

## Translation

Notice: This document has been translated from the Japanese original for reference purposes. In the event of any discrepancy between this translated document and the Japanese original, the latter shall prevail.



Securities code: 6524

A background graphic consisting of a dark blue field filled with a grid of small, glowing cyan dots. The dots are arranged in a pattern that suggests a globe or a complex network, with some dots appearing brighter and more prominent than others. The overall effect is one of high-tech precision and global connectivity.

**World-Class Manufacturing**


# Financial Results Materials Second Quarter of FY12/2023

Kohoku Kogyo is a leading manufacturer of lead terminals for aluminum electrolytic capacitors and parts for submarine optical communication.

**Kohoku Kogyo Co., Ltd.**  
August 9, 2023

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**I . Financial summary for the First Two Quarters of FY12/2023**  
**Financial Forecast for FY12/2023**



# Highlights of First Two Quarters of FY12/2023

- Sales in the Lead Terminals business deteriorated more than expected. Impacted by the major inventory adjustment for components and materials due to the sluggish information and telecommunications equipment market as well as unexpected adjustments in the automotive electronics market. Overall price revisions of unprofitable products led to a significant improvement in the profit structure.
- In the Optical Components and Devices business, sales of optical devices for submarine cables remained affected by supply chain disruptions. Sales of land-based optical communications devices also slumped for data center applications.

## ● Macro Environment

- As the global economy transitioned to the post-pandemic era, some sectors, such as retail and service industries, saw improvements.
- The impact of soaring costs due to rising energy prices as well as the prolonged situation in Russia and Ukraine remains.
- There are concerns over an economic downturn due to a decline in the propensity to consume and low property prices in China.

## ● Business Environment

- EV sales grew rapidly in Europe and the U.S. as well as in China.
- EV sales increased rapidly in Europe and the U.S.
- The disruption in the automotive electronic parts market caused by the shortage of semiconductors resulted in some excess inventories.
- The information and telecommunications equipment market, including PCs, has not recovered from the severe situation of last summer.
- The submarine cable market has been affected by supply chain disruptions since last summer.

## ● Performance (First Two Quarters)

- Net sales decreased 11.7% YoY (down 934 million yen) due to the deterioration of the market environment.
- Operating profit dropped 17.4% YoY (down 356 million yen) due to a decrease in sales.

# Income Statement (First Two Quarters) Summary

Sales and profit decreased due to the impact of customer inventory adjustments, etc.

(Millions of yen)

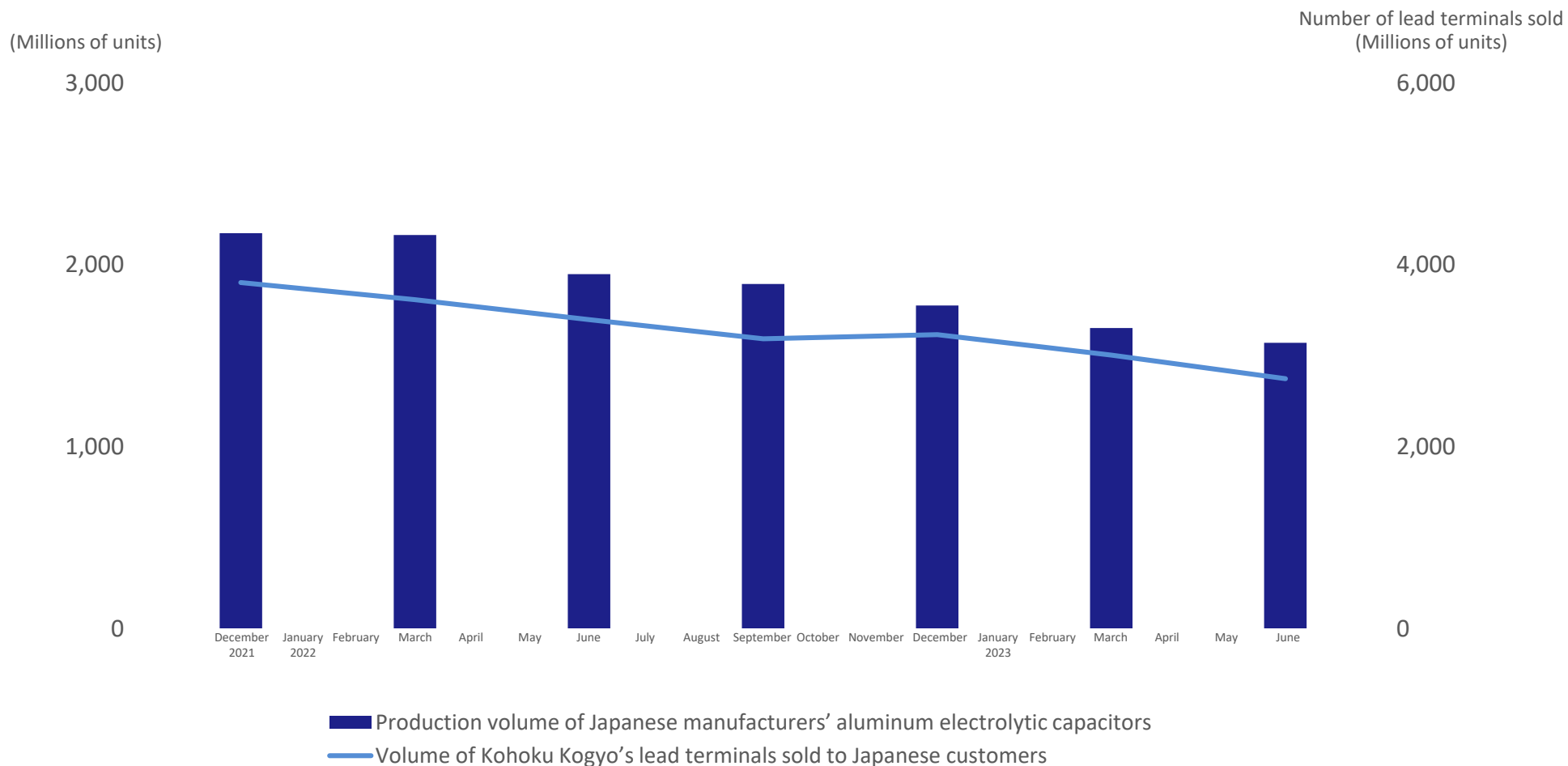
	FY12/2022	FY12/2023		FY12/2023				
	First 2 quarters (Jan–Jun)	First 2 quarters (Jan–Jun)	YoY change (%)		Q1 (Jan–Mar)	Q2 (Apr–Jun)	QoQ change (%)	
Net sales	7,958	7,023	-934	-11.7%	3,521	3,502	-18	-0.5%
Lead Terminals Business	4,204	3,789	-415	-9.9%	1,864	1,924	+60	+3.2%
Optical Components and Devices Business	3,753	3,234	-518	-13.8%	1,656	1,577	-78	-4.8%
Operating profit	2,042	1,686	-356	-17.4%	846	839	-6	-0.8%
<i>Operating margin ratio</i>	25.7%	24.0%	-1.7 pt	-	24.0 %	24.0%	±0 pt	-
Ordinary profit	2,731	2,185	-546	-20.0%	882	1,302	+419	+47.5%
Profit attributable to owners of parent	1,817	1,344	-473	-26.0%	564	779	+214	+38.0%
Exchange rate (average for the period)	123.15 yen/\$	134.99 yen/\$			132.40 yen/\$	137.49 yen/\$		

- Fixed cost ratio increased due to a decline in net sales, and the operating margin ratio for the first two quarters (January–June) declined to 24.0%.
- Non-operating profit includes foreign exchange gains totaling 527 million yen (it was 650 million yen for the first two quarters of the previous fiscal year).

# Business Environment for FY12/2023 (2Q)

The production volume of Japanese manufacturers' aluminum electrolytic capacitors has been declining since last summer.

Miniature Aluminum Electrolytic Capacitors Market Production (Japanese Manufacturers) (Including Overseas Production)



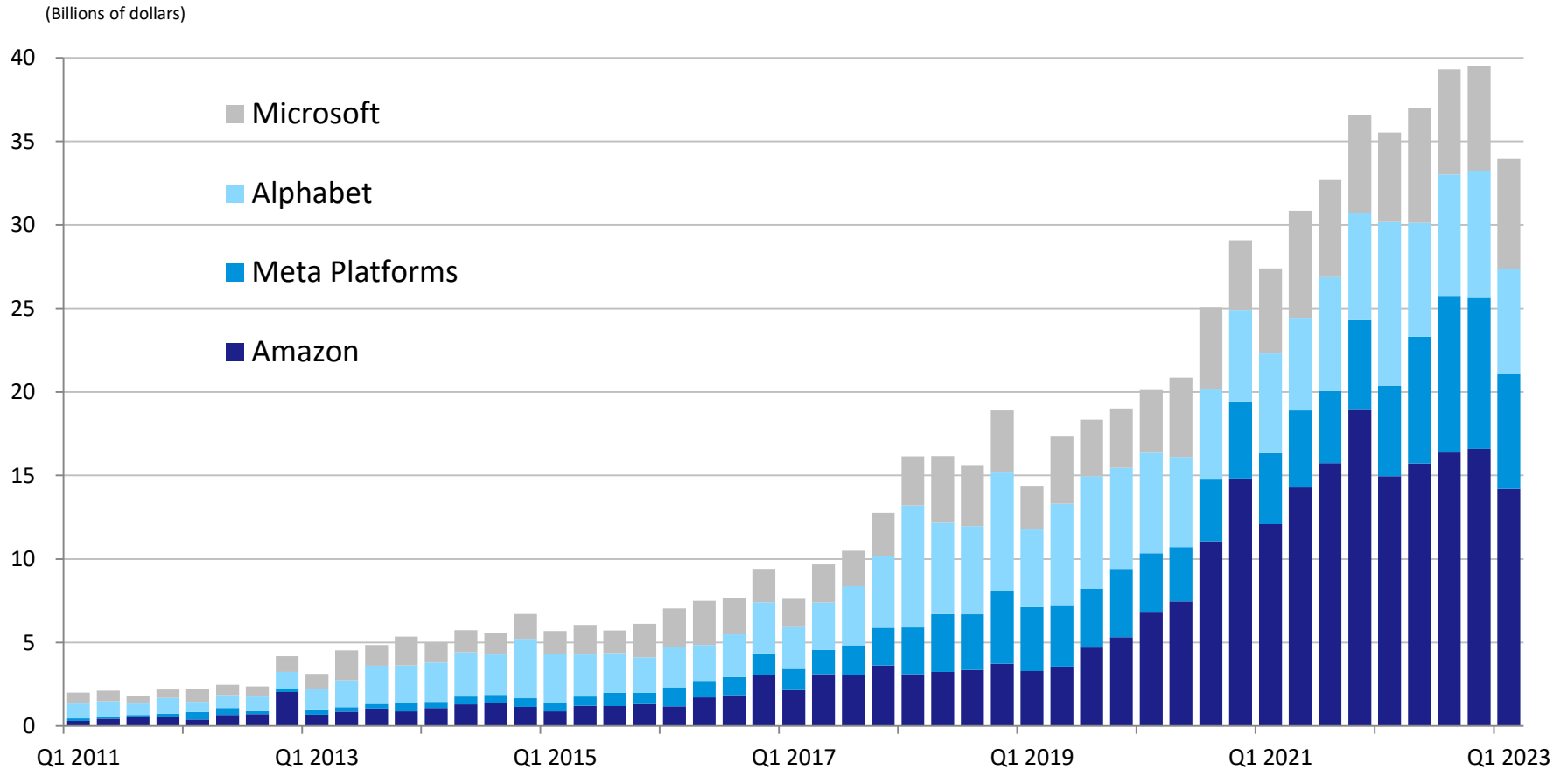
\*Figures are monthly.

(Source: Kohoku Kogyo)

# Business Environment for FY12/2023 (2Q)

Big Tech's aggressive investment in submarine cables dropped significantly in 2023.

## Capital Expenditures by U.S. Tech Giants (Excluding Apple)

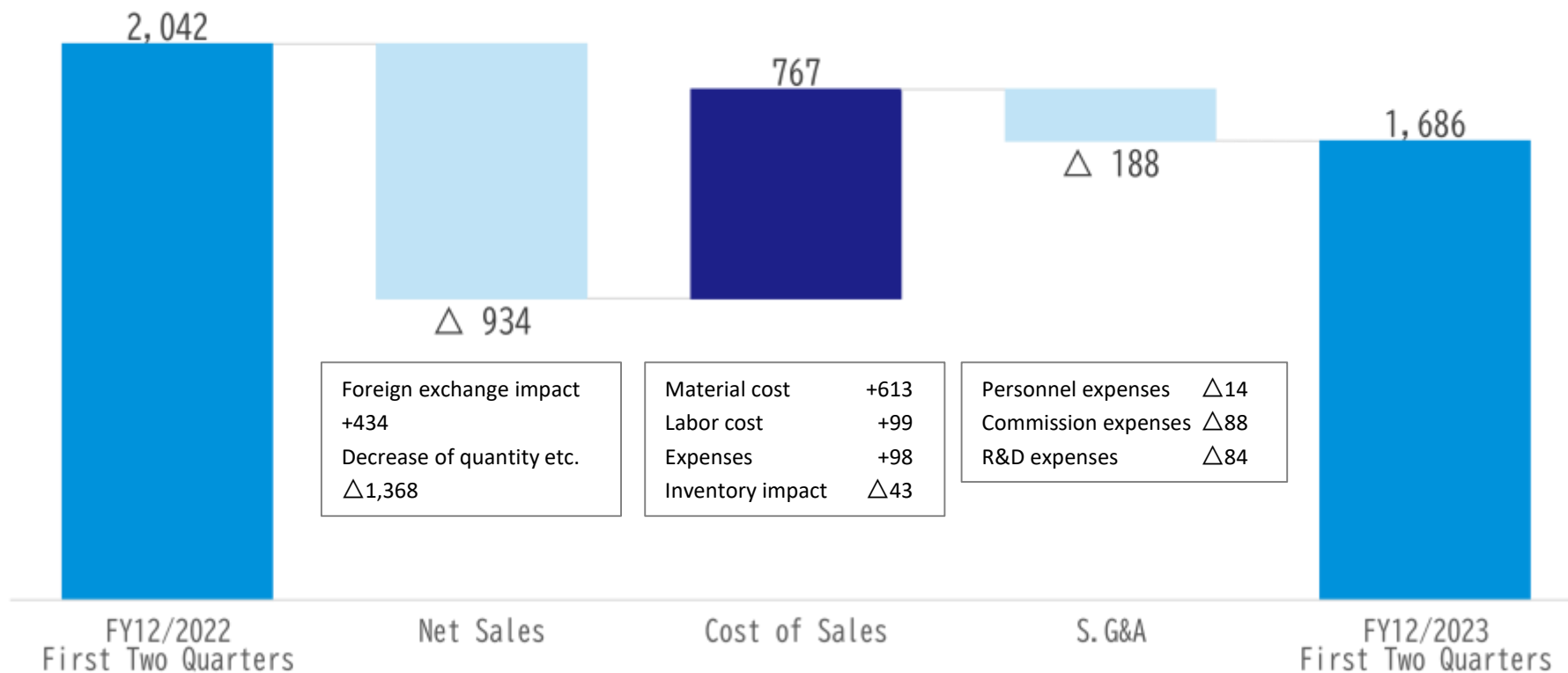


(Source: Company data)

