



Results for the 1st half of the fiscal year ending March 31, 2023

1. This fiscal year results cover period from April to September 2022 of Ferrotec, and period from January to June 2022 of consolidated subsidiaries and companies accounted for using the equity method.
2. This presentation was prepared for the purpose of providing information regarding the company's results of operations for the first half of the fiscal year ending March 31, 2023 and is not a solicitation to purchase securities issued by the company. Please ensure that the decision on whether to make an investment in our company is made at your own risk.
3. These materials were prepared based on information available as of date of the disclosure. All opinions, forecasts and other forward-looking statements are based on management's judgments in accordance with materials available at that time and may be changed without prior notice.

Consolidated Financial Summary

(Million yen)	Q2 FY3/22	Q2 FY3/23	YoY	
	Amount	Amount	Amount	Pct. change (%)
Net sales	59,826	97,505	37,679	63.0
Cost of sales	37,587	62,967	25,380	67.5
Gross income	22,238	34,538	12,300	55.3
SG&A expenses	11,530	17,476	5,946	51.6
Operating income	10,708	17,061	6,353	59.3
Non-operating income	2,283	7,380	5,097	223.3
Non-operating expenses	523	888	365	69.8
Ordinary income	12,468	23,554	11,086	88.9
Extraordinary income	9,339	822	- 8,517	- 91.2
Extraordinary loss	1,162	768	- 394	- 33.9
Net income attributable to non-controlling shareholders	345	1,989	1,644	476.5
Net income attributable to owners of parent	17,257	15,979	- 1,278	- 7.4
Capital investment	13,898	24,928	11,030	79.4
Depreciation	3,820	5,596	1,776	46.5

Net sales: 97.5 billion yen, +63% YoY
 Operating income: 17.1 billion yen, +59% YoY
 Net income: 16.0 billion yen, -7% YoY

- SG&A expenses
+52% YoY due to increase in labor cost and R&D expenses.
- Non-operating income
Foreign exchange gains: 5,196 million yen
- Non-operating expenses
Equity in losses of affiliates (net): 249 million yen (including 3 wafer businesses: 545 million yen)

- Extraordinary income
- Gain on change in equity: 618 million yen (Third-party allotment of new shares in wafer business: 9.5 million yuan, 8.45 yuan/share)
 - Gain on step acquisition (TOB of Toyo Knife): 204 million yen
- Extraordinary loss
- Loss on step acquisition (TOB of Ohizumi Mfg.): 702 million yen
- Income taxes: 5,639 million yen, +2,596 million yen YoY
 Net income attributable to non-controlling interests (net of tax)
- Silicon parts and quartz crucibles business: 895 million yen
 - Power semiconductor substrates business: 876 million yen
 - Cleaning business: 259 million yen

Note: Exchange rate Q2 FY3/21⇒Q2 FY3/22: US\$ ¥108.45 → ¥124.52; RMB ¥16.76 → ¥19.13 (Avg. during period)

Sales and Operating Income by Segment

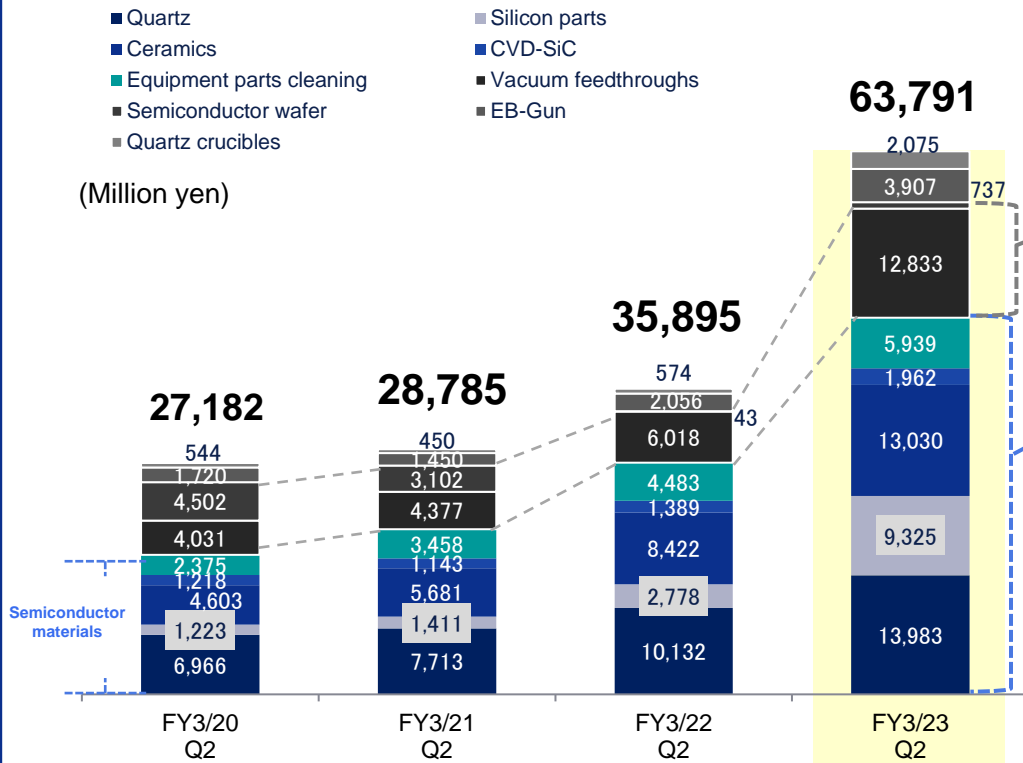
Net sales (¥ in millions)	Q2 FY3/22		Q2 FY3/23		YoY	
	Amount	Pct. of sales (%)	Amount	Pct. of sales (%)	Difference	Pct. change (%)
Semiconductor and other equipment-related	39,178	65.5	63,791	65.4	24,613	62.8
Electronic device	12,213	20.4	23,073	23.7	10,860	88.9
Others	8,434	14.1	10,640	10.9	2,206	26.2
Total	59,826	100.0	97,505	100.0	37,679	63.0

