

## **Financial Information**



HORIBA, Ltd.



## **Contents**



- 2023 First Half Results
- 2023 Forecasts
- Outlines by Business Segment
- Topics Accelerate initiatives in focus markets
- Shareholder Return
- Financial Data
- Corporate Profile



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## **Review of First Half of 2023**



# External Events

- Revitalization of economic activity by reclassifying COVID-19's category (equivalent to Class 2) to Class 5
- Accelerated inflation, including a rise in energy prices, in addition to yen depreciation
- Greater delay than expected in recovery in demand for semiconductors
- Growing interest in hydrogen energy, ammonia, and synthetic fuels
- Further heightening of interest in life science

# Internal Events

- Accelerated cross-segment business activities in our three focused fields
- ◆ Focus on an application for process measurement for industries
- ◆ Accelerated efforts in new fields such as hydrogen energy and life science
- Acquisition in the water quality field

## **2023 First Half Results**

(Billions of yen)



	2022	20	23	Cha	nges
	1st half results (JanJun.)	1st half forecasts (as of May 12)	1st half resul (JanJun.)	ts vs 2022	vs Previous Forecasts
Sales	114.9	127.5	<ul><li>131.</li></ul>	<b>1</b> +16.1	+3.6
Operating profit	16.2	18.5	<b>★</b> 17.	8 +1.5	- 0.6
O.P.%	14.1%	14.5%	13.6	% -0.5p	-0.9p
Ordinary profit	16.7	18.3	<b>*</b> 18.	1 +1.3	- 0.1
Net income attributable to owners of parent	11.2	19.0	<b>*</b> 19.	0 +7.7	+0.0
USD/JPY	123.14	133.00	135.0	+11.86	+2.00
EUR/JPY	134.39	144.00	145.9	+11.54	+1.93

## 2023 First Half Results by Segment

(Billions of yen)



		Sales		Орє	erating pro	ofit
	2022	2023	vs 2022	2022	2023	vs 2022
	1st half results (JanJun.)	1st half results (JanJun.)	Changes	1st half results (JanJun.)	1st half results (JanJun.)	Changes
Auto	25.6	30.5	+4.8	-1.7	-2.1	-0.3
P&E	10.1	<b>*</b> 11.3	+1.1	0.6	0.9	+0.2
Medical	13.6	<b>*</b> 15.5	+1.9	-0.1	0.1	+0.3
Semi	49.4	<b>★</b> 56.2	+6.8	16.7	<b>★</b> 18.6	+1.9
Scientific	15.9	<b>*</b> 17.4	+1.4	0.7	0.2	-0.5
Total	114.9	<b>★</b> 131.1	+16.1	16.2	<b>★</b> 17.8	+1.5

## 2023 First Half Results (B/S, CF)



B/S

- ◆Total assets were ¥435.2bn, up ¥18.5bn, by increasing inventory
- ◆Equity ratio: 61.1%

(compared to the end of Dec. 2022)

CF

- ◆Operating CF: Cash in ¥3.6bn due to operating profit
- ◆Investing CF: Cash out ¥1.2bn due to capital investments
- ◆Financial CF: Cash out ¥18.5bn due to repayments of debt

Free CF: + ¥2.3bn

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## HORIBA's Assumptions Regarding Market Environment



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Continued concern about the impact of global inflation and geopolitical situations.

Expect a recovery in economic activities in the "with or post-COVID-19" era.

#### Automotive



Accelerate use of hydrogen energy/batteries and increase in plug-in vehicles.

Expect the introduction of new emission regulations in Europe and China.

## Process & Environmental



Expect business expansion in the new energy market in response to the decarbonization trend.

Environmental regulation-driven demand remains strong. Anticipate it to expand to industrial processes including semiconductors.

#### Medical



Expect strong sales of medical instruments in Japan and in growing regions.

Sales of test reagents are recovering in the "with or post-COVID-19" era.

#### Semiconductor



Capital investment by semiconductor manufacturers continue to be in an adjustment phase.

Expect medium-term growth in measurement demand, driven by growth in generative AI, etc. in the semiconductor market.

### Scientific



Demand is strong for measurement and analysis equipment used for development and manufacturing processes in various markets.

Anticipate an increase in demand in the life science market.

