

Business model and capital allocation strategy

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Investor Day **Veldhoven**

ASML



ASML Small Talk 2022



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

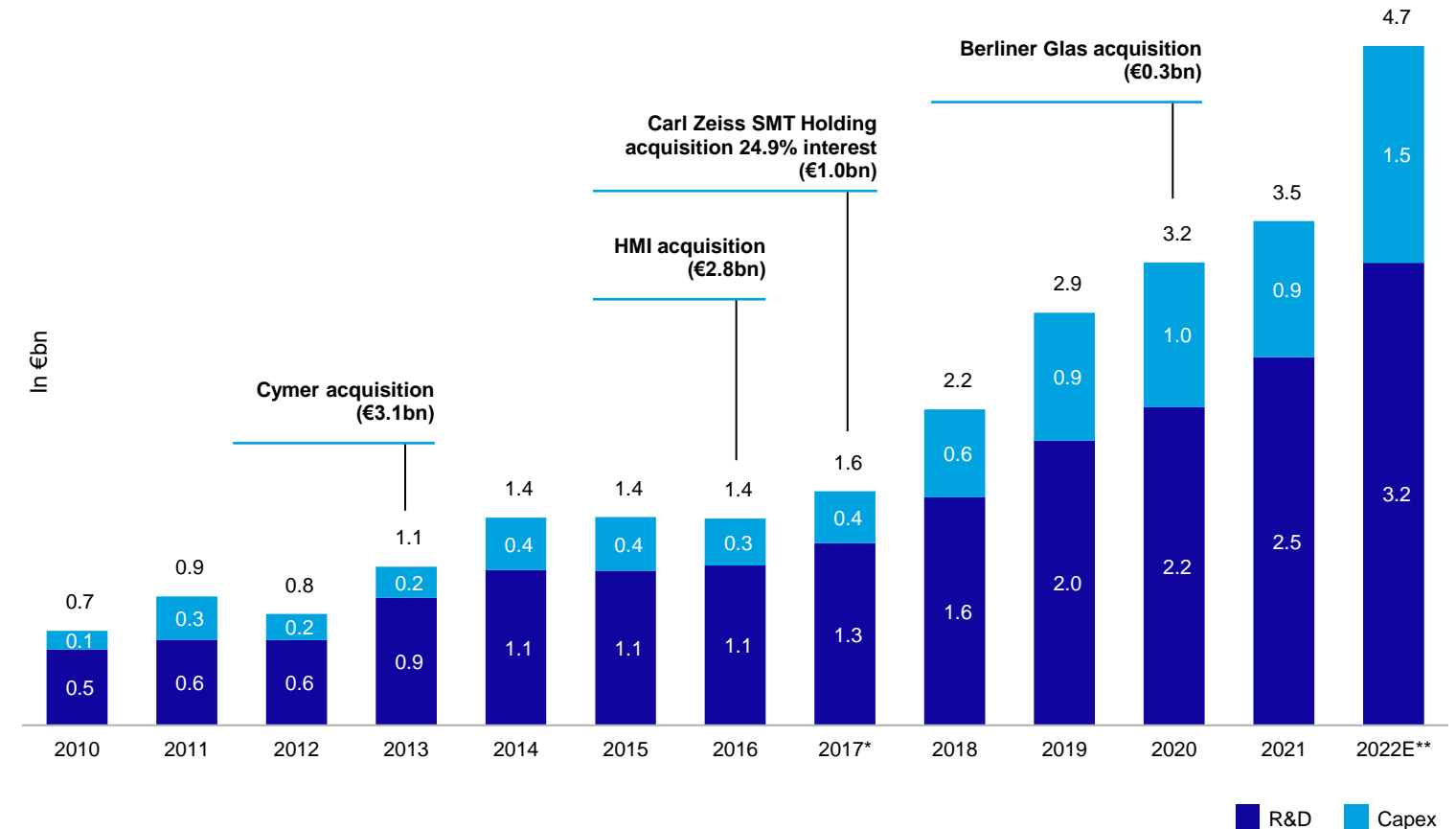
Growth methods

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



* ASML contribution Zeiss SMT Capex included as of 2017

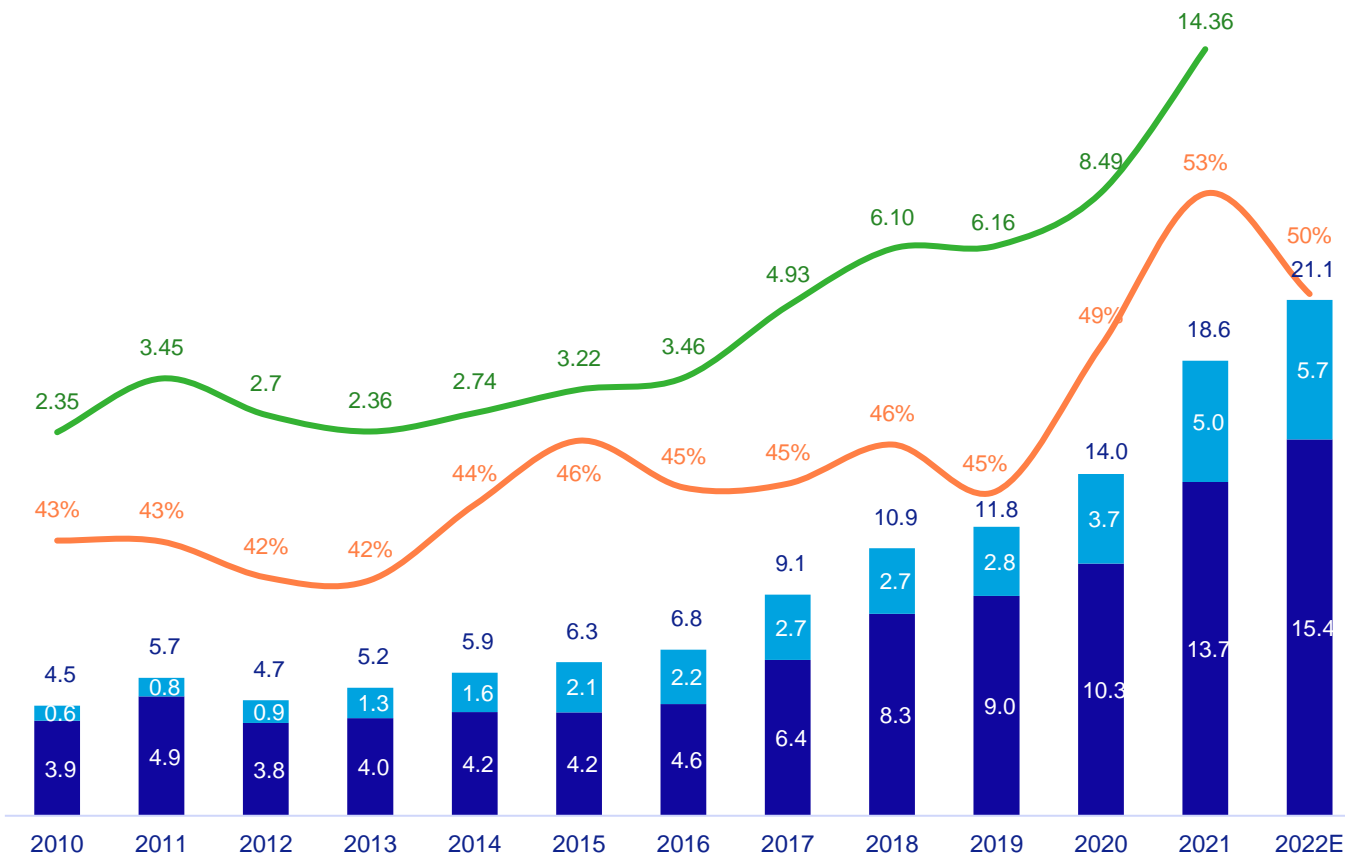
** 2022E is the best estimate for the FY2022 figures

