Since Jan. 1st, 2018

New Management of HORIBA Group started
# Change in Representative Directors

<table>
<thead>
<tr>
<th>Name</th>
<th>New title from Jan.1, 2018</th>
<th>Previous title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atsushi Horiba</td>
<td>Chairman &amp; Group CEO</td>
<td>Chairman, President &amp; CEO</td>
</tr>
<tr>
<td>Juichi Saito</td>
<td>Executive Vice Chairman &amp; Group COO</td>
<td>Executive Vice President</td>
</tr>
<tr>
<td>Dr. Masayuki Adachi</td>
<td>President &amp; COO</td>
<td>Senior Managing Director</td>
</tr>
<tr>
<td>Takashi Nagano</td>
<td>Director &amp; Global ATS Board Leader</td>
<td>Director &amp; General Manager</td>
</tr>
</tbody>
</table>

**Purpose behind the change in roles of new organization**

Strengthening group management and clarifying the group management system, to further enhance HORIBA’s technology and development capabilities.

**Future roles**

- **Horiba**: Strengthen governance, promote the corporate culture, and supervise the entire group.
- **Saito**: Manage the group and lead specific strategies.
- **Adachi**: Focus on managing HORIBA, Ltd. and strengthen its function as the global headquarters of HORIBA Group.
- **Nagano**: Focus on the ATS segment, accelerate its global business expansion.

*At the press conference, Kyoto, Oct. 24, 2017*
Contents

- 2017 Results
- 2018 Forecast
- Business Segments Outline
- Shareholder Return
- Other Topics
  - Financial Data
  - Corporate profile
Contents

- 2017 Results
- 2018 Forecast
- Business Segments Outline
- Shareholder Return
- Other Topics
  - Financial Data
  - Corporate profile
# Review of 2017

<table>
<thead>
<tr>
<th>External Events</th>
<th>Internal Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>◆ Start of the Trump administration in US</td>
<td>◆ New/expanded facilities (US, UK, South Korea, etc.)</td>
</tr>
<tr>
<td>◆ UK’s announcement to leave EU ⇒ General election in UK</td>
<td>◆ Completion of the Aso factory expansion</td>
</tr>
<tr>
<td>◆ Presidential election in France, general election in Germany</td>
<td>◆ Partnership in the Medical segment</td>
</tr>
<tr>
<td>◆ Booming semiconductor market</td>
<td>◆ Announcement of a transition to a new management regime</td>
</tr>
<tr>
<td>⇒ Innovation such as IoT, AI, and autonomous vehicle operation</td>
<td>◆ Renewed a record-high share price; market cap exceeds 330bn yen</td>
</tr>
</tbody>
</table>
Summary of 2017 Results

Renewed record-highs in sales, profit and dividend; 11.5% ROE

P&L

- Increase in sales and profit in the Automotive Test Systems and Semiconductor segments

B/S

- Total assets were 265.9bn yen, up 26.2bn yen from the end of 2016, due to capital spending
- Interest-bearing debt was 42.0bn yen, down 4.6bn yen from the end of 2016, due to using the capability of financial subsidiaries in US and UK
- Equity ratio 56.5%

CF

- Operating CF: Cash in 28.2bn yen due to growth in profit
- Investing CF: Cash out 13.1bn yen due to capital spending
- Financial CF: Cash out 9.0bn yen due to short-term debt repayment

Free CF

+15.1bn yen
## 2017 Results

<table>
<thead>
<tr>
<th></th>
<th>2016 Results</th>
<th>Forecast (as of Dec. 19)</th>
<th>2017 Results</th>
<th>vs. 2016</th>
<th>vs. Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sales</strong></td>
<td>170.0</td>
<td>192.0</td>
<td><strong>195.3</strong></td>
<td>+25.3</td>
<td>+3.3</td>
</tr>
<tr>
<td><strong>Operating Profit</strong></td>
<td>18.4</td>
<td>24.5</td>
<td><strong>26.8</strong></td>
<td>+8.3</td>
<td>+2.3</td>
</tr>
<tr>
<td><strong>O. P. %</strong></td>
<td>10.9%</td>
<td>12.8%</td>
<td><strong>13.7%</strong></td>
<td>+2.8p</td>
<td>+1.0p</td>
</tr>
<tr>
<td><strong>Ordinary Profit</strong></td>
<td>18.2</td>
<td>23.5</td>
<td><strong>26.6</strong></td>
<td>+8.3</td>
<td>+3.1</td>
</tr>
<tr>
<td>Net Income attributable to Owners of Parent</td>
<td>12.9</td>
<td>15.0</td>
<td><strong>16.2</strong></td>
<td>+3.3</td>
<td>+1.2</td>
</tr>
<tr>
<td><strong>USD / JPY</strong></td>
<td>108.78</td>
<td>111.00</td>
<td>112.16</td>
<td>+3.38</td>
<td>+1.16</td>
</tr>
<tr>
<td><strong>EUR / JPY</strong></td>
<td>120.26</td>
<td>127.00</td>
<td><strong>126.70</strong></td>
<td>+6.44</td>
<td>-0.30</td>
</tr>
</tbody>
</table>