## **2023 Forecasts**

(Billions of yen)



	2022	20	23	Char	nges
	Results	Previous Forecasts (as of May 12)	Forecasts (as of Aug. 9)	vs 2022	vs Previous Forecasts
Sales	270.1	279.0	<b>*</b> 281.0	+10.8	+2.0
Operating profit	45.8	40.0	41.0	- 4.8	+1.0
O.P.%	17.0%	14.3%	14.6%	-2.4p	+0.3p
Ordinary profit	46.8	39.5	41.0	- 5.8	+1.5
Net income attributable to owners of parent	34.0	34.0	<b>★</b> 35.5	+1.4	+1.5
USD/JPY	131.62	133.00	137.00	+5.38	+4.00
EUR/JPY	138.14	144.00	148.00	+9.86	+4.00

## 2023 Forecasts by Segment

(Billions of yen)



	Sales					Operating profit				
	2022	20	23	Chai	nges	2022	2022 2023		Changes	
	Results	Previous Forecasts (as of May 12)	Forecasts (as of Aug. 9)	vs 2022	vs Previous forecasts	Results	Previous Forecasts (as of May 12)	Forecasts (as of Aug. 9)	vs 2022	vs Previous forecasts
Auto	67.5	79.0	79.0	+11.4	_	-0.6	0.5	0.5	+1.1	-
P&E	22.5	25.0	<b>*</b> 25.0	+2.4	-	2.1	2.5	2.5	+0.3	-
Medical	29.7	31.0	<b>*</b> 31.0	+1.2	-	-0.0	0.5	0.5	+0.5	-
Semi	114.0	105.0	107.0	-7.0	+2.0	42.0	33.5	34.5	-7.5	+1.0
Scientific	36.2	39.0	<b>*</b> 39.0	+2.7	-	2.5	3.0	<b>*</b> 3.0	+0.4	-
Total	270.1	279.0	<b>*</b> 281.0	+10.8	+2.0	45.8	40.0	41.0	-4.8	+1.0

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#### 2023 First Half Results

**X1** Mechatronics **X2** Engineering Consultancy & Testing

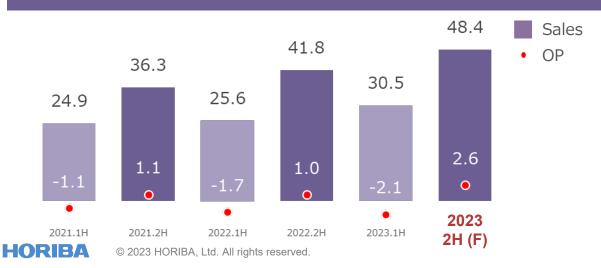
#### [EMS]

- Sales increased on the back of recovery in demand, mainly in Asia.
- Captured demand for heavy-duty vehicles such as trucks and buses in Europe and the Americas.

#### [MCT\*1 and ECT\*2]

- Sales increased by capturing demand for vehicle electrification and hydrogen energy.
- Increased investment in growth fields such as hydrogen energy and batteries.

### Sales and O.P. (First Half and Second Half)



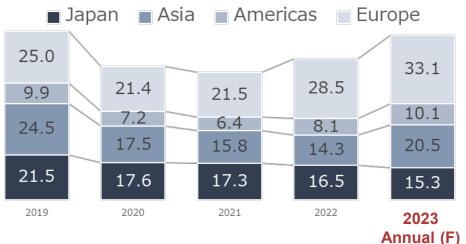
#### 2023 Full Year Forecasts Medium- to long-term outlook

#### [EMS]

Increase in demand in anticipation of the introduction of new emission regulations in Europe and other countries.

#### [MCT and ECT]

- Expect sales expansion in the field of next-generation mobility development.
- Continue to invest in the production and development of products for the hydrogen energy industry. Aim to further increase sales by strengthening production and development systems.
- Aim to improve profitability by shifting to higher-value-added products in the MCT business.





#### 2023 First Half Results

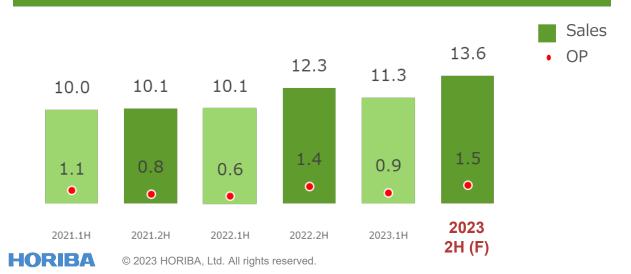
#### [Gas monitoring]

Steady demand related to environmental regulations contributed to sales increase in Europe.

[Water quality monitoring]

Demand was steady for water quality measurement equipment used in the manufacturing processes in the electronics industry and in compliance with environmental regulations.

### Sales and O.P. (First Half and Second Half)



#### 2023 Full Year Forecasts Medium- to long-term outlook

- %1 Carbon dioxide Capture, Utilization and Storage%2 Total Organic Carbon
- Expect an increase in demand for process measurement in the environmental regulation related field and the industrial field.
   [Gas monitoring]
- Expect an increase in demand for gas measurement in the electronics device industry.
- Expect an increase in demand for new energy and in CCUS\*1-related demand.

[Water quality monitoring]

Aim to further expand in the water quality field through the business of TOC analyzers\*2 and that of Tethys, an acquired company.