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

Revenue/Gross margin/EPS



* Installed Base Management equals our net service and field option sales

■ Systems (€bn) ■ Installed Base Management (€bn) ■ EPS (€) ■ Gross margin (%)

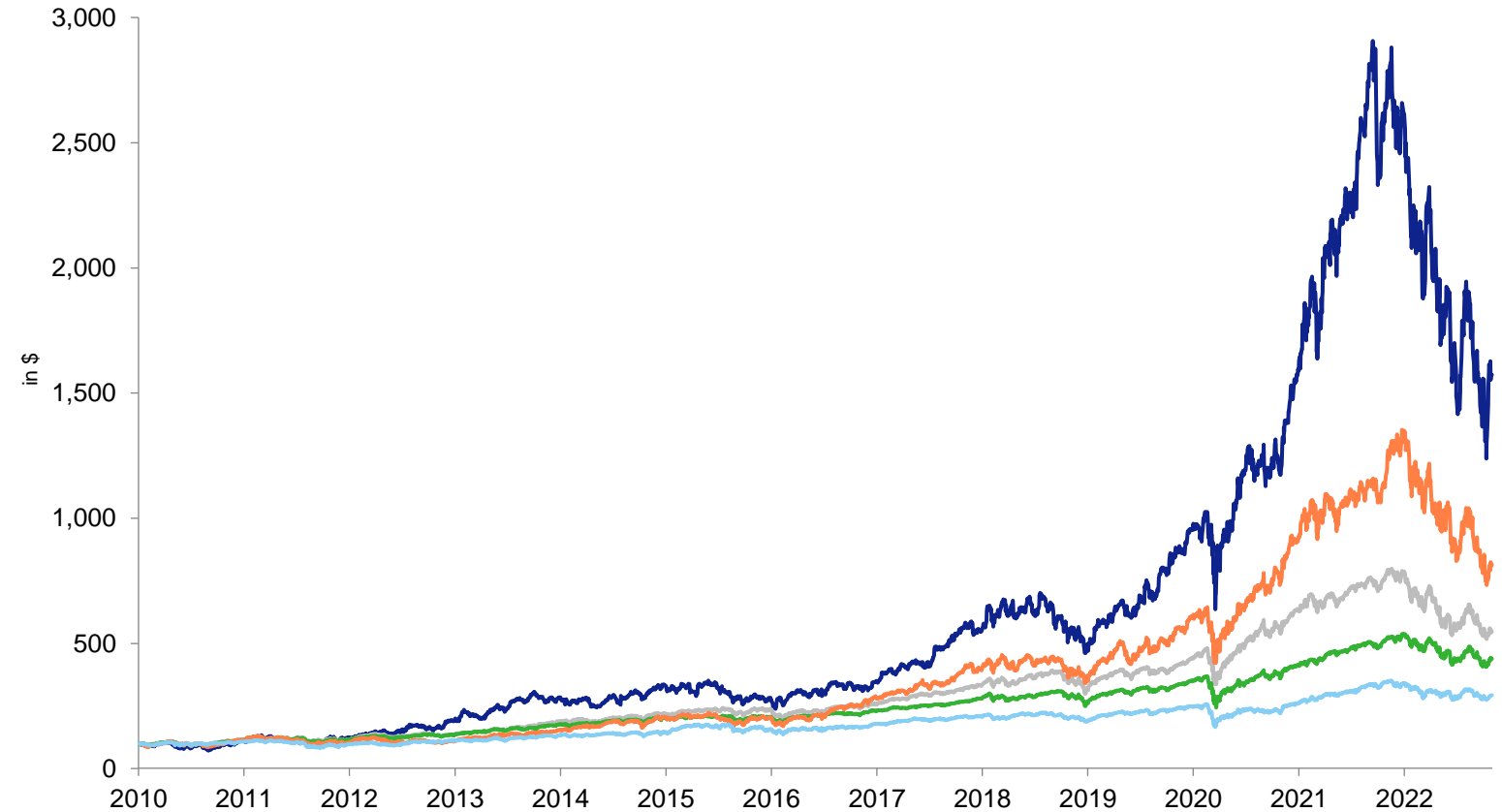
ASML created significant shareholder value over the period 2010-2022*

ASML outgrows markets indices

Total Shareholder Return (TSR)
annualized compounded :

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

Total Shareholder Return



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

ASML (Nasdaq) NASDAQ S&P 500 SOX AEX

Historical shareholder value creation

Continuing growth

Continued shareholder value creation

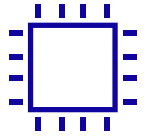
Model scenarios

Model assumptions

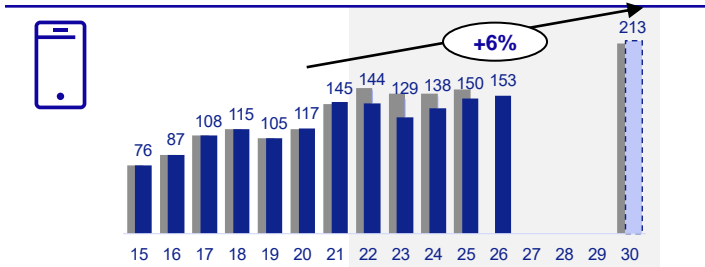


Semi end markets expected to grow 9% through 2030

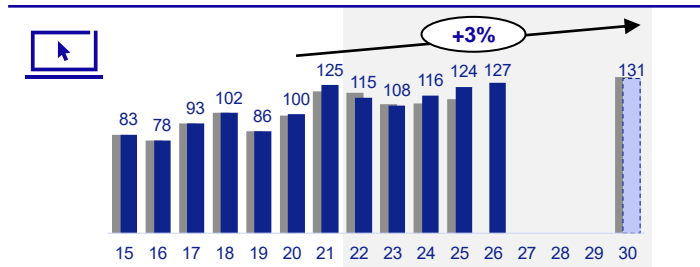
All markets contributing; Datacenter, Automotive and Industrial expected to outperform



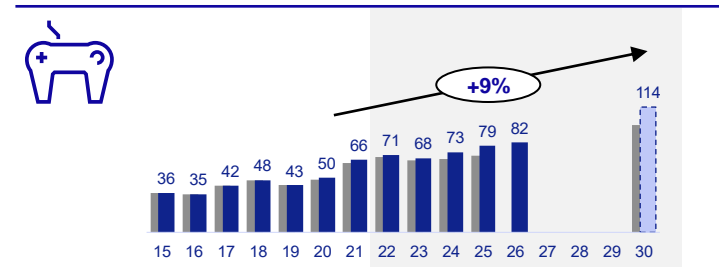
Smartphone (\$bn)