*Record-high*
# 2017 Results by Segment

(Billions of Yen)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto</td>
<td>62.2</td>
<td>72.0</td>
<td>73.3</td>
<td>+11.1</td>
<td>3.5</td>
<td>6.7</td>
<td>7.6</td>
<td>+4.1</td>
</tr>
<tr>
<td>P&amp;E</td>
<td>16.7</td>
<td>17.0</td>
<td>17.4</td>
<td>+0.6</td>
<td>1.5</td>
<td>0.6</td>
<td>1.0</td>
<td>-0.4</td>
</tr>
<tr>
<td>Medical</td>
<td>26.5</td>
<td>25.0</td>
<td>25.1</td>
<td>-1.3</td>
<td>2.8</td>
<td>1.7</td>
<td>1.9</td>
<td>-0.8</td>
</tr>
<tr>
<td>Semi</td>
<td>38.8</td>
<td>52.0</td>
<td>53.3</td>
<td>+14.4</td>
<td>9.6</td>
<td>15.0</td>
<td>15.6</td>
<td>+5.9</td>
</tr>
<tr>
<td>Scientific</td>
<td>25.7</td>
<td>26.0</td>
<td>26.1</td>
<td>+0.3</td>
<td>0.9</td>
<td>0.5</td>
<td>0.4</td>
<td>-0.4</td>
</tr>
<tr>
<td>Total</td>
<td>170.0</td>
<td>192.0</td>
<td>195.3</td>
<td>+25.3</td>
<td>18.4</td>
<td>24.5</td>
<td>26.8</td>
<td>+8.3</td>
</tr>
</tbody>
</table>

* : Record-high

© 2018 HORIBA, Ltd. All rights reserved.
Contents

- 2017 Results
- 2018 Forecast
- Business Segments Outline
- Shareholder Return
- Other Topics
  - Financial Data
  - Corporate profile
## Market Assumptions for 2018

<table>
<thead>
<tr>
<th></th>
<th>Strong willingness to invest by the global automotive sector due to tighter emission regulations in Japan &amp; Asia and innovation for electrification &amp; autonomous driving</th>
</tr>
</thead>
</table>
| **Auto** | Recovery in investment by the oil industry due to higher oil prices  
Tighter environmental regulations in developing countries |
| **P&E** | Japan: Favorable sales to doctors in private practice  
Overseas: Increase in demand for blood testing equipment in developing countries |
| **Medical** | Continuous strong investment by semiconductor manufacturers  
Expect growth in demand for power semiconductors, due to vehicle electrification |
| **Semi** | Stable demand for optical components from the semiconductor market  
Accelerating research on new materials due to the booming secondary battery and semiconductor markets |
Exchange rate

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>vs 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Results</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>USD</td>
<td>108.78</td>
<td>112.16</td>
<td>110</td>
<td>-2.16</td>
</tr>
<tr>
<td>EUR</td>
<td>120.26</td>
<td>126.70</td>
<td>130</td>
<td>+3.30</td>
</tr>
</tbody>
</table>

1 yen O.P. sensitivity for 2018 Forecast (Yen appreciation)

- USD: 0.21 billion yen
- EUR: 0.02 billion yen
## 2018 Forecast

(Billions of Yen)

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>Forecast</th>
<th>vs. 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Results</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales</td>
<td>170.0</td>
<td>195.3</td>
<td>star 210.0</td>
<td>+14.6</td>
</tr>
<tr>
<td>Operating profit</td>
<td>18.4</td>
<td>26.8</td>
<td>star 29.0</td>
<td>+2.1</td>
</tr>
<tr>
<td>O.P. %</td>
<td>10.9%</td>
<td>13.7%</td>
<td>13.8%</td>
<td>+0.1p</td>
</tr>
<tr>
<td>Ordinary profit</td>
<td>18.2</td>
<td>26.6</td>
<td>star 28.4</td>
<td>+1.7</td>
</tr>
<tr>
<td>Net Income attribute to Owners of Parent</td>
<td>12.9</td>
<td>16.2</td>
<td>19.0</td>
<td>+2.7</td>
</tr>
<tr>
<td>Net profit per share (Yen)</td>
<td>307</td>
<td>386</td>
<td>450</td>
<td>+64</td>
</tr>
<tr>
<td>ROE</td>
<td>10.0%</td>
<td>11.5%</td>
<td>12.1%</td>
<td>+0.6%</td>
</tr>
</tbody>
</table>

