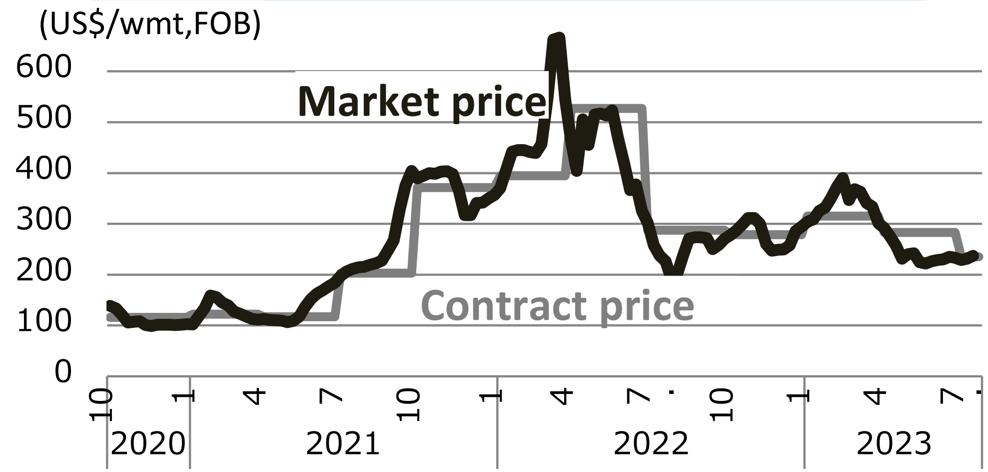
- The fine iron ore price fell to the $90 level at the end of May due to delayed recovery in Chinese steel demand and expectations of a crude steel production cutback.
- Since June, the price has been moving up and down between $90-$110 due to expectations of China's issuance of additional economic stimulus measures, etc.
- We will closely monitor future trends in global economic sentiment, China's economic recovery, and the issuance of policies to reduce crude steel production.

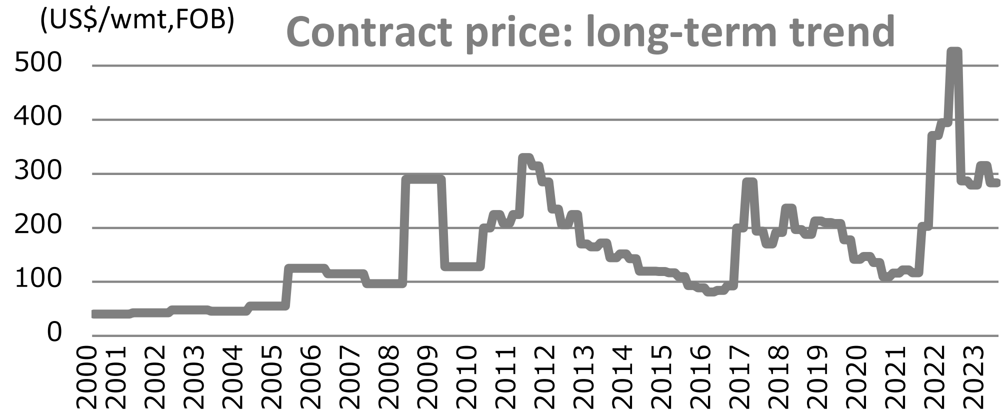




Coking coal price

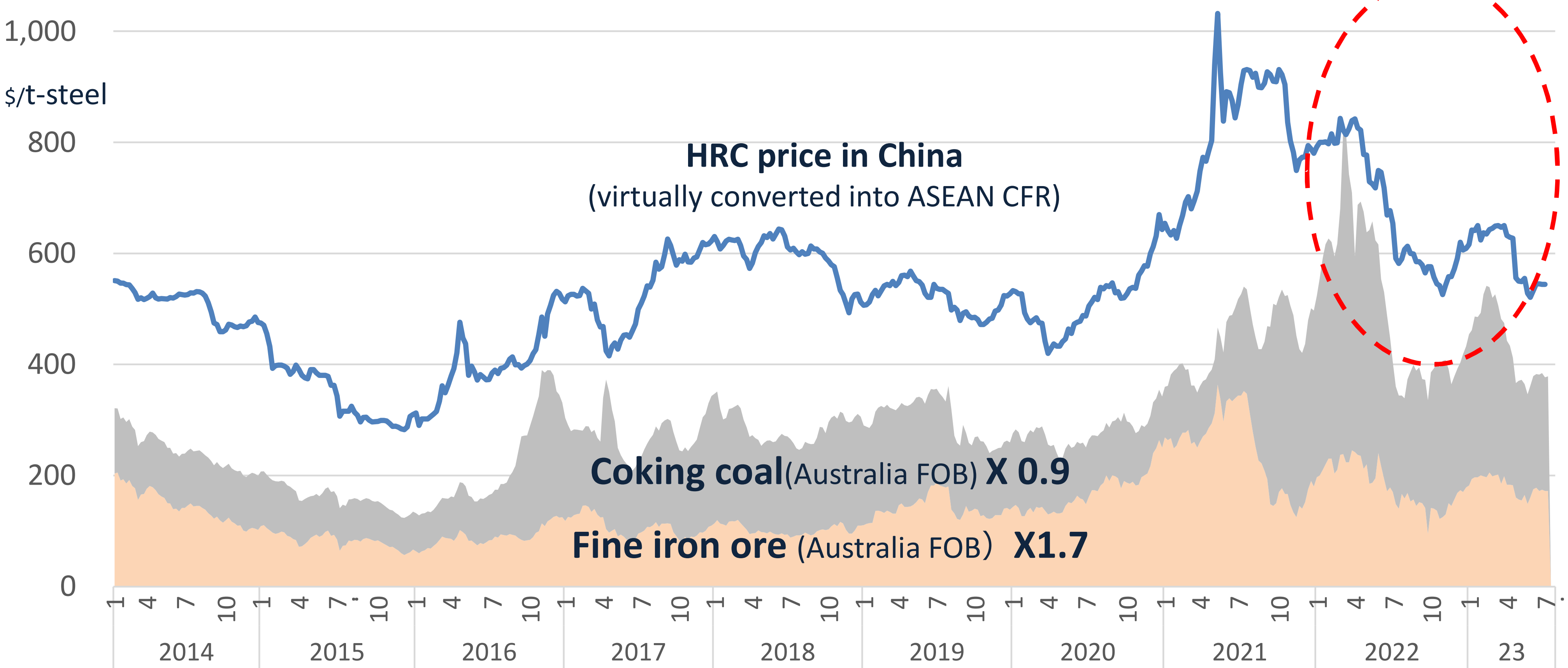
- Due to chronic labor shortages, heavy rainfall and operation troubles in coal-bearing countries, the coking coal price has rose to $390 in mid-February.
- Since then, the price has fallen back due to weather recovery in supplier countries and sluggish steel demand. The price is currently staying at around $230.