# Operating profit (First Two Quarters) Increase/Decrease Factors (YoY basis)

The decrease in profit was small compared to the decrease in sales due to an improved gross profit margin

Millions of yen

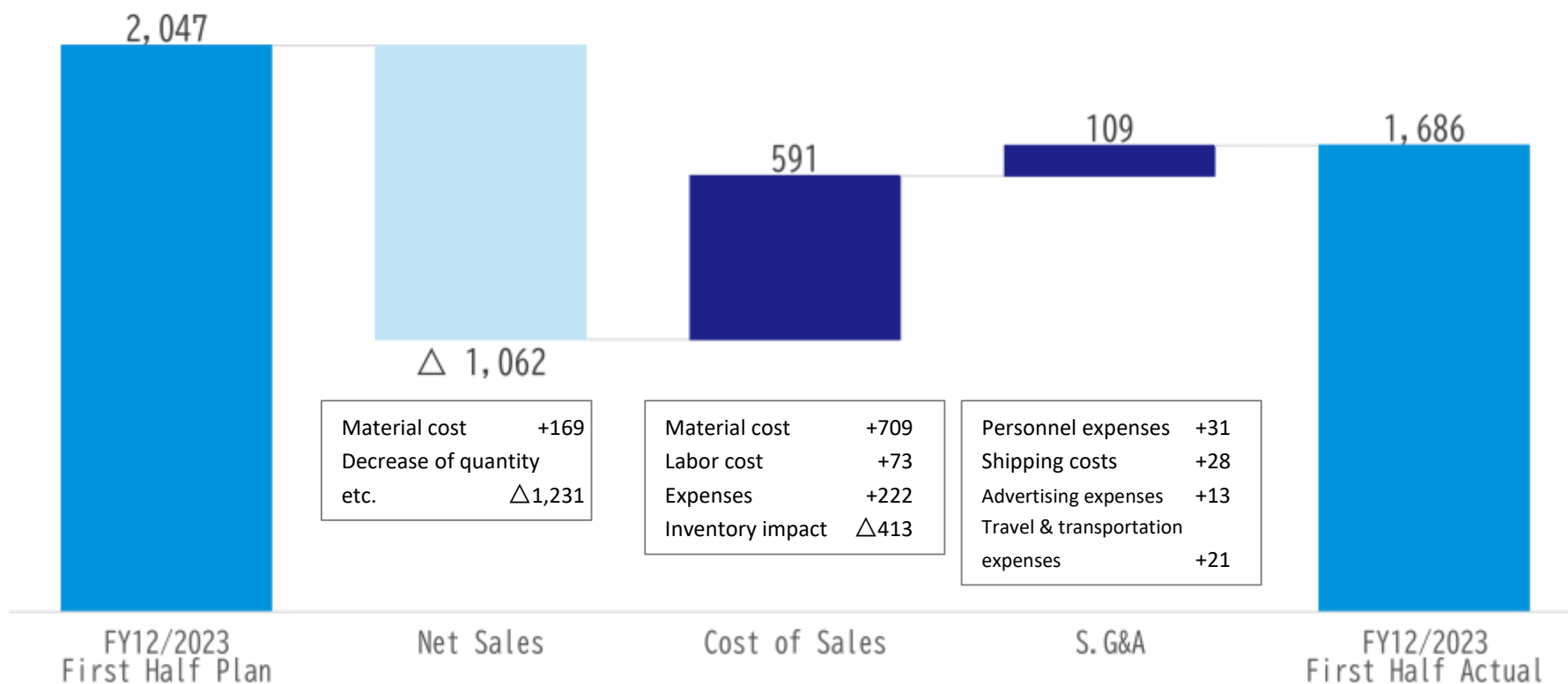




# Operating profit (First Two Quarters) Increase/Decrease Factors (vs. Plan)

The deterioration in market conditions was greater than expected and the decline in sales had a major impact, but it was partially offset by reduced material costs and expenses

Millions of yen



# Summary of Balance Sheet/Cash Flow Statement (Q2)

Equity ratio increased to 77.7% due to decrease in liabilities.

(Millions of yen)

Balance Sheet	End of FY12/2022	End of Q2 FY12/2023	Increase/decrease	Major changes
Current assets	17,227	17,320	+92	Finished goods +331 Cash and deposits -224
Non-current assets	7,057	7,894	+836	Construction in progress +480 Intangible assets +106 Machinery, equipment and vehicles +186
Total assets	24,285	25,214	+929	
Current liabilities	3,375	3,220	-155	Short-term borrowings -95 Current portion of long-term borrowings -68
Non-current liabilities	2,613	2,407	-205	Lease liabilities +62 Long-term borrowings -308
Total liabilities	5,988	5,628	-360	
Total net assets	18,296	19,586	+1,290	Retained earnings +849 Foreign currency translation adjustment +410
Total liabilities and net assets	24,285	25,214	+929	

Cash Flow Statement	First 2 quarters of FY12/2022	First 2 quarters of FY12/2023	Major items for first 2 quarters of FY12/2023
Operating cash flow	1,197	1,510	Income before income taxes +2,147 Income taxes paid -571
Investing cash flow	-553	166	Proceeds from withdrawal of time deposits +1,031 Purchase of property, plant and equipment -792
Free cash flow	644	1,676	
Financing cash flow	-1,422	-1,044	Dividends paid -494 Repayments of long-term borrowings -376
Net increase (decrease) in cash and cash equivalent	-455	776	
Cash and cash equivalent at end of period	10,496	10,139	

# Financial Forecast for FY12/2023

The optical components and devices market began to show signs of improvement due to the easing of supply chain disruptions as well as new submarine cable projects. However, the aluminum electrolytic capacitor market continued to undergo adjustments, leading to downward revisions to the second half forecast.

(Millions of yen)

	FY12/2022	FY12/2023 (plan)		
	Actual	Initial full-year forecast	Revised full-year forecast	Revised full-year forecast vs. previous year's results
Net sales	15,673	16,494	14,490	-1,182 -7.5%
Lead Terminals Business	8,384	9,162	7,508	-875 -10.4%
Optical Components and Devices Business	7,289	7,331	6,981	-307 -4.2%
Operating profit	3,884	4,121	3,411	-473 -12.2%
<i>Operating margin ratio</i>	24.8%	25.0%	23.5%	-1.3 pt -
Ordinary profit	4,443	4,084	3,363	-1,080 -24.3%
Profit attributable to owners of parent	3,066	2,819	2,157	-909 -29.7%
Net income per share (yen)	346.14	313.41		<Exchange Rate Sensitivity> Net sales 80 million yen/yen Operating profit 40 million yen/yen
Exchange rate (average for the period)	131.64 yen/\$	130 yen/\$	130 yen/\$ (2nd half)	

## Current status and outlook

### <Net Sales>

- The Lead Terminals business still faces the same difficult conditions it did in the first fiscal half. At present, it is expected to continue undergoing adjustments until the end of the year.
- In the Optical Components and Devices business, the market conditions for land-based optical components are expected to remain severe. On the upside, we received long-term bulk orders for optical devices used in submarine cables, and there is a new project for a submarine cable system to be built by a consortium.

### <Profitability>

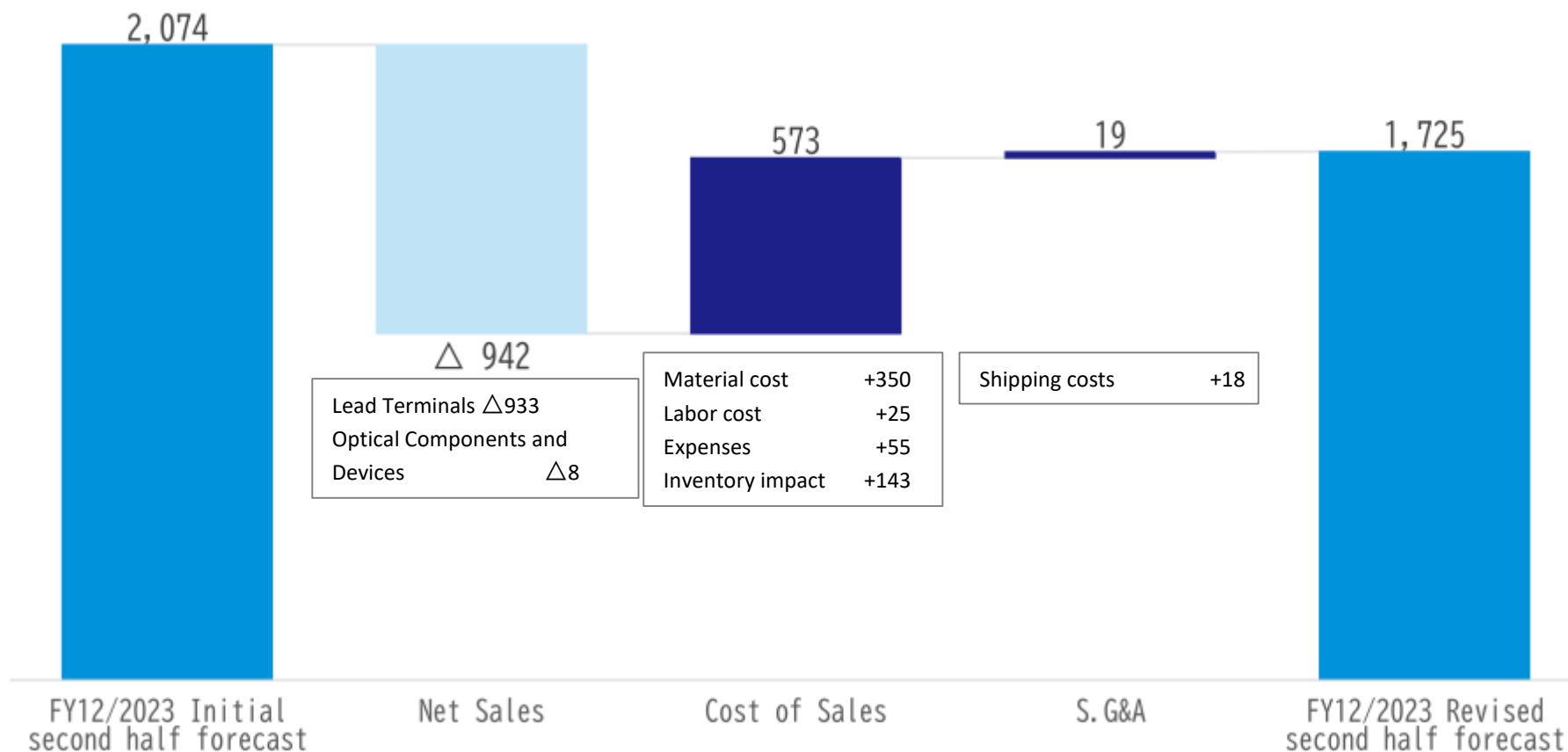
- Price revisions will help improve the Lead Terminals business. They are expected to offset the loss resulting from a decline in sales.
- In the Optical Components and Devices business, changes in the product mix will have a positive effect on the profit margin. They are expected to offset the loss resulting from a decline in sales.