* : Record-high

2018: Record-high
## 2018 Forecast by Segment

### (Billions of Yen)

<table>
<thead>
<tr>
<th>Segment</th>
<th>2017 Results</th>
<th>2018 Forecast</th>
<th>vs. 2017</th>
<th>2017 Results</th>
<th>2018 Forecast</th>
<th>vs. 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto</td>
<td>73.3</td>
<td>79.0</td>
<td>+5.6</td>
<td>7.6</td>
<td>8.0</td>
<td>+0.3</td>
</tr>
<tr>
<td>P&amp;E</td>
<td>17.4</td>
<td>19.0</td>
<td>+1.5</td>
<td>1.0</td>
<td>1.4</td>
<td>+0.3</td>
</tr>
<tr>
<td>Medical</td>
<td>25.1</td>
<td>26.0</td>
<td>+0.8</td>
<td>1.9</td>
<td>2.0</td>
<td>+0.0</td>
</tr>
<tr>
<td>Semi</td>
<td>53.3</td>
<td>58.0</td>
<td>+4.6</td>
<td>15.6</td>
<td>17.0</td>
<td>+1.3</td>
</tr>
<tr>
<td>Scientific</td>
<td>26.1</td>
<td>28.0</td>
<td>+1.8</td>
<td>0.4</td>
<td>0.6</td>
<td>+0.1</td>
</tr>
<tr>
<td>Total</td>
<td>195.3</td>
<td>210.0</td>
<td>+14.6</td>
<td>26.8</td>
<td>29.0</td>
<td>+2.1</td>
</tr>
</tbody>
</table>

- **Star**: Record-high

© 2018 HORIBA, Ltd. All rights reserved.
Contents

- 2017 Results
- 2018 Forecast
- Business Segments Outline
- Shareholder Return
- Other Topics
  - Financial Data
  - Corporate profile
**2017 Results**

- **EMS**<sup>1</sup>: Sales increase due to tighter emission regulations
- **MCT**<sup>2</sup>: Recovery in capital spending by automakers
- **ECT**<sup>3</sup>: Increase in expenses to form a MIRA Japan team
  
  Aggressive investment for next-generation regulations and technologies

<sup>1</sup>Emission Measurement Systems; <sup>2</sup>Mechatronics; <sup>3</sup>Engineering Consultancy & Testing

**2018 Forecast**

- **EMS**: Solid demand in Europe under new regulations
  
  Increase in demand in China and India ahead of new regulations

- **MCT**: Similar trend as in 2017. Automakers: likely to increase new R&D facility construction in 2019–2020

- **ECT**: Increase in orders based on next-gen technologies

---

**Auto Sales Breakdown**

(Billions of yen)

<table>
<thead>
<tr>
<th>Year</th>
<th>EMS</th>
<th>MCT</th>
<th>ECT</th>
<th>Sales and O.P. (Full-year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>1.8</td>
<td>1.6</td>
<td>2.8</td>
<td>37.1</td>
</tr>
<tr>
<td>2010</td>
<td>1.6</td>
<td>1.6</td>
<td>2.8</td>
<td>35.7</td>
</tr>
<tr>
<td>2011</td>
<td>2.8</td>
<td>1.6</td>
<td>4.4</td>
<td>38.6</td>
</tr>
<tr>
<td>2012</td>
<td>4.2</td>
<td>1.6</td>
<td>4.4</td>
<td>43.2</td>
</tr>
<tr>
<td>2013</td>
<td>4.2</td>
<td>1.6</td>
<td>4.2</td>
<td>49.5</td>
</tr>
<tr>
<td>2014</td>
<td>4.2</td>
<td>1.6</td>
<td>5.8</td>
<td>55.0</td>
</tr>
<tr>
<td>2015</td>
<td>4.2</td>
<td>1.6</td>
<td>5.8</td>
<td>65.4</td>
</tr>
<tr>
<td>2016</td>
<td>4.2</td>
<td>1.6</td>
<td>5.2</td>
<td>62.2</td>
</tr>
<tr>
<td>2017</td>
<td>4.2</td>
<td>1.6</td>
<td>3.5</td>
<td>73.3</td>
</tr>
<tr>
<td>2018</td>
<td>4.2</td>
<td>1.6</td>
<td>7.6</td>
<td>79.0</td>
</tr>
</tbody>
</table>

*4 Intelligent Transport Systems

**2017 Results and 2018 Forecast**

© 2018 HORIBA, Ltd. All rights reserved.
The next-generation emission regulations

EVs generating activity

Status of next-gen emission regulations

<table>
<thead>
<tr>
<th>Regulation</th>
<th>EU</th>
<th>Japan</th>
</tr>
</thead>
<tbody>
<tr>
<td>RDE²</td>
<td></td>
<td>2022 (Plan)</td>
</tr>
</tbody>
</table>

