

Fiscal 2018 First Half Supplementary Information

November 9, 2018

DOWA HOLDINGS CO.,LTD.

Overview of Operating Results

■ Consolidated Income Statements

Billion yen

	FY2017		FY2018		Change			
	H1 Results	Full Year Results	H1 Results	Full Year Forecasts	H1		Full Year	
Net Sales	219.3	454.7	221.8	455.0	2.5	1%	0.2	0%
Operating Income	14.6	30.9	9.3	24.5	(5.3)	(36%)	(6.4)	(21%)
Ordinary Income	17.2	36.3	12.8	30.0	(4.4)	(26%)	(6.3)	(17%)
Profit attributable to owners of parent	11.7	24.6	8.8	21.0	(2.8)	(24%)	(3.6)	(15%)

* Full year forecasts were revised on October 29, 2018.

- ✓ In the first half of FY2018, the ordinary income rose 26% year on year.
- ✓ Earnings decreased mainly in Nonferrous Metals due to the worsening of purchase conditions for raw material ore.

Foreign exchange rates and Metal prices

	FY2017 Results			FY2018 Results		
	1Q average	2Q average	H1 average	1Q average	2Q average	H1 average
Exchange Rate: (¥/\$)	111.1	111.0	111.1	109.1	111.5	110.3
Copper: (\$/t)	5,663	6,347	6,005	6,872	6,103	6,487
Zinc: (\$/t)	2,598	2,962	2,780	3,114	2,534	2,824
Indium: (\$/kg)	186	182	184	307	266	286

Business Environment (H1)

➤ **Waste-related business**

Japan: The generated waste volume was firm.

Southeast Asia: Due to the delay of spot projects, waste treatment volume decreased.

➤ **Automobile-related market**

Demand was steady resulting from firm automobile production.

➤ **New forms of energy- and electronic components-related business**

New forms of energy: Demand decreased due to subsidies reduction in China.

Electronic components: Steady demand mainly for smartphone devices.

➤ **Metal prices and Exchange rates**

Metal prices: In downward phase.

Exchange rates: Stable at around the 110 yen level.

Trends in Major Products

Indexes (100 for Q1 of FY2017)

		FY2017				FY2018	
		1Q	2Q	3Q	4Q	1Q	2Q
Environmental Management & Recycling	Intermediate waste processing volume in Japan	100	90	95	86	103	85
	Recycling materials collection volume (To Kosaka)	100	96	104	103	124	122
	Waste processing amount in South East Asia	100	87	87	92	94	95
Nonferrous Metals	Copper production (Kosaka, Onahama)	100	82	70	85	85	68
	Zinc production (Akita)	100	79	111	100	108	79
Electronics Materials	LED sales volume	100	107	121	109	117	93
	Silver powder sales volume	100	118	117	82	92	83
Metal Processing	Copper alloy strip sales volume	100	97	106	102	100	101
Heat Treatment	Heattreatment sales amount	100	106	114	114	114	113
	Industrial furnace sales amount	100	143	115	194	97	151

Year-on-Year Comparison by Segment

Billion yen

	FY2017 H1 Results			FY2018 H1 Results			Change			Details of Changes to Ordinary Income
	Net Sales	Operating Income	Ordinary Income	Net Sales	Operating Income	Ordinary Income	Net Sales	Operating Income	Ordinary Income	
Environmental Management & Recycling	48.2	2.6	2.9	51.2	2.8	3.2	2.9	0.2	0.2	- Collections of used household appliances and automobile shredder dust were firm.
Nonferrous Metals	102.3	4.3	6.5	109.3	0.1	2.7	6.9	(4.1)	(3.8)	- The conditions for purchasing raw materials worsened. - Electricity charges rose. - Occurrence of end-of-period evaluation loss.
Electronics Materials	41.0	3.0	3.3	33.3	1.6	2.1	(7.7)	(1.4)	(1.1)	- Decrease in Silver powder sales to China. - Increase in R&D expenses.
Metal Processing	42.2	3.2	3.3	46.0	3.1	3.2	3.7	(0.1)	(0.1)	- Demand for Copper rolled products was firm. - Occurrence of temporary loss due to decline in copper price.
Heat Treatment	12.9	1.0	0.9	13.6	1.2	1.2	0.6	0.1	0.2	- Demands for both heat treatment processing and industrial furnaces were firm.
Other/ Elimination	(27.6)	0.4	0.0	(31.7)	0.4	0.2	(4.1)	0.0	0.1	
Total	219.3	14.6	17.2	221.8	9.3	12.8	2.5	(5.3)	(4.4)	