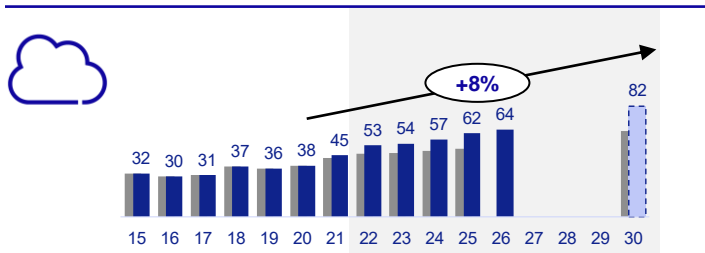
Personal Computing (\$bn)



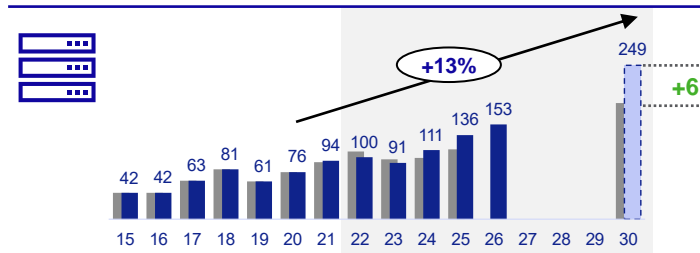
Consumer Electronics (\$bn)



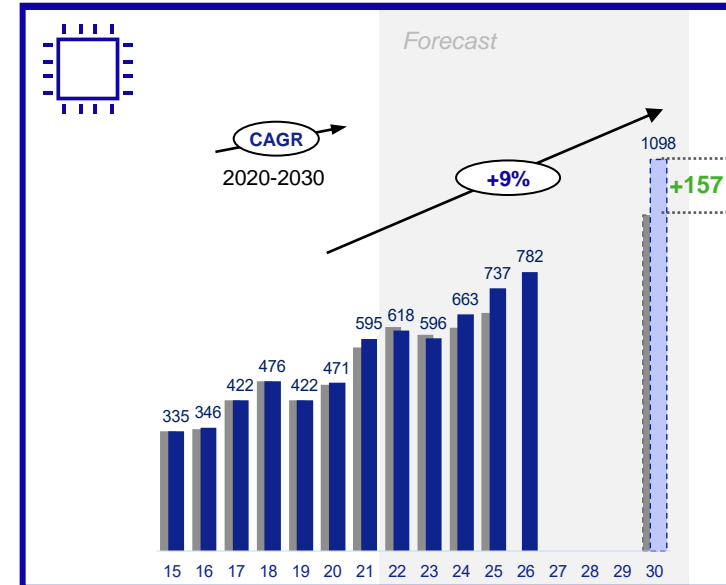
Wired & wireless Infrastructure (\$bn)



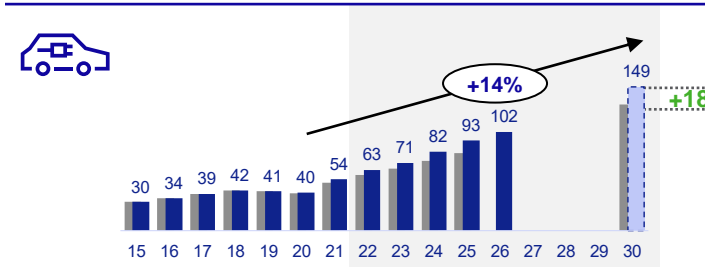
Servers, Datacenters & Storage (\$bn)



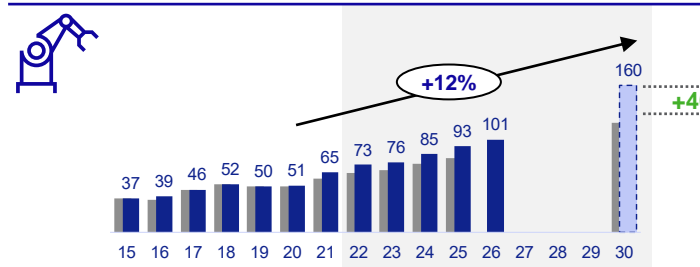
Total Semiconductor (\$bn)



Automotive (\$bn)



Industrial Electronics (\$bn)



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

■ CMD 2021 ■ CMD 2022
■ CMD 2022 - extrapolation

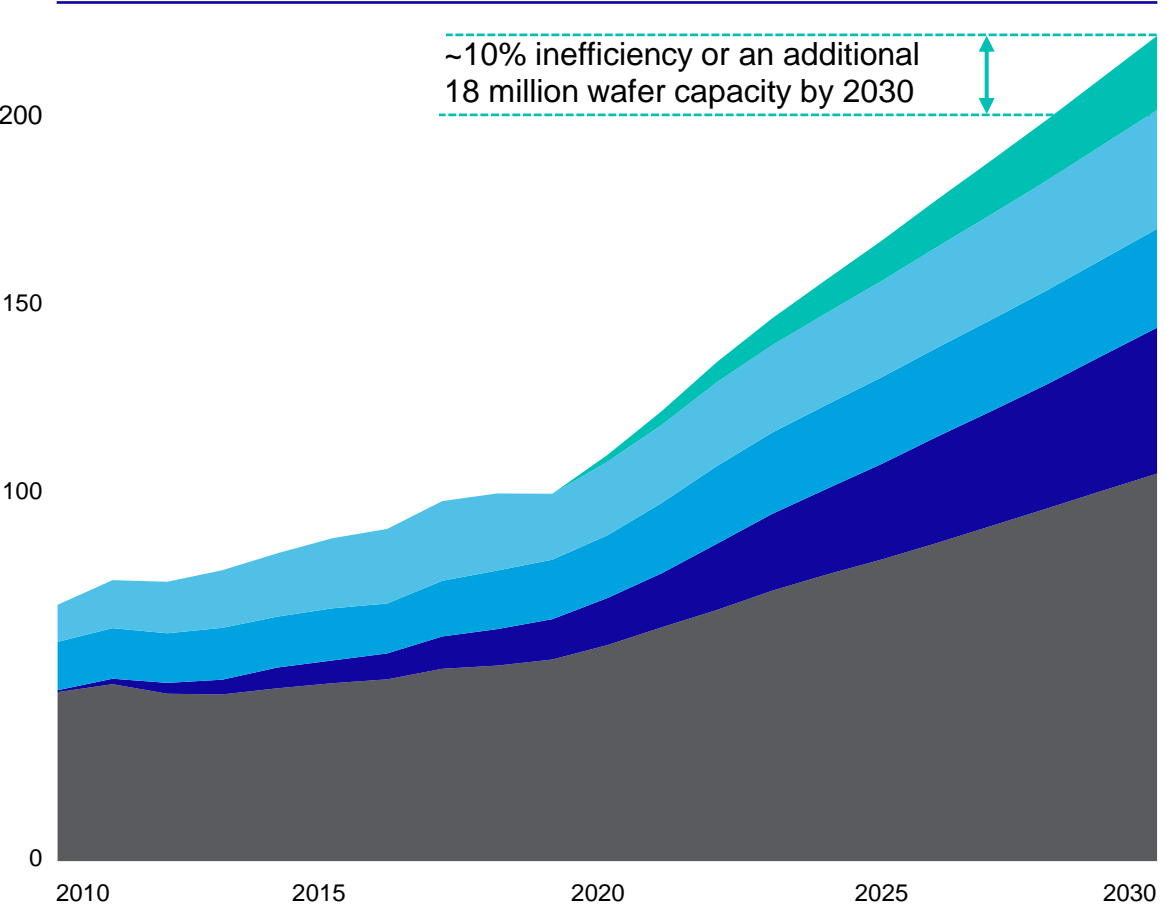
Translating to expected growth of wafer demand in all segments



