

# Results for Third Quarter of FY2023 (Ended September 30, 2023)

November 8, 2023 SUMCO Corporation (Code: 3436)

(LEI: 353800SUSRUOM0V6KU92)

**SUMCO CORPORATION** 

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## Notes Regarding the Forecasts



This material is prepared for the purpose of continuous disclosure to general shareholders and investors and will not constitute an offer or solicitation of securities of the Company in any states or jurisdictions.

The estimate, expectation, forecast and other future information is prepared based on the information which is available for the Company as of today and on certain assumptions and qualifications (which includes our subjective judgment) and the actual financial performance or result may be substantially different from such future information contained in the material due to risk factors including domestic and global economic conditions, trend of semiconductor market and foreign exchanges.





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# Summary and **Market Environment**

Nov. 8, 2023

Mayuki Hashimoto

Representative Director, CEO & Chairman of the Board



#### ■ 3Q-2023 Consolidated Business Result

(Billions of Yen)

	3Q-2023 Forecast	3Q-2023 Actual	Change
Net Sales	101.0	100.2	(8.0)
Operating Income	11.0	15.1	+4.1
Ordinary Income	11.0	15.4	+4.4
Net Income (Note)	7.0	9.3	+2.3
Exchange Rate (Yen/US\$)	138.0	144.1	+6.1

#### 4Q-2023 Consolidated Business Forecast

(Billions of Yen)

	3Q-2023 Actual	4Q-2023 Forecast	Change
Net Sales	100.2	101.0	+0.8
Operating Income	15.1	6.5	(8.6)
Ordinary Income	15.4	5.0	(10.4)
Net Income (Note)	9.3	2.5	(6.8)
Exchange Rate (Yen/US\$)	144.1	145.0	+0.9

(Note) Net income attributable to owners of the parent

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## 1-2. Shareholder Return



		FY2018 (Dec-2018)	FY2019 (Dec-2019)	FY2020 (Dec-2020)	FY2021 (Dec-2021)	FY2022 (Dec-2022)	FY2023 (Dec-2023)
Dividende per chare for	Interim	30	25	18	17	36	42
Dividends per share for common stocks (Yen)	Year-end	32	10	9	24	45	10
	Total	62	35	27	41	81	52
Dividends payment	Interim	8.7	7.3	5.2	4.9	12.6	14.7
(Billions of Yen)	Year-end	9.3	2.9	2.6	8.4	15.7	3.5
	Total	18.1	10.2	7.8	13.3	28.3	18.2
Dividend ratio (%)	Total	31.0%	31.0%	30.9%	30.2%	40.4%	<sup>(*1)</sup> 30.5%
Share Buyback							
Amount (Billions of Yen)	Total	-	3.3	2.5	-	-	-
Ratio (%)	Total	-	10.0%	9.8%	_	-	_
Total Return Ratio (%)	Total	31.0%	41.0%	40.7%	30.2%	40.4%	30.5%

<sup>\*1. 1.7</sup> billion yen of Subsidy income after tax is excluded from dividends.

#### 2-1. Market Environment



#### 3Q-2023

- ✓ Volume
- As customers continued adjusting production, shipment of 300 mm wafers declined for both memory and logic
- Market conditions for 200 mm and smaller wafers being weak overall, the correction phase continued and shipments declined
- ✓ Pricing
- Long-term contract prices are being honored for both 300 mm and 200 mm wafers

#### 4Q-2023 Forecast

- ✓ Volume
- Customer production adjustments are expected to continue for applications of 300 mm wafers
- For wafers of 200 mm and smaller as well, shipments are expected to decline as production adjustments by customers continue
- ✓ Pricing
- Long-term contract prices are being honored for both 300 mm and 200 mm wafers
- Spot prices for smaller diameters are showing weakness

#### Outlook

- ✓ Semiconductor production is expected to recover in 2024, as in addition to strong investment in data centers, and continuing strong demand in the EV and energy fields, demand should bottom out for personal computers and smartphones, which had been trending weakly for some time.
  - On the other hand, since customers are faced with excess wafer inventories, additional time will be needed before order volumes recover, and silicon wafer demand is expected to recover in the second half of 2024.

