A Work Project, presented as part of the requirements for the Award of a Master Degree in Finance from the NOVA – School of Business and Economics.

ASML N.V. Equity Research - Sustaining Moore's Law Through Innovation

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A Project carried out on the Master in Finance Program, under the supervision of:

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16.12.2024

Abstract:

This equity research report provides an in-depth analysis of ASML N.V., the global leader in semiconductor lithography equipment. Renowned for its pioneering innovation in Extreme Ultraviolet lithography, ASML plays a pivotal role in advancing semiconductor manufacturing technology. The report examines ASML's strategic alignment with customer roadmaps, evaluates its robust financial performance, and assesses its positioning within a competitive and evolving market landscape. ESG considerations emphasize ASML's leadership in sustainability and corporate governance. The valuation incorporates scenario analyses, capturing growth opportunities driven by EUV adoption while addressing potential risks, including geopolitical challenges and emerging competitive technologies. This study underscores ASML's dominant market position and its essential contribution to sustaining Moore's Law through relentless innovation.

Keywords:

Semiconductors, Artificial Intelligence, Cloud Computing, Integrated Circuits

This work used infrastructure and resources funded by Fundação para a Ciência e a Tecnologia (UID/ECO/00124/2013, UID/ECO/00124/2019 and Social Sciences DataLab, Project 22209), POR Lisboa (LISBOA-01-0145-FEDER-007722 and Social Sciences DataLab, Project 22209) and POR Norte (Social Sciences DataLab, Project 22209).

This report is part of the ASML N.V. Equity Research report (annexed), developed by Niclas Sylvester Wurm and Afonso Pedroso de Carvalho Neves and should be read as an integral part of it.

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Introduction

This report forms part of a joint equity research conducted on ASML N.V., focusing on the company's strategic position, financial performance, and valuation prospects. The joint report aims to deliver a comprehensive analysis of ASML's business environment and intrinsic value, segmented into key areas: **Internal Environment**, analyzing ASML's history, business operations, management, and strategic priorities; **External Environment**, exploring macroeconomic trends, customer dynamics, and the competitive landscape; and **Valuation**, incorporating historical performance, financial projections, and scenario analyses to derive a fair value estimate for the company.

The report concludes that ASML's technological innovation, particularly in Extreme Ultraviolet lithography, has solidified its position as an indispensable partner to leading semiconductor manufacturers. Its strategic alignment with customer roadmaps, strong financial performance, and leadership in ESG initiatives contribute to its dominant market position. While potential risks include geopolitical tensions and emerging alternative technologies, our valuation suggests that ASML remains well-positioned to deliver sustained shareholder value.

The sections authored by my partner, provided a comprehensive overview of ASML's history, main activities, and business lines, along with its ownership structure and payout policy. It also examines macroeconomic factors affecting the sector and their implications for ASML. Their contribution includes the forecasting of ASML's financial statements, intrinsic valuation via a Discounted Cash Flow model, and a calculation of the company's total expected return.

My contribution to the report focuses on analyzing ASML's Internal and External Environments in greater detail. This includes an evaluation of the company's management team, strategic priorities, and stock performance. Furthermore, I provide insights into ASML's competitive landscape and customer base, along with a thorough SWOT Analysis. Additionally, I examine ASML's ESG performance and assess its historical financial health, including profitability, return metrics, capital structure, and cash flow management. My section also introduces relative valuation methodologies using trading multiples and finally provides scenario analyses to assess the sensitivity of ASML's value to key assumptions.

Based on our valuation, we estimated a share price of €767.10 by December 2025, which implies a capital gain of 14.37%. When combined with a dividend yield of 2.54%, this results in an expected total return of 16.91%. Consequently, leading to recommend us a **"BUY".**

Internal Environment

Management

Exhibit 1. Supervisory Board

Position	Name	Appointed
Chair	Nils Andersen	2023
Vice Chair	Annet Aris	2015
Member	Birgit Conix	2021
Member	Mark Durcan	2020
Member	Warren East	2020
Member	Alexander Everke	2022
Member	Terri Kelly	2018
Member	Jack de Kreij	2023
Member	An Steegen	2022

Note: All members of the Supervisory Board are independent, non-executive members

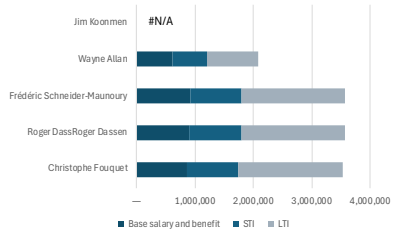
Source: ASML's Annual Report

Exhibit 2. Board of Management

Position	Name	Appointed
CEO	Christophe Fouquet	2024
CFO	Roger Dassen	2018
COO	Frédéric Schneider-Maunoury	2009
CPO	Wayne Allan	2023
CCO	Jim Koonmen	2024

Source: ASML's Annual Report

Exhibit 3. Remuneration at a glance (€)



FY2023 Achievements	
Total renumeration	24.6m
Achieved of STI target	128.2%
Achieved of LTI target	157.7%
CEO vs. average per FTE	43:1

Source: ASML's Annual Report

Exhibit 4. ASML Key Pillars

- Strengthen customer trust
- Build a Winning Position in Holistic Lithography
- Enhance the Value of EUV 0.33 NA for Manufacturing
- Strengthen customer trust
- Insert EUV 0.55 NA into High-Volume Manufacturing

Source: ASML's Annual Report

ASML operates under a two-tier board system, consistent with Dutch corporate governance standards. This structure divides responsibilities between a Board of Management, which handles day-to-day operational decisions, and an independent Supervisory Board that oversees general governance and strategic alignment. The company is led by an experienced team. The CEO, who has been with ASML since 2008, previously led key units such as EUV and Applications at ASML. The CFO brings expertise from Deloitte and academia, while the COO draws on operational experience from Alstom and the French Ministry of Industry. The CPO has a background in global manufacturing and supply chain operations. Lastly, the CCO, who joined through the Brion acquisition, has led ASML's light source subsidiary Cymer.

ASML's remuneration policy links executive incentives with the company's financial health, technology leadership, customer satisfaction, and ESG objectives. This includes base salary, with short-term incentives (STI) capped at 120% of base salary for the CEO and 100% for the other executives. STI are based on annual targets like EBIT margin and technology advancements. Long-term incentives (LTI), share-based are capped at 200% of base salary, with vesting over five years. LTI targets include total shareholder return, ESG objectives, and strategic initiatives. The policy includes claw back mechanisms to reclaim variable pay in cases of misconduct or misstatement, ensuring compliance with Dutch governance standards. Additionally, shareholding requirements link board members' interests to long-term company performance, requiring the CEO to hold shares worth three times their base salary.

Strategy

ASML operates with a stakeholder-centric approach, balancing the needs of customers, suppliers, employees, and shareholders. Its strategy is built on five key pillars that align with this approach: strengthening customer trust through operational excellence and sustainability; advancing holistic lithography and applications by integrating its product portfolio and delivering cutting-edge metrology solutions; maintaining DUV competitiveness to support customer roadmaps with continuous innovation and operational improvements; enhancing Low-NA EUV for HVM with cost-effective upgrades and extended system lifecycles; and pioneering High-NA EUV technology, which is expected to transform Logic and DRAM manufacturing starting in 2025.

ASML's advancements benefit the entire industry by driving performance, cost

Exhibit 5. Stakeholder Focus

Source: ASML's Annual Report

reductions, and sustainable practices, ultimately leading to enhanced products for consumers worldwide. To stay at the forefront of the industry, more than 15,500 engineers at ASML work on innovation across its holistic lithography portfolio. The company invests heavily in Research & Development (R&D), with €4 billion spent in FY2023. ASML targets strategic acquisitions and investments to build a robust and comprehensive lithography portfolio. Recently, the firm has been enhancing its capabilities in process control, lithography systems, defect inspection, and metrology. Overall, the company primarily focuses on organic growth driven by significant investments in R&D to advance their lithography technology, particularly in EUV systems.

Stock Performance

Exhibit 6. Stock Performance (10.12.2014 – 10.12.2024)

Stock	Avg. Annual Return	STD	Info Sharpe
ASML	21.0%	33.5%	0.63
KLA Corp.	23.1%	39.4%	0.59
Lam Research	23.6%	42.0%	0.56
Applied Material	20.4%	41.0%	0.50
Tokyo Electron	23.0%	39.0%	0.59
Canon	2.9%	25.0%	0.12
Nikon	-0.6%	25.0%	-0.02

Index	Avg. Annual Return	STD	Info Sharpe
ASML	21.0%	33.5%	0.63
Nasdaq100	16.4%	22.0%	0.74
AEX	7.9%	17.5%	0.45
MSCI World	8.3%	15.3%	0.54
Eurostoxx50	4.8%	19.3%	0.25

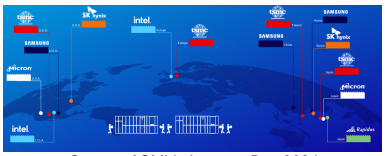
Source: LSEG Workspace, retrieved 11.12.2024

ASML represents approximately 12.12% of the AEX, the Netherlands' leading stock market index. It is also part of the Nasdaq100 and a constituent of the EuroStoxx50. Overserving the period between 10.12.2014 – 10.12.2024 ASML has offered an average annual return of 20.90%. Compared to the indices in the same period, ASML has outperformed the NDX and AEX. However, with a standard deviation of 33.54%, ASML shows volatility and potential higher risk. While ASML offers strong performance metrics, it has been slightly outperformed by KLA, Lam Research, and Tokyo Electron in terms of average annual return. Strictly compared to its direct competitors, Nikon and Canon, ASML clearly outperformed.

External Environment

Customers

Exhibit 7. Foundry Investments



Source: ASML's Investor Day 2024

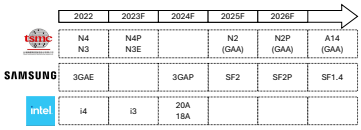
ASML's core customer base is predominantly located in Asia, with significant markets in Taiwan, South Korea, and Japan, alongside substantial business activities in the United States. Europe constitutes a smaller segment of the overall market. Customers can be grouped in two main categories: memory chips and logic chips. Memory chips are primarily manufactured by companies such as Samsung, SK Hynix, Micron, and Kioxia, while the more advanced logic chips are produced by industry leaders like TSMC, Intel, and Samsung. A critical portion of ASML's revenue is derived from these last three companies.

ASML's strategic relationships with its customers have evolved over decades, characterized by mutual dependency and the integration of ASML's technology with customers' roadmaps. Due to the lack of alternatives and high switching costs, ASML enjoys high customer retention. For example, ASML's NXE and High-NA EXE systems are specifically designed to support customers' transitions to advanced process nodes such as TSMC's N2, Samsung's 3nm GAA, and Intel's

Exhibit 9. Chips Act in Action

Source: Semiconductor Industry Association

Exhibit 10. Process Roadmap



Source: Macrotrends

20A and beyond. Furthermore, ASML is already preparing the next-generation Hyper-NA systems to enable sub-1nm production.

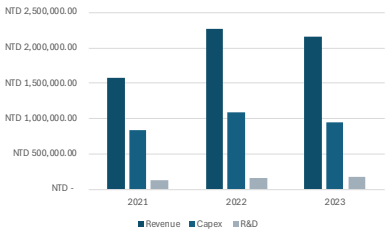
Exhibit 11. Revenue per Resolution

Node Size	2022	2023	2024
> 7nm	47%	42%	30-40%
≤ 7nm	53%	58%	60-70%

Source: TSMC's Annual Reports

TSMC founded in 1987 in Taiwan, is the largest and most advanced dedicated semiconductor foundry, responsible for around 55% of the global market for contract chip fabrication. The company manufactures chips for fabless companies, which includes Apple, Nvidia, AMD, and increasingly Intel. As the leader in cutting-edge semiconductor technology, TSMC specializes in advanced nodes, with over 50% of its revenue derived from chips smaller than 7nm. Its manufacturing relies heavily on suppliers, particularly ASML's EUV and DUV lithography systems, to produce leading-edge chips such as 3nm, 5nm, and 7nm. To sustain its leadership in next-generation nodes (<2nm), TSMC invests significantly in R&D and new fabs while expanding capacity overseas to mitigate geopolitical risks. Its capital expenditures have steadily increased, projected to reach $32 to $36 billion in 2025, supporting the expansion of advanced manufacturing facilities.

Exhibit 12. TSMC Key Financials (NTD M)



Source: TSMC's Annual Reports

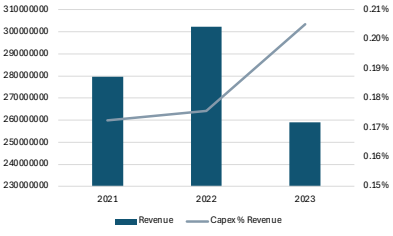
Exhibit 13. Company Logo

SAMSUNG

Source: Samsung's Website

Samsung Electronics, a subsidiary of the South Korean Samsung Group is a major player in semiconductors, consumer electronics, and telecommunications. Operating as an integrated device manufacturer, Samsung designs, manufactures, and markets its own chips while also providing foundry services to third parties. Although its ability to compete with TSMC has fluctuated, Samsung continues to invest aggressively in next-generation process nodes, particularly 3nm GAA technology. Samsung's reliance on ASML's systems spans both its foundry services and memory production, ensuring its competitiveness in both areas. The company's 2024 capex is projected at $40.5 billion, reflecting its focus on expanding foundry capacity and diversifying risks with overseas fabs, including significant investments in the US.

