HORIBA, Ltd.
(6856)

Morgan Stanley MUFG
Kyoto Trip 2017

June 12, 2017
Contents

- 2016 Results
- 2017 Forecast
- Business Segment Outline
- Shareholder Return
- MLMAP2020 [2016-2020] Progress
  - Financial Data
  - Corporate profile

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## Review of 2016

<table>
<thead>
<tr>
<th>External events</th>
<th>Internal events</th>
</tr>
</thead>
<tbody>
<tr>
<td>◆ Earthquakes in Kumamoto</td>
<td>◆ Revenue recognition policy change (January): Shipment base ➔ Delivery/installation base</td>
</tr>
<tr>
<td>◆ Exhaust gas and fuel economy testing problems</td>
<td>◆ HORIBA MIRA full-year results in HORIBA’s consolidated results included for the first time</td>
</tr>
<tr>
<td>◆ Appreciation of the yen</td>
<td>◆ HORIBA BIWAKO E-HARBOR began operation</td>
</tr>
<tr>
<td>◆ Brexit</td>
<td>◆ Expansion of HORIBA STEC’s Aso Factory decided</td>
</tr>
<tr>
<td></td>
<td>◆ HORIBA India Technical Center was established</td>
</tr>
<tr>
<td></td>
<td>◆ Reorganization of HORIBA Group companies in France decided (effective January 2017)</td>
</tr>
<tr>
<td></td>
<td>◆ Water measuring businesses integrated to HORIBA Advanced Techno Ltd. (from January 2017)</td>
</tr>
</tbody>
</table>
Summary of 2016 Results

Paid the highest dividend amount (85 yen per share)
Achieved ROE of 10%

P&L
- Year-on-year declines from the top line down to ordinary profit, but the absolute levels were the second highest to the record-highs in 2015
- Record-high net profit due to a one-time drop in tax rate*
- Negative impact of yen appreciation: Revenues down 14.2bn yen; OP down 3.1bn yen

B/S
- Total assets were 239.6bn yen, down 7.5bn yen from the end of 2015, due to lower yen value caused by the yen appreciation
- Equity ratio: 55.4%

CF
- Operating CF: Inflow of 15.8bn yen, due to growth in profit
- Investing CF: Outflow of 10.4bn yen, due to capital spending
- Financial CF: Outflow of 0.4bn yen, due to long-term borrowing

* 2015 results are restated numbers. Net profit in 2016 was the second highest compared with the restated figures.
# 2016 full year results

(Billions of yen)

<table>
<thead>
<tr>
<th></th>
<th>2015 Results (New Policy※)</th>
<th>Forecast (as of Nov.2016)</th>
<th>2016 Results</th>
<th>vs.2015</th>
<th>vs. Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>171.9</td>
<td>170.0</td>
<td>170.0</td>
<td>-1.1%</td>
<td>+0.1%</td>
</tr>
<tr>
<td>Operating Profit</td>
<td>20.1</td>
<td>17.5</td>
<td>18.4</td>
<td>-8.2%</td>
<td>+5.7%</td>
</tr>
<tr>
<td>O.P %</td>
<td>11.7%</td>
<td>10.3%</td>
<td>10.9%</td>
<td>-0.8p</td>
<td>+0.6p</td>
</tr>
<tr>
<td>Ordinary profit</td>
<td>19.6</td>
<td>17.0</td>
<td>18.2</td>
<td>-6.9%</td>
<td>+7.5%</td>
</tr>
<tr>
<td>Net Income attrib. to Owners of Parent</td>
<td>13.2</td>
<td>10.8</td>
<td>12.9</td>
<td>-2.4%</td>
<td>+20.0%</td>
</tr>
<tr>
<td>Net profit per share(Yen)</td>
<td>315</td>
<td>256</td>
<td>308</td>
<td>-2.4%</td>
<td>+20.0%</td>
</tr>
<tr>
<td>ROE</td>
<td>10.7%</td>
<td>8.5%</td>
<td>10.0%</td>
<td>-0.7p</td>
<td>+1.5p</td>
</tr>
</tbody>
</table>

※2015 results are restated numbers. The same shall apply hereinafter.
# 2016 Results by Segment

(Billions of yen)

