

KEYVALUE
GLOBAL RESEARCH

Equity Research

ANALYSIS OF ASML HOLDING

DATE:
04/12/2024

[Keyvalueam.com](https://keyvalueam.com)

Buy: \$902,14(26,8%)

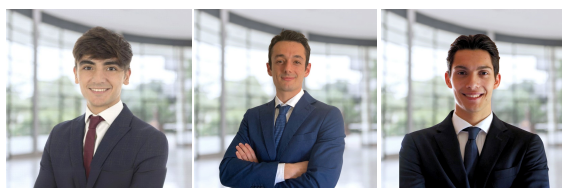
Equity Research Division
04/12/2024

Summary

UNITS

| | |
|----------------|------------------------|
| Country | The Netherlands |
| Sector | Semiconductor Industry |
| Current Price | 711 \$ |
| Target Price | 902 \$ |
| Upside | 27% % |
| Ticker | ASML |
| Stock Exchange | NASDAQ |

| | |
|-----------------------|--------------|
| Shares Outstanding | 394 m |
| Market Capitalization | 280.177 m \$ |
| EPS (2023) | 22,0 \$ |



Analyst Christian Piazza | Team Leader Alessandro Bindi | Head of Equity Research Marco Tempestini

INVESTMENT SUMMARY

We issue a BUY recommendation for ASML, with a one-year target price of \$902.14, presenting an 26.8% upside potential from ASML's closing price of \$711.47 on December 2nd, 2024. Our concerns are related to its concentrated customer base, vulnerability to geopolitical and supply chain disruptions. Additionally the high cost of its advanced technologies outweigh its impressive technological leadership and market dominance. While ASML's position as the sole producer of Extreme Ultraviolet (EUV) lithography systems has been a cornerstone of its success, reliance on a few key clients like TSMC, Samsung, and Intel exposes it to significant risk. Moreover, the company's substantial capital expenditure (CAPEX) requirements and sensitivity to industry demand cycles indicate potential challenges to maintaining sustainable profitability in an evolving market landscape. This recommendation reflects a cautious outlook despite ASML's undeniable contributions to the semiconductor industry.

ASML Technology and Product Offering

ASML's product portfolio remains unmatched in the semiconductor sector, with cutting-edge technologies including EUV and Deep Ultraviolet (DUV) lithography systems, alongside metrology and inspection equipment. These innovations enable manufacturers to produce advanced, high-performance chips essential for emerging applications in artificial intelligence (AI), Internet of Things (IoT), and 5G. While its technological exclusivity and the ability to drive miniaturization of chips offer significant competitive advantages, the high costs associated with its systems limit its appeal to a narrow customer base. Additionally, its recurring revenue from software solutions and installed base management services provides some stability. However, these strengths do not fully offset the risks posed by ASML's reliance on a niche market and limited customer diversity.

ASML Positioning in the Sector

ASML is firmly positioned as the global leader in the semiconductor lithography market, with a commanding 20% share of the global lithography systems market. The company's dominance is built on its exclusive production of Extreme Ultraviolet (EUV) lithography machines, which are critical for fabricating chips at advanced nodes (5nm and below). This technological exclusivity creates a high barrier to entry for competitors, such as Nikon and Canon, who focus primarily on Deep Ultraviolet (DUV) systems. ASML's strategic partnerships with top-tier semiconductor manufacturers like TSMC, Samsung, and Intel, who collectively represent a significant proportion of global chip production, further solidify its market presence. Additionally, ASML's extensive patent portfolio and ongoing research ensure that its leadership in innovation remains uncontested. Despite challenges posed by geopolitical tensions, supply chain dependencies, and customer concentration, ASML's agility in navigating regulatory environments and its robust financial position allow it to maintain leadership in the rapidly evolving semiconductor landscape.

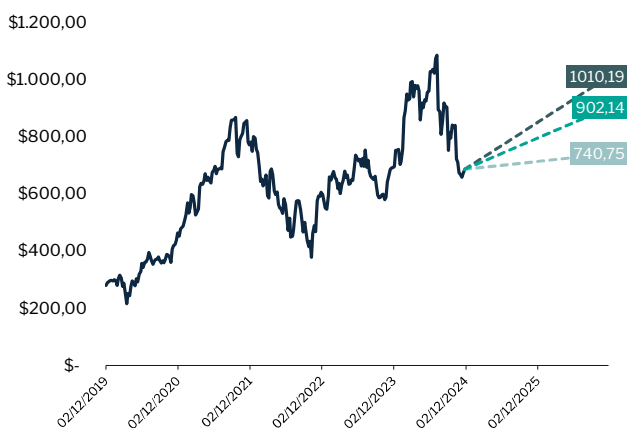
ASML Growth Programme and Strategy

ASML's growth program is a testament to its forward-thinking approach, focusing on both technological innovation and geographic expansion. The increasing demand for semiconductors driven by artificial intelligence (AI), the Internet of Things (IoT), and 5G technologies places ASML at the heart of global tech innovation. The company's strategic investments in EUV technology continue to fuel demand from semiconductor manufacturers aiming to produce faster and more efficient chips. ASML is also expanding into high-growth markets like India and China, supported by rising domestic investments in semiconductor manufacturing. These regions are poised to become key contributors to global semiconductor production, aligning with ASML's vision for future growth. Moreover, ASML is actively addressing global megatrends, such as sustainability, by integrating eco-friendly manufacturing processes and advancing chip technologies that reduce energy consumption. This growth strategy positions ASML as not only a technology leader but also a socially responsible corporate entity, well-equipped to navigate emerging opportunities and challenges in the semiconductor market.

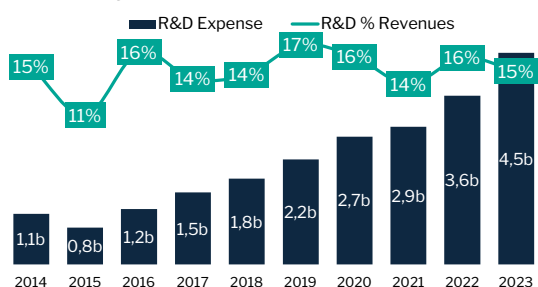
Quality Investing

ASML is a prime example of quality investing, with its leadership in the semiconductor lithography market, consistent innovation, and strong financial performance. The company's robust margins, recurring revenue streams from its installed base, and substantial R&D investment reflect its commitment to delivering long-term value to shareholders. However, two key issues merit consideration. First, ASML's dependency on a small customer base, including TSMC, Samsung, and Intel, leaves it vulnerable to fluctuations in demand and changes in customer strategies. This concentration risk underscores the importance of diversifying its revenue streams over time. Second, ASML's operational model, while technologically advanced, is not entirely immune to disruption. Geopolitical tensions, trade restrictions, and potential supply chain vulnerabilities could impact its ability to meet customer demands. For instance, its reliance on specialized suppliers for EUV machine components represents a critical risk. Despite these challenges, ASML's exceptional execution, high barriers to entry for competitors, and continued focus on innovation ensure its position as a leading investment choice in the semiconductor industry. These strengths, balanced with a proactive approach to mitigating its vulnerabilities, make ASML a compelling pick for quality-focused investors.

--- Optimistic --- Pessimistic --- base



Source: Team Analysis



Source: Company data, Team Analysis

Small customer base



Demand fluctuations



Source: Company data, Team Analysis

Business Model

OVERVIEW

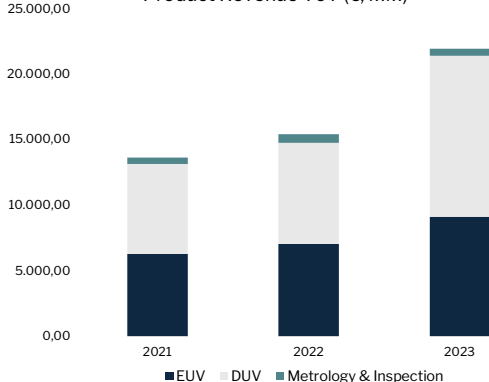
ASML Holding NV, headquartered in Veldhoven, the Netherlands, is the global leader in the design and production of advanced lithography systems, which are crucial for semiconductor manufacturing. The company plays an indispensable role in the advancement of Moore's Law, enabling chipmakers to produce smaller, more powerful, and energy-efficient semiconductors. ASML's innovative technologies power devices ranging from smartphones to high-performance computing systems, fostering progress in industries like artificial intelligence, 5G, and data centers. Its broad portfolio includes state-of-the-art Extreme Ultraviolet (EUV) and Deep Ultraviolet (DUV) lithography systems, alongside metrology and inspection tools, computational lithography software, and refurbished legacy systems. By focusing on innovation, sustainability, and close customer collaboration, ASML has established itself as a cornerstone in the global semiconductor supply chain, catering to leading manufacturers such as TSMC, Samsung, and Intel. The company's unique position in the market underscores its critical role in meeting the growing demand for cutting-edge chip technologies.

BUSINESS SEGMENTS & GEOGRAPHIC REACH

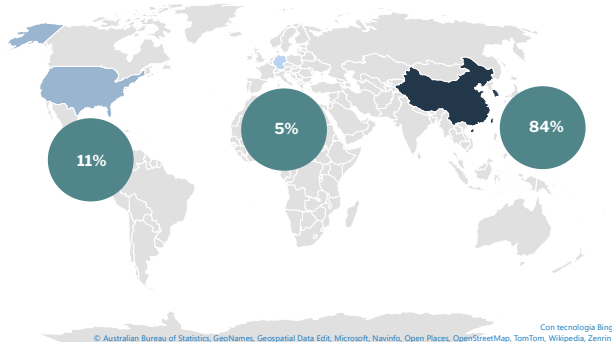
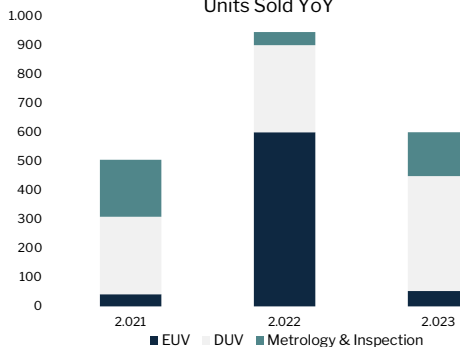
ASML operates across several interconnected business segments, each of which is critical to the semiconductor industry. The first, and most advanced, is its EUV lithography systems, which are used to create the high-resolution patterns necessary for the most sophisticated chips in the world. These systems are unmatched in their ability to push Moore's Law forward, allowing manufacturers to increase transistor density on silicon wafers for applications in artificial intelligence and next-generation computing. Complementing this is ASML's portfolio of DUV lithography systems, which remain the backbone of high-volume chip production for both advanced and mature technology nodes. These systems are used for manufacturing logic and memory chips at scale, as well as facilitating innovations across a wide range of industries. In addition, ASML refurbishes older systems such as its PAS 5500 models, extending their operational life and offering cost-effective solutions to customers. The company also produces metrology and inspection tools to ensure precision and quality in every step of chip production, from research and development to mass manufacturing. Finally, its computational lithography software optimizes the production process, predicting and resolving issues that could affect chip quality and production efficiency.