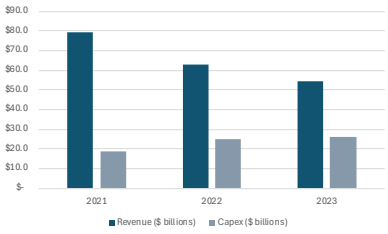
Exhibit 14. Samsung Key Financials (100M KRW)



Source: Samsung's Annual Reports

Intel Corp. is one of the largest semiconductor manufacturers in the world and a pioneer in developing processors, for personal computers and data centers. The company has historically been known for its in-house manufacturing capabilities but has struggled to maintain leadership in cutting-edge process nodes, facing delays in transitions to 10nm and below, which eroded its technological lead. These challenges prompted a reduction in spending, with 2024 capex projections lowered by over 20% to an estimated $25–$27 billion. To address these setbacks, Intel is transitioning towards a hybrid model, continuing to manufacture some chips in-house while increasingly relying on external foundries. The company is focusing on developing advanced process technologies, such as sub-7nm, and expanding its EUV capacity to regain technological leadership. The U.S. Department of Commerce recently awarded Intel up to $7.86 billion in direct funding and a 25% investment tax credit for qualified investments exceeding $100 billion. Additionally, Intel secured a $3 billion contract under the Secure Enclave program. These

Exhibit 15. Intel Key Financials (M $)



Source: Intel's Annual Reports

Exhibit 16. Intel Foundry location

Source: Intel's Website

measures aim to bolster Intel's U.S.-based investments and innovation efforts.

Competition

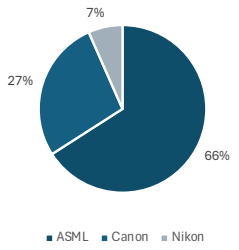
In the 1990s, ASML was a modest player in the lithography industry, facing competition from established firms such as Nikon and Canon. Through strategic technological advancements, ASML managed to capture significant market share, enhanced by the development of EUV, where it maintains a monopoly.

Nikon, which specializes in optics and imaging products, is also involved in semiconductor lithography systems for IC , flat panel display (FPDs) and organic light-emitting diode (OLED) manufacturing. Their lithography focus remains on mature technologies, which are used for producing legacy nodes. Canon, known for its cameras and office equipment, is also active in the production of lithography systems. Similar to Nikon they offer equipment for FPD and OLED production, which diverges from ASML's core focus. Although Canon's traditional offerings primarily compete with ASML's DUV systems, it recently introduced nanoimprint lithography (NIL), an emerging alternative to traditional photolithography. This technology positions Canon as a competitor in certain niche markets requiring sub-10nm production. While the company reports high interest, it has not yet gained widespread adoption. Nikon's and Canon's offerings are more traditional and less focused on the cutting-edge sectors. Beyond EUV, ASML continues to lead in other lithography technologies. It holds the top position in ArF immersion and dry tools, with Nikon as a notable but distant competitor. In the arena of older technologies such as I-line and KrF lithography, where the technological requirements are less, Canon and Nikon present significant competition.

In the M&I segment, ASML faces competition from specialized firms like KLA, Applied Materials, and Hitachi. These companies offer patterning solutions that complement or compete with ASML's. The software applications market is more competitive, given the range of participants and new entrants.

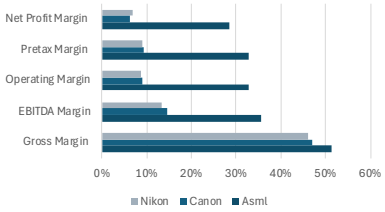
ASML is well-positioned to retain its market leadership in the foreseeable future. As the semiconductor industry advances toward smaller nodes and higher complexity, ASML's monopoly on EUV and advancements in High-NA EUV solidify its role as an enabler of semiconductor innovation. Supported by strong customer relationships, unmatched technological expertise, and consistent R&D investments, ASML is expected to remain at the forefront of the sector. This assessment is reinforced by Porter's Five Forces framework, which highlights the company's strategic advantages across key competitive forces (see Appendix).

Exhibit 17. Total Units Sold FY2023



Source: Companies' Annual Reports

Exhibit 18. Margin comparison FY2023



Source: Companies' Annual Reports

Exhibit 19. Peer Market capitalization

Company	Market Capitalization
ASML	€ 271,049,517,700.50
Core Competitor	
Nikon	€ 3,627,009,280.02
Canon	€ 41,695,139,970.51
Peer Group	
KLA Corporation	€ 82,214,231,550.93
Applied Materials	€ 132,933,998,346.60
Teradyne	€ 18,378,030,574.08
Entegris Inc	€ 15,523,005,076.50
ASM International	€ 26,065,204,763.20
Veeco	€ 1,533,543,575.22
Lam Research	€ 93,292,755,233.98
Tokyo Electron	€ 72,185,832,219.33

Source: LSEG Workspace, retrieved 11.12.2024

Exhibit 20. Porters 5 Forces Overall Score

Source: Own assessment

Environmental, Social and Governance

Exhibit 21. ESG Factors

Environmental	ASML FY2023	Peer Average
Total Energy Use / Revenue ($ M)	56.8	162.9
Renewable Energy Use Ratio	73%	34%
Total Water Use / Revenue ($ M)	38.6	116.8
Estimated CO2 Equivalents Emission Total	187300	144000
Total CO2 Emissions /Revenue ($ M)	6.2	15.0
Waste Recycling Ratio	86%	76%
Total Waste / Revenue ($ M)	0.3	0.8

Social		
Women Managers	15.46	15.77
Management Departures	No	
Employment Creation	11.62	19.72
Attrition Rate	3.60%	7%
Percentages of Female Employees	20%	20%
Employee Accidents	83	51.43

Governance		
Audit Committee Independence	100%	84%
Compensation Committee Independence	100%	91%
Average Board Tenure	4.3	8.5
Board Gender Diversity, Percent	44%	32%
Global Compact Signatory	Yes	
Shareholder rights policy score	51.1	51.7

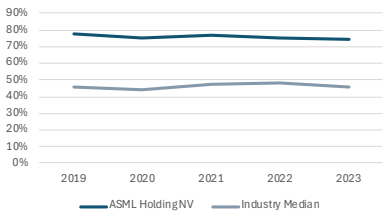
Source: LSEG Workspace, Annual Reports

Exhibit 22. Scored Points

	Score	Weight
Environmental	0.83	0.4
Social	0.58	0.3
Governance	0.93	0.3
Weighted Score	**0.78**	

Source: Own assessment

Exhibit 23. LSEG Overall ESG Score



Source: LSEG Workspace

In evaluating ASML's Environmental, Social, and Governance (ESG) performance, we assessed key metrics across the three pillars, benchmarking ASML against its peers (see Appendix). Points were assigned based on relative performance, resulting in pillar scores that reflect ASML's strengths and areas for improvement. Our findings highlight ASML's leadership in ESG within the WFE industry, consistent with assessments by Sustainalytics, MSCI, CDP, and LSEG.

ASML aims to achieve net-zero emissions across its value chain by 2040, with interim targets of net-zero Scope 1 and 2 emissions by 2025. To address Scope 3 the largest category, ASML collaborates with suppliers to implement renewable energy solutions, reduce carbon-intensive processes, and adopt circular economy principles, such as reuse and recycling. The company excels in energy efficiency, renewable energy adoption, waste minimization, and water conservation. ASML achieves a renewable energy use ratio of 73%, nearly double the industry average of 34%, and a recycling ratio of 86%, outperforming the industry median of 75%. Additionally, ASML produces only 0.3 tons of waste per million USD in revenue, compared to the industry average of 0.8. These results underscore ASML's Environmental pillar score of 0.83.

ASML fosters diversity, retention, and community development through targeted programs and partnerships. The ASML Foundation funds STEM education and inclusion projects, enhancing education and research in underserved communities. The company also prioritizes workplace safety and health protocols, ensuring a positive culture of employee retention and supply chain responsibility. Despite these efforts, ASML faces challenges in gender representation, especially in leadership roles. With only 20% of ASML's workforce consisting of women, the company lags behind peers. Additionally, ASML reported 83 employee accidents, higher than some peers, indicating room for improvement. The Social pillar score of 0.58 underrepresents ASML's qualitative impact, as metrics such as gender diversity and accident rates weigh heavily in our scoring systems. To address this, ASML could set public diversity targets, expand leadership development programs for women, and strengthen workplace safety initiatives to reduce accidents.

ASML's two-tier board structure ensures transparency, accountability, and alignment with global standards. Independent committees, strong gender diversity (44% female representation on the board), and balanced leadership enhance strategic oversight and adaptability to ESG challenges. Furthermore, the company integrates ESG principles into its governance framework, adheres to leading reporting standards, and protects shareholder rights. For example, ASML's fully independent audit and compensation committees ensure unbiased oversight,

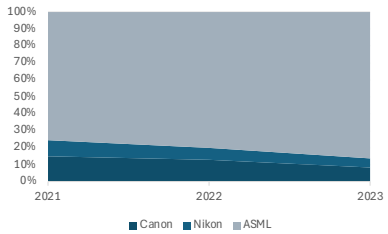
while the integration of ESG targets into executive compensation highlights its commitment to sustainable governance. With a Governance pillar score of 0.93, ASML outperforms most peers, reflecting its robust governance practices.

ASML demonstrates leadership in sustainability, driven by strong Environmental and Governance performance. However, addressing challenges in gender representation, reducing accident rates, and advancing Scope 3 emissions reduction efforts will solidify its position as a sustainable leader in the semiconductor industry.

Swot Analysis

Strengths

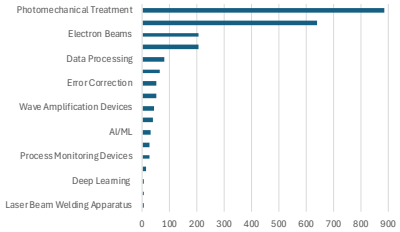
Exhibit 24. Market Share Estimation



Source: Own calculations

ASML is the only company in the world capable of producing EUV, essential to manufacture the most advanced semiconductors. In 2023, EUV technology accounted for 42% of ASML's revenue, reflecting its growing importance. When considering the combined lithography revenues of Canon and Nikon, including their FPD products, ASML holds a market share of 86%. Comparing the number of units sold, ASML owns 66% of the market. This dominance enhances ASML's bargaining power with major semiconductor manufacturers. ASML's expertise and extensive R&D investment create significant barriers to entry. The high costs, technical complexity, and specialized knowledge required for developing EUV technology further protect ASML's market position from potential competitors. ASML has demonstrated robust financial performance, with high revenue growth, profitability, and substantial cash flow. This financial strength creates a virtuous cycle by enabling continuous investment in R&D, which helps ASML maintain its technological lead and respond to evolving market demands.

Exhibit 25. ASML Holding Patent Portfolio (Patents Technology Area)

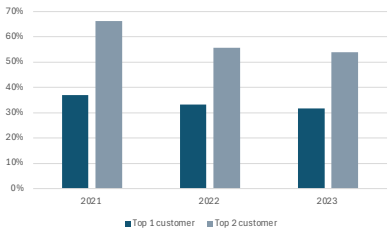


Note: The patent count represents the number of unique patent families. Data Range based on Publication Year (2019 - 2024)

Source: GreyB

Weaknesses

Exhibit 26. Customer concentration (% of Revenue)



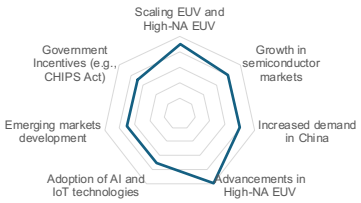
Source: ASML's Annual Reports

ASML relies heavily on a few major customers, with TSMC, Samsung, and Intel collectively accounting for over 80% of revenue, according to Fitch. EUV machines are extremely costly, with Low-NA systems priced at ~$180 million and High-NA systems at ~$380 million. While ASML's R&D drives innovation, it also imposes a significant burden, potentially straining resources during market volatility. The complexity of EUV lithography challenges production scalability and maintenance. Additionally, ASML's reliance on critical suppliers makes its supply chain vulnerable to disruptions, risking delays and higher costs.

