CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Cautionary note regarding forward-looking statements: All matters discussed in this presentation, except for any historical data, are forward-looking statements. Forward looking statements involve risks and uncertainties that could cause actual results to differ materially from those in the forward-looking statements. These include, but are not limited to, economic conditions and trends in the semiconductor industry generally and the timing of the industry cycles specifically, currency fluctuations, corporate transactions, financing and liquidity matters, the success of restructurings, the timing of (significant) orders, market acceptance of new products, competitive factors, litigation involving intellectual property, shareholders and/or other issues, commercial and economic disruption due to natural disasters, terrorist activity, armed conflict or political instability, epidemics and other risks indicated in the company’s reports and financial statements. The company assumes no obligation nor intends to update or revise any forward-looking statements to reflect future developments or circumstances.
OUTLINE

› Semiconductor capital spending in 2015
› ASMI results in 2015
› Corporate responsibility
› Products & business highlights
› Market outlook and conclusions
OUTLINE

› Semiconductor capital spending in 2015
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OUR INDUSTRY WAS SLIGHTLY DOWN IN 2015

SEMICONDUCTOR CAPITAL SPENDING
(USD billion)

Source: Gartner, April 2016

Semiconductor capex was down in 2015 by 1%
WAFER FAB EQUIPMENT WAS SLIGHTLY DOWN IN 2015

WAFER FAB EQUIPMENT BY DEVICE TYPE
(USD billion)

2010 2011 2012 2013 2014 2015

-18%  +15%  -8%  +16%  -1%

Other       Memory       Logic       Foundry

Source: Gartner, April 2016

› 2015 WFE spending decreased by 1%
› Memory was strong, Logic was weak
OUTLINE

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KEY HIGHLIGHTS – 2015 (BASED ON IFRS)

› ASMI revenues up 23% and up 14% at constant currencies

› Gross margin further increased to 44%

› ASMI EBIT margin 16.6% in 2015 compared to 17.1% in 2014
  • Excluding impairments 450 mm, margin improved from 17.3% in 2014 to 19.0% in 2015

› Free cash flow up 33% to €104 million in 2015
  • Second €100 million share buyback program announced October 2015
  • Proposal to ASMI 2016 AGM for dividend of €0.70 per share

› Normalized net earnings of €185 million up from €161 million in 2014
  • ASMPT contributed €44 million to net earnings in 2015
## NET EARNINGS 2015

### FINANCIALS BASED ON IFRS

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NET SALES</strong></td>
<td>546</td>
<td>670</td>
<td>162</td>
<td>201</td>
<td>162</td>
<td>145</td>
<td>142</td>
</tr>
<tr>
<td><strong>GROSS PROFIT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross margin</td>
<td>43.1%</td>
<td>44.1%</td>
<td>43.1%</td>
<td>45.0%</td>
<td>43.4%</td>
<td>44.8%</td>
<td>43.9%</td>
</tr>
<tr>
<td>Selling, general and administrative</td>
<td>(81)</td>
<td>(93)</td>
<td>(21)</td>
<td>(25)</td>
<td>(24)</td>
<td>(23)</td>
<td>(23)</td>
</tr>
<tr>
<td>Research and development</td>
<td>(61)</td>
<td>(90)</td>
<td>(18)</td>
<td>(20)</td>
<td>(15)</td>
<td>(37)</td>
<td>(21)</td>
</tr>
<tr>
<td>Restructuring</td>
<td>(0.1)</td>
<td>(1.7)</td>
<td>-</td>
<td>(0.5)</td>
<td>(0.3)</td>
<td>(0.9)</td>
<td>(0.5)</td>
</tr>
<tr>
<td><strong>EBIT</strong></td>
<td>93</td>
<td>111</td>
<td>31</td>
<td>45</td>
<td>31</td>
<td>4</td>
<td>19</td>
</tr>
<tr>
<td>EBIT margin</td>
<td>17.1%</td>
<td>16.6%</td>
<td>19.2%</td>
<td>22.1%</td>
<td>18.9%</td>
<td>2.8%</td>
<td>13.2%</td>
</tr>
<tr>
<td>Financing cost</td>
<td>25</td>
<td>25</td>
<td>28</td>
<td>(12)</td>
<td>2</td>
<td>6</td>
<td>(11)</td>
</tr>
<tr>
<td>Income tax</td>
<td>(19)</td>
<td>5</td>
<td>(4)</td>
<td>(5)</td>
<td>8</td>
<td>7</td>
<td>(2)</td>
</tr>
<tr>
<td>Result from investments*</td>
<td>62</td>
<td>43</td>
<td>13</td>
<td>20</td>
<td>9</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Amortization intangible assets resulting from the sale of the 12% stake of ASMPT</td>
<td>(23)</td>
<td>(27)</td>
<td>(7)</td>
<td>(7)</td>
<td>(7)</td>
<td>(7)</td>
<td>(7)</td>
</tr>
<tr>
<td><strong>NET RESULT</strong></td>
<td>138</td>
<td>157</td>
<td>62</td>
<td>42</td>
<td>43</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td><strong>NORMALIZED NET RESULT</strong>*</td>
<td>161</td>
<td>185</td>
<td>68</td>
<td>49</td>
<td>50</td>
<td>18</td>
<td>12</td>
</tr>
</tbody>
</table>