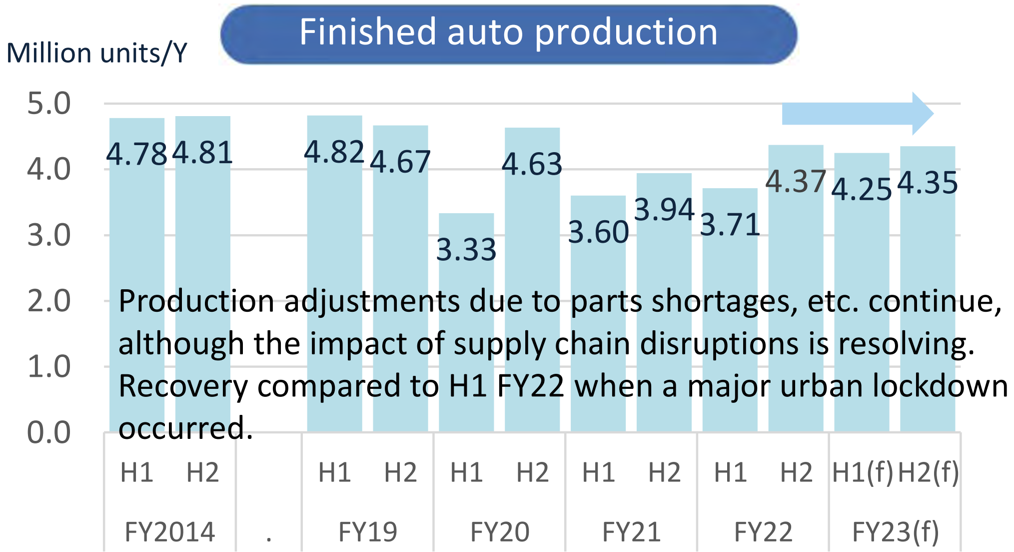
Spreads on commodity-grade products overseas remain depressed

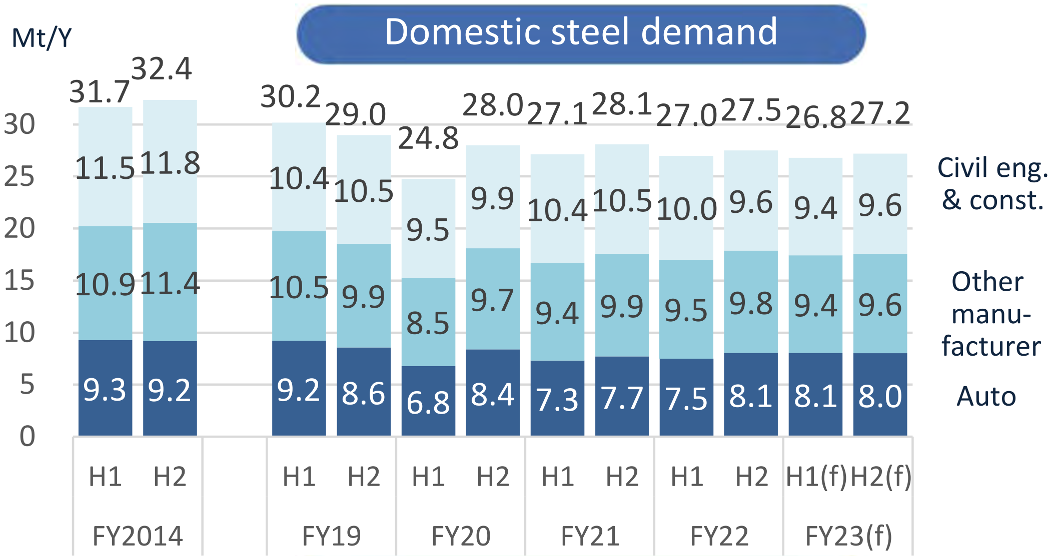
- While the recovery of domestic demand in China is less than expected, crude steel production in China remains at a high level without production adjustment to meet demand, affecting market conditions in ASEAN and other neighboring countries.
- There has been no major change in the international supply-demand trend, and the situation remains severe.
- Despite the downward trend in steel raw material prices, profitability of Asian steelmakers remains low due to persistently high energy costs and other factors.

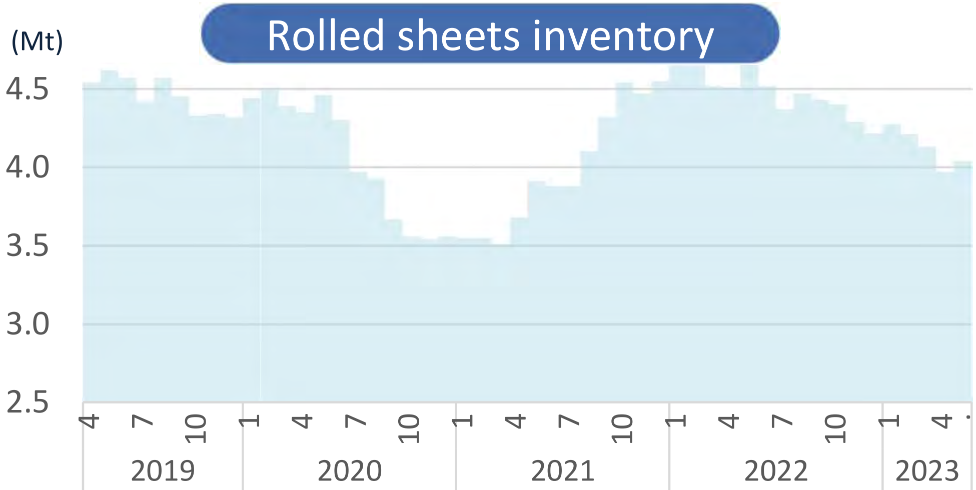


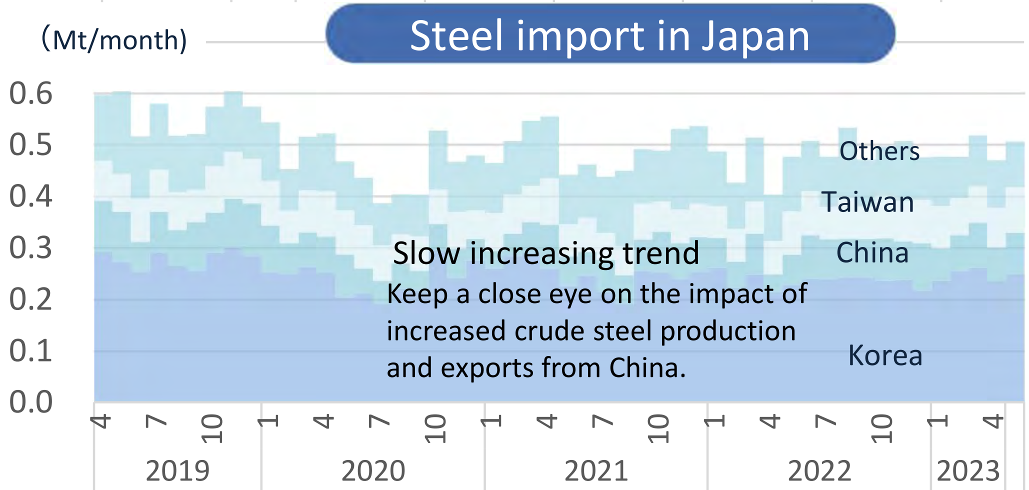
Business Environment Steel S&D in Japan

- The Japanese economy is slowly recovering, driven by inbound demand and service consumption, etc. However, the construction and manufacturing sectors still remain below the level of the previous year in many applications.
- A certain level of recovery is expected in the automotive application due to the easing of supply chain disruptions, but shipbuilding, industrial machinery, and other applications remain weak due to slowing external demand.