Operating income (¥ in millions)	Q2 FY3/22		Q2 FY3/23		YoY	
	Amount	Profit margin (%)	Amount	Profit margin (%)	Difference	Pct. change (%)
Semiconductor and other equipment-related	7,118	18.2	11,707	18.4	4,589	64.5
Electronic device	3,052	25.0	5,325	23.1	2,273	74.5
Others	660	7.8	398	3.7	- 262	- 39.7
Corporate & elimination	-123	-	-369	-	- 246	-
Total	10,708	17.9	17,061	17.5	6,353	59.3

Sales by Product

(Million yen)	Q2 FY3/22	Q2 FY3/23	YoY (%)
Semiconductor and other equipment-related	39,178	63,791	62.8
Vacuum feedthroughs	8,228	12,833	56.0
Quartz	10,132	13,983	38.0
Silicon parts	2,778	9,325	235.7
Ceramics	8,422	13,030	54.7
CVD-SiC	1,389	1,962	41.3
EB-Gun, LED	3,129	3,907	24.9
Wafer processing (out of scope of consolidation)	43	85	97.7
Wafer recycling	-	652	-
Equipment parts cleaning	4,483	5,939	32.5
Quartz crucibles	574	2,075	261.5
Electronic device	12,213	23,073	88.9
Thermo-electric module	8,424	11,546	37.1
Power semiconductor substrates	3,349	7,919	136.5
Ferrofluid, others	440	485	10.2
New → Sensor (Ohizumi Mfg.)	-	3,123	-
Others	8,434	10,640	26.2
Total	59,826	97,505	63.0

Transition of sales



Overview of this segment

- Sales increased due to successful capacity expansion in metal processing and semiconductor materials.
- Vacuum feedthroughs and metal processing: +113% YoY, silicon parts: +236% YoY

Vacuum feedthroughs, Wafer processing, Wafer recycling

- Vacuum feedthroughs and metal processing: +113% YoY; aggressively captured metal processing demand from semiconductor manufacturing equipment manufacturers, and Changshan plant, which has increased production capacity, and other facilities began operations.
- Wafer processing and wafer recycling: Operations started at the Tongling plant for wafer recycling

Semiconductor materials, Cleaning business

[Semiconductor materials (quartz, silicon parts, ceramics, and CVD-SiC)]

- Quartz: +38% YoY; demand is growing, Changshan and Dongtai plants are in operation
- Silicon parts: +236% YoY; increased production capacity at Yinchuan plant to meet growing demand
- Ceramics: +55% YoY; increased demand for semiconductors, increased production capacity at Hangzhou plant
- CVD-SiC: +41% YoY; increased demand for semiconductors, increased production at Okayama plant

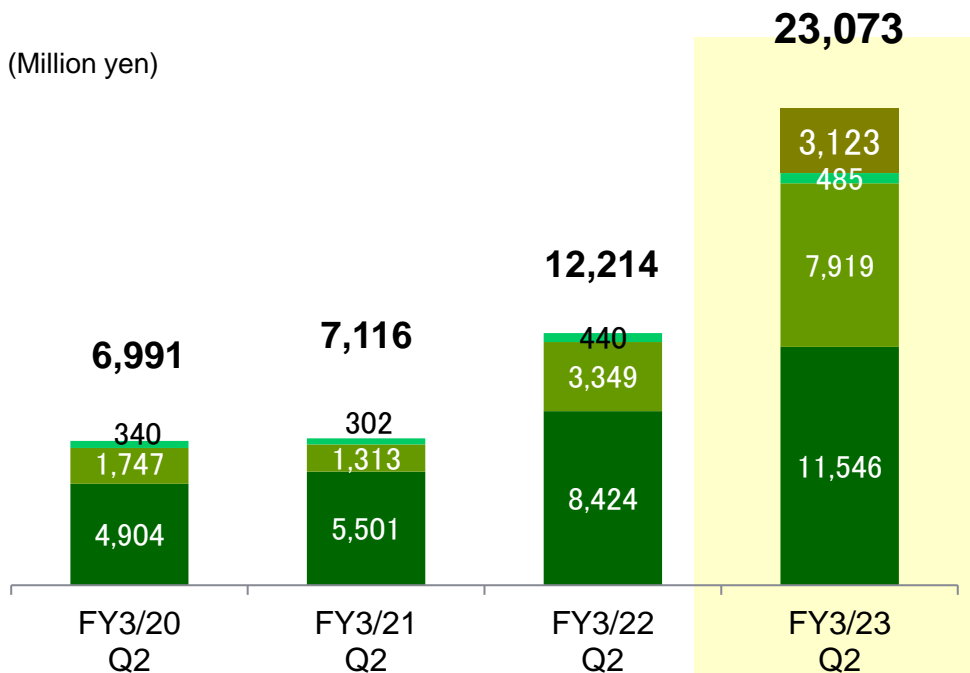
[Cleaning business]

- Changshan Plant; captured growing demand for cleaning by Chinese semiconductor and FPD manufacturers

Transition of sales

- Thermo-electric module
- Power semiconductor substrates
- Ferrofluid, others
- Sensor (OHIZUMI MFG)

(Million yen)



Overview of this segment

- Sales of power semiconductor substrates increased due to rapid growth in sales of AMB substrates.