* (excl. amortization intangible assets resulting from the sale of the 12% stake of ASMPT)
## BALANCE SHEET

### FINANCIALS BASED ON IFRS

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and cash equivalents</td>
<td>386</td>
<td>447</td>
<td>416</td>
</tr>
<tr>
<td>Other current assets</td>
<td>234</td>
<td>223</td>
<td>232</td>
</tr>
<tr>
<td>Property, plant and equipment, net</td>
<td>79</td>
<td>92</td>
<td>91</td>
</tr>
<tr>
<td>Goodwill, net</td>
<td>11</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Other intangible assets</td>
<td>65</td>
<td>82</td>
<td>85</td>
</tr>
<tr>
<td>Investments &amp; associates, and other assets</td>
<td>1,093</td>
<td>1,181</td>
<td>1,134</td>
</tr>
<tr>
<td>Other non-current assets</td>
<td>21</td>
<td>41</td>
<td>42</td>
</tr>
<tr>
<td><strong>TOTAL ASSETS</strong></td>
<td><strong>1,889</strong></td>
<td><strong>2,076</strong></td>
<td><strong>2,010</strong></td>
</tr>
<tr>
<td>ST debt (incl. current LT debt)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other current liabilities</td>
<td>135</td>
<td>115</td>
<td>117</td>
</tr>
<tr>
<td>Other long term liabilities</td>
<td>12</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td><strong>TOTAL LIABILITIES</strong></td>
<td><strong>146</strong></td>
<td><strong>128</strong></td>
<td><strong>130</strong></td>
</tr>
<tr>
<td>Total shareholders’ equity</td>
<td>1,743</td>
<td>1,948</td>
<td>1,880</td>
</tr>
<tr>
<td><strong>TOTAL LIABILITIES &amp; EQUITY</strong></td>
<td><strong>1,889</strong></td>
<td><strong>2,076</strong></td>
<td><strong>2,010</strong></td>
</tr>
</tbody>
</table>
## CASH FLOW

### FINANCIALS BASED ON IFRS

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Normalized net result</td>
<td>164</td>
<td>185</td>
<td>68</td>
<td>12</td>
</tr>
<tr>
<td>Depreciation and amortization</td>
<td>33</td>
<td>54</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>Working capital</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>(9)</td>
</tr>
<tr>
<td>Result from investments</td>
<td>(62)</td>
<td>(44)</td>
<td>(13)</td>
<td>(6)</td>
</tr>
<tr>
<td>Other adjustments</td>
<td>(10)</td>
<td>(23)</td>
<td>(22)</td>
<td>10</td>
</tr>
<tr>
<td><strong>Net cash from operating activities</strong></td>
<td><strong>125</strong></td>
<td><strong>175</strong></td>
<td><strong>43</strong></td>
<td><strong>19</strong></td>
</tr>
<tr>
<td>Dividend received from investments</td>
<td>20</td>
<td>43</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Capitalized development expenditure</td>
<td>(14)</td>
<td>(30)</td>
<td>(6)</td>
<td>(7)</td>
</tr>
<tr>
<td>Capital expenditure and other</td>
<td>(32)</td>
<td>(40)</td>
<td>(8)</td>
<td>(7)</td>
</tr>
<tr>
<td><strong>Net cash from investing activities</strong></td>
<td><strong>(26)</strong></td>
<td><strong>(29)</strong></td>
<td><strong>(14)</strong></td>
<td><strong>(14)</strong></td>
</tr>
<tr>
<td><strong>Net cash from financing activities</strong></td>
<td><strong>(58)</strong></td>
<td><strong>(105)</strong></td>
<td><strong>(25)</strong></td>
<td><strong>(24)</strong></td>
</tr>
<tr>
<td><strong>Net cash (used) provided</strong></td>
<td><strong>41</strong></td>
<td><strong>41</strong></td>
<td><strong>4</strong></td>
<td><strong>(19)</strong></td>
</tr>
</tbody>
</table>
HISTORICAL DEVELOPMENT – ASMI