#### 2023 First Half Results

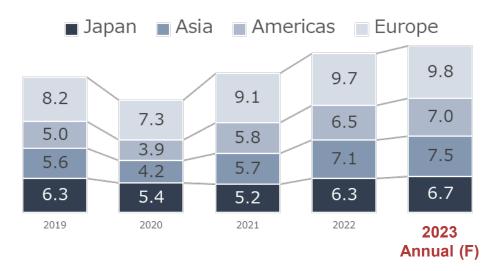
- Sales of test reagents were on a recovery trend due to recovery of social activities as the COVID-19 pandemic settled down.
   [Japan/Americas]
  - Launch of new hematology analyzers contributed to sales increase. Sales of clinical chemistry analyzers and reagents increased.

#### 2023 Full Year Forecasts Medium- to long-term outlook

- Expect a recovery in sales of test reagent sales, following that of equipment sales in Japan and growth markets.
- Will significantly supply hematology analyzers to Siemens. Plan to expand sales areas globally from Europe, where the product was launched. Anticipate medium- to long-term profit contribution.
- Aim for further business expansion in the fields of immunology and clinical chemistry, in addition to the hematology field.

#### Sales and O.P. (First Half and Second Half)







#### 2023 First Half Results

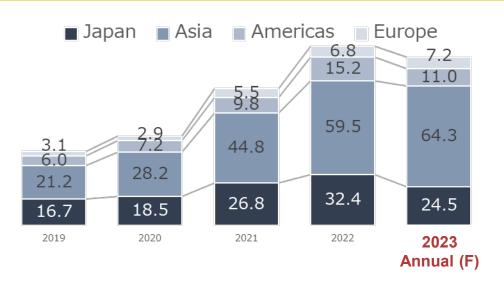
- A high order backlog at the end of 2022 led to sales increase, although demand for semiconductors fell into an adjustment phase.
- Demand for mass flow controllers for production of photovoltaic panels and artificial diamond increased. Localization accelerated in China and India.

#### 2023 Full Year Forecasts Medium- to long-term outlook

- Capital investment by semiconductor manufacturers will be in an adjustment phase throughout 2023.
- Expect a pick-up in demand along with the market recovery in 2024 and beyond.
- Aim to expand business fields by utilizing the Optical Smart Sensing technology, in addition to existing main products .

#### Sales and O.P. (First Half and Second Half)





### Scientific

## First Half Results and 2023 Forecasts



#### 2023 First Half Results

- Increased sales of Raman Spectrometers, Particle-size distribution analyzers, X-ray fluorescence analyzers and other devices for the markets related to advanced materials and life science.
- A slowdown in the semiconductor market led to a decrease in sales of optical components for semiconductor production equipment manufacturers.

#### Sales and O.P. (First Half and Second Half)



#### 2023 Full Year Forecasts Medium- to long-term outlook

- Expand the industrial manufacturing process evaluation and monitoring business in parallel with sales expansion of cutting-edge R&D products.
- Expect growth in demand for products specialized for industrial processes of the life science field (i.e., pharmaceuticals) and the semiconductor market.
- Expect an increase in sales of optical components, led by a recovery in the semiconductor market.



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## Accelerate initiatives in focus markets



Mid-Long Term Management Plan "MLMAP2023" **Market Oriented Business** To develop analysis and measurement solutions, utilizing HORIBA's core technologies, in the leading three business fields of the mega trend Bio & Healthcare Materials & Semiconductor Energy & Environment **Automotive Medical-Diagnostic Semiconductor Environmental Process Scientific** Solution Provider Beyond "Life Cycle Management" To support customers' core businesses from all aspects – from product introduction to replacement

Three concepts of **Automotive Business** 

Service Lifecycle Management

Mobility Solution
Business

Alternative Energy
Conversion

## [Energy & Environment] Hydrogen Business



## Production tweaking to meet growing needs

Started mass production in Europe of water electrolyzers that produce hydrogen by using renewable energy

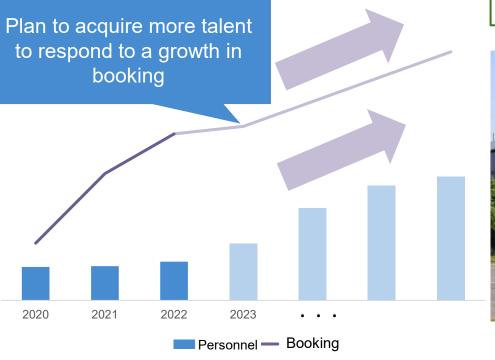
Growing demand for evaluation systems and production inspection systems for the development of electrolyzers

The HORIBA Group responds to growing needs

Optimization of the production floor

- ✓ Increase production lines
- ✓ Improve production processes
- ✓ Effectively use outsourcing

**FuelCon: Booking and personnel** 



Build a production system that can meet increasing demand by strengthening personnel and production facilities



HORIBA FuelCon in Germany
[HORIBA eHUB]



## [Energy & Environment]

### **Accelerated Global Partnership in Hydrogen Business**



## Contributing to efficient use of hydrogen energy, i.e., fuel cells and electrolyzers

### Established a test facility center at HORIBA MIRA in partnership with Ceres Power

- Provide various testing, required for developing SOFC & SOEC
- Conduct a range of tests, from 24-hour mapping to endurance tests for thousands of hours





HORIBA

- ✓ Deliver fuel cell technology to
- Contribute to systems and product development for climate change such as power production, transportation, and data centers.