- Sales of thermoelectric modules were also strong.

[Thermo-electric modules]

- +37% YoY; strong sales for 5G telecommunication equipment, steady sales for biotechnology such as PCR, etc., offset decline in sales of temperature-controlled automobile seats

[Power semiconductor substrates]

- +137% YoY; sales of AMB substrates for automobiles and EVs, in particular, grew rapidly
- Sales of DCB substrates also expanded due to increased production capacity.
- Strengthening of R&D center functions was successful, and high heat-resistant and high-strength DPC substrates were developed, and further product development is underway.

Consolidated Balance Sheet -Assets-

(Million yen)	FY3/22 Year-end	FY3/23 End-Sep.	Difference
Current assets	133,414	190,942	57,528
Cash & deposits	52,579	83,825	31,246
Note & accounts receivable	41,797	58,279	16,482
Inventories	28,436	42,557	14,121
Fixed assets	131,358	179,390	48,032
Tangible fixed assets	84,083	122,616	38,533
Buildings and structures	22,728	30,782	8,054
Equipment and machinery	25,122	34,599	9,477
Tools, furniture, and fixture	5,324	6,295	971
Land	1,895	4,160	2,265
Leased assets (net)	4,040	9,269	5,229
Construction in progress	24,972	37,508	12,536
Intangible fixed assets	1,996	5,852	3,856
Goodwill	283	3,427	3,144
Investments & other assets	45,277	50,921	5,644
Total assets	264,772	370,333	105,561

[Major factors for increase in current assets]

- Of the 31,246 million yen in cash and cash equivalents, the balance of cash and cash equivalents of the Chinese subsidiary* that implemented a third-party allotment of new shares: 19,759 million yen
- *Increase in notes and accounts receivable-trade and inventories due to increase in sales

[Major factors for increase in tangible fixed assets]

- Construction in progress of 12,536 million yen is mainly for capital investment in China in the Tongling wafer recycling business, Shanghai China headquarters, Guangzhou cleaning business, and Changshan vacuum feedthroughs and metal processing business subsidiaries.

[Major factors for increase in investments and other assets]

- 4,076 million yen investment in Wuhu TUS Semiconductor Co. Ltd., a manufacturer of SiC power devices, by a Chinese subsidiary

Consolidated Balance Sheet -Liabilities and Net Assets-

(Million yen)	FY3/22 Year-end	FY3/23 End-Sep.	Difference
Current assets	68,800	95,160	26,360
Notes and accounts payable	26,702	34,091	7,389
Short-term debt	6,324	13,650	7,326
Current portion of long-term borrowings + bonds	8,501	13,279	4,778
Fixed assets	35,014	50,145	15,131
Bonds	8,806	5,082	- 3,724
Convertible bond-type bonds with share acquisition rights	2,134	—	- 2,134
Long-term debt	11,796	24,647	12,851
Total liabilities	103,814	145,306	41,492
Net assets	160,957	225,026	64,069
Shareholder's equity	117,511	144,623	27,112
Total accumulated other comprehensive income	13,511	30,708	17,197
Non-controlling interests	29,888	49,651	19,763
Total liabilities & net assets	264,772	370,333	105,561
Equity ratio	49.5%	47.3%	-2.2pt

[Major factors for changes in current and fixed liabilities]

*The parenthesis represents the change from the end of FY3/22.

Short-term debt + Current portion of long-term debt and bonds: 26,929 million yen (+12,102)

Long-term debt + bonds and convertible bonds: 29,729 million yen (+6,992)

Total interest-bearing debt: 56,658 million yen (+19,094)

[Major factors for changes in net assets]

*The parenthesis represents the change from the end of FY3/22.

- Capital surplus: 57,105 million yen (+11,034)

Originating from third-party allotment of shares by our company, wafer companies and Chinese subsidiaries

- Retained earnings: 58,276 million yen (+14,959)

- Foreign currency translation adjustment: 30,462 million yen (+17,334)
Increased due to the depreciation of the yen (against the Chinese yuan, etc.)

- Non-controlling interests:
Increase due to third-party allotment of new shares to FLH (power semiconductor substrates) and FTNC (silicon parts and quartz crucibles) in China; increase due to consolidation of Ohizumi Mfg. (sensors)

[Equity ratio]

Equity ratio stands at 47.3%, exceeding the target of 40% stated in the mid-term management plan.