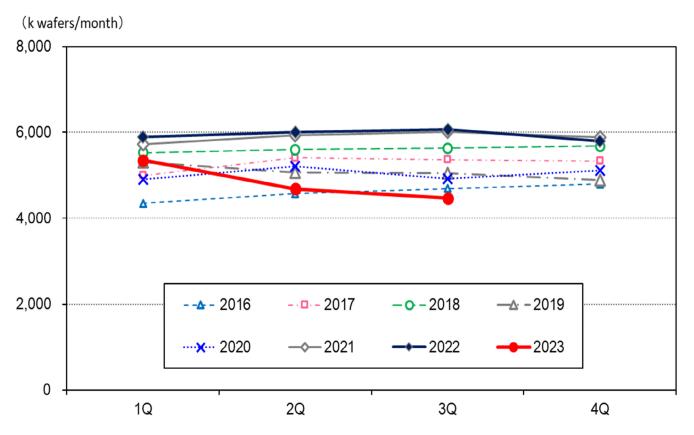
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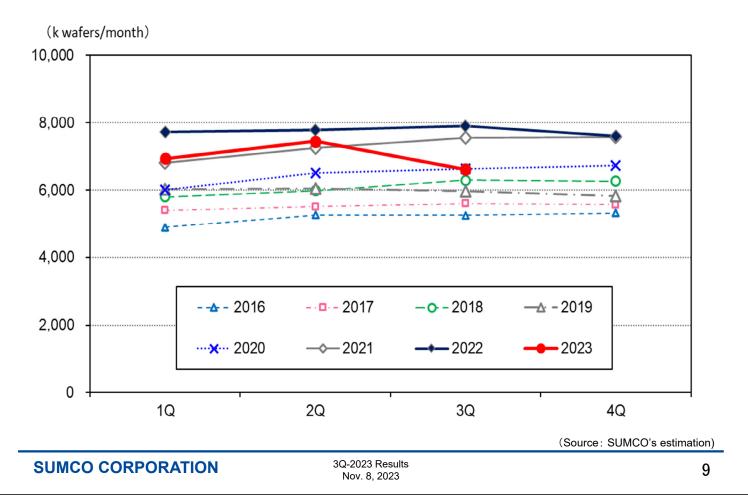
#### 2-2. 200mm Wafer Trend





(Source: SUMCO's estimation)





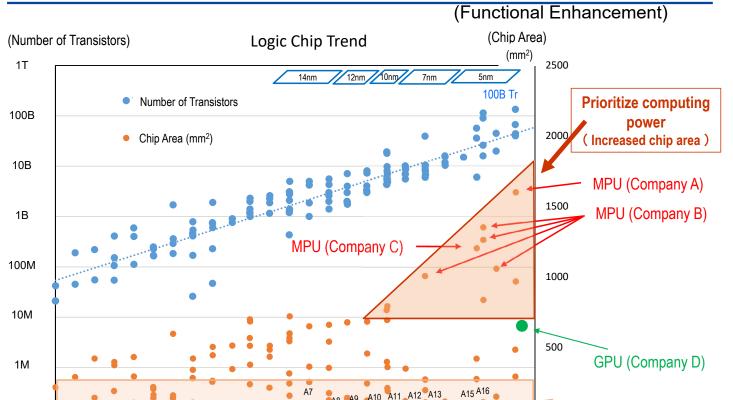
## 3. Improving Device Functionality and Increasing Chip Area



- 1-1. Increasing Logic Transistor Count and Impact on Chip Area (Functional Enhancement )
- 1-2. Combining Subdivided Chips (Increase in Silicon Area)
- 2. Image Sensor Chip stacking
- 3. 3D DRAM stacking
- 4. Improvement in 3D-NAND performance
- 5. Changes in Structure of Leading-edge Packages (multi-chip modules)







(Source: Prepared by SUMCO from data announced by each company and publicly available information)