SOFC: Solid Oxide Fuel Cell SOEC: Solid Oxide Electrolysis Cell

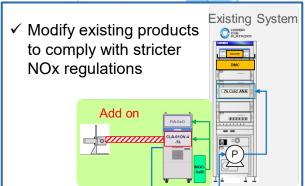
## [Energy & Environment] Conventional Energy



### "HORIBA Will Always Be Involved in Combustion Measurement"

Trends in various countries toward the introduction of new emission regulations and HORIBA's application







## Emission measurement business order trend

Nov. 2022: EU's announcement of the Euro 7 emission regulations

Growth in order in preparation for new regulations

2019

2020

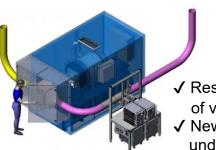
2021

2022

2023

forecast

### Respond to brake dust



- √ Respond to regulations of various countries
- ✓ New product under development

Wide coverage from gas measurement (i.e., ammonia, nitrogen compounds, and hydrogen) to particulate matter measurement (i.e., brake dust)

# [Energy & Environment] Water Quality Measurement System: Strengthening Technology and Lineup



## Globalizing the water business and accelerating the market share growth in Asia



- Strengthen the ability to propose solutions for water measurement system
- Accelerate business development in emerging countries
- Promote new product development by synergy effects in technologies

### TOCADERO (DE)



## NDIR+ combustion

- ✓ Contribute to improving efficiency in drainage control
- ✓ Develop business from Germany

### Tethys (FR)



## UV-VIS spectroscopy

- ✓ Measurement technology based on ultraviolet-visible spectroscopy
- ✓ Sales network in India and other developing countries

### **HORIBA Advanced Techno (Asia)**



#### Electrochemical

- + Pretreatment, sample handling, anti fouling
- ✓ Water quality analysis and examination systems that use electrochemistry and the Non-dispersive Infrared Absorption Method (NDIR)
- ✓ Develop businesses mainly in the Japanese market



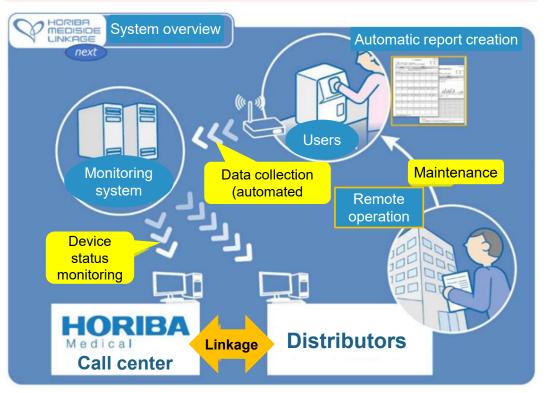
# [Bio & Healthcare] "New" Integrated Remote Monitoring Support Services for Medical Equipment



Automatic report creation and remote functions: Contribute to medical workplace reform

#### Launched "HORIBA MEDISIDE LINKAGE next"

# Strengthened "HORIBA MEDISIDE LINKAGE" service, launched in 2016



Background: Amended Labor Standards Act (scheduled to be enforced in April 2024) to put cap of doctors' overtime work

→ Challenge for the whole healthcare industry to reform its working practices

#### HORIBA's proposals (improved points)

- Automatically create reports required by the amended Medical Service Act (2018)
- Remotely control device settings and perform cleaning operations

Started offering the services for automatic hematology and CRP analyzer Yumizen H330 CRP (bestselling model). Plan to support other models one by one.

Reducing the workload in medical workplaces
Contributing to provision of safe, secure medical services

# [Bio & Healthcare] Increase in Production of Micro Reagent Chips for Multi-assay Blood Analyzers



## Multi-assay blood analyzer "Banalyst" for POCT of Hemoglobin A1C and CRP

### Visualized production lines to realize increased production efficiency

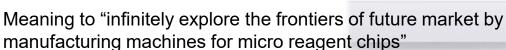
## M-FRONTIER

Micro Reagent Chip Production Area

Nickname of an area dedicated to manufacturing of micro reagent chips for Banalyst located in HORIBA's headquarters.