Factor Analysis of Ordinary Income

Billion yen

FY2018 H1 – FY2017 H1	Environmental Management & Recycling	Nonferrous Metals	Electronics Materials	Metal Processing	Heat Treatment	Other	Total
Effect of various measures, increase/decrease in sales, etc.	0.7	(2.4)	(1.3)	(0.0)	0.3	0.1	(2.7)
Of the above, free metal income difference (volume difference)	–	(0.7)	–	–	–	–	(0.7)
Free metal income difference (metal price difference)	–	0.9	–	–	–	–	0.9
Exchange rate difference of foreign currency-based income	–	(0.1)	0.0	–	–	–	(0.1)
Purchase conditions for raw material (base conditions difference)	–	(1.8)	–	–	–	–	(1.8)
Difference between the market value and book value at sale, and between market value and valuation prices at end of period	–	(0.6)	–	–	–	–	(0.6)
Electricity charges, etc.	–	(0.2)	–	–	–	–	(0.2)
Depreciation in manufacturing cost	(0.5)	0.2	(0.1)	(0.1)	(0.1)	(0.0)	(0.5)
Increase/decrease in operating income	0.2	(4.1)	(1.4)	(0.1)	0.1	0.0	(5.3)
Effect of non-operating income/expenses							
- Equity method income or loss	0.1	(0.2)	0.0	(0.0)	0.0	0.2	0.0
- Other	(0.0)	0.5	0.3	(0.0)	0.1	(0.0)	0.7
Increase/decrease in ordinary income	0.2	(3.8)	(1.1)	(0.1)	0.2	0.1	(4.4)

Comparison with forecast by Segment

Billion yen

	FY2018 H1 Forecast (announced on May 11)			FY2017 H1 Results			Change			Details of Changes to Ordinary Income
	Net Sales	Operating Income	Ordinary Income	Net Sales	Operating Income	Ordinary Income	Net Sales	Operating Income	Ordinary Income	
Environmental Management & Recycling	52.7	3.0	3.1	51.2	2.8	3.2	(1.4)	(0.1)	0.1	- Decrease in some unit prices of waste treatment. - Collections of used household appliances and automobile shredder dust were firm.
Nonferrous Metals	109.9	4.5	6.8	109.3	0.1	2.7	(0.5)	(4.3)	(4.0)	- Metal prices decreased. - Occurrence of end-of-period evaluation loss.
Electronics Materials	36.2	2.0	2.7	33.3	1.6	2.1	(2.8)	(0.3)	(0.5)	- Decrease in Silver powder sales to China.
Metal Processing	46.6	3.5	3.5	46.0	3.1	3.2	(0.5)	(0.3)	(0.2)	- Occurrence of temporary loss due to decline in copper price.
Heat Treatment	14.3	1.3	1.2	13.6	1.2	1.2	(0.6)	(0.0)	0.0	- Demands for both heat treatment processing and industrial furnaces were firm.
Other/ Elimination	(30.7)	0.2	0.2	(31.7)	0.4	0.2	(1.0)	0.2	0.0	
Total	229.0	14.5	17.5	221.8	9.3	12.8	(7.1)	(5.1)	(4.6)	

Financial Highlights (1)

■ Consolidated Balance Sheets

Billion yen

	Mar. 31, 2018	Sep. 30, 2018	Change		Mar. 31, 2018	Sep. 30, 2018	Change
Current Assets	228.3	230.1	1.8	Current Liabilities	142.8	144.4	1.6
				Noncurrent Liabilities	65.9	82.5	16.5
Noncurrent Assets	228.1	242.4	14.2	Non-Controlling Interests	8.9	8.7	(0.2)
				Equity	238.8	236.9	(1.8)
Total Assets	456.5	472.6	16.0	Total Liabilities and Net Assets	456.5	472.6	16.0
				Interest-bearing debt	109.8	127.3	17.4
				Equity ratio (%)	52.3	50.1	(2.2)

- ✓ Total assets increased by 472.6 billion yen as compared with the end of the previous fiscal year due to investment related to mine development and overseas business expansion. Due to these investments, interest-bearing debt increased to 127.3 billion yen.