China, India: New regulation from 2020 (Plan)
(Same level as Euro6)

1 Worldwide harmonized Light vehicles Test Procedure
(Unified emission regulations by the UN)
2 Real Driving Emission (On-board emission regulation)

Activity derived from EVs

Test systems
Provide solutions from single systems (powertrain, motor) to comprehensive systems, incl. vehicle evaluation

Battery development and analysis

- Development and testing of battery packs and battery management systems (HORIBA MIRA)
- Analysis and evaluation of li-ion and all-solid-state batteries (use of scientific technology)

Business expansion by mutual utilization of resources

EMS Sales/ Backlog

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales</th>
<th>Backlog</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>16.9</td>
<td>28.6</td>
</tr>
<tr>
<td>2013</td>
<td>17.9</td>
<td>33.3</td>
</tr>
<tr>
<td>2014</td>
<td>20.2</td>
<td>37.4</td>
</tr>
<tr>
<td>2015</td>
<td>26.9</td>
<td>39.8</td>
</tr>
<tr>
<td>2016</td>
<td>29.4</td>
<td>40.1</td>
</tr>
<tr>
<td>2017</td>
<td>37.5</td>
<td>45.3</td>
</tr>
<tr>
<td>2018 (Fore.)</td>
<td></td>
<td>49.0</td>
</tr>
</tbody>
</table>

(Billions of yen)
Contributing to R&D for autonomous driving vehicles

Business in UK

Participate in the UK government project
- Autonomous driving “UK Autodrive”
- Host demonstration experiment

Main members of “UK Autodrive”
- Ford
- Tata
- Jaguar
- University of Cambridge
- University of Oxford
- MIRA

※UK Autodrive Consortium members
http://www.ukautodrive.com/consortium-members/

New order booked from the UK government
Establish a facility for multi-purpose tests such as communication, crash, and vehicle turning.

Action for business globalization

Event at the British Embassy Tokyo
- Automakers and UK government VIPs attended
- HORIBA presented potential for EV & autonomous vehicle business.

Accompanied UK Prime Minister May’s visit to China
- Dr. George Gillespie, CEO of HORIBA MIRA accompanied the prime minister, as a representative of the UK automotive industry.

Accelerate business globalization

Event at the British Embassy Tokyo
(2nd from right: UK Ambassador to Japan, Paul Madden)

Prime Minister May’s visit to China

※UK Autodrive Consortium members
http://www.ukautodrive.com/consortium-members/
2017 Results and 2018 Forecast

**2017 Results**

- **+** Stack gas analyzers
  
  - Japan: Replacement demand
  
  - China: Demand increase, driven by VOC regulation

- **-** Slow sales in the process measurement equipment business in US due to less investment by the oil industry

**2018 Forecast**

- **+** Capture domestic replacement demand and anticipate further demand for stack gas analyzers related to VOC regulation in China

- **+** Sales increase for process measurement equipment business due to recovery in investment by the oil industry

- **+** Capture domestic replacement demand for water measurement systems

- Sales increase in developing countries
### Gas

**Business expansion in emerging markets**

- **Launch new products in developing countries**
  (Tunable Laser Hydrogen Chloride Analyzer “TX-100”)

- **Feature:** No need of periodic replacement of parts; Easy calibration → Reduce running and maintenance cost

- **Plan:** Sale to incineration plants

- **Enhancement of local engineering (India, China)**

  - Customize stack gas analyzer to local specification
  - TX-100 (adopted at an incineration plant in China)
  - Local customization in India

### Water

- **Sales increase by coping with local regulations**

  - **S. Korea**
    - Wastewater regulation change → Quickly modified and authorized

- **India**
  - Authorized under local industrial standard
  - Increase in the number of distributors for expanding sales channels

- **Water quality analyzers applied in the sewerage process of plants**

- **Korea**

- **India**

  - [Sewerage plants]
2017 Results and 2018 Forecast

2017 Results

- Increase in expense in promoting hematology and CRP analyzers in Japan
- Sales drop in South America
- Increase in expense for US FDA approval and sales promotion of new products

2018 Forecast

- Intensified competition in hematology and CRP analyzers in Japan
- Sales increase by new products launch and increase in expense for US FDA approval and sales promotion of new products

New testing systems

Solution
(Launch in 2017)

Rendering of installed products in a customer’s lab. in Brazil

Sales and O.P. (Full-year)