Opportunities

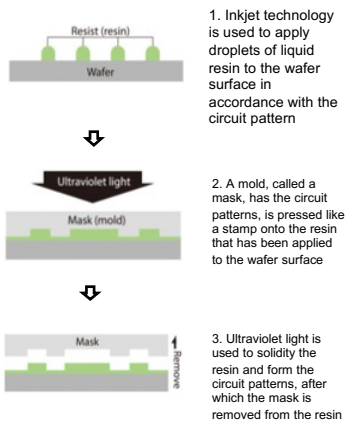
The growing demand for advanced semiconductors in applications such as AI, 5G, autonomous vehicles, and IoT presents significant growth opportunities,

Exhibit 27. Strategic Growth Opportunities



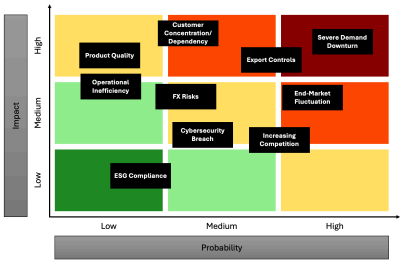
Source: Own assessment

Exhibit 28. Canon NIL manufacturing



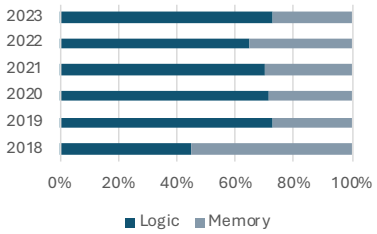
Source: Canon's Website

Exhibit 29. Risk Matrix



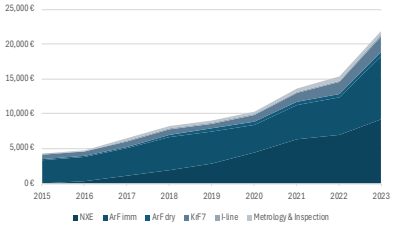
Source: Own assessment

Exhibit 30. Net System sales % by end-use



Source: ASML's Annual Reports

Exhibit 31. Net System sales per technology (€ M)



Source: ASML's Annual Reports

particularly in expanding EUV adoption. ASML's ability to scale EUV technology into the next decade, coupled with advancements in holistic lithography, positions it at the core of the AI opportunity. This includes supporting 3D integration in advanced logic and DRAM processes, reducing costs, and addressing energy challenges. Government initiatives like the CHIPS Act further promote growth by incentivizing domestic production. ASML's robust installed base and high-value service offerings ensure steady revenue streams, while strategic partnerships and innovation in High-NA EUV pave the way for long-term technological leadership.

Threats

ASML is exposed to geopolitical tensions, particularly between the US and China. Export restrictions and trade barriers limit ASML's ability to sell its products in key markets. These restrictions could fuel China's ambition to develop its own semiconductor manufacturing technologies, potentially reducing its reliance on ASML in the future. Chinese companies, such as SMIC, have already made progress in producing 7nm chips using DUV technology and have registered patents related to EUV technology, signaling China's potential move toward self-sufficiency in advanced chip manufacturing. Although ASML currently leads in EUV technology, the competitive landscape could become more challenging if other companies succeed in developing alternative lithography technologies or if new entrants disrupt the market. In this context, Canon's NIL could pose a potential threat. However, the existing value chain is heavily structured around EUV, providing ASML with some protection in the short term.

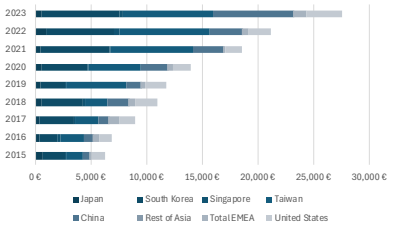
Valuation

Historical Performance

Top-down revenue segmentation shows that net systems sales have increased steadily to €21.62 billion in 2023, reflecting significant growth in ASML's core offerings, primarily driven by new system sold. Sales of used systems are relatively minor but show gradual growth. ASML's sales also indicate a stronger demand from logic manufacturers compared to memory, especially in recent years. Revenue by technology shows that the introduction of EUV has been transformational. NXE sales started low in 2013 but surged to €9.12 billion in 2023, representing now 42% of total revenue. While DUV remains a strong contributor, with ArF imm. consistently leading, its share of revenue is gradually declining. M&I although relatively small in proportion is growing steadily, reaching €536.1 million in 2023. IBM provides a steady revenue stream from services, upgrades, and maintenance, reaching €5.62 billion in 2023.

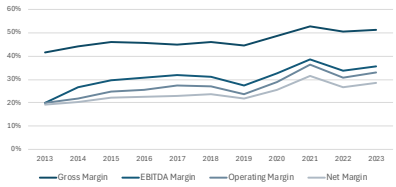
The majority of ASML's revenue is driven by the Asian market, with contributions

Exhibit 32. Total Net Sales by geographic location (€ M)



Source: ASML's Annual Reports

Exhibit 33. Margin Performance



Source: ASML's Annual Reports

Exhibit 34. Peer Gross Margin

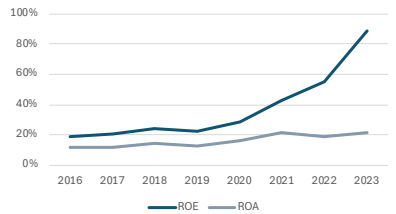
	FY2021	FY2022	FY2023
Nikon	35%	44%	46%
Canon	46%	45%	47%
Average	**40%**	**45%**	**47%**

	FY2021	FY2022	FY2023
KLA	60%	61%	60%
Applied Materials	47%	47%	47%
Teradyne	60%	59%	57%
Entegris Inc	46%	43%	42%
ASM International	48%	47%	48%
Veeco	42%	41%	43%
Lam Research	47%	46%	45%
Tokyo Electron	40%	46%	45%
Average	**49%**	**49%**	**48%**

	FY2021	FY2022	FY2023
Intel	55%	43%	40%
TSMC	52%	60%	54%
Samsung	40%	37%	30%
Average	**49%**	**46%**	**42%**

Source: Companies' Annual Reports

Exhibit 35. Return Metrics



Source: ASML's Annual Reports

growing substantially to 82% year-to-date (YTD). Since 2017, China has rapidly increased in importance, with sales rising to 26% by 2023 and reaching 48% YTD. South Korea and Taiwan have also been significant contributors; South Korea's share has generally ranged between 20% and 34%, reflecting the presence of major customers like Samsung, while Taiwan's share has fluctuated over time. In contrast, EMEA has remained a minor contributor, accounting for between 3% and 10% of revenue over the years, with a recent low of 1%. This limited contribution reflects the region's lack of large-scale semiconductor manufacturing facilities compared to Asia and the US. The US started as a relatively significant region in 2013 with 14% of sales, peaked at 32% in 2014, but gradually decreased to around 9–11% in recent years. This trend suggests that while the US has a strong demand for semiconductor technology, it has been overshadowed by rapid growth in Asia, particularly in China.

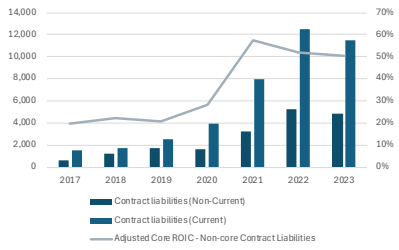
- Profitability from Operations

Between 2013 and 2015, ASML faced challenges related to its acquisition of Cymer, which led to gross margin pressures due to non-cash purchase price accounting adjustments. A recovery was seen in the subsequent years as integration synergies began to materialize. In 2016 and 2017, a strategic shift towards high-end system sales initially compressed margins because of the inclusion of lower-margin EUV systems. However, the gross margin rebounded in 2017, driven by an optimized product mix favoring more high-end systems and controlled costs in EUV service infrastructure. The period from 2020 to 2023 marked significant margin expansion, propelled by enhanced EUV profitability and growth in service and upgrade sales. Although the gross margin slightly declined in 2022 due to inflationary pressures and High-NA investments, a recovery in 2023 was driven by a larger share of higher-margin DUV system sales and reduced inflationary impacts. ASML's profitability metrics, including EBITDA, operating, and net margins, have all shown substantial improvement over the past decade. This consistent increase reflects effective cost management, operational efficiency, and a favorable product mix focusing on high-margin products. Overall, ASML shows steady improvement across all profitability metrics, suggesting effective management and robust operations. Despite fluctuations, the overall trend is positive, indicating a sustainable growth pattern.

- Return and Efficiency Ratios

The ROE steadily increased to 58% in 2023, reflecting efficient capital use and strong net income growth. While equity fluctuated slightly, it grew over time, contributing to the sharp rise in ROE. With an ROE significantly higher than the cost of equity (8.35%), ASML is generating substantial value for shareholders by delivering returns above expectations. ASML has consistently enhanced its ability

Exhibit 36. Contract liabilities (€ M)



Source: ASML's Annual Reports

Exhibit 37. ROIC comparison

	FY2022	FY2023
ASML (Adjusted Non-core)	51.68%	50.15%
KLA	48.5%	49.6%
Applied Materials	42.3%	42.3%
Lam Research	42.0%	42.7%

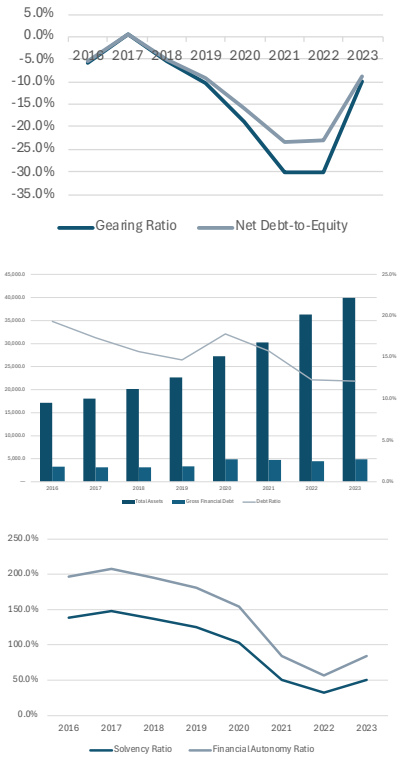
Source: LSEG Workspace, Annual Reports

to generate profits from its assets, reflected in a steady growth of the ROA to nearly 20% in 2023. This improvement highlights the exceptional productivity of ASML's high-tech manufacturing equipment and intellectual property in driving earnings. The ROIC, adjusted to exclude non-current contract liabilities, was approximately 50.15% in 2023, compared to 139.4% unadjusted. This adjustment addresses the increase in the ROIC influenced by including long-term deferred revenues, which are tied to future periods and non-current operations. ASML's adjusted ROIC is in line with industry peers such as KLA, Lam Research, and Applied Materials. These peers operate with similar R&D intensity and asset composition, including significant intangible assets like intellectual property (IP). With a WACC of 9.14%, an adjusted ROIC well above indicates that ASML is highly effective at generating returns from its total employed capital.

ASML's return metrics show that the company's core operations are extraordinarily profitable and efficient, as reflected in the high Core ROIC and operational margin. ASML's conservative capital management, focus on core activities, and high profitability metrics underscore a strategy aimed at sustaining its technological edge and market leadership.

- Capital Structure Ratios

Exhibit 38. Capital Structure (€ M)



Source: ASML's Annual Reports

ASML's negative gearing ratio, due to negative net debt, indicates the company had more cash and equivalents than debt. This conservative approach implies the company prefers to avoid leverage and a strategic management of its cash reserves. The debt-to-equity ratio shows a similar trend, low or negative values confirm that ASML relies heavily on equity, emphasizing a stable capital structure with minimal leverage. The gradual decrease in the solvency ratio, which remains above 50% in 2023, signals that liabilities have grown relative to equity. However, its high value indicates ASML still has a substantial equity cushion, ensuring it can cover its liabilities if needed. The decline in the financial autonomy ratio from 60% in 2013 to 34% in 2023 reflects an increased use of external financing driven by a growing portion of liabilities relative to equity. A relatively stable and low debt ratio shows that the total assets of the company are not heavily financed by debt. The interest coverage ratio increased over the period, indicating improving profitability and operational efficiency in covering interest expenses.

ASML offers a conservative capital structure characterized by low or even negative debt metrics, a strong reliance on equity, and growing profitability, which highlights the company's cautious approach to financing. ASML's choice to operate with little net debt ensures a low-risk financial profile and reduces vulnerability to market volatility and credit conditions. In years where ASML has negative net debt, the company forgoes potential tax benefits that could arise from having a positive level of debt. While the absence of significant debt ensures a strong balance sheet and

reduces financial risk, it also means that ASML is not leveraging the potential financial leverage benefits. The decision to maintain low net debt is a strategic one that aligns with the overall business approach, prioritizing stability and long-term growth over short-term financial gains from tax shields. This strategy is particularly common in the high-tech industry, where rapid changes in technology and market cycles can quickly alter financial needs and opportunities.

- Cash Flow Management

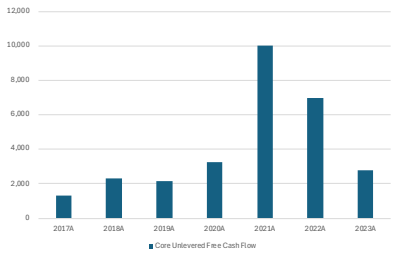
From 2013 to 2018 the **average holding period** decreased from 285 days to 212 days, which suggests an efficient inventory management. This metric subsequently increased to **241 days** in 2023 indicating a slowdown tied to macroeconomic factors and changes in market demand. The **average payable period** general increased until it peaked at **89 days** in 2022. A higher payable period can improve cash flow as it allows the company to keep cash for a longer period, but if too high, it may harm supplier relationships. The **average collection period** varied significantly, dropping to 57 days in 2023, which indicates improved efficiency in collecting payments. A shorter collection period signals that ASML is quickly converting receivables into cash, which is favorable for liquidity. Notably, ASML has managed its accounts receivable through various measures, including increased factoring. In 2019, ASML facilitated the management of receivables through a factoring arrangement totaling €1.3 billion, which continued in subsequent years to enhance liquidity. The **cash conversion cycle (CCC)** decreased from 271 days in 2013 to 186 days in 2021, showing an improvement in cash flow efficiency. However, it rose to 253 days in 2022 before settling at **234 days** in 2023, indicating variability in recent years. Despite these fluctuations, the overall trend highlights an improvement in the company's operational efficiency over the years.