2024

2020

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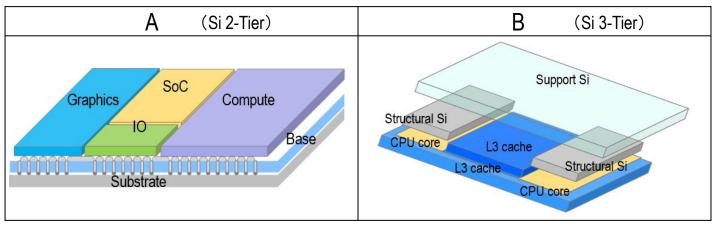
# 3-1-2. Combining Subdivided Chips (Increase in Silicon Area) SMCO

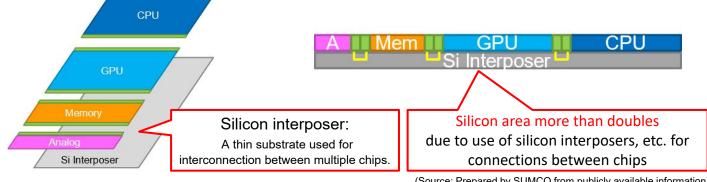


For Consumer

(Constant chip area)

#### Higher Functionality by Connecting Various Chips



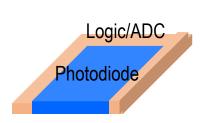


(Source: Prepared by SUMCO from publicly available information)

## 3-2. Image Sensor Chip stacking

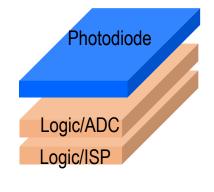


- ✓ Analog/digital conversion (ADC), logic and interconnects deployed in lower layers
- ✓ Image signal processors (ISP) installed virtually, made faster



Photodiode

Logic/ADC



#### 1 chip

Image sensors and peripheral circuits share the same chip

#### 2 chips

Increase in image sensors
(photo-detection area)
Optimization of logic
fabrication process for faster
speed

## 3 chips

Circuitry for functional enhancement on separate chips

(Source: Prepared by SUMCO from publicly available information)

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## 3-3. 3D DRAM stacking



With advances in generative AI, etc., processing of large volumes of data at high speed

→ Reduced latency of interconnects, etc. (use of HBM=High Bandwidth Memory)

# DRAM

Planar structure

 Use of interconnects for connecting chips

# Multilayer laminated structure (HBM)

CPU/GPU/SoC IO/Logic Si Interposer

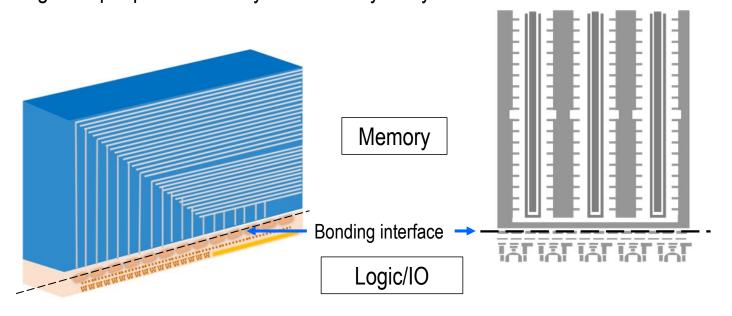
- Major reduction in interconnect length
- TSV interconnects for faster speed (increasing data transfer speed)
- Lower heat generation and power consumption per data transferred
- Increase in silicon area from TSV structure
- Faster speed from interposer use (high-density interconnects)

(Source: Prepared by SUMCO from publicly available information)

## 3-4. Improvement in 3D-NAND performance



Greater bit density and faster transfer speed are achieved by bonding together peripheral circuitry and memory array wafers.



#### Uses 2 silicon wafers

(Source: Prepared by SUMCO from publicly available information)

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## 3-5. Changes in Structure of Leading-edge Packages (multi-chip modules) SMCO

