Business model and capital allocation strategy

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Investor Day Veldhoven
Business model and capital allocation strategy

Key messages

Investments create value

Our continued investments in technology leadership have created significant shareholder value

Growth in markets

Growth in semiconductor end markets and increasing lithography intensity on future nodes fuel demand for our products and services

Market scenarios opportunity

We expect substantial growth opportunities in this decade. Based on different market scenarios, we see an opportunity to achieve the following in 2025 and 2030:

- **2025**: annual revenue between approximately €30 billion and €40 billion with gross margin between approximately 54% and 56%
- **2030**: annual revenue between approximately €44 billion and €60 billion with gross margin between approximately 56% and 60%

Growing dividends and buybacks

We expect to continue to return significant amounts of cash to our shareholders through a combination of growing dividends and share buybacks. ASML announces a new share buyback program, effective today, and to be executed by December 31, 2025. We intend to repurchase shares up to an amount of €12.0 billion.
Historical shareholder value creation

Continuing growth

Continued shareholder value creation
ASML’s technology leadership comes from strategic investments that enable cost-effective innovations for our customers

**Growth methods**

Organic growth by investments in R&D and Capex

Strategic acquisitions and investments in
- Supply chain for technology and capacity (Cymer, Carl Zeiss SMT, Berliner Glas)
- New business (HMI)

**Investments**

- Cymer acquisition (€1.1bn)
- Carl Zeiss SMT Holding acquisition 24.9% interest (€1.0bn)
- HMI acquisition (€2.8bn)
- Berliner Glas acquisition (€0.3bn)

* ASML contribution Zeiss SMT Capex included as of 2017
** 2022E is the best estimate for the FY2022 figures
ASML’s EPS has grown at a CAGR of 18% since 2010 driven by revenue growth, improved margins and share buybacks

**Growth drivers**

- Systems revenue grew at a 12% CAGR since 2010
- Installed Base Management* grew at a 21% CAGR since 2010 driven by upgrades and service of growing installed base
- Gross margin improved from 43% in 2010 to ≥50%, reflecting the strength of our DUV and Applications business and progress in EUV profitability
- EPS grew at 18% CAGR since 2010 driven by profitability and share buyback

\* Installed Base Management equals our net service and field option sales
ASML created significant shareholder value over the period 2010-2022*

ASML outgrows markets indices

Total Shareholder Return (TSR) annualized compounded:

- **ASML (Nasdaq)**: 24%
- Semiconductor index - SOX 18%
- Technology index - Nasdaq 14%

Source: Bloomberg (Total Shareholder Return: index = 2010)

Total Shareholder Return (TSR) = shareprice increase + dividend pay-out

2022*: the graph includes data until November 1, 2022

November 11, 2022
Historical shareholder value creation

**Continuing growth**

Continued shareholder value creation
Model scenarios

Model assumptions

1. **End markets**
   - Start with end markets

2. **Wafer demand**
   - Convert to wafer demand: High – Low scenarios

3. **Litho spend**
   - Translate to worldwide units, convert to ASML share

**Installed Base Management**

- Estimate growth of our Installed Base business

**Scenarios**

- 2025 High
- 2025 Low
- 2030 High
- 2030 Low

**2025** High

**2030** High

**2025** Low

**2030** Low
Semi end markets expected to grow 9% through 2030
All markets contributing; Datacenter, Automotive and Industrial expected to outperform

Source: Historical data: Gartner. Outlook: Gartner 3Q22 Forecast (Sep22, 2022) for years ’22-’26; Outlook 2030: ASML estimate; segment revenue extrapolated using ’20-’26
Compound Annual Growth Rate (CAGR). Some deviations from this methodology due to expected growth profile differences across the decade

ASML November 11, 2022
Translating to expected growth of wafer demand in all segments

Higher growth for advanced Logic, mature markets and Technological sovereignty and foundry competition compared to CMD 2021

Cost-effective innovations

- Tech sovereignty leading to less efficient use of the installed capacity as countries/regions aim to (re)gain fab footprint.
- Fab base becomes more spread in ownership and geography and load balancing will become more difficult.
- Intensified foundry competition could lead to period with overcapacity as players try to capture market share.