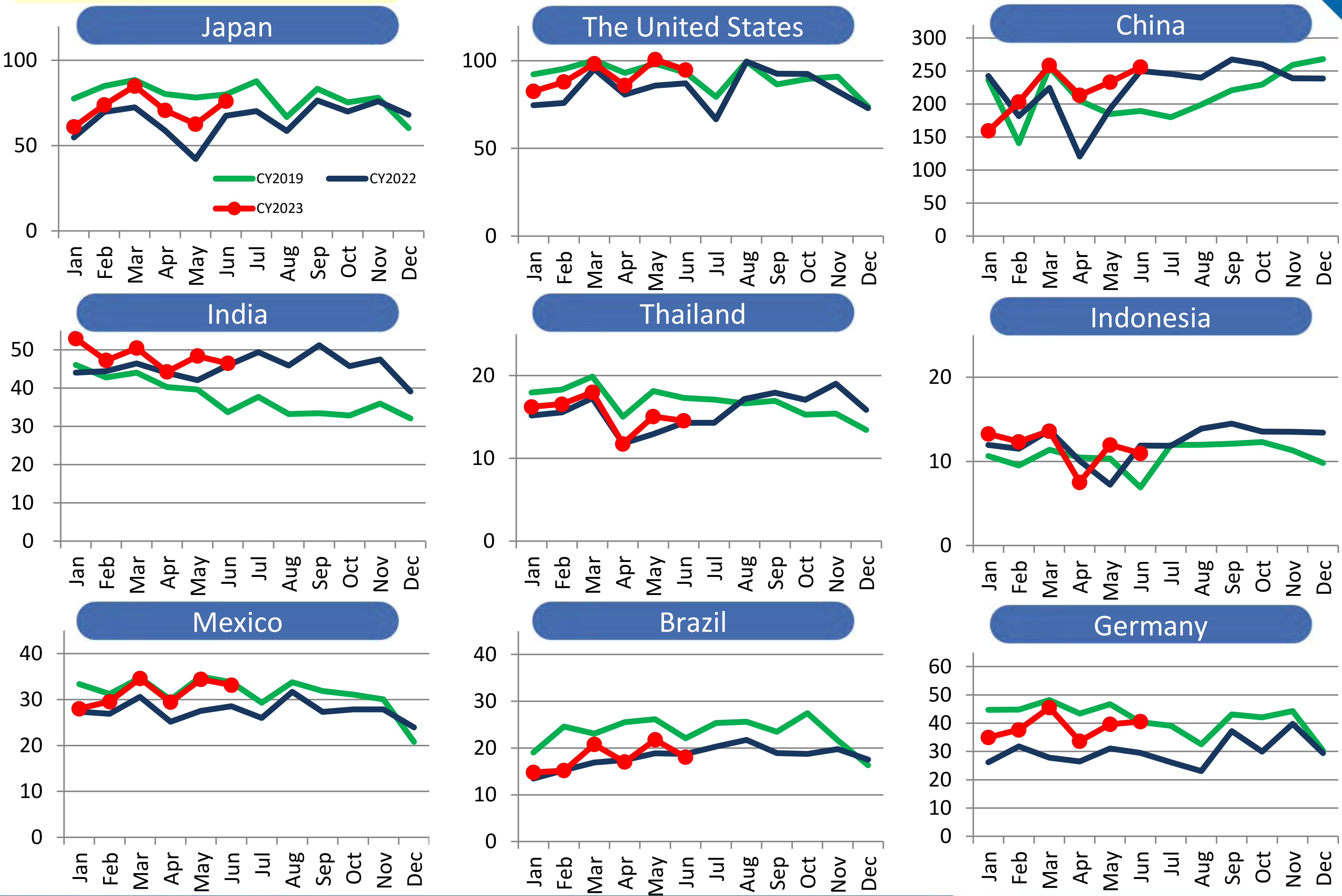






Finished Auto Production

(10 thousand units/month)



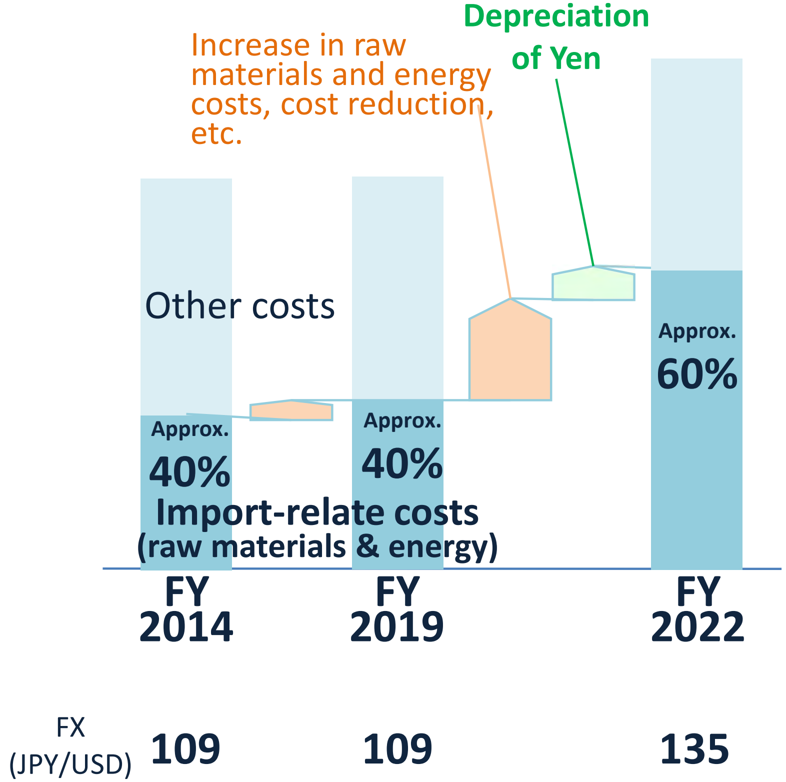
Business Environment The Balance of Trade and FX Sensitivity

Domestic steel business: The proportion of import-related costs to steel manufacturing cost has risen due to the recent surge in prices of raw materials and energy, and because the amount of import exceeds export, **the impact of Yen depreciation to our domestic steel business is negative**.

Consol. business profit: **The impact of Yen depreciation is neutral or slightly positive** due to increase in profit in overseas business and raw material business translated into Yen basis, and valuation gains for inventories and foreign assets.

	Impact from Yen depreciation	
Domestic Steel Business	**-) Negative**	Excess of import to export Q4 FY2022 1.2 bn. USD/Q (import 4.7 – export 3.5)
Overseas Steel Business Raw Material business	+) Positive	Increase in profit translated into Yen basis
Other Group Companies Three Non-Steel Segments	+) Positive	Excess in export, gain in foreign asset valuation
Underlying consol. business P/L	-) Negative	
Inventory valuation Non-operating P/L	+) Positive	Gain in valuation for imported materials, gain in foreign asset valuation
Consol. business P/L	**Neutral or slightly positive**	

Cf. Rough figure for our steel manufacturing cost structure



Agenda

Topics – DX Promotion (1)

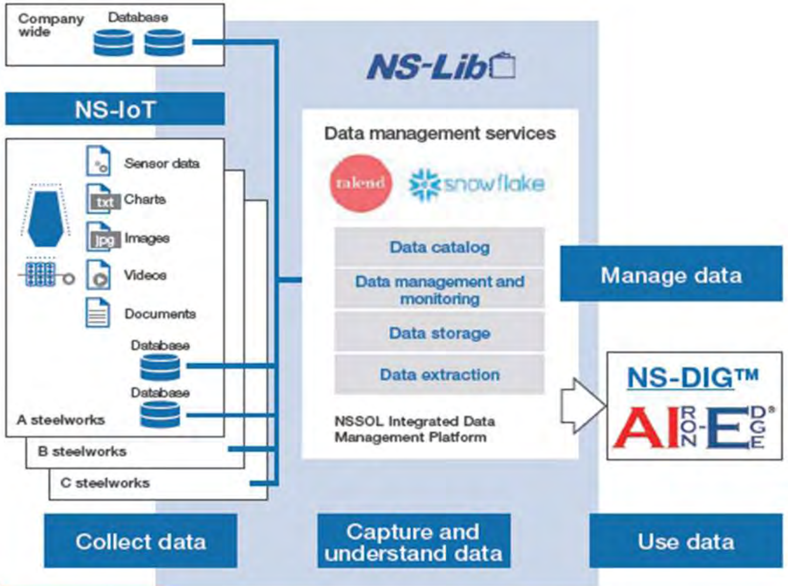
Received Data Management Highest Award at Data Management 2023 from JDMC* firstly in steel industry * Japan Data Management Consortium(JDMC)

Cf. Past Winners of Data Management Highest Award
OSAKA GAS CO.,LTD., Kyowa Kirin Co., Ltd., Komatsu Ltd., Isetan Mitsukoshi Holdings Ltd., Seven & i Holdings Co., Ltd., JAPAN TOBACCO INC., NIPPON TELEGRAPH AND TELEPHONE CORPORATION, ALL NIPPON AIRWAYS CO., LTD., Sumitomo Mitsui Financial Group, Inc., Tokio Marine Holdings, Inc., Ministry of Agriculture, Forestry and Fisheries

The award ceremony
Photo right: Takeo Hoshino, The Head of Digital Innovation Div.

