

# **Financial Information**

HORIBA, Ltd.



- 2021 First Half Results
- 2021 Forecasts
- Outlines by Business Segment
- Topics HORIBA's Contribution to Social Issues
- Shareholder Return
- Financial Data
- Corporate Profile



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# **Review of First Half of 2021**

# External Events

- Increased momentum to de-carbonization and carbon neutral
- Accelerated investment in electrification by the automotive industry
- Increased investment in semiconductor production equipment due to increased demand for data transmission
- Further heightened interest in life science

# Internal Events

- Continued investment for growth mainly in China and Europe
- Focused development of new technologies and aggressive launch of new products
- Business expansion in new markets related to energy and lifescience

**2021 First Half Results** 

(Billions of yen)

	2020	20	)21	vs 2020	vs Previous Forecasts
	1st half Results (Jan-Jun)	1st half Forecasts (as of May 13)	1st half Results (Jan-Jun)	Changes	Changes
Sales	84.9	97.0	<b>*</b> 101.3	+16.3	+4.3
Operating Profit	6.6	10.5	13.0	+6.3	+2.5
O.P.%	7.9%	10.8%	12.9%	+5.0p	+2.1p
Ordinary Profit	6.7	10.3	13.0	+6.2	+2.7
Net Income attributable to Owners of Parent	4.8	6.7	8.7	+3.8	+2.0
USD/JPY	108.23	108.00	107.82	-0.41	-0.18
EUR/JPY	119.31	128.00	129.89	+10.58	+1.89

\star : Record-high

(Billions of yen)

		Sales		Operating profit			
	2020	2021	vs 2020	2020	2021	vs 2020	
	1st half Results (Jan-Jun)	1st half Results (Jan-Jun)	Changes	1st half Results (Jan-Jun)	1st half Results (Jan-Jun)	Changes	
Auto	27.1	24.9	-2.1	-0.2	-1.1	-0.9	
P&E	8.6	* 10.0	+1.3	0.4	<b>*</b> 1.1	+0.6	
Medical	10.4	12.8	+2.4	-0.0	0.3	+0.4	
Semi	27.4	<b>*</b> 40.0	+12.6	6.4	<b>*</b> 12.3	+5.9	
Scientific	11.3	<b>*</b> 13.4	+2.0	0.1	<b>*</b> 0.4	+0.3	
Total	84.9	101.3	+16.3	6.6	13.0	+6.3	

# 2021 First Half Results (B/S, CF)

B/S

- ◆Total assets were ¥348.9bn, up ¥20.8bn, by establishing some bases and increasing in cash
- ◆Equity ratio: 54.7%

(compared to the end of Dec. 2020)

CF

- ◆Operating CF: Cash in ¥15.8bn due to operating profit
- ◆Investing CF: Cash out ¥6.9bn due to capital investments

◆Financial CF: Cash out ¥3.1bn due to dividend payout

Free CF:+¥8.8bn

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# **HORIBA's Assumptions Regarding Market Environment**

General	Due to the re-spread of COVID-19, the future remains uncertain.  Growing concern about the procurement of components.
Automotive	Expect stagnant R&D investment demand to recover.  Electrification and autonomous driving technology development are expected to accelerate.
Process & Environmental	Environmental regulation-related demand remains strong, and the Asian market expands centered on air and water quality measurement.  The crude oil processing market is likely to remain uncertain.
Medical	The market environment is difficult to forecast due to uncertainty about when the spread of COVID-19 will be contained.
Semiconductor	Capital investment by semiconductor manufacturers stays at a high level.  Monitoring demand will increase in the medium term due to technological evolution of semiconductor manufacturing process.
Scientific	Expect a recovery in R&D and capital investment by the corporate sector.  Anticipate an increase in demand in the semiconductor and life science market.



	2020	20	21	Changes	
	Results	Previous Forecasts (as of May 13)	Forecasts (as of Aug. 10)	vs 2020	vs Previous Forecasts
Sales	187.0	210.0	<b>*</b> 220.0	+32.9	+10.0
Operating Profit	19.6	24.5	28.5	+8.8	+4.0
O.P.%	10.5%	11.7%	13.0%	+2.5p	+1.3p
Ordinary Profit	19.3	24.0	28.0	+8.6	+4.0
Net income attributable to Owners or Parent	13.1	16.0	18.5	+5.3	+2.5
USD/JPY	106.76	108.00	109.00	+2.24	+1.00
EUR/JPY	121.88	128.00	130.00	+8.12	+2.00

