Financial Information

HORIBA, Ltd.
September, 2018
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Contents

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

## External Events
- Escalating global trade tensions
- Decline in emerging markets currencies due to tightening by the Fed in the U.S.
- Temporary subdued capital spending despite robust demand for semiconductors
- Automotive electrification, emission regulations

## Internal Events
- Enhanced North American bases (for Semiconductors and Scientific)
- Full-scale operation at the expanded Aso factory (for Semiconductors)
- Aggressive investment in next-generation automotive technologies
- Renewed record-high stock price of HORIBA: market cap exceeds ¥400bn
Summary of the First Half Results of 2018

Reached a record high in sales, profit and dividend (first half)

**P&L**
- Significant increase in sales and profit in Automotive and Semiconductor segments, year-on-year
- Semiconductor was weak in 2Q compared to 1Q.

**B/S**
- Total asset were ¥268.7bn, up to ¥2.8bn, due to increase in inventory.
- Tangible assets was ¥68bn, down to ¥0.6bn due to appreciation of the yen
- Equity ratio: 57.1%

(Compared to the end of Dec. 2017)

**CF**
- Operating CF: Cash in ¥12.4bn due to growth in profit
- Investing CF: Cash out ¥4.4bn due to capital spending
- Financial CF: Cash out ¥4.3bn due to payment of dividend

\[
\text{Free CF} = 12.4bn - 4.4bn - 4.3bn = 7.9bn
\]

Free CF +¥7.9bn
## 2018 First Half Results

(Billions of Yen)

<table>
<thead>
<tr>
<th></th>
<th>2017 1st half</th>
<th>Forecast Beg. of the year (as of Feb. 13)</th>
<th>Previous Forecast (as of May 9)</th>
<th>2018 1st half</th>
<th>Results</th>
<th>vs 2017 1st half</th>
<th>vs Forecast Beg. of the year</th>
<th>vs Previous Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sales</strong></td>
<td>87.3</td>
<td>96.0</td>
<td>102.0</td>
<td>★ 99.9</td>
<td>+12.6</td>
<td>+3.9</td>
<td>-2.0</td>
<td></td>
</tr>
<tr>
<td><strong>Operating Profit</strong></td>
<td>9.7</td>
<td>11.8</td>
<td>14.8</td>
<td>★ 14.0</td>
<td>+4.3</td>
<td>+2.2</td>
<td>-0.7</td>
<td></td>
</tr>
<tr>
<td><strong>O. P. %</strong></td>
<td>11.1%</td>
<td>12.3%</td>
<td>14.5%</td>
<td>★ 14.1%</td>
<td>+3.0p</td>
<td>+1.8p</td>
<td>-0.4p</td>
<td></td>
</tr>
<tr>
<td><strong>Ordinary Profit</strong></td>
<td>9.5</td>
<td>11.5</td>
<td>14.5</td>
<td>★ 13.7</td>
<td>+4.1</td>
<td>+2.2</td>
<td>-0.7</td>
<td></td>
</tr>
<tr>
<td><strong>Net Income attribute to Owners of Parent</strong></td>
<td>6.4</td>
<td>7.7</td>
<td>9.7</td>
<td>★ 10.5</td>
<td>+4.0</td>
<td>+2.8</td>
<td>+0.8</td>
<td></td>
</tr>
<tr>
<td><strong>USD/JPY</strong></td>
<td>112.34</td>
<td>110.0</td>
<td>110.0</td>
<td>108.67</td>
<td>-3.67</td>
<td>-1.33</td>
<td>-1.33</td>
<td></td>
</tr>
<tr>
<td><strong>EUR/JPY</strong></td>
<td>121.66</td>
<td>130.0</td>
<td>130.0</td>
<td>131.55</td>
<td>+9.89</td>
<td>+1.55</td>
<td>+1.55</td>
<td></td>
</tr>
</tbody>
</table>

* : Record-high

**Results**

2018 1st half: Record-high
## 2018 First Half Results by Segment

(Billions of Yen)