Note: Exchange rate End-FY3/22⇒End-Q2 FY3/23: US\$ ¥115.02 → ¥ 136.68; RMB ¥18.06 → ¥ 20.38 (Avg. during period)

Consolidated Cash Flow

(Million yen)	Q2 FY3/22	Q2 FY3/23
Cash flow from operating activities	6,369	20,988
Income before income tax	20,645	23,608
Depreciation	3,820	5,596
Foreign exchange loss (gain)	- 1,199	- 2,000
Changes in notes & accounts receivable (-: increase)	- 2,737	- 3,288
Changes in inventories (-: increase)	- 3,523	- 5,091
Increase/decrease in notes and accounts payable-trade (-: decrease)	1,800	- 2,271
Loss on change in equity (-: gain)	- 9,327	- 618
Others	- 3,110	5,052
Cash flow from investing activities	- 8,226	- 28,783
Payments for purchase of tangible fixed assets	- 13,814	- 24,852
Proceeds from sales of tangible fixed assets	351	168
Payments for purchase of intangible fixed assets	- 84	- 76
Others	5,321	- 4,023
Cash flow from financing activities	18,274	32,461
Changes in short-term debt	114	4,170
Proceeds from long-term borrowings	1,707	14,366
Payments of long-term borrowings	- 3,666	- 3,717
Proceeds from share issuance	- 1,434	- 1,434
Proceeds from share issuance to non-controlling shareholders	22,181	20,515
Others	- 628	- 1,439
Changes in cash & cash equivalents	18,007	31,192
Cash and cash equivalents, beginning of year	30,202	52,579
Cash and cash equivalents, end of year	48,210	83,770

[Operating cash flow]

Income before income taxes + depreciation and amortization: 29,204 million yen

Changes in notes and accounts receivable, inventories and notes and accounts payable: -10,650 million yen

[Investing cash flow]

Purchase of tangible and intangible fixed assets: -24,928 million yen

[Financial cash flow]

Proceeds from payments by noncontrolling interests: 20,515 million yen

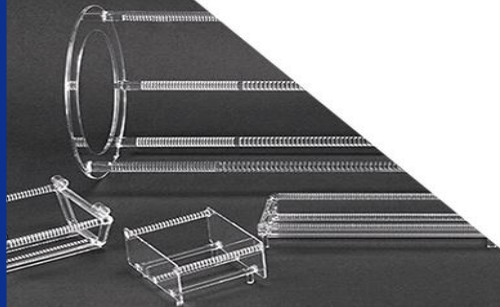
- **FTNC (silicon parts and quartz crucibles): 10,644 million yen**
- **FLH (Power semiconductor substrates): 9,630 million yen**



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Business Forecasts for FY3/23



FY3/23 Full-year Business Forecasts

- Revised the forecasts upwardly on August 12 and revised again on November 14
- Reflects the yen's depreciation trend in foreign exchange rates. (Assumed exchange rate: US\$1 = 125 yen → 133 yen)

	FY3/22	FY3/23 (Est.)		
(Million yen)	Result	Revised on August 12	Revised on November 14	YoY (%)
Net sales	133,821	195,000	200,000	49.5
Operating income	22,600	32,500	34,000	50.4
Ordinary income	25,994	34,000	39,000	50.0
Net income attributable to owners of parent	26,659	20,000	24,000	- 10.0
Depreciation	8,085	13,297	13,081	-1.6
EBITDA	30,685	45,797	47,081	2.8
Assumed exchange rate (average for the period)	US\$: 110.37 yen RMB: 17.12 yen	US\$: 124.52 yen RMB: 19.13 yen	US\$: 132.80 yen RMB: 19.50 yen	-

*EBITDA = operating income + depreciation and amortization; profits and losses from external investments in consolidated subsidiaries are included in non-controlling interests.

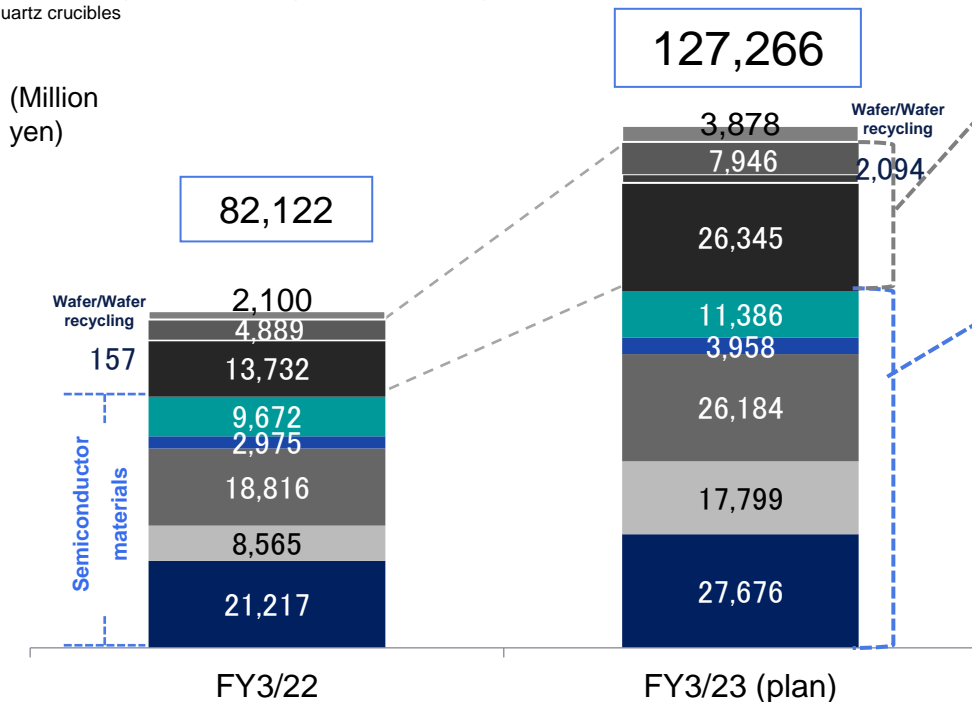
Business Forecasts of Each Segment/Product for FY3/23