<table>
<thead>
<tr>
<th>Segment</th>
<th>2015 Sales</th>
<th>2016 Forecast</th>
<th>2016 Results</th>
<th>2016 vs. 2015</th>
<th>2015 Operating Profit</th>
<th>2016 Operating Profit</th>
<th>2016 vs. 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto</td>
<td>65.4</td>
<td>64.0</td>
<td><strong>62.2</strong></td>
<td>-4.9%</td>
<td>5.2</td>
<td>3.5</td>
<td>3.5</td>
</tr>
<tr>
<td>P&amp;E</td>
<td>16.7</td>
<td>16.5</td>
<td><strong>16.7</strong></td>
<td>+0.3%</td>
<td>1.7</td>
<td>1.5</td>
<td>1.5</td>
</tr>
<tr>
<td>Medical</td>
<td>27.6</td>
<td>26.5</td>
<td><strong>26.5</strong></td>
<td>-4.0%</td>
<td>2.5</td>
<td>2.7</td>
<td>2.8</td>
</tr>
<tr>
<td>Semi</td>
<td>35.3</td>
<td>37.0</td>
<td><strong>38.8</strong></td>
<td>+9.8%</td>
<td>9.4</td>
<td>9.0</td>
<td>9.6</td>
</tr>
<tr>
<td>Scientific</td>
<td>26.7</td>
<td>26.0</td>
<td><strong>25.7</strong></td>
<td>-3.8%</td>
<td>1.1</td>
<td>0.8</td>
<td>0.9</td>
</tr>
<tr>
<td>Total</td>
<td>171.9</td>
<td>170.0</td>
<td><strong>170.0</strong></td>
<td>-1.1%</td>
<td>20.1</td>
<td>17.5</td>
<td><strong>18.4</strong></td>
</tr>
</tbody>
</table>

*Record-high (New Policy*)

※2015 results are restated numbers. The same shall apply hereinafter.
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  - Corporate profile
2017 Market outlook

- **Auto**
  - Expect steady R&D investments by automakers
  - Closely monitor emission regulations in EU and Japan

- **P&E**
  - Expect firm demand for stack gas analyzers and water measurement equipment in Asian countries

- **Medical**
  - Closely monitor sales trend of small-sized products in Japan
  - Changes in medical care system in US

- **Semi**
  - Expect continuous investment by semiconductor manufacturers in the first half, uncertainties over outlook in demand by semiconductor production equipment in the second half

- **Scientific**
  - Japan: Expect an increase in the private sector capital spending.
  - Overseas: Closely monitor government budgets and spending in EU
## Exchange rate forecast for 2017

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
<th>Forecast as of Feb. 14</th>
<th>Forecast as of May 12</th>
<th>2017 vs 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>USD</strong></td>
<td>121.10</td>
<td>108.78</td>
<td>110</td>
<td>110</td>
<td>+1.22</td>
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<tr>
<td><strong>EUR</strong></td>
<td>134.31</td>
<td>120.26</td>
<td>120</td>
<td>120</td>
<td>-0.26</td>
</tr>
</tbody>
</table>

1 yen O.P. sensitivity for 2017 Forecast as of May 12

- **USD**: 160 million yen
- **EUR**: 23 million yen
## Forecast for 2017

(Billions of yen)

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
<th>Results (New policy*)</th>
<th>2016 Forecast as of Feb. 14</th>
<th>Results</th>
<th>Forecast as of May 12</th>
<th>vs 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sales</strong></td>
<td>171.9</td>
<td>170.0</td>
<td>177.0</td>
<td></td>
<td></td>
<td>183.0</td>
<td>+7.6%</td>
</tr>
<tr>
<td><strong>Operating profit</strong></td>
<td>20.1</td>
<td>18.4</td>
<td>20.0</td>
<td></td>
<td></td>
<td>21.0</td>
<td>+13.5%</td>
</tr>
<tr>
<td><strong>O.P %</strong></td>
<td>11.7%</td>
<td>10.9%</td>
<td>11.3%</td>
<td></td>
<td></td>
<td>11.5%</td>
<td>+0.6p</td>
</tr>
<tr>
<td><strong>Ordinary profit</strong></td>
<td>19.6</td>
<td>18.2</td>
<td>19.3</td>
<td></td>
<td></td>
<td>20.3</td>
<td>+11.1%</td>
</tr>
<tr>
<td><strong>Net income attribute to Owners of Parent</strong></td>
<td>13.2</td>
<td>12.9</td>
<td>13.0</td>
<td></td>
<td></td>
<td>13.6</td>
<td>+4.9%</td>
</tr>
<tr>
<td><strong>Net profit per share (Yen)</strong></td>
<td>315</td>
<td>308</td>
<td>309</td>
<td></td>
<td></td>
<td>323</td>
<td>+4.8%</td>
</tr>
<tr>
<td><strong>ROE</strong></td>
<td>10.7%</td>
<td>10.0%</td>
<td>9.5%</td>
<td></td>
<td></td>
<td>9.9%</td>
<td>-0.1p</td>
</tr>
</tbody>
</table>

※2015 results are restated numbers. The same shall apply hereinafter.
## Forecast for 2017 by segment

(Billions of yen)