<table>
<thead>
<tr>
<th>Segment</th>
<th>Sales (Billions of Yen)</th>
<th>Operating Profit (Billions of Yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2017 1st half</td>
<td>2018 1st half</td>
</tr>
<tr>
<td>Auto</td>
<td>33.0</td>
<td>32.7</td>
</tr>
<tr>
<td>P&amp;E</td>
<td>8.0</td>
<td>9.2</td>
</tr>
<tr>
<td>Medical</td>
<td>13.0</td>
<td>13.1</td>
</tr>
<tr>
<td>Semi</td>
<td>33.0</td>
<td>32.3</td>
</tr>
<tr>
<td>Scientific</td>
<td>13.0</td>
<td>12.5</td>
</tr>
<tr>
<td>Total</td>
<td>102.0</td>
<td>99.9</td>
</tr>
</tbody>
</table>

- Record-high

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## Market Overview for the Full Year 2018

### Auto
- Strong appetite for investment in the global automotive sector due to tighter emission regulations in Japan & Asia and innovation for electrification & autonomous driving

### P&E
- Increase in demand due to tighter environmental regulations in emerging countries
- Recovery in investment in the oil industry due to higher oil prices

### Medical
- Japan: Favorable sales to doctors in private practice
- Overseas: Increase in demand for blood testing equipment in emerging countries

### Semi
- Anticipate a pick-up in investment in the second half, due to solid demand of semiconductor devices from a mid- to long-term perspective

### Scientific
- Robust corporate R&D expenditures
- Accelerating research on new materials for secondary batteries
### Exchange Rate

**2017 Actual**

<table>
<thead>
<tr>
<th></th>
<th>1st half</th>
<th>Full year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>USD</strong></td>
<td>112.34</td>
<td>112.16</td>
</tr>
<tr>
<td><strong>EUR</strong></td>
<td>121.66</td>
<td>126.70</td>
</tr>
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</table>

**2018**

<table>
<thead>
<tr>
<th></th>
<th>Previous Forecast (as of May 9)</th>
<th>Results</th>
<th>Forecast 2nd half</th>
<th>Forecast (as of Aug. 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>USD</strong></td>
<td>110</td>
<td>108.22</td>
<td>109.12</td>
<td>108.67</td>
</tr>
<tr>
<td><strong>EUR</strong></td>
<td>130</td>
<td>133.14</td>
<td>129.96</td>
<td>131.55</td>
</tr>
</tbody>
</table>

**1 yen O.P. sensitivity for 2018 Forecast (Yen appreciation/Full year)**

- **USD**: ¥200 million
- **EUR**: ¥20 million
## 2018 Forecast

<table>
<thead>
<tr>
<th></th>
<th>2017 Results</th>
<th>Forecast Beg. of the year (as of Feb. 13)</th>
<th>Previous Forecast (as of May 9)</th>
<th>2018 Results</th>
<th>vs 2017 1st half</th>
<th>vs Forecast Beg. of the year</th>
<th>vs Previous Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sales</strong></td>
<td>195.3</td>
<td>210.0</td>
<td>218.0</td>
<td><strong>212.0</strong></td>
<td>+16.6</td>
<td>+2.0</td>
<td>-6.0</td>
</tr>
<tr>
<td><strong>Operating Profit</strong></td>
<td>26.8</td>
<td>29.0</td>
<td>34.0</td>
<td><strong>31.0</strong></td>
<td>+4.1</td>
<td>+2.0</td>
<td>-3.0</td>
</tr>
<tr>
<td><strong>O. P. %</strong></td>
<td>13.7%</td>
<td>13.8%</td>
<td>15.6%</td>
<td><strong>14.6%</strong></td>
<td>+0.9p</td>
<td>+0.8p</td>
<td>-1.0p</td>
</tr>
<tr>
<td><strong>Ordinary Profit</strong></td>
<td>26.6</td>
<td>28.4</td>
<td>33.4</td>
<td><strong>30.4</strong></td>
<td>+3.7</td>
<td>+2.0</td>
<td>-3.0</td>
</tr>
<tr>
<td><strong>Net Income attribute to Owners of Parent</strong></td>
<td>16.2</td>
<td>19.0</td>
<td>22.5</td>
<td><strong>21.5</strong></td>
<td>+5.2</td>
<td>+2.5</td>
<td>-1.0</td>
</tr>
<tr>
<td><strong>Net profit per share (Yen)</strong></td>
<td>386</td>
<td>450</td>
<td>533</td>
<td>509</td>
<td>+123</td>
<td>+59</td>
<td>-24</td>
</tr>
<tr>
<td><strong>ROE</strong></td>
<td>11.5%</td>
<td>12.1%</td>
<td>14.3%</td>
<td><strong>13.8%</strong></td>
<td>+2.3p</td>
<td>+1.7p</td>
<td>-0.5p</td>
</tr>
</tbody>
</table>