Initiatives to integrate data accumulated individually at each steel mill and data needed for management purposes, and use them

NS-IoT : "Data collection" Wireless sensor-utilization platform
NS-Lib : "Data integration and understanding"
Integrated data platform that enables real-time understanding of management information and KPIs for optimal action
NS-DIG® : "Data utilization" Integrated data analysis and AI development platform



DX human resources development to handle these data

Highly acclaimed

Topics – DX Promotion (2)

Acquiring real-time information on the transportation of imported raw materials
Contributing to more efficient supply chains by speeding up decision-making

(Announced on May 29, 2023)

NS Solutions

Developed by NS solutions with MOL Information Systems

System integration with Mitsui O.S.K. Lines, Ltd.'s information provision platform "Lighthouse".Data management is possible not only for Mitsui O.S.K. Lines, Ltd. but also for shipping companies that operate imported iron ore and coal vessels for Nippon Steel.

shipping company

Lighthouse
Information provision platform

Data linkage

Nippon Steel

Raw material supply and demand management system
Voyage schedule and raw material inventory forecast management system

Acquiring real-time information on the transportation of raw materials import

Data linkage between the shipping company's information provision platform and our raw material supply and demand management system

Due to weather and other factors, the number of voyage days and anchorage days may vary, resulting in the need to revise the operation plan

Speeds up decision-making based on up-to-date voyage schedules and raw material inventory forecasts

Production stabilization

Optimal Inventory Management

Supply Chain Streamlining

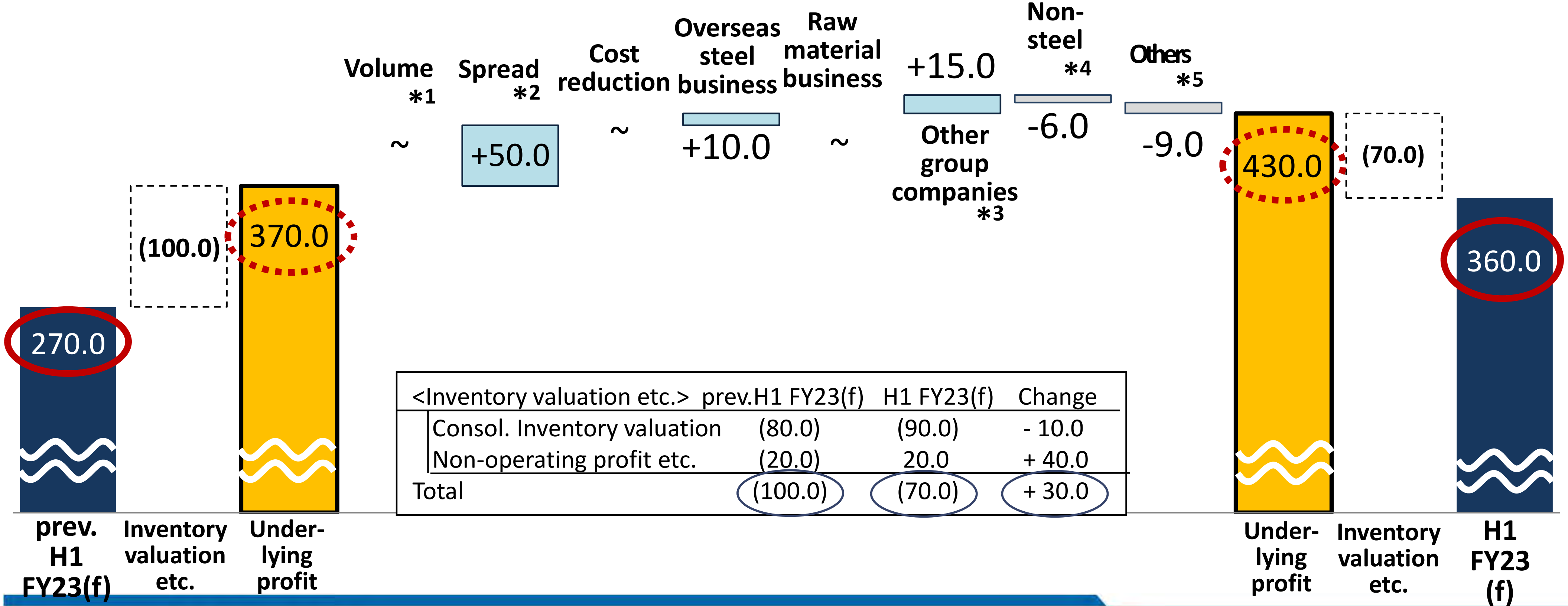
Contribute to CO_2 reduction by improving operational and transportation efficiency, etc.

Agenda

Business Profit Variance (prev. H1 FY23(f) -> H1 FY23(f))

(Bn. JPY)	H1 FY23 old	H1 FY23(f)	Change
Business Profit	**270.0**	**360.0**	***+90.0***
Underlying profit	**370.0**	**430.0**	***+60.0***
1) Domestic	140.0	185.0	*+45.0*
2) Overseas	55.0	65.0	*+10.0*
3) Raw material	60.0	60.0	~
4) Other group	85.0	100.0	*+15.0*
5) Non-steel	23.5	18.0	*-6.0*

*1 Crude steel production : +0 Mt (approx. 17.50 -> 17.50)
Steel shipment volume : +0 Mt (approx. 16.00 -> 16.00)
*2 Incl. the impact of FX, and carry over -70.0 (74.0 -> 4.0)
*3 Improve: Stainless steel& EAFs, operational support, Trading, etc.
*4 Engineering -7.0, etc.
*5 Incl. increase in depreciation cost -



<Inventory valuation etc.>	prev.H1 FY23(f)	H1 FY23(f)	Change
Consol. Inventory valuation	(80.0)	(90.0)	- 10.0
Non-operating profit etc.	(20.0)	20.0	+ 40.0
Total	(100.0)	(70.0)	+ 30.0

Business Profit Variance (prev. FY23(f) -> FY23(f))

(Bn. JPY)	FY23(f) old	FY23(f)	Change
Business Profit	650.0	690.0	*+40.0*
Underlying profit	800.0	840.0	*+40.0*
1) Domestic	280.0	330.0	*+50.0*
2) Overseas	120.0	120.0	~
3) Raw material	125.0	115.0	*-10.0*
4) Other group	210.0	215.0	*+5.0*
5) Non-steel	58.0	49.0	*-9.0*