★: Record-high

	Sales				Operating					
	2020	20	21	Cha	nges	2020	20	)21	Chai	nges
	Results	Previous Forecasts (as of May 13)	Forecasts (as of Aug. 10)	vs 2020	vs Previous Forecasts	Results	Previous Forecasts (as of May 13)	Forecasts (as of Aug. 10)	vs 2020	vs Previous Forecasts
Auto	63.9	64.0	64.0	+0.0	-	2.4	1.0	1.0	-1.4	-
P&E	18.3	21.0	* 21.0	+2.6	-	1.6	1.5	1.5	-0.1	-
Medical	21.0	25.0	25.0	+3.9	_	-0.4	0.5	0.5	+0.9	_
Semi	56.9	71.0	<b>*</b> 81.0	+24.0	+10.0	14.0	20.0	<b>*</b> 24.0	+9.9	+4.0
Scientific	26.8	29.0	<b>*</b> 29.0	+2.1	-	1.9	1.5	1.5	-0.4	-
Total	187.0	210.0	220.0	+32.9	+10.0	19.6	24.5	28.5	+8.8	+4.0

★: Record-high



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(Billions of yen)

#### 2021 First Half Results

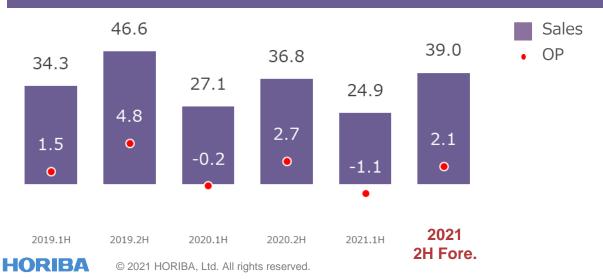
Decline in sales due to the relatively long product lead time and the decreased order backlog from the end of the previous fiscal year

[EMS\*1]

Limited sales activities because of the influence of the transformational period for power units [MCT\*2 and ECT\*3]

Delayed product shipments and acceptance, which resulted in sales and profit falling below projections

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



#### 2021 Full Year Forecasts

Focus on support for vehicle development in the transformational period of power units [EMS]

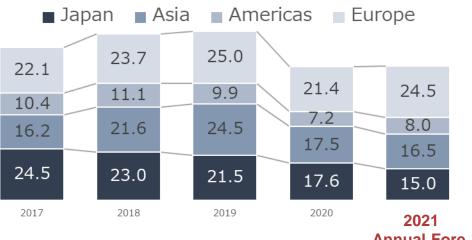
Launch new products ahead of introduction of new emission gas regulations

[MCT · ECT]

Aim for further expansion of business related to EV development \*1 Emission

\*2 Mechatronics

\*3 Engineering Consultancy & Testing



(Billions of yen)

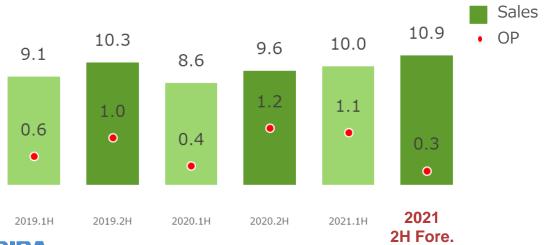
#### 2021 First Half Results

■ Solid demand for public investment due to environmental regulations, and for measurement related to the electronics industry

【Gas Monitoring, Water Quality 】
Solid regulation-related demand, especially for environmental regulations in Asia
【Water quality】

Strong demand for water quality measurement equipment for manufacturing processes in the electronics industry

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

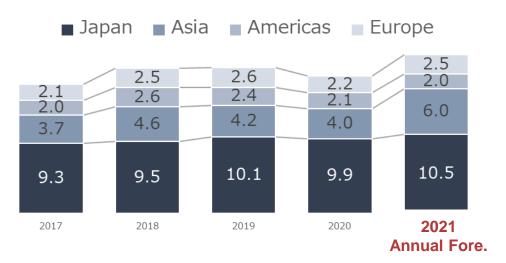


#### 2021 Full Year Forecasts

- Expand business, boosted by growing interests in environmental conservation
   [Stack Gas Analyzer, Air Quality Monitoring]
  - Plan to gain more orders in Asia
  - Introduce new technology of gas measurement to the market

[Water quality]

Expect solid sales of devices to the electronics industry in Japan and Asia



(Billions of yen)

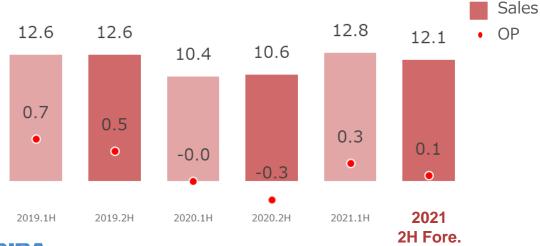
#### 2021 First Half Results

Increase in sales of hematology analyzers in the Americas and other areas.