Geographically, ASML operates in all major regions of the world, reflecting the global nature of the semiconductor industry. In 2023, ASML generated €27.558 billion in net sales, with Taiwan contributing the largest share at €8.074 billion, followed by South Korea at €6.949 billion and China at €7.251 billion. These regions account for 80% of ASML's revenue, driven by major customers such as TSMC, Samsung, and SMIC. The United States accounted for €3.151 billion, while the EMEA region (excluding the Netherlands) generated €1.206 billion. ASML's presence is supported by its eight advanced manufacturing facilities in Europe, Asia, and the United States, enabling high-precision assembly and testing of its systems. Additionally, ASML collaborates with a global supplier network, managing €15.5 billion in spending across 5,100 suppliers. Notably, the Netherlands and the broader EMEA region each account for 40% of its supplier spending, with North America and Asia comprising the rest. This geographically distributed model underscores ASML's ability to support its customers and ensure continuity across its complex supply chain.

Product Revenue YoY (€, MM)



Units Sold YoY

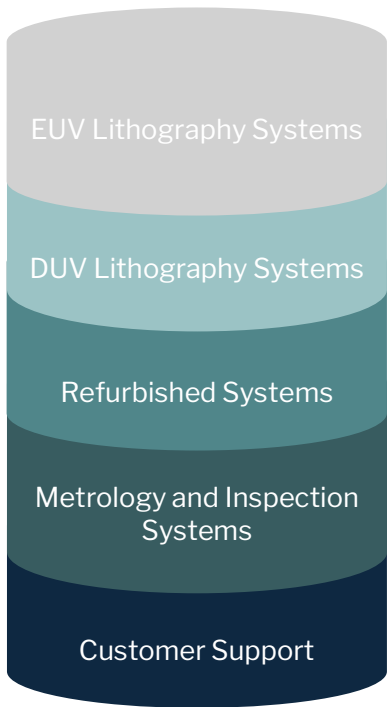


COMPANY STRATEGY

ASML's strategy is centered on sustaining its technological leadership, expanding its operational capacity, and driving long-term value for its stakeholders. At its core, the company aims to grow its holistic lithography business by expanding production capacity to meet rising global demand for semiconductors. ASML has set ambitious revenue targets, aiming to achieve between €30 and €40 billion by 2025 with a gross margin of 54-56%. By 2030, it projects annual revenues of €44 to €60 billion, with margins improving to 56-60%. These targets are underpinned by a commitment to integrate its product offerings, from EUV and DUV lithography to metrology, inspection, and computational tools, providing a seamless solution to meet diverse customer needs.

In addition to growth, ASML prioritizes supply chain resilience, working closely with suppliers to scale production and ensure business continuity. By employing supplier risk profiles and adhering to sustainable sourcing standards under the Responsible Business Alliance framework, ASML mitigates risks while supporting its roadmap. The company is also investing in adjacent business opportunities, leveraging synergies in semiconductor scaling technologies to explore new markets and applications. This diversification ensures ASML's continued relevance in an evolving industry. Finally, ASML emphasizes sustainability, with initiatives focused on reducing energy consumption, emissions, and material use, as well as fostering circular economy practices. By aligning with the United Nations' Sustainable Development Goals, ASML seeks to balance its environmental and social responsibilities with its role as a leader in the semiconductor industry.





Products: EUV Lithography Systems

ASML's Extreme Ultraviolet (EUV) lithography systems represent the pinnacle of its technological innovation. These systems enable chipmakers to produce the smallest, most complex chips by allowing unprecedented transistor densities on silicon wafers. The TWINSCAN EXE:5000, ASML's flagship EUV model, is specifically designed for high-volume production and is critical for next-generation technologies, including artificial intelligence, high-performance computing, and advanced consumer electronics. This cutting-edge technology is unique to ASML, giving the company a near-monopoly in the EUV market. By continuously improving system throughput and performance, ASML ensures its EUV systems remain indispensable for customers aiming to produce the most advanced semiconductors.

Products: DUV Lithography Systems

Deep Ultraviolet (DUV) lithography systems form the backbone of ASML's offerings and remain essential for high-volume semiconductor manufacturing. The TWINSCAN NXT:2100i, a leading DUV model, supports the production of a wide range of logic and memory chips, catering to both advanced and mature nodes. These systems are highly versatile, enabling manufacturers to balance performance and cost efficiency. While EUV systems dominate advanced node production, DUV lithography remains vital for numerous applications, including consumer electronics and industrial technologies. ASML's ability to complement EUV with DUV technology ensures that it offers a comprehensive portfolio to address diverse customer needs.

Products: Refurbished Systems

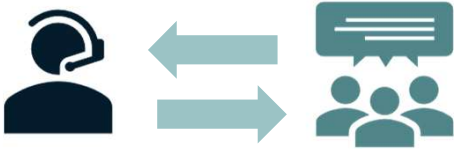
ASML's refurbished systems division extends the lifecycle of older lithography models, such as the PAS 5500 series, by upgrading and repurposing them for new uses. These systems, which are still widely used in customer fabs, provide a cost-effective alternative for customers looking to maintain or expand their manufacturing capabilities without investing in new equipment. The refurbishment process also supports ASML's sustainability goals by reducing waste and promoting resource efficiency. This segment highlights ASML's commitment to maximizing the value of its products throughout their lifecycle, offering tailored solutions to customers in various markets.

Products: Metrology and Inspection Systems

Metrology and inspection tools are critical to maintaining the precision and quality of semiconductor production processes. ASML's portfolio includes advanced systems like the YieldStar 375, which provide accurate measurements and defect detection at every stage of chip manufacturing. These tools are used across the production pipeline, from research and development to high-volume manufacturing, ensuring that chips meet stringent performance standards. By integrating these tools with its lithography systems, ASML offers a holistic solution that optimizes chip production and minimizes waste, enabling customers to achieve superior yields and efficiency.

Customer Support

Customer support is a cornerstone of ASML's operations, with a global team of approximately 10,000 specialists dedicated to ensuring the optimal performance of its systems. These professionals provide on-site maintenance, training, and optimization services, ensuring that ASML's equipment runs smoothly in customer fabs. By maintaining close relationships with its customers, ASML not only enhances system uptime but also gathers insights to inform future product development. This customer-centric approach strengthens ASML's reputation as a trusted partner in the semiconductor industry, enabling its clients to achieve their manufacturing goals efficiently and effectively.



Acquisitions

Berliner Glas Group

In July 2020, ASML acquired Berliner Glas Group, adding 1,600 employees and expanding its expertise in optical solutions. The acquisition strengthens ASML's vertical integration, operational synergies, and technological capabilities, aligning with its growth strategy and reinforcing its leadership in semiconductor manufacturing. The integration allows for continuity in the company's customer and supplier relationships while leveraging its strengths for long-term value creation.

Cymer Inc.

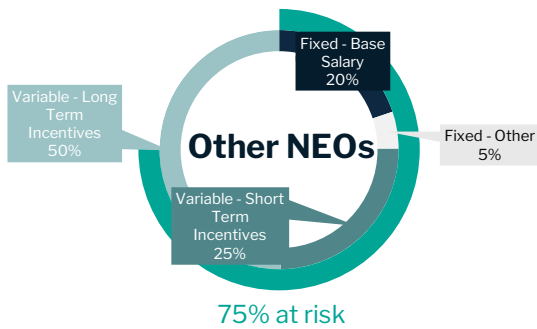
In 2013, ASML completed its acquisition of Cymer, Inc., a leading developer of lithography light sources, enhancing ASML's capabilities in advanced chipmaking technology. The merger included a cash payment of \$20.00 per Cymer share plus 1.1502 ASML ordinary shares, increasing ASML's share capital by approximately 36.5 million shares. This deal has implications for the delivery of smaller, faster and more energy efficient chips which aligns with the company's strategy to drive Moore's Law forward.

Hermes Microvision, Inc.

In 2016, ASML acquired Hermes Microvision, Inc. (HMI), a specialist in e-beam inspection systems, for 100 billion TWD (€2.75 billion). The deal enhanced ASML's capabilities in process control and metrology, particularly for advanced sub-10 nm semiconductor manufacturing. Funded through debt, equity, and cash, the acquisition was expected to immediately benefit ASML's earnings per share.



Source: Team Analysis, Company Data



Source: Team Analysis, Company Data

Remuneration Principles

| | |
|-----------------------------|------------|
| Competitiveness | Alignment |
| Long-term Orientation | Compliance |
| Simplicity and Transparency | |



CAPITAL ALLOCATION

Rewarding Shareholders with Dividends

ASML has consistently increased its dividend payouts, reflecting robust financial health and a commitment to shareholder returns. On October 16, 2024, the company announced an interim dividend of €1.52 per ordinary share, payable on November 7, 2024. This marks a continuation of its policy to distribute growing dividends quarterly. Such a strategy indicates confidence in sustained profitability and provides investors with regular income. However, in a highly competitive industry with significant growth prospects, allocating substantial funds to dividends could potentially limit resources available for reinvestment in innovation and expansion.

Paying Off Outstanding Debt

ASML maintains a solid investment-grade credit rating, with Moody's assigning an A2 rating with a positive outlook and Fitch rating ASML at A+ with a stable outlook as of May 2024. The company's debt maturity schedule includes several euro-denominated bonds maturing between 2025 and 2032, such as a 3.5% EUR bond of €1,000 million due on December 6, 2025. This prudent debt management enhances financial stability, ensuring that ASML can meet its obligations without compromising operational flexibility. Given its strong financial position, the company may prioritize strategic investments over aggressive debt repayment, balancing growth initiatives with maintaining a healthy balance sheet.

Strategic Acquisitions

ASML has engaged in strategic acquisitions to bolster its technological capabilities. For example, in 2016, the company acquired Hermes Microvision, Inc. (HMI), a specialist in e-beam inspection systems, for TWD 100 billion (€2.75 billion). This acquisition aimed to enhance ASML's process control and metrology, particularly for advanced sub-10 nm semiconductor manufacturing. The success of such acquisitions depends on their ability to create value, which can be assessed by monitoring the return on investment (ROI) before and after the acquisition. A declining or stagnant ROI may indicate that the acquisition has not delivered the anticipated benefits.