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales</th>
<th>O.P.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>22.3</td>
<td>1.9</td>
</tr>
<tr>
<td>2010</td>
<td>22.5</td>
<td>2.3</td>
</tr>
<tr>
<td>2011</td>
<td>23.4</td>
<td>3.1</td>
</tr>
<tr>
<td>2012</td>
<td>22.4</td>
<td>2.4</td>
</tr>
<tr>
<td>2013</td>
<td>26.8</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>27.0</td>
<td>2.4</td>
</tr>
<tr>
<td>2015</td>
<td>27.6</td>
<td>1.7</td>
</tr>
<tr>
<td>2016</td>
<td>26.5</td>
<td>2.8</td>
</tr>
<tr>
<td>2017</td>
<td>25.1</td>
<td>1.9</td>
</tr>
<tr>
<td>2018</td>
<td>26.0</td>
<td>2.0</td>
</tr>
</tbody>
</table>
Long-term agreement with Siemens Healthineers

Contract signed: Oct. 2017
Contents: Supply middle-large hematology analyzer to Siemens, which provides total healthcare solutions including inspection equipment, diagnostic imaging unit, and care system
Aiming at sales growth, together with HORIBA Yumizen brand

Test Category

<table>
<thead>
<tr>
<th>Clinical Chemistry</th>
<th>Hematology</th>
<th>Immunology</th>
<th>Coagulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2tn yen</td>
<td>350bn yen</td>
<td>2tn yen</td>
<td>200bn yen</td>
</tr>
</tbody>
</table>

Business development by test category:

- **Clinical Chemistry (C.C.)**: Small and medium-sized hospitals
- **Mid./Small Hematology**: Large hospitals, testing centers, and small- to mid-sized hospitals
- **CRP**: For private practice and small- to mid-sized hospitals
- **Mid./Small Coag.**: Coordinate with software “GATE LINK” compliant with electric medical charts

New product “Yumizen H630CRP” with combined technology of Japan and France

- 5 Diff. white cell diagnosis (France) + CRP (Japan)
- For private practice and small- to mid-sized hospitals
- Coordinate with software “GATE LINK” compliant with electric medical charts

Initiatives for business expansion

- Medical long-term agreement with Siemens Healthineers
- New product “Yumizen H630CRP” with combined technology of Japan and France
- Exhibition (Launch in Nov. 2017)

Aiming at sales growth, together with HORIBA Yumizen brand

- Large hospitals
- Testing centers
- Small and medium-sized hospitals
- Private practitioners
- Hospital units and surgery rooms (POCT)
2017 Results and 2018 Forecast

**2017 Results**
- Record-high sales and O.P.
- Record-high production volume in Mass Flow Controllers (MFC)

**2018 Forecast**
- Robust capital spending by semiconductor makers in 1st half of year
- Increased production capacity of the expanded Aso factory

---

### 2017 Results and 2018 Forecast

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales (Billions of yen)</th>
<th>O.P. (Billions of yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>12.4</td>
<td>0.0</td>
</tr>
<tr>
<td>2010</td>
<td>27.6</td>
<td>6.3</td>
</tr>
<tr>
<td>2011</td>
<td>24.6</td>
<td>4.9</td>
</tr>
<tr>
<td>2012</td>
<td>17.8</td>
<td>2.2</td>
</tr>
<tr>
<td>2013</td>
<td>24.1</td>
<td>4.8</td>
</tr>
<tr>
<td>2014</td>
<td>28.9</td>
<td>6.4</td>
</tr>
<tr>
<td>2015</td>
<td>35.3</td>
<td>9.4</td>
</tr>
<tr>
<td>2016</td>
<td>38.8</td>
<td>9.6</td>
</tr>
<tr>
<td>2017</td>
<td>53.3</td>
<td>5.6</td>
</tr>
<tr>
<td>2018</td>
<td>58.0</td>
<td>17.0</td>
</tr>
</tbody>
</table>

- **Sales and O.P. (Full-year)**

---

**MFC-related topics in Semi. market**
- Increase in storage for data centers
- Increase throughput of Big Data related to AI and IoT
- Increased use of semicon in automobiles

---

**High demand for semi.**
- Change in semiconductor technology (Miniaturization, 3D-NAND, Multi-layered)

---

**High demand for etching**
- Increase in storage for data centers
- Increase throughput of Big Data related to AI and IoT
- Increased use of semicon in automobiles

---

**HORIBA’s strength in high-end etching**
- Installed PI (Pressure Insensitive) function that enables highly accurate fuel control against pressure fluctuation
- Pressure Insensitive MFC CRITERION D500

---

© 2018 HORIBA, Ltd. All rights reserved.
Establish a stable delivery system
Enhance sales and service capabilities

Completed expansion of Aso factory
Expansion to satisfy further increase in demand
Timely delivery of high-quality products

Investment: About 2.7bn yen
Completed: Dec. 2017
Objective: Increase production capacity of MFCs (50% increase in floor space)