<table>
<thead>
<tr>
<th></th>
<th>2020-2025CMD</th>
<th>2020-2030CMD</th>
<th>Percentage CAGR 2020-2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAND</td>
<td>+100</td>
<td>+100</td>
<td>4.9%</td>
</tr>
<tr>
<td>DRAM</td>
<td>+80</td>
<td>+80</td>
<td>4.7%</td>
</tr>
<tr>
<td>Advanced Logic</td>
<td>+125</td>
<td>+220</td>
<td>12.0%</td>
</tr>
<tr>
<td>Mature</td>
<td>+200</td>
<td>+380</td>
<td>6.0%</td>
</tr>
<tr>
<td>Total</td>
<td>+505</td>
<td>+780</td>
<td>6.5%</td>
</tr>
<tr>
<td>+ Technological</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sovereignty &amp;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competition</td>
<td></td>
<td>+150</td>
<td>7.4%</td>
</tr>
<tr>
<td>Total capacity</td>
<td>+505</td>
<td>+930</td>
<td></td>
</tr>
</tbody>
</table>

Source: ASML analysis, advanced Logic ≤28 nm, mature >28 nm

~10% inefficiency or an additional 18 million wafer capacity by 2030.
Lithography spend increasing on future nodes

**Advanced Logic (≤ 28 nm)**
- 45 kwspm

**DRAM**
- 100 kwspm

**NAND**
- 120 kwspm

*Spend % by Wavelength*

- 7 nm
- 5 nm
- 3 nm
- 2 nm
- 1.x nm
- 1 nm

**Spend % by Wavelength**

- 92L
- 128L
- 176L
- 2xxL
- 3xxL
- 4xxL
- 5xxL

*kwspm: 1,000 wafer starts per month;** NoN: Node on Node;
Mature markets drive DUV spend

### Power

- 250 nm
- 130 nm
- 45 nm

### Mature Logic/Analog

- 250 nm
- 130 nm
- 45 nm

### Sensors

- Non-Optical
- Optical

- 250 nm
- 40 nm
Installed Base Management*: growing installed base provides opportunity for growth in service and upgrades

**Growth drivers:**

- **Growing installed base** population
- **Service**: move to value-based services
- **Upgrades**: design for extendibility, enabling performance upgrades in the field

**Installed Base Management**: services and upgrades

*Installed Base Management equals our net service and field option sales
## Model assumptions 2025 & 2030

### Market share assumptions: EUV 100%, ArFi 90%, Dry 65%

<table>
<thead>
<tr>
<th>General</th>
<th>Advanced Logic (≤ 28 nm)</th>
<th>DRAM</th>
<th>NAND</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EUV High-NA high volume from 2025/2026</td>
<td>EUV High-NA from 2026</td>
<td>Storage class memory remains a niche</td>
</tr>
<tr>
<td></td>
<td>2-year cadence</td>
<td>&lt;2-year cadence</td>
<td>3D NAND: stack of stacks &amp; CMOS bonded array.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&lt;2-year cadence</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Market Low - High</th>
<th>Advanced Logic (≤ 28 nm)</th>
<th>DRAM</th>
<th>NAND</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reference 16/14 nm, <strong>350 kwspm</strong></td>
<td>Bit growth:</td>
<td>Storage class memory remains a niche</td>
</tr>
<tr>
<td></td>
<td>Node on node (percent change):</td>
<td>Low: 15%</td>
<td>3D NAND: stack of stacks &amp; CMOS bonded array.</td>
</tr>
<tr>
<td></td>
<td>Low: -5%</td>
<td>High: 25%</td>
<td>&lt;2-year cadence</td>
</tr>
<tr>
<td></td>
<td>High: 8%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EUV</th>
<th>Advanced Logic (≤ 28 nm)</th>
<th>DRAM</th>
<th>NAND</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20-30 EUV exposures (including High-NA)</td>
<td>Bit growth:</td>
<td>Storage class memory remains a niche</td>
</tr>
<tr>
<td></td>
<td>First EUV High-NA node ~ 4-9 exposures</td>
<td>Low: 15%</td>
<td>3D NAND: stack of stacks &amp; CMOS bonded array.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High: 25%</td>
<td>&lt;2-year cadence</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>70-80% of wafer capacity converted</td>
<td>First High-NA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>to nodes with <strong>up to 9 exposures</strong></td>
<td>node ~1-2 exposures</td>
<td></td>
</tr>
<tr>
<td></td>
<td>of EUV (including High-NA) **</td>
<td></td>
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</tbody>
</table>