Conducting Share Buybacks

ASML returns cash to shareholders through share buybacks, with cumulative repurchases since 2006 amounting to several billion euros. While buybacks can enhance shareholder value by reducing the number of outstanding shares, the timing of these buybacks is crucial. Repurchasing shares when they are overvalued may not be an efficient use of capital. Ideally, buybacks should occur when shares are undervalued relative to their intrinsic value, such as during market corrections, provided the company's fundamentals remain strong.

In summary, ASML's capital allocation strategy includes rewarding shareholders, managing debt, pursuing strategic acquisitions, and conducting share buybacks. The effectiveness of these actions depends on their alignment with long-term growth objectives and the prudent timing of capital deployments.

BACKGROUND AND COMPENSATION

Chief Executive Officer

ASML recently underwent a leadership transition, with Christophe Fouquet stepping into the role of CEO following Peter Wennink's departure in April 2024. Fouquet's appointment marks a continuation of ASML's focus on cultivating internal talent and sustaining its trajectory as a global leader in semiconductor technology. With a master's degree in physics and extensive industry experience, including senior roles at KLA Tencor and Applied Materials, Fouquet joined ASML in 2008 and has played a pivotal role in strategic marketing and product management. His promotion to CEO highlights ASML's emphasis on leadership continuity, ensuring the company's vision remains aligned with its long-term goals. Under Wennink's decade-long leadership, ASML was transformed into Europe's largest semiconductor equipment manufacturer, a legacy that Fouquet is well-positioned to advance.

ASML's remuneration policies are designed to attract and retain top talent, incentivize performance, and align executive interests with the company's strategic priorities. In 2023, total remuneration for the Board of Management was €24.6 million, with compensation packages reflecting a balanced mix of fixed salaries and performance-based incentives. Short-term incentives (STI) achieved 128.2% of their target, rewarding strong operational performance across metrics such as EBIT margin and customer orientation. Long-term incentives (LTI), achieved at 157.7% of target, emphasized ASML's consistent delivery on multi-year goals, including ROIC, shareholder returns, and technology leadership.

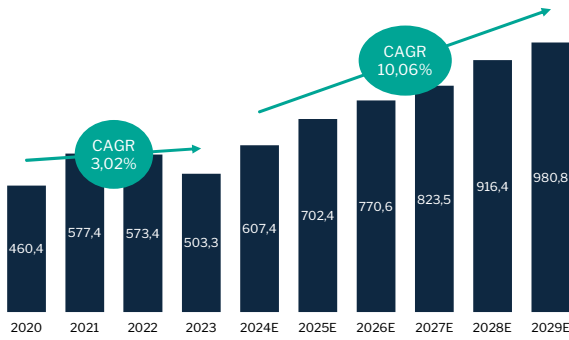
The policy is underpinned by ASML's guiding principles of competitiveness, alignment, long-term orientation, compliance, and transparency. Performance metrics ensure that executive remuneration is tied to the company's strategic goals, while the inclusion of ESG-related targets demonstrates a commitment to sustainability. This approach is bolstered by ASML's financial strength, as evidenced by €27.6 billion in sales, €14.1 billion in gross profit, and a 65.8% ROIC in 2023, enabling the company to provide competitive remuneration without compromising its capacity to invest in growth and innovation.

ASML's remuneration framework also emphasizes simplicity and stakeholder inclusivity, with transparent governance processes overseen by the Supervisory Board. These policies ensure that leadership compensation is fair, performance-driven, and aligned with shareholder interests, reinforcing ASML's position as a high-quality, sustainable business in the global technology landscape. With Fouquet's appointment and a robust remuneration structure in place, ASML is well-prepared to continue its leadership in the semiconductor industry while driving long-term value creation.

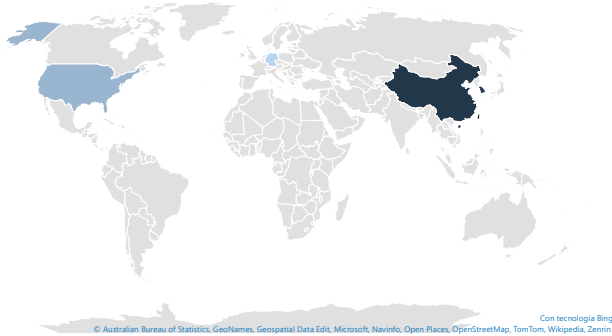
Semiconductor Lithography Systems Market Overview

The Semiconductor Lithography Systems market, valued at \$12.8 billion in 2022, is anticipated to grow at a compound annual growth rate (CAGR) of 6.6%, reaching \$21.3 billion by 2030. This expansion reflects the critical role of lithography systems in driving advancements in semiconductor manufacturing. These systems underpin the production of chips for rapidly evolving technologies such as artificial intelligence (AI), the Internet of Things (IoT), 5G, and edge computing. The broader semiconductor industry is also projected to grow at a CAGR of 10.06%, with revenues expected to exceed \$980 billion by 2029, demonstrating the interconnected growth between semiconductors and lithography systems.

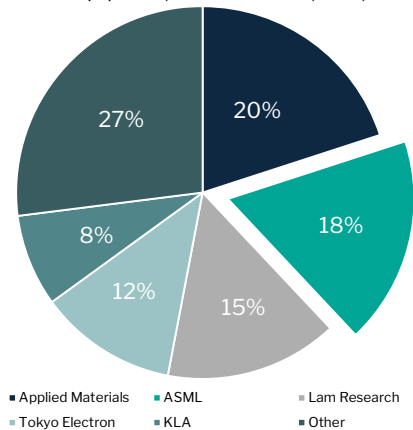
Revenue of the semiconductor industry worldwide 2020-2029 (in billion U.S. dollars)



Geographical distribution of ASML's revenues



Global Lithography Systems (Wafer Fabrication Equipment) Market Shares (2022)



Key Market Trends and Growth Drivers

Several factors are propelling the semiconductor lithography systems market. Advanced lithography technology, especially the adoption of Extreme Ultraviolet (EUV) systems, enables the transition to smaller process nodes such as 5nm and beyond. These smaller nodes are crucial for enhancing chip performance, reducing power consumption, and meeting the computational demands of next-generation AI, IoT, and automotive applications. The growth of data centers and cloud computing is further fueling demand for cutting-edge chips, driving the market for high-precision lithography systems. In parallel, global sustainability initiatives have prompted innovations in eco-friendly lithography technologies. Companies are focusing on reducing energy consumption and minimizing waste during production. Additionally, geopolitical factors, such as localization efforts in Europe and North America, are accelerating investments in semiconductor manufacturing, amplifying the demand for lithography equipment. The market's segmentation highlights the demand for both Deep Ultraviolet (DUV) and EUV systems. While DUV systems are widely used for mature nodes, EUV systems are indispensable for cutting-edge applications such as high-performance computing and advanced packaging.

Challenges Facing the Market

Despite promising growth, the market faces hurdles that could impact its trajectory. The high cost of lithography equipment, particularly EUV systems, remains a barrier to adoption, especially for smaller manufacturers. EUV systems, which can cost over \$100 million per unit, require significant capital investment, making affordability a major concern. Supply chain disruptions, exacerbated by global geopolitical tensions and pandemic-related challenges, have highlighted vulnerabilities in semiconductor production. These disruptions can delay equipment delivery and impact timelines for chip production. Furthermore, the semiconductor industry's rapid innovation necessitates continuous upgrades to manufacturing processes and systems. This demands a highly skilled workforce capable of adapting to technological advancements, a challenge for many companies operating in a fast-paced, capital-intensive environment.

Regional Market Dynamics

Regional dynamics play a pivotal role in shaping the semiconductor lithography market. The Asia-Pacific region leads the market due to its dominance in semiconductor manufacturing, with Taiwan, South Korea, and China serving as key players. Taiwan Semiconductor Manufacturing Company (TSMC) and Samsung are notable drivers of this region's dominance, heavily investing in EUV systems to maintain their technological edge. North America is witnessing significant growth, fueled by governmental initiatives like the CHIPS Act, which seeks to bolster domestic semiconductor manufacturing and reduce reliance on Asia. Europe is also investing in local production capabilities, with countries like Germany and the Netherlands playing key roles in the supply chain. In contrast, regions like the Middle East, Africa, and South America remain emerging markets with limited local manufacturing capabilities but growing demand due to increased technology adoption.

Market Segmentation Insights

The market's segmentation by type and application underscores its versatility. DUV lithography is widely used for producing mature nodes that power applications such as consumer electronics and MEMS devices. Meanwhile, EUV lithography is essential for manufacturing advanced nodes used in AI and high-performance computing. Applications span various industries, including automotive, where semiconductors enable advanced driver-assistance systems (ADAS) and autonomous driving technologies, and industrial electronics, which require chips for automation and IoT-enabled processes. Other applications include data storage, with increasing demand for semiconductors in servers and cloud infrastructure, and consumer electronics, where wearables and smartphones continue to drive innovation. Advanced packaging, crucial for miniaturizing and enhancing chip performance, further highlights the need for lithography systems in diverse technological ecosystems.

Key Players in the Market

With a market share of 18%, ASML Holding NV holds the second position among the leaders in the lithography systems market, thanks to its dominance in EUV technology. ASML's systems enable the production of the most advanced chips required for AI, 5G, and high-performance computing. The top spot in the ranking is claimed by Applied Materials with an 20% market share, with a focus on process optimization and a broad portfolio of semiconductor manufacturing solutions. Lam Research and Tokyo Electron are major players in the DUV market, with respective market shares of 15% and 12%, contributing to high-volume production in mature nodes. Other significant players include Nikon, Canon, Veeco Instruments, and SUSS MicroTec, which focus on niche applications and complementary technologies. Collectively, these companies drive innovation and ensure the availability of advanced lithography solutions across the semiconductor industry.

Future Outlook and Opportunities

The future of the semiconductor lithography systems market is bright, supported by technological advancements and global efforts to localize semiconductor manufacturing. ASML expects the semiconductor market to grow by 9% annually through 2030, driven by increased investments in EUV technology and innovations in DUV systems. This growth will be supported by rising demand from automotive, data storage, and wireless communication sectors, which collectively represent over 65% of the semiconductor market's growth contribution. Localization efforts, such as the CHIPS Act in the U.S. and similar initiatives in Europe, are accelerating investments in domestic semiconductor production. These initiatives aim to strengthen supply chains and enhance technological sovereignty. ASML, leveraging its technological leadership, is well-positioned to capitalize on these trends, driving growth in advanced chip production while meeting the industry's sustainability goals.