Financial Highlights (2)

■ Consolidated Statements of Cash Flows

Billion yen

	FY2017 H1	FY2018 H1	Change
Cash Flows from Operating Activities	0.4	15.4	15.0
Profit before income taxes	17.0	12.6	(4.3)
Depreciation and amortization	8.3	9.0	0.6
Income taxes (paid) refund	(7.6)	(5.3)	2.3
Inventories	(21.5)	(3.5)	18.0
Other, net	4.2	2.6	(1.5)
Cash Flows from Investing Activities	(12.2)	(21.5)	(9.2)
Acquisition of property, plant and equipment	(10.8)	(11.1)	(0.2)
Other investments	(1.3)	(10.3)	(9.0)
Cash Flows from Financing Activities	9.1	7.8	(1.2)
Total	(2.6)	1.8	4.4

Forecast for Fiscal 2018

■ Consolidated Income Statements

Billion yen

	FY2017 Results ①	FY2018 Forecast			Change ③ - ①
		announced on May 11 ②	announced on October 29 ③	Change ③ - ②	
Net Sales	454.7	475.0	455.0	(20.0) (4%)	0.3 0%
Operating Income	30.9	32.0	24.5	(7.5) (23%)	(6.4) (21%)
Ordinary Income	36.3	38.0	30.0	(8.0) (21%)	(6.3) (17%)
Profit attributable to owners of parent	24.6	26.5	21.0	(5.5) (21%)	(3.6) (15%)

- ✓ With respect to the forecast for fiscal 2018, we revised the previous forecast on October 29 this year, taking into consideration the results of the first half and the most recent nonferrous metal prices.

Year-on-Year Comparison by Segment (full year)

Billion yen

	FY2017 Results			FY2018 Forecast (announced on October 29)			Change			Details of Changes to Ordinary Income
	Net Sales	Operating Income	Ordinary Income	Net Sales	Operating Income	Ordinary Income	Net Sales	Operating Income	Ordinary Income	
Environmental Management & Recycling	99.3	4.9	5.7	104.5	5.5	6.3	5.1	0.5	0.5	- Collections of used household appliances and automobile shredder dust were firm.
Nonferrous Metals	217.9	9.2	13.0	224.3	4.0	8.0	6.3	(5.2)	(5.0)	- The conditions for purchasing raw materials worsened. - Electricity charges rose. - Decrease in equity-method affiliates.
Electronics Materials	77.7	5.6	6.1	66.7	3.2	4.5	(11.0)	(2.4)	(1.6)	- Decrease in Silver powder sales to China. - Increase in R&D expenses.
Metal Processing	90.6	7.2	7.5	93.5	7.2	7.4	2.8	(0.0)	(0.1)	- Demand for Copper rolled products was firm.
Heat Treatment	28.2	2.6	2.5	29.9	3.2	3.2	1.6	0.5	0.6	- Demands for both heat treatment processing and industrial furnaces were firm.
Other/ Elimination	(59.1)	1.2	1.3	(63.9)	1.4	0.6	(4.7)	0.1	(0.7)	- Decrease in equity-method affiliate.
Total	454.7	30.9	36.3	455.0	24.5	30.0	0.2	(6.4)	(6.3)	

Assumptions and Sensitivities (FY2018 H2)

Sensitivity (Operating Income / H2)			Million yen
	Assumptions	Fluctuation	Sensitivity
Exchange rate	110.0 ¥/\$	± 1 ¥/\$	210
Copper	6,200 \$/t	±100 \$/t	30
Zinc	2,600 \$/t	±100 \$/t	200
Indium	250 \$/kg	±10 \$/kg	30

* Exchange rate sensitivity; Nonferrous Metals 170 million yen and Electronic Materials 40 million yen.