M-FRONTIER naming concept:

- MICRO &
- MACHINE
- MANUFACTURE
- MUGEN (infinite)
- MIRAI (future)
- FRONTIER



After taking over the business of microblood analysis system from ROHM Co., Ltd. in 2018, micro reagent chips for multi-assay POCT blood analyzer Banalyst had continuously been produced at a factory located outside of HORIBA's head office in Kyoto.

The production has been moved to M-FRONTIER when its construction was completed at the headquarters.









POCT: Point-of-care Testing

## [Bio & Healthcare]

## Method Using Proprietary Technology Acquired Local Certification

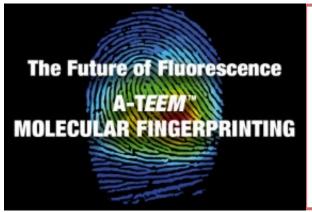


Aqualog using HORIBA's unique A-TEEM\* technology adopted for pharmaceutical testing

### Shortening time to examine pharmaceuticals

Pharmaceutical testing has many inspection items and some testing takes a long time. Three-dimensional fluorescence measurement analyzer Aqualog, which uses HORIBA's unique A-TEEM technology, has been adopted as a quality control item and obtained the local certification.

- Enable sample measurement, which used to take a long time by using a liquid chromatography method, to be completed in a few minutes
- Also applicable to bio-sample measurement



#### \*HORIBA A-TEEM technology

- ✓ Technology to simultaneously measure absorption and fluorescence of liquid samples
- ✓ Combines the unique analysis with own optical measurement technology to accurately measure samples with complex composition in a short time

3D fluorescence measurement analyzer Aqualog



**HORIBA** 

# [Materials & Semiconductors] Contributing to Realizing High-quality Continuous Production



## Introducing high-end tabletop analysis technology into production process innovation

### Constant monitoring of production lines for thin metal films

#### [What to measure]

Measuring brush and switches for motor, and metal sheets with a thick silver film (clad material) used for relay contacts

[Purposes for introducing the technology]

- Reduce use of silver (Cost reduction)
- Reduce the control operator's man-hours on production lines

Ex.
In-line film thickness analysis solution

Ex.
In-line film thickness analysis solution

Apply membrane material

Apply membrane material

Membrane material

Roll direction

Introducing HORIBA's X-ray analysis technology into production lines

In conjunction with automation of production lines, HORIBA's unique measurement method has enabled measurement of thick films with thicknesses exceeding 100um, which cannot be measured by normal X-ray analysis.



The analysis part of the X-ray analyzer being installed in the production line

# [Materials & Semiconductors] Aggressive Investment in the Semiconductor Field



## Continuous investment to cope with the further growth of the semiconductor market

Strengthening the production and development system for Reticle/mask particle detection equipment

- ✓ Plans to expand the production area for the equipment at Horiba's HQ factory and increase production capacity by 1.5
- ✓ Improve efficiency by dedicating the existing area only for development. And advance development aimed at expanding the functionality of the equipment.
- Enables efficient inspection of particles, from legacy to EUV and other cutting-edge processes
- Enables detailed inspection by being combined with spectroscopic instruments

Fast measurement of particles on reticles\* and blanks used in the lithography process

\*Surface of pattern/glass/pellicle

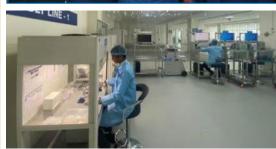
Reticle/mask particle detection system PD Xpadion

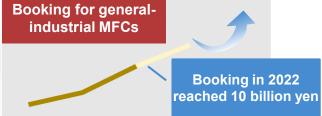
### Launched a local MFC production line in India



Contributing to the production of solar panels and artificial diamonds

- Started production of general-industrial MFC
- Many major customers participated in the opening event. High expectations for HORIBA were evidenced.





2020 2021 2022 2023 · · · · forecast



HORIBA India Private Limited (Pune)

**HORIBA** 

## Academic-government Collaboration Leads the Creation of Nextgeneration Ecosystems



29

### HORIBA's top executives were appointed chairmen of industrial associations

#### **JEMIMA**

(Japan Electric Measuring Instruments Manufacturers' Association)



Chairman Juichi Saito



JEMIMA's new top team: From left: Vice Chairman Nara, Vice Chairman Sone, Advisor Nishijima and Chairman Saito

Japan's largest industrial association in the fields of "measurement" and "control"

Operates the largest exhibition in the field of industrial measurement The only entity representing the electrical measuring instrument industry **JAIMA**(Japan Analytical Instruments Manufacturers' Association)



Chairman Masayuki Adachi



JAIMA President Inaugural Speech: Chairman Adachi

Japan's largest industrial association in the field of "analysis"

Operates JASIS, the largest exhibition in the field of scientific instruments

By leveraging HORIBA's unique position to contribute to the development of a sustainable society, HORIBA is helping to revitalize the activities of both associations and contribute to the development of science and industry around the world