External Analysis

SWOT ANALYSIS

S

Strengths

- Leader of EUV lithography machines, enabling cutting-edge chip production
- Strong IP portfolio: high entry barriers for competitors
- Global presence with partnerships across the semiconductor ecosystem
- Skilled workforce and steady R&D investments

W

Weaknesses

- High dependency on a few major customers like TSMC and Samsung
- Significant CAPEX and R&D costs strain profitability
- Narrow focus on photolithography systems, making it vulnerable to demand cycles
- Limited presence in emerging markets

O

Opportunities

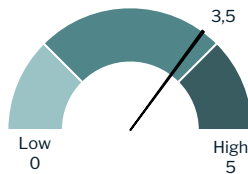
- Rising demand for AI, IoT, and 5G technologies requiring custom chips
- Growth in semiconductor manufacturing in China and India
- Advances in 3D chip design and process nodes
- Increased global investment in localized semiconductor production

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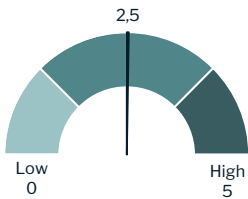
Threats

- Geopolitical risks and export restrictions on key markets
- Intense competition from Applied Materials and Tokyo Electron
- Economic downturns reducing customer spending on capital equipment
- Internalization of production capabilities by customers

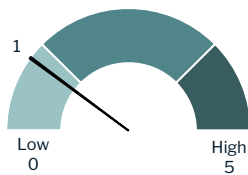
BARGAINING POWER OF SUPPLIERS



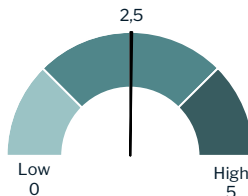
BARGAINING POWER OF BUYERS



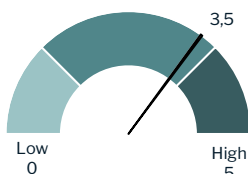
THREAT OF NEW ENTRANTS



THREAT OF SUBSTITUTE PRODUCTS



COMPETITIVE RIVALRY



Porter's Five Forces

Bargaining Power of Suppliers

ASML heavily depends on precision components, with 60% of its inputs requiring specialized technologies. Critical suppliers such as ZEISS Group, which provides ASML with essential optical systems, wield significant bargaining power due to their unique expertise and limited competition in this field. In 2023, key suppliers raised their prices by 10-15% due to material costs and inflation, underscoring ASML's vulnerability to price increases. The long-term contracts prevalent in the industry further reduce ASML's flexibility in responding to supplier demands. This reliance on a few critical suppliers creates potential risks to profitability and operational efficiency.

Bargaining Power of Buyers

ASML's customer base is highly concentrated, with major clients like TSMC, Intel, and Samsung accounting for a substantial share of its revenue. The loss of any one of these customers would significantly impact profitability. However, ASML's technological dominance in EUV (Extreme Ultraviolet) lithography, which is indispensable for advanced chip manufacturing, reduces customer bargaining power. Despite this, customers exhibit price sensitivity, especially in light of rising costs in semiconductor production. ASML's ability to deliver cutting-edge technology, such as its NXE:3600D EUV system, strengthens its position but does not entirely eliminate pricing pressures from its key clients.

Threat of New Entrants

The threat of new entrants in ASML's market is minimal due to several substantial barriers. Developing lithography systems, particularly EUV technology, requires billions in R&D investments, advanced technological expertise, and access to critical components like ZEISS's optical systems. Additionally, ASML's established relationships with industry leaders like TSMC and Samsung create a competitive moat that new entrants cannot easily overcome. Regulatory hurdles, such as intellectual property protections and strict compliance requirements for high-tech equipment, further deter potential competition. ASML's brand reputation and leadership in EUV lithography solidify its dominance, making it nearly impossible for new players to compete effectively in this space.

Threat of Substitute Products

Substitutes to ASML's photolithography technology remain limited. While emerging semiconductor manufacturing methods, such as directed self-assembly (DSA) or nanoimprint lithography (NIL), pose theoretical alternatives, they have yet to achieve the scale or performance required to rival ASML's lithography systems. EUV technology, an internal advancement, continues to replace older deep ultraviolet (DUV) systems for smaller, more efficient chips, showcasing ASML's ability to adapt its offerings. Switching costs for customers are also prohibitively high, as transitioning to alternative technologies would require significant redesigns of production lines and processes. Thus, ASML faces minimal risk from substitutes as long as its technologies remain cutting-edge.

Competition

ASML competes primarily in the high-end lithography market, where it enjoys a near-monopoly in EUV lithography. Competitors like Nikon and Canon focus largely on less advanced DUV systems, leaving ASML with unmatched leadership in EUV. However, these competitors invest heavily in R&D to challenge ASML's dominance, particularly in emerging technologies. For example, Nikon's focus on ArF immersion lithography systems offers competition in specific niches, though it cannot currently rival ASML's EUV systems in advanced node manufacturing. While ASML's differentiation reduces price competition, the race for technological innovation remains intense, evidenced by frequent patent disputes. Despite this, ASML's scale, innovation pipeline, and established market position ensure stable market share among key players.

Financial Analysis

INCOME STATEMENT

Performance Review

From 2014 to 2023, ASML Holdings demonstrated consistent revenue growth fueled by increasing demand for its cutting-edge lithography technologies. Revenues grew from \$7,089 million in 2014 to \$30,424 million in 2023, reflecting a robust CAGR of approximately 19.4%. This growth was underpinned by the company's dominant position in the semiconductor equipment industry and the high adoption rates of EUV lithography systems, which significantly contributed to gross profit expansion from \$3,003 million in 2014 to \$14,984 million in 2023. Despite fluctuations in operating expenses, particularly in R&D investments, ASML maintained profitability with an average EBITDA margin of 32.6%. Strategic investments in innovation and operational efficiencies allowed the company to withstand market cycles and maintain a competitive edge.

Future Growth Scenarios (2024–2028)

Revenue projections for 2024 to 2028 are modeled across pessimistic, base, and optimistic scenarios, leveraging quantitative approaches like moving averages and qualitative assessments of macroeconomic conditions, technological advancements, and strategic priorities. The scenarios account for varying degrees of adoption of ASML's high-NA EUV lithography systems, as well as the impact of AI and IoT markets, geopolitical challenges, and competitive pressures.

Base Scenario

ASML is expected to achieve a CAGR of 11.91%, with revenues reaching \$47.7 billion by FY2028. Steady demand for EUV systems in AI and memory production drives growth. Gross margins stabilize at 53%, supported by efficient scaling and consistent R&D investments at 17.0% of revenue. Controlled SG&A expenses at 4.1% and strong customer relationships ensure robust operating margins, positioning ASML to meet global chipmaker demand.

Pessimistic Scenario

Revenue growth slows to a CAGR of 6.84%, reaching \$38.06 billion by FY2028, due to geopolitical challenges, competition from emerging technologies, and slower adoption of high-NA EUV systems. Gross margins decline slightly to 49.0% amid rising costs and constrained pricing power. Sustained R&D investments at 17.0% of revenue underscore ASML's innovation focus, though delays in technology adoption and external pressures temper growth prospects.

Optimistic Scenario

ASML achieves a CAGR of 14.98%, with revenues reaching \$54.25 billion by FY2028, fueled by strong demand for high-NA EUV systems in AI, 5G, and IoT applications. Gross margins improve to 54.0% due to economies of scale and operational efficiencies. R&D spending decreases slightly to 16.5% of revenue, reflecting higher revenue base efficiency, while SG&A expenses drop to 3.7%. ASML's first-mover advantage and market leadership solidify its position as a key enabler of advanced semiconductor production.

Gross Profit Margin

ASML's gross profit margin reflects efficient production processes and premium pricing for its cutting-edge lithography systems. Historically, the margin has remained strong due to economies of scale and cost reductions from increased EUV adoption. This efficiency, combined with limited competition, enabled gross margins to exceed 50% consistently. Moving forward, margins are projected to remain robust, supported by further cost optimizations and demand for advanced high-NA EUV systems. However, risks such as rising material costs and inflation may limit improvements.

EBIT Margin

ASML has maintained a solid EBIT margin, driven by disciplined cost management and strategic R&D investments averaging 16%–17% of revenue. Stable SG&A expenses as a percentage of revenue have supported operating efficiency, while R&D spending has preserved ASML's technological edge. Looking ahead, EBIT margins are expected to stabilize at around 32% by 2028, benefiting from scale efficiencies and demand for advanced semiconductor manufacturing. Risks include increasing R&D costs for next-generation systems, which could constrain further margin expansion.

Net Income Margin

ASML's net income margin, consistently above 20%, highlights its profitability and effective financial management. Strong free cash flow generation and low debt servicing costs have sustained this performance. Projections indicate a stable margin of approximately 26% by 2028, driven by revenue growth from AI and 5G demand. However, geopolitical risks and export restrictions could pose challenges to maintaining these margins.

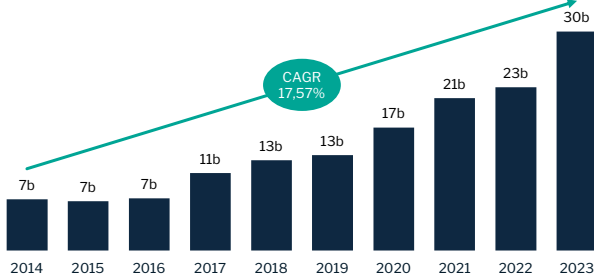
Earnings Per Share (EPS)

ASML's EPS grew from \$6.9 in 2019 to \$22.0 in 2023, reflecting a CAGR of 33.58%, driven by robust demand for EUV and DUV lithography systems. Projected to reach \$31.1 by 2028 at a CAGR of 12.69%, this growth reflects ASML's technological leadership and operational efficiency. Strong R&D investments and expanding high-NA EUV adoption ensure sustained profitability and shareholder value.

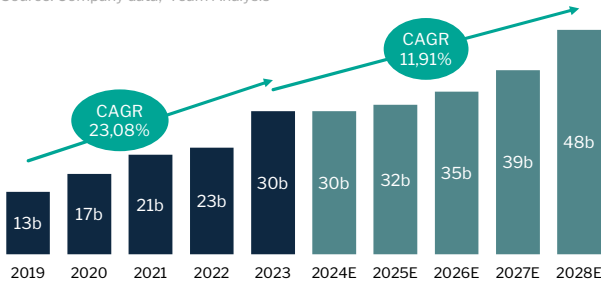
Return on Assets (ROA)

ASML's ROA increased from 11% in 2015 to 21% in 2023, highlighting improved asset efficiency and strong profit generation. While total assets are projected to grow from \$44.1 billion in 2023 to \$65.5 billion by 2028, ROA is expected to stabilize near 19%–21%. This reflects ASML's ability to scale operations effectively, driven by innovation and market leadership in semiconductor manufacturing, which is required for a technology based company to stay ahead of its competition.