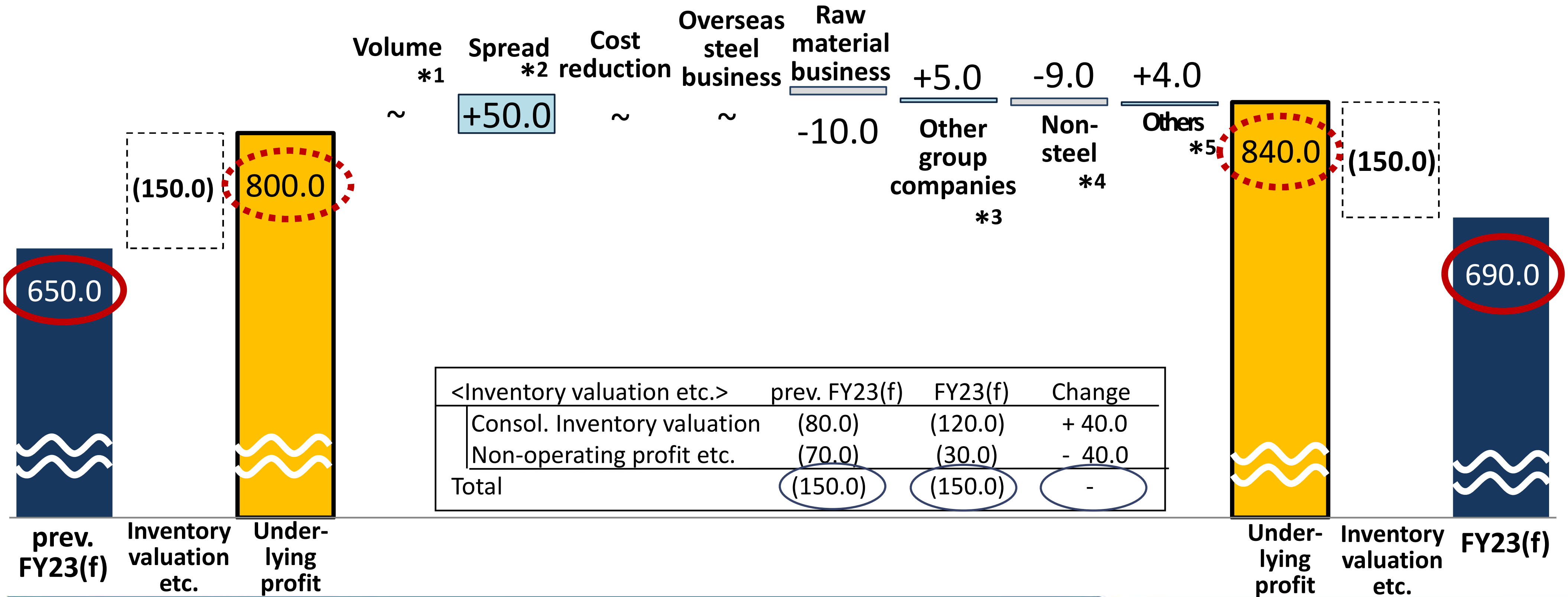
*1 Crude steel production : +0 Mt (approx. 35.00 -> 35.00)
Steel shipment volume : +0 Mt (approx. 32.00 -> 32.00)

*2 Incl. the impact of FX, and carry over -90.0 (113.0 -> 23.0)

*3 Improve: operational support, Stainless steel & EAFs, secondary processing, etc.

*4 Engineering -10.0, etc.

*5 Incl. decrease in depreciation cost +0

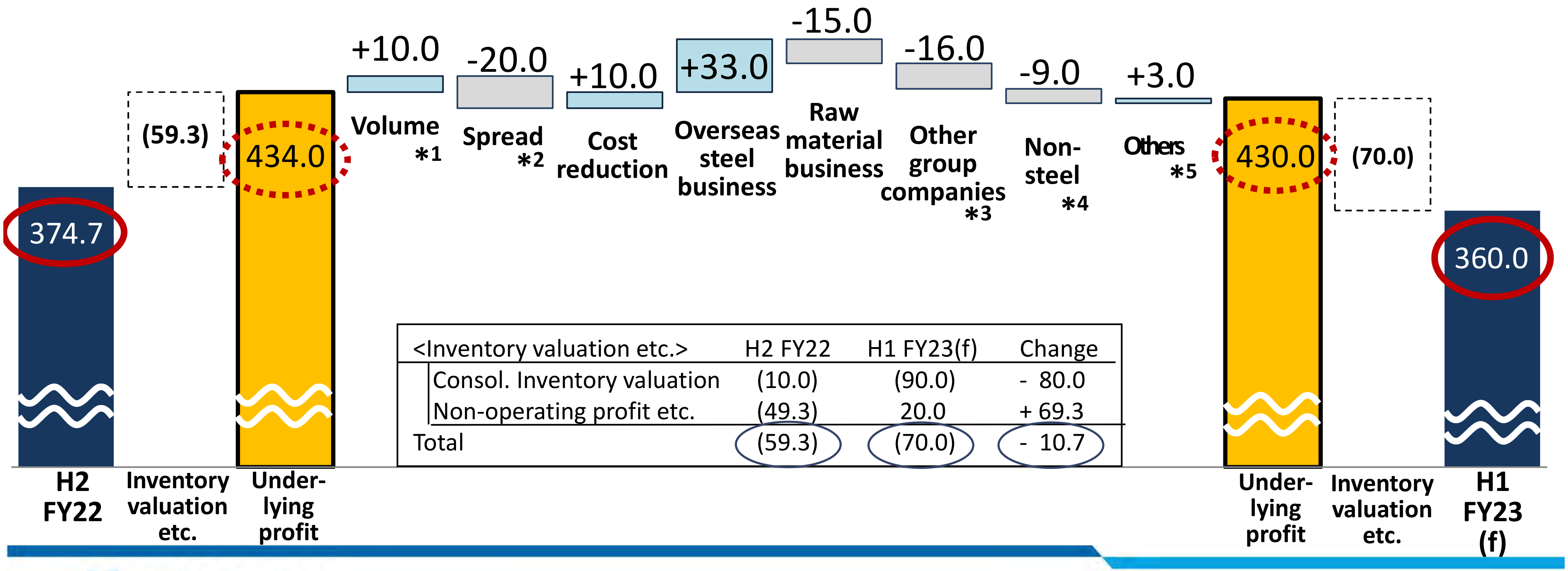


<Inventory valuation etc.>	prev. FY23(f)	FY23(f)	Change
Consol. Inventory valuation	(80.0)	(120.0)	+ 40.0
Non-operating profit etc.	(70.0)	(30.0)	- 40.0
Total	(150.0)	(150.0)	-

Business Profit Variance (H2 FY22 -> H1 FY23(f))

(Bn. JPY)	H2 FY22	H1 FY23(f)	Change
Business Profit	**374.7**	**360.0**	***-14.7***
Underlying profit	**434.0**	**430.0**	***-4.0***
1) Domestic	**177.0**	**185.0**	***+8.0***
2) Overseas	**32.0**	**65.0**	***+33.0***
3) Raw material	**75.0**	**60.0**	***-15.0***
4) Other group	**116.0**	**100.0**	***-16.0***
5) Non-steel	**27.0**	**18.0**	***-9.0***

*1 Crude steel production : approx. +0.29 Mt (17.21 -> approx. 17.50)
Steel shipment volume : approx. +0.21 Mt (15.79 -> approx.16.00)
*2 Incl. the impact of FX, and carry over +20.0 ((16.0) -> 4.0)
*3 Improve: Secondary processing, Stainless steel& EAFs, etc.
*4 Engineering -6.3, etc.
*5 Incl. increase in depreciation cost -4.0