# Financial Forecast for FY12/2023

## Change points of second half forecast

The initial forecast was revised downward by 349 million yen in light of concerns over prolonged inventory adjustments as well as the lower cost of sales

Millions of yen



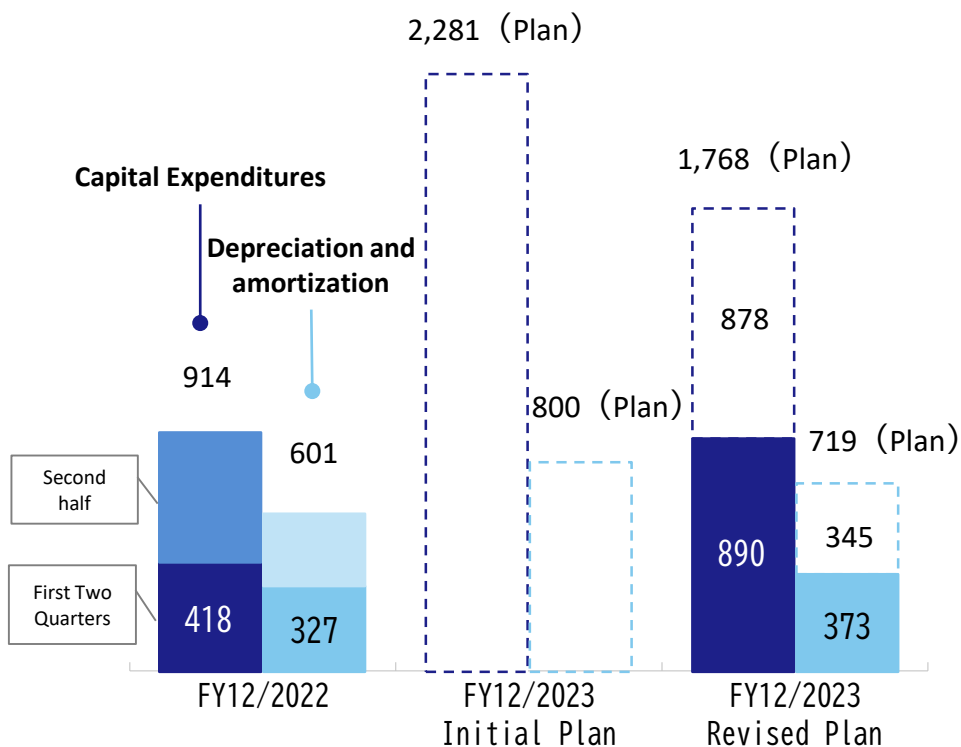
# Capital Expenditures and R&D Expenses

Non-urgent capital expenditures were put off in light of the prolonged deterioration of the market

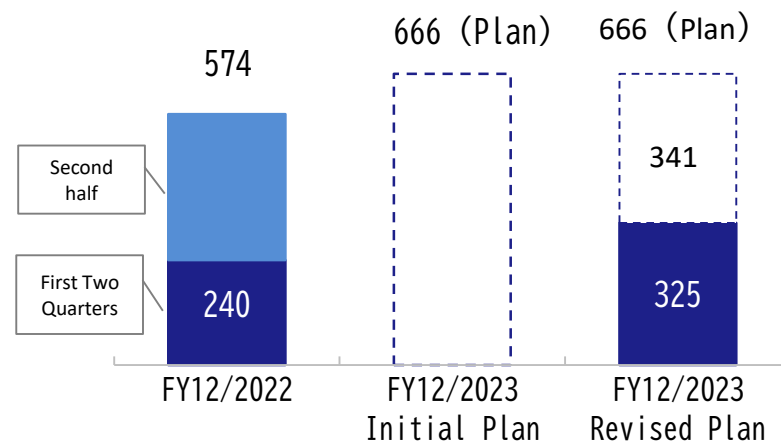
## Capital expenditures and depreciation (Millions of yen)

Capital Expenditures  
 ■ second half  
 ■ First Two Quarters Actual

Depreciation and amortization  
 ■ second half  
 ■ First Two Quarters Actual



## R&D expenses (Millions of yen)



※There are no changes to plan

# Progress in Medium-Term Management Policy

- **Strengthen profitability of core business (lead terminals)**

- Revised prices for unprofitable products in April 2023
- Sales of products for EDLC applications grew as a result of the increased sales ratio of new products, but evaluations of our core product, the new type of burr-free lead terminal, is taking time

- **Increase market share in growth businesses (optical components and devices) and develop new products**

- All-around product development is on track with the development plans of companies installing submarine cables
- Strengthen research and publish results (e.g., paper co-authored with KDDI) with an eye to the widespread use of MCF in 2030 and onward

- **Develop next-generation businesses utilizing core technologies**

- Continue to develop manufacturing technology and respond to customer needs with the aim of commercializing high-purity silica glass products
- Started mass production and supply of aspheric lenses for ultraviolet applications in July 2023

- **Strengthen corporate governance and build a strong profit structure**

- Enhance non-financial activities and establish an organization to promote sustainability
- Bolster internal control systems, including reconfiguration of core IT systems and response to cyber attacks





## **II . Situation by segment**

# Results by Segment (First Two Quarters) - Lead Terminals

Unexpected adjustments continue in the European automotive market, but the operating margin ratio has improved.

(Millions of yen)

	FY12/2022	FY12/2023			FY12/2023			
	First 2 quarters (Jan-Jun)	First 2 quarters (Jan-Jun)	YoY change	YoY change (%)	Q1 (Jan-Mar)	Q2 (Apr-Jun)	QoQ change	QoQ change (%)
Net sales	4,204	3,789	-415	-9.9%	1,864	1,924	+60	+3.2%
Operating profit	178	157	-20	-11.6%	28	128	+99	+346.1%
Operating margin ratio	4.2%	4.2%	±0 pt	-	1.5%	6.7%	+5.1 pt	-

## Overview of FY12/2023 (First Two Quarters)

- **Operating environment remained harsh due to slow market recovery**
  - While automobile production has been getting back on track, the recovery in actual demand has been delayed due to optimization of excess inventories.
  - Inventory adjustments in the information and telecommunications equipment market have continued since last year, and sales of PCs and other IT-related equipment have been weak.
- **The company's status and efforts to improve earnings**
  - Agreed with all customers on price revisions for unprofitable products, and started revising prices in April.
  - Since it takes time to evaluate the new type of burr-free lead terminal to differentiate it from the conventional burr-free product, boosting its adoption has been pushed back.
  - Efforts have been made to develop new welding and die casting technologies to achieve high efficiency and precision.

# Market and Business Environment: Comparison between Assumption at Beginning of the FY and Now: Lead Terminals

## 1. Our perception based on information from customers, market research firms, and other sources.

	Initial comments (as of February)	Current situation
(1) Overall aluminum electrolytic capacitor market (mainly Japanese customers)	<ul style="list-style-type: none"> <li>● In 2023, automotive application sales are expected to increase slightly during the first half of the year and recover in the second half compared with 2022 as the shortage of semiconductors is likely to continue while on-automotive sales are expected to decrease slightly.</li> </ul>	<ul style="list-style-type: none"> <li>➤ The semiconductor shortage is on the way to being resolved, but it will take until the end of the year to resolve the excess inventory of aluminum electrolytic capacitors.</li> </ul>
	<ul style="list-style-type: none"> <li>● The telecommunications equipment sector is expected to remain in a severe situation in the first half of 2023 due to the delayed recovery of the Chinese market but should gradually recover in the second half.</li> </ul>	<ul style="list-style-type: none"> <li>➤ In the information and telecommunications equipment market, demand, which surged during the pandemic, is expected to continue its current decline partly due to deteriorating economic conditions in China.</li> </ul>
(2) Trends by application	<ul style="list-style-type: none"> <li>● Sales of hybrid capacitors for the automotive market increased approximately 30% (replacing some existing markets).</li> </ul>	<ul style="list-style-type: none"> <li>➤ Demand has not increased in the Chinese and European automobile markets. Investment in increasing production capacity for hybrid capacitors (1.5 to 2 times the current capacity by 2024) has picked up speed, but current demand is sluggish.</li> </ul>
	<ul style="list-style-type: none"> <li>● The overall automobile market will grow only slightly, but the EV market is expected to grow significantly.</li> </ul>	<ul style="list-style-type: none"> <li>➤ New energy vehicles are steadily expanding in Europe and China, where the automobile market recovery is slow.</li> </ul>
	<ul style="list-style-type: none"> <li>● Regarding the ICT market, the PC/server/smartphone market will continue to be sluggish during the first half of this year.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Market conditions for PC, server, and smartphone applications are expected to remain tough until the end of the year or the first half of next year.</li> </ul>

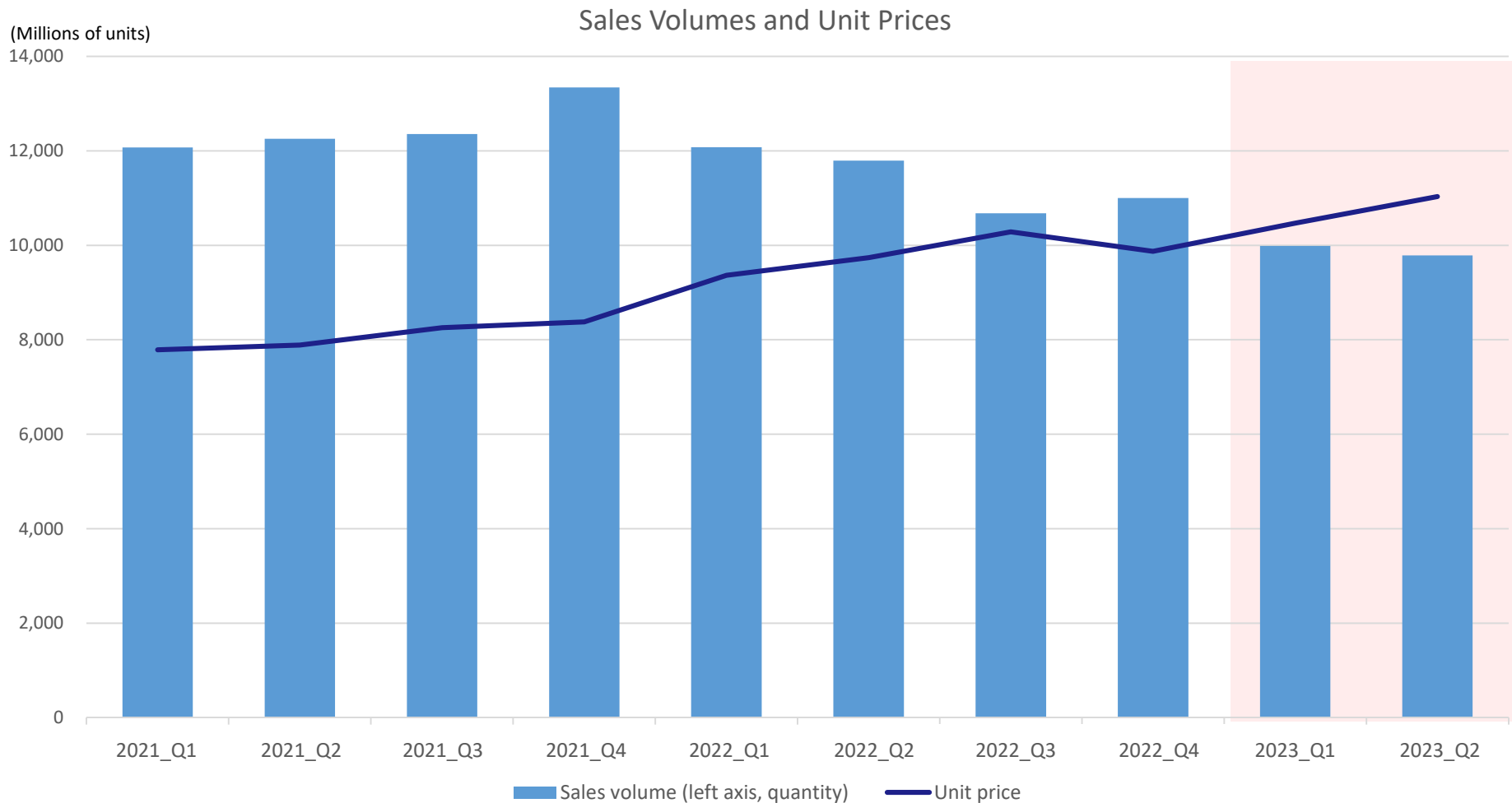
# Market and Business Environment: Comparison between Assumption at Beginning of the FY and Now: Lead Terminals

## 2. Business environment surrounding the company

	Initial comments (as of February)	Current situation
(1) Production	<ul style="list-style-type: none"> <li>● Production will be suspended at the Suzhou factory from July to September 2023. It is expected to resume in October.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Production at the existing factories was halted at the end of May. Transfer of equipment was completed in June, and production started in July. Following the start of mass production and shipment in August, production will go into full swing in September.</li> </ul>
	<ul style="list-style-type: none"> <li>● Inventory accumulation and inventory sales at the Suzhou factory until June, equipment transfer to the Dongguan/Malaysia factories, and production increase.</li> </ul>	<ul style="list-style-type: none"> <li>➤ On track. Have been continuing to reduce inventory via sales since June.</li> </ul>
	<ul style="list-style-type: none"> <li>● Due to the relocation of the Suzhou factory, the overseas production ratio will change from 5:2:2 to 3:3:3 (Suzhou: Dongguan: Malaysia).</li> </ul>	<ul style="list-style-type: none"> <li>➤ Will shift to the 3:3:3 production ratio in September</li> </ul>
	<ul style="list-style-type: none"> <li>● The cost burden associated with the relocation is about 500 million yen.</li> </ul>	<ul style="list-style-type: none"> <li>➤ As planned, no change</li> </ul>
(2) Sales	<ul style="list-style-type: none"> <li>● In line with the growth of hybrid capacitors, we will significantly increase the production of a new burr-free type (at all bases) and raise sales of high-performance products to 20% at once.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Evaluation of the new burr-free type is taking longer than expected. More customers are seeing its pluses, and sales are expected to increase in the second half of the fiscal year.</li> </ul>
	<ul style="list-style-type: none"> <li>● Sales of new products other than burr-free type are expected to increase in the second half of the year in line with the growth of the automotive application market.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Growing adoption of our products for EDLC applications is greater than expected.</li> </ul>
	<ul style="list-style-type: none"> <li>● Gradual expansion of automotive EDLC (Electric Double Layer Capacitor)</li> </ul>	
(3) Technology	<ul style="list-style-type: none"> <li>● Started development of new welding technology that will be the cornerstone of lead terminals technology (targeting practical application in 2024)</li> </ul>	<ul style="list-style-type: none"> <li>➤ Worked on joint development of new welding technology with Israel-based ARIEL Photonics.</li> </ul>
	<ul style="list-style-type: none"> <li>● Higher speed rotation (300 rpm → 350 rpm), operational availability (85% → 90%), OEE (overall equipment effectiveness) (83% → 90%).</li> </ul>	<ul style="list-style-type: none"> <li>➤ Developed new welding technology and new die casting technology to achieve high efficiency and precision.</li> </ul>