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

Capacity (million wafer/year) 300 mm equivalent

~10% inefficiency or an additional 18 million wafer capacity by 2030



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

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

	kwspm/yr CMD 2021 2020-2025	kwspm/yr Growth 2020-2030	Percentage CAGR 2020-2030
NAND	+100	+100	4.9%
DRAM	+80	+80	4.7%
Advanced Logic	+125	+220	12.0%
Mature	+200	+380	6.0%
Total	+505	+780	6.5%
+ Technological Sovereignty & Competition		+150	
Total capacity	+505	+930	7.4%

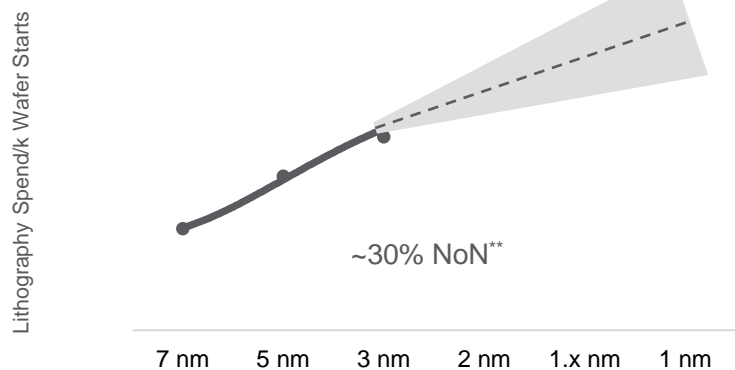
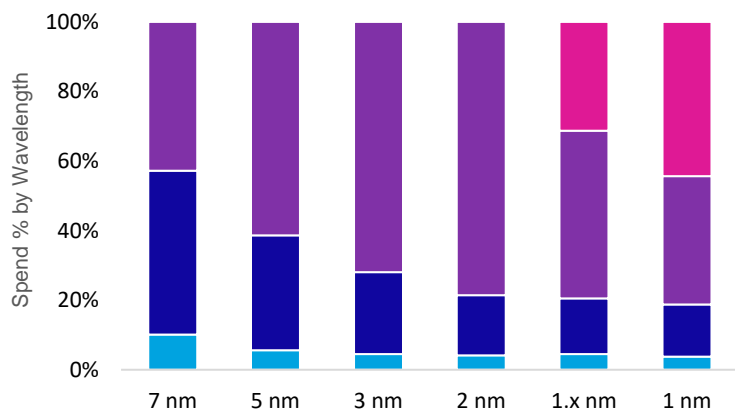
■ Mature ■ Logic ■ DRAM ■ NAND

Lithography spend increasing on future nodes



Advanced Logic (≤ 28 nm)

45 kwspm*



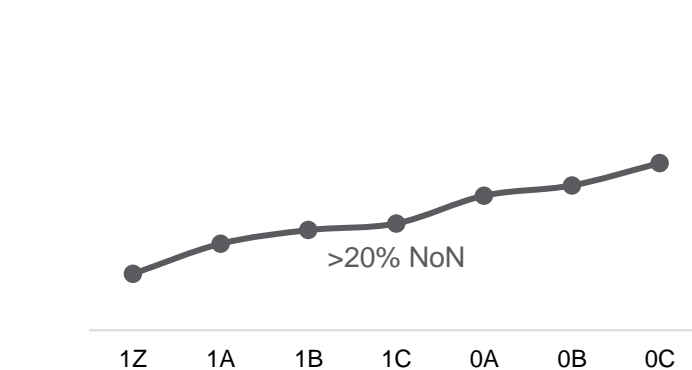
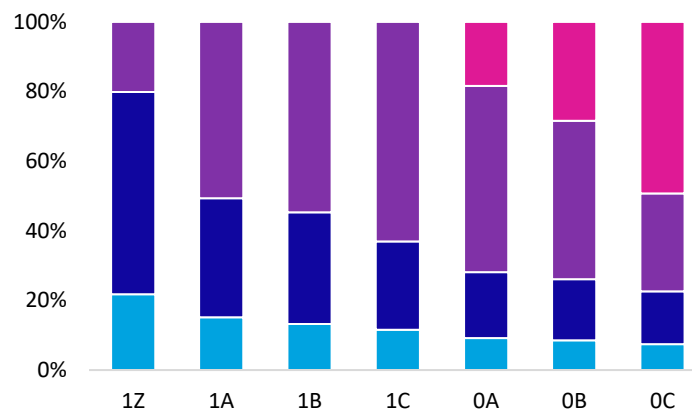
*kwspm: 1,000 wafer starts per month;

** NoN: Node on Node;



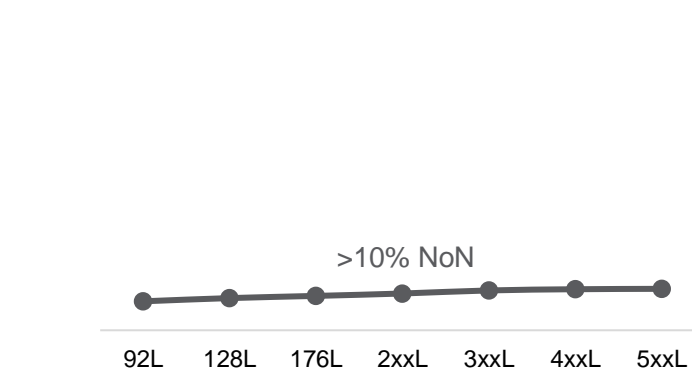
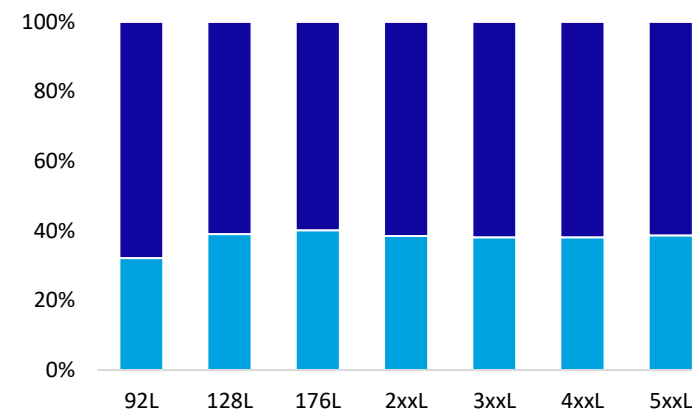
DRAM