<table>
<thead>
<tr>
<th>Segment</th>
<th>Sales 2016</th>
<th>Forecast as of Feb. 14</th>
<th>Forecast as of May 12</th>
<th>vs 2016</th>
<th>O.P 2016</th>
<th>Forecast as of Feb. 14</th>
<th>Forecast as of May 12</th>
<th>vs 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto</td>
<td>62.2</td>
<td>67.0</td>
<td>69.0</td>
<td>+10.9%</td>
<td>3.5</td>
<td>5.2</td>
<td>5.2</td>
<td>+47.3%</td>
</tr>
<tr>
<td>P&amp;E</td>
<td>16.7</td>
<td>18.0</td>
<td>18.0</td>
<td>+7.4%</td>
<td>1.5</td>
<td>1.6</td>
<td>1.1</td>
<td>-28.6%</td>
</tr>
<tr>
<td>Medical</td>
<td>26.5</td>
<td>25.0</td>
<td>25.0</td>
<td>-5.9%</td>
<td>2.8</td>
<td>2.2</td>
<td>2.2</td>
<td>-21.6%</td>
</tr>
<tr>
<td>Semi</td>
<td>38.8</td>
<td>41.0</td>
<td>46.0</td>
<td>+18.5%</td>
<td>9.6</td>
<td>10.0</td>
<td>12.0</td>
<td>+24.0%</td>
</tr>
<tr>
<td>Scientific</td>
<td>25.7</td>
<td>26.0</td>
<td>25.0</td>
<td>-2.9%</td>
<td>0.9</td>
<td>1.0</td>
<td>0.5</td>
<td>-47.1%</td>
</tr>
<tr>
<td>Total</td>
<td>170.0</td>
<td>177.0</td>
<td>183.0</td>
<td>+7.6%</td>
<td>18.4</td>
<td>20.0</td>
<td>21.0</td>
<td>+13.5%</td>
</tr>
</tbody>
</table>
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Next Slide
### 2016 Results and 2017 Forecast

#### Topics of Automotive Industries in 2016
- **The autonomous-driving car age begins.**
  - Use of artificial intelligence (AI)
- **Accelerated EV development**
  - R&D shift to electrification
- **Exhaust gas and fuel economy test scandals at VW and in Japan.**
- **More strict regulations in EMS (WLTP, RDE*)**
  - For indoor tests and on-road tests
- **Brexit**

#### 2016 Results

<table>
<thead>
<tr>
<th></th>
<th>EMS*</th>
<th>MCT</th>
<th>ECT*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

- EMS*: Steady sales in Japan, increase in OBS*
- MCT: Temporary decline in demand
- ECT*: Full-year incremental sales; goodwill of 0.4bn yen

#### 2017 Forecast

<table>
<thead>
<tr>
<th></th>
<th>EMS</th>
<th>MCT</th>
<th>ECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

- EMS: Steady sales in Japan and Asia
- MCT: Significant recovery; improved profitability
- ECT: Many inquiries; weak GBP to depress amounts in yen

### Sales and O.P. (Billions of yen)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>54.2</td>
<td>37.1</td>
<td>35.7</td>
<td>38.6</td>
<td>43.2</td>
<td>49.5</td>
<td>55.0</td>
<td>64.2</td>
<td>65.4</td>
<td>62.2</td>
</tr>
<tr>
<td>O.P.</td>
<td>7.2</td>
<td>1.8</td>
<td>1.6</td>
<td>2.8</td>
<td>4.4</td>
<td>4.2</td>
<td>5.8</td>
<td>4.4</td>
<td>5.2</td>
<td>3.5</td>
</tr>
</tbody>
</table>

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EMS: Emission Measurement Systems
OBS: On-Board Exhaust Emission Measurement System
ECT: Engineering Consultancy & Testing business operated by HORIBA MIRA
WLTP, RDE: See details on Slide 17
Auto

Strategy for improving profitability

- HORIBA BIWAKO E-HARBOR
- MCT

Aim at cutting the lead time to one-third

Shorten the lead time in the specification-design stage

Case of the MEXA series middle-sized EMS product

[Problem] Long waiting in the design process

[Solution] Reduce design work by standardizing specs

Lead time from specification adoption to design completion

60 days in Aug. 2015

The lead time was shortened to 1/5

11 days in Aug. 2016

MCT business improves profitability

Significant recovery is expected in 2017

- Pick up in automakers’ investments
- Improve order booking by expanding turnkey projects (in Japan, EU, the US)

Focus on improving profitability

- Tighter management of project progress

MCT Sales and Order Backlog (Billions of yen)

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales</th>
<th>Backlog</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>8.1</td>
<td>9.5</td>
</tr>
<tr>
<td>2012</td>
<td>11.6</td>
<td>11.0</td>
</tr>
<tr>
<td>2013</td>
<td>14.5</td>
<td>12.8</td>
</tr>
<tr>
<td>2014</td>
<td>16.2</td>
<td>13.3</td>
</tr>
<tr>
<td>2015</td>
<td>19.7</td>
<td>10.8</td>
</tr>
<tr>
<td>2016</td>
<td>13.2</td>
<td>15.2</td>
</tr>
<tr>
<td>2017</td>
<td>18.0</td>
<td>18.0</td>
</tr>
</tbody>
</table>

(Forecast) (Restated)

Inquiry

Determine
Speculation

Design

Procure

Product

Inspection

Test

Inspection

Collection

Focus on improving profitability

MCT Sales and Order Backlog (Billions of yen)