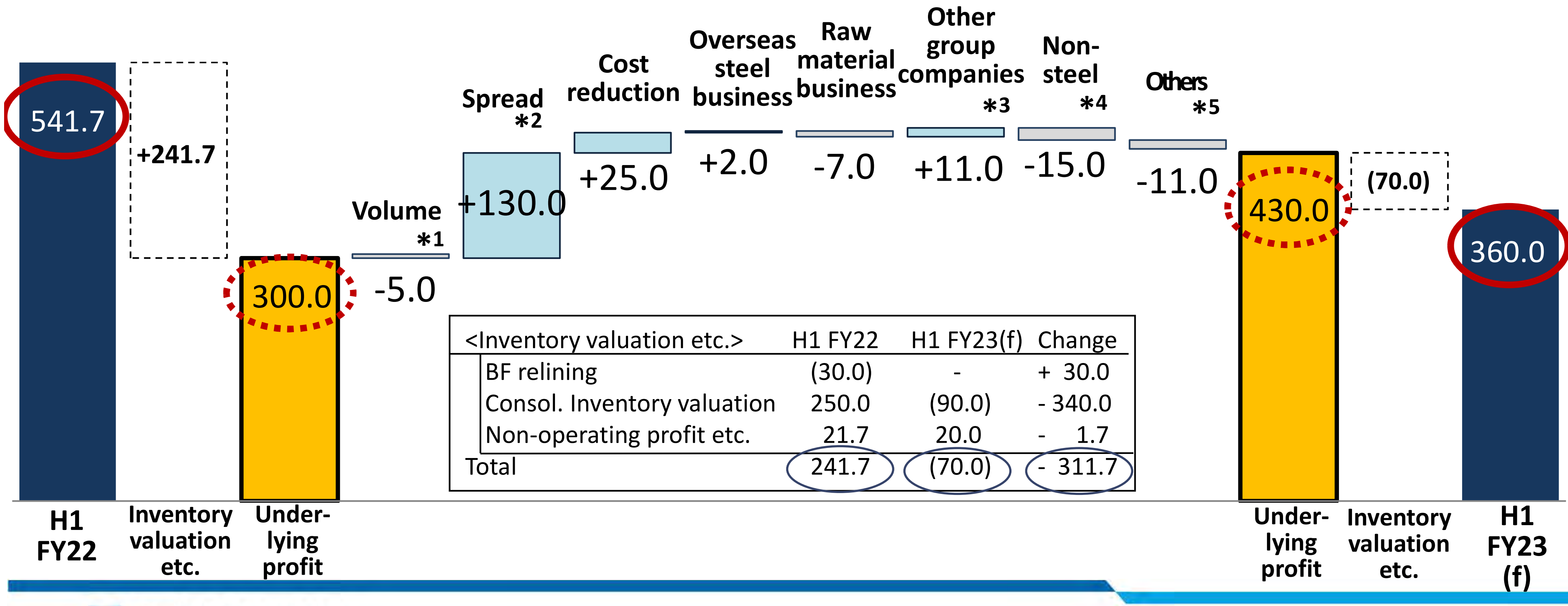


<Inventory valuation etc.>	H2 FY22	H1 FY23(f)	Change
Consol. Inventory valuation	(10.0)	(90.0)	- 80.0
Non-operating profit etc.	(49.3)	20.0	+ 69.3
Total	(59.3)	(70.0)	- 10.7

Business Profit Variance (H1 FY22 -> H1 FY23(f))

(Bn. JPY)	H1 FY22	H1 FY23(f)	Change
Business Profit	**541.7**	**360.0**	***-181.7***
Underlying profit	**300.0**	**430.0**	***+130.0***
1) Domestic	**45.0**	**185.0**	***+140.0***
2) Overseas	**63.0**	**65.0**	***+2.0***
3) Raw material	**67.0**	**60.0**	***-7.0***
4) Other group	**89.0**	**100.0**	***+11.0***
5) Non-steel	**33.0**	**18.0**	***-15.0***

*1 Crude steel production : approx.+0.46 Mt (17.04 -> approx. 17.50)
Excl. BF relining impact : +0.06Mt (17.44 -> approx. 17.50)
Steel shipment volume : approx.+0.31 Mt (15.69 -> approx. 16.00)
Excl. BF relining impact : approx. -0.09 Mt (16.09 -> approx. 16.00)
*2 Incl. the impact of FX, and carry over -75.0 (79.0 -> 4.0)
*3 Improve: Trading, operational support, etc.
*4 Engineering -5.3, etc.
*5 Incl. increase in depreciation cost -9.0

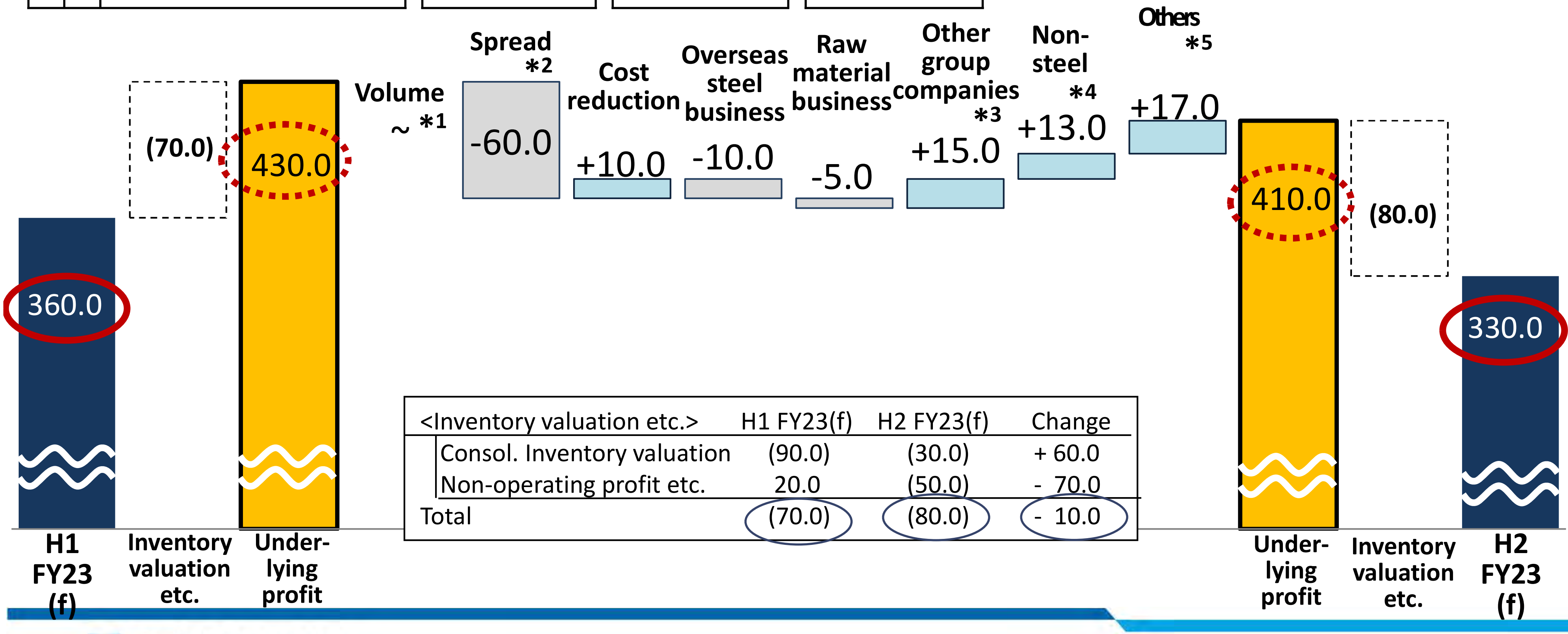


<Inventory valuation etc.>	H1 FY22	H1 FY23(f)	Change
BF relining	(30.0)	-	+ 30.0
Consol. Inventory valuation	250.0	(90.0)	- 340.0
Non-operating profit etc.	21.7	20.0	- 1.7
Total	241.7	(70.0)	- 311.7

Business Profit Variance (H1 FY23(f) -> H2 FY23(f))

(Bn. JPY)	H1 FY23(f)	H2 FY23(f)	Change
Business Profit	**360.0**	**330.0**	***-30.0***
Underlying profit	**430.0**	**410.0**	***-20.0***
1) Domestic	**185.0**	**145.0**	***-40.0***
2) Overseas	**65.0**	**55.0**	***-10.0***
3) Raw material	**60.0**	**55.0**	***-5.0***
4) Other group	**100.0**	**115.0**	***+15.0***
5) Non-steel	**18.0**	**31.0**	***+13.0***

*1 Crude steel production :approx. +0 Mt (approx.17.50 -> 17.50)
Steel shipment volume : +0 Mt (approx.16.00 -> 16.00)
*2 Incl. the impact of FX, and carry over +15.0 (4.0 -> 15.0)
*3 Improve: Stainless steel& EAFs, Trading, etc.
*4 Engineering +5.0, Chemicals & Materials +2.0, System Solutions +5.5
*5 Incl. increase in depreciation cost -4.0



<Inventory valuation etc.>	H1 FY23(f)	H2 FY23(f)	Change
Consol. Inventory valuation	(90.0)	(30.0)	+ 60.0
Non-operating profit etc.	20.0	(50.0)	- 70.0
Total	(70.0)	(80.0)	- 10.0

Business Profit Variance (FY22 -> FY23(f))