* kwspm: 1000 wafer starts per month
** Assuming EUV export license restrictions apply

November 11, 2022
Our updated model for 2025 goes beyond our high-market scenario from CMD 2021

<table>
<thead>
<tr>
<th>Market</th>
<th>System units</th>
<th>Total sales opportunity (in €bn)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High</strong></td>
<td>CMD 2021 Units ASML</td>
<td>CMD 2022 Units ASML</td>
</tr>
<tr>
<td>EUV High-NA 0.55</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>EUV Low-NA 0.33</td>
<td>70</td>
<td>80</td>
</tr>
<tr>
<td>ArFi (immersion)</td>
<td>78</td>
<td>105</td>
</tr>
<tr>
<td>Dry</td>
<td>189</td>
<td>385</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>342</td>
<td>575</td>
</tr>
<tr>
<td><strong>Low</strong></td>
<td>CMD 2021 Units ASML</td>
<td>CMD 2022 Units ASML</td>
</tr>
<tr>
<td>EUV High-NA 0.55</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>EUV Low-NA 0.33</td>
<td>48</td>
<td>65</td>
</tr>
<tr>
<td>ArFi (immersion)</td>
<td>63</td>
<td>75</td>
</tr>
<tr>
<td>Dry</td>
<td>124</td>
<td>180</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>240</td>
<td>325</td>
</tr>
</tbody>
</table>

*M&I: Metrology & Inspection
**Installed Base Management equals our net service and field option sales

ASML
November 11, 2022
Higher sales across all product portfolio translates to increase in 2025 and 2030 modeled scenario

Growth drivers

- Increase in EUV and Non EUV* is driven by increase in units for 2025 and increase in units/ASP for 2030

- Growing Installed Base Management provides higher service and field upgrade business

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ASML 2025 - 2030 sales build up (mid point of range)

<table>
<thead>
<tr>
<th>CAGR</th>
<th>CMD 2021</th>
<th>CMD 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020 – 2025</td>
<td>14%</td>
<td>20%</td>
</tr>
<tr>
<td>2020 – 2030</td>
<td>11%</td>
<td>14%</td>
</tr>
<tr>
<td>2025 – 2030</td>
<td>8%</td>
<td>8%</td>
</tr>
</tbody>
</table>

* Non EUV = DUV + Metrology & Inspection
** IBM = Installed Base Management, equals our net service and field option sales
And increasing litho as a percentage of semi market

Drivers

• Semi industry sales growing faster this decade than in previous decades
• Higher semi market growth requires increased upfront Capex investments to enable future semi growth
• Equipment portion within overall Capex is increasing, with opportunity to further increase litho
• Technological sovereignty trend leads to lower utilization

Litho/Semi industry sales ratio

Source: ASML analysis using WSTS.org, SEMI.org, VLSI Research/TechInsights, Gartner
# ASML updated financial model