- Liquidity Ratios

The **current ratio**, which measures the ability to cover short-term obligations with short-term assets, is strong, staying above two until 2020, then dropping to **1.50** in 2023. A ratio above one indicates that ASML has more current assets than liabilities. However, extremely high ratios might indicate excessive assets or inefficient use of resources. The **quick ratio** follows a similar trend, remaining stable until 2020 before dropping **below one** in 2022. A quick ratio below one suggests a reliance on inventory sales to meet short-term liabilities. The **cash ratio** assesses the company's ability to cover short-term liabilities with only cash and equivalents. It fluctuates between 0.4 and 0.94, with a noticeable decline from 2020 onwards. This decline suggests reduced cash reserves relative to liabilities.

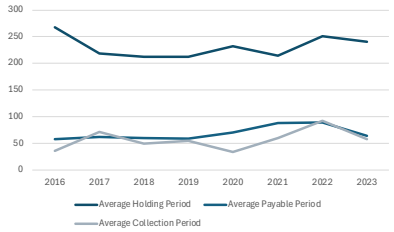
The data indicates that the company experienced increased operational efficiency up until 2021, as evidenced by the declining CCC and generally strong liquidity

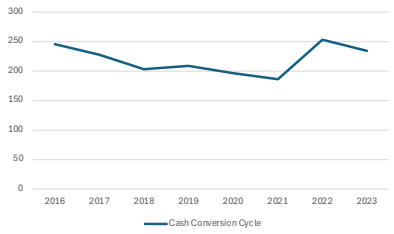
Exhibit 39. Cashflow evolution (€ M)



Source: ASML's Annual Reports

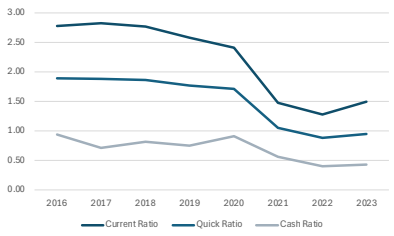
Exhibit 40. Cash Conversion Cycle





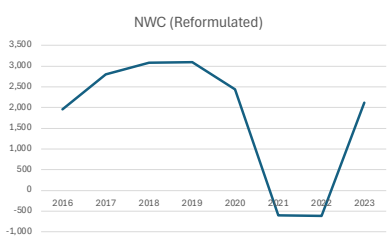
Source: ASML's Annual Reports

Exhibit 41. Liquidity Ratio Evolution



Source: ASML's Annual Reports

Exhibit 42. NWC Evolution (€ M)



Source: ASML's Annual Reports

ratios. However, the following periods show higher variability, with significant changes in NWC and declines in liquidity ratios. While the liquidity side indicates a strong position, there's a slight downward trend, especially in the cash ratio.

- Capital Expenditure

Capital expenditure is consistently increasing over the years. Capex-to-revenue ranged between 2% and 15%. With capex-to-depreciation ranging from 43.3% to 356%, ASML spends substantially more on capex than what is depreciated each year, which shows a strategy focused on growth. ASML's capex-to-revenue sits within a competitive range of 8.4% when compared to its core competitors, Nikon and Canon, which generally exhibit lower percentages. Other semiconductor equipment manufacturers, such as KLA, Applied Materials, and Tokyo Electron, show a peer average of 4.11% to 6.14% . ASML's capex spending is closely aligned, positioning it competitively within the broader semiconductor equipment industry. Furthermore, ASML's capex trend is closely linked to the investment patterns of key customers, which average capex-to-revenue ratios of 24% to 37.9% from 2020 to 2023.

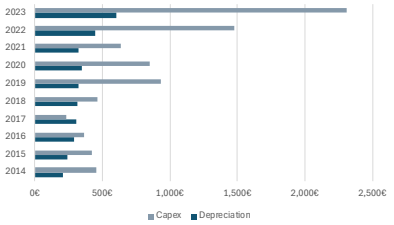
The ratios indicate that ASML is in a growth and expansion phase, supported by a well-balanced financial strategy. The company effectively leverages operating cash flows for reinvestment while maintaining sustainability through prudent management of capital intensity. Given the long lead times in semiconductor manufacturing and the rapid pace of technological change, investments made by ASML during a high capex period might not translate into immediate revenue but are crucial for long-term growth and maintaining technological leadership.

- Research and Development

R&D costs have steadily increased to €3,980.6 million in 2023, a fourfold increase over a decade. Although R&D spending has grown in absolute terms, it has decreased as a proportion of revenue, indicating that revenue growth has outpaced R&D expenditure. The substantial increase in absolute R&D spending aligns with the company's goal of maintaining and advancing its market position. The decreasing R&D-to-revenue over the years, combined with increasing revenue, suggests that the company achieved greater R&D efficiency. The increase in R&D-to-total assets in recent years shows a commitment to invest in innovation relative to the company's asset base.

The data shows that ASML is not only expanding its R&D investment but also appears to be doing so in a targeted and more efficient way, aligning its R&D strategy with its overall growth and asset expansion. When compared to its peers, ASML's R&D-to-revenue aligns with industry averages. Damodaran estimates a current R&D-to-revenue in the semiconductor equipment industry to be at 10.32%.

Exhibit 43. Capex-to-depreciation (€ M)



Source: ASML's Annual Reports

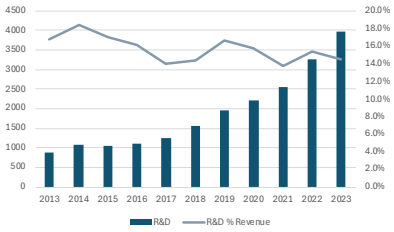
Exhibit 44. Peer Capex-to-revenue

Industry Peers	FY2021	FY2022	FY2023
ASML	3.4%	7.0%	8.4%
KLA	3.3%	3.3%	3.3%
Applied Materials	2.9%	3.1%	4.2%
Teradyne	3.6%	5.2%	6.0%
Entegris Inc	9.2%	14.2%	13.0%
ASM International	4.2%	4.2%	5.8%
Veeco	7.0%	3.8%	4.2%
Lam Research	2.4%	3.2%	2.9%
Tokyo Electron	4.4%	3.2%	3.5%
Average	**4.61%**	**5.02%**	**5.34%**

Customers	FY2021	FY2022	FY2023
ASML	3.4%	7.0%	8.4%
TSMC	52.9%	47.8%	43.9%
Intel	23.7%	39.4%	47.5%
Samsung	*16.9%*	*16.4%*	*22.2%*
Average	**31.1%**	**34.5%**	**37.9%**

Source: Companies' Annual Reports

Exhibit 45. R&D Evolution (€ M)



Source: ASML's Annual Reports

Exhibit 46a. Peer R&D-to-revenue

Industry Peers	FY2021	FY2022	FY2023
ASML	13.7%	15.4%	14.4%
KLA	13.4%	12.0%	12.4%
Applied Materials	10.8%	10.7%	11.7%
Teradyne	11.5%	14.0%	15.6%
Entegris Inc	12.7%	16.6%	16.4%
ASM	8.7%	9.7%	11.7%
Veeco	15.2%	16.0%	16.9%
Lam Research	10.2%	9.3%	9.9%
Tokyo Electron	9.8%	7.9%	8.7%
Average	**11.5%**	**12.0%**	**12.9%**

Source: Companies' Annual Reports

Exhibit 46b. R&D Comparison

Competitors	FY2021	FY2022	FY2023
ASML	13.7%	15.4%	14.4%
Nikon	13.3%	11.3%	11.2%
Canon	*8.2%*	*7.6%*	*7.9%*
Average	**10.7%**	**9.5%**	**9.5%**

Source: Companies' Annual Reports

Exhibit 47. Cost of Debt

$$Rd = YTM - (Annulized\ Probility\ of\ Default * Loss\ Given\ Default)$$

Credit Rating	A+
YTM	2.62%
Term to Maturity	7.0
Cumulative Probability of Default	0.43%
Annualized Probability of Default	0.06%
Loss Given Default	48.30%
Rd	**2.59%**

Source: ASML' website, S&P Global, Fitch, Trading View

Exhibit 48. Cost of Equity

Risk Free Rate	2.12%
Equity Risk Premium	5.34%
βe (relevered)	1.30
Re	**9.07%**

Source: Trading economics, Damodaran

Exhibit 49. WACC

Corporate Tax Rate	25.80%
Target D / EV	-1.00%
Target E / EV	101.00%
WACC	**9.14 %**

Source: Own calculations

Exhibit 50. Upper Boundary

$$(1 + Real\ Growth\ of\ the\ Economy) * (1 + \text{Euro Inflation}) - 1$$

Source: Own assessment

Exhibit 51. TGR estimates

Upper Boundary	5.16%

Sensible estimates for ASML's TGR	
1) Growth Rate of FCF when it stabilizes	5.04%
2) Growth Rate considering RONIC & RR	4.00%

Source: Own Calculations

Even with a deceasing ratio, ASML's spending of 14.44% is still above the industry average.

- Core Enterprise Value

- Discount Rate

We estimated the cost of debt by adjusting the YTM of ASML's longest maturing bond, which has a seven-year term. To account for the credit risk, we annualized the cumulative probability of default (PD) associated with ASML's A+ rating, provided by Fitch. Given ASML's strong investment-grade status and the nature of its assets, we based our recovery rate assumption on historical averages for investment-grade, senior unsecured bonds. Applying these inputs, we estimated a cost of debt of 2.59%.

The cost of equity was estimated by applying the capital asset pricing model. We used the yield of the German bond with 2.12% as the risk-free rate proxy. For our beta estimation, we applied a linear regression using ASML and MSCI's World Index daily closing prices over the past three years. We adjusted for leverage by employing a debt-to-enterprise ratio (D/EV) of -1%, based on historical data. Additionally, we determined the equity risk premium (ERP) by applying a weighted average method to ASML's total net sales by geographic region over the last three years, alongside the respective ERP from Damodaran.

Given ASML's strategic approach to maintaining a minimal level of debt (target of -1.00% D/EV), the WACC primarily reflects the cost of equity. This leads to a post-tax WACC of 9.14%.

- Terminal Growth Rate

We have set the upper boundary for the Terminal Growth Rate (TGR) as the nominal growth of the global economy. Based on the IMFs projections, global real GDP growth in 2029 is estimated at 3.1%, and the Eurozone forecasted inflation rate is approximately 2%, resulting in an upper boundary of 5.1%.

To determine the appropriate TGR for ASML, we considered its position as a technology enabler and its close alignment with global economic growth. Sensible estimates for ASML's TGR include the growth rate of free cash flow when it stabilizes, which is approximately 5.04%, and the growth rate derived from the product of RONIC and the reinvestment rate, estimated at 4.00%. Based on these observations, we adopted a TGR of 5.04%, reflecting ASML's ability to grow in line with the broader economy while sustaining robust cash flows in perpetuity.

- Relative Valuation

For ASML, we used forecasted values based on our projections for December

Exhibit 52. Companies within the Industry

Company	Relationship to ASML
Nikon	Core Competitor
Canon	Core Competitor
KLA Corporation	Metrology
Applied Materials	Inspection, metrology
Teradyne	Complementary (test equipment)
Entegris Inc	Supplier (materials handling)
ASM International	Semiconductor deposition
Veeco	Semiconductor equipment supplier
Lam Research	Etching, deposition
Tokyo Electron	Coater/developer and semiconductor equipment supplier

Source: Companies' Annual Reports

Exhibit 53. Multiple Valuation Summary

Companies	EV/EBIT
ASML.AS	28.65
KLA Corp.	22.65
Applied Mat.	19.49
Teradyne	32.82
Entegris Inc	38.14
ASM Int.	33.90
Lam Research	21.44
Tokyo Electron	19.34
Average	**26.83**
Multiple	26.83
Forecasted EBIT	€ 9,395,834,628
Core EV	€ 252,061,497,874
Participation in Carl Zeiss	€ 4,646,745,420
Loan to Carl Zeiss	€ 873,488,478
Net Financial Debt	€ 3,090,120,393
Equity	€ 260,671,852,165
#Shares	393450122
Price Target	**€ 663**

Companies	EV/EBITDA
ASML.AS	25.37
KLA Corp.	20.64
Applied Mat.	18.51
Teradyne	26.85
Entegris Inc	21.98
ASM Int.	27.01
Lam Research	19.86
Tokyo Electron	17.55
Average	**21.77**
Multiple	21.77
Forecasted EBITDA	€ 10,450,905,826
EV	€ 227,521,008,807
Participation in Carl Zeiss	€ 4,646,745,420
Loan to Carl Zeiss	€ 873,488,478
Net Financial Debt	€ 3,090,120,393
Equity	€ 236,131,363,098
#Shares	393450122
Price Target	**€ 600**

Companies	EV/Revenue
ASML.AS	9.76
KLA Corp.	8.93
Applied Mat.	5.65
Teradyne	6.28
Entegris Inc	6.11
ASM Int.	8.85
Lam Research	6.27
Tokyo Electron	5.23
Average	**6.76**
Multiple	6.76
Forecasted Revenue	€ 29,826,286,639
EV	€ 201,647,575,330
Participation in Carl Zeiss	€ 4,646,745,420
Loan to Carl Zeiss	€ 873,488,478
Net Financial Debt	€ 3,090,120,393
Equity	€ 210,257,929,621
#Shares	393450122
Price Target	**€ 534**

Source: LSEG Workspace, Companies' Annual Reports, Own calculations

2025. To derive comparable multiples, we utilized trailing twelve months (TTM) values for the peer group. This approach reflects the most reliable and recent operational performance of comparable companies. While forward multiples could align better with the Dec. 2025 horizon, inconsistencies in forecasts across peers make TTM multiples more robust for our analysis. We applied these multiples to relevant financial metrics to calculate the enterprise value and, ultimately, the share price. This ensures alignment with observable market data while cross-checking the results of our primary valuation approach.