# Trends in Sales Volumes and Unit Prices

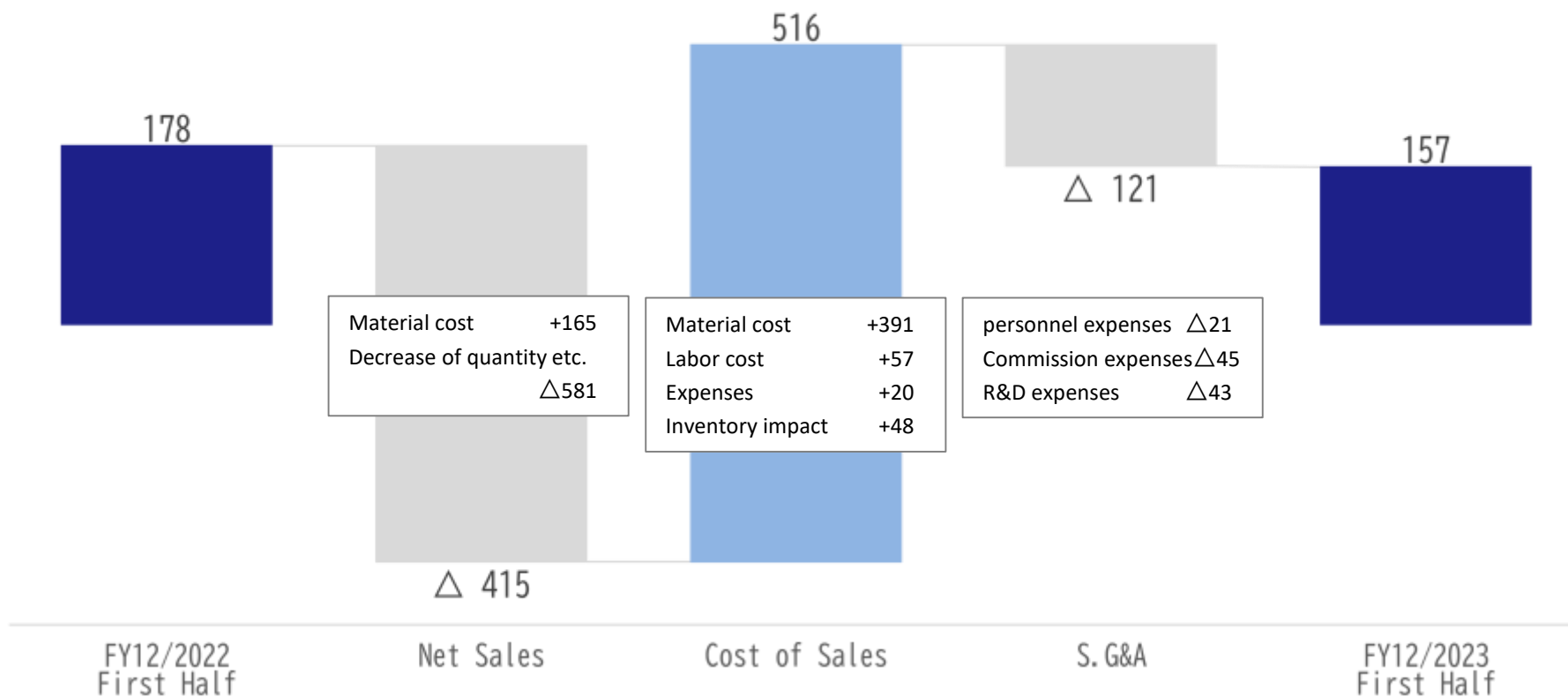
- Market conditions continue to be difficult.
- Average unit price improved due to price revisions implemented in April.



# Factors of Increase/Decrease in Operating profit (First Two Quarters) by Segment (YoY) - Lead Terminals

Despite sluggish sales due to the continued market downturn, we generated a profit as a result of price revisions

Millions of yen

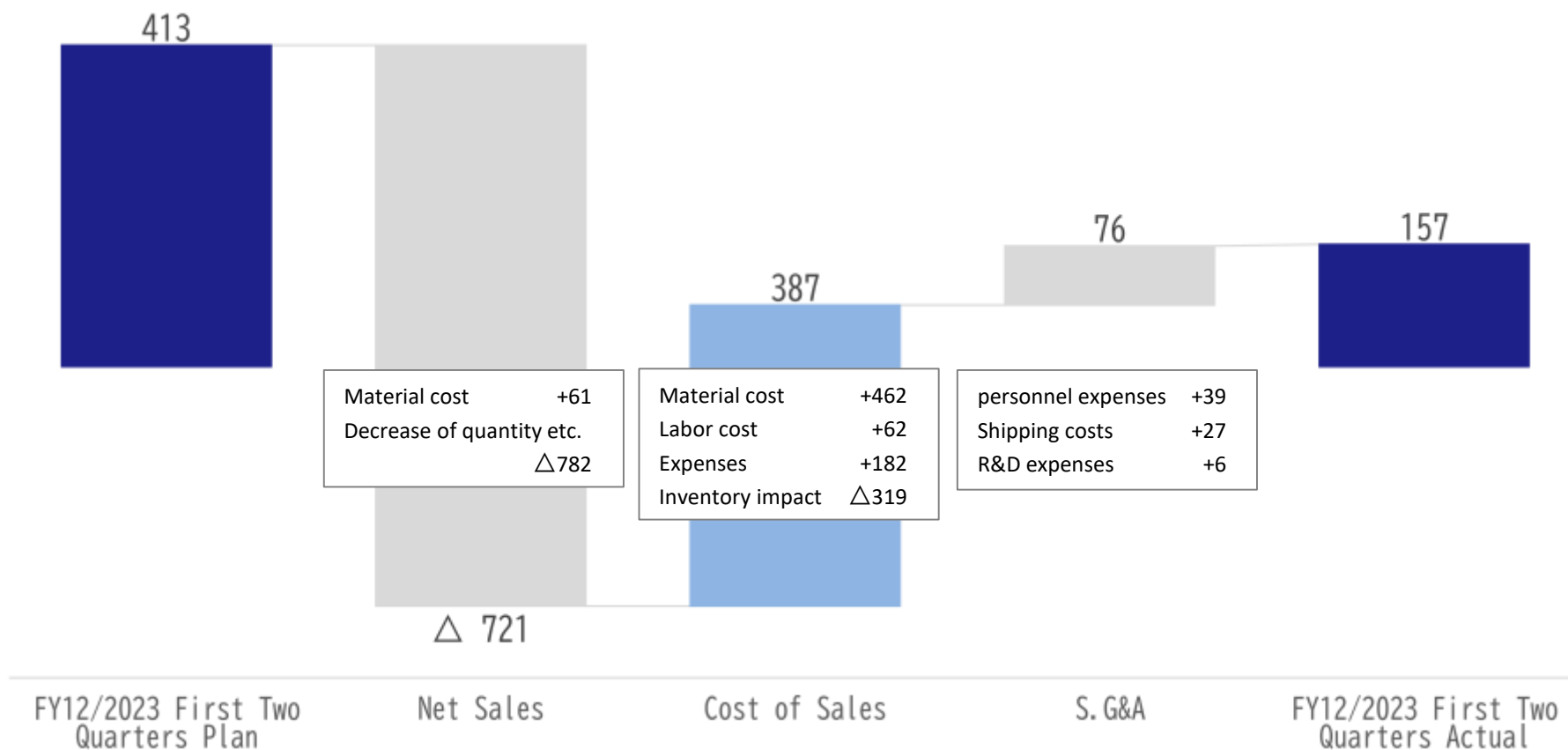




# Factors of Increase/Decrease in Operating profit (First Two Quarters) by Segment (vs. Plan) - Lead Terminals

Although price revisions had a positive impact, profit declined significantly due to a downturn in the market that was much greater than initially expected

Millions of yen



# Outlook for Lead Terminals Business

Sales and profit forecast figures were revised downward due to the continuing severity of the market environment and the negative impact of inventory build-up in the first half of the fiscal year.

## Segment Results

(Millions of yen)

	FY12/2022	FY12/2023 (plan)		
	Actual	Initial full-year forecast	Revised full-year forecast	Revised full-year forecast vs. previous year's results
Net sales	8,384	9,162	7,508	-875 -10.4%
Operating profit	232	699	49	-182 -78.6%
<i>Operating margin ratio</i>	2.8%	7.6%	0.7%	-2.1 pt -

## Outlook for FY12/2023

- Both the information and telecommunications equipment market and automotive market are expected to remain challenging.
- The effect of price revisions will offset the decrease in profit due to a decline in sales.
- Will work in the second half of the fiscal year to make up for falling behind in increasing the new product sales ratio in the first half.

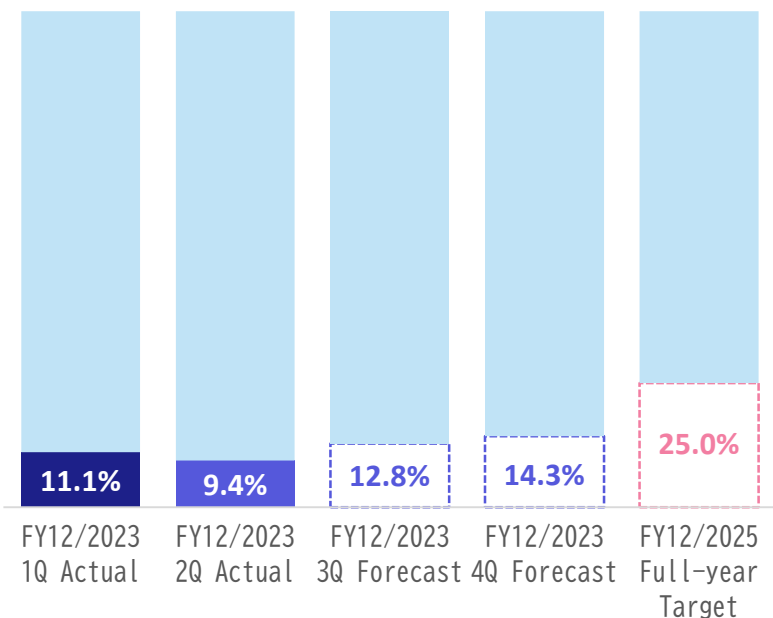
# Strengthen Profitability of Core Business (Lead Terminals)

## 1. Improve sales ratio of new products.

### Sales Ratio of New Products



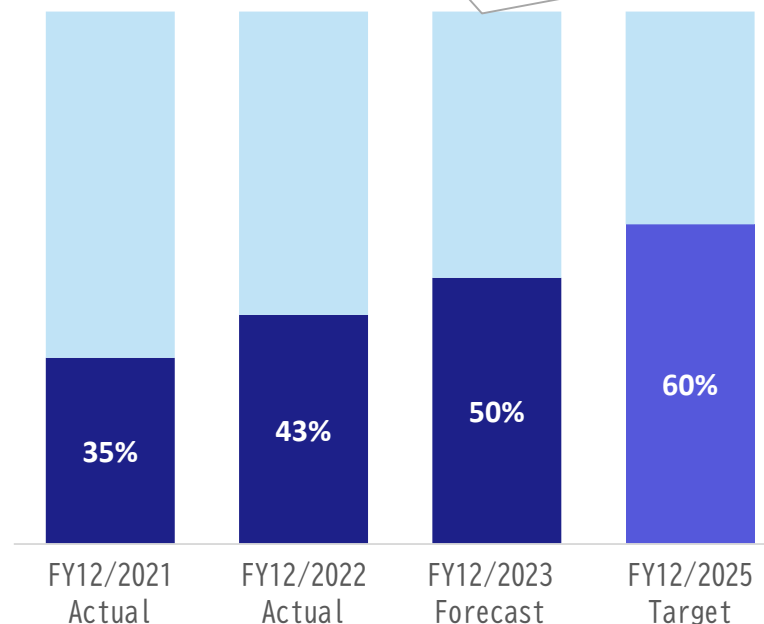
Strengthen the production system for burr-less type and focus on expanding sales for automotive hybrid capacitors



Customer evaluation delayed longer than expected.  
Sales ratio expected to be lower than expected

### Ratio of Sales to the Automotive Market

Assumed that sales ratio for automobiles in the second quarter remained mostly unchanged from the previous quarter (43%).



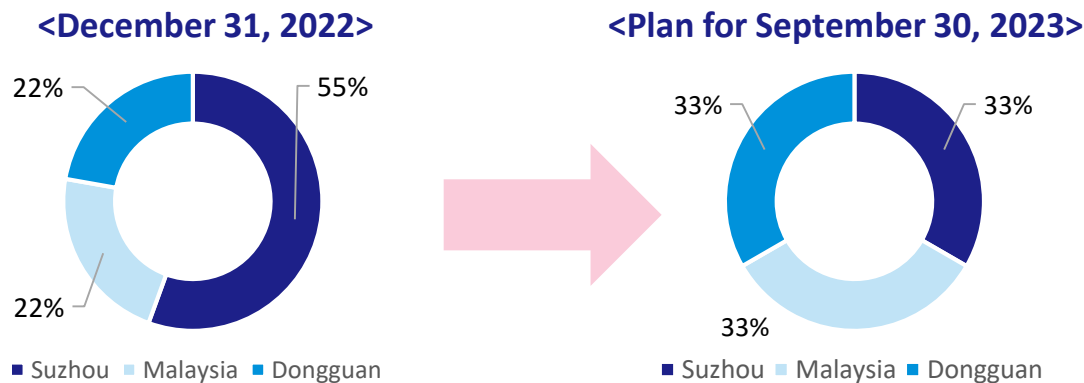
# Strengthen Profitability of Core Business (Lead Terminals)

## 2. Progress in negotiations with each customer for price correction

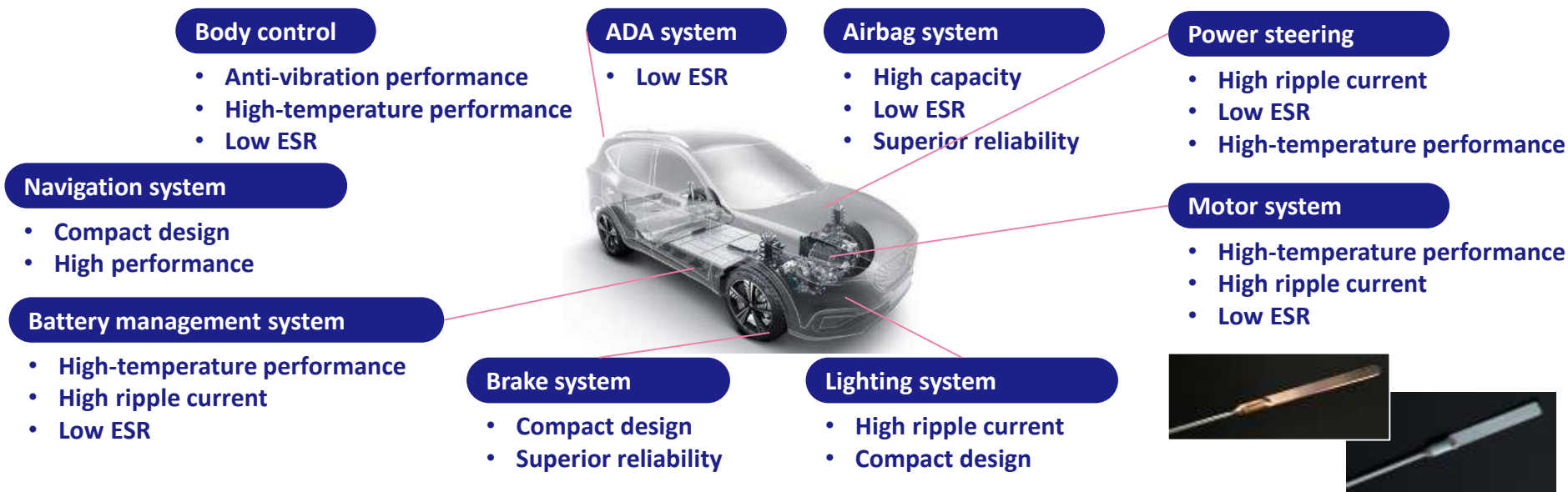
	Initial comments (as of February)	Current situation
(1) Price revisions	<ul style="list-style-type: none"> <li>For key customers: Complete price change negotiations by March Apply new prices in April to improve profitability</li> </ul>	➤ Carried out as planned
(2) Sliding scale pricing	<ul style="list-style-type: none"> <li>For all key customers: Implement sliding scale pricing for materials Looking to shorten sliding scale calculation period (maximum 6 months ⇒ maximum 3 months)</li> </ul>	➤ Shortened the sliding scale calculation period to 2–3 months.