<table>
<thead>
<tr>
<th></th>
<th>Actuals</th>
<th>CMD 2021 Low - High market</th>
<th>CMD 2022 Low - High market</th>
<th>CMD 2022 Low - High market</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2021</td>
<td>2025</td>
<td>2025</td>
<td>2030</td>
</tr>
<tr>
<td>Total sales</td>
<td>18.6€bn</td>
<td>~24 – 30€bn</td>
<td>~30 – 40€bn</td>
<td>~44 – 60€bn</td>
</tr>
<tr>
<td>Installed Base Management*</td>
<td>5.0€bn</td>
<td>~6 – 7€bn</td>
<td>~7 – 8€bn</td>
<td>~11 – 13€bn</td>
</tr>
<tr>
<td>System sales</td>
<td>13.6€bn</td>
<td>~18 – 23€bn</td>
<td>~23 – 32€bn</td>
<td>~33 – 47€bn</td>
</tr>
<tr>
<td>Gross margin</td>
<td>52.7%</td>
<td>~54 – 56%</td>
<td>~54% – 56%</td>
<td>~56% – 60%</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>2.5€bn (14%)</td>
<td>~3.4 – 3.7€bn</td>
<td>~4.3 – 4.8€bn</td>
<td>~6.0 – 6.6€bn</td>
</tr>
<tr>
<td>SG&amp;A</td>
<td>0.7€bn (4%)</td>
<td>~1.0€bn</td>
<td>~1.3€bn</td>
<td>~1.6€bn</td>
</tr>
<tr>
<td>Capex</td>
<td>0.9€bn (5%)</td>
<td>~1.0€bn</td>
<td>~1.5€bn</td>
<td>~1.5€bn</td>
</tr>
<tr>
<td>Cash Conversion Cycle</td>
<td>219 days</td>
<td>&lt;200 days</td>
<td>&lt;200 days</td>
<td>&lt;200 days</td>
</tr>
<tr>
<td>Effective Tax Rate</td>
<td>15%</td>
<td>~16%</td>
<td>~16.5%**</td>
<td>~16.5%**</td>
</tr>
</tbody>
</table>

* Installed Base Management equals our net service and field option sales
** Estimated Effective Tax Rate is based on 2022 tax legislation, and currently expected changes
Our flexible operating model can deal with the industry volatility and uncertainties

<table>
<thead>
<tr>
<th>Flexible workforce</th>
<th>Outsourced R&amp;D</th>
<th>Systems Cost of Goods (COG) at Standard, composition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees</td>
<td>R&amp;D spend, B€</td>
<td>Majority of systems COG is externally sourced</td>
</tr>
<tr>
<td>Additional flexibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>through the hour bank</td>
<td></td>
<td></td>
</tr>
<tr>
<td>and other measures</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 2021                      |                                             |                                                     |
|----------------------------|                                             |                                                     |
| Flexworkers                | D&E Flex labor and farm-out                 | Materials                                           |
| 93%                        | D&E Fix labor and other costs               | Labor                                               |
| 7%                         | 27%                                         | 82%                                                 |
| Own personnel              | 73%                                         | 18%                                                 |

November 11, 2022
Historical shareholder value creation

Continuing growth

Continued shareholder value creation
ASML’s capital return policy
Maintain a strong and flexible balance sheet

Focused investment in our business through R&D, Capex

Excess cash distribution

- Combination of growing dividends and share buybacks
- A new share buyback program, effective today, to be executed by December 31, 2025. Intention to repurchase shares up to €12.0 billion, of which we expect a total of up to 2 million shares to cover employee share plans. Intention to cancel the remainder of the shares repurchased.

*ASML contribution for Zeiss SMT capex included as of 2017
** 2022E is the best estimate for the FY2022 figures
*** 2022YTD is up to and including 18 October 2022 for share buyback and including 14 November 2022 interim dividend
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Growth in semiconductor end markets and increasing lithography intensity on future nodes fuel demand for our products and services.