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales</th>
<th>Backlog</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>8.1</td>
<td>9.5</td>
</tr>
<tr>
<td>2012</td>
<td>11.6</td>
<td>11.0</td>
</tr>
<tr>
<td>2013</td>
<td>14.5</td>
<td>12.8</td>
</tr>
<tr>
<td>2014</td>
<td>16.2</td>
<td>13.3</td>
</tr>
<tr>
<td>2015</td>
<td>19.7</td>
<td>10.8</td>
</tr>
<tr>
<td>2016</td>
<td>13.2</td>
<td>15.2</td>
</tr>
<tr>
<td>2017</td>
<td>18.0</td>
<td>18.0</td>
</tr>
</tbody>
</table>

(Forecast) (Restated)

Significant recovery is expected in 2017

- Pick up in automakers’ investments
- Improve order booking by expanding turnkey projects (in Japan, EU, the US)

Focus on improving profitability

- Tighter management of project progress
Auto

Regulatory trend in EMS (Emission Measurement System) and Operations in an emerging Market

Regulatory trend

- Solid sales in Japan (automakers, parts makers)
  - Steady investment in Japan
- WLTP*(unified emission regulations by the UN)
  - Start in Sep. 2017 in EU and in 2018 in Japan
- RDE (Real Driving Emission: on-road test) regulation
  - Start in Sep. 2017 in EU

※WLTP…Worldwide harmonized Light vehicles Test Procedure

EMS Sales and Order Backlog (Billions of yen)

HORIBA MIRA AETC Establishment
(Advanced Emission Test Centre : AETC)

- Open: July, 2017 (Plan)
- Location: Nuneaton, Warwickshire, UK
- Function: Cutting-edge Emission Testing Lab. (applied for RDE regulation)
- Objective: Strengthen demonstration test

HORIBA India Technical Center Establishment

- Open: November, 2016
- Location: Pune, western India (Center of Auto Business)
- Function: Indoor Automotive test/ Product customization/Training
- Objective: Strengthen demonstration test and application development

※WLTP…Worldwide harmonized Light vehicles Test Procedure

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Auto

ECT (HORIBA MIRA) Business

ECT Business (Engineering/HORIBA MIRA)
- Sale decline caused by weaker GBP vs. the JPY
- Investments of 3.0bn yen planned each in 2016 and 2017 while closely monitoring the Brexit impacts
- Increased inquiries to MIRA Technology Park
- Accelerated global business (Japan/Asia)

ECT Sales and Backlog (Billions of Yen)

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales</th>
<th>Backlog</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>4.2</td>
<td>4.5</td>
</tr>
<tr>
<td>2016</td>
<td>3.5</td>
<td>7.2</td>
</tr>
<tr>
<td>2017</td>
<td>7.0</td>
<td></td>
</tr>
</tbody>
</table>

JPY/GBP
- 2015: 185 yen
- 2016: 147 yen
- 2017: 140 yen

Participation in the UK government autonomous driving car project

Participated in Jaguar Land Rover’s testing; contributed to the demonstration test of autonomous driving technology

G7 transport ministers’ summit
(held in Karuizawa, Japan, in Sep. 2016)

George Gillespie, CEO of HORIBA MIRA, participated as a representative of U.K.
Main theme → Autonomous driving
1. Development and dissemination of cutting-edge technology regarding automobiles and roads
2. Basic policy for transportation infrastructure

Major participants
- Germany: BMW
- France: Renault
- Japan: Toyota
- UK: HORIBA MIRA
2016 Results and 2017 Forecast

2016 Results

+ Steady sales of stack gas analyzers in Japan
+ Robust process analytical measurement business (U.S.)
- Weak sales in EU and Asia

2017 Forecast

+ Expect steady sales to continue in Japan
+ Profitability improvement in gas measurement business in HORIBA BIWAKO E-HARBOR
+ Increase R&D expenditure for water business

Sales by region

<table>
<thead>
<tr>
<th></th>
<th>Europe</th>
<th>America</th>
<th>China</th>
<th>Asia</th>
<th>Japan</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>2.0</td>
<td>2.9</td>
<td>0.7</td>
<td>1.9</td>
<td>16.7</td>
</tr>
<tr>
<td>2017 (Forecast)</td>
<td>2.0</td>
<td>3.0</td>
<td>0.9</td>
<td>2.1</td>
<td>18.0</td>
</tr>
</tbody>
</table>

Sales and O.P.

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales</th>
<th>O.P.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>13.7</td>
<td>1.0</td>
</tr>
<tr>
<td>2009</td>
<td>12.0</td>
<td>0.2</td>
</tr>
<tr>
<td>2010</td>
<td>11.7</td>
<td>0.8</td>
</tr>
<tr>
<td>2011</td>
<td>14.5</td>
<td>2.5</td>
</tr>
<tr>
<td>2012</td>
<td>13.7</td>
<td>1.6</td>
</tr>
<tr>
<td>2013</td>
<td>14.7</td>
<td>1.2</td>
</tr>
<tr>
<td>2014</td>
<td>16.4</td>
<td>2.0</td>
</tr>
<tr>
<td>2015</td>
<td>16.7</td>
<td>1.7</td>
</tr>
<tr>
<td>2015 (Forecast)</td>
<td>16.7</td>
<td>1.5</td>
</tr>
<tr>
<td>2016</td>
<td>16.7</td>
<td>1.5</td>
</tr>
<tr>
<td>2017 (Forecast)</td>
<td>18.0</td>
<td>1.1</td>
</tr>
</tbody>
</table>
P&E Analysis technology for the environment