## 3. Progress in relocating production system

- ✓ Moved ahead of original schedule.
- ✓ Production at the existing factories was halted at the end of May. Transfer of equipment was completed in June, and production started in July. Following the start of mass production and shipment in August, production will go into full swing in September.
- ✓ Inventory buildup was completed by May with about 4 months of inventory shipped from the Suzhou plant.



# Performance Requirements for Hybrid Aluminum Electrolytic Capacitors for Automotive Applications and The Company's technical response



Major performance requirements by areas	
<b>Drive system</b>	• High-temperature performance, low ESR, high ripple current
<b>Body</b>	• Anti-vibration performance, high-temperature performance
<b>Safety system</b>	• Low ESR, long life, high capacity
<b>Information system</b>	• Low ESR, low profile
<b>Common requirements</b>	• Reliable and stable supply system

Capacitor performance	Performance requirements for lead terminals	Technology to realize performance
Low ESR (equivalent series resistance)	Bonding performance *Adhesion	Pressing, washing
Low leakage current	Leakage current characteristics, bonding performance	Forming, washing
Long life	Leakage current characteristics, contamination (impurity) prevention	Welding, washing, forming
Vibration resistance	Anti-vibration type	Welding, pressing

# Topics in the Lead Terminals Business

Developing new technologies and applying them at factories across the Group to significantly improve production efficiency, reduce costs, and further enhance quality

Development and application of new welding technology dramatically improves productivity and quality

Focus of technological  
development

Increase speed of welding and stabilize welded parts  
via laser welding



Conventional arc welding



Laser welding



Laser welding machine

1<sup>st</sup> STEP

Copper-to-copper welding  
(for next-generation capacitors)

2<sup>nd</sup> STEP

Welding of aluminum wire  
and copper  
(for EDLC)

Obtain patent

Start supplying samples in  
2024



# Results by Segment (First Two Quarters) - Optical Components and Devices

The submarine cable market was still impacted by supply chain disruptions, causing a significant downturn in the land-based optical communications market

(Millions of yen)

	FY12/2022	FY12/2023			FY12/2023			
	First 2 quarters (Jan-Jun)	First 2 quarters (Jan-Jun)	YoY change	YoY change (%)	Q1 (Jan-Mar)	Q2 (Apr-Jun)	QoQ change	QoQ change (%)
Net sales	3,753	3,234	-518	-13.8%	1,656	1,577	-79	-4.8%
Operating profit	1,864	1,528	-335	-18.0%	817	711	-106	-13.0%
<i>Operating margin ratio</i>	49.7%	47.3%	-2.4 pt	-	49.3%	45.1%	-4.2 pt	-

## Overview of FY12/2023 (First Two Quarters)

### ● Inventory adjustments continue to weigh on sales

- Sales of optical components for submarine cables decreased due to the lingering effect of supply chain disruptions
- In the land-based optical communications market, we lost business from some customers due to the embargo imposed as a result of the U.S.-China trade friction

### ● Investments in R&D and productivity improvements

- Steady progress was made in the development of new products and the introduction of automated lines
- Focusing on future technologies Will present a paper on multicore fiber (MCF) technology co-authored with KDDI Research at an academic conference in October

# Market and Business Environment: Comparison between Assumption at the Beginning of the FY and Now: Optical Components and Devices Business

## 1. Market environment and order trends

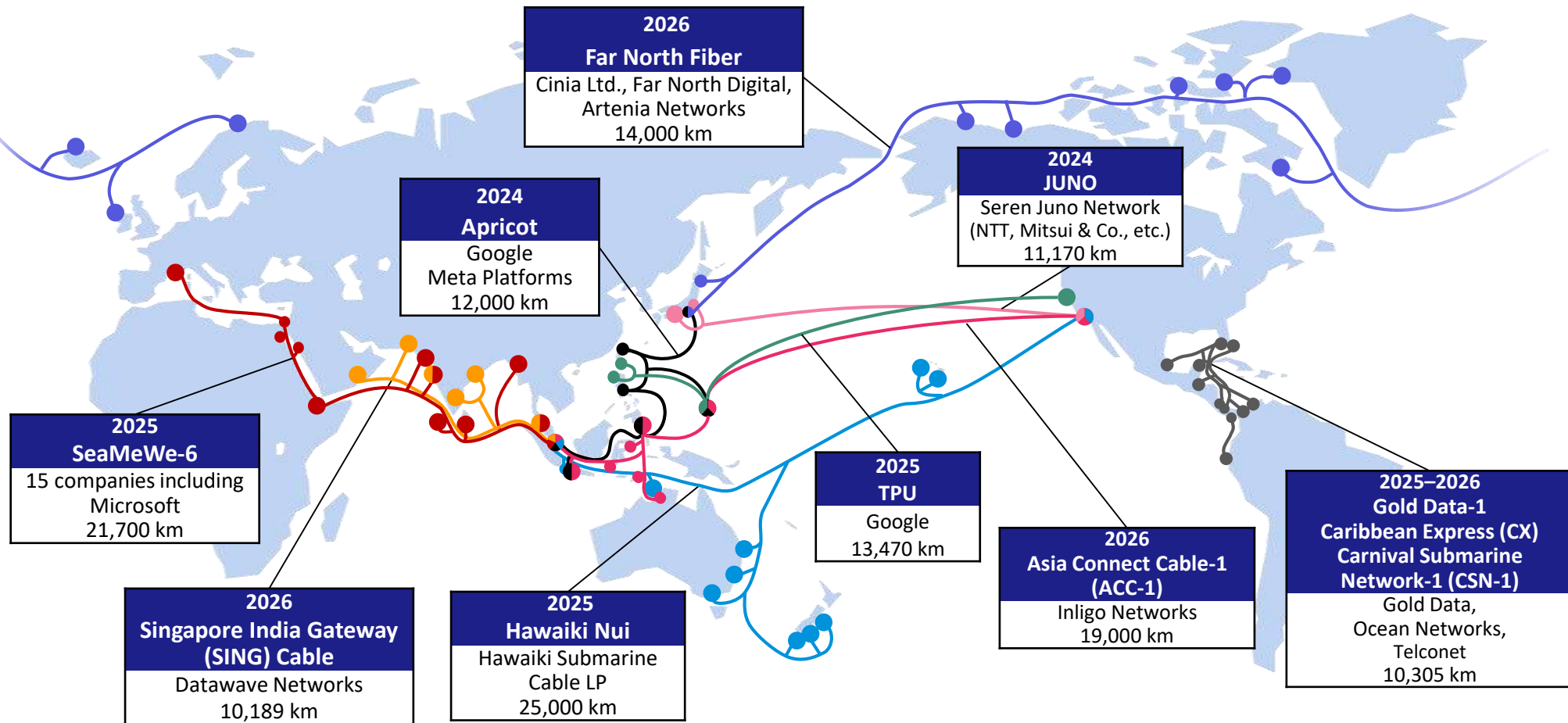
	Initial comments (as of February)	Current outlook
(1) Market trends	<ul style="list-style-type: none"> <li>● The marine cable market is expected to continue growing steadily as it continues to shift toward high-speed and high-capacity products</li> </ul>	<ul style="list-style-type: none"> <li>➤ The impact of supply chain disruptions in the first half of the fiscal year will ease in the second half</li> <li>➤ Long-term bulk orders from some customers will boost sales</li> <li>➤ The land-based optical communications market will remain very severe due to the embargo imposed as a result of the U.S.-China trade friction.</li> </ul>

## 2. Business Environment surrounding the company

	Initial comments (as of February)	Current outlook
(1) Product development	<ul style="list-style-type: none"> <li>● Develop new products for multicore (32 fiber pairs or more) cables</li> <li>● Develop technologies for multicore fiber and satellite communication optical devices with an eye to 2030 and beyond</li> </ul>	<ul style="list-style-type: none"> <li>➤ Start shipping new product samples designed for 32 FP cables in 2024 (mass production to start in phases in 2024–2025)</li> <li>➤ Start shipping samples of optical devices for multicore fibers</li> </ul>
(2) Productivity, etc.	<ul style="list-style-type: none"> <li>● Introduce semi-automatic production equipment</li> <li>● Strengthening the BCP system</li> </ul>	<ul style="list-style-type: none"> <li>➤ Start full-scale mass production at the Sri Lanka factory in 2024</li> <li>➤ Implemented flood control measures at the pre-processing plant (headquarters factory) for optical devices and strengthened the headquarters BCP system (May 2023)</li> </ul>

# New Construction Continues for Submarine Cable Networks in 2024 and Onward

Investments in submarine cable networks continue as global communications infrastructure is strengthened



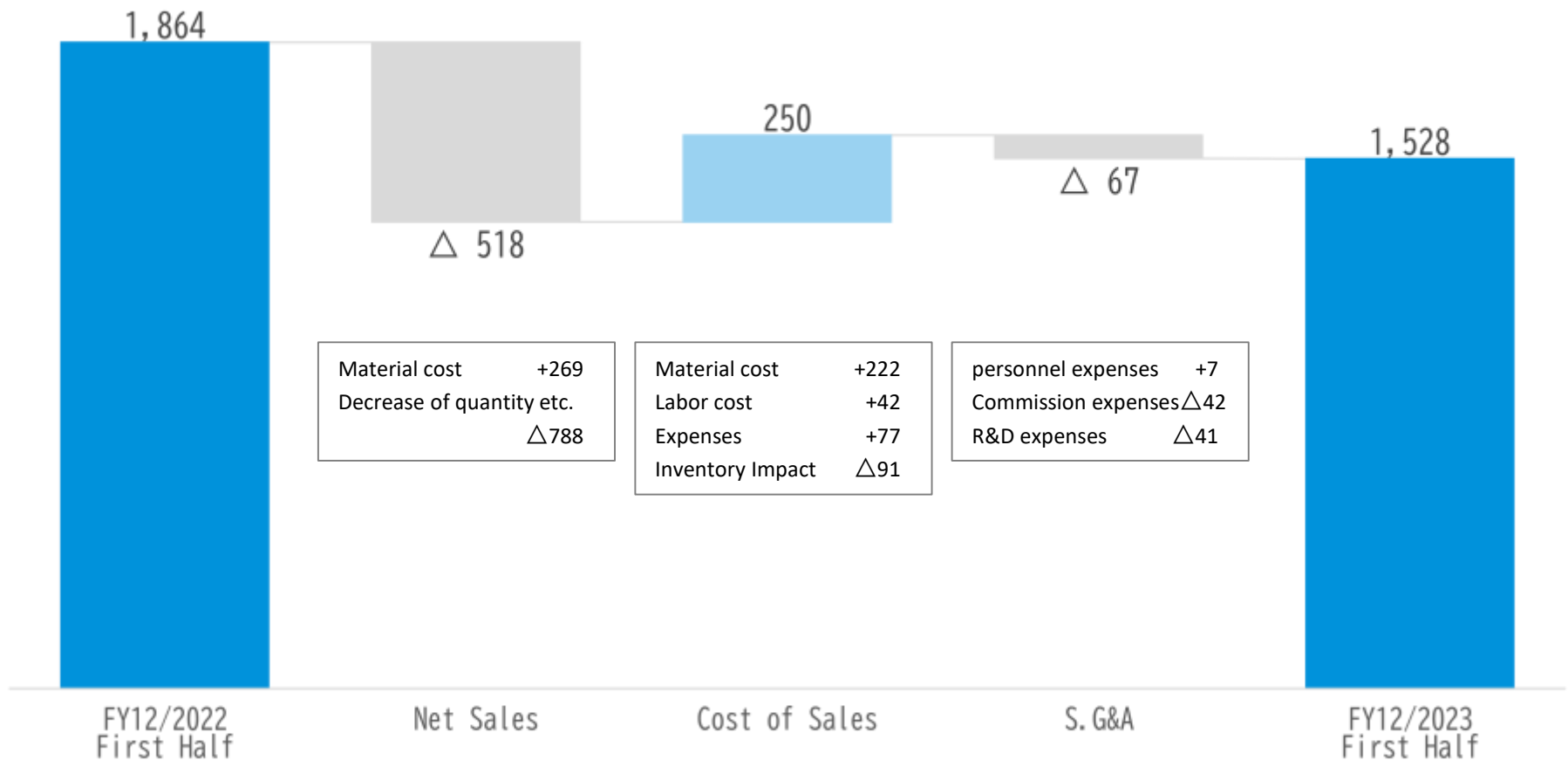
\* 10,000 kilometer or longer submarine cable projects scheduled to go into service between 2024 and 2026

\*Source: TeleGeography "Submarine Cable Map"

# Operating profit by Segment (First Two Quarters) Change Factors (YoY) - Optical Components and Devices

Sales fell significantly due to lower sales volumes, mainly for land-based optical communication devices