Total Revenues



Source: Company data, Team Analysis

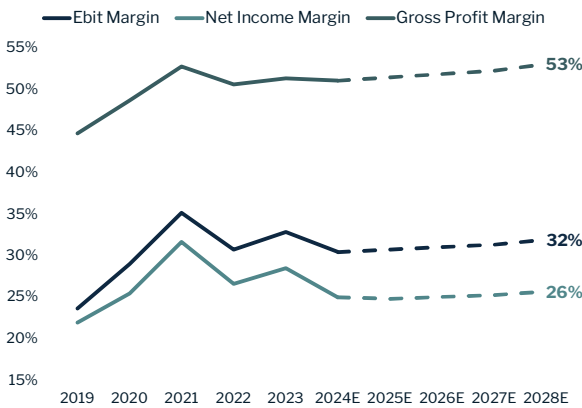
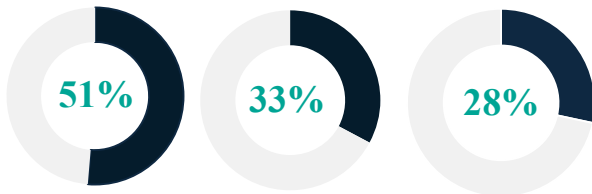


Source: Company data, Team Analysis

Gross Profit Margin

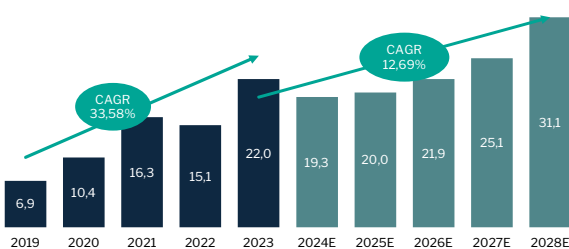
Ebit Margin

Net Income Margin



Source: Company data, Team Analysis

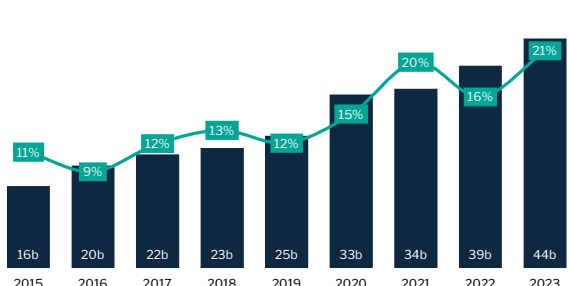
EPS

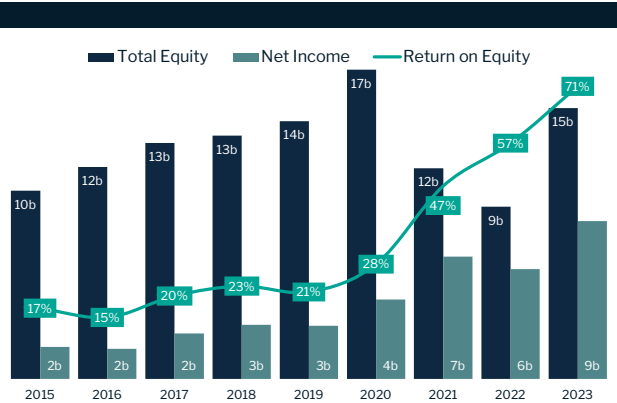


Source: Company data, Team Analysis

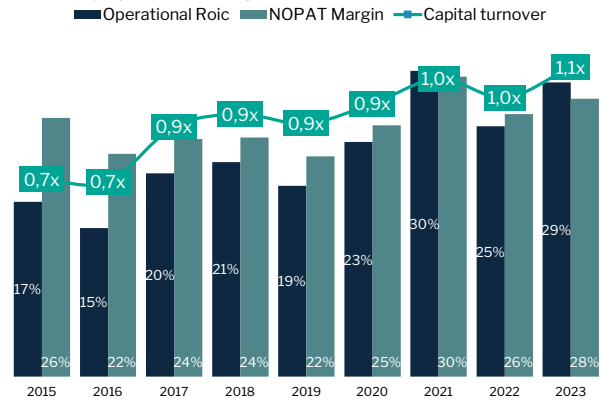
Total Assets

Return on Assets

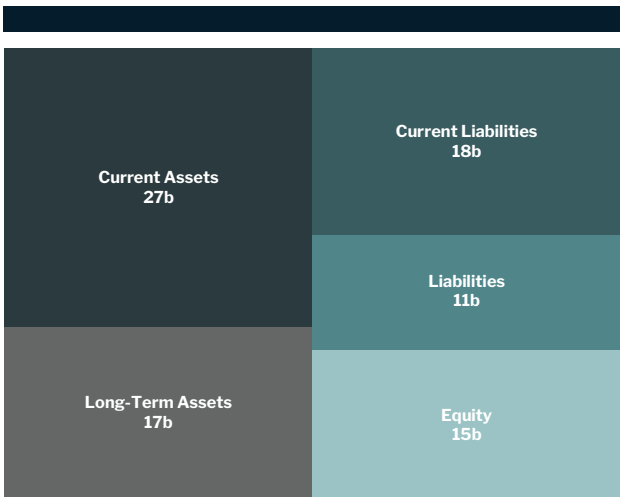




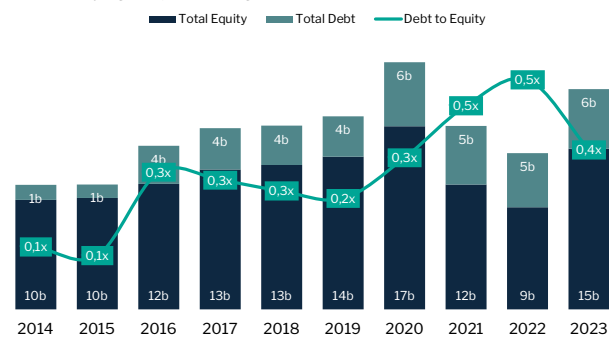
Source: Company data, Team Analysis



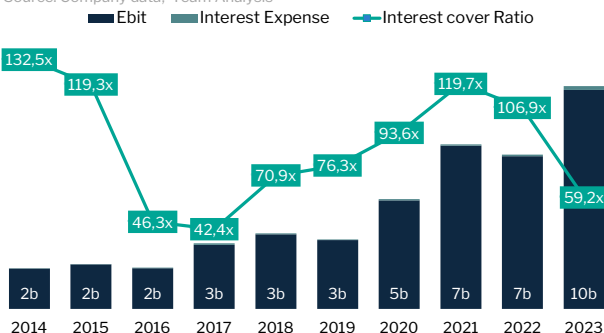
Source: Company data, Team Analysis



Source: Company data, Team Analysis



Source: Company data, Team Analysis



Source: Company data, Team Analysis

Return on Equity (ROE)

ASML's ROE has demonstrated exceptional growth, climbing from 21% in 2019 to an impressive 71% in 2023. This reflects the company's ability to transform shareholder equity into substantial profits, fueled by its dominant position in the semiconductor industry. The surge in ROE is largely attributed to ASML's high-margin product lines, such as its EUV lithography systems, which command premium pricing due to their technological superiority. Additionally, strategic share buybacks have reduced equity, amplifying ROE. ASML's significant investments in R&D—accounting for approximately 16% of revenues—have further enhanced its leadership in innovation, ensuring sustained profitability. By consistently generating strong returns from shareholder capital, ASML underscores its appeal as a secure and growth-oriented investment, backed by cutting-edge technologies critical to chipmakers worldwide.

Return on Invested Capital (ROIC)

ASML's ROIC highlights its ability to generate substantial returns from both shareholder equity and debt, particularly through its strategic reinvestments in R&D and production capacity. With a stable NOPAT margin of around 28% and an improving capital turnover of 1.1x in 2023, ASML has optimized the use of its invested capital to maintain its competitive edge. This reflects the company's success in translating its R&D spending into commercially viable technologies like high-NA EUV systems, which are essential for advanced semiconductor manufacturing. Additionally, ASML's ability to maintain high ROIC while scaling operations to meet rising global chip demand shows its operational efficiency and disciplined capital allocation. By effectively leveraging its investments, ASML continues to ensure strong returns for its stakeholders while reinforcing its technological leadership.

BALANCE SHEET

Liquidity and Asset Growth

ASML has demonstrated robust liquidity, with cash and short-term investments peaking at \$9 billion in FY2020, driven by pandemic-induced semiconductor demand. These moderated to \$7.7 billion in FY2023 but are projected to recover to \$11.1 billion by FY2027, reflecting strong cash flow management and reinvestment strategies. Current assets rose significantly from \$8.4 billion in FY2014 to \$27.8 billion in FY2023, supported by effective receivables and inventory management. Projections suggest further growth to \$39.2 billion by FY2028, highlighting operational efficiency in maintaining liquidity for short-term obligations.

Liabilities and Leverage

ASML's total liabilities increased from \$5.7 billion in FY2014 to \$28.6 billion in LTM, mainly due to rising current liabilities and accounts payable. Despite this, long-term debt remained stable at \$5.2 billion, and the Debt-to-Equity (D/E) ratio, which spiked to 0.5x in 2021 amid a sector boom, returned to 0.4x in 2023, showcasing disciplined leverage management. The interest coverage ratio (ICR) peaked at 132.5x in 2014 and, following a decline during the sector downturn, recovered to 59.2x in 2023, reflecting ASML's strong ability to meet debt obligations despite cyclical market conditions.

Capital Structure and Efficiency

ASML's capital structure showcases its ability to leverage strategic investments for sustained growth. Total assets grew from \$15.8 billion in FY2014 to \$46.6 billion in LTM, with future projections reaching \$65.5 billion by FY2028. This growth is supported by a steady rise in net property, plant, and equipment (PPE) from \$1.75 billion in FY2014 to \$7.4 billion in LTM, underlining investments in manufacturing capacity to maintain technological leadership in lithography. Goodwill, which has remained stable at around \$5 billion, is forecasted to decrease to about \$4 billion by FY2028.