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## **Shareholder Return**

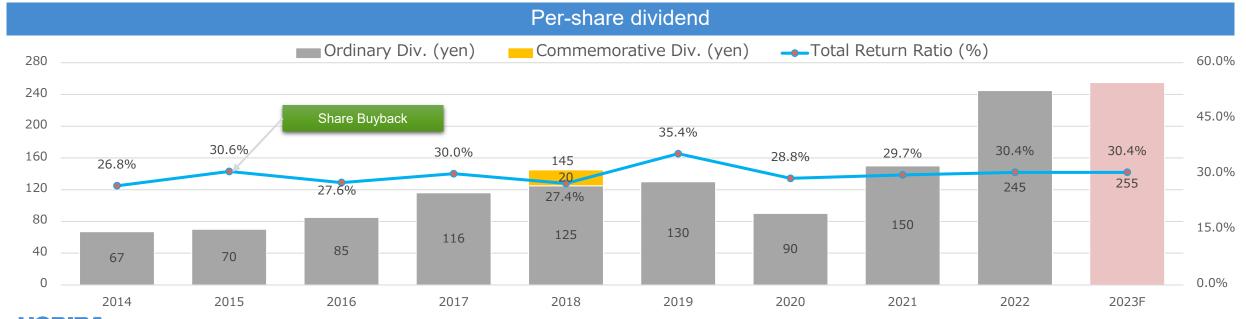


Basic policy

Dividend payment + Share buyback = 30% of Consolidated net profit to be targeted Remaining earnings are retained internally for strategic investment (i.e. facilities, M&A)

#### Dividends per share and Share buybacks

- 2021 Results 150yen [Interim 50yen/Year-end 100yen]
- 2022 Results 245yen [Interim 65yen/Year-end 180yen]
- 2023 Forecast 255yen [Interim 80yen/Year-end 175yen]



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## **Exchange Rate Trend / Forecasts / Impacts**



	20	22			2023	2023		
	1H	Annual	Previous	Actual	Fore	ecasts	vs 2022	
	117	Ailluai	Forecasts (as of 12 May)	1H	2H	Annual	(Annual)	
USD	123.14	131.62	133	135.00	139.00	137	+5.38	
EUR	134.39	138.14	144	145.93	150.07	148	+9.86	
							(Yen)	

(Billions of yen)

Exchange rate impact for 2023 First Half results (vs 2022 First Half results)

Increase sales	+6.29
Increase cost of goods sales	-3.21
Impact to gross profit	+3.08
Increase expenses	-1.36
Impact to operating profit	+1.71

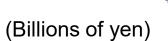
Exchange rate impact for 2023 Forecasts

1 yen impact of Sales and O.P. (Weak yen)

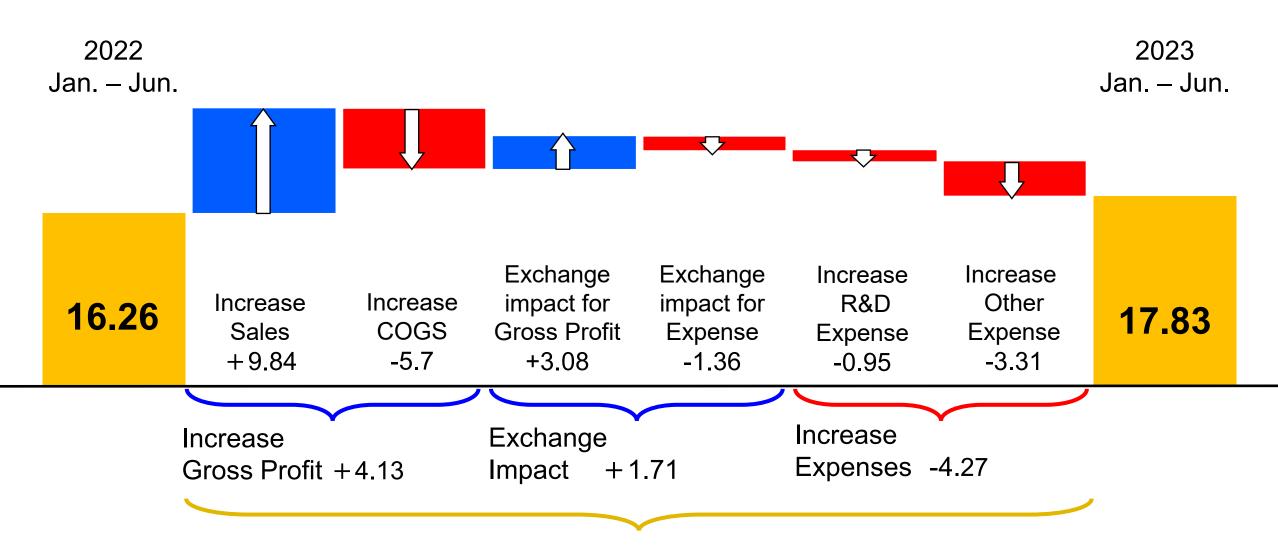
	Sales	Operating profit
USD	+0.64	+0.40
EUR	+0.38	+0.00