* : Record-high

(Billions yen)
# 2018 Forecast by Segment

(Billions of Yen)

<table>
<thead>
<tr>
<th>Sales</th>
<th>2017</th>
<th>2018</th>
<th>2018 Forecast</th>
<th>Previous Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto</td>
<td>73.3</td>
<td>79.0</td>
<td>79.0</td>
<td>79.0</td>
</tr>
<tr>
<td>P&amp;E</td>
<td>17.4</td>
<td>19.0</td>
<td>19.0</td>
<td>19.0</td>
</tr>
<tr>
<td>Medical</td>
<td>25.1</td>
<td>26.0</td>
<td>26.0</td>
<td>26.0</td>
</tr>
<tr>
<td>Semi</td>
<td>53.3</td>
<td>58.0</td>
<td>60.0</td>
<td>60.0</td>
</tr>
<tr>
<td>Scientific</td>
<td>26.1</td>
<td>28.0</td>
<td>28.0</td>
<td>28.0</td>
</tr>
<tr>
<td>Total</td>
<td>195.3</td>
<td>210.0</td>
<td>218.0</td>
<td>218.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>O.P.</th>
<th>2017</th>
<th>2018</th>
<th>2018 Forecast</th>
<th>Previous Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto</td>
<td>7.6</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
</tr>
<tr>
<td>P&amp;E</td>
<td>1.0</td>
<td>1.4</td>
<td>1.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Medical</td>
<td>1.9</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Semi</td>
<td>15.6</td>
<td>17.0</td>
<td>22.0</td>
<td>22.0</td>
</tr>
<tr>
<td>Scientific</td>
<td>0.4</td>
<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
</tr>
<tr>
<td>Total</td>
<td>26.8</td>
<td>29.0</td>
<td>34.0</td>
<td>34.0</td>
</tr>
</tbody>
</table>

- : Record-high

Sales vs 2017 1st half: +5.6

O.P. vs 2017 1st half: +0.3
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First Half Results and 2018 Forecast

2018 First Half Results

EMS**1: Europe – Solid demand after new regulations
China, India – Demand increase for compliance with new regulations

MCT**2: Lower profitability due to higher sales ratio to Asia

ECT**3: Expanded business in next-gen. automotive technology


2018 Full Year Forecast

EMS: Demand growth in China and India

MCT: Steady delivery of orders received for Europe, Asia

ECT: Aggressive investment to accelerate growth

【Half year】Sales and O.P.

<table>
<thead>
<tr>
<th></th>
<th>Sales (Billions of yen)</th>
<th>O.P. (Billions of yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15.1H</td>
<td>15.2H</td>
</tr>
<tr>
<td>EMS</td>
<td>26.6</td>
<td>38.7</td>
</tr>
<tr>
<td>MCT</td>
<td>2.9</td>
<td>2.2</td>
</tr>
<tr>
<td>ECT</td>
<td>4.2</td>
<td>5.8</td>
</tr>
</tbody>
</table>

【Full year】Sales and O.P.

<table>
<thead>
<tr>
<th></th>
<th>Sales (Billions of yen)</th>
<th>O.P. (Billions of yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS</td>
<td>49.5</td>
<td>55.0</td>
</tr>
<tr>
<td>MCT</td>
<td>4.2</td>
<td>5.8</td>
</tr>
<tr>
<td>ECT</td>
<td>4.2</td>
<td>5.8</td>
</tr>
</tbody>
</table>
Effect of enhanced emission regulations

Status of the next-gen. emission regulations
HORIBA BIWAKO E-HARBOR achieved record-high output

- Sales of EMS business
  - 2015 (Before the start of E-HARBOR) ¥39.8bn
  - 2018 (forecast) ¥49.0bn Up 25%

- Emission regulations

<table>
<thead>
<tr>
<th>Regulation</th>
<th>EU</th>
<th>Japan</th>
</tr>
</thead>
<tbody>
<tr>
<td>WLTP¹</td>
<td>Sep. 2017</td>
<td>Oct. 2018</td>
</tr>
<tr>
<td>RDE²</td>
<td></td>
<td>2022 (plan)</td>
</tr>
</tbody>
</table>

China and India: Adoption of new regulations in 2020 (plan) (Same level as Euro6)

1: Worldwide harmonized Light vehicles Test Procedure
2: Real Driving Emissions
Enhanced engineering capability

Increase in solution provision for the automotive development processes

- **Vehicle testing system** *(Subaru Corp.)*
  - Provide the powertrain testing system that reproduces climate change and other conditions of real driving.
  - Tie up with HORIBA’s labs in Japan and the U.S. and curtail the customer’s development processes.