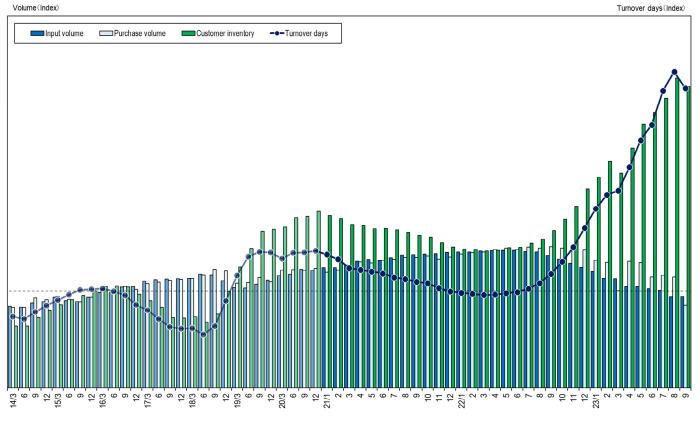


Structures combining multiple chips are necessary for achieving advanced functionality, resulting in greater silicon wafer area consumption.

- 1. Logic Increase in silicon wafer consumption from use of chiplets for achieving both higher functionality and productivity
- Increase in silicon wafer consumption from 3D stacking for increasing photo-2. CIS detection area and image processing speed
- 3. DRAM Increase in silicon wafer consumption from 3D stacking for faster processing of large amounts of data
- Increase in silicon wafer consumption from fabricating separate wafers using 4. NAND optimized processes for memory stacking and faster peripheral circuitry, respectively, and bonding them together

## 4-1. Customer 300mm Wafer Inventory Trend





(Source: SUMCO's estimation)

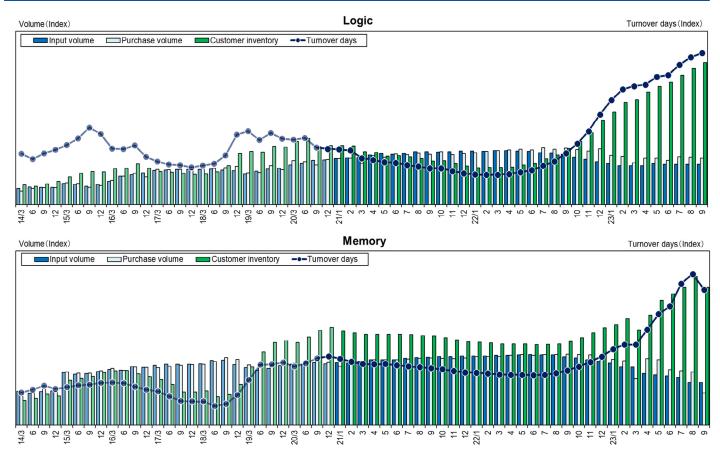
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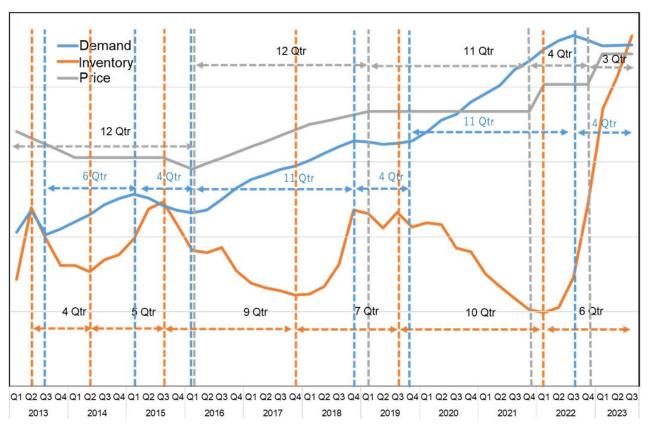
## 4-2. Customer 300mm Wafer Inventory (Logic/Memory)





(Source: SUMCO's estimation)

## 5-1. 300mm Epi Wafer Demand, Inventory and Price Trend MCO



(Source: SUMCO's estimation)

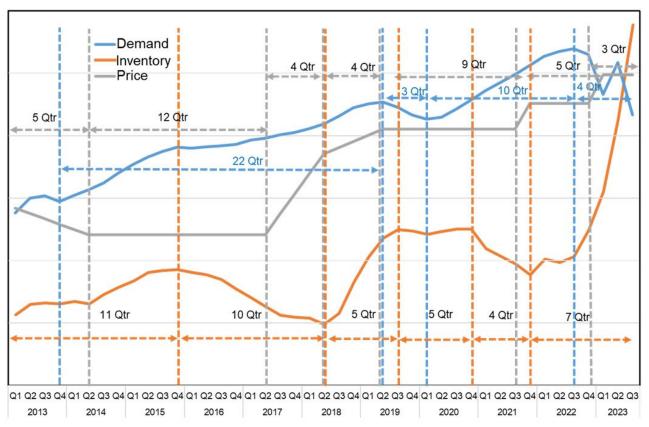
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## 5-2. 300mm Polished Wafer Demand, Inventory and Price Trend SMCO