Foreign Exchange Rates and Metal Prices

	FY2017			FY2018				(ref.)
	H1 average	H2 average	Full Year average	H1 assumption	H1 average	H2 assumption	Full Year estimation	Oct. 2018 Ave.
Exchange rate: (¥/\$)	111.1	110.6	110.9	110.0	110.3	110.0	110.1	112.8
Copper: (\$/t)	6,005	6,884	6,444	7,000	6,487	6,200	6,344	6,216
Zinc: (\$/t)	2,780	3,328	3,054	3,200	2,824	2,600	2,712	2,672
Indium: (\$/kg)	184	269	226	350	286	250	268	239

Sensitivity is based on assumptions that the Company assumes to be reasonable at the time of publication. Actual effects may differ materially due to a variety of factors.

Investment

Billion yen

	FY2016 Results			FY2017 Results			FY2018 H1 Results			FY2018 Estimation		
	Capital investment & loan	R&D investment	Total	Capital investment & loan	R&D investment	Total	Capital investment & loan	R&D investment	Total	Capital investment & loan	R&D investment	Total
Environmental Management & Recycling	5.7	0.3	6.0	8.2	0.4	8.6	2.1	0.1	2.3	8.0	0.4	8.4
Nonferrous Metals	8.2	2.0	10.3	12.3	1.2	13.6	9.0	0.8	9.9	27.0	1.2	28.2
Electronics Materials	3.7	3.2	7.0	4.6	3.4	8.1	2.1	1.9	4.1	3.0	4.5	7.5
Metal Processing	4.0	0.5	4.5	3.6	0.5	4.2	4.6	0.3	5.0	6.0	0.7	6.7
Heat Treatment	5.3	0.4	5.7	4.9	0.3	5.3	3.0	0.1	3.1	5.0	0.3	5.3
Companywide, Other	2.4	0.0	2.3	0.8	0.0	0.9	0.6	0.0	0.5	1.0	0.0	1.0
Total	29.4	6.6	36.1	34.8	6.1	40.9	21.7	3.4	25.1	50.0	7.3	57.3

(Ref.) Depreciation Expenses

	FY2016 Results	FY2017 Results	FY2018 H1 Results	FY2018 Estimation
Environmental Management & Recycling	4.5	4.3	2.5	5.8
Nonferrous Metals	3.8	4.6	1.9	4.2
Electronics Materials	2.3	2.7	1.2	3.2
Metal Processing	2.0	2.4	1.2	3.0
Heat Treatment	1.9	2.0	1.0	2.5
Companywide, Other	0.9	1.0	0.5	1.2
Total	15.7	17.2	8.7	20.2

Major investments for FY2018 H1

Nonferrous Metals:

Construction of Los Gatos Zinc Mine.

Metal Processing:

Expansion and upgrading of manufacturing facilities of Copper rolled products.

Heat treatment:

Expansion and upgrading of heat treatment facilities in Japan and North America.