We expect substantial growth opportunities in this decade. Based on different market scenarios, we see an opportunity to achieve the following in 2025 and 2030:

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Forward Looking Statements

This document and related discussions contain statements that are forward-looking within the meaning of the U.S. Private Securities Litigation Reform Act of 1995, including statements with respect to expected trends, including trends in end markets and the technology industry and business environment trends, expected lithography and semiconductor industry growth and growth rates and revenue, capital intensity outlook, expected growth in semiconductor end markets, expected growth in wafer demand and capacity and additional wafer capacity requirements, expected investments in wafer capacity and plans to increase capacity, expected growth in lithography spend, opportunity for growth in service and upgrades and expected growth in Installed Base Management sales, expected increase in capacity and plan for ASML and its suppliers to increase capacity and output to meet demand, expected production of systems, updated model for 2025 and 2030, outlook and expected, modelled or potential financial results, including revenue projections and annual revenue opportunity gross margin, R&D costs, SG&A costs, capital expenditure, cash conversion cycle and annualized effective tax rate for 2025 and 2030 and assumptions underlying such expected, modelled or potential amounts, and other assumptions underlying our business and financial models, expected trends in semiconductor end markets and long term growth opportunities, demand and demand drivers, expected growth in the semiconductor industry including demand growth and expected capital spend in the coming years, the impact of technology sovereignty and foundry competition, statements with respect to dividends and share buybacks and dividend policy, including expectation of growing dividends and buybacks and statements with respect to ASML’s new buyback plan, energy generation and consumption trends and the drive toward energy efficiency, increasing technological sovereignty across the world, including specific goals of countries across the world, increasing competition in the foundry business and other non-historical statements. You can generally identify these statements by the use of words like "may", "will", "could", "should", "project", "believe", "anticipate", "expect", "plan", "estimate", "forecast", "potential", "intend", "continue", "target", "future", "progress", "goal" and variations of these words or comparable words. These statements are not historical facts, but rather are based on current expectations, estimates, assumptions and projections about our business and our future financial results and readers should not place undue reliance on them. Forward-looking statements do not guarantee future performance and involve a number of substantial known and unknown risks and uncertainties. These risks and uncertainties include, without limitation, economic conditions, product demand and semiconductor equipment industry capacity, worldwide demand and manufacturing capacity utilization for semiconductors, the impact of general economic conditions on consumer confidence and demand and capacity for our customers’ products, performance of our systems, the impact of the COVID-19 outbreak and measures taken to contain it on us, our suppliers, the global economy and financial markets, the impact of the Russian military actions in the Ukraine and measures taken in response on the global economy and global financial markets and other factors that may impact ASML’s financial results, including customer demand and ASML’s ability to obtain parts and components for its products and otherwise meet demand, the success of technology advances and the pace of new product development and customer acceptance of and demand for new products, risks relating to execution of technology roadmaps, demand and production capacity and our and our supplier’s ability to increase capacity to meet demand, the impact of inflation and any recession, investments in capacity and lithography spend, our ability to meet the goals and expectations in our business and financial models and whether the assumptions underlying our models prove to be reasonable and accurate, the number and timing of systems ordered, shipped and recognized in revenue, and the risk of order cancellation or push out, supply chain capacity and constraints and logistics and constraints on our ability to produce systems to meet demand, our ability to increase capacity including our infrastructure and workforce, our ability to control costs and maintain and improve gross margin and competitive position, trends in the semiconductor industry, our ability to enforce patents and protect intellectual property rights and the outcome of intellectual property disputes and litigation, availability of raw materials, critical manufacturing equipment and qualified employees, trade environment, geopolitical risks and impact on our business, import/export and national security regulations and orders and their impact on us including the impact of new U.S. export regulations, changes in exchange and tax rates, available liquidity and liquidity requirements, our ability to refinance our indebtedness, available cash and distributable reserves for, and other factors impacting, dividend payments and share repurchases, results of our share repurchase program and other risks indicated in the risk factors included in ASML’s Annual Report on Form 20-F for the year ended December 31, 2021 and other filings with and submissions to the US Securities and Exchange Commission. These forward-looking statements are made only as of the date of this document. We undertake no obligation to update any forward-looking statements after the date of this report or to confirm such statements to actual results or revised expectations, except as required by law.