(Million yen)	FY3/22	FY3/23 (Plan revised on Nov. 14)	YoY Pct. change
Semiconductor and other equipment-related	82,122	127,266	55.0
Vacuum feedthroughs and metal processing	13,732	26,345	91.9
Quartz	21,217	27,676	30.4
Silicon parts	8,565	17,799	107.8
Ceramics	18,816	26,184	39.2
CVD-SiC	2,975	3,958	33.0
EB-Gun, LED	4,889	7,946	62.5
Wafer processing (out of scope of consolidation)	59	206	249.2
Wafer recycling	98	1,888	-
Equipment parts cleaning	9,672	11,386	17.7
Quartz crucibles	2100	3,878	84.7
Electronic device	27,023	53,061	96.4
Thermo-electric module	17,635	21,390	21.3
Power semiconductors	8,473	20,849	146.1
Ferrofluid, others	916	933	1.9
Sensor (Ohizumi Mfg.)	-	9,888	-
Others	24,674	19,673	- 20.3
Total	133,821	200,000	49.5

Transition of sales

- Quartz
- Ceramics
- Equipment parts cleaning
- Wafer processing and Wafer recycling
- Quartz crucibles
- Silicon parts
- CVD-SiC
- Vacuum feedthroughs and metal processing
- EB-gun



Overview of this segment

- Sales of metal processing and semiconductor materials both are expected to increase due to the successful expansion of production capacity.
- Vacuum feedthroughs and metal processing: +92% YoY, silicon parts: +108% YoY

Vacuum feedthroughs, Metal processing

- Vacuum feedthroughs and metal processing: +92% YoY; capture metal processing demand from semiconductor manufacturing equipment manufacturers, Changshan plant and other facilities began operations.
- Wafer processing and wafer recycling: Operations started at the Tongling plant for wafer recycling.

Semiconductor materials, Cleaning business

[Semiconductor materials (quartz, silicon parts, ceramics, and CVD-SiC)]

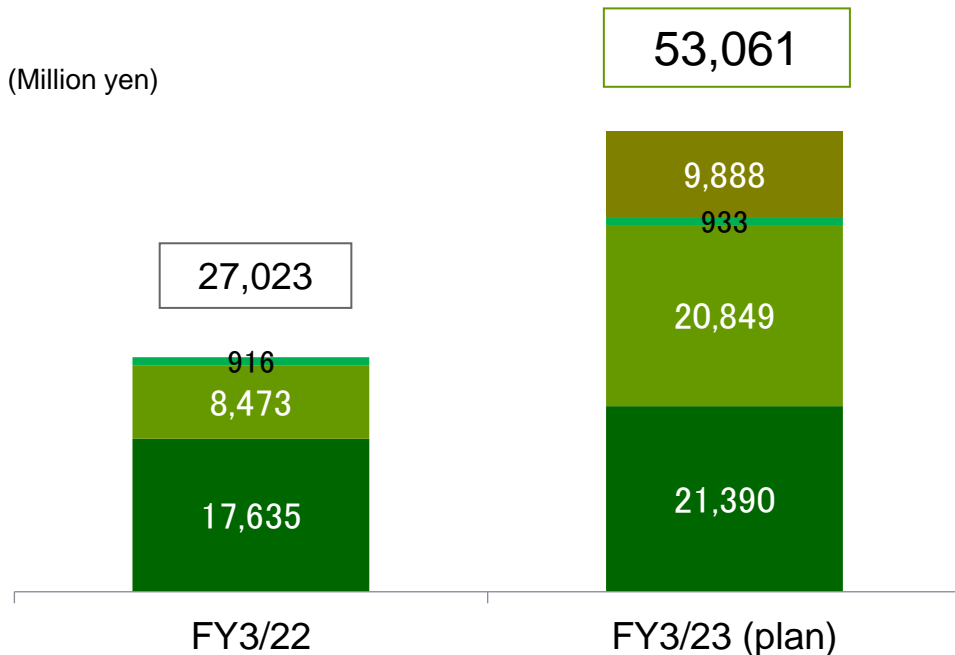
- Quartz: +30% YoY; demand is expected to remain firm
- Silicon parts: +108% YoY; demand is expected to grow, successful expansion of Yinchuan plant
- Ceramics: +39% YoY; steady demand for semiconductors is expected, Hangzhou plant in operation
- CVD-SiC: +33% YoY; demand for semiconductors are expected to increase, increased production at Okayama plant

[Cleaning Business]

- Cleaning business: +18% YoY, demand for cleaning is expected to be steady in China

Transition of sales

- Thermo-electric module
- Ferrofluid, others
- Power semiconductor substrates
- Sensor (OHIZUMI MFG)



Overview of this segment

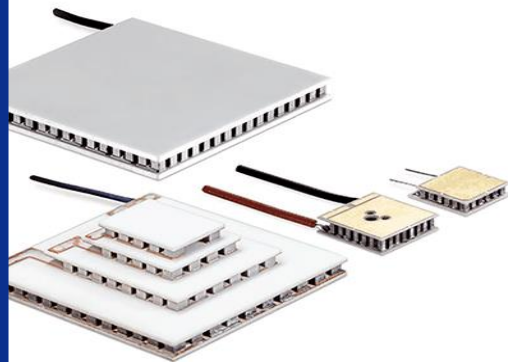
- In power semiconductor substrates, sales of AMB substrates are expected to continue to increase.
- Sales of thermoelectric modules are also expected to be remained strong.