100 kwspm



NAND

120 kwspm

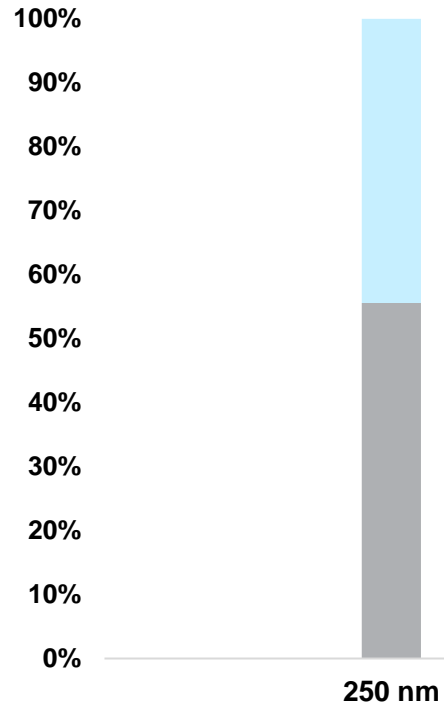


High-NA EUV ArFi Dry

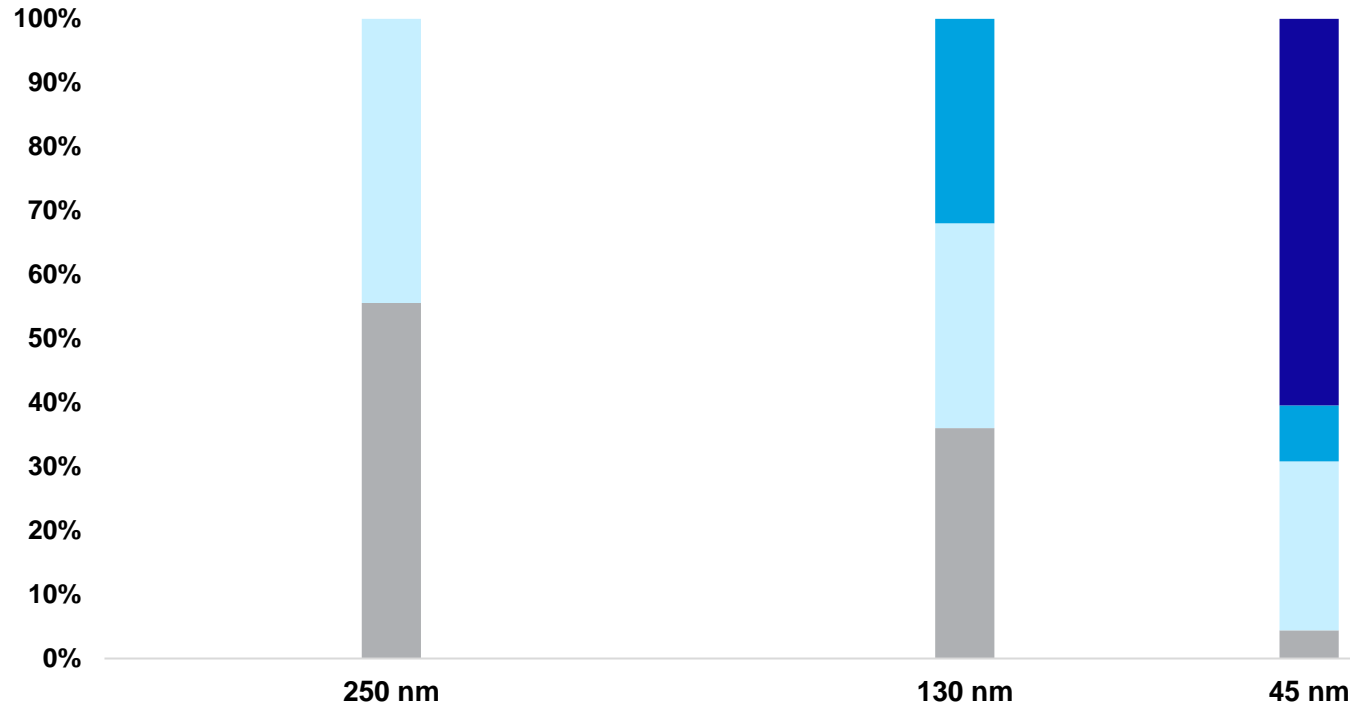
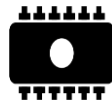
Mature markets drive DUV spend