#### [Asia]

Improvement in equipment and reagent sales, since blood tests were encouraged as a part of medical measures against the COVID-19

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



#### 2021 Full Year Forecasts

- Expect containment of spread of COVID-19 and thereby a full-scale recovery in the number of patients visiting hospitals
- Will start supply of hematology analyzers to Siemens in Europe. Expect profit contribution over the medium to long term
- Through the acquisition of MedTest, seek to strengthen the reagent production function of the clinical chemistry business in the US, and to expand the business over the medium to long term



(Billions of yen)

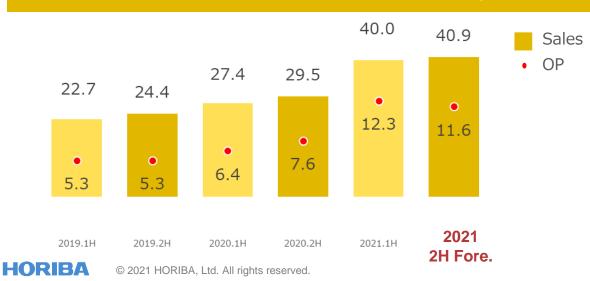
#### 2021 First Half Results

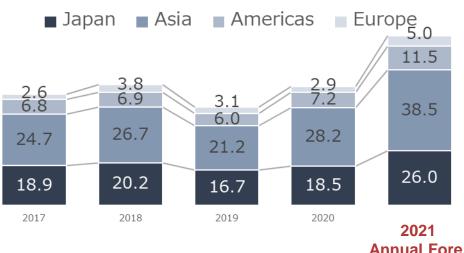
- Increase in demand for semiconductors, associated with the expansion of digital business
- Increase in sales to semiconductor production equipment manufacturers, in response to a recovery of semiconductor manufacturers' capital investment

#### 2021 Full Year Forecasts

- Continue to expect sales to semiconductor production equipment manufacturers to increase, in response to a growth of semiconductor manufacturers' capital investment driven by an increase in demand for semiconductors
- Expand business fields by utilizing various sensing technologies

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





(Billions of yen)

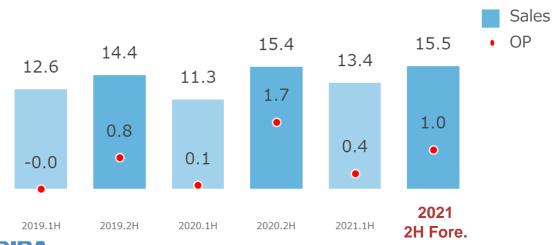
#### 2021 First Half Results

- Strong demand and increase in sales of optical components for semiconductor production equipment manufactures
- Recovery in sales of Raman Spectrometers and other products due to a gradual recovery in corporate R&D investments

#### 2021 Full Year Forecasts

- Expect a recovery in R&D and capital investments, which were stagnant in 2020
- Expect further increase in demand in the life science field such as pharmaceuticals
- Aim to expand the inline solution business for industrial manufacturing processes over the medium to long term

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



## Sales By Region



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# **HORIBA's Contribution to Social Issues**

# Cross-segmentation in Response to Various Social Issues

## 1. Market Oriented Business

**Energy & Environment** 

Bio & Healthcare

Materials & Semiconductor

**Three Fields** 

To develop analysis and measurement solutions, utilizing HORIBA's core technologies, in the leading three business fields of the mega trend

## 2. Solution Provider Beyond Life Cycle Management

To support customers' core businesses from all aspects – from product introduction to replacement

## 3. HORIBA Core Values "The Next Stage of Super Dream Team"

Mid-Long Term Management Plan "MLMAP2023"



# **Business Expansion in the Energy Field**

## Acquisition of BeXema, a manufacturer of power supplies in Germany

- ✓ BeXema supplies power and electronic load devices used in test equipment for fuel cells and battery testing equipment BeXema
- ✓ HORIBA established the system to provide evaluation and measurement solution technologies for fuel cells, batteries, and water electrolysis

  HORIBA

Acquisition of the power electronics technology





BeXema has supplied power supplies to HORIBA FuelCon for some time.