ASML's specialized market position makes it challenging to find direct comparable within the semiconductor equipment industry. The technical requirements and capital-intensity of wafer fabrication have led to a market concentrated around a select group of specialized companies, each with distinct technological strengths. While Nikon and Canon historically competed, they no longer compare in terms of business model, scale, or technological specialization. To construct a meaningful peer group, we focused on companies with comparable technologies, business models, and overlapping customer bases.

Applied Materials, Lam Research, Tokyo Electron, and ASM International are key players in deposition and etching, processes that follow lithography. These companies enable the layering and patterning of materials on wafers and share ASML's focus on advanced node technologies, serving common customers like TSMC and Samsung. **KLA** provides metrology and inspection tools, ensuring yield and quality by identifying defects in wafers processed with ASML's lithography equipment. **Teradyne** specializes in semiconductor testing, ensuring the functionality of chips. Its role in quality assurance connects it to ASML's broader ecosystem. Lastly **Entegris** which supplies contamination control and advanced materials critical for precision in semiconductor fabrication, indirectly supporting ASML's lithography processes. These peers represent complementary roles in wafer fabrication and quality assurance, making them well-suited for relative valuation. Each provides insights into operational efficiency, profitability, and technological leadership within the semiconductor value chain. The asset-side multiples should reflect operational performance independently of capital structure. These metrics are especially relevant in ASML's capital-intensive, R&D-driven industry, capturing profitability and efficiency.

With the selected Peer group, we estimate an implied share price range between approximately €534 - €662. This range suggests that the market has largely factored in ASML's technological leadership, as the EBIT-based valuation closely matches the current trading price, highlighting the market's appreciation of its superior margins and profitability. The Revenue-based multiples imply a relative discount, likely reflecting ASML's higher margins. Given ASML's critical role in the

value chain, persistent demand from leading customers, and stable execution on its product roadmap, support the view that ASML remains a key long-term value driver within the semiconductor equipment ecosystem.

Additional Tests

- Scenario Analysis

Our valuation of ASML incorporates two distinct scenarios to account for varying market conditions, updated data assumptions, and technological shifts. These scenarios, best-case and worst-case, are constructed by adjusting critical operational and financial variables to explore a broad range of potential outcomes.

Exhibit 54. Best-case scenario

DCF Valuation (€ in millions, except per share data)	
Core Levered Explicit Horizon FCFs	115,789.61
Core Levered Terminal FCFs	299,613.89
Core Levered Enterprise Value	**415,403.50**
Participation in Carl Zeiss (Lev)	5,133.79
Loan to Carl Zeiss (Lev)	873.49
Total Levered Enterprise Value	**421,410.79**
Net Financial Debt	4,214.11
Equity Value	**425,624.89**
# Shares Outstanding	393.45
Share Price	**1,081.78**
Last close price (10/Dec/2024)	**670.70**
Price target for December 2025	1081.78
Capital Gain (Loss)	**61.29%**
Total Dividend Yield	2.53%
Expected Total Return	**63.82%**

Source: Own calculations

Exhibit 55. Worst-case scenario

DCF Valuation (€ in millions, except per share data)	
Core Levered Explicit Horizon FCFs	48,515.54
Core Levered Terminal FCFs	89,206.92
Core Levered Enterprise Value	**137,722.46**
Participation in Carl Zeiss (Lev)	3,148.84
Loan to Carl Zeiss (Lev)	873.49
Total Levered Enterprise Value	**141,744.79**
Net Financial Debt	1,417.45
Equity Value	**143,162.24**
# Shares Outstanding	393.45
Share Price	**363.86**
Last close price (10/Dec/2024)	**670.70**
Price target for December 2025	363.86
Capital Gain (Loss)	**-45.75%**
Total Dividend Yield	2.56%
Expected Total Return	**-43.19%**

Source: Own calculations

In the best-case scenario, ASML's EUV tools continue to set the standard for the industry, bolstered by an easing of market restrictions and evolving production efficiencies. With the removal of current sanctions, ASML gains direct access to China, unlocking a vast, high-growth market eager to upgrade its lithography capabilities. Semiconductors remain integral to a broad range of applications, from advanced computing to artificial intelligence, ensuring robust and sustained demand. Under these favorable conditions, the company's unit sales and ASPs for EUV equipment trend higher than previously anticipated, as reflected in the improved net system sales growth metrics. By catering to a larger customer base and leveraging economies of scale in production and procurement, ASML not only ramps up volumes but also improves its cost structure. Lower per-unit costs and stable service margins enhance overall profitability, while R&D spending, as a proportion of revenues, remains controlled, supporting long-term innovation.

In the worst-case, ASML's competitive edge in EUV is eroded by the emergence of Canon's NIL. Over time, NIL establishes itself as an alternative, offering meaningful advantages in cost-efficiency, yield improvements, or both. Semiconductor manufacturers seeking to control capex and enhance production yields increasingly favor NIL, reducing the demand for EUV equipment. As NIL gains traction, ASML's EUV unit sales and ASPs come under pressure, and the cost of system sales metrics revert to higher percentages. Margins compress due to heightened competition and a need for higher R&D spending to close the gap.

Under our best-case scenario, unrestricted EUV sales to China drive ASML's price target to €1,081.78, yielding a total return of approximately 63.8%. Conversely, in the worst-case scenario, marked by the rise of NIL technology and declining EUV demand, the share price could fall to €363.86, resulting in a total return of about -43.2%. These outcomes underscore the sensitivity of ASML's valuation to global access and competitive dynamics, highlighting the importance of sustained technology leadership and market openness for the company's long-term success.

Appendix

Reformulated Historical Income Statement

Year ended December 31 (€ M)	2013A	2014A	2015A	2016A	2017A	2018A	2019A	2020A	2021A	2022A	2023A
Core											
Net system sales	3,993.1	4,242.8	4,310.4	4,718.9	6,424.4	8,259.1	8,996.2	10,316.6	13,652.8	15,430.3	21,938.6
Net service and field option sales	1,252.2	1,613.5	1,977.0	2,156.2	2,538.3	2,684.9	2,823.8	3,661.9	4,958.2	5,743.1	5,619.9
Total net sales	**5,245.3**	**5,856.3**	**6,287.4**	**6,875.1**	**8,962.7**	**10,944.0**	**11,820.0**	**13,978.5**	**18,611.0**	**21,173.4**	**27,558.5**
Cost of system sales	(2,233.6)	(2,335.5)	(2,246.0)	(2,423.9)	(3,439.9)	(4,141.2)	(4,676.2)	(5,169.3)	(6,482.9)	(7,582.3)	(10,151.0)
Cost of service and field option sales	(834.4)	(924.4)	(1,145.7)	(1,305.9)	(1,502.6)	(1,773.6)	(1,864.0)	(2,012.0)	(2,319.1)	(2,891.0)	(3,271.4)
Total cost of sales	**(3,068.1)**	**(3,259.9)**	**(3,391.7)**	**(3,729.8)**	**(4,942.5)**	**(5,914.8)**	**(6,540.2)**	**(7,181.3)**	**(8,802.0)**	**(10,473.3)**	**(13,422.4)**
Gross profit	**2,177.3**	**2,596.4**	**2,895.7**	**3,145.3**	**4,020.2**	**5,029.2**	**5,279.8**	**6,797.2**	**9,809.0**	**10,700.1**	**14,136.1**
Research and development costs	(882.0)	(1,074.0)	(1,068.1)	(1,105.8)	(1,259.7)	(1,575.9)	(1,968.5)	(2,200.8)	(2,547.0)	(3,253.5)	(3,980.6)
Selling, general and administrative costs	(311.7)	(321.1)	(345.7)	(374.8)	(416.6)	(488.0)	(520.5)	(544.9)	(725.6)	(945.9)	(1,113.2)
Gain on sale of subsidiaries	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	213.7	0.0	0.0
Core result before taxes	**983.5**	**1,201.2**	**1,481.9**	**1,664.7**	**2,343.9**	**2,965.3**	**2,790.8**	**4,051.5**	**6,750.1**	**6,500.7**	**9,042.3**
Statutory taxes	(245.9)	(300.3)	(370.5)	(416.2)	(586.0)	(741.4)	(697.6)	(1,012.8)	(1,687.6)	(1,677.2)	(2,332.9)
Tax adjustments	180.2	163.5	225.8	204.9	291.4	281.9	429.6	458.5	664.3	735.2	936.8
Core Result = NOPAT	**917.8**	**1,064.4**	**1,337.2**	**1,453.4**	**2,049.3**	**2,505.8**	**2,522.8**	**3,497.2**	**5,726.8**	**5,558.7**	**7,646.2**
Non-Core											
R&D contributions under the NRE funding agreement	64.5	81.0	83.2	93.8	95.8	0.0	0.0	0.0	0.0	0.0	0.0
Interest income	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.4
Non-Core result before taxes	**64.5**	**81.0**	**83.2**	**93.8**	**95.8**	**0.0**	**0.0**	**0.0**	**0.0**	**0.6**	**2.4**
Statutory taxes	(16.1)	(20.3)	(20.8)	(23.5)	(24.0)	0.0	0.0	0.0	0.0	(0.2)	(0.6)
Tax adjustments	67.7	77.9	0.0	8.8	0.0	100.8	70.1	(5.9)	(9.3)	(39.4)	(29.1)
Profit from participation in Carl Zeiss	0.0	0.0	0.0	0.0	(16.7)	6.2	18.2	88.6	199.1	138.0	191.3
Non-Core Result	**116.1**	**138.7**	**62.4**	**79.1**	**55.1**	**107.0**	**88.3**	**82.7**	**189.8**	**99.1**	**164.0**
Financial											
Interest and other, net	(24.4)	(8.6)	(16.5)	33.7	(50.3)	(28.3)	(25.0)	(34.9)	(44.6)	(45.2)	38.8
Financial result before taxes	**(24.4)**	**(8.6)**	**(16.5)**	**33.7**	**(50.3)**	**(28.3)**	**(25.0)**	**(34.9)**	**(44.6)**	**(45.2)**	**38.8**
Statutory taxes	6.1	2.1	4.1	(8.4)	12.6	7.1	6.2	8.7	11.2	11.7	(10.0)
Tax adjustments	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial result	**(18.3)**	**(6.5)**	**(12.4)**	**25.3**	**(37.7)**	**(21.2)**	**(18.8)**	**(26.2)**	**(33.4)**	**(33.6)**	**28.8**
Net Income	**1,015.5**	**1,196.6**	**1,387.2**	**1,557.8**	**2,066.7**	**2,591.6**	**2,592.3**	**3,553.7**	**5,883.2**	**5,624.2**	**7,839.0**