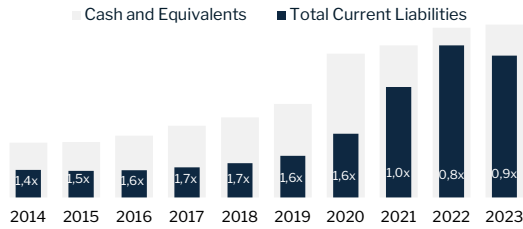
Operational Liquidity and Risk

Despite a sharp increase in current liabilities, from \$3.5 billion in FY2014 to \$17.9 billion in FY2023, ASML has maintained strong operational liquidity. This is enabled by efficient management of current assets, with accounts receivable as a percentage of revenue peaking at 33% in FY2022 and returning to 26% in FY2023, reflecting a focus on optimizing credit sales terms. Inventory management ratios remained consistent, averaging 60%-75% of COGS, ensuring robust supply chain operations and the ability to meet customer demand during periods of high growth.

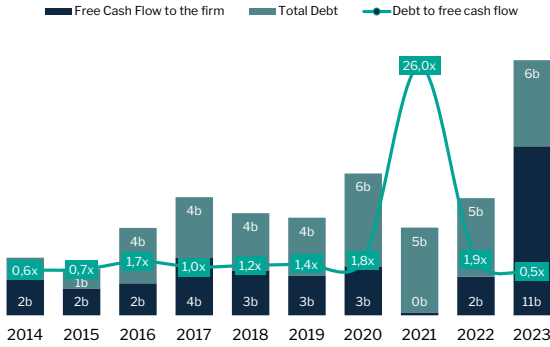
Shareholder Value Creation

ASML has consistently delivered value to shareholders, as evidenced by the growth in book value per share from \$23.39 in FY2014 to \$37.75 in FY2023. However, equity performance projections by FY2027 may suggest that ASML may shift toward leveraging capital more aggressively to support future growth. This strategy, while reflective of ASML's growth focus, could influence shareholder sentiment. Nonetheless, ASML's prudent management of financial leverage, along with its focus on innovation and strategic reinvestments, underscores its ability to navigate cyclical challenges and drive long-term value creation in the semiconductor market.

Quick Ratio

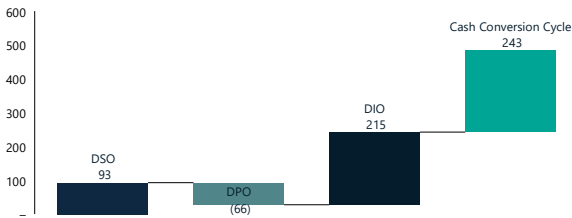


Source: Company data, Team Analysis

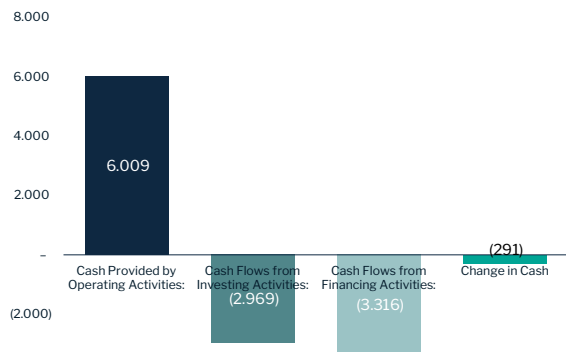


Source: Company data, Team Analysis

Cash Conversion Cycle

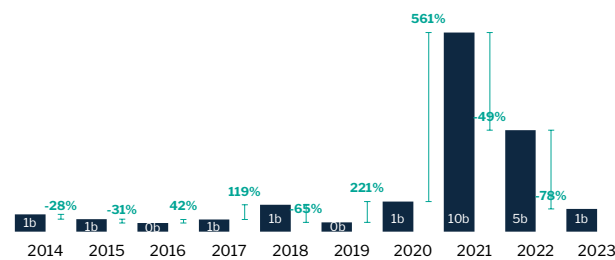


Source: Company data, Team Analysis



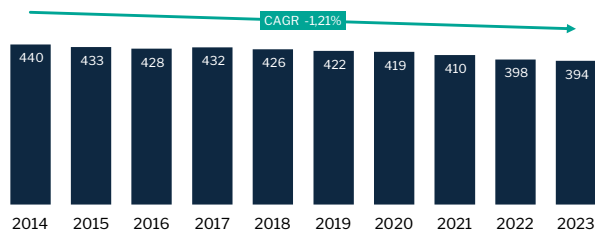
Source: Company data, Team Analysis

Repurchase of Common Stock



Source: Company data, Team Analysis

Diluted Shares Outstanding



Source: Company data, Team Analysis

Quick Ratio Analysis

ASML's quick ratio, which measures its ability to meet short-term liabilities using cash and equivalents, remained stable at 1.6x-1.7x from 2014 to 2018, indicating strong liquidity. By 2021, it dropped to 1.0x as short-term liabilities surged due to pandemic-driven demand and strategic reinvestments in R&D and manufacturing capacity. This shift likely reflects increased working capital needs, including higher inventories and extended customer credit during supply chain disruptions.

By 2023, the quick ratio recovered slightly to 0.9x, signaling effective liability management while supporting growth initiatives. Projections suggest further improvement as operational cash flow rises and liabilities stabilize, ensuring ASML maintains liquidity while pursuing long-term growth.

Debt-to-Free Cash Flow and Leverage Trends

ASML's debt-to-free cash flow ratio peaked at 26.0x in 2021, driven by a temporary decline in free cash flow caused by a \$5.6 billion negative change in working capital. This spike may reflect the company's strategic debt issuance to fund capacity expansions during the semiconductor boom. Increased inventories and receivables, compounded by supply chain disruptions, likely contributed to this anomaly.

By 2023, the ratio declined to 0.5x, reflecting normalized free cash flow and stable debt levels at \$6 billion. This improvement highlights ASML's strong cash generation and disciplined debt management, ensuring financial flexibility and resilience against industry cycles.

Cash Conversion Cycle (CCC)

ASML's CCC increased to 243 days by 2023, primarily due to extended inventory days (DIO) as the company prioritized stockpiling critical components to mitigate supply chain risks. Stable days sales outstanding (DSO) mitigated some of this increase, reflecting efficient receivables collection.

The longer CCC reflects ASML's strategic focus on maintaining supply chain resilience and meeting rising demand, despite higher working capital requirements. Projections suggest a gradual reduction as inventories normalize and receivables improve, supporting sustainable cash flow generation.

CASHFLOW STATEMENT

Operating Cash Flow

ASML's cash provided by operating activities highlights strong operational efficiency. From FY2014 to FY2023, operating cash flow grew from \$1.7 billion to \$6.0 billion, reflecting ASML's ability to generate consistent revenue while managing costs effectively. However, a notable spike to \$12.3 billion in FY2021 aligns with pandemic-driven semiconductor demand, as chipmakers increased production to meet a surge in consumer electronics and cloud infrastructure needs. This temporary rise was partially driven by a significant increase in net income and changes in working capital.

Investing Cash Flow

Investing activities represent ASML's focus on long-term growth through strategic investments. Over the years, capital expenditures (CapEx) have increased steadily, from \$434 million in FY2014 to \$2.4 billion in FY2023, reflecting ASML's ongoing commitment to R&D and expanding manufacturing capabilities for EUV and high-NA systems. The 2023 figure highlights ASML's emphasis on scaling production capacity to meet growing customer demand. However, periodic fluctuations, such as negative cash flows of \$1.7 billion in FY2020, reflect temporary declines related to asset acquisitions or shifts in investment strategy.

Financing Cash Flow

ASML's financing activities indicate a balanced approach toward managing shareholder returns and financial stability. Share repurchase programs peaked in FY2021, with \$9.7 billion allocated, corresponding to a reduction in diluted shares outstanding. This aggressive buyback strategy aligns with periods of share undervaluation, enhancing shareholder value. While dividends paid have grown steadily, the total financing cash flow in recent years reflects ASML's prioritization of reinvestments over immediate returns. By FY2023, financing cash outflows remained substantial, underscoring ASML's commitment to disciplined financial management.

Free Cash Flow and Shareholder Returns

Free cash flow to the firm (FCFF) experienced a substantial increase from \$2.3 billion in FY2014 to \$10.8 billion in FY2023, bolstered by operational efficiencies and controlled CapEx. Projections for the next years suggest ASML's operational strength during cyclical demand upturns. Share buybacks during this period also align with ASML's focus on enhancing long-term shareholder value, evidenced by the CAGR decline of -1.21% in diluted shares outstanding from FY2014 to FY2023.

Sector and Strategic Insights

The sharp rise in operating cash flows during FY2020-FY2021 can be attributed to the global semiconductor boom during the pandemic, while the subsequent normalization highlights ASML's adaptability to sector cyclicality. Investing cash flow patterns align with ASML's R&D-centric strategy, ensuring technological leadership in lithography. Meanwhile, financing activities emphasize shareholder-centric initiatives without compromising financial flexibility, supporting ASML's ability to maintain leadership in an intensely competitive sector.

Valuation

DCF VALUATION

Weighted Average Cost of Capital

| | |
|---|----------------------|
| Risk free rate (R_f) | 2,09% ⁽¹⁾ |
| Country risk premium | 0,71% ⁽²⁾ |
| Equity risk premium ($R_m - R_f$) | 4,95% ⁽³⁾ |
| Equity Beta | 1,49 ⁽⁴⁾ |
| Cost of Equity (K_e) | 10,17% |
| Cost of debt | 3,50% ⁽⁵⁾ |
| Tax rate | 12,87% |
| After-tax Cost of Debt (K_{dt}) | 3,05% |

Capital Structure

| | |
|---|---------------|
| Equity | 98% |
| Debt | 2% |
| Weighted Average Cost of Capital | 10,04% |

We estimate a WACC of 10,04% for ASML. To determine the cost of debt, we add ASML's debt rating-implied corporate spread to the risk-free rate. To reflect ASML's global operations, we use a revenue-weighted spread plus the risk-free rate (DE5y), adjusted based on regional revenue distribution. The cost of equity is calculated using the CAPM formula, incorporating a revenue-weighted equity risk premium. The Beta is derived from a direct correlation with the MSCI WORLD, as we believe this benchmark aligns more closely with ASML's global reach and its potential market movements.

We expect the terminal growth rate to stabilize at 2,5% after 2028 based on (1) projected real GDP growth in core markets, (2) Growth of the industry, and (3) long term inflation goals of company' main countries of operation. We see potential upside for the terminal growth rate based on the possible favorable market position and economic conditions. This will result in further appreciation of the share price far beyond our target price. Our terminal value also implies an exit EV/EBITDA multiple of 28,91x.

SCENARIOS

BEAR CASE

BASE CASE

BULL CASE



Technological Innovation and R&D Leadership

Launch of high-NA EUV systems, while competitors introduce viable alternative technologies, reducing ASML's market edge.

Steady innovation with gradual adoption of high-NA EUV systems, maintaining technological leadership and market share.