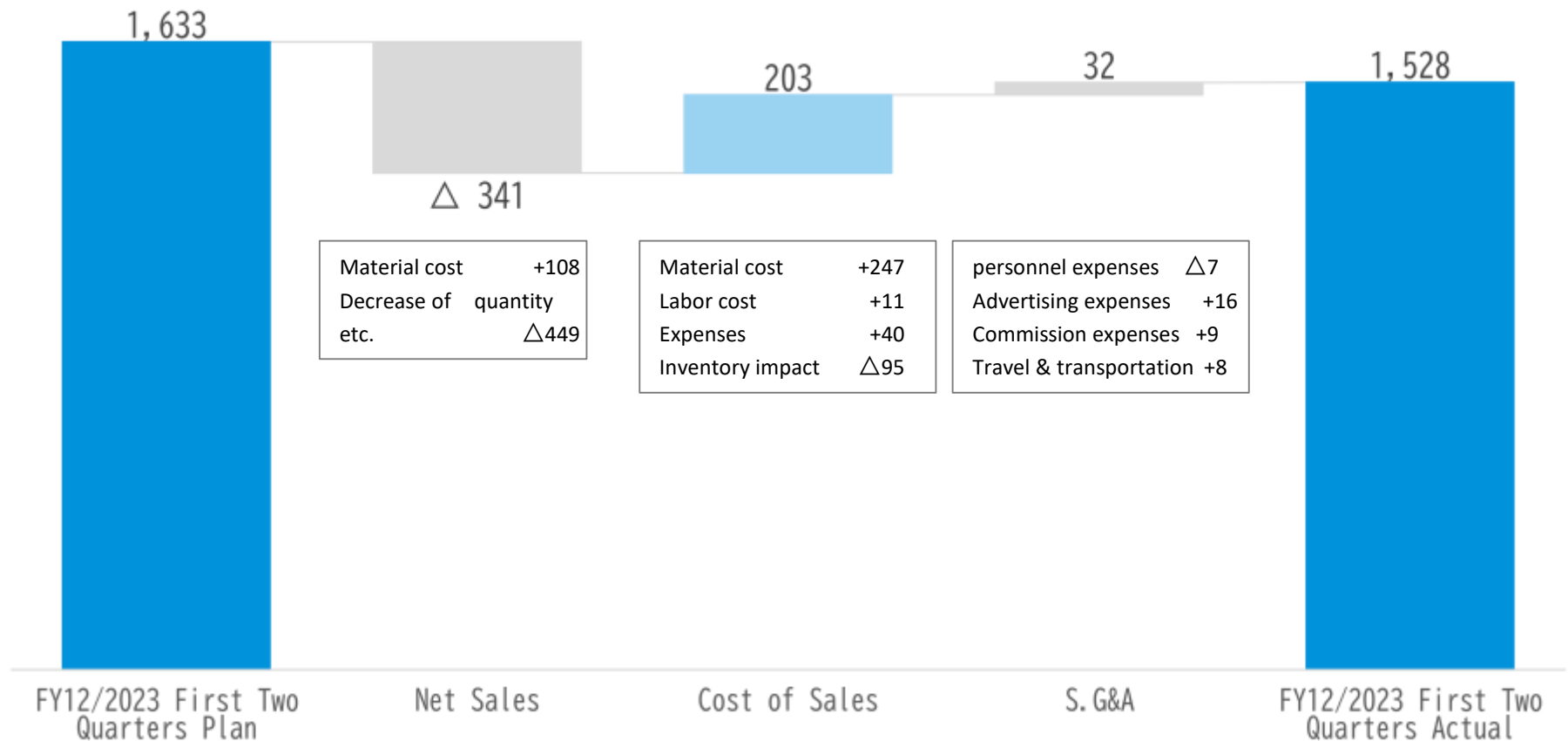
Millions of yen



# Factors of Increase/Decrease in Operating profit (First Two Quarters) by Segment (vs. Plan) - Optical Components and Devices

A drop in land-based optical communication device sales resulted in a slight decrease in profit

Millions of yen



# Outlook for Optical Components and Devices Business

The market for land-based optical communication devices will continue to be tough, but the submarine optical cable market will begin to show signs of improvement.

## Segment Results

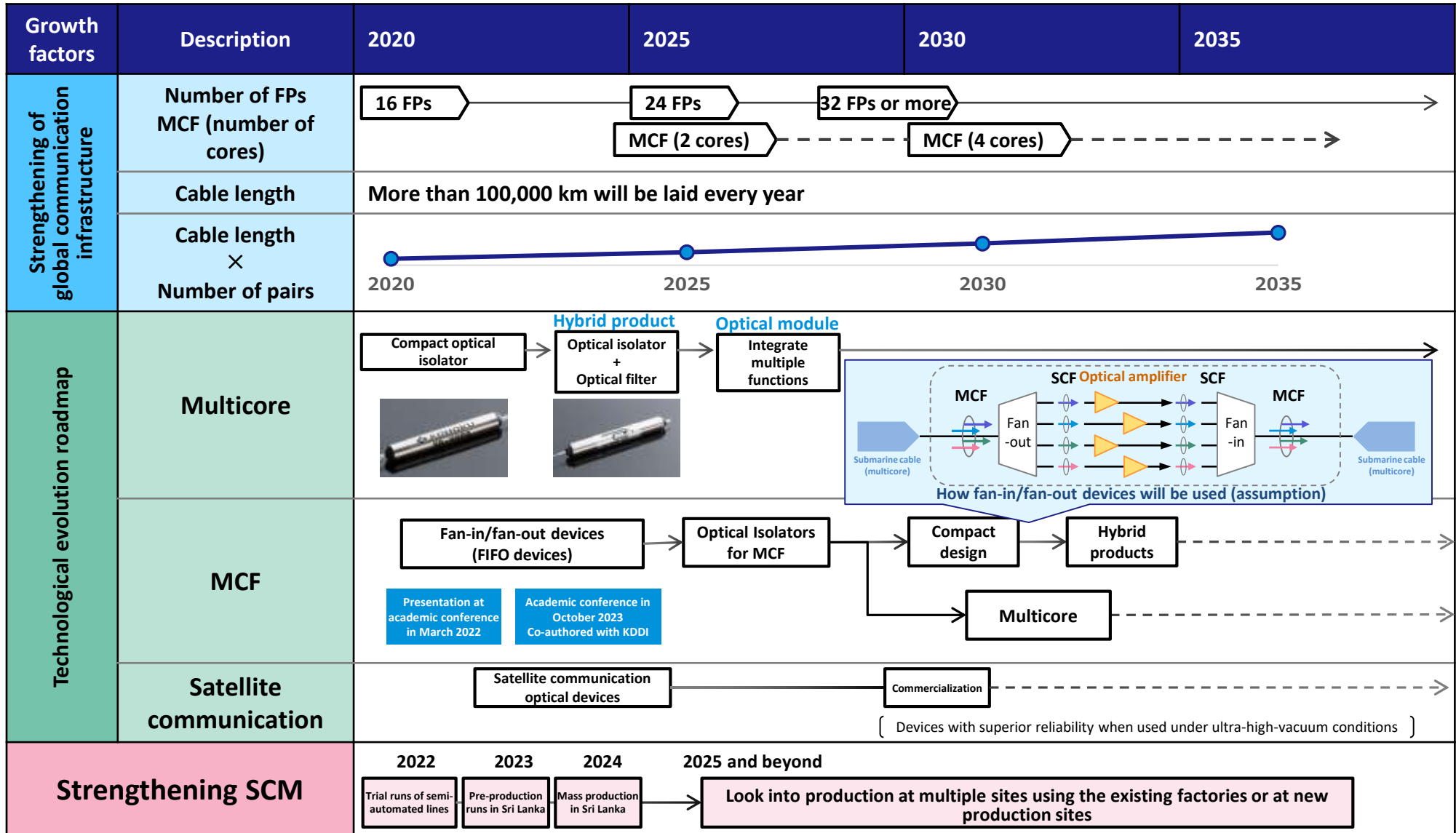
(Millions of yen)

	FY12/2022	FY12/2023 (plan)		
	Actual	Initial full-year forecast	Revised full-year forecast	Revised full-year forecast vs. previous year's results
Net sales	7,289	7,331	6,981	-307 -4.2%
Operating profit	3,652	3,422	3,361	-290 -7.9%
<i>Operating margin ratio</i>	50.1%	46.7%	48.2%	-1.9 pt -

## Outlook for FY12/2023

- The submarine cable market is expected to gradually recover from inventory adjustments and return to normal
- Will carry out all-around product development to support each company's technological innovations designed to realize high-speed, high-capacity multicore submarine cables

# Roadmap for Next-generation Submarine Cable Technologies



# Topics: Optical Components and Devices Business

## Technology for manufacturing high-purity silica glass, SSG® (slurry cast silica glass)

### International patent application filed for special preform manufacturing equipment

We have filed an international patent application for a special preform manufacturing equipment used for SSG®, a technology for manufacturing high-purity silica glass products.

Using this preform manufacturing equipment for which an international patent application was filed, it is possible to manufacture unconventional preforms with a high density of multiple holes and preforms with a cross-sectional shape that cannot be made with a cutting tool.

We have already obtained a patent for this manufacturing equipment in Japan. Currently, having filed a PCT application, we are working to acquire rights overseas.

#### <Examples of special preforms>



Preform with 100 1-mm holes



PCF preform  
(Cut model)

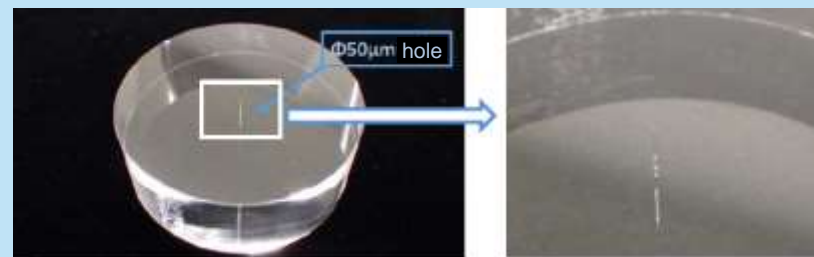
### Micro-hole (ø50 μm) drilling technology

Using SSG®, we have established a technology for drilling extremely fine holes that are difficult to make with a drill or laser.

It makes it possible to manufacture silica glass components, such as preforms, with excellent hole diameter and hole placement precision.

Since SSG® has a purity equivalent to synthetic silica glass, it is expected to be used for various industrial applications that take advantage of silica glass' high melting point, such as semiconductor fabrication processes and processing technologies that bring out special properties of metals.

#### <Example of silica component made using SSG®>



(Micro-hole preform)

(Enlarged view of 50 μm  
micro-hole)



## III. Others

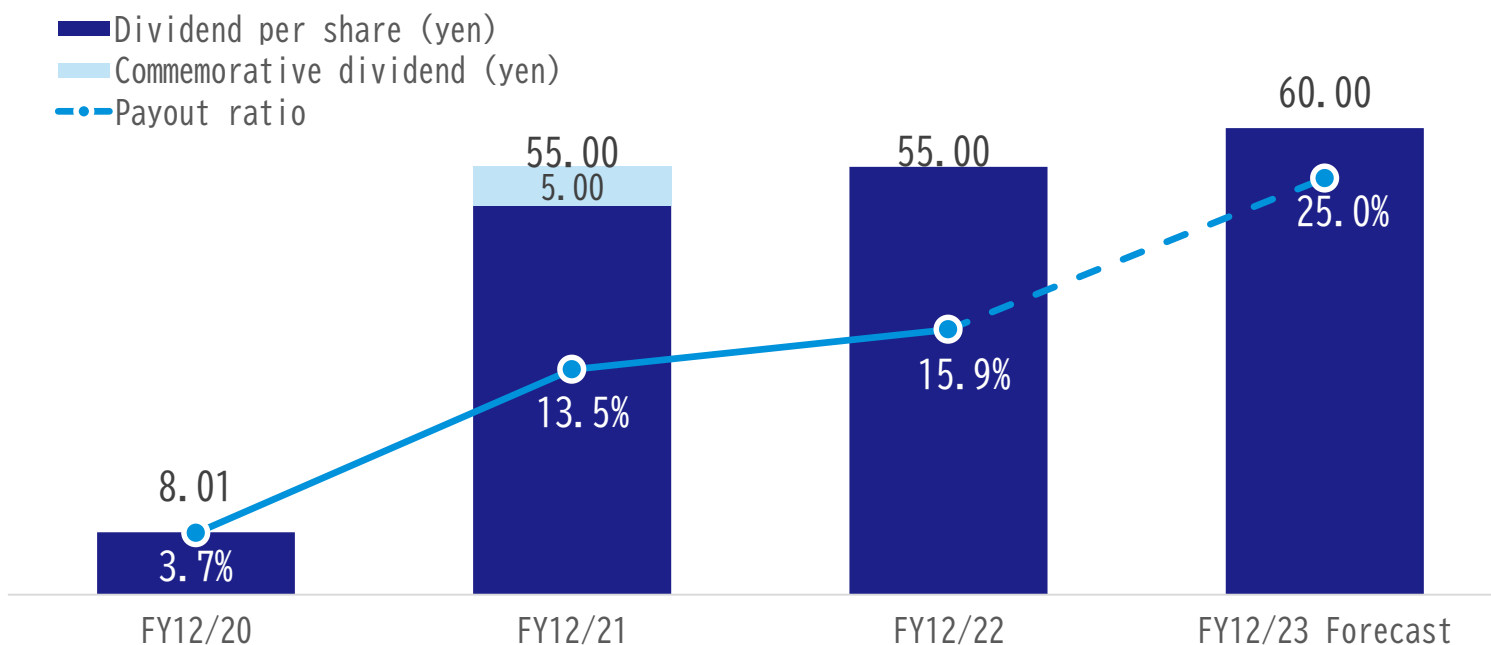
# Changes in shareholder returns

Based on the policy of enhancing shareholder returns, we plan to increase the dividend per share by 5 yen for the current fiscal year (as originally projected)

## < Shareholder Return Policy >

- In order to achieve sustainable growth, we will actively put money into capital expenditures, research and development, M&A, etc. We will also maintain a certain amount of internal reserves for the time being to strengthen our financial standing.
- For shareholder returns, we will strive to enhance shareholder returns aiming for a consolidated dividend payout ratio of 30% in the medium to long term.