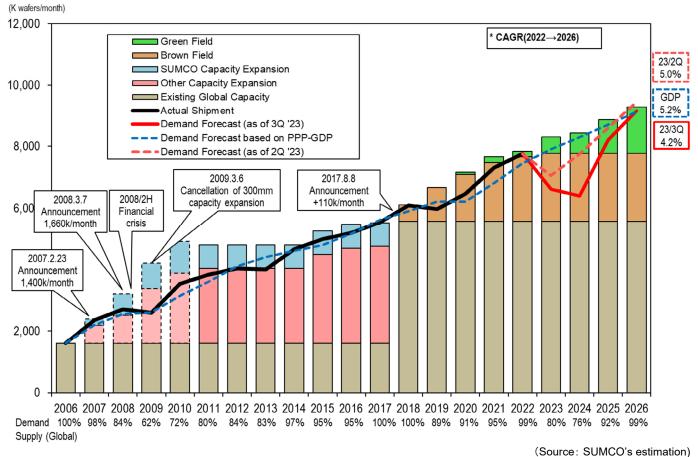




(Source: SUMCO's estimation)

## 6. 300 mm Wafer Global Capacity and Demand FCST





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# 3Q-2023 Consolidated Business Result

#### Michiharu Takii

Representative Director, Vice Chairman, Chief Financial Officer

## 7-1. Summary of Consolidated Business Result



(Billions of Yen)

	3Q-2022	3Q-2023 Actual (9 months)				Change
	(9 months)	1Q	2Q	3Q	Total	QoQ
Net sales	323.6	109.9	110.7	100.2	320.8	(2.8)
Operating income	79.9	25.9	20.8	15.1	61.8	(18.1)
Non-operating income and expenses	3.5	1.4	0.4	0.3	2.1	(1.4)
Ordinary income	83.4	27.3	21.2	15.4	63.9	(19.5)
Extraordinary income	-	20.1	-	-	20.1	+20.1
Income taxes	(22.4)	(7.7)	(6.7)	(3.9)	(18.3)	+4.1
Net income attributable to non-controlling interests	(9.3)	(2.1)	(2.5)	(2.2)	(6.8)	+2.5
Net income attributable to owners of the parent	51.7	37.6	12.0	9.3	58.9	+7.2
Capital expenditure (Acceptance basis)	79.2	91.6	55.3	78.4	225.3	+146.1
Depreciation	43.0	14.0	16.5	19.2	49.7	+6.7
EBITDA (*1)	123.1	40.1	37.4	34.2	111.7	(11.4)
Exchange rate (Yen/US\$) (*2)	126.4	133.2	135.9	144.1	137.3	+10.9
Operating margin (%)	24.7%	23.6%	18.8%	15.0%	19.3%	(5.4%)
EBITDA margin (%)	38.1%	36.5%	33.8%	34.2%	34.8%	(3.3%)
ROE (%)	13.9%	15.8%	8.5%	6.5%	12.9%	(1.0%)
Basic Earnings per share (Yen)	147.91	107.66	34.14	26.57	168.42	+20.51

<sup>\*1.</sup> EBITDA = Operating Income + Depreciation + Amortization of Goodwill

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## 7-2. Analysis of Changes in Operating Income