BeXema's chargingdischarging device, converter, and emulator installed in the battery test room of CELL0\*

\*CELLO: a test room that evaluates and analyzes batteries and fuel cells for electric vehicles. It is established in HORIBA BIWAKO E-HARBOR, Biwako Factory

Company Name:	BeXema GmbH
Established:	2014
Sales:	Approx. 250 mln yen (FY2020)
Workforce:	18
Contract date:	July 2, 2021

# Leading the Way to a Sustainable Energy Society

## Aiming to develop new technologies and create business in the energy field

Launch of HORIBA Institute for Mobility and Connectivity<sup>2</sup>



- ✓ A research institute supported by HORIBA opened in July
- Undertook a standardization project from a public institution

HORIBA Institute for Mobility and Connectivity<sup>2</sup> (HIMaC<sup>2</sup>)



- ➤ Conduct research on electrochemistry, renewable energy, energy storage, energy grid, etc.
- > Achieve connectivity of electric power and mobility

Promote innovation for next-generation mobility and urban energy networks

#### Contribution to a hydrogen energy society

Demand growth for hydrogen generators using water electrolysis



HORIBA FuelCon provides
 equipment that enables to evaluate
 performance efficiency of water
 electrolysis cells for hydrogen
 production; demand is increasing

#### **Evaluator EC/ES**

Control the temperature and flow volume of water and evaluate the performance and efficiency of water electrolysis cells up to 5000kW.

Contributing to the early construction of a hydrogen-based society with "measurement" technology

✓ Joined the Japan
 Hydrogen Association in
 March 2021



【Japan Hydrogen Association 】 Established: December 7, 2020

Purpose: As a cross-industry and open organization with a bird's eye view of the entire supply chain, it will support the early creation of a hydrogen society by carrying out social implementation projects."

**HORIBA** 

# Contributing to Higher Efficiency of Vehicle Testing

## Providing total measurement solutions for vehicle development

#### Launch of VULCAN EVO

- ✓ Sales launch of "VULCAN EVO" chassis dynamometer in Japan
  - > Easy maintenance to sharply reduce downtime
  - ➤ Evaluation testing for vehicle performance and emissions in compliance with international standards for ICEs, EVs, FCVs, PHEVs, etc.



#### [International standards: WLTP]

- Worldwide harmonized Light vehicles Test Procedure
- WLTP-based measurement of fuel efficiency and electricity efficiency became mandatory in Japan in April 2020

#### Full-scale development of STARS SOAK +

- ✓ Measures vehicle conditions and the soak room temperature before emission gas/fuel economy test.
  - Improves test efficiency by preventing human error and ensuring traceability

The status of the vehicle in the soak room can be centrally managed with a tablet terminal.



#### [Soak Room]

- A room kept at a certain temperature.
- ➤ In order to measure the test data accurately, the test vehicle is put in the room in advance

Contributing to reducing the test burden on auto-related manufacturers



# **Development of New Technology "IRLAM"**

## Providing new value with the cutting-edge core technology

## IRLAM: Infrared Laser Absorption Modulation

In-house developed laser

- ✓ The world's first\*1 gas concentration calculation algorithm inspired by the concept of data science.
- ✓ By downsizing and lengthening the Heliot cell (a container that contains the gas to be measured), high-sensitivity, high-speed measurement is possible
- ✓ In-house manufactured quantum cascade laser (QCL) meets needs for a wide range of gas measurement

\*1: HORIBA estimate





#### New products with IRLAM technology

# Laser gas analyzer for process monitoring "PLGA-1000"

- ✓ High-sensitivity, high-speed continuous measurement of raw material gas and impurity gas in the petrochemical manufacturing process
- ✓ Optimize productivity



# Adopted for automotive emission measurement systems "OBS-ONE-XL" "XLA-13H" "XLA-11"

✓ Gases that were difficult to measure can now be measured with high accuracy

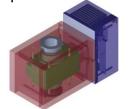
Adopted for OBS-ONE-XL onboard emission measurement system



Semiconductor process monitor (under development)

✓ Real-time monitoring in the semiconductor manufacturing process will become possible

Application in semiconductor gas concentration monitors (rendering)



23

Contributing to next-generation energy development such as hydrogen, industrial process monitoring, and tightening of environmental regulations