**Gas**

- **Automatic on-line analysis of PM components**
  - Integrate HORIBA's technology in SCI and P&E
  - Identify sources of origin of microparticles
  - Enable 24-hour consecutive analysis of elements

**Water**

- **Project to improve water quality of wastewater from dyeing factories**
  - Installing wastewater treatment systems and water quality monitors in Myanmar
  - Joint project with Hitachi Zosen Corporation

**Ministry of Environment (MOE) plans to adopt HORIBA's products**

- Scheduled to install devices at 4 sites in Japan in Apr. 2017

**Designated one of the “Model businesses to improve water environment in Asia” by MOE**

- Started experimentation in Jan. 2017

Demo facility installed in HORIBA BIWAKO E-HARBOR

PM2.5 analyzer

Facilities installed in Wundwin city, Myanmar

Water quality analyzer

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2016 Results and 2017 Forecast

2016 Results

+ Firm sales of CBC+CRP analyzers in Japan
- Sales decrease in yen due to the yen appreciation
+ Steady growth in India

2017 Forecast

+ Expect firm sales of CBC+CRP analyzers in Japan
+ Accelerated sales expansion by introducing a new brand in overseas markets

Sales by region

<table>
<thead>
<tr>
<th>Region</th>
<th>2016</th>
<th>2017 (Forecast)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>26.5</td>
<td>25.0</td>
</tr>
<tr>
<td>America</td>
<td>9.2</td>
<td>8.7</td>
</tr>
<tr>
<td>China</td>
<td>6.5</td>
<td>5.5</td>
</tr>
<tr>
<td>Asia</td>
<td>1.2</td>
<td>1.3</td>
</tr>
<tr>
<td>Japan</td>
<td>5.8</td>
<td>6.0</td>
</tr>
</tbody>
</table>

Sales and O.P.

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales</th>
<th>O.P.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>24.7</td>
<td>0.6</td>
</tr>
<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>
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<tr>
<td>2013</td>
<td>26.8</td>
<td>2.4</td>
</tr>
<tr>
<td>2014</td>
<td>27.0</td>
<td>1.7</td>
</tr>
<tr>
<td>2015</td>
<td>27.4</td>
<td>2.4</td>
</tr>
<tr>
<td>2015 (Forecast)</td>
<td>27.6</td>
<td>2.5</td>
</tr>
<tr>
<td>2016</td>
<td>26.5</td>
<td>2.8</td>
</tr>
<tr>
<td>2017 (Forecast)</td>
<td>25.0</td>
<td>2.2</td>
</tr>
</tbody>
</table>
Medical Growth with New Brand and Service

New brand “Yumizen”

- Brand building in the IVD market
- Strategy to expand sales in medium/large-sized hematology analyzers
  - Propose total solutions, including a data management system
  - Expand business globally from 2Q of 2017

Provide maintenance service system using IoT technology for reducing device downtime

- Enhance maintenance support by continuous monitoring & diagnostic reports
- Detect problems in advance and provide appropriate suggestions
- Target: 6,000 contracts by 2020 in Japan
  Also plan to expand globally
2016 Results

- Record-high sales and operating profit due to increased investments by semiconductor manufacturers in Asia
- Sales decrease in yen terms due to the appreciation of the yen

2017 Forecast

- Investment to raise Aso factory production capacity
- Less-certain market outlook for the 2nd half
- Closely monitor investment trend in China

Topics regarding the semiconductor industry and mass flow controller market

- Data centers’ shift to memory for storage
  - Sharp increase in demand for semiconductors
- Changes in manufacturing technology
  - Miniaturization, 3D-NAND, double-patterning
  - Increase in demand for etching devices
- Disciplined investment by semiconductor manufacturers
  - The silicon cycle to fluctuate less widely
  - The market to stabilize

Sales and O.P

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales (Bn Yen)</th>
<th>O.P. (Bn Yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>16.7</td>
<td>1.2</td>
</tr>
<tr>
<td>2009</td>
<td>12.4</td>
<td>-0.0</td>
</tr>
<tr>
<td>2010</td>
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<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>
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<tr>
<td>2014</td>
<td>28.9</td>
<td>6.4</td>
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<td>9.4</td>
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<td>2015</td>
<td>35.3</td>
<td>9.4</td>
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<tr>
<td>2016</td>
<td>38.8</td>
<td>9.6</td>
</tr>
<tr>
<td>2017</td>
<td>46.0</td>
<td>12.0</td>
</tr>
</tbody>
</table>

Previous policy

New policy

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Aso Factory’s capacity expansion and the market share in mass flow controllers