(Bn. JPY)	FY22	FY23(f)	Change
Business Profit	**916.4**	**690.0**	***-226.4***
Underlying profit	**734.0**	**840.0**	***+106.0***
1) Domestic	**222.0**	**330.0**	***+108.0***
2) Overseas	**95.0**	**120.0**	***+25.0***
3) Raw material	**142.0**	**115.0**	***-27.0***
4) Other group	**205.0**	**215.0**	***+10.0***
5) Non-steel	**60.0**	**49.0**	***-11.0***

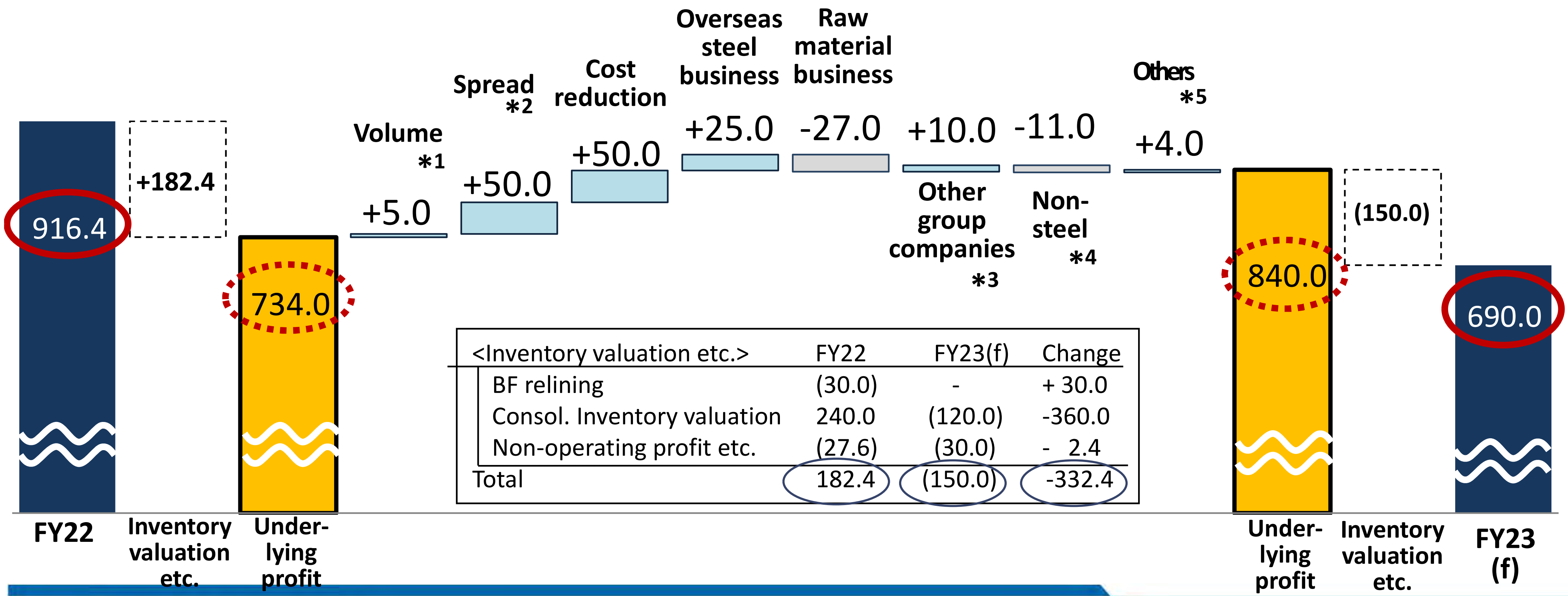
*1 Crude steel production : approx. +0.75Mt (34.25 -> approx. 35.00)
Excl. BF relining impact : +0.35Mt (34.65-> approx. 35.00)
Steel shipment volume : approx. +0.53 Mt (31.47 -> approx. 32.00)
Excl. BF relining impact : +0.13Mt (31.87 -> approx. 32.00)

*2 Incl. the impact of FX, and carry over -40.0 (63.0 -> 23.0)

*3 Improve: Trading, etc.

*4 Engineering -6.6, etc.

*5 Incl. increase in depreciation cost -17.0



<Inventory valuation etc.>	FY22	FY23(f)	Change
BF relining	(30.0)	-	+ 30.0
Consol. Inventory valuation	240.0	(120.0)	-360.0
Non-operating profit etc.	(27.6)	(30.0)	- 2.4
Total	182.4	(150.0)	-332.4

Business Profit Variance (Q1 FY23 vs. Q2 FY23(f))

(Bn. JPY)	Q1 FY23	Q2 FY23(f)	Change
Business Profit	**248.7**	**111.3**	***-137.4***
<Underlying Profit>	**250.0**	**180.0**	***-70.0***
Steel	**243.4**	**106.6**	***-136.8***
Non-steel	**12.8**	**4.7**	***-8.1***
Adjustment	**(7.6)**	**2.6**	***+10.2***

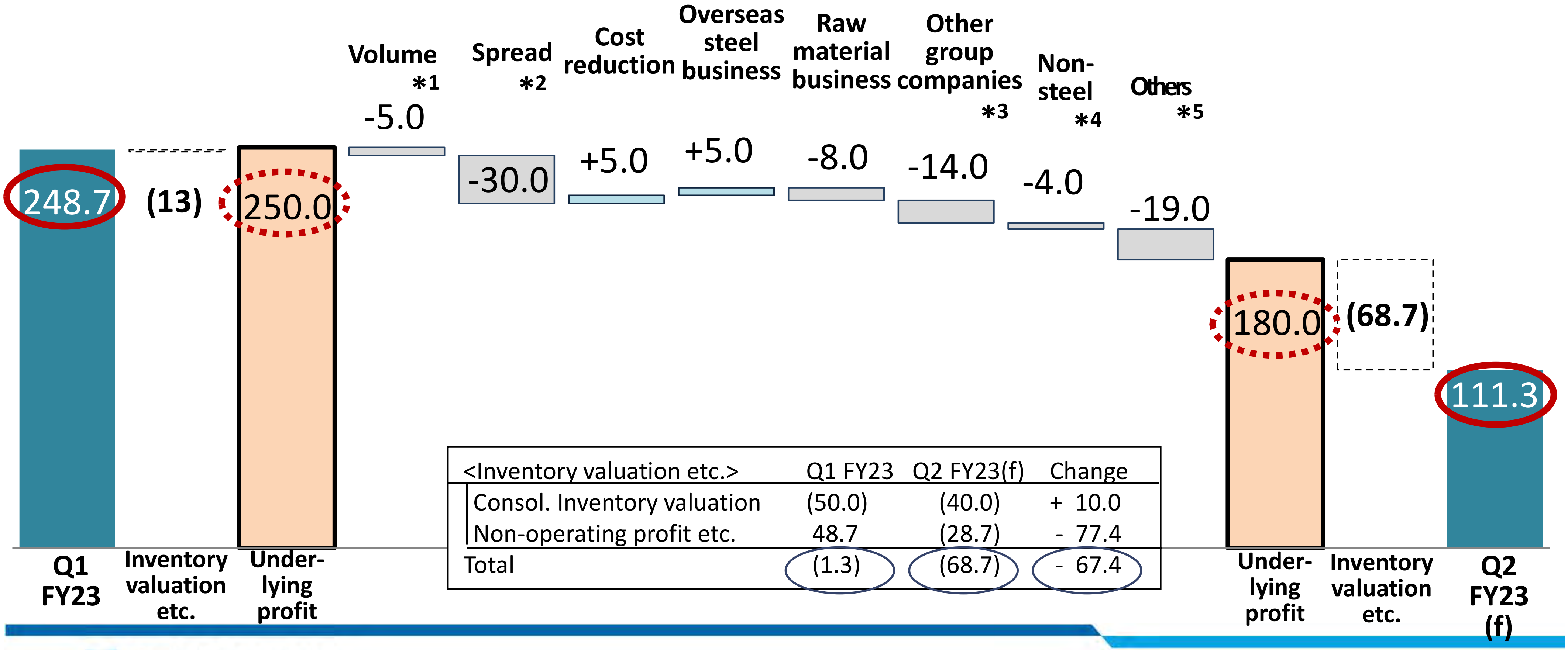
*1 Crude steel production : approx. +0.14 Mt (8.68 -> 8.82)
Steel shipment volume : approx. -0.14 Mt (8.07 -> approx. 7.93)

*2 Incl. the impact of FX fluctuation, and carry over -10.0 (7.0 -> (3.0))

*3 Improve: Stainless steel and EAFs, secondary processing, Trading, etc.