[Thermo-electric modules]

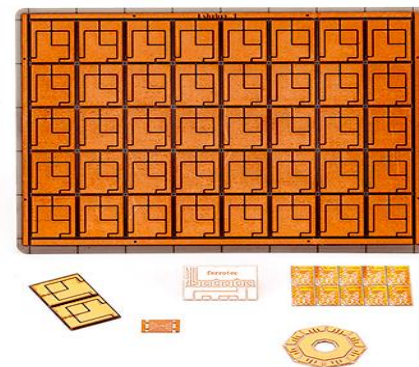
- +21% YoY; sales for 5G communication equipment and bio-technologies are also expected to be strong.

[Power semiconductor substrates]

- +146% YoY; sales are expected to continue to increase due to successful capacity expansion amid rising demand for AMB substrates for automobiles, EVs, etc.
- Sales of DCB substrates are also expected to continue to be strong.
- The range of DPC boards and other products is expanding.



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Financial Management



- In addition to the increase in production output of semiconductor materials, power semiconductor substrates, etc., we have invested in Toyo Knife and Ohizumi Mfg..
- The 3-year plan for investing 180 billion yen, including the acquisition of shares via M&A, which was formulated at the beginning of the term, is unchanged.

[Initial investment plan]

A total of 180 billion yen



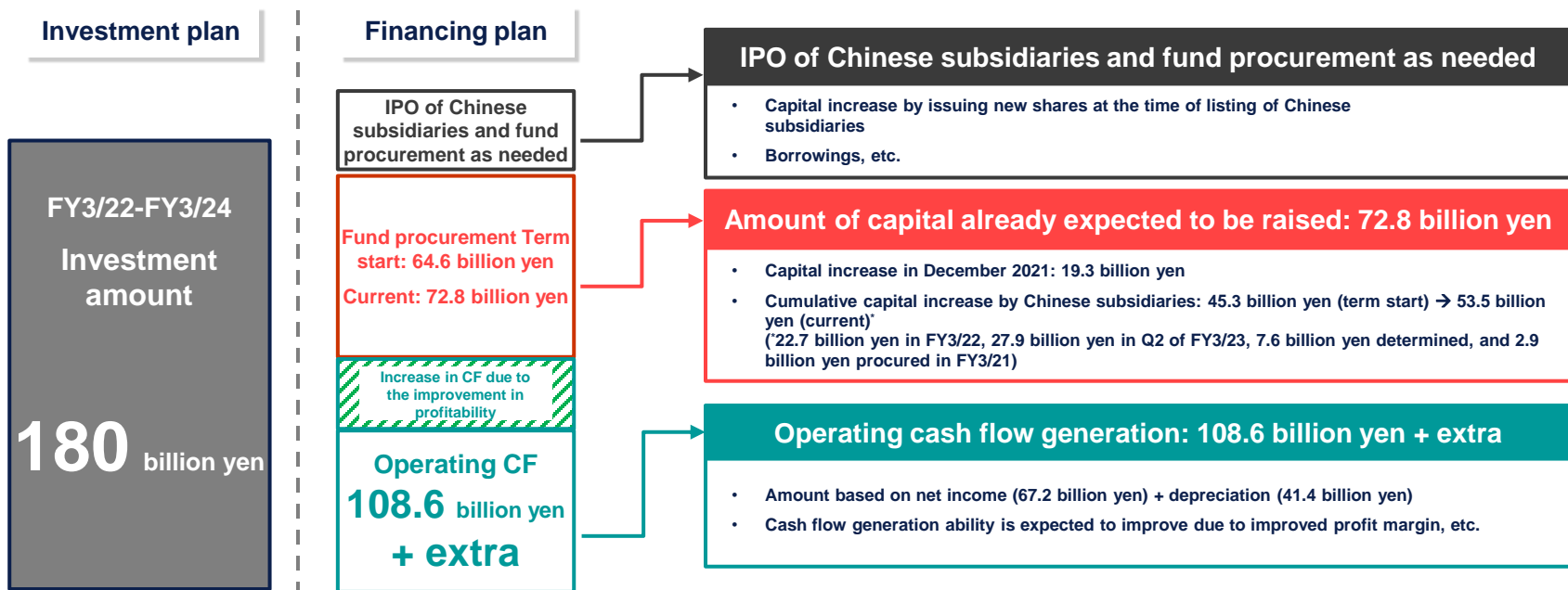
Investment plan in the 3-year mid-term management plan

[Progress so far]

- Invested 35.4 billion yen in FY3/22 and 29.8 billion yen in the 1st half of FY3/23 (including the acquisition of shares).
- Invested for boosting the production output of materials such as quartz, ceramics, and silicon parts, and power semiconductor substrates.
- **Worked on the investment in Malaysia, and the construction of new factories in Ishikawa and Kumamoto.**
- Acquired Toyo Knife as a wholly owned subsidiary, and acquired 51% of shares of Ohizumi Mfg. to make it a consolidated subsidiary.
- Our plan of investing 180 billion yen, which was formulated at the beginning of the term, has not been changed. There is a possibility that this plan will be revised, according to new M&A projects, consolidated subsidiaries' investment plans, etc.