- **Joint dev’t of EV technologies** *(Keihin Corp.)*
  - HORIBA MIRA provides the battery management system to assists the EV system development.

HORIBA MIRA in the U.K. opened MIRA Technology Institute

Jointly invested with the **LLEP** in the U.K.
- Aimed at fostering personnel in the next-gen. automotive industry
- Education facility in a 24,500㎡ site
- Managed by local universities (inviting professors)

Rendering of MIRA Technology Institute

*Quoted from [https://www.miratechnologypark.com/](https://www.miratechnologypark.com/)*

*LLEP: Leicester & Leicestershire Enterprise Partnership*
Battery evaluation testing facility for electric vehicles (HORIBA BIWAKO E-HARBOR)

- Assessment of the combination of a battery, powertrain, and a vehicle
- Testing a wide range of temperature environment → To be used in evaluating xEV and fuel batteries
- Operation to start in July 2019 (plan)
- Investment amount: about ¥1.3bn

Advanced Battery Development Suite (ABDS) (HORIBA MIRA)

HORIBA MIRA’s engineering capability to be deployed globally
**2018 First Half Results**

- **Stack gas analyzers:** Sales increase in North America due to enforced marketing; flattish demand in Japan
- **Air quality monitoring:** Demand growth in Europe and emerging countries due to enhanced regulations
- **Water quality:** Sales increase due to business expansion in Japan and emerging countries

**2018 Full Year Forecast**

- **Stack gas analyzers:** Anticipate progress in VOC regulations in China
- **Process measurement equipment:** Anticipate a recovery in investment due to higher oil prices
- **Water quality monitoring:** Capture replacement demand in Japan and expand business in emerging countries
Business growth in Asia

Expand the environmental regulation and monitoring business

- Delivery to and continued orders received from Ho Chi Minh and 5 other cities/provinces in Vietnam
  - Air Quality Monitoring Station (AQMS)
  - Water Quality Monitoring Station (WQMS)

Main operation by HORIBA, Vietnam

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Air pollution monitoring equipment business:</td>
<td>2.4</td>
<td>2.1</td>
<td>2.5</td>
<td>3.0</td>
</tr>
<tr>
<td>Consolidated sales (¥bn)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Analytical part of AQMS, produced at HORIBA BIWAÇO E-HARBOR

Launch of “HAKARU※ EXpress”

From a hardware sales business to a data sales business using cloud computing

- Installation of automatic total nitrogen, total phosphorous measurement equipment
  1. Provide the water quality measurement report
  2. Use cloud and monitor the status of equipment

Main operation by HORIBA Advanced Techno

Dan Horiba
President of HORIBA Advanced Techno Co., Ltd.

“HAKARU EXpress” service
※: HAKARU = Measuring in Japanese

Trouble
Diagnosis
Analysis
Recovery
Stable Operation

Install Equipment
Measurement
Cloud
Daily Maint.
Routine Maint.

Air pollution monitoring equipment business:
Consolidated sales (¥bn)
Intensified competition in hematology and CRP analyzers in Japan
Further business expansion in emerging countries with high demand
Higher sales promotion expenses due to new product launch

Business expansion in emerging countries (China, India)

Sales and O.P. (Billions of yen)

<table>
<thead>
<tr>
<th>2018 First Half Results</th>
<th>2018 Full Year Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strong sales of new products in Japan</strong></td>
<td><strong>Intensified competition in hematology and CRP analyzers in Japan</strong></td>
</tr>
<tr>
<td><strong>Sales increase in Europe in yen terms due to the weaker yen</strong></td>
<td><strong>Further business expansion in emerging countries with high demand</strong></td>
</tr>
<tr>
<td><strong>Business expansion in emerging countries (China, India)</strong></td>
<td><strong>Higher sales promotion expenses due to new product launch</strong></td>
</tr>
</tbody>
</table>

(2018 First Half Results and 2018 Forecast)
Initiatives for business expansion

New products to be launched globally

Mid and large-sized new product
“HELO Solution”
Completed installation in France, Brazil, Thailand and the U.K.