Ref. Historical Data

■ Consolidated financial data

Billion yen

		FY2016					FY2017					FY2018				
		1Q	2Q	3Q	4Q	Full year	1Q	2Q	3Q	4Q	Full year	1Q	2Q	3Q	4Q	Full year
Total	Net Sales	93.7	91.0	102.9	122.8	410.5	110.1	109.1	119.3	116.1	454.7	115.1	106.6	-	-	-
	Operating Income	7.6	5.7	7.3	13.3	33.9	8.2	6.4	8.6	7.6	30.9	6.9	2.4	-	-	-
	Ordinary Income	6.8	6.7	9.1	13.7	36.5	9.0	8.1	10.4	8.6	36.3	8.5	4.2	-	-	-
	Profit attributable to owners of parent	4.9	4.9	6.4	9.8	26.1	6.1	5.5	7.4	5.4	24.6	6.0	2.8	-	-	-
Environmental Management & Recycling	Net Sales	21.8	23.5	23.3	28.1	96.9	24.3	23.9	25.1	25.8	99.3	26.3	24.8	-	-	-
	Operating Income	1.0	1.6	1.9	2.0	6.6	1.6	0.9	1.3	1.0	4.9	1.7	1.0	-	-	-
	Ordinary Income	0.8	1.6	2.1	2.1	6.8	1.7	1.2	1.6	1.1	5.7	1.9	1.3	-	-	-
Nonferrous Metals	Net Sales	49.7	44.7	52.2	60.9	207.7	50.1	52.2	58.2	57.2	217.9	58.7	50.6	-	-	-
	Operating Income	2.9	0.3	1.3	5.4	10.0	2.9	1.4	2.8	2.0	9.2	1.6	(1.4)	-	-	-
	Ordinary Income	2.9	0.9	2.4	5.8	12.2	3.8	2.6	3.5	2.9	13.0	2.8	(0.1)	-	-	-
Electronics Materials	Net Sales	13.1	13.9	17.1	18.3	62.5	23.2	17.7	20.6	16.0	77.7	17.7	15.5	-	-	-
	Operating Income	1.4	1.4	1.4	2.2	6.5	1.4	1.5	1.4	1.0	5.6	1.1	0.4	-	-	-
	Ordinary Income	1.2	1.5	1.8	2.1	6.8	1.5	1.7	1.6	1.1	6.1	1.3	0.7	-	-	-
Metal Processing	Net Sales	17.5	17.5	18.9	21.4	75.4	21.0	21.1	24.5	23.8	90.6	23.0	22.9	-	-	-
	Operating Income	1.5	1.6	1.7	2.0	6.9	1.5	1.6	2.0	2.0	7.2	1.6	1.4	-	-	-
	Ordinary Income	1.5	1.6	1.8	2.0	7.1	1.6	1.7	2.0	2.0	7.5	1.7	1.4	-	-	-
Heat Treatment	Net Sales	5.5	5.9	6.3	7.2	25.1	5.9	7.0	6.9	8.3	28.2	6.3	7.2	-	-	-
	Operating Income	0.4	0.4	0.4	1.0	2.3	0.3	0.7	0.6	0.9	2.6	0.4	0.7	-	-	-
	Ordinary Income	0.3	0.3	0.5	0.9	2.2	0.2	0.7	0.6	0.8	2.5	0.5	0.7	-	-	-
Other/ Elimination	Net Sales	(14.0)	(14.8)	(15.1)	(13.4)	(57.4)	(14.5)	(13.0)	(16.2)	(15.3)	(59.1)	(17.1)	(14.5)	-	-	-
	Operating Income	0.2	0.2	0.3	0.5	1.3	0.3	0.1	0.3	0.5	1.2	0.2	0.1	-	-	-
	Ordinary Income	(0.1)	0.5	0.2	0.5	1.1	0.0	0.0	0.8	0.5	1.3	0.1	0.0	-	-	-
■ Exchange rate and Metal prices		FY2016 (average)					FY2017 (average)					FY2018 (average)				
		1Q	2Q	3Q	4Q	Full year	1Q	2Q	3Q	4Q	Full year	1Q	2Q	3Q	4Q	Full year
Exchange Rate: (¥/\$)		108.1	102.4	109.3	113.6	108.4	111.1	111.0	113.0	108.3	110.9	109.1	111.5	-	-	-
Copper: (\$/t)		4,730	4,774	5,281	5,834	5,154	5,663	6,347	6,808	6,959	6,444	6,872	6,103	-	-	-
Zinc: (\$/t)		1,915	2,253	2,518	2,781	2,367	2,598	2,962	3,234	3,422	3,054	3,114	2,534	-	-	-
Indium: (\$/kg)		237	206	195	190	207	186	182	239	298	226	307	266	-	-	-

DOWA

* Forward-looking statements made in this document, such as business forecast, are based on the information available at this time and on certain premises that the Company assumes to be reasonable. Actual performance may differ materially from such forecasts due to a variety of factors.