# High value-added solutions for semiconductor manufacturing processes

## Various applications that contribute to semiconductor manufacturing

#### Particle detection systems

Optical Smart Sensing - Metrology

Semicon. manufacturing processes

Reticle/mask manufacturing process

Photolithography/ wafer process

HORIBA's response

Blank mask inspection

Inspection of three surfaces (Pattern, Glass, Pellicle)

Pellicle inspection

Various mask sizes/board inspection





#### PR-PD3EP

High-accuracy detection of foreign substances on EUV-process pellicles

Strengthen the production line in anticipation of an increase in demand

### New dissolved oxygen meter



#### **HD-960LR**

Highly accurate continuous monitoring of dissolved oxygen in chemicals used in semiconductor manufacturing processes

Expands types of chemicals and contributes to improvement in yields

## Centrifugal nanoparticle analyzer



#### **Partica Centrifuge**

Measure the size of particles from the sedimentation velocity of particles

24

Contributes to improving abrasive uniformity in flattening processes (CMP) of semiconductor manufacturing

**HORIBA** 

# **Business Expansion in the Life Science Field**

## Expanding applications - from R&D to manufacturing processes

## Cooperation with SHIMADZU: LC-Raman System

"Separate" technology to extract measurement targets from mixed samples



High Performance Liquid Chromatograph (LC) Control / analysis / data management



Raman Spectrometers

"Visible" technology

to distinguish differences in

molecular structure

**Qualitative analysis** 

A complex system that combines SHIMADZU's LC and HORIBA's Raman with the dedicated software program "LiChRa"

#### Rapid Microorganism Detection System Rapica



- ✓ Rapid detection of the presence or absence of microorganisms by the highsensitivity ATP method\*
- Automated protocols such as automatic reagent introduction
- Possible to manage the trend of data
- Shorter inspection time for raw material arrival and product shipment
- Management of environmental protection and water use
- Investigation at the time of pollution and resumption of production

\* Measure the amount of light emitted by combining ATP which exists in the cells of living organisms with enzymes to emit light.



# Participation in the HAYABUSA2 Sample Analysis Project

## HORIBA's core technology for the future



26



 Implemented non-destructive, non-contact analysis of elements contained in samples of asteroid Ryugu

- Advanced analytical and measurement equipment and high skills of technicians are required
- HORIBA Techno Service, which specializes in high-precision microanalysis, participates

Analyzing the sample with our X-ray fluorescence



Development of a container (cell) dedicated to samples of Ryugu to perform advanced sample handling



# Analytical Solution Plaza has been established to broaden service business



- ✓ A new "place" for exchange analysis
- Providing analytical technology through contracted analysis and joint research by analytical engineers

Results of the analysis to be announced by JAXA in December 2021. Check it up!

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# **Shareholder Return**

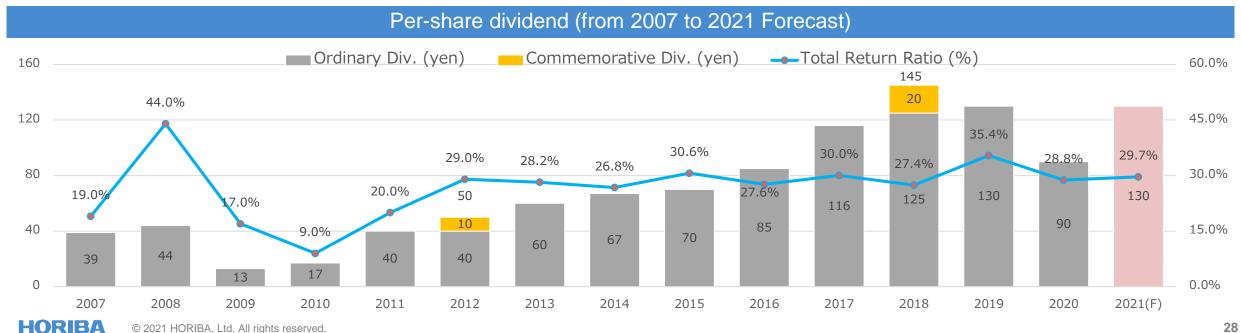
#### Basic policy

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)

#### <u>Dividends per share and Share buybacks</u>

- 2019 Results 130yen [Interim 50yen/Year-end 80yen]
- 90yen [Interim 30yen/Year-end 60yen] 2020 Results
- 2021 Forecast 130yen [Interim 50yen/Year-end 80yen]

Amended the previous forecasts to increase the year-end per-share dividend forecast by 20yen. (Interim dividend increased by 10yen)