5 diff. white cell diagnosis + CRP
“Yumizen H630”
Favorable sales to doctors in private practice in Japan

Business alliance with Siemens Healthcare Diagnostics
In the process of arranging products for obtaining accreditation

Opened the application center (biochemical) to accelerate the U.S. business

➢ To start full operation in August 2018 (plan) in Irvine, California
➢ For application development in the biochemical field
➢ Biochemical business consolidated sales: ¥4.1bn (2017)

Biochemical analytical equipment to be launched in the U.S. (OEM supply from JEOL Ltd.)
First Half Results and 2018 Forecast

**2018 First Half Results**

- Record-high sales and O.P.
- Record-high production volume in Mass Flow Controllers (MFC)
- The Aso factory expansion boosted supply capacity.

**2018 Full Year Forecast**

- Anticipate a pick-up in investment in the second half due to solid demand from a mid- to long-term perspective, despite the current time-out in capital spending demand by semicon makers.
- **Japan** : The Aso factory’s full-fledged operation has stabilized the supply system.
- **Overseas** : Opening of a new development base in the U.S. to enhance a global R&D capacity.
Semi

Strengthen supply capacity and global R&D

Full-fledged production after the Aso expansion

Combined output at Aso and Kyoto
350,000 MFCs per year

Production status: Record-high output (March 2018)
Aso Factory: Mass production of MFCs
Kyoto Factory: Development and production of advanced MFCs

HORIBA STEC Aso Factory

Construction completion ceremony (May 2018)

Opening of HORIBA Reno Technology Center

Enhance a N. America development base in the focus area

Establish a global R&D capability

Start: Aug. 2018
Investment: App. ¥1.2bn
Place: Reno, Nevada, the U.S.
Activity: Development in fluid measurement and control technologies

Relocate into the semiconductor industry cluster region
1. Deepen relationship with customers
2. Promptly capture needs
3. Incorporate into products

HORIBA’s global MFC market share: About 60% (HORIBA’s estimate; as of 2018)
First Half Results and 2018 Forecast

2018 First Half Results

+ Sales increase in Japan and Europe on the back of robust corporate R&D spending
+ Americas’ sales up for semicon makers’ spectroscopes
- Expense incurred to strengthen bases in Americas

2018 Full Year Forecast

+ Solid sales in Japan to continue
+ Enhance actions for business expansion in secondary batteries
- Risk in temporary slowdown in sales of spectroscopes for semicon makers in Americas
Strengthen global bases and expand core business

Opening of HORIBA New Jersey Optical Spectroscopy Center

Start: Aug. 2018  Investment: App. ¥2.1bn
Place: Piscataway, New Jersey, the U.S.
Activity: Development and production of fluorescence analyzers and spectrometers

Expand into the life science field
Fluorescence analyzer DUETTA
Expanding demand for semiconductors
Spectrometer

HORIBA New Jersey Optical Spectroscopy Center

Hosting of the RamanFest 2018 International Symposium on Raman technologies

➢ Held on June 25 and 26, 2018
➢ Attended by about 100 advanced technology researchers and developers
➢ HORIBA initiated this project, held the first one in 2013 and the first in Japan in 2018.
➢ 16 academic/corporate speakers and poster session ➔ Connecting academia and industries

Aim at further business expansion as a leading company with a 50-year history in Raman Spectroscopy

RamanFest 2018

* HORIBA’s estimate (as of 2018)
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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 buyback

<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>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.)

- 2008: 44 yen
- 2009: 13 yen
- 2010: 17 yen
- 2011: 40 yen
- 2012: 50 yen
- 2013: 60 yen
- 2014: 67 yen
- 2015: 70 yen
- 2016: 85 yen
- 2017: 116 yen
- 2018: 120 yen

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HORIBA’s perspectives on ESG investment

Contribution to the environment and society via its business:
Building of an open & fair governance structure

**Examples**

**Environment**
- **Portable emission measurement system OBS—ONE**
- **Industrial water quality analyzer H-1 Series**
- **Emission gas measurement system**
  Contribute to emission regulations, realizing healthy society, preventing climate change
- **Environment-related products**
  Contribute to environmental preservation and improvement by identifying causes of pollutions via analysis of air pollutants and industrial waste