(EUR million)

Net Sales (lhs)  EBIT (rhs)
BOOKINGS & BACKLOG – ASMI

(EUR million)

- Bookings
- Backlog
SHAREHOLDER REMUNERATION

› Proposed dividend increases by 17% to €0.70 per share

› Second €100 million share buyback announced in October 2015
  • To be executed in 2015/2016 timeframe; 57% completed as of May 23, 2016
  • As part of commitment to use excess cash for the benefit of shareholders

DIVIDEND PER SHARE PAID (EUR)

CUMULATIVE CASH RETURNED TO MARKET ‘10-’16 YTD (EUR M)

**as of 23 May 2016, including proposed dividend

*proposed
TOTAL SHAREHOLDER RETURN IN 2014-2015

- Comparison of same sector companies
- Includes dividend payouts and redistribution of capital
TOTAL SHAREHOLDER RETURN 2011-2015

› Comparison of same sector companies
› Includes dividend payouts and redistribution of capital
Strong increase in implied value to €1.0 billion positive up from €400-500 million negative in May 2012
SHAREHOLDING IN ASMPT

As of 15 March 2013, our share of approximately 40% of ASMPT’s net earnings is included in ‘result from investments’

Amortization intangible assets resulting from the sale of the 12% stake in ASMPT amounted to €27 million in 2015

<table>
<thead>
<tr>
<th>EUR million</th>
<th>Full year 2014</th>
<th>Full year 2015</th>
<th>Q1 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales ASMPT (HK$ million)</td>
<td>14,229</td>
<td>12,977</td>
<td>2,862</td>
</tr>
<tr>
<td>Net profit ASMPT (EUR million, 100% based)</td>
<td>179</td>
<td>120</td>
<td>16</td>
</tr>
<tr>
<td>Result from investments (including ASMI’s 40% share of ASMPT net profit)</td>
<td>62</td>
<td>43</td>
<td>6</td>
</tr>
<tr>
<td>Remeasurement gain, realized gain on sale of ASMPT shares, amortization and fair value adjustments</td>
<td>(23)</td>
<td>(27)</td>
<td>(7)</td>
</tr>
<tr>
<td>Result from ASMPT investment</td>
<td>39</td>
<td>16</td>
<td>(1)</td>
</tr>
</tbody>
</table>
OUTLINE

› Semiconductor capital spending in 2014
› ASMI results in 2014
› Corporate Responsibility
› Products & Business highlights
› Market outlook and conclusions
CORPORATE RESPONSIBILITY

Second Annual Corporate Responsibility (CR) Report

- In reference to Global Reporting Initiative (GRI) G4 Standard
- Reported Materiality Assessment and Stakeholder Engagement

Electronics Industry Citizenship Coalition (EICC) Code of Conduct

- Continued “Low Risk” ranking in official EICC system
- Performance against the Code of Conduct is a corporate objective
- Conducted third-party audits of 3 key ASM sites
- Expanded accountability into supply chain, conducted high-risk supplier audits

Next Steps:

- Complete 3rd Party EICC audits at 2 remaining key sites before the end of 2017

Transparency → ASM website + Corporate Responsibility Report
HEALTH & SAFETY

GLOBAL INJURY AND RECORDABLE RATES

- Injury rate declines for 5th year in a row
- Safety Leadership engagement sessions almost complete
- Global Service Safety Manager added
- Further strengthened high risk area strategic safety plans
  - Service, Engineering Lab and Manufacturing
Completed three-year plan (2013-2015)