Regarding the procurement of investment funds

- The amount of capital to be raised in 3 years and the assumed operating CF (net income + depreciation) amount to over 180 billion yen.
- Our company expects that we will need to raise funds to deal with the increase in working capital, but even if the IPO of the Chinese subsidiaries is not factored in and the total amount is raised through borrowings from financial institutions, our company expects to maintain an equity ratio of 40% and a D/E ratio* of about 0.5, and this has not been changed since the beginning of the term.



Note: D/E ratio = Interest-bearing debt/shareholders' equity

[Contents disclosed on May 30, 2022]

Dividend Policy

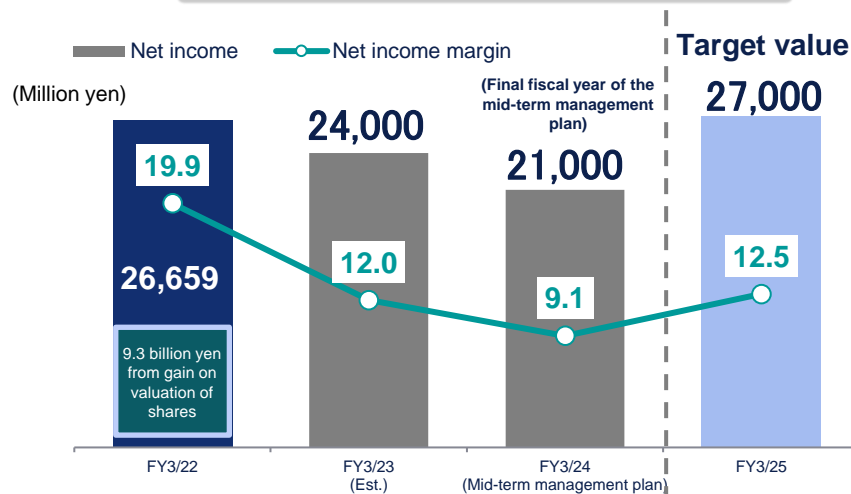
While the basic policy of increasing shareholder return through sustainable earnings growth remains unchanged, decisions on dividends will be made with an eye on a “payout ratio of 20%” and in consideration of the balance between financial and investment opportunities.

<Initial> <Revised>
Dividend per share: 70 yen/year ⇒ 100 yen/year

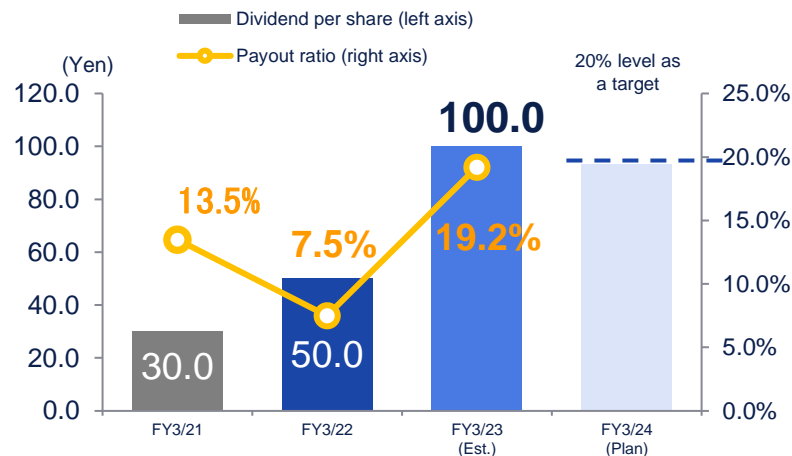
[Total dividend] (3.2 billion yen) ⇒ (4.6 billion yen)
 [Net income] (17 billion yen) ⇒ (24 billion yen)

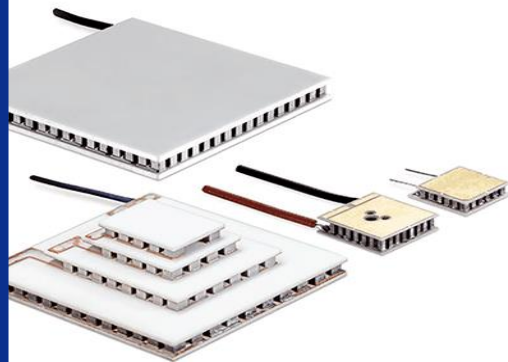
*We will determine the dividend amount, while considering net income after deducting temporary profit with no cash inflow, such as profit from changes in equity.