Enhance global sales and service bases

Korea: new head office of HORIBA STEC KOREA, Ltd.
- Started in Apr. 2017
- Increased production capacity and number of engineers

Taiwan: new head office of HORIBA Taiwan, Inc.
- Started in Sep. 2017
- Added one clean room, the second

China: new service offices in Wuhan and Nanjing
Provide technical service to nearby customers

HORIBA’s global MFC market share: About 60% (as of Dec. 2017; estimate: HORIBA)
Scientific

2017 Results and 2018 Forecast

2017 Results

- Sluggish sales to universities in Japan, US and EU
  ⇔ Strong sales in China
- Increase in R&D expenses for new products
- US sales up of spectroscopes for semicon makers

2018 Forecast

+ Firm sales of core components for optical products
+ Recovery in demand from universities in Japan, US and EU
+ New market development with products customized to needs of each customer

Diffraction gratings

- Core component of optical products
- Global state of the art technology
- Developed and produced by HORIBA France S.A.S. (former HORIBA Jobin Yvon S.A.S.) entered into HORIBA Gr. in 1997

HORIBA France S.A.S.
Europe Research Center (France)

Sales and O.P. (Full-year)

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales (Billions of yen)</th>
<th>O.P. (Billions of yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>20.5</td>
<td>1.2</td>
</tr>
<tr>
<td>2010</td>
<td>20.8</td>
<td>1.1</td>
</tr>
<tr>
<td>2011</td>
<td>22.0</td>
<td>1.4</td>
</tr>
<tr>
<td>2012</td>
<td>20.4</td>
<td>0.9</td>
</tr>
<tr>
<td>2013</td>
<td>22.9</td>
<td>0.9</td>
</tr>
<tr>
<td>2014</td>
<td>25.6</td>
<td>1.2</td>
</tr>
<tr>
<td>2015</td>
<td>26.7</td>
<td>1.1</td>
</tr>
<tr>
<td>2016</td>
<td>25.7</td>
<td>0.9</td>
</tr>
<tr>
<td>2017</td>
<td>26.1</td>
<td>0.4</td>
</tr>
<tr>
<td>2018</td>
<td>28.0</td>
<td>0.6</td>
</tr>
</tbody>
</table>

© 2018 HORIBA, Ltd. All rights reserved.
New product launch in new markets
Initiatives taken in growth markets

New product “DUETTA” for the Bio-Life science market

- Fluorescence and absorbance spectrometer
- For R&D of antibody treatment drugs
- Combined the technology of former Photon Technology International (US) acquired in 2014 and former HORIBA Jobin Yvon US

Raman spectrometer: Expand business in China and apply new technology

Raman/Fluorescence Technology Symposium
Participated by 80 scientists in materials, energy, chemical, other fields
(Held in Dun Huang, China, in Aug. 2017)

Toray Research Center developed a new analysis method by using HORIBA’s technology

- Integrated current Raman microscope with AFM (Atomic Force Microscope)
- Enabled a nano-level analysis
- Valid for structural analysis of power semiconductors

Use of a speed detector to enable quick measurement
New software with Improved user interface

AFM (Atomic Force Microscope) Raman
Contents

- 2017 Results
- 2018 Forecast
- Business Segments Outline
- Shareholder Return
- Other Topics
  - Financial Data
  - Corporate profile
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

<table>
<thead>
<tr>
<th>Year</th>
<th>Interim</th>
<th>Year-end</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016 Results</td>
<td>85 yen</td>
<td>[30 yen, 55 yen]</td>
</tr>
<tr>
<td>2017 Results</td>
<td>116 yen</td>
<td>[40 yen, 76 yen]</td>
</tr>
<tr>
<td></td>
<td>(Upward revision by +21 yen from previous forecast)</td>
<td></td>
</tr>
<tr>
<td>2018 Forecast</td>
<td>120 yen</td>
<td>[50 yen, 70 yen]</td>
</tr>
</tbody>
</table>

Per-share dividend (from 2008 to 2018 Forecast)

Renewed record-highs in dividend in 7 years (Fore.)

An average total return ratio of last 3 years: 28%
Contents

- 2017 Results
- 2018 Forecast
- Business Segments Outline
- Shareholder Return
- Other Topics
  - Financial Data
  - Corporate profile
Initiatives for workstyle innovation matching the workfront

“Stained Glass Project” initiatives

- **STEP 1** from 2014
  - Start from promoting women’s empowerment

- **STEP 2** from 2015
  - Start Workstyle Innovation workshop
    - Theme: “Individuals are changemakers”

- **STEP 3** from 2017
  - Connect management, HR Department, and workfront
  - Make best of characteristics of each worksite and organization

Key actions in 2018
- Raise efficiency of meetings: Create optimal operating methods for corporate-wide use
- Study introduction of rules to achieve flexible workstyles considering the workfront