(Billions of yen)

## **Operating Profit Analysis (vs 2022)**







Increase Operating Profit + 1.57

## Capital Investment, Depreciation, R&D



	2022		2023		
	Actual	Previous Forecasts (as of May 12)	Forecasts (as of Aug. 9)	vs Previous Forecasts	Actual Jan Jun.
Capex	12.5	14.0	14.0	-	4.2
Depreciation and amortization	11.3	12.0	12.0	_	5.9
R&D expenses	18.5	22.0	22.0	_	9.8
to net sales(%)	6.9%	7.9%	7.8%	-0.1p	7.5%

2023 Topics

#### PP&E:

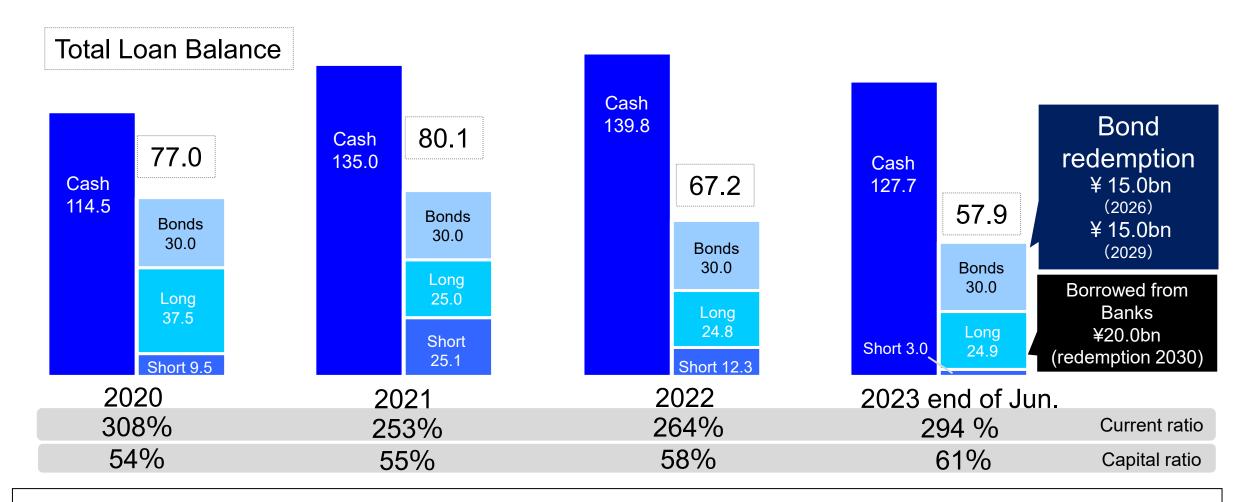
investment in semi and automotive-related facilities, enhancement of global bases

Consider urgency and priority and make investment decisions

## **Cash Balance**

(Consolidated basis, each end of period) (Billions of yen)





•Recent issuer rating: R&I "A" (Sep. 2022), JCR "A+" (Sep. 2022)

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## Five Business Segments & Major Products



Figures are the sales composition ratio for FY 2022

Automotive (25%)



**Emission Measurement Systems** 



Process & Environmental (8%)



**Stack Gas Analyzers** 



Medical (11%)



Automatic Blood Cell
Counters plus CRP



Semiconductor (42%)



**Mass Flow Controllers** 



Scientific (14%)