*4 On the underlying BP basis : Engineering -6.2, Chemicals & Materials +2.8, etc.

*5 Incl. increase in depreciation cost -3.0



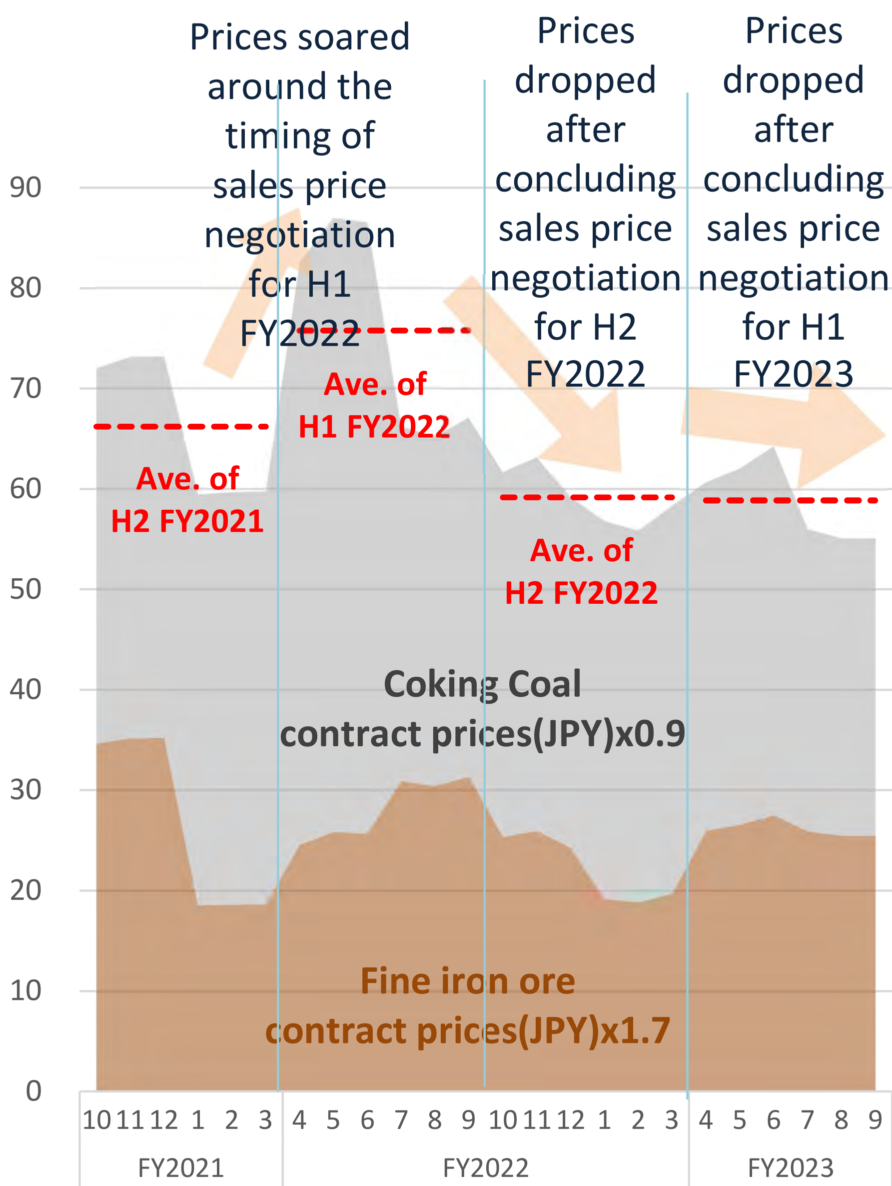
<Inventory valuation etc.>	Q1 FY23	Q2 FY23(f)	Change
Consol. Inventory valuation	(50.0)	(40.0)	+ 10.0
Non-operating profit etc.	48.7	(28.7)	- 77.4
Total	(1.3)	(68.7)	- 67.4

NIPPON STEEL

Agenda

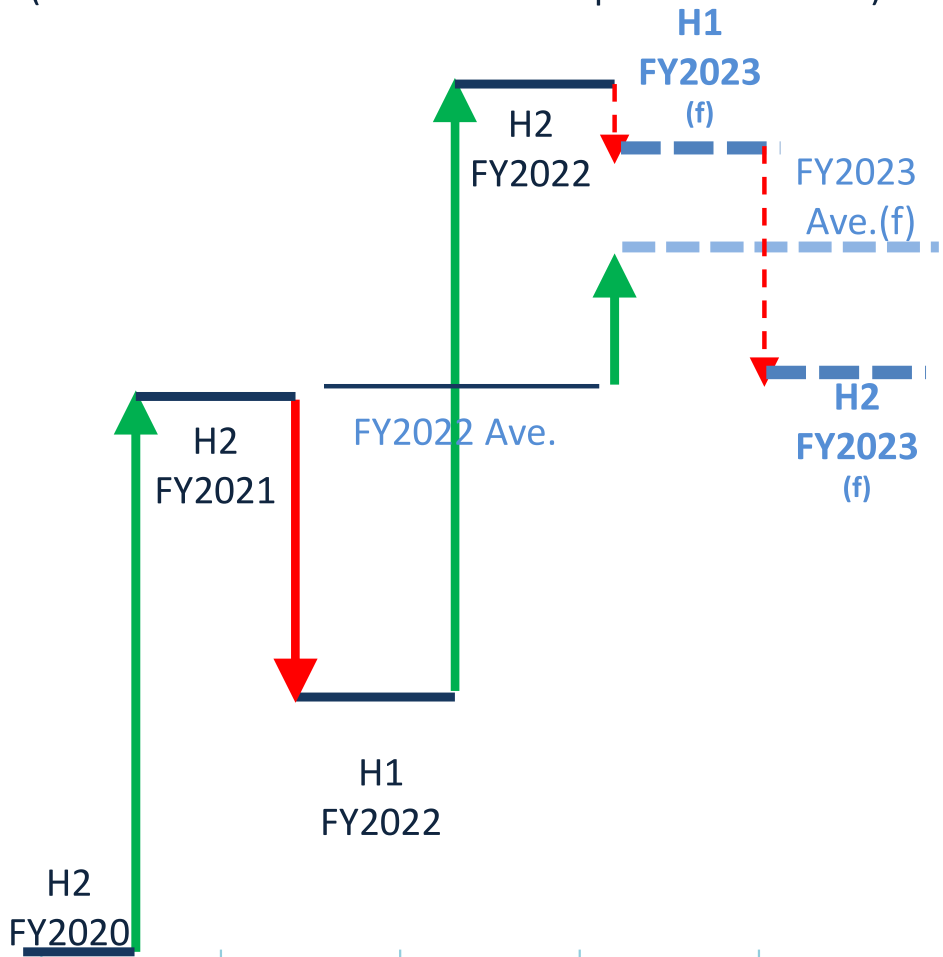
Realization of an appropriate level of price spread

Raw material costs per ton



Spread Variance history

(Direct contract-based sales and Spot market sales)



		H2 FY2020 -> H2 FY2021	H2 FY2021 -> H1 FY2022	H1 FY2022 -> H2 FY2022	H2 FY2022 -> H1(f) FY2023	FY2022 -> FY2023(f)
Spread Variance	Bn. JPY /6M	+166.0	-75.0	+150.0	**-20.0**	**+50.0**
	kJPY/t	+9	-5	+9	**-1**	**+2**

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