**Social**
- **Innovation for electrification & autonomous driving**
  Help realize safe, pleasant society
- **MIRA Technology Institute**
  Contribute to industries’ development by developing next-gen. talents
- **Aso factory’s expansion**
  Contribute to local communities and continuous job creation

**Governance**
- **Outside Directors with diverse experiences and skills**
  Raise the quality of strategies by making decisions upon active discussions at the Board of Directors and corporate value

- Sawako Takeuchi
  Academic background as a holder of a doctor’s degree in engineering and international experience

- Masahiro Sugita
  Deep insight and knowledge on finance and economy, and accumulated experience as a director and auditor of other companies

- Jiko Higashifushimi
  Insight as Head Priest of the Shorenin Religious Corporation and work experience at a financial institution
Case of an improved asset efficiency in the MCT business

◆ Improvement at Olomouc Factory (Czech) with a focus on production of standard Chassis dynamometers
✓ Full review of production processes and supply chain and adoption of the Kanban pull system

25% cut in production lead-time

Workshops on adoption of a new benchmark

◆ Action plan for those responsible in global finance
◆ Workshops for managers

➢ Action plan (examples)
  • Promoting the benchmark to all group employees
  • Optimization of group inventory by sharing inventory information
  • Building of a sales company–factory cooperative structure for collection of receivables

HORIBA Premium Value

A new management benchmark with awareness on WACC

O.P.  Cost of capital

(Invested capital X In-house rate of cost of capital)
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Trend of Market capitalization

¥132bn in Jan. 2008

¥52bn in Dec. 2008

¥407bn on May 14, 2018 (Record-high)
### Operating Profit Analysis (vs 2017)

(Billions of yen)

- Increase Sales: +11.66
- Increase Cost of Goods Sales: -4.98
- Exchange Impact for Gross Profit: +0.06
- Exchange Impact for Expenses: -0.36
- Increase R&D Cost: -0.44
- Increase Other Expenses: -1.58

- Operating Profit: 14.05

---

- Increase Gross Profit: +6.68
- Exchange Impact: -0.30
- Increase Expenses: -2.02

Increase of Operating Profit: +4.35
## Impact of Fluctuation in Foreign exchange

### Exchange rate impact (2018 First-Half Results)

<table>
<thead>
<tr>
<th></th>
<th>Sales</th>
<th>Operating profit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Billions of Yen)</td>
<td>(Billions of Yen)</td>
</tr>
<tr>
<td>Total</td>
<td>+¥0.97bn</td>
<td>-¥0.30bn</td>
</tr>
<tr>
<td>Auto</td>
<td>+0.67</td>
<td>-0.13</td>
</tr>
<tr>
<td>P&amp;E</td>
<td>+0.05</td>
<td>-0.06</td>
</tr>
<tr>
<td>Medical</td>
<td>+0.34</td>
<td>-0.06</td>
</tr>
<tr>
<td>Semi</td>
<td>-0.25</td>
<td>-0.46</td>
</tr>
<tr>
<td>Scientific</td>
<td>+0.14</td>
<td>-0.15</td>
</tr>
<tr>
<td>Total</td>
<td>+0.97</td>
<td>-0.88</td>
</tr>
</tbody>
</table>

### Exchange rate impact for 2018 Forecast

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

- **Sales**
  - USD: -¥0.47bn  
  - EUR: -¥0.33bn

- **Operating profit**
  - USD: -¥0.20bn  
  - EUR: -¥0.02bn

---

**Currency rates**

- **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>2017 Results</th>
<th>2018 Forecast (as of May 9)</th>
<th>2018 Forecast (as of Aug. 3)</th>
<th>2018 vs 2017</th>
<th>2018 vs Previous Forecast</th>
<th>2017 First-Half Results</th>
<th>2018 First-Half Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Investment</td>
<td>11.6</td>
<td>16.0</td>
<td>16.0</td>
<td>+0.4</td>
<td>-</td>
<td>5.5</td>
<td>5.7</td>
</tr>
<tr>
<td>Depreciation</td>
<td>7.5</td>
<td>7.5</td>
<td>7.5</td>
<td>-0.0</td>
<td>-</td>
<td>3.6</td>
<td>3.5</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>13.9 (To net sales) 7.1%</td>
<td>15.5</td>
<td>15.5</td>
<td>+0.1</td>
<td>-</td>
<td>6.6</td>
<td>7.2</td>
</tr>
</tbody>
</table>