## Change in Dividend/Dividend Payout Ratio



# Non-Financial Initiatives, KPIs, and Progress

- Establish a sustainability committee and strengthen non-financial activities
- Disclose information about CDP's climate change questionnaire; expanded the scope of reporting from a non-consolidated to consolidated basis (responded to the questionnaire in July)

Item	Important issues (Materiality)	Specific Themes of Initiatives	Examples of Key Performance Indicators (KPIs)	Achievement status	Status of activities Q1-Q2
E Environment	Global environmental conservation and reduction of environmental load	<ul style="list-style-type: none"> <li>■ Introduction of equipment that contributes to CO<sub>2</sub> reduction</li> <li>■ Increasing the utilization ratio of renewable energy such as solar power</li> <li>■ Efforts to reduce CO<sub>2</sub> emissions by introducing power-saving devices/adjusting with demand devices</li> </ul>		Achieved	Met the emissions requirements of Jiangsu Province's pollution control regulations (environmental assessment) following the relocation of the Suzhou plant in China (zero phosphorus and nitrogen emissions)
		<ul style="list-style-type: none"> <li>■ Collaboration with "Conservation of Forest of Yamakado Water Source" activities</li> </ul>	<ul style="list-style-type: none"> <li>• Maintain and strengthen relationship</li> </ul>	Achieved	No special remarks
		<ul style="list-style-type: none"> <li>■ Promotion of paperless practice (reduce paper use)</li> </ul>	<ul style="list-style-type: none"> <li>• Lead terminals: Reduce by 99% by 2024 (compared with 2021) at headquarters manufacturing department</li> </ul>	Achieved	Reducing in phases
		<ul style="list-style-type: none"> <li>■ Improving the productivity of optical communication parts and devices and effectively using resources</li> <li>■ Energy saving in crystal growth process/KECS/KLA</li> </ul>	<ul style="list-style-type: none"> <li>• Productivity (yield, person-hours, etc.): Improve 5% YoY starting in 2022</li> <li>• Electricity consumption (per intensity): Reduce by 5% YoY starting in 2022</li> </ul>	Achieved	Improved yield through small-group activities, etc.
		<ul style="list-style-type: none"> <li>■ Reducing the number of defects</li> </ul>	<ul style="list-style-type: none"> <li>• Defect rate: Reduce by 38.3% by 2024 (compared with 2021)</li> </ul>	Achieved	Reduced power consumption by improving yield
		<ul style="list-style-type: none"> <li>■ Promoting the reuse of water globally</li> </ul>	<ul style="list-style-type: none"> <li>• Lead terminals: Reduce water consumption by 6% by 2024 (compared with 2021)</li> </ul>	Not achieved	Achieved 25.0% of the 23% reduction target; making ongoing efforts (Increased 33.9%)
S Society	Development of global human resources	<ul style="list-style-type: none"> <li>■ Headquarters: Promoting guidance on and development of specialized knowledge and management skills</li> </ul>	<ul style="list-style-type: none"> <li>• Acquisition of specialized knowledge necessary for headquarters operations: 2 cases/year starting in 2022</li> </ul>	Achieved	Implementing various training and education programs
		<ul style="list-style-type: none"> <li>■ Overseas: Promoting OJT in operations and OFF J/T for the surrounding business environment</li> </ul>	<ul style="list-style-type: none"> <li>• Acquisition of specialized knowledge necessary for overseas operations: 3 cases/year starting in 2022</li> </ul>	Achieved	Providing local staff with skill improvement training
	Creating a workplace that respects diverse individuals and making the most of their abilities	<ul style="list-style-type: none"> <li>■ Promotion of diversity and inclusion</li> </ul>	<ul style="list-style-type: none"> <li>• Obtain Certification as Outstanding Organization in Health &amp; Productivity Management in 2023</li> </ul>	Achieved	Certified as an Outstanding Organization in Health & Productivity Management in March 2023 Appointed a female director in March 2023
		<ul style="list-style-type: none"> <li>■ Carrying out awareness-raising activities for respecting human rights</li> </ul>	<ul style="list-style-type: none"> <li>• Survey of current paid leave usage rate: Increase 5 percentage points YoY starting in 2022</li> </ul>	Not achieved	Not achieved yet
	Realization of safe and rewarding workplaces	<ul style="list-style-type: none"> <li>■ Promotion of safety and health measures</li> </ul>	<ul style="list-style-type: none"> <li>• Utilization of employee satisfaction survey: Conduct survey and make improvements once a year</li> </ul>	Partially achieved	Conducted harassment surveys and health questionnaires
		<ul style="list-style-type: none"> <li>■ Appropriate evaluation of part-time employees</li> </ul>	<ul style="list-style-type: none"> <li>• Introduce evaluation system for part-time employees</li> </ul>	Partially achieved	Looking into ways to improve the evaluation system
	Respect for human rights and diversity	<ul style="list-style-type: none"> <li>■ Headquarters: Human resource development that makes the most of the abilities of female and foreign employees</li> </ul>	<ul style="list-style-type: none"> <li>• Percentage of female and foreign employees in supervisory (leader) and managerial positions: Increase 5% YoY starting in 2022</li> </ul>	Achieved	Increased the number of female managers from zero to 1
<ul style="list-style-type: none"> <li>■ Overseas: Increasing the ratio of female and foreign employees in supervisory and managerial positions</li> </ul>		<ul style="list-style-type: none"> <li>• Career advancement training participation rate: Increase 15% via 2022-2023 plan</li> </ul>	Not achieved		
Development and revision of new products yet to exist in	<ul style="list-style-type: none"> <li>■ Realization of new optical communication parts and devices that contribute to technological innovation</li> </ul>	<ul style="list-style-type: none"> <li>• New product ratio (net sales): 15% or more by 2024</li> </ul>	Achieved	Currently 10%	
	<ul style="list-style-type: none"> <li>■ Realization of optical communication parts and devices that contribute to energy saving</li> </ul>	<ul style="list-style-type: none"> <li>• Energy-saving product ratio (net sales): 15% or more by 2024</li> </ul>	Achieved	Currently 10%	
Strengthening manufacturing	<ul style="list-style-type: none"> <li>■ Achieving productivity and quality improvement with advanced technology</li> </ul>	<ul style="list-style-type: none"> <li>• OEE (Overall Equipment Effectiveness): 88% by 2024 (90% including new welding technology)</li> </ul>	Partially achieved	OEE unchanged due to the transfer of equipment associated with the reorganization of factories	
Coexistence and common benefit with local communities	<ul style="list-style-type: none"> <li>■ Promoting social contribution initiatives</li> </ul>	<ul style="list-style-type: none"> <li>• Basic funding policy for social contribution activities:</li> </ul>	Achieved		
	<ul style="list-style-type: none"> <li>■ Collaboration with "Conservation of Forest of Yamakado Water Source" activities</li> </ul>	<ul style="list-style-type: none"> <li>• 0.5%~1% of consolidated ordinary income (average for the past three fiscal years)</li> </ul>	Achieved	Planning an event for autumn 2023	
	<ul style="list-style-type: none"> <li>■ Promoting scholarship program to Nagahama Agricultural High School</li> </ul>		Achieved		
	<ul style="list-style-type: none"> <li>■ Continuing to donate educational art materials to Nagahama City</li> <li>■ Promoting activities to clean up traffic mirrors and trash in the neighborhood</li> </ul>		Achieved		
G Governance	Partnerships with suppliers	<ul style="list-style-type: none"> <li>■ Promoting fair trade practices (stakeholder management)</li> </ul>	<ul style="list-style-type: none"> <li>• Consider and implement evaluation score system</li> </ul>	Achieved	Implemented a supply chain evaluation system
			<ul style="list-style-type: none"> <li>• Evaluation score: Increase 5% YoY starting in 2023</li> </ul>	Partially achieved	
	Thorough corporate governance	<ul style="list-style-type: none"> <li>■ Strengthening compliance education and training</li> </ul>		Achieved	Conducted harassment training, etc., as
		<ul style="list-style-type: none"> <li>■ Utilization of whistleblowing system</li> </ul>		Achieved	1 report filed this fiscal year
		<ul style="list-style-type: none"> <li>■ Appropriate management and utilization of owned information and intellectual</li> </ul>		Achieved	Managed by the IP Committee
		<ul style="list-style-type: none"> <li>■ Taking appropriate measures for information system security</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure compliance with the corporate governance code on an ongoing basis</li> </ul>	Achieved	Conducted security response training and seminars in June 2023
		<ul style="list-style-type: none"> <li>■ Formulation of basic sustainability policy (CG Code 3-1-3, 4-2-2)</li> </ul>		Partially achieved	Under review by the Sustainability Committee
<ul style="list-style-type: none"> <li>■ Information disclosure in English (3-1-2)</li> </ul>		Achieved	Ongoing since November 2022		
<ul style="list-style-type: none"> <li>■ Creating business portfolio policy (5-2-1)</li> <li>■ Other</li> </ul>		Not achieved			
			Achieved	Evaluated the board's effectiveness	