Investment for capacity expansion

HORIBA STEC’s Aso Factory capacity expansion

- Amount: 2.7bn yen
- Completion: Nov. 2017 (Plan)
- Target: Increase in production capacity for mass flow controllers (1.5 times larger space)

The first company to invest in capacity expansion in Kumamoto Prefecture after the earthquakes

HORIBA STEC Korea, Ltd. New office establishment

- Open: April, 2017
- Location: Yongin-si, Korea (Suburb of Seoul)
- Function: Engineering, Production, Sales and Service of MFC for Korean market
- Objective: Strengthen Production, Engineering and Education capability

Global market share of MFC

2016: 57%
2016 Results and 2017 Forecast

2016 Results

- Firm sales to the private sector and weak sales to academia in Japan
- Weak sales to academia in all regions
- Increased sales of Raman Spectroscopy in China

2017 Forecast

- More applications for the private sector in Japan
- Weak sales to academia in all regions
- New product release through integrating technologies within HORIBA Group

Sales and O.P.

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales (Billions of yen)</th>
<th>O.P. (Billions of yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>24.8</td>
<td>0.8</td>
</tr>
<tr>
<td>2009</td>
<td>20.5</td>
<td>1.2</td>
</tr>
<tr>
<td>2010</td>
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<td>1.1</td>
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<tr>
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<tr>
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<td>26.7</td>
<td>1.1</td>
</tr>
<tr>
<td>2017 (Forecast)</td>
<td>25.7</td>
<td>0.9</td>
</tr>
</tbody>
</table>

Sales by region

- Europe
- America
- China
- Asia
- Japan

2016 Results (Billions of yen)

- Europe: 5.5
- America: 6.5
- China: 3.4
- Asia: 2.6
- Japan: 7.5

2017 Forecast (Forecast)

- Europe: 5.4
- America: 6.5
- China: 3.3
- Asia: 2.8
- Japan: 7.0

Previous policy - New policy
Exploit new markets using HORIBA technology

Cutting-edge technology of HORIBA and HORIBA Jobin Yvon
Close relationship with academia

 Imaging CL* device (released in Aug. 2016)
- Convert defective images into high-accuracy images
- Characteristic distribution analysis of phosphor parts of LED elements
- Accelerate R&D for the next-generation power devices

New market creation and product development to meet customer’s needs

For a rare metal manufacturer
- Software development for rare metal analysis
- Customized chamber

Material for semiconductors, Life science sector
- Specialized in defect characterization
- Applied Topcon technology
- Collaboration with Raman
- Testing for protein and drugs

Cutting-edge material development
- High concentration cell
- Minute amount measurement

HORIBA
HORIBA Jobin Yvon
Electron beam technology of Topcon

New product by integrating HORIBA Group’s technologies

* Imaging Cathodoluminescence (CL)
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- Shareholder Return
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  - Corporate profile
Shareholder Return

Dividends and Share buybacks

- **2015 Results**: 70 yen per share +
- **2016 Results**: 85 yen per share
- **2017 Forecast**: 90 yen per share

2015 Share buyback
218,400 shares, about 1.0 billion yen

Per-share dividend (from 2002 to 2017 Forecast)

An Average total return ratio of last 3 years: 29.2%
Record high for 7 years in a row

Basic policy (since 2013)
- 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)
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Continual growth in Sales and in all profits

Doubled in 10 years from 2010

CAGR: 7.8%

2001-2005

2006-2010

2011-2015

2016-2020

Sales

O.P.

Net profit

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Major policies

MLMAP2020 “ONE STEP AHEAD”

- Applying HORIBA Technology in new business fields and new markets and becoming a true partner in analysis and measurement
- Accelerating corporate growth by its Super Dream Team based on balanced management, matrix organization, and HORIBA Stained Glass Project
- Improving capital efficiency to maximize corporate value
Actions for achieving MLMAP2020 targets

1. Re-organize the water measuring business to accelerate growth

2. “Stained Glass Project” activities

3. Improvement in asset efficiency and maximizing corporate value
   - Introduction of original KPIs to measure asset efficiency
   - Establishment of financial subsidiaries
Accelerate growth in water measuring business

Integrate water measuring resources to HORIBA Advanced Techno Ltd. (Kyoto)

Integrate products and technology from all HORIBA affiliates and 3 segments (Scientific/P&E/Semi) in all function including R&D, production, sales
→ Create the value only HORIBA can realize

Doubled sales in water measuring business
10bn yen → 20bn yen

(Billions of yen)

- 2015 (Previous Accounting policy)
- 2016
- 2017 (Forecast)
- 2020 (Plan)

- P&E
- Semi
- Scientific

盖 all water treatment processes
- Timely and precisely satisfy market demand
- Create water measurement network using IoT

Cover all water treatment processes
Timely and precisely satisfy market demand
Create water measurement network using IoT

HORIBA
Accelerometer
Chemical Concentration Monitor

P&E
Water quality analyzer

Semi
Ph meter
Water measuring and analysis business domain

Water measuring/analysis business domain: Life Cycle of Water

Water supply infrastructure
Industrial water
Industrial processes
Industrial sewage
Sewage infrastructure