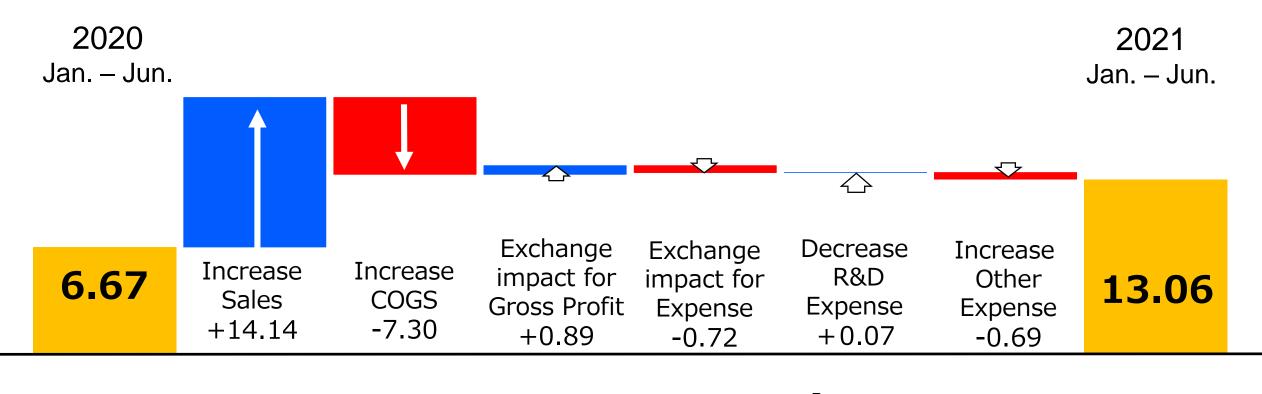
28

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# Operating Profit Analysis (vs 2020 Jan. – Jun.)

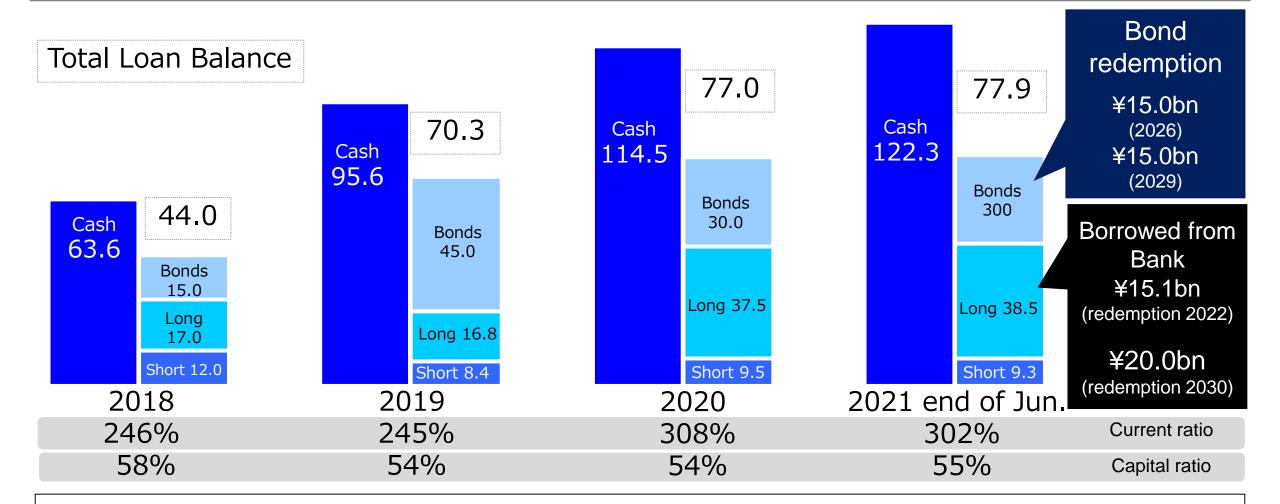
(Billions of yen)



Increase Exchange Increase
Gross Profit +6.83 Impact +0.16 Expenses -0.61

Increase Operating Profit +6.39

# **Cash Balance**



Recent issuer rating: R&I "A"(Aug. 2021), JCR "A+" (Aug. 2021)

**Exchange rate** 

(Yen)

	20	20	2021								
	1H Annual				Previous	Actual		Forecasts		vs 2020	
	Aillidai	Forecasts (as of 13th May)	1Q	2Q	1H	2H	Annual	V3 2020			
USD	108.23	106.76	108	106.09	109.55	107.82	110.18	109	+2.24		
EUR	119.31	121.88	128	127.81	131.97	129.89	130.11	130	+8.12		

Revise forecast for annual exchange rate.