Rapid adoption of high-NA EUV and breakthrough innovations cement ASML's dominance in semiconductor lithography.

Product Growth

2%

6%

10%



Supply Chain and Geopolitical Stability

Export restrictions and supply bottlenecks delay shipments and strain ASML's production schedules.

Stable supply chain with manageable geopolitical risks ensures uninterrupted production and delivery.

Supply chain optimization and favorable trade policies enhance ASML's operational efficiency and global reach.

Supply Chain

Bottleneck

Maintained

Streamlined



Adoption of Next-Generation Technologies

Slow demand for EUV systems due to delayed adoption of advanced nodes by chipmakers.

Consistent demand for EUV systems as chipmakers transition to smaller nodes at a steady pace.

Grown demand for EUV systems driven by rapid advancements in AI, 5G, and automotive semiconductor technologies.

Customer Base

-1%

1%

2%

Price target ASML

740,75

902,14

1010,19

% Change from current price

4%

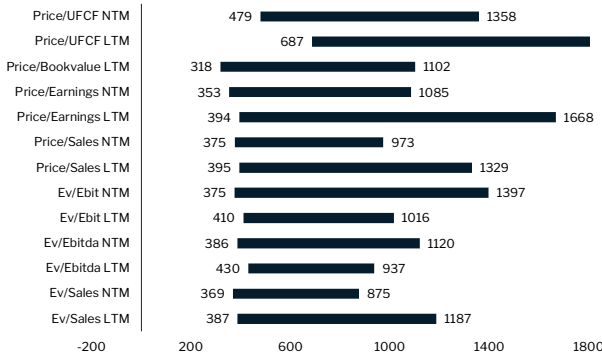
27%

42%

RELATIVE VALUATION

To confirm our valuation and recommendation for ASML, we conducted a multiples analysis to contextualize its value relative to comparable companies within the semiconductor equipment manufacturing industry. By selecting peers based on industry alignment and operational similarities, we ensured a more precise comparison in terms of business models, growth dynamics, and market risks. The chosen peer group includes companies such as Brooks Automation, Applied Materials, Lam Research, KLA Corporation, and others, reflecting firms that operate in semiconductor fabrication, equipment manufacturing, or adjacent technologies. These companies face similar technological and geopolitical challenges, cyclical demand patterns, and capital-intensive operations, making them ideal benchmarks for ASML.

Our analysis focuses on multiples such as EV/EBITDA and P/E ratios, which provide insights into core operating profitability and market expectations. EV/EBITDA is particularly relevant, given the high capital expenditures and R&D investments typical of the semiconductor industry, and is less impacted by non-operational factors such as tax variations. ASML's EV/EBITDA multiple reflects its premium positioning, driven by its leadership in EUV technology and strong profit margins. The P/E ratio further underscores ASML's market expectations for sustained earnings growth, aligning closely with peers while considering the company's competitive advantages. By analyzing these multiples alongside others, we ensure a comprehensive view of ASML's relative valuation and its positioning within the semiconductor equipment sector.



| Qualitative Factors | |
|---------------------------|-------------------------------------|
| Unique business model | <input checked="" type="checkbox"/> |
| Operates globally | <input type="checkbox"/> |
| Diversified customer base | <input type="checkbox"/> |
| Capable of Growing | <input checked="" type="checkbox"/> |
| Competitive advantages | <input checked="" type="checkbox"/> |
| Pricing Power | <input checked="" type="checkbox"/> |
| Leading Market position | <input checked="" type="checkbox"/> |
| Capable Management | <input checked="" type="checkbox"/> |
| Recession resistant | <input checked="" type="checkbox"/> |
| Immune to disruption | <input type="checkbox"/> |

| Quantitative Factors | |
|----------------------|-----|
| Debt/Equity <0.8 | Yes |
| Ebit/interst exp. >5 | Yes |
| Revenue 5y CAGR > 5% | Yes |
| ROIC 5y Avg > 15% | Yes |
| FCF/Net income > 80% | Yes |
| Ebitda 5y CAGR > 7% | Yes |

ASML aligns strongly with our investment criteria, showcasing a unique business model, global operations, and leadership in advanced lithography systems, particularly EUV technology. Its competitive advantages include pricing power, market leadership, and high switching costs, making it a critical player in the semiconductor industry. ASML is recession-resistant due to its indispensable role in chip production. Financially, ASML exhibits robust metrics, including a Debt/Equity ratio below 0.8, EBIT coverage far exceeding interest expenses, a 5-year ROIC average over 15%, and strong FCF conversion exceeding 80% of net income. Its EBITDA CAGR surpasses 7%, reflecting efficient cash generation and sustained growth.

However, ASML's reliance on a small group of major customers, such as TSMC, Samsung, and Intel, creates concentration risk, as large but irregular orders drive its revenue. Although ASML's revenue distribution is diversified across most of the world's developed regions, it remains deeply tied to the Eastern area, where the company generates 84% of its total revenue. The company's supply chain is also vulnerable, relying on specialized suppliers like Zeiss for optics and niche component manufacturers. Additionally, the cyclical nature of the semiconductor market exposes ASML to potential volatility during downturns. Despite these challenges, ASML's technological leadership, financial strength, and market-critical role position it well for sustained growth.

Investment risks



1) Geopolitical Tensions

ASML faces increasing risks from geopolitical tensions, particularly regarding trade restrictions and export controls on critical technologies. Restrictions on selling to key markets such as China significantly impact ASML's revenue streams, as a substantial portion of its customer base resides in countries subject to export regulations. For instance, Dutch and U.S. government restrictions on high-tech exports have imposed limitations on ASML's ability to supply advanced lithography systems to Chinese customers. To mitigate these risks, ASML actively engages with authorities and governments to navigate export license requirements. The company emphasizes compliance with international trade laws and collaborates with global peers in advocacy efforts to ensure the stability of its industrial footprint. ASML has also optimized its manufacturing and supply chain operations to reduce exposure to any single geographic region. These measures aim to balance the risks of geopolitical uncertainties while maintaining its leadership in advanced semiconductor manufacturing.

2) Global Economic Uncertainty

The cyclical nature of the semiconductor industry exposes ASML to significant economic risks, particularly during downturns. Global economic conditions, such as inflation, high interest rates, and reduced customer spending, create uncertainty in semiconductor demand. These conditions often lead to order delays or cancellations, directly affecting ASML's revenue and profitability. To address these challenges, ASML focuses on maintaining flexibility in its operations. The company employs scenario planning to anticipate various economic scenarios and adjust its strategies accordingly. By carefully managing its cost structure, ASML ensures that it can remain competitive during periods of reduced demand. Additionally, ASML's efforts to diversify its customer base geographically help offset regional economic slowdowns.

3) Innovation Pressures

ASML operates in an innovation-driven industry where maintaining technological leadership is critical. The company's competitive edge depends on its ability to deliver cutting-edge lithography systems ahead of competitors. However, innovation timelines are increasingly compressed, and ASML faces significant pressure to develop new products, such as its EUV 0.55 NA (High NA) technology. Compounding these challenges is the risk of cybersecurity attacks targeting ASML's intellectual property (IP), which could jeopardize its market leadership. To mitigate these risks, ASML has implemented a robust IP management framework, including patent portfolio monitoring and strategic investments in security infrastructure. The company also engages in open innovation initiatives with partners to share risks and rewards in developing new technologies. Furthermore, ASML allocates substantial resources to training and awareness programs to counter cybersecurity threats effectively. These measures collectively support ASML's ability to deliver on its technology roadmap while safeguarding its innovation ecosystem.

4) Growth Challenges

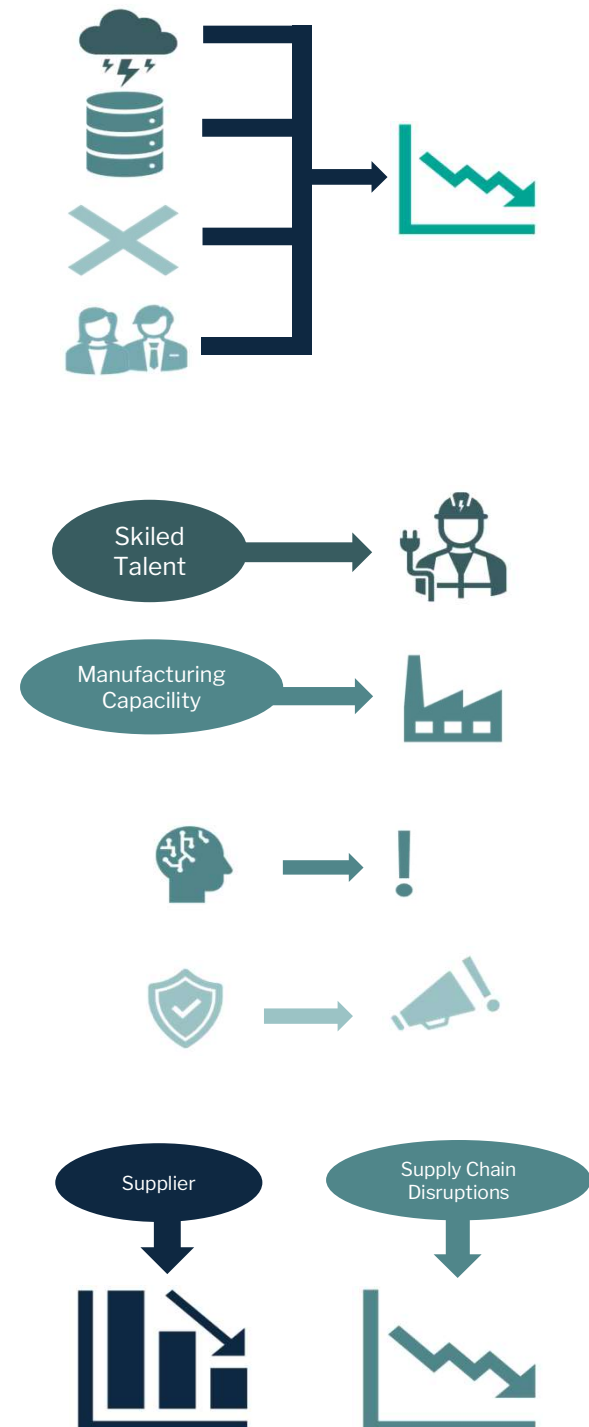
Rapid growth has introduced operational challenges for ASML, particularly in expanding its production capacity and addressing supply chain constraints. The company faces difficulties in hiring and retaining highly skilled talent, which is essential for scaling its operations. Supply chain bottlenecks, exacerbated by rising demand for semiconductors, further complicate ASML's ability to meet customer needs. To overcome these growth-related obstacles, ASML is increasing its manufacturing capabilities and investing in supplier support programs to ensure consistent supply chain performance. The company has also accelerated cycle time reduction initiatives to improve production efficiency. On the workforce front, ASML has launched onboarding and training programs to reduce time-to-knowledge for new hires, ensuring they can contribute effectively to the company's operations. Additionally, ASML collaborates with governments to secure favorable policies and infrastructure investments that support its expansion efforts.