Reviews of activities in 2017

- **“KAERU” Meeting**
  - Get off early.
  - Change work practices.
  - Change myself.
- Realizing flexible workstyles
  - A company-wide survey of opinions of frontline workers
  - Support for work and family care balance

34 meetings (340 participants)
- Identified “efficiency of meetings” as common issue

“KAERU” Meeting
- Workstyle Innovation workshop
  - Theme: “Individuals are changemakers”

Connect management, HR Department, and workfront
- Make best of characteristics of each worksite and organization
Adopt a budget for a unique KPI to measure capital efficiency

“Capital cost” is deducted from “Operating profit”

HORIBA Premium Value

- Penetrate the concept to group companies with a simple calculation method
- Focus the operating profit which business divisions monitoring on a daily operations
- Evaluate in absolute numbers, to easily understand effects and targets in monetary terms

Approach by each division

- Net sales
- Cost of Sales
- Selling, general and administrative expenses
- Operating income
- Working capital
- Fixed assets
- Invested capital
- Internal capital cost ratio

Examples of activity targets by segment

- New sales channels development
- New products launch
- Inventory optimization
- Lead time reduction
- Early collection of accounts receivable
Operating profit Analysis (vs 2016)

(Billions of Yen)


18.49

Increase Sales +21.13

Increase Cost of Goods sales -9.85

Exchange Impact for Gross profit +2.25

Exchange Impact for Expenses -0.94

Increase R&D cost -0.80

Increase Other expenses -3.44


26.83

Increase Gross profit +11.28

Exchange impact +1.30

Expenses impact -4.25

Increase of Operating profit +8.33
### Impact of Fluctuation in Foreign Exchange

#### Exchange rate impact (2017 Results)

<table>
<thead>
<tr>
<th></th>
<th>Sales</th>
<th>Operating profit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>USD</td>
</tr>
<tr>
<td>Total</td>
<td>+4.17bn yen</td>
<td></td>
</tr>
<tr>
<td>Auto</td>
<td>+1.26</td>
<td>+0.32</td>
</tr>
<tr>
<td>P&amp;E</td>
<td>+0.29</td>
<td>+0.08</td>
</tr>
<tr>
<td>Medical</td>
<td>+0.79</td>
<td>+0.15</td>
</tr>
<tr>
<td>Semi</td>
<td>+1.06</td>
<td>+0.70</td>
</tr>
<tr>
<td>Scientific</td>
<td>+0.75</td>
<td>+0.30</td>
</tr>
<tr>
<td>Total</td>
<td>+4.17</td>
<td>+1.57</td>
</tr>
</tbody>
</table>

#### Exchange rate impact for 2018 Forecast

1 yen impact of Sales and O.P. (Yen appreciation)

- **Sales**
  - USD: -0.52bn yen
  - EUR: -0.32bn yen
- **Operating profit**
  - USD: -0.21bn yen
  - EUR: -0.02bn yen

---

For 2016 - 2018:

- **2016 Jan. - Dec.**
  - USD: 108.78 yen, EUR: 120.26 yen
- **2017 Jan. - Dec.**
  - USD: 112.16 yen, EUR: 126.70 yen
- **2018 Jan. - Dec. (Fore.)**
  - USD: 110.00 yen, EUR: 130.00 yen
# Capital Investment, Depreciation, R&D

(Billions of Yen)

<table>
<thead>
<tr>
<th></th>
<th>2016 Results</th>
<th>2017 Forecast @12/19</th>
<th>2017 Results</th>
<th>2017 vs 2016</th>
<th>2016 vs Forecast</th>
<th>2018 Forecast</th>
<th>2018 vs 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Investment</td>
<td>13.7</td>
<td>15.0</td>
<td>11.6</td>
<td>-2.1</td>
<td>-3.4</td>
<td>16.0</td>
<td>+4.4</td>
</tr>
<tr>
<td>Depreciation</td>
<td>6.8</td>
<td>7.2</td>
<td>7.5</td>
<td>+0.7</td>
<td>+0.3</td>
<td>7.5</td>
<td>+0.0</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>12.9</td>
<td>14.0</td>
<td>13.9</td>
<td>+1.0</td>
<td>-0.1</td>
<td>15.5</td>
<td>+1.6</td>
</tr>
<tr>
<td>(To net sales)</td>
<td>7.6%</td>
<td>7.4%</td>
<td>7.1%</td>
<td>-0.5%</td>
<td>-0.3%</td>
<td>7.4%</td>
<td>+0.3%</td>
</tr>
</tbody>
</table>

**2017 Topics**
- PP&E
- Depreciation
- R&D

Expansion of Aso factory (2.3 bn yen), Investment to MIRA (1.3 bn yen)
Goodwill of MIRA*(0.4 bn yen)
Increased in P&E business