Tap water
Water-intake

Water in nature (rivers, lakes, underground water)

Products

R&D → Production → Quality

Semiconductor
Petrochemical
Pharmaceutical
Energy
Medical

Recycling → Discharge

Regulations on discharged water
Water measuring and analysis business domain

Water supply infrastructure
Industrial water

Industrial processes
Products

R&D
Production
Quality

Semi (Chemical Concentration Monitor)

P&E (Regulation & Process)

Tap water

Water-intake

Industrial water

Industrial sewage

Sewage infrastructure

Drainage restriction

Recycling
Discharge

Water in nature (rivers, lakes, underground water)

Scientific (University/pH)
Selected as one of New Diversity Management Selection 100 (by the Ministry of Economy, Trade and Industry of Japan)

Reasons for the award:
Corporate motto “Joy and Fun” and the Stained Glass Project

HORIBA Stained Glass Project
- Lunch gatherings of working mothers
- Seminars on how to balance long-term care and work
- Workshop to improve work productivity

Mr. Saito, executive vice president, and Ms. Moriguchi, leader of Stained Glass Project at the award-receiving ceremony.
Enhance asset efficiency and maximize corporate value

- Decided to introduce a new KPI to measure asset efficiency
  - Indicator composed of “Operating profit” and “WACC”
  - Applying unit: Business segments and Group companies
    - Strengthen PDCA cycle: Efficient use of business assets and increase profit
  - Plan to prepare a budget to this project in 2018

- Founded financial subsidiaries in the US and the UK
  - Improve capital efficiency through group financing
  - Strengthen financial management function in each region

Diagram:
- Investment
- Cash Generation
- Business Growth
- Improve asset efficiency & Accelerate business growth
Symbol of MLMAP2020

ONE STEP AHEAD - To create a next stage of HORIBA -

Step out of the existing business fields and pursue further expansion. Take a new perspective and overcome technological/market/organization barriers. Be flexible, think outside the box, and move up to the next stage.
Contents

- 2016 Results
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- Business Segment Outline
- Shareholder Return
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- Financial Data
- Corporate profile
Trend of Market capitalization

(Billions of yen)

216BJPY in Oct. 2007

52BJPY in Dec. 2008

310BJPY on Jun. 2, 2017 (Record-high)
Changed the accounting policy for revenue recognition

Changed points: Original Shipment base
New The date of delivery or installation based on contractual arrangements

Applied timing: January 2016
Reason for change: Triggered by the introduction of a new ERP implementation, to harmonize with international accounting standards.

As of February 10, 2016, audit procedures for this change has not finished yet.
Operating profit analysis (vs. 2015)

(Millions of Yen)

2015 Results

20,142

- Increase Sales amount +12,426
- Increase Cost of goods sales -8,071
- Exchange impact for Gross profit -6,675
- Exchange impact for Expenses +3,484

2016 Results

18,499

- R&D cost increase -1,231
- Other expenses increase -1,574

Sales impact / Decrease sales cost ratio +4,354

Exchange impact -3,191

Expenses impact -2,806

Decrease of Operating profit -1,642

※2015 results are restated numbers. The same shall apply hereinafter(same in following slide)
## Consolidated Cash Flows

(Millions of Yen)

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
<th>Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash flows from operating activities</td>
<td>14,770</td>
<td>15,871</td>
<td>1,101</td>
</tr>
<tr>
<td>Cash flows from investing activities</td>
<td>-30,642</td>
<td>-10,427</td>
<td>20,214</td>
</tr>
<tr>
<td>Cash flows from financing activities</td>
<td>12,843</td>
<td>-451</td>
<td>-13,294</td>
</tr>
<tr>
<td>Cash and cash equivalents at end of year</td>
<td>47,859</td>
<td>51,940</td>
<td>4,081</td>
</tr>
<tr>
<td>Free cash flows</td>
<td>-15,872</td>
<td>5,443</td>
<td>21,315</td>
</tr>
</tbody>
</table>
## Capital Investment, Depreciation, R&D

(Billions of yen)

<table>
<thead>
<tr>
<th></th>
<th>2015 Results</th>
<th>Forecast @11/7</th>
<th>2016 Results</th>
<th>vs 2015</th>
<th>vs Forecast</th>
<th>2017 Forecast</th>
<th>vs 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>PP&amp;E</td>
<td>14.8</td>
<td>15.3</td>
<td>13.4</td>
<td>-10%</td>
<td>-12%</td>
<td>14.6</td>
<td>+9%</td>
</tr>
<tr>
<td>Intangibles</td>
<td>1.4</td>
<td>0.7</td>
<td>0.3</td>
<td>-75%</td>
<td>-49%</td>
<td>0.4</td>
<td>+11%</td>
</tr>
<tr>
<td>Capital Investment</td>
<td>16.3</td>
<td>16.0</td>
<td>13.7</td>
<td>-15%</td>
<td>-14%</td>
<td>15.0</td>
<td>+9%</td>
</tr>
<tr>
<td>Depreciation</td>
<td>6.1</td>
<td>6.5</td>
<td>6.8</td>
<td>+12%</td>
<td>+5%</td>
<td>7.2</td>
<td>+6%</td>
</tr>
<tr>
<td>R&amp;D (To net sales)</td>
<td>12.3</td>
<td>13.0</td>
<td>12.9</td>
<td>+5%</td>
<td>-1%</td>
<td>14.0</td>
<td>+8%</td>
</tr>
</tbody>
</table>