## 2018 Topics

- **PP&E**: Enhancement of North American bases, Investment to MIRA, Battery evaluation testing facility (HORIBA BIWAKO E-HARBOR), Enhancement of global bases
- **Depreciation**: Decrease Goodwill of MIRA※ (¥0.4bn/year) + Increase by new investment
- **R&D**: Increase in Auto Business

※Good will of MIRA e.g...Amortization included
## Consolidated Cash Flows

(Billions of Yen)

<table>
<thead>
<tr>
<th></th>
<th>2018 First Half</th>
<th>2017 First Half</th>
<th>Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash flows from operating activities</td>
<td>+12.40</td>
<td>+16.27</td>
<td>-3.86</td>
</tr>
<tr>
<td>Cash flows from investing activities</td>
<td>-4.43</td>
<td>-6.80</td>
<td>+2.37</td>
</tr>
<tr>
<td>Cash flows from financing activities</td>
<td>-4.31</td>
<td>-7.10</td>
<td>+2.79</td>
</tr>
<tr>
<td>Cash and cash equivalents at end of year</td>
<td>61.47</td>
<td>54.17</td>
<td>+7.29</td>
</tr>
<tr>
<td>Free cash flows</td>
<td>+7.97</td>
<td>+9.47</td>
<td>-1.49</td>
</tr>
</tbody>
</table>
Cash Balance

(Billions of Yen)

Total Loan Balance

44.7

46.7

42.0

40.5

(Consolidated basis, each end of year)

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

*B1 Cash…Cash and Cash Equivalents at End of Period. *2 JBIC: Japan Bank for International Cooperation

- Bond redemption
  In 2020

- Borrowed from JBIC※2
  ¥15.1bn

- Current ratio
- Capital ratio

<table>
<thead>
<tr>
<th>Year</th>
<th>Cash*1</th>
<th>Bonds</th>
<th>Current ratio</th>
<th>Capital ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>47.8</td>
<td>15.0</td>
<td>242%</td>
<td>56%</td>
</tr>
<tr>
<td></td>
<td>16.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>51.9</td>
<td>15.0</td>
<td>237%</td>
<td>55%</td>
</tr>
<tr>
<td></td>
<td>19.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>58.3</td>
<td>15.0</td>
<td>239%</td>
<td>57%</td>
</tr>
<tr>
<td></td>
<td>18.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018 end of Jun.</td>
<td>61.4</td>
<td>15.0</td>
<td>245%</td>
<td>57%</td>
</tr>
<tr>
<td></td>
<td>18.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7.1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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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
**Business Segments**

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

**Sales Breakdown by Segment**

- **Automotive**
  - 73.3% (649 MUSD)
  - (Sales of FY2017)

- **Semicon**
  - 53.3% (471 MUSD)

- **Medical**
  - 25.1% (222 MUSD)

- **Scientific**
  - 26.1% (231 MUSD)

- **P&E**
  - 17.4% (154 MUSD)

**Sales**

- ¥195.3bn

(Sales of FY2017)

- 38% = Automotive Sales Ratio
- 27% = Medical Sales Ratio
- 13% = Scientific Sales Ratio
- 9% = P&E Sales Ratio

( ) = Segment Sales in MUSD

%- = Segment Sales Ratio
Market Share

Global

Emission Measurement Systems

Stack Gas Analyzers

Domestic

Automatic Blood Cell Counter plus CRP

(As of December 31, 2015)

Mass Flow Controllers

Raman Spectrophotometers

Gratings

80%

20%

100%

60%

30%

35%

※Market shares quoted are estimates by HORIBA.
HORIBA Worldwide

Sales of FY2017: ¥195.3bn
(1,729 MUSD)

The Number of Group Companies by region
(As of December 31, 2017)

<table>
<thead>
<tr>
<th>Region</th>
<th>Count</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 Ratio by Region

- EU: 21%
- Japan: 33%
- Americas: 17%
- Asia: 29%
Employees by Region

(As of December 31, 2017)

- Japan: 38%
- The U.S.: 11%
- Germany: 8%
- The U.K.: 11%
- France: 12%
- Other Asia: 16%
- Other Europe: 2%
- Americas: 2%

Total Number of Employees:
- 7,399

- Total Asia: 4,041 (54%)
- Total Europe: 2,414 (33%)
- Total Americas: 944 (13%)
Thank you