**2018 Topics**
- PP&E
- Depreciation
- R&D

Expansion of Aso factory (1.7 bn yen), Investment to global network
Decrease Goodwill of MIRA +Increase by new investment and expansion of Aso factory (0.1 bn yen)
Increase in Auto and Semi Business

*(Good will of MIRA e.g...Amortization included)
## Consolidated Cash Flows

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2016</th>
<th>Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash flows from operating activities</td>
<td>+28.28</td>
<td>+15.87</td>
<td>+12.41</td>
</tr>
<tr>
<td>Cash flows from investing activities</td>
<td>-13.16</td>
<td>-10.42</td>
<td>-2.73</td>
</tr>
<tr>
<td>Cash flows from financing activities</td>
<td>-9.04</td>
<td>-0.45</td>
<td>-8.59</td>
</tr>
<tr>
<td>Cash and cash equivalents at end of year</td>
<td>+58.33</td>
<td>+51.94</td>
<td>+6.39</td>
</tr>
<tr>
<td>Free cash flows</td>
<td>+15.12</td>
<td>+5.44</td>
<td>+9.67</td>
</tr>
</tbody>
</table>
Cash Balance

(Billions of Yen)

- Loan repayment due to group financing
- Recent issuer rating: R&I “A-” (July 2017), JCR “A” (August 2017)

*(1) Cash*: Cash and Cash Equivalents at End of Period. *(2) JBIC: Japan Bank for International Cooperation
Contents

- 2017 Results
- 2018 Forecast
- Business Segments Outline
- Shareholder Return
- Other Topics
  - Financial Data
  - Corporate profile
Corporate Profile

Head Office
Kyoto, Japan

Foundation
1945

Incorporation
1953

Fiscal Year End
December 31

Atsushi Horiba
Chairman & Group CEO

- Corporate motto -

Omoshiro-okashiku
Joy and Fun

To have interest and pride in our work to enjoy our lives
Business Segments

Automotive Test Systems
- Emission Measurement Systems
- Test Automation Systems
- Intelligent Transport Systems
- Engineering Consultancy & Testing (HORIBA MIRA, Ltd)

Process & Environmental
- Environmental & Process Systems
- Environmental Radiation Monitor
- Environmental Regulation & Process Business

Medical
- In-Vitro Diagnostic (IVD) Systems
- Integration of HORIBA ABX’s Technology & Marketing Know-how

Semiconductor
- Mass Flow Controller
- In-situ Analysis
- Synergy among HORIBA HQ, HORIBA STEC, HORIBA Advanced Techno and HORIBA Jobin Yvon’s Technologies

Scientific
- Raman, Grating, and Fluorescence
- Synergy of HORIBA and HORIBA Jobin Yvon’s Technologies

© 2018 HORIBA, Ltd. All rights reserved.
Business Segments

Sales Breakdown by Segment

Sales: 195.3 B.JPY

- Automotive: 73.3% (649 MUSD)
- Semiconductor: 53.3% (471 MUSD)
- Medical: 25.1% (222 MUSD)
- Scientific: 26.1% (231 MUSD)
- Process & Environmental: 17.4% (154 MUSD)

( ) = Segment Sales in MUSD
% = Segment Sales Ratio
(Sales of FY2017)
Market share

Global

Emission Measurement Systems

80%

Stack Gas Analyzers

20%

Mass Flow Controllers

57%

Raman Spectrophotometers

30%

Domestic

Automatic Blood Cell Counter plus CRP

100%

(As of December 31, 2015)

Gratings

35%

※Market shares quoted are estimates by HORIBA.
The Number of Group Companies by region
(As of December 31, 2017)

<table>
<thead>
<tr>
<th>Region</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Americas</td>
<td>9</td>
</tr>
<tr>
<td>Europe</td>
<td>22</td>
</tr>
<tr>
<td>Asia</td>
<td>17 (4 in Japan, including HORIBA, Ltd.)</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
</tr>
</tbody>
</table>

Sales of FY2017: 195.3 BJPY
(1,729 MUSD)
Employees by Region

(As of December 31, 2017)

- **Japan**: 38% (7,399 employees)
- **Other Asia**: 16% (5,416 employees)
- **France**: 12% (2,414 employees)
- **U.S.A**: 11% (2,414 employees)
- **Germany**: 8% (1,968 employees)
- **UK**: 11% (1,968 employees)
- **Other Europe**: 2% (493 employees)
- **Americas**: 2% (493 employees)

**Total Number of Employees**
- **7,399**
- **54%**
- **Total Asia**: 4,041 (54%)
- **Total Europe**: 2,414 (33%)
- **Total Americas**: 944 (13%)
Thank you