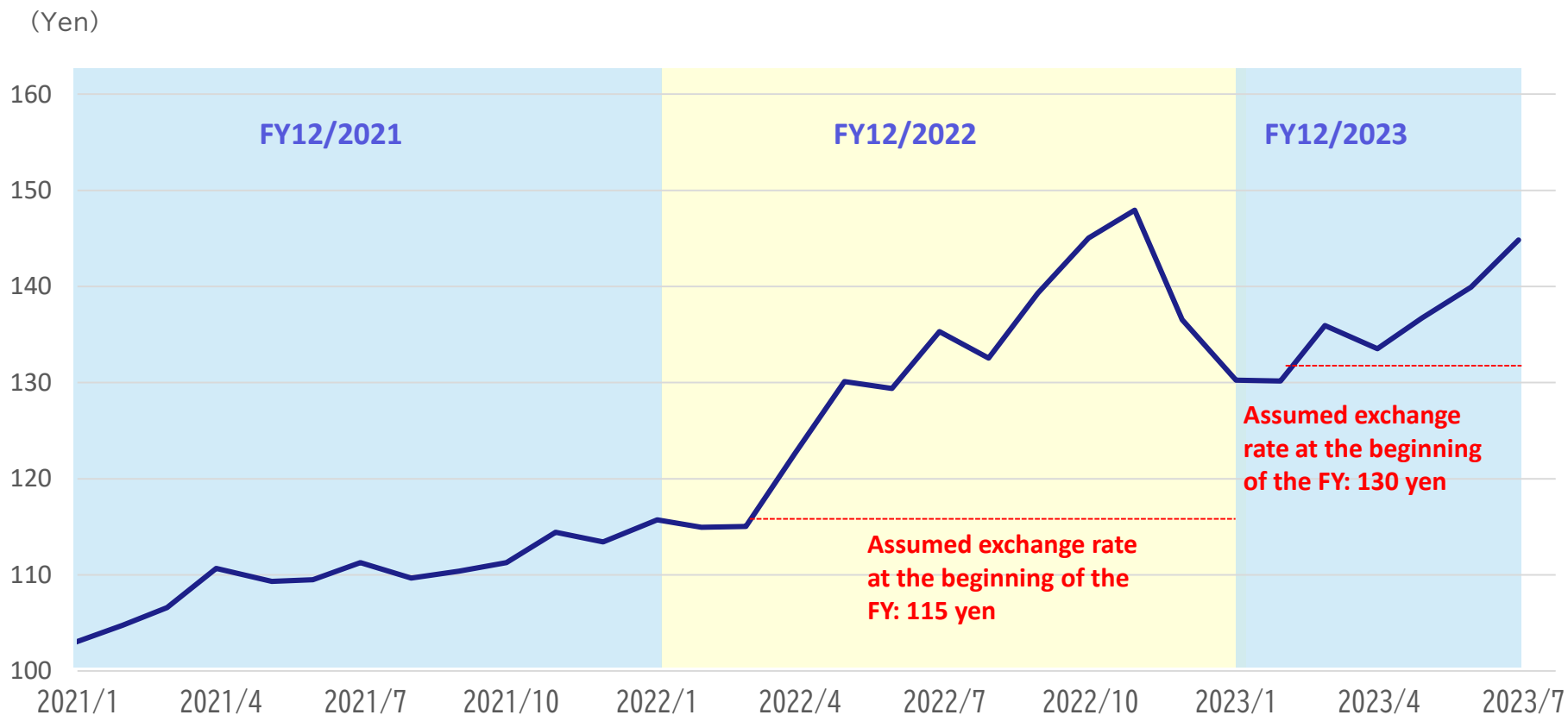


## **IV. Reference Information**

# Business Environment for FY12/2023 (First Two Quarters)

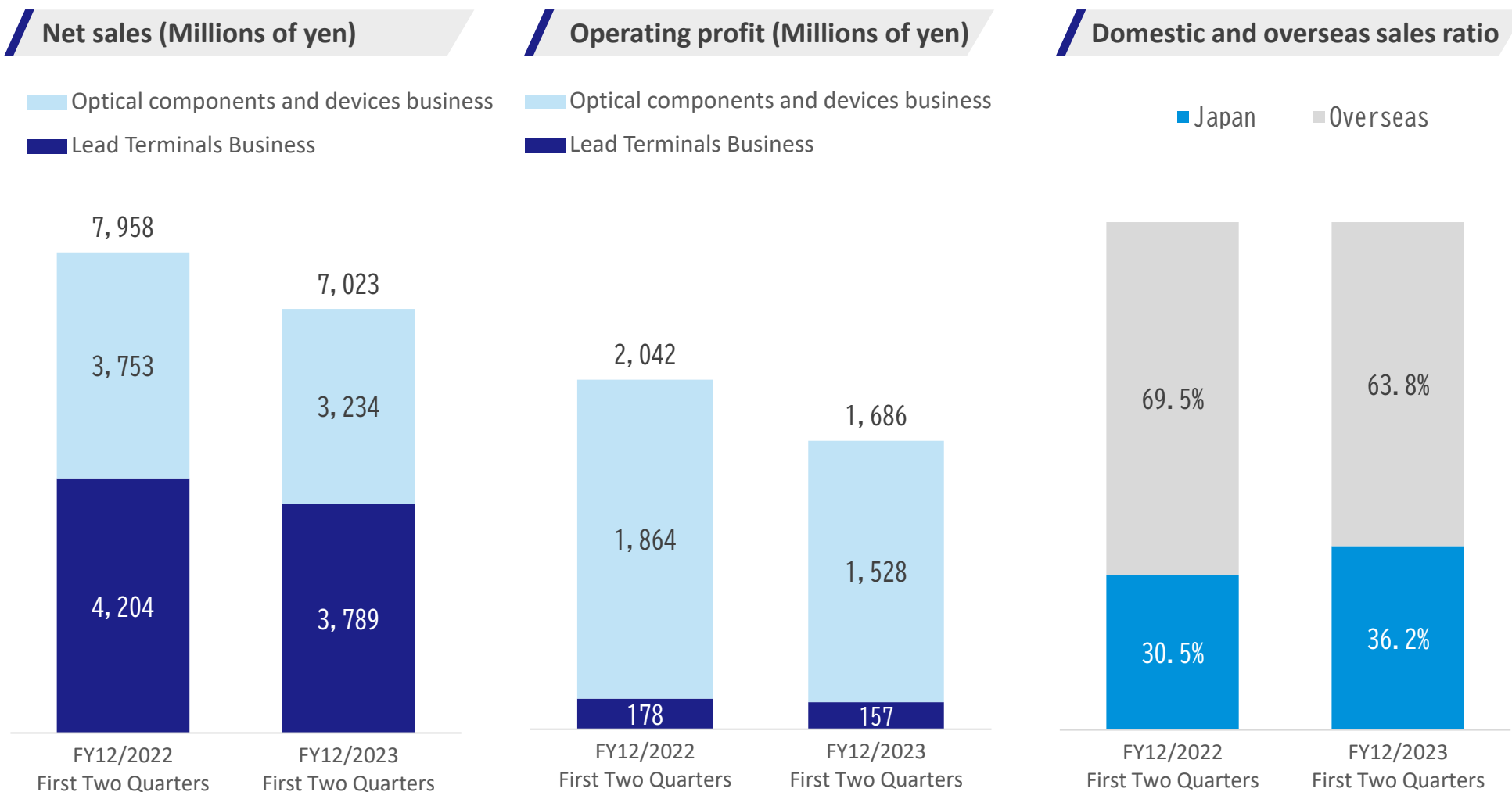
The average exchange rate during the period from January to June was 134.99 yen/USD, slightly weaker than projected

USD/JPY trend graph



# Results by Segment and Ratio of Domestic and Overseas Sales (First Two Quarters)

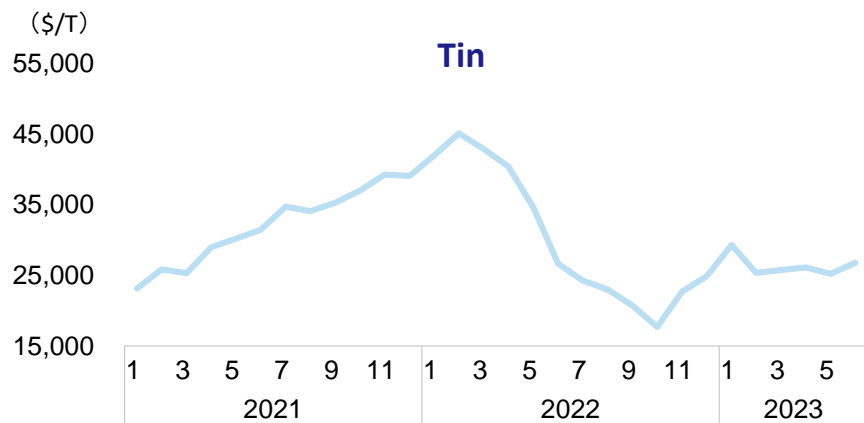
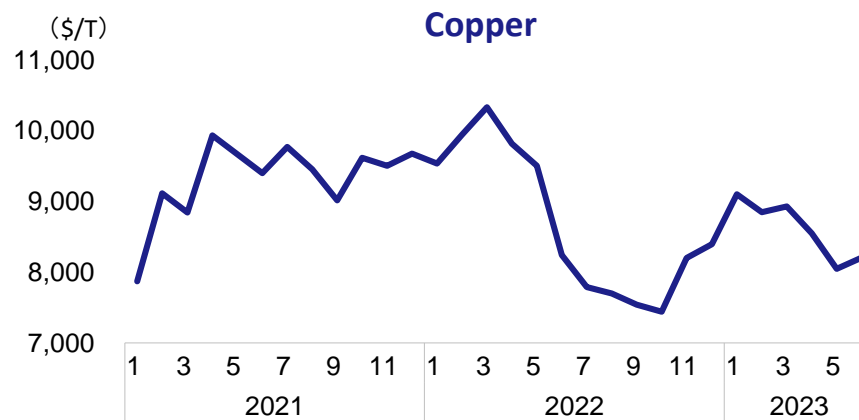
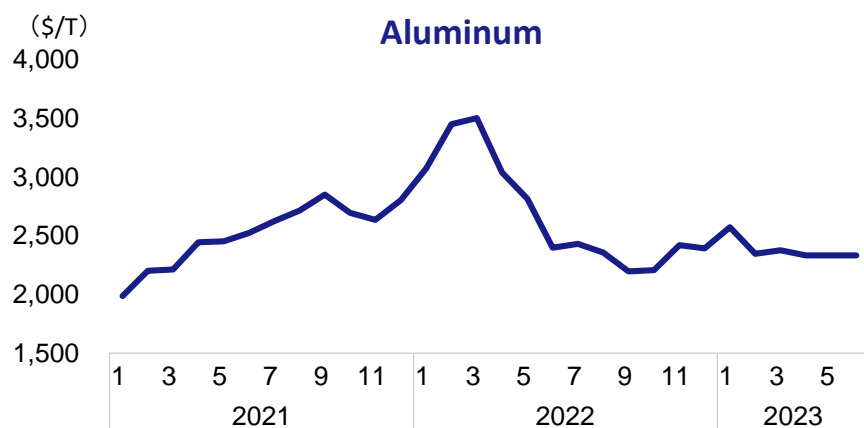
Sales of lead terminals and optical components and devices both declined around 10% year on year



# External Environment – Non-Ferrous Metals Market Trends

Market prices of non-ferrous metals have reversed from the downward trend in 2022 and remain unchanged

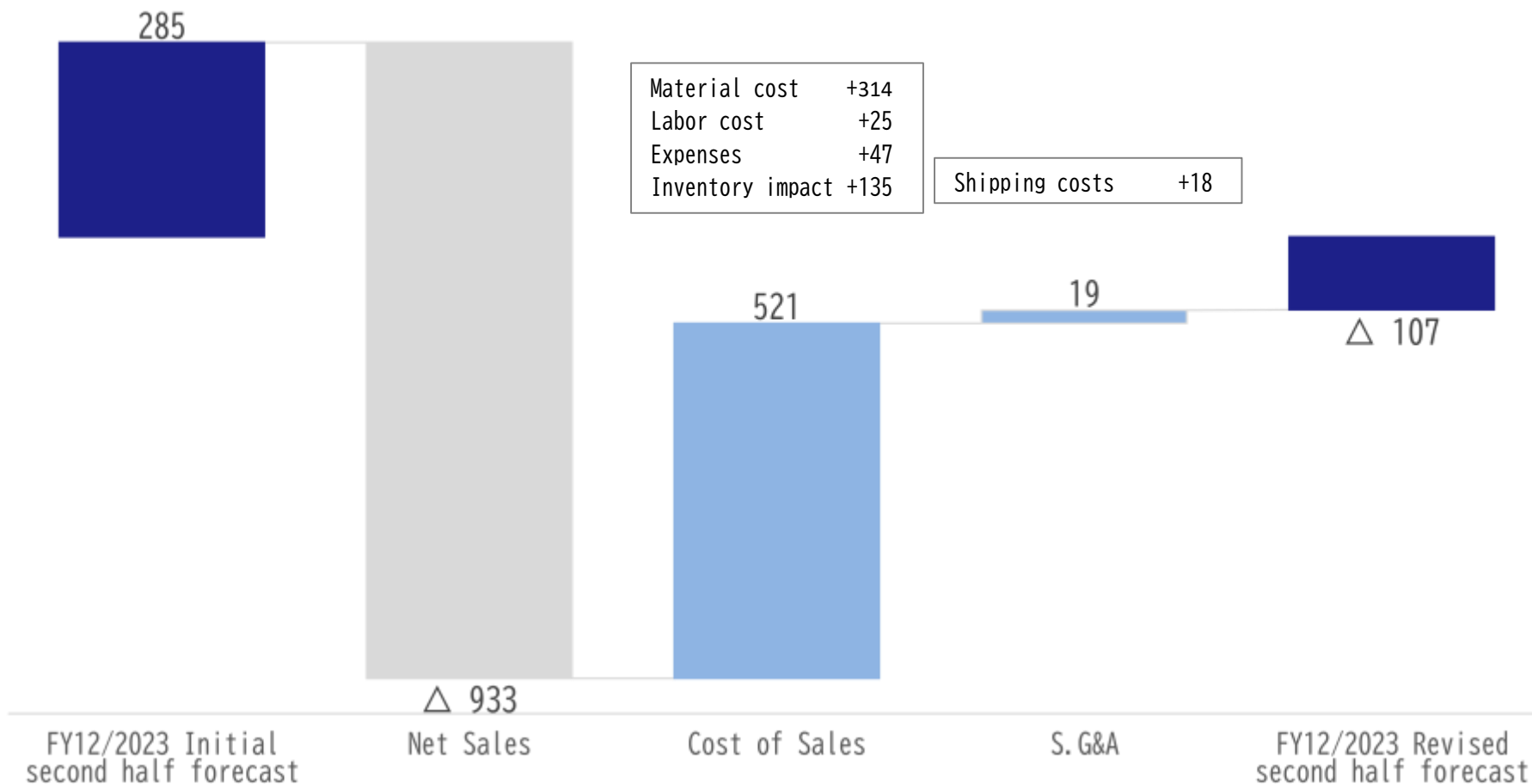
## Non-Ferrous Metals Market (LME)



# Initial second half forecast vs Revised full-year forecast - Lead Terminals

Earnings forecast for the second half was revised downward due to tougher-than-expected market conditions

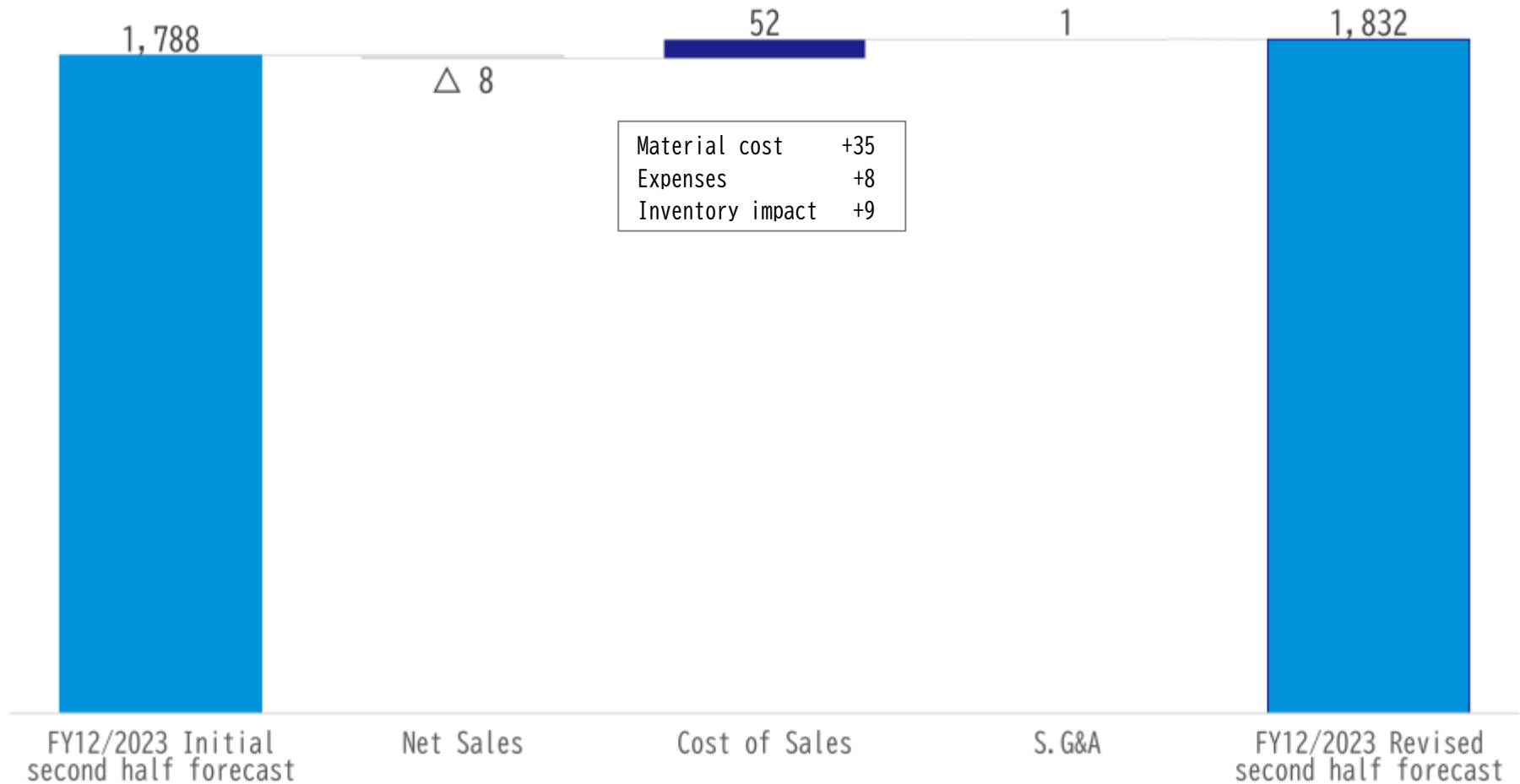
Millions of yen





# Initial second half forecast vs Revised full-year forecast - Optical Components and Devices

An increase in orders from the submarine cable sector offset the drop in sales of products for land-based optical communications, almost as expected



**This document contains our current plans and performance forecasts.**

**These future plans and forecast figures are plans and projections made by us based on available information. Actual results may differ from these plans and forecast figures due to various conditions and factors.**

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