Target net income

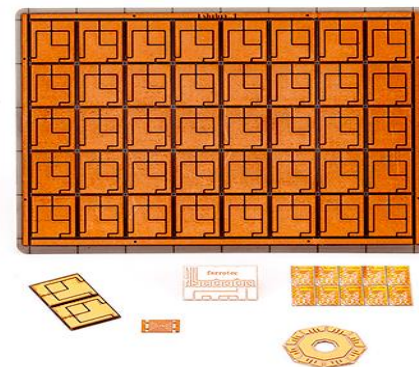


Dividend target





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Appendix



Business Performance (FY3/23 1H Results vs. Plan)



(Million yen)	FY3/23Q Plan		FY3/23Q Results			
	Amount	Pct. of sales (%)	Amount	Pct. of sales (%)	Difference	Pct. change (%)
Semiconductor and other equipment-related	59,029	65.6	63,791	65.4	4,763	8.1
Vacuum feedthroughs and metal processing	11,595	12.9	12,833	13.2	1,238	10.7
Quartz	12,617	14.0	13,983	14.3	1,366	10.8
Silicon parts	9,138	10.2	9,325	9.6	187	2.0
Ceramics	12,301	13.7	13,030	13.4	730	5.9
CVD-SiC	1,846	2.1	1,962	2.0	116	6.3
EB-Gun, LED	3,144	3.5	3,907	4.0	763	24.3
Wafer processing (out of scope of consolidation)	80	0.1	85	0.1	5	6.3
Wafer recycling	543	0.6	652	0.7	109	20.1
Equipment parts cleaning	5,720	6.4	5,939	6.1	219	3.8
Quartz crucibles	2,045	2.3	2,075	2.1	30	1.5
Electronic device	20,303	22.6	23,073	23.7	2,770	13.6
Thermo-electric module	9,978	11.1	11,546	11.8	1,568	15.7
Power semiconductors	6,650	7.4	7,919	8.1	1,269	19.1
Ferrofluid, others	479	0.5	485	0.5	6	1.3
Sensor (Ohizumi Mfg.)	3,196	3.6	3,123	3.2	- 73	- 2.3
Others	10,667	11.9	10,640	10.9	- 27	- 0.2
Total (consolidated net sales)	90,000	100.0	97,505	100.0	7,505	8.3
Gross income	32,528	36.1	34,538	35.4	2,010	6.2
SG&A expenses	16,528	18.4	17,476	17.9	948	5.7
Operating income	15,999	17.8	17,061	17.5	1,062	6.6
Ordinary income	19,000	21.1	23,554	24.2	4,554	24.0
Net income	12,000	13.3	15,979	16.4	3,979	33.2

*Note: Net income thereafter refers to net income attributable to owners of parent. Figures are partially rounded.

Business Performance (FY3/23 1H Results vs. 2H Plan)



(Million yen)	FY3/23 1H Results		FY3/23 2H Plan			
	Amount	Pct. of sales (%)	Amount	Pct. of sales (%)	Difference	Pct. change (%)
Semiconductor and other equipment-related	63,791	65.4	63,475	61.9	- 317	- 0.5
Vacuum feedthroughs and metal processing	12,833	13.2	13,512	13.2	678	5.3
Quartz	13,983	14.3	13,693	13.4	- 290	- 2.1
Silicon parts	9,325	9.6	8,474	8.3	- 851	- 9.1
Ceramics	13,030	13.4	13,154	12.8	123	0.9
CVD-SiC	1,962	2.0	1,996	1.9	34	1.7
EB-Gun, LED	3,907	4.0	4,039	3.9	132	3.4
Wafer processing (out of scope of consolidation)	85	0.1	121	0.1	36	42.4
Wafer recycling	652	0.7	1,236	1.2	584	89.6
Equipment parts cleaning	5,939	6.1	5,447	5.3	- 492	- 8.3
Quartz crucibles	2,075	2.1	1,803	1.8	- 272	- 13.1
Electronic device	23,073	23.7	29,988	29.3	6,915	30.0
Thermo-electric module	11,546	11.8	9,845	9.6	- 1,701	- 14.7
Power semiconductors	7,919	8.1	12,930	12.6	5,011	63.3
Ferrofluid, others	485	0.5	448	0.4	- 37	- 7.6
Sensor (Ohizumi Mfg.)	3,123	3.2	6,765	6.6	3,642	116.6
Others	10,640	10.9	9,033	8.8	- 1,608	- 15.1
Total (consolidated net sales)	97,505	100.0	102,495	100.0	4,990	5.1
Gross income	34,538	35.4	34,414	33.6	- 124	- 0.4
SG&A expenses	17,476	17.9	17,476	17.1	0	0.0
Operating income	17,061	17.5	16,939	16.5	- 123	- 0.7
Ordinary income	23,554	24.2	15,446	15.1	- 8,108	- 34.4
Net income	15,979	16.4	8,021	7.8	- 7,958	- 49.8

*Note: Net income thereafter refers to net income attributable to owners of parent. Figures are partially rounded.

- The forward-looking statements in this document are based on information available as of the date of publication of this document and assumptions concerning uncertain factors affecting future results.
- Actual results may differ materially from these forecasts due to various factors. Such factors include, but are not limited to, COVID-19 situation, international conditions, economic conditions, product supply and demand trends, raw material prices, market conditions, and exchange rates.
- The amount of capital investment for FY3/23 in this document is based on the budget for the current fiscal year and is not finalized. We undertake no obligation to update any information with respect to these matters
- For official forecasts, please refer to the disclosure of financial results based on the Tokyo Stock Exchange Regulations.

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