Notes: A - Audited

Reformulated Historical Balance Sheet

Year ended December 31 (€ M)	2013A	2014A	2015A	2016A	2017A	2018A	2019A	2020A	2021A	2022A	2023A
Core											
Operating cash	157.4	175.7	188.6	206.3	268.9	328.3	354.6	419.4	558.3	635.2	826.8
Current receivables	1,128.8	1,248.6	1,084.2	1,121.6	1,799.4	2,109.3	2,351.3	3,020.8	4,213.6	6,680.5	5,713.3
Current tax assets (liabilities)	16.5	7.6	15.4	(190.3)	(90.4)	(108.2)	113.1	(42.7)	(259.9)	(281.9)	692.3
Contract assets	0.0	0.0	0.0	148.3	270.4	95.9	231.0	119.2	164.6	131.9	240.1
Inventories	2,393.0	2,549.8	2,573.7	2,731.8	2,955.6	3,439.5	3,809.2	4,569.4	5,179.2	7,199.7	8,850.7
Other assets	295.6	351.8	436.8	453.1	460.0	730.4	808.3	762.7	948.3	1,626.1	1,558.7
Accounts payable	(625.9)	(496.2)	(418.9)	(593.2)	(837.3)	(964.0)	(1,062.2)	(1,377.9)	(2,116.3)	(2,565.2)	(2,347.3)
Accrued and other liabilities	(2,207.5)	(2,282.4)	(2,657.2)	(533.1)	(492.7)	(817.7)	(980.4)	(1,074.8)	(1,360.0)	(1,567.1)	(1,974.0)
Contract liabilities	0.0	0.0	0.0	(1,386.4)	(1,530.0)	(1,728.6)	(2,526.4)	(3,954.2)	(7,935.2)	(12,481.0)	(11,441.0)
Net Working Capital	**1,158.0**	**1,554.9**	**1,222.7**	**1,958.0**	**2,803.9**	**3,084.9**	**3,098.5**	**2,441.9**	**(607.4)**	**(621.8)**	**2,119.6**
Finance receivables	46.0	55.3	124.0	55.9	264.9	275.1	421.1	400.5	383.0	0.0	60.6
Deferred and other tax assets (liabilities)	(104.2)	(51.0)	(97.0)	(376.0)	(309.4)	(14.9)	210.9	433.2	858.1	1,405.8	1,500.1
Other assets	267.8	329.3	369.1	522.8	537.5	746.4	727.4	827.7	839.7	739.8	657.3
Goodwill	2,088.6	2,357.5	2,624.6	4,873.9	4,541.1	4,541.1	4,541.1	4,629.1	4,555.6	4,555.6	4,588.6
Other intangible assets	697.6	723.8	738.2	1,323.0	1,166.0	1,104.0	1,104.4	1,048.9	952.1	842.4	741.7
PPE and Right use of assets	1,217.8	1,447.5	1,620.7	1,687.2	1,600.8	1,727.1	2,323.2	2,815.2	3,147.5	4,136.9	5,799.8
Contract liabilities	0.0	0.0	0.0	(447.4)	(622.0)	(1,224.6)	(1,759.6)	(1,639.9)	(3,225.7)	(5,269.9)	(4,825.5)
Accrued and other liabilities	(287.8)	(415.3)	(416.8)	(176.3)	(117.3)	(108.0)	(77.7)	(119.6)	(130.8)	(303.4)	(220.0)
Core Invested Capital	**5,083.8**	**6,002.0**	**6,185.5**	**9,421.1**	**9,865.5**	**10,131.1**	**10,589.3**	**10,837.0**	**6,772.1**	**5,485.4**	**10,422.2**
Non-Core											
Participation in Carl Zeiss	0.0	0.0	0.0	0.0	982.2	915.8	833.0	820.7	892.5	923.6	919.6
Loan to Carl Zeiss	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	124.4	364.4	912.4
Non-Core Invested Capital	**0.0**	**0.0**	**0.0**	**0.0**	**982.2**	**915.8**	**833.0**	**820.7**	**1,016.9**	**1,288.0**	**1,832.0**
Total Invested Capital	**5,083.8**	**6,002.0**	**6,185.5**	**9,421.1**	**10,847.7**	**11,046.9**	**11,422.3**	**11,657.7**	**7,789.0**	**6,773.4**	**12,254.2**
Financial											
Excess cash & Short-term Investments	2,853.2	2,578.7	3,220.1	3,850.6	3,019.4	3,706.1	4,363.5	6,932.2	7,032.0	6,740.8	6,183.3
Derivative financial assets (liabilities)	60.0	86.1	113.0	20.2	48.4	54.5	133.6	142.8	96.7	(243.9)	(125.6)
Gross Financial Debt	(1,074.6)	(1,154.1)	(1,129.7)	(3,319.5)	(3,139.1)	(3,166.5)	(3,327.2)	(4,867.3)	(4,777.1)	(4,459.5)	(4,859.5)
Net Financial Debt	**1,838.6**	**1,510.6**	**2,203.4**	**551.3**	**(71.3)**	**594.1**	**1,169.9**	**2,207.7**	**2,351.6**	**2,037.4**	**1,198.2**
Total Shareholders' Equity	**6,922.4**	**7,512.6**	**8,388.8**	**9,972.4**	**10,776.4**	**11,641.0**	**12,592.2**	**13,865.4**	**10,140.6**	**8,810.8**	**13,452.4**
Total Funding	**5,083.8**	**6,002.0**	**6,185.5**	**9,421.1**	**10,847.7**	**11,046.9**	**11,422.3**	**11,657.7**	**7,789.0**	**6,773.4**	**12,254.2**

Notes: A - Audited

Reformulated Historical Cash Flow Map

Year ended December 31 (€ M)	2014A	2015A	2016A	2017A	2018A	2019A	2020A	2021A	2022A	2023A
Core										
Net Operating Profit After Taxes	1,064.4	1,337.2	1,453.4	2,049.3	2,505.8	2,522.8	3,497.2	5,726.8	5,558.7	7,646.2
Dep., Imp. and Loss (Gain) on Disposal of PPE	223.5	246.9	299.5	320.0	334.4	333.1	357.2	305.7	484.5	643.1
Amor. and Imp. of Intangible Assets	43.9	51.2	63.5	105.6	103.7	115.4	123.5	133.0	144.3	138.7
Share-based Compensation Expense	63.4	59.0	47.7	53.1	46.3	74.6	53.9	117.5	68.9	134.8
Inventory Reserves	162.8	211.8	73.0	120.1	218.2	221.5	192.4	180.7	278.5	485.3
Deferred Tax Expense (Benefit)	(59.1)	45.3	13.4	(8.4)	(238.5)	(236.8)	(211.3)	(419.6)	(564.2)	(133.6)
Gain on Sale of Subsidiaries	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(213.7)	0.0	0.0
Proceeds from Sale of Subsidiaries	0.0	0.0	0.0	0.0	0.0	0.0	0.0	329.0	0.0	0.0
Gross Cash Flow	**1,499.0**	**1,951.4**	**1,950.5**	**2,639.7**	**2,969.9**	**3,030.6**	**4,012.9**	**6,159.4**	**5,970.7**	**8,914.5**
Less: Δ Net Working Capital	329.4	(392.9)	687.9	1,295.0	481.0	215.0	(390.4)	(2,961.8)	198.1	3,295.0
Less: Δ Goodwill	268.9	267.0	2,249.3	(332.8)	0.0	0.0	88.0	(73.5)	0.0	33.0
Less: Δ Other Intangible Assets	70.1	65.5	648.3	(51.4)	41.7	115.8	68.0	36.2	34.6	38.0
Less: Capital Expenditures	453.2	420.1	366.0	233.6	460.7	929.2	849.2	638.0	1,473.9	2,306.0
Less: Δ Other Core Invested Capital	(62.6)	106.4	(387.0)	166.3	(318.2)	(388.7)	168.5	(1,597.2)	(2,716.2)	466.6
Core Unlevered Free Cash Flow	**440.0**	**1,485.2**	**(1,614.1)**	**1,329.0**	**2,304.7**	**2,159.3**	**3,229.6**	**10,002.5**	**6,980.3**	**2,776.0**
Non-Core										
Non-Core Result	138.7	62.4	79.1	55.1	107.0	88.3	82.7	189.8	99.1	164.0
Equity Method Investment Adjustment	0.0	0.0	0.0	36.4	61.6	56.9	11.0	(49.8)	15.3	4.2
Gross Cash Flow	**138.7**	**62.4**	**79.1**	**91.5**	**168.6**	**145.2**	**93.7**	**140.0**	**114.4**	**168.2**
Less: Δ Participation in Carl Zeiss	0.0	0.0	0.0	1,019.6	(0.0)	(6.1)	0.0	0.0	8.7	0.0
Less: Δ Loan to Carl Zeiss	0.0	0.0	0.0	0.0	0.0	0.0	0.0	124.4	240.0	548.0
Non-Core Unlevered Free Cash Flow	**138.7**	**62.4**	**79.1**	**(928.1)**	**168.6**	**151.3**	**93.7**	**15.6**	**(134.3)**	**(379.8)**
Unlevered Free Cash Flow	**578.6**	**1,547.6**	**(1,535.0)**	**400.9**	**2,473.3**	**2,310.6**	**3,323.3**	**10,018.1**	**6,846.0**	**2,396.2**
Financial										
Financial Result	(6.5)	(12.4)	25.3	(37.7)	(21.2)	(18.8)	(26.2)	(33.4)	(33.6)	28.8
Amortization of Underwriting Commissions	1.2	2.7	2.6	3.8	3.6	7.8	15.6	16.4	3.3	6.6
Gross Cash Flow	**(5.2)**	**(9.7)**	**27.9**	**(33.9)**	**(17.6)**	**(11.0)**	**(10.6)**	**(17.0)**	**(30.3)**	**35.4**
Less: Δ Net Financial Debt	(350.9)	707.6	(1,657.9)	(599.1)	648.9	591.1	1,076.7	121.4	(302.0)	(817.4)
Plus: Net Transactions with Shareholders	(924.3)	(830.4)	(150.7)	(966.1)	(1,806.8)	(1,708.5)	(2,236.0)	(9,879.6)	(7,117.7)	(3,248.9)
Financing Cash Flows	**(578.7)**	**(1,547.6)**	**1,535.0**	**(400.9)**	**(2,473.3)**	**(2,310.6)**	**(3,323.3)**	**(10,018.1)**	**(6,846.0)**	**(2,396.2)**

Notes: A - Audited

Reformulated Forecasted Income Statement

Year ended December 31 (€ M)	2024E	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F	2035F
Core												
Net system sales	21,793.2	23,149.7	25,868.9	28,923.4	32,149.0	35,539.4	39,029.7	42,040.4	44,405.6	46,840.3	48,493.2	50,158.8
Net service and field option sales	6,258.1	6,676.6	7,493.2	8,414.1	9,392.6	10,427.6	11,500.4	12,387.6	13,084.5	13,801.9	14,289.0	14,779.7
Total net sales	**28,051.3**	**29,826.3**	**33,362.1**	**37,337.5**	**41,541.6**	**45,967.0**	**50,530.1**	**54,428.0**	**57,490.2**	**60,642.2**	**62,782.2**	**64,938.5**
Cost of system sales	(10,678.7)	(11,227.6)	(12,287.7)	(13,449.4)	(14,627.8)	(15,815.0)	(16,977.9)	(18,077.4)	(18,872.4)	(19,790.0)	(20,367.2)	(20,941.3)
Cost of service and field option sales	(3,190.1)	(3,386.7)	(3,782.2)	(4,226.0)	(4,694.0)	(5,185.2)	(5,689.9)	(6,113.3)	(6,440.9)	(6,776.8)	(6,998.1)	(7,220.0)
Total cost of sales	**(13,868.8)**	**(14,614.3)**	**(16,069.9)**	**(17,675.4)**	**(19,321.8)**	**(21,000.2)**	**(22,667.8)**	**(24,190.7)**	**(25,313.3)**	**(26,566.8)**	**(27,365.2)**	**(28,161.3)**
Gross profit	**14,182.6**	**15,212.0**	**17,292.2**	**19,662.1**	**22,219.8**	**24,966.8**	**27,862.3**	**30,237.3**	**32,176.9**	**34,075.4**	**35,417.0**	**36,777.3**
Research and development costs	(4,364.4)	(4,623.1)	(5,004.3)	(5,600.6)	(6,231.2)	(6,895.1)	(7,579.5)	(8,164.2)	(8,623.5)	(9,096.3)	(9,417.3)	(9,740.8)
Selling, general and administrative costs	(1,164.1)	(1,193.1)	(1,292.8)	(1,400.2)	(1,505.9)	(1,608.8)	(1,705.4)	(1,768.9)	(1,796.6)	(1,819.3)	(1,805.0)	(1,785.8)
Core result before taxes	**8,654.1**	**9,395.8**	**10,995.1**	**12,661.3**	**14,482.7**	**16,462.9**	**18,577.4**	**20,304.2**	**21,756.8**	**23,159.8**	**24,194.6**	**25,250.7**
Core taxes	(1,402.2)	(1,412.2)	(1,652.5)	(1,903.0)	(2,176.7)	(2,474.3)	(2,792.1)	(3,051.7)	(3,270.0)	(3,480.9)	(3,636.4)	(3,795.1)
Core Result = NOPAT	**7,251.9**	**7,983.7**	**9,342.5**	**10,758.4**	**12,306.0**	**13,988.6**	**15,785.3**	**17,252.5**	**18,486.8**	**19,678.9**	**20,558.3**	**21,455.6**
Non-Core												
Interest Income	4.6	5.0	4.9	4.6	3.9	3.2	2.5	1.8	1.1	0.4	0.1	0.0
Non-Core result before taxes	**4.6**	**5.0**	**4.9**	**4.6**	**3.9**	**3.2**	**2.5**	**1.8**	**1.1**	**0.4**	**0.1**	**0.0**
Non-Core taxes	(0.6)	(1.3)	(1.3)	(1.2)	(1.0)	(0.8)	(0.6)	(0.5)	(0.3)	(0.1)	(0.0)	(0.0)
Profit from participation in Carl Zeiss	230.2	242.5	265.4	290.5	316.0	341.6	366.7	390.5	407.7	427.5	439.9	452.4
Non-Core Result	**234.1**	**246.2**	**269.1**	**293.9**	**318.9**	**344.0**	**368.6**	**391.8**	**408.4**	**427.8**	**440.0**	**452.4**
Financial												
Interest and other, net	7.0	75.0	80.0	85.2	90.4	95.8	101.2	106.7	112.2	117.9	123.8	130.0
Financial result before taxes	**7.0**	**75.0**	**80.0**	**85.2**	**90.4**	**95.8**	**101.2**	**106.7**	**112.2**	**117.9**	**123.8**	**130.0**
Interest tax shield	(1.8)	(19.3)	(20.7)	(22.0)	(23.3)	(24.7)	(26.1)	(27.5)	(28.9)	(30.4)	(31.9)	(33.5)
Financial result	**5.2**	**55.6**	**59.4**	**63.2**	**67.1**	**71.1**	**75.1**	**79.1**	**83.2**	**87.5**	**91.9**	**96.5**
Net Income	**7,491.2**	**8,285.5**	**9,671.0**	**11,115.5**	**12,691.9**	**14,403.6**	**16,229.0**	**17,723.5**	**18,978.5**	**20,194.2**	**21,090.1**	**22,004.4**