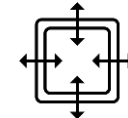
Power



Mature Logic/Analog



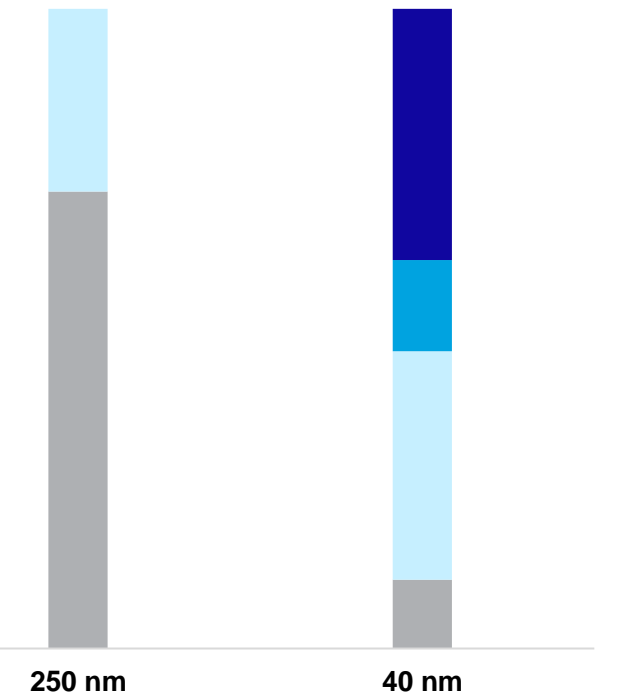
Sensors



Non-Optical



Optical



■ ArFi ■ ArF ■ KrF ■ i-line

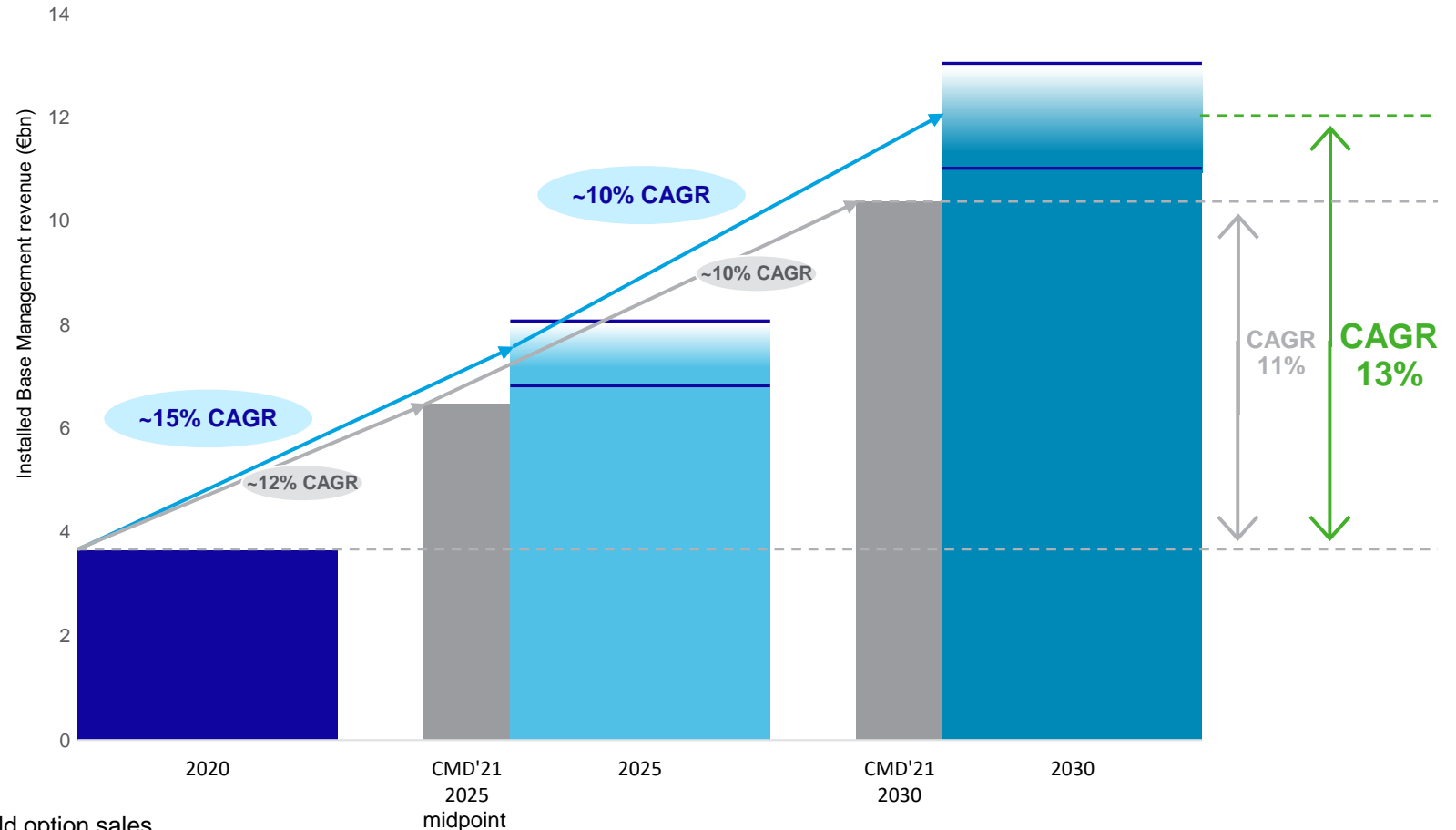
Installed Base Management*: growing installed base provides opportunity for growth in service and upgrades



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%



Advanced Logic (≤ 28 nm)



DRAM



NAND

General

- EUV High-NA high volume from 2025/2026
- 2-year cadence

- EUV High-NA from 2026
- <2-year cadence

- Storage class memory remains a niche
- 3D NAND: stack of stacks & CMOS bonded array.
- <2-year cadence

Market Low - High

- Reference 16/14 nm, **350 kwspm***
- Node on node (percent change):
- Low: **-5%**
- High: **8%**

Bit growth:

- Low: 15%
- High: 25%

Bit growth:

- Low: 25%
- High: **35%**

EUV

- 20-30 EUV exposures (including High-NA)
- First EUV High-NA node ~ 4-9 exposures

- **70-80%** of wafer capacity converted to nodes with **up to 9 exposures** of EUV (including High-NA) **
- **First High-NA node ~1-2 exposures**

* kwspm: 1000 wafer starts per month

** Assuming EUV export license restrictions apply

Our updated model for 2025 goes beyond our high-market scenario from CMD 2021

Market

System units

High

	CMD 2021 Units ASML 2025	CMD 2022 Units ASML 2025	CMD 2022 Units ASML 2030
EUV High-NA 0.55	5	5	30
EUV Low-NA 0.33	70	80	80
ArFi (immersion)	78	105	115
Dry	189	385	425
Total	342	575	650

Total sales opportunity (in €bn)

	CMD 2021 Sales 2025	CMD 2022 Sales 2025	CMD 2022 Sales 2030
Systems (Litho and M&I*)	23	32	47
Installed Base Management**	7	8	13
Total	30	40	60

Low

	CMD 2021 Units ASML 2025	CMD 2022 Units ASML 2025	CMD 2022 Units ASML 2030
EUV High-NA 0.55	5	5	15
EUV Low-NA 0.33	48	65	65
ArFi (immersion)	63	75	85
Dry	124	180	250
Total	240	325	415

	CMD 2021 Sales 2025	CMD 2022 Sales 2025	CMD 2022 Sales 2030
Systems (Litho and M&I*)	18	23	33
Installed Base Management**	6	7	11
Total	24	30	44

*M&I : Metrology & Inspection

** Installed Base Management equals our net service and field option sales

Higher sales across all product portfolio translates to increase in 2025 and 2030 modeled scenario