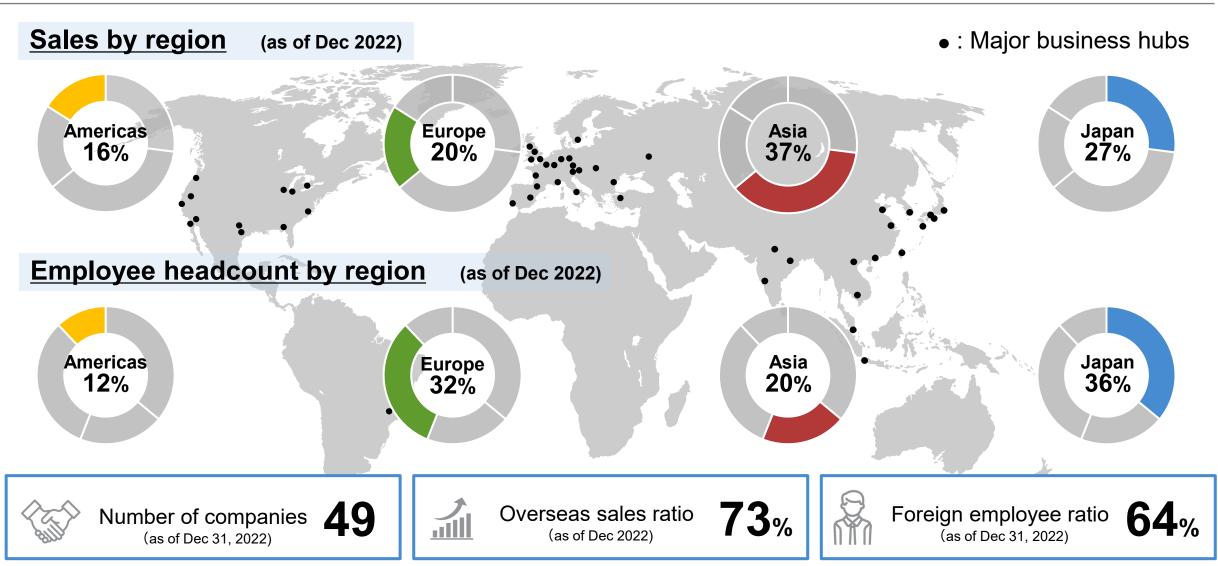
**Raman Imaging Device** 





## **Global Network**





## Achieving Sustainable Growth through M&A



### Major M&As

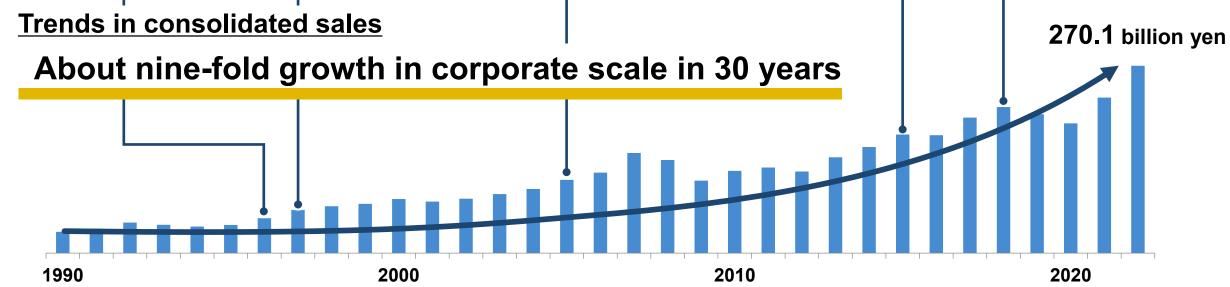


1997
Jobin Yvon
(France)
[Scientific]





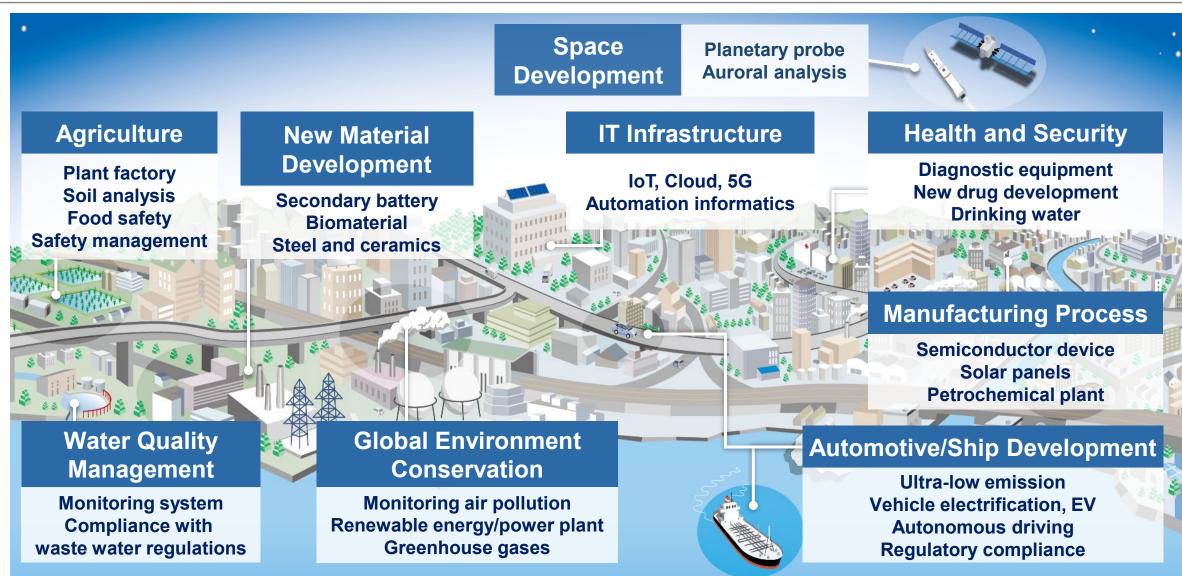
2018
FuelCon
(Germany)
[Automotive]



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## **HORIBA's Business Domain**







HORIBA celebrates its 70th anniversary in 2023.