1USD: 108 Yen -> 109 Yen

1EUR: 128 Yen -> 130 Yen



Exchange rate impact (2021 First Half results)

Increase Sales	+2.19
Increase Cost of Goods Sales	-1.30
Increase Expenses	-0.72
Impact to Operating Profit	+0.16

(Yen)	2020	2021	Diff.
(1en)	Jan - Jun	Jan - Jun	Dilli.
USD	108.23	107.82	-0.41
EUR	119.31	129.89	+10.58

Exchange rate impact
for 2021 Forecast
1 yen impact of Sales and O.P.
(Yen appreciation)

	Sales	Operating Profit
USD	-0.56	-0.26
EUR	-0.31	-0.00

(Yen)	2021 Forecast
USD	109.00
EUR	130.00

# Capital Investment, Depreciation, R&D

(Billions of yen)

	2020		2021		
	Results	Previous Forecasts (as of May 13)	Forecasts (as of Aug. 10)	Diff.	Actual Jan - Jun
Capex	15.1	16.5	16.5	-	6.2
Depreciation and amortization	9.6	10.5	10.5	-	5.0
R&D expenses	15.5	17.0	17.0	-	7.9
to net sales(%)	8.3%	8.1%	7.7%	-0.4p	7.9%

2021 Topics PP&E

Continuation: Investment to HORIBA FuelCon's new facility, a new

facility in China, etc.

New: Enhance the base of global production



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# Five Business Segments & Major Products