Growth drivers

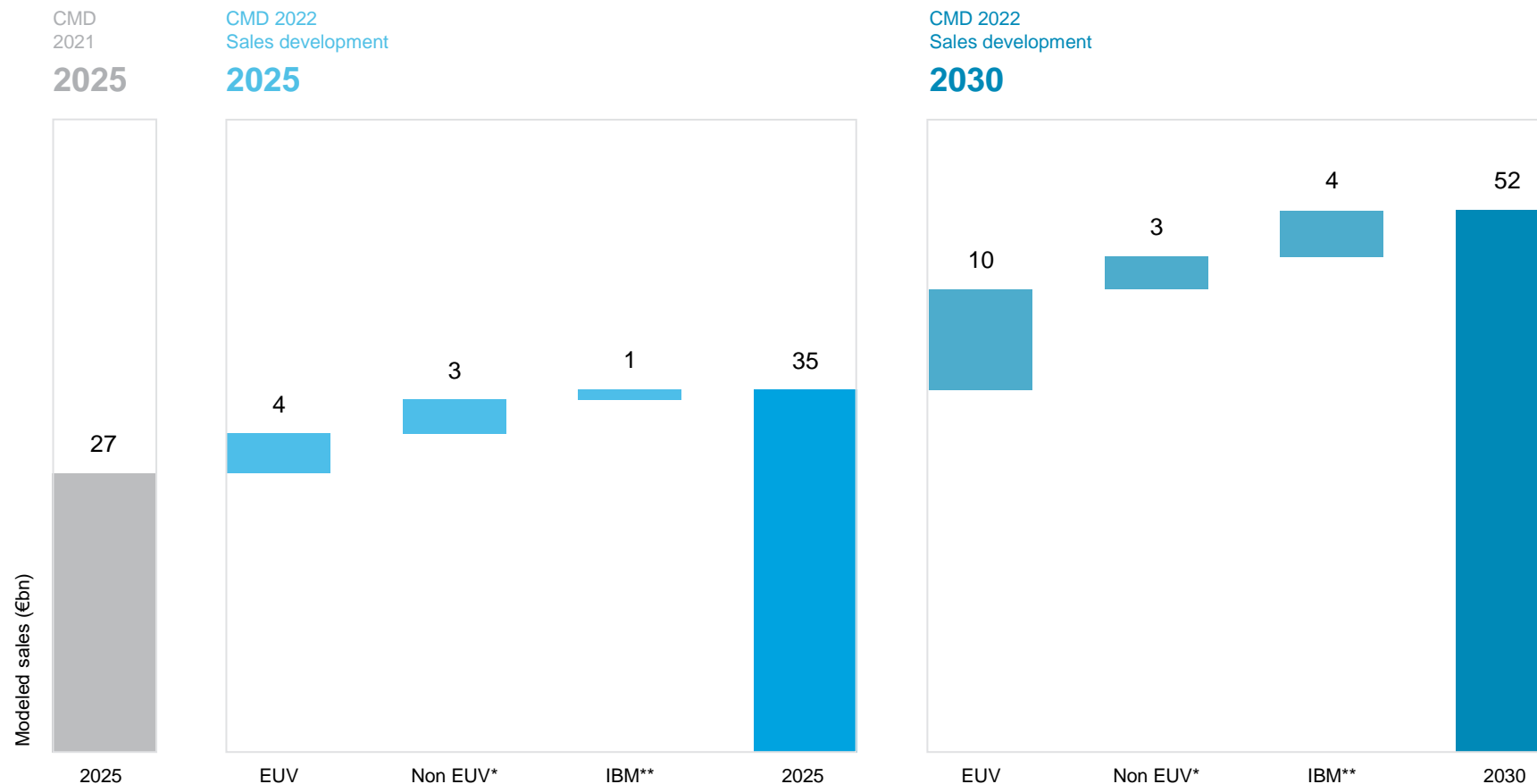
- Increase in EUV and Non EUV* is driven by increase in units for 2025 and increase in units/ASP for 2030
- Growing Installed Base Management provides higher service and field upgrade business

CAGR	CMD 2021	CMD 2022
2020 – 2025	14%	20%
2020 – 2030	11%	14%
2025 – 2030	8%	8%

* Non EUV = DUV + Metrology & Inspection

** IBM = Installed Base Management, equals our net service and field option sales

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

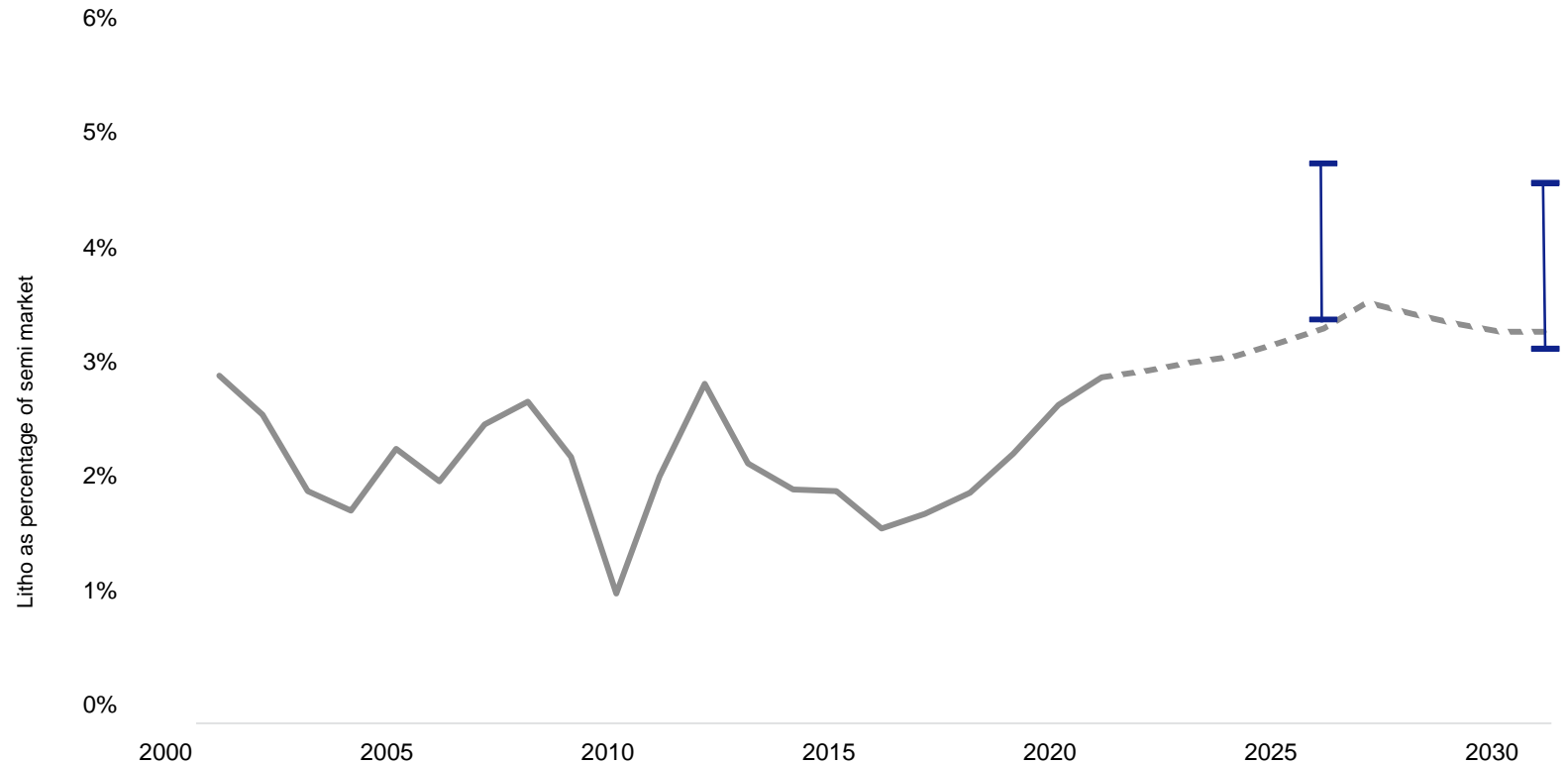


And increasing litho as a percentage of semi market

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

■ External sources ■ ASML CMD 2022 scenarios (High-Low range)

ASML updated financial model

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

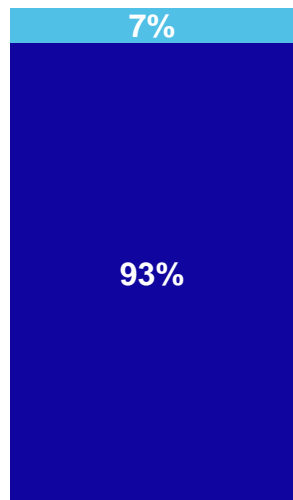
* Installed Base Management equals our net service and field option sales