Notes: E - Expected; F - Forecasted

Reformulated Forecasted Balance Sheet

Year ended December 31 (€ M)	2024E	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F	2035F
Core												
Operating cash	841.5	894.8	1,000.9	1,120.1	1,246.2	1,379.0	1,515.9	1,632.8	1,724.7	1,819.3	1,883.5	1,948.2
Current receivables	6,536.0	6,949.5	7,773.4	8,699.6	9,679.2	10,710.3	11,773.5	12,681.7	13,395.2	14,129.6	14,628.2	15,130.7
Current tax assets (liabilities)	(17.3)	(18.8)	(22.0)	(25.3)	(29.0)	(32.9)	(37.2)	(40.6)	(43.5)	(46.3)	(48.4)	(50.5)
Contract assets	280.5	298.3	333.6	373.4	415.4	459.7	505.3	544.3	574.9	606.4	627.8	649.4
Inventories	9,153.4	9,645.5	10,606.2	11,665.8	12,752.4	13,860.1	14,960.7	15,965.9	16,706.8	17,534.1	18,061.0	18,586.4
Other assets	1,683.1	1,789.6	2,001.7	2,240.2	2,492.5	2,758.0	3,031.8	3,265.7	3,449.4	3,638.5	3,766.9	3,896.3
Accounts payable	(2,815.4)	(2,966.7)	(3,262.2)	(3,588.1)	(3,922.3)	(4,263.0)	(4,601.6)	(4,910.7)	(5,138.6)	(5,393.1)	(5,555.1)	(5,716.7)
Accrued and other liabilities	(2,114.3)	(2,226.9)	(2,438.0)	(2,689.7)	(2,949.4)	(3,215.9)	(3,482.8)	(3,719.5)	(3,894.9)	(4,085.6)	(4,206.0)	(4,326.0)
Contract liabilities	(11,220.5)	(11,632.3)	(12,677.6)	(13,814.9)	(14,955.0)	(16,088.5)	(17,685.5)	(19,049.8)	(20,121.6)	(21,224.8)	(21,973.8)	(22,728.5)
Net Working Capital	**2,327.0**	**2,732.9**	**3,315.9**	**3,981.1**	**4,730.0**	**5,566.8**	**5,980.2**	**6,369.8**	**6,652.4**	**6,978.2**	**7,184.2**	**7,389.3**
Finance receivables	224.4	238.6	266.9	298.7	332.3	367.7	404.2	435.4	459.9	485.1	502.3	519.5
Deferred and other tax assets (liabilities)	1,590.4	1,698.6	1,852.0	2,019.4	2,197.9	2,387.8	2,582.9	2,764.4	2,922.8	3,089.4	3,228.1	3,364.1
Other assets	953.7	1,014.1	1,134.3	1,269.5	1,412.4	1,562.9	1,718.0	1,850.6	1,954.7	2,061.8	2,134.6	2,207.9
Goodwill	4,588.6	4,588.6	4,588.6	4,588.6	4,588.6	4,588.6	4,588.6	4,588.6	4,588.6	4,588.6	4,588.6	4,588.6
Other intangible assets	704.6	669.4	635.9	604.1	573.9	545.2	518.0	492.1	467.5	444.1	421.9	400.8
PPE and Right use of assets	6,825.9	7,825.1	8,916.3	10,115.4	11,422.3	12,836.5	14,352.0	15,911.3	17,453.5	18,987.0	20,446.7	21,844.0
Contract liabilities	(4,768.7)	(4,921.3)	(5,504.7)	(6,160.7)	(6,854.4)	(7,584.6)	(8,084.8)	(8,708.5)	(9,198.4)	(9,702.8)	(10,045.1)	(10,390.2)
Accrued and other liabilities	(271.6)	(286.0)	(313.1)	(345.5)	(378.8)	(413.1)	(447.3)	(477.7)	(500.3)	(524.8)	(540.2)	(555.6)
Core Invested Capital	**12,174.3**	**13,559.9**	**14,892.1**	**16,370.7**	**18,024.3**	**19,858.0**	**21,611.7**	**23,225.9**	**24,800.7**	**26,406.8**	**27,920.9**	**29,368.4**
Non-Core												
Participation in Carl Zeiss	950.2	983.1	1,019.1	1,058.5	1,101.4	1,147.7	1,197.5	1,250.5	1,305.8	1,363.8	1,423.5	1,484.8
Loan to Carl Zeiss	1,000.0	982.2	912.4	782.1	639.2	496.3	353.5	210.6	85.5	12.5	(0.0)	(0.0)
Non-Core Invested Capital	**1,950.2**	**1,965.3**	**1,931.5**	**1,840.6**	**1,740.6**	**1,644.1**	**1,551.0**	**1,461.1**	**1,391.3**	**1,376.3**	**1,423.5**	**1,484.8**
Total Invested Capital	**14,124.5**	**15,525.3**	**16,823.6**	**18,211.2**	**19,764.9**	**21,502.0**	**23,162.7**	**24,687.0**	**26,192.0**	**27,783.0**	**29,344.4**	**30,853.3**
Financial												
Net Financial Debt	**2,895.1**	**3,090.1**	**3,288.0**	**3,490.3**	**3,697.0**	**3,907.2**	**4,117.5**	**4,330.7**	**4,550.7**	**4,779.5**	**5,020.0**	**5,272.9**
Total Shareholders' Equity	**17,019.6**	**18,615.4**	**20,111.6**	**21,701.5**	**23,461.8**	**25,409.2**	**27,280.2**	**29,017.7**	**30,742.7**	**32,562.6**	**34,364.4**	**36,126.1**
Total Funding	**14,124.5**	**15,525.3**	**16,823.6**	**18,211.2**	**19,764.9**	**21,502.0**	**23,162.7**	**24,687.0**	**26,192.0**	**27,783.0**	**29,344.4**	**30,853.3**

Notes: E - Expected; F - Forecasted

Reformulated Forecasted Cash Flow Map

Year ended December 31 (€ M)	2024E	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F	2035F
Core												
NOPAT = Core Result	7,251.9	7,983.7	9,342.5	10,758.4	12,306.0	13,988.6	15,785.3	17,252.5	18,486.8	19,678.9	20,558.3	21,455.6
Dep., Imp. and Loss (Gain) on Disposal of PPE	808.1	951.0	1,090.2	1,242.3	1,409.3	1,591.4	1,788.4	1,999.6	2,216.8	2,431.7	2,645.4	2,848.7
Amor. and Imp. of Intangible Assets	109.5	104.0	98.8	93.9	89.2	84.7	80.5	76.5	72.7	69.0	65.6	62.3
Share-based Compensation Expense	135.2	143.8	160.8	180.0	200.2	221.5	243.5	262.3	277.1	292.3	302.6	313.0
Inventory Reserves	391.8	412.8	454.0	499.3	545.8	593.2	640.3	683.4	715.1	750.5	773.0	795.5
Deferred Tax Expense (Benefit)	(528.2)	(573.5)	(671.0)	(772.6)	(883.7)	(1,004.4)	(1,133.4)	(1,238.7)	(1,327.2)	(1,412.8)	(1,475.9)	(1,540.3)
Gross Core Cash Flow	**8,168.2**	**9,021.9**	**10,475.4**	**12,001.2**	**13,666.9**	**15,475.1**	**17,404.7**	**19,035.6**	**20,441.2**	**21,809.7**	**22,868.9**	**23,934.8**
Less: Δ Net Working Capital	599.2	818.8	1,037.0	1,164.5	1,294.7	1,430.0	1,053.7	1,073.0	997.7	1,076.3	979.0	1,000.6
Less: Δ Other Intangible Assets	72.4	68.8	65.4	62.1	59.0	56.1	53.3	50.6	48.1	45.7	43.4	41.2
Less: Capital Expenditures	1,834.2	1,950.2	2,181.4	2,441.4	2,716.2	3,005.6	3,304.0	3,558.8	3,759.1	3,965.2	4,105.1	4,246.1
Less: Δ Other Core Invested Capital	27.6	(557.8)	(979.6)	(1,126.5)	(1,255.7)	(1,393.0)	(1,281.3)	(1,547.5)	(1,552.7)	(1,642.6)	(1,605.2)	(1,674.1)
Core Unlevered Free Cash Flow	**5,634.9**	**6,741.8**	**8,171.2**	**9,459.7**	**10,852.6**	**12,376.5**	**14,275.0**	**15,900.7**	**17,189.1**	**18,365.1**	**19,346.7**	**20,321.0**
Non-Core												
Non-Core Result	234.1	246.2	269.1	293.9	318.9	344.0	368.6	391.8	408.4	427.8	440.0	452.4
Equity Method Investments Adjustment	(30.8)	(32.9)	(36.0)	(39.4)	(42.9)	(46.3)	(49.8)	(53.0)	(55.3)	(58.0)	(59.7)	(61.4)
Gross Non-Core Cash Flow	**203.3**	**213.3**	**233.1**	**254.5**	**276.0**	**297.6**	**318.8**	**338.8**	**353.1**	**369.8**	**380.3**	**391.0**
Less: Δ Participation in Carl Zeiss	(0.2)	0.0	0.0	0.0	0.0	0.0	(0.0)	(0.0)	0.0	(0.0)	0.0	(0.0)
Less: Δ Loan to Carl Zeiss	87.6	(17.8)	(69.8)	(130.3)	(142.9)	(142.9)	(142.9)	(142.9)	(125.1)	(73.0)	(12.5)	0.0
Non-Core Unlevered Free Cash Flow	**115.9**	**231.1**	**302.9**	**384.8**	**418.9**	**440.5**	**461.7**	**481.7**	**478.2**	**442.8**	**392.8**	**391.0**
Unlevered Free Cash Flow	**5,750.8**	**6,972.9**	**8,474.1**	**9,844.6**	**11,271.4**	**12,817.0**	**14,736.7**	**16,382.4**	**17,667.3**	**18,808.0**	**19,739.5**	**20,712.0**
Financial												
Financial Result	5.2	55.6	59.4	63.2	67.1	71.1	75.1	79.1	83.2	87.5	91.9	96.5
Amortization of Underwriting Commissions	19.4	20.7	22.0	23.3	24.7	26.1	27.5	28.9	30.4	31.9	33.6	35.2
Gross Financial Cash Flow	**24.6**	**76.3**	**81.4**	**86.5**	**91.8**	**97.2**	**102.6**	**108.1**	**113.7**	**119.4**	**125.4**	**131.7**
Less: Δ Net Financial Debt	1,716.2	215.7	219.8	225.7	231.4	236.3	237.9	242.2	250.4	260.8	274.1	288.1
Plus: Net Transactions with Shareholders	(4,059.2)	(6,833.5)	(8,335.6)	(9,705.4)	(11,131.9)	(12,677.8)	(14,601.5)	(16,248.3)	(17,530.5)	(18,666.6)	(19,590.9)	(20,555.7)
Financing Cash Flow	**(5,750.8)**	**(6,972.9)**	**(8,474.1)**	**(9,844.6)**	**(11,271.4)**	**(12,817.0)**	**(14,736.7)**	**(16,382.4)**	**(17,667.3)**	**(18,808.0)**	**(19,739.5)**	**(20,712.0)**