Figures are the sales composition ratio for FY 2020



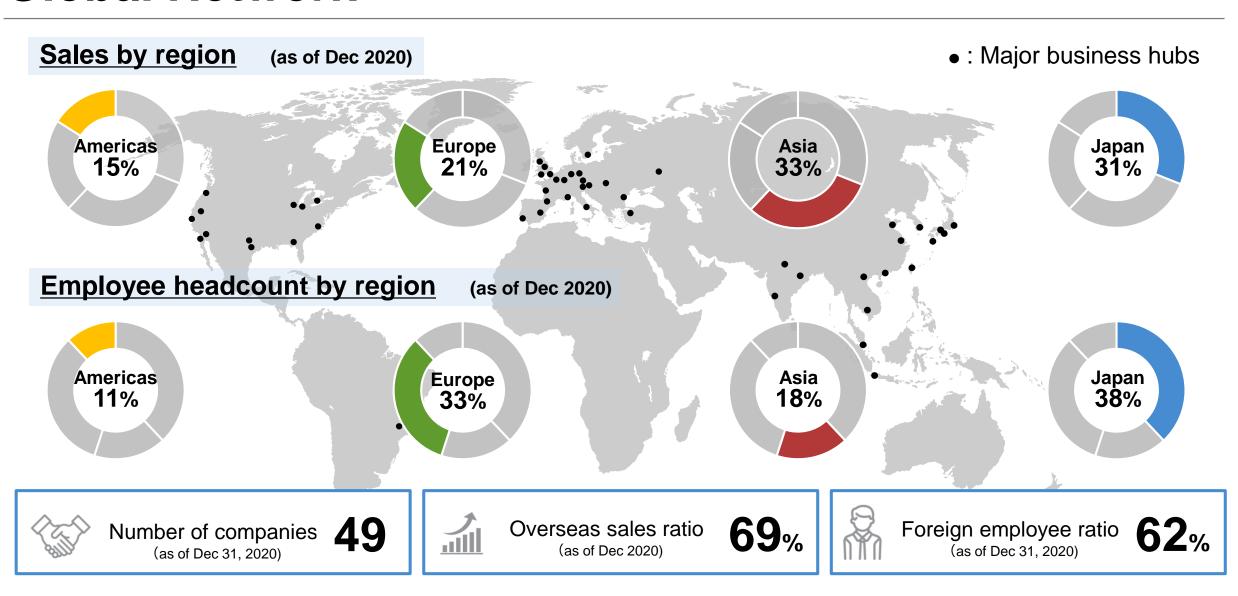






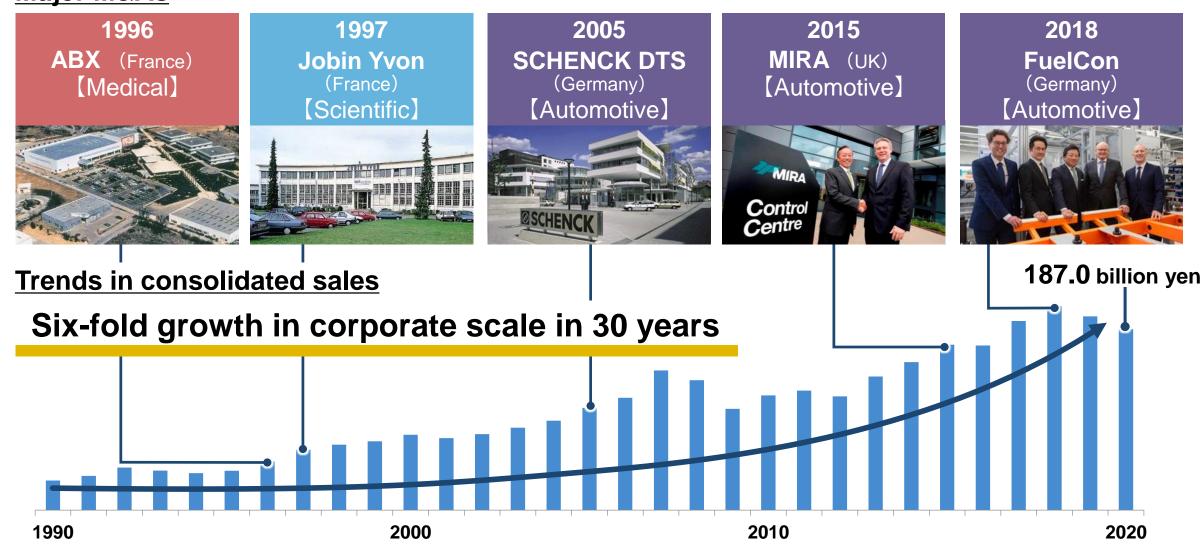


# **Global Network**



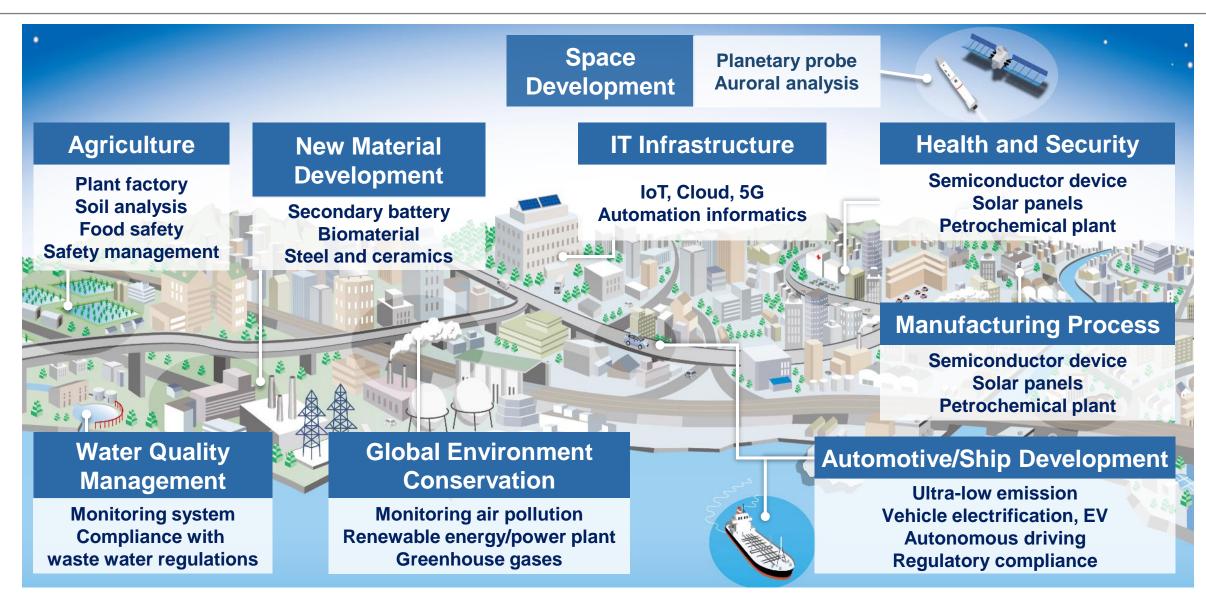
# **Achieving Sustainable Growth Through M&A**

## Major M&As



38

# **HORIBA's Business Domain**



# Published "HORIBA Report 2020-2021" (Eng. ver.)

An Integrated Report that conveys HORIBA's "diversity" and "uniqueness"!