ENVIRONMENTAL SCORECARD

<table>
<thead>
<tr>
<th>OBJECTIVES</th>
<th>UNIT</th>
<th>RESULTS 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>GREENHOUSE GAS (GHG) REDUCING MEASURES</td>
<td>METRIC TON EQUIV CO₂ (MTCO₂E)</td>
<td>94% OF TARGET</td>
</tr>
<tr>
<td>WATER USAGE REDUCTION (M³)</td>
<td>M³</td>
<td>248% OF TARGET</td>
</tr>
<tr>
<td>RECYCLED SOLID WASTE DIVERSION RATE</td>
<td>PERCENT (%) OF TOTAL SOLID WASTE</td>
<td>65%</td>
</tr>
<tr>
<td>COMPLIANCE WITH DISCHARGE REQUIREMENTS</td>
<td>TOTAL COUNT</td>
<td>ZERO VIOLATIONS</td>
</tr>
</tbody>
</table>

Achieved  Partially achieved  Not achieved

2016-2020 Targets

- Reduce GHG emissions by 5% / R&D spend below 2015 levels by 2020
- Reduce water use by 10% / R&D spend below 2015 levels by 2020
- Less than 10% of all waste to landfill by 2020
- New construction projects exceed energy efficiency standards of local jurisdictions
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ASM has a leading position in ALD

- ALD for high-k metal gates
- ALD spacers for multiple patterning (Memory & Logic)

ASM Epitaxy strong position in Analog & Power

PECVD

- Low-k supplier for 7th consecutive Logic device node
- New PECVD opportunities on XP8 platform

Vertical furnace increased business for More-than-Moore apps
WHAT HAS CHANGED IN 2015?

› Further broadening of single wafer ALD applications

› Revenue contribution of Memory segment further increased

› Further strengthened position within the top-10 capex customers

› 2015 another year in which ASMI outgrew the wafer fab equipment market
GROWING WALLET SHARE WITH TOP CLIENTS

Further grew our position beyond the top-3 in the top-10 capex spenders in 2015.

Growing share of wallet with top clients

<table>
<thead>
<tr>
<th>ASMI REVENUE</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top 3</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Nr 4-10</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Rest</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Growing share of wallet with top clients
ALD BECOMING AN IMPORTANT DEPOSITION EQUIPMENT SEGMENT

› The CAGR ‘15–’19 of the ALD segment is highest within the deposition equipment market

› ALD estimated to represent between 20 and 25% of the total deposition equipment market by 2019

› Drivers for growth:
  - Strengths of ALD: (i) high-precision deposition of smooth and conformal ultra-thin films; (ii) ability to deposit new materials
  - Device scaling, new materials and the use of 3D structures all are drivers to increase demand for ALD
ESTIMATED ALD MARKET GROWTH

Long term growth 2015-2019

- Single wafer ALD market ~$750m in 2015
- Expected to double to approximately ~$1.5bn in the next 3-4 years

Key market growth drivers

- In Logic/Foundry a strong rise in the number of ALD steps going from 16/14nm to 10/7nm: new patterning steps, next generation high-k/metal gates and new applications for advanced FinFET devices
- In Memory new films for 3D NAND devices and advanced patterning layers & non-patterning films for DRAM

Source: ASMI, Gartner, VLSI April 2016
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SEMICONDUCTOR GROWTH DRIVERS

SEMICONDUCTOR SALES BY KEY APPLICATION

(USD billion)

Source: Gartner, April 2016

› Semiconductor growth drivers are mobile devices, but long term growth rate is slowing
› New semi growth drivers are solid state drives, servers, automotive and IoT

CAGR '15-20

- Industrial Trans, Automation, Security +12%
- Automotive +6%
- Solid State Drives +15%
- Smartphone Premium +1%
- Smartphone Basic +7%
- Tablet -2%
- PC / Tablet Hybrid +26%
- PC Ultramobile Clamshell +12%
- PC Desktop & Notebook -6%
ASM MARKETS

WAFER FAB EQUIPMENT BY TECHNOLOGY NODE

Source: Gartner, April 2016

Advanced nodes: market segments with high expected growth
Based upon the current backlog and our current visibility:

For Q2 we expect sales between €130-€140 million, while we expect an order intake of €145-€165 million, both on a currency comparable level.

Based upon the current visibility, we expect a much stronger second half as compared to the first half of 2016.
SUMMARY

› Revenue increased 23% in 2015 and 14% at constant currencies, again outperforming the overall wafer fab equipment market

› Solid traction in ALD continued in 2015

› Strong improvement in free cash flow

› The Company believes to be well positioned for an increased number of ALD applications in the next technology nodes for Logic/Foundry/Memory