### 2016 Topics
- PP&E: Investment to MIRA (3.0BJYP)
- Depreciation: Goodwill of MIRA *(0.4BJYP)*, Biwako factory *(0.7BJYP)*
- R&D: Increased in Automotive Test System Business

### 2017 Topics
- PP&E: Investment to MIRA (3.0BJYP), Expansion of Aso Factory (2.7BJYP)
- Depreciation: Goodwill of MIRA *(0.4BJYP)*, Increase in MIRA and Test center invested in 2016
- R&D: Increase in Auto and P&E Business

※Good will of MIRA e.g. … Amortization included
### Cash Balance

**(Billions of yen)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Loan Balance</th>
<th>Cash Balance*1</th>
<th>Bonds</th>
<th>Long</th>
<th>Short</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>24.1</td>
<td>49.2</td>
<td>15.0</td>
<td>2.5</td>
<td>6.6</td>
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<tr>
<td>2014</td>
<td>28.0</td>
<td>51.1</td>
<td>15.0</td>
<td>2.2</td>
<td>10.8</td>
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<tr>
<td>2015</td>
<td>44.7</td>
<td>47.8</td>
<td>15.0</td>
<td>16.8</td>
<td>12.8</td>
</tr>
<tr>
<td>2016</td>
<td>46.7</td>
<td>51.9</td>
<td>15.0</td>
<td>19.2</td>
<td>12.4</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Year</th>
<th>Current Ratio</th>
<th>Capital Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>269%</td>
<td>60%</td>
</tr>
<tr>
<td>2014</td>
<td>254%</td>
<td>60%</td>
</tr>
<tr>
<td>2015</td>
<td>229%</td>
<td>55%</td>
</tr>
<tr>
<td>2016</td>
<td>237%</td>
<td>55%</td>
</tr>
</tbody>
</table>

- Conclusion of liquidation of receivable contract with 2 banks.
- Recent issuer rating: R&I [A-] (July 2016), JCR [A] (August 2016)

*1 Cash*…Cash and Cash Equivalents at End of Period. *2 JBIC: Japan Bank for International Cooperation
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■ 2017 Forecast
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■ MMLMAP2020 [2016-2020] Progress
  ● Financial Data
  ● Corporate profile
Corporate Profile

- Head office  Kyoto, Japan
- Founded     1945
- Incorporated 1953
- CEO         Atsushi Horiba
- Fiscal year end December 31

- Corporate motto -

JOY and FUN

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

**Automotive Test Systems**
- Emission Measurement Systems (EMS)
- Mechatronics Devices (MCT)
- Driving Control Systems (ITS)
- Engineering Consultancy & Testing (ECT)

**Process & Environmental**
- Environmental 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 and HORIBA Jobin Yvon’s Technologies

**Scientific**
- Synergy of HORIBA and HORIBA Jobin Yvon’s Technologies
- Raman, Grating, and Fluorescence
Well Balanced Business Operation - Five Business Segments -

Sales 170.0 Billion of Yen

- Automotive Test Systems
- Process & Environmental
- Medical
- Semiconductor
- Scientific

Business Composition of Sales (Billions of Yen)

- Automotive: 62.2 Billion (36%)
- Scientific: 25.7 Billion (15%)
- Semiconductor: 38.8 Billion (23%)
- Medical: 26.5 Billion (16%)
- P&E: 16.7 Billion (10%)
Market Shares

Global

Emission Measurement Systems

- 80%

Stack Gas Analyzers

- 20%

Mass Flow Controllers

- 57%

Raman Spectrophotometers

- 30%

Domestic

Automatic Blood Cell Counter plus CRP

- 100%

Gratings

- 35%

※Market shares quoted are estimates by HORIBA.
HORIBA Worldwide

Sales of FY2016: 170.0 BJPY

Geographic Composition of Sales (2016)

The Number of Group Companies by region
(As of December 31, 2016)

<table>
<thead>
<tr>
<th>Region</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>America</td>
<td>9</td>
</tr>
<tr>
<td>Europe</td>
<td>23</td>
</tr>
<tr>
<td>Asia</td>
<td>17 (4 in Japan, including HORIBA, Ltd.)</td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
</tr>
</tbody>
</table>
Thank you very much for your attention.
Thank you

감사합니다

Cảm ơn

ありがとうございます

Dziekuje

धन्यवाद

Grazie

Merci

谢谢

μαγνητή

ขอบคุณครับ

ありがとうございました

धन्यवाद

நன்றா

Obrigado

Σας ευχαριστούμε

شكرًا

Tack ska ni ha

Danke

Большое спасибо

Gracias