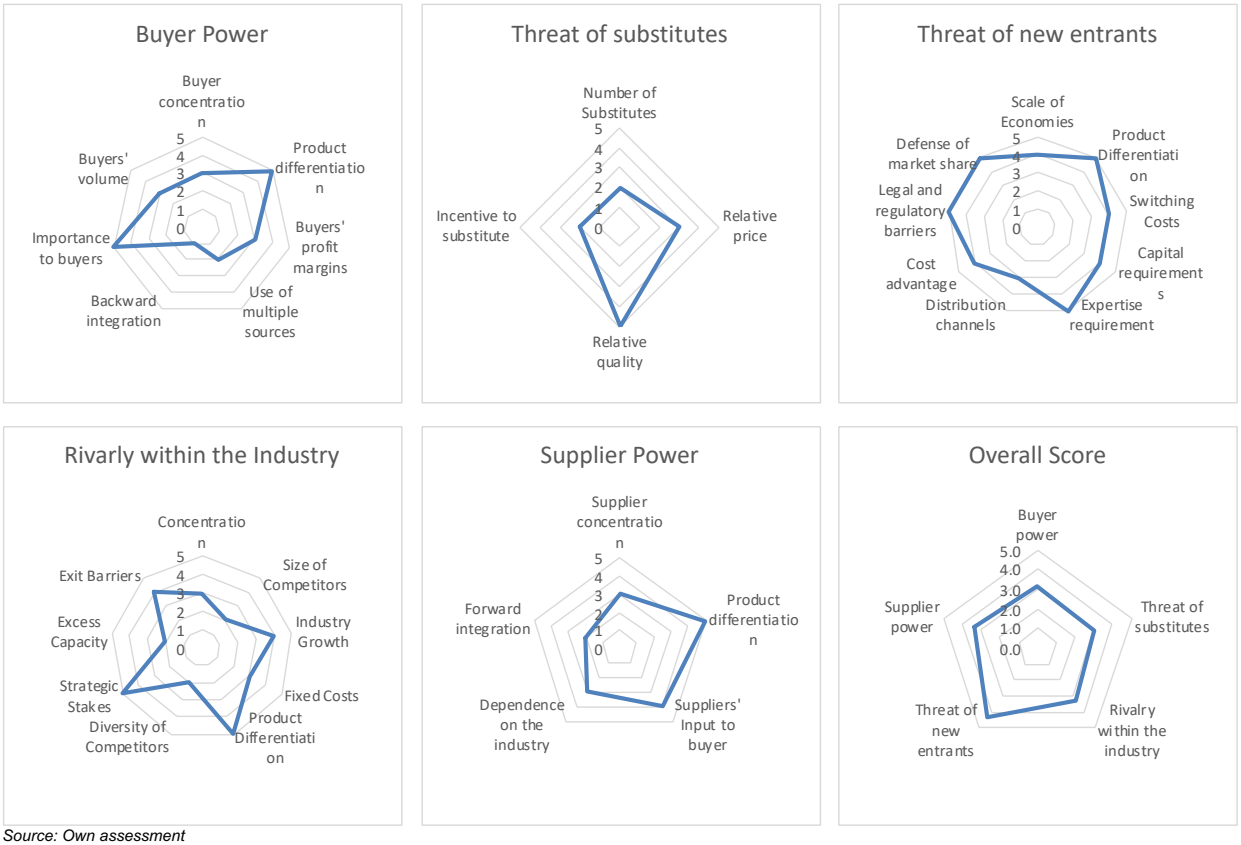
Notes: E- Expected; F - Forecasted

Porters 5 Forces

Main Categories	Subcategories	Assessment
Buyer power	Buyer concentration	ASML has a small number of large customers (e.g., TSMC, Samsung, Intel) who depend heavily on its machines. They are not only reliant on its technology but also align their production timelines and profitability with ASML's ability to deliver cutting-edge machines. This dependency enhances ASML's negotiating leverage.
	Product differentiation	ASML's lithography technology is unique and critical for semiconductor manufacturing. Despite significant profit margins and R&D capabilities, large customers cannot internally match ASML's scale or expertise in lithography technology, further limiting their negotiating power.
	Buyers' profit margins	Buyers' profit margins are significant, but reliance on ASML limits their negotiating power.
	Use of multiple sources	Few alternative sources exist for ASML's EUV and advanced DUV technology.
	Backward integration	High expertise and capital requirements make backward integration unlikely for buyers.
	Importance to buyers	ASML's systems are mission-critical, enabling the advanced process nodes required for customers' competitiveness. Delays in ASML's delivery timelines can severely disrupt production schedules, increasing customers' reliance on ASML.
	Buyers' volume	While customers like TSMC and Intel make significant purchases, ASML's monopoly on EUV systems ensures that these volumes have minimal influence over pricing or terms, maintaining ASML's dominant position.
Threat of substitutes	Number of Substitutes	No direct substitutes for EUV technology exist; Nanoimprint Lithography (NIL) is an emerging technology that could potentially compete with ASML's lithography systems in the long term. However, it remains in early adoption stages with limited industrial viability as the industry infrastructure is adopted for EUV.
	Relative price	ASML's pricing power is high due to the lack of alternatives and high switching costs.
	Relative quality	ASML's systems are superior in precision and quality compared to competitors.
	Incentive to substitute	Customers have no incentive to substitute as ASML's machines are essential for advanced nodes. Alternative semiconductor manufacturing techniques, such as chip stacking and advanced packaging, may reduce dependency on traditional lithography systems. Furthermore, advanced packaging and chip stacking could reduce the number of lithography steps required in semiconductor manufacturing. However, these techniques are currently complementary and unlikely to replace lithography for defining critical process nodes.
Rivalry within the industry	Concentration	ASML dominates EUV lithography with no viable competition. Regional initiatives, such as China's push to develop domestic semiconductor equipment, may shift dynamics in the DUV segment and create regional competitors in the medium to long term.
	Size of Competitors	Nikon and Canon are smaller competitors in DUV, with limited market share in advanced technologies. Furter Competition in M&I which is a smaller part of ASML whole Revenue.
	Industry Growth	Government incentives like the CHIPS Act in the U.S. and Europe's semiconductor funding are driving demand for advanced lithography systems, supporting ASML's growth and reducing pricing pressure.
	Fixed Costs	High fixed costs incentivize continuous production, though ASML balances R&D and scaling costs effectively.
	Product Differentiation	ASML's differentiation in EUV and DUV systems provides a strong competitive edge.
	Diversity of Competitors	ASML's singular focus on lithography allows it to concentrate resources on R&D and customer relationships, whereas competitors like Nikon and Canon have diversified portfolios that dilute their focus in this domain.
	Strategic Stakes	ASML's role in semiconductor advancements ties its success to the strategic stakes of the entire industry. ASML's collaboration with Carl Zeiss SMT strengthens its competitive position by ensuring exclusive access to critical optical components for EUV lithography, solidifying its market dominance.
	Excess Capacity	ASML operates near full capacity, with plans to expand further.
	Exit Barriers	High exit barriers due to capital intensity and technological investments in the industry.
Threat of new entrants	Scale of Economies	ASML's scale and market dominance create significant cost advantages for R&D and production.
	Product Differentiation	ASML's differentiation in EUV technology makes entry nearly impossible for competitors.
	Switching Costs	High switching costs for customers solidify ASML's position as the preferred supplier.
	Capital requirements	Capital requirements for R&D and production are enormous, limiting new entrants. While capital requirements are a significant barrier, government subsidies (e.g., China's efforts to develop domestic suppliers) may partially offset this barrier for new entrants. However, the technological expertise required remains a high hurdle.
	Expertise requirement	Expertise in lithography, optics, and nanotechnology is essential for competing with ASML. Decades-long partnerships have created co-dependence, making it almost impossible for new entrants to replicate the ecosystem needed to compete
	Distribution channels	ASML's global distribution network supports its dominant market position.
	Cost advantage	ASML's economies of scale and automation lower its production costs.
	Legal and regulatory barriers	Regulatory barriers, including export controls, protect ASML from competitors entering key markets. ASML's extensive patent portfolio, combined with export controls, further protects its market position and creates additional entry barriers beyond capital and technology.
	Defense of market share	ASML actively defends its patents and market position through R&D and legal actions.
Supplier power	Supplier concentration	Suppliers hold some power due to unique materials (e.g., Carl Zeiss optics), but ASML mitigates this with strategic partnerships. While ASML mitigates supplier leverage through strategic partnerships, risks such as geopolitical tensions and rare material shortages could temporarily shift power toward suppliers.
	Product differentiation	ASML depends on highly differentiated, specialized components from suppliers.
	Suppliers' Input to buyer	Supplier inputs are critical but cannot dictate terms due to ASML's scale and partnerships.
	Dependence on the industry	ASML relies on specific industries, but its leadership position minimizes supplier leverage. Suppliers like Carl Zeiss SMT are highly dependent on ASML's leadership position in the semiconductor equipment market for their revenue streams. This mutual dependence reduces suppliers' ability to dictate terms.
	Forward integration	Forward integration by suppliers is unlikely due to ASML's expertise and market control.

Source: Own assessment

Portes 5 Forces Factor - Scores



Source: Own assessment

ESG Assessment

Environment

Company	Total Energy Use / Million in Revenue USD	Renewable Energy Use Ratio	Total Water Use / Million in Revenue USD	Estimated CO2 Equivalents Emission Total	Total CO2 Emissions / Million in Revenue $	GHG Emission (Scope 1,2&3)/ Revenue	Estimated Scope 3 emissions/ Revenue	Waste Recycling Ratio	Total Waste / Million in Revenue USD
ASML	56.85	72.89%	38.60	187300	6.16	500.19	494.03	0.86	0.29
KLA Corp.	94.54	45.32%	33.99	76222	8.27	471.63	463.36	0.41	NA
Applied Mat.	83.42	53.39%	91.49	227856	8.84	943.62	934.79	0.72	0.76
Teradyne	101.85	NA	35.32	33530	10.63	1232.20	1221.58	0.49	0.32
Entegris Inc	358.16	1.50%	404.15	117023	35.66	NA	338.51	NA	NA
ASM Int.	NA	NA	75.11	29100	11.28	889.67	736.94	0.85	1.11
Lam Research	92.77	37.96%	87.53	322268	18.49	429.49	392.82	0.77	0.59
Tokyo Electron	246.75	32.09%	89.87	202000	12.14	873.73	861.56	0.99	1.10
Median	**98.19**	**37.96%**	**87.53**	**117023**	**11.28**	**881.70**	**736.94**	**0.75**	**0.76**
Average	**162.92**	**34.05%**	**116.78**	**144000**	**15.04**	**806.73**	**707.08**	**0.70**	**0.78**
Rank to Peers	1	1	3	5	1	3	4	2	1
Score	8.00	8.00	6.00	4.00	8.00	6.00	5.00	7.00	8.00

Source: LSEG Workspace, Annual Statements

Social

Company	Women Managers	Management Departures	Employment Creation	Attrition Rate	Female Employees	Employee Accidents
ASML	15.46	FALSE	11.62	4%	20%	83.00
KLA Corp.	NA	FALSE	23.89	NA	18%	84.00
Applied Mat,	16.80	FALSE	22.22	NA	20%	129.00
Teradyne	19.00	FALSE	10.17	4%	23%	6.00
Entegris Inc	NA	FALSE	45.99	NA	28%	14.00
ASM Int.	18.77	FALSE	28.56	7%	17%	13.00
Lam Research	18.60	FALSE	-2.82	10%	21%	57.00
Tokyo Electron	5.70	FALSE	10.04	7%	14%	57.00
Median	**18.60**		**22.22**	**7%**	**20%**	**57.00**
Average	**15.77**		**19.72**	**7%**	**20%**	**51.43**
Rank to Peers	5		5	1	5	6
Score	4.00		4.00	8.00	4.00	3.00

Source: LSEG Workspace, Annual Statements, ESG Report

Governance

Company	Audit Committee Independence	Compensation Committee Independence	Board Structure Type	Average Board Tenure	Board Gender Diversity	GLOBAL COMPACT SIGNATORY	Shareholder rights policy score
ASML	100	100	Two-tier	4.3	44%	TRUE	51.11
KLA Corp.	87.5	100	Two-tier	11.5	27%	TRUE	50.28
Applied Mat.	100	100	Unitary	11.0	33%	TRUE	50.28
Teradyne	100	100	Unitary	9.2	22%	TRUE	50.28
Entegris Inc	100	100	Unitary	9.7	25%	TRUE	50.28
ASM Int.	100	100	Unitary	4.3	50%	TRUE	51.06
Lam Research	100	100	Two-tier	7.3	30%	TRUE	50.20
Tokyo Electron	0	40	Unitary	6.3	33%	TRUE	59.54
Median	**100**	**100**		**9.15**	**30%**		**50.28**
Average	**83.93**	**91.43**		**8.47**	**32%**		**51.70**
Rank to Peers	1	1		2	2%		2
Score	8.00	8.00		7.00	7%		7.00

Source: LSEG Workspace

ASML ESG Performance Metrics Overview

	FY2022	FY2023	Median	Average
Environmental				
Resource Reduction Policy	TRUE	TRUE		
Total Energy Use / Revenue ($ M)	72.07	56.85	98.19	163
Renewable Energy Use Ratio	72.83%	72.89%	38.0%	34%
Total Water Use / Revenue ($ M)	51.28	38.60	88	117
Estimated CO2 Equivalents Emission Total	210200	187300	117023	144000
Total CO2 Emissions / Revenue ($ M)	9.28	6.16	11	15
Waste Recycling Ratio	95%	86%	74.71%	76.01%
Total Waste / Revenue ($ M)	0.31	0.29	0.76	0.78
Social				
Women Managers	14.05	15.46	18.60	15.77
Management Departures	No relevant departure			
Employment Creation	20.93	11.62	22.22	19.72
Attrition Rate	6%	3.60%	7%	7%
Percentages of Female Employees	19%	20%	20%	20%
Employee Accidents	63	83	57.00	51.43
Governance				
Audit Committee Independence	100%	100%	100%	84%
Compensation Committee Independence	100%	100%	100%	91%
Board Structure Type	Two-tier			
Average Board Tenure	4.6	4.3	9.15	8.47
Board Gender Diversity	44.4%	44.4%	30%	32%
Global Compact Signatory	Yes			
Shareholder rights policy score	51.06	51.11	50.28	51.70

Source: LSEG Workspace, Annual Statements

Team Assessment Score

	Score	Weight
Environmental Pillar	0.83	0.4
Social Pillar	0.58	0.3
Governance Pillar	0.75	0.3
Weight Average Score	**0.73**	

LSEG Overall ESG Score Comparison

Year	ASML Holding NV	Industry Median
2019	78%	46%
2020	75%	44%
2021	77%	47%
2022	75%	48%
2023	74%	46%

Source: LSEG Workspace

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