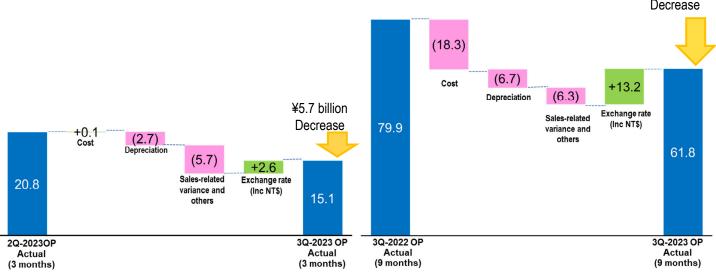
#### 1. 2Q-2023 Actual → 3Q-2023 Actual

			(Billions of Yen)
	2Q-2023 Actual	3Q-2023 Actual	Change
Net Sales	110.7	100.2	(10.5)
Operating Income	20.8	15.1	(5.7)
Exchange Rate (Yen/US\$)	135.9	144.1	+8.2

#### 2. 3Q-2022 Actual $\rightarrow 3Q-2023$ Actual

			(Billions of Yen)
	3Q-2022	3Q-2023	Change
	Act (9 months)	Act (9 months)	Change
Net Sales	323.6	320.8	(2.8)
Operating Income	79.9	61.8	(18.1)
Exchange Rate (Yen/US\$)	126.4	137.3	+10.9

¥18.1 billion Decrease



<sup>\*2.</sup> If the yen appreciate by 1 yen against the US dollar, operating income of SUMCO will decrease by 1.3 billion yen per year

# 7-3. Balance Sheet and Cash-Flow(Consolidated) MCO

1. 0	. Consolidated Balarice Officet					
		End of Dec-2022	End of Sep-2023	Change		
	Cash and time deposits	259.3	182.9	(76.4)		
	Notes and accounts receivable	89.9	80.3	(9.6)		
	Finished products and WIP	46.9	58.8	+11.9		
	Raw materials and supplies	135.4	159.0	+23.6		
	Tangible and intangible assets	308.6	492.9	+184.3		
	Deferred income tax assets	8.3	8.4	+0.1		
	Other assets	44.1	47.6	+3.5		
Tota	al Assets	892.5	1,029.9	+137.4		
	Debt and borrowings	141.3	191.0	+49.7		
	Other liabilities	159.8	206.7	+46.9		
Liab	ilities	301.1	397.7	+96.6		
	Capital stock	199.0	199.0	-		
	Capital surplus	85.2	85.2	+0		
	Retained earnings	234.3	262.8	+28.5		
	Non-controlling interests etc.	72.9	85.2	+12.3		
Equ	ity	591.4	632.2	+40.8		
	eholders' equity ratio	59.8%	55.4%	(4.4%)		
	ty per share (Yen)	1,523.7	1,630.5	+106.8		
	ratio (gross)	0.26x	0.34x	+0.08x		
D/E	ratio (net)	(0.22)x	+0.01x	+0.23x		

2. C	consoli	dated Cash-Flow	(Billions of Yen
			3Q-2023
			(9 months)
		Income before income taxes	84.0
		Extraordinary income	(20.1)
		Depreciation	49.7
	Subtotal		113.6
	Increase in	inventories	(16.4)
	Others, ne		(22.3)
Net cash	provided	by operating activities	74.9
	Capital exp	penditure (Acceptance basis)	(225.3)
	Proceeds f	rom purchase of shares of subsidiaries	9.9
	Others, ne	(	46.5
Net cash	used in ir	nvesting activities	(168.9)
Free cas	h-flow		(94.0)
ow cing etc.	Dividends	paid	(37.4)
Cash flow from financing activities, etc.	Proceeds f	rom debt	49.0
Ca from activ	Foreign cu	rrency translation adjustments and others	6.0
		ash and time deposits	(76.4)
		,	,

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# 4Q-2023 Consolidated Business Forecast

## 8-1. 4Q-2023 Consolidated Business Forecast



(Billions of Yen)