** 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

Flexible workforce Employees

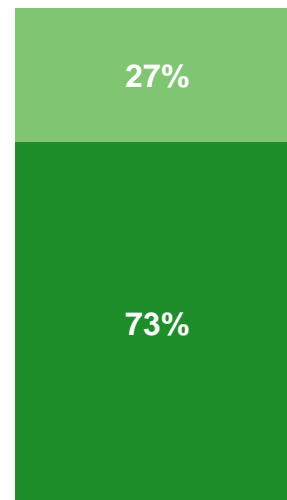
Additional flexibility through the hour bank and other measures



2021

- Flexworkers
- Own personnel

Outsourced R&D R&D spend, B€

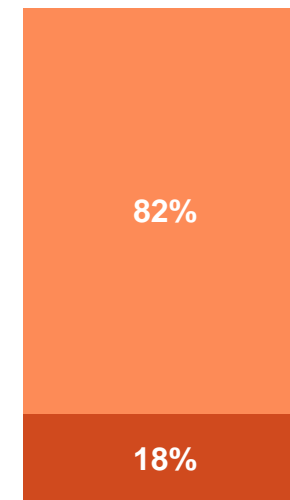


2021

- D&E Flex labor and farm-out
- D&E Fix labor and other costs

Systems Cost of Goods (COG) at Standard, composition

Majority of systems COG is externally sourced



2021

- Materials
- Labor

Historical shareholder value creation

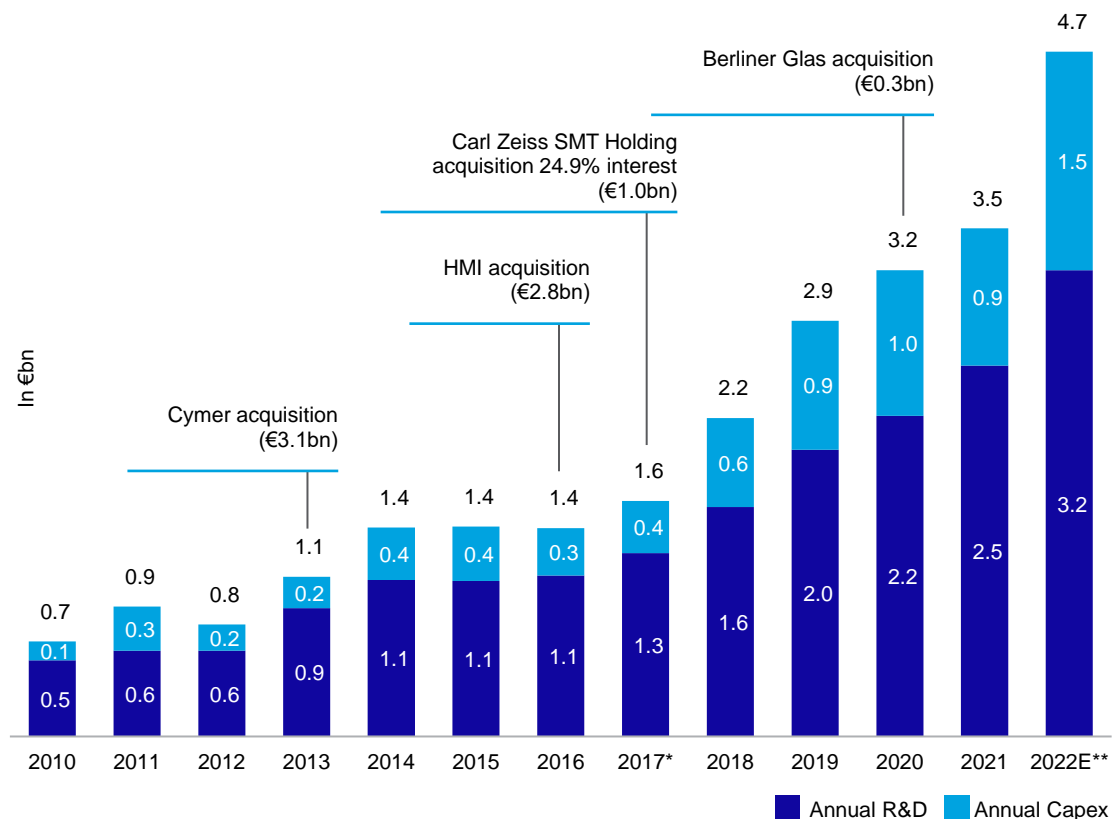
Continuing growth

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



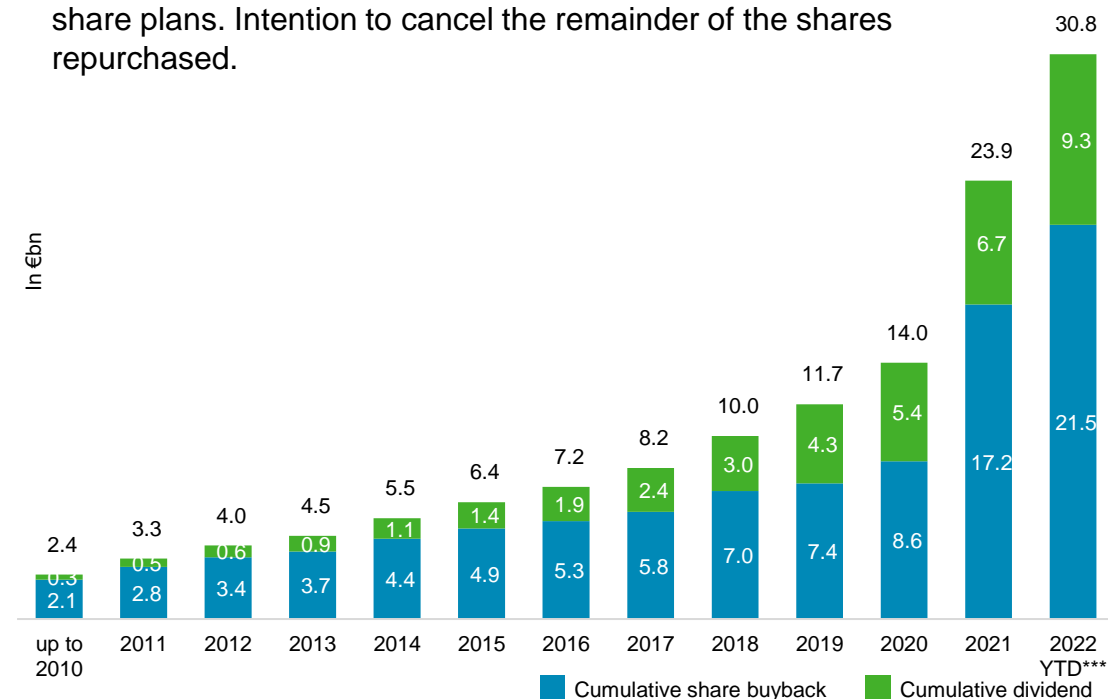
*ASML contribution for Zeiss SMT capex included as of 2017

** 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

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.



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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 conform such statements to actual results or revised expectations, except as required by law.

ASML Small Talk 2022

ASML



**Investor Day
Veldhoven**