	FY2022	FY2023 Forecast			FY2023 Forecast		
	Actual	1Q ACT	2Q ACT	3Q ACT	4Q FCST	Total	Change
Net sales	441.0	109.9	110.7	100.2	101.0	421.8	(19.2)
Operating income	109.6	25.9	20.8	15.1	6.5	68.3	(41.3)
Non-operating income and expenses	1.7	1.4	0.4	0.3	(1.5)	0.6	(1.1)
Ordinary income	111.3	27.3	21.2	15.4	5.0	68.9	(42.4)
Extraordinary income and expenses	-	20.1	-	-	-	20.1	+20.1
Income taxes	(29.5)	(7.7)	(6.7)	(3.9)	(1.0)	(19.3)	+10.2
Net income attributable to non-controlling interests	(11.6)	(2.1)	(2.5)	(2.2)	(1.5)	(8.3)	+3.3
Net income attributable to owners of the parent	70.2	37.6	12.0	9.3	2.5	61.4	(8.8)
Depreciation	59.5	14.0	16.5	19.2	22.1	71.8	+12.3
EBITDA	169.5	40.1	37.4	34.2	28.6	140.3	(29.2)
Exchange rate (Yen/US\$) (*1)	131.0	133.2	135.9	144.1	145.0	139.5	+8.5
Operating margin (%)	24.9%	23.6%	18.8%	15.0%	6.4%	16.2%	(8.7%)
EBITDA margin (%)	38.4%	36.5%	33.8%	34.2%	28.3%	33.3%	(5.1%)
ROE (%)	13.9%	15.8%	8.5%	6.5%	1.8%	11.1%	(2.8%)
Basic Earnings per share (Yen)	200.49	107.66	34.14	26.57	7.15	175.60	(24.89)

<sup>\*1 .</sup> If the yen appreciate by 1 yen against the US dollar, operating income of SUMCO will decrease by 1.3 billion yen per year.

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(Billions of Yen)

## 8-2. Analysis of Changes in Operating Income

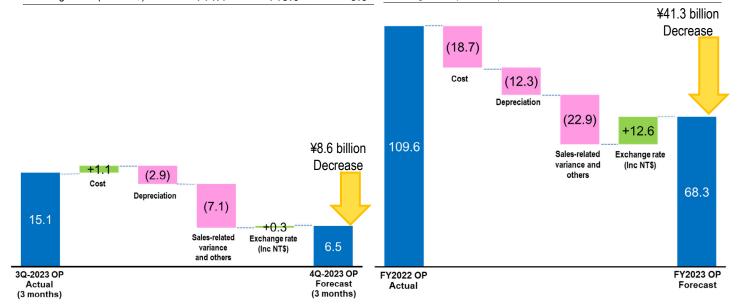


#### 1. 3Q-2023 Actual $\rightarrow 4Q-2023$ Forecast

			(Billions of Yen)
	3Q-2023 Actual	4Q-2023 Forecast	Change
Net Sales	100.2	101.0	+0.8
Operating Income	15.1	6.5	(8.6)
Exchange Rate (Yen/US\$)	144 1	145 0	+0.9

# 2. 2022 Actual (12 months) $\rightarrow$ 2023 Forecast (12 months)

	FY2022 Actual	FY2023 Forecast	Change
Net Sales	441.0	421.8	(19.2)
Operating Income	109.6	68.3	(41.3)
Exchange Rate (Yen/US\$)	131.0	139.5	+8.5





## Reference Materials

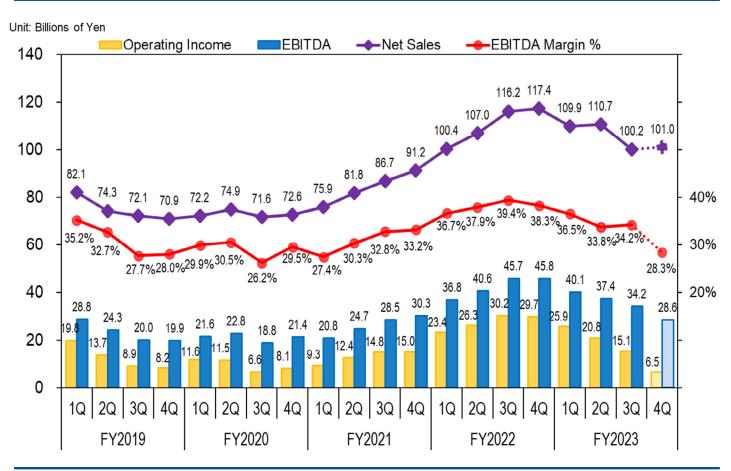
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## Quarterly Trend





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