5) ESG and Climate Risks

Environmental, Social, and Governance (ESG) regulations are becoming increasingly stringent, requiring ASML to adapt its operations to meet new standards. Stakeholders demand that ASML minimize its environmental impact across the entire lifecycle of its products, which creates pressure to align with evolving ESG expectations. Furthermore, climate change poses risks to ASML's supply chain and operations through extreme weather events, such as flooding and heat waves. ASML has implemented several measures to address these risks, including deploying ESG strategies throughout its value chain and adhering to the Global Reporting Initiative (GRI) framework for non-financial reporting. The company also invests in infrastructure designed to withstand climate-related disruptions, such as updated building designs to address extreme weather. Through stakeholder engagement and compliance with ESG standards, ASML seeks to minimize the impact of these risks while maintaining operational continuity.

6) Supply Chain Concentration

ASML relies on a limited number of suppliers for critical components, making it vulnerable to supply chain disruptions. Many suppliers are geographically concentrated, compounding risks from geopolitical tensions and natural disasters. Some key suppliers are in Taiwan, a geopolitically sensitive region. To mitigate this, ASML diversifies its supply chain by sourcing components from multiple regions, securing long-term contracts, and maintaining buffer inventories of critical materials. These strategies enhance resilience against supply chain shocks and support customer commitments.



APPENDIX

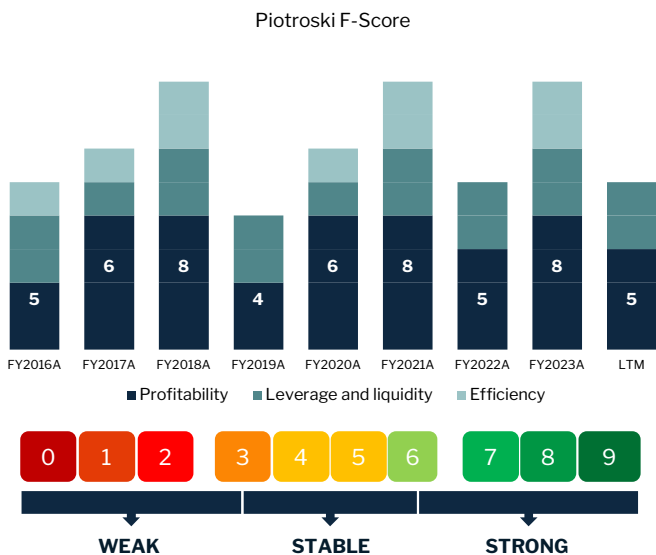


| | SLOAN RATIO | | | | | |
|---------------------------|--------------|--------------|----------------|---------------|----------------|--------------|
| | FY2019A | FY2020A | FY2021A | FY2022A | FY2023A | LTM |
| Net Income | 2,908 | 4,341 | 6,696 | 6,022 | 8,654 | 7,734 |
| Cash Flow from Operations | 3,675 | 5,653 | 12,344 | 9,087 | 6,009 | 5,380 |
| Cash Flow from Investing | (1,298) | (1,652) | (82) | (1,102) | (2,969) | (2,226) |
| Total Assets | 25,384 | 33,310 | 34,408 | 38,870 | 44,113 | 46,635 |
| Sloan Ratio | 2,09% | 1,02% | -16,18% | -5,05% | 12,73% | 9,82% |
| Interpretation | Good Quality | Good Quality | Normal Quality | Good Quality | Normal Quality | Good Quality |

The profits reported in the income statement, along with revenue, are among the key financial metrics closely monitored by investors, as they directly influence the short-term performance of the stock price. However, this focus can place pressure on management, pushing them to adopt accounting practices aimed at meeting market expectations, potentially resulting in profits that may not be sustainable in the long run. Provisions, being subject to discretionary estimates, are one of the areas where more aggressive management can intervene.

Sloan highlighted that companies with a high level of accruals, meaning a high proportion of provisions, tend to generate lower stock returns compared to those with a lower provision ratio. The Sloan ratio, which represents the percentage of provisions relative to total assets, is thus a useful indicator for assessing the quality of a company's earnings.

Our analysis indicates that the company's Sloan Ratio falls within the optimal range of -10% to 10%. This figure reflects a high quality of earnings, suggesting that the company's profitability is solid and sustainable in the long term. In this context, we believe the risk for investors is limited, with an optimal balance between provisions and operating earnings. This positioning indicates prudent management and a healthy financial foundation.

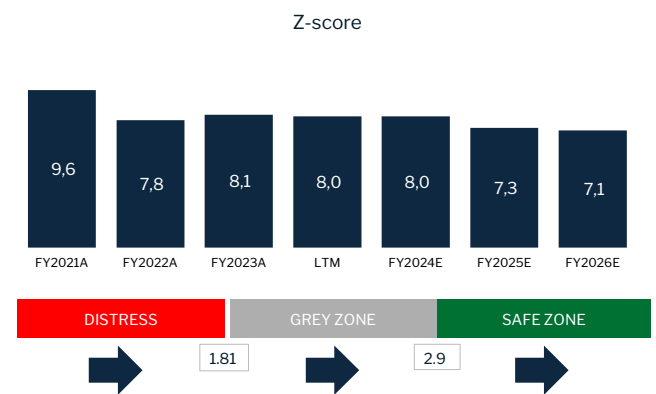


PIOTROSKI F-SCORE

The Piotroski F-Score is a fundamental analysis tool developed by accounting professor Joseph D. Piotroski to assess a company's financial health. This score comprises nine financial criteria, divided into three main categories: profitability, operational efficiency, and capital structure. Each metric within these categories is assigned one point if it meets certain favorable conditions, resulting in a cumulative score that ranges from 0 to 9.

Over the past 20 years, a stock selection strategy within the S&P 500 that used a Piotroski F-Score greater than 6 and included annual rebalancing would have outperformed the S&P 500, achieving a compound annual growth rate (CAGR) of 14.8%. This superior performance highlights how the Piotroski F-Score can enhance returns within a value investing strategy, demonstrating its effectiveness in selecting financially strong companies relative to the broader market.

Our analysis indicates that the company's Piotroski F-Score in 2023 is within the optimal range of 7 to 9, reflecting a strong financial position and robust fundamentals. This high score suggests the company excels across profitability, operational efficiency, and capital structure management. In this context, we consider the investment risk to be limited, as the financial indicators demonstrate effective management and resilience. With this strong foundation, the company is well-positioned for sustainable growth, making it an attractive option for value-focused investors.



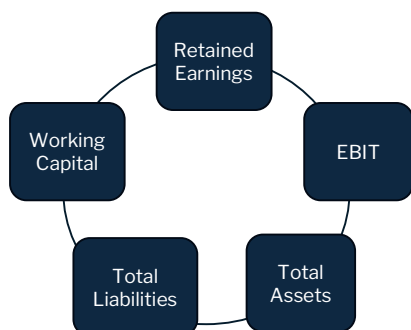
ALTMAN Z-SCORE

| | Historical | | | | Projected | | |
|-----------------------|------------|------------|------------|------------|------------|------------|------------|
| | FY2021A | FY2022A | FY2023A | LTM | FY2024A | FY2025A | FY2026A |
| 1. | 0,6 | 0,6 | 0,6 | 0,6 | 0,6 | 0,7 | 0,6 |
| 2. | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 |
| 3. | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 |
| 4. | 12 | 10 | 10 | 10 | 10 | 9 | 8 |
| 5. | 0,62 | 0,58 | 0,69 | 0,63 | 0,61 | 0,56 | 0,57 |
| Z-score | 9,6 | 7,8 | 8,1 | 8,0 | 8,0 | 7,3 | 7,1 |
| Interpretation | Safe zone | Safe zone | Safe zone | Safe zone | Safe zone | Safe zone | Safe zone |

The Altman Z-score is a predictive financial metric designed to assess the likelihood of a company's insolvency within the next two years. Developed to anticipate bankruptcy risk, Altman's model has demonstrated an accuracy rate of 95% one year before bankruptcy, decreasing to 72% two years before and 52% three years before.

This formula measures the "distance" between a company's financial ratios and those typical of distressed companies. A high Z-score indicates a lower risk of failure, while a low score signals higher risk, providing investors and analysts with a key parameter to evaluate a company's creditworthiness and financial stability.

Based on our analysis, the company is in a safe zone, with a low risk of default in the short to medium term. This high score indicates a solid financial structure and a stable capacity to generate operating cash flows. Assets are efficiently utilized, and leverage is maintained at manageable levels, making this company an attractive option for investors seeking stability and resilience to market shocks. This positioning inspires confidence in the company's management reliability and long-term sustainability.





| INCOME STATEMENT | | | | | | | | | | | | | | |
|-----------------------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Amounts in million | FY2016A | FY2017A | FY2018A | FY2019A | FY2020A | FY2021A | FY2022A | FY2023A | LTM | FY2024E | FY2025E | FY2026E | FY2027E | FY2028E |
| Revenues | 7,236 | 10,753 | 12,538 | 13,259 | 17,076 | 21,183 | 22,672 | 30,424 | 29,296 | 30,424 | 31,763 | 34,558 | 39,120 | 47,726 |
| % YoY Growth | 6.0% | 48.6% | 16.6% | 5.8% | 28.8% | 24.0% | 7.0% | 34.2% | -3.7% | 0.0% | 4.4% | 8.8% | 13.2% | 22.0% |
| Cost of goods sold | (3,926) | (5,930) | (6,776) | (7,336) | (8,773) | (10,018) | (11,215) | (14,818) | (14,312) | (14,908) | (15,437) | (16,657) | (18,699) | (22,431) |
| Gross Profit | 3,311 | 4,823 | 5,761 | 5,922 | 8,303 | 11,164 | 11,457 | 15,606 | 14,984 | 15,516 | 16,326 | 17,901 | 20,421 | 25,295 |
| % YoY Growth | 7.6% | 45.7% | 19.5% | 2.8% | 40.2% | 34.5% | 2.6% | 36.2% | -4.0% | -0.6% | 5.2% | 9.6% | 14.1% | 23.9% |
| SG&A expenses | (394) | (500) | (559) | (584) | (666) | (826) | (1,013) | (1,229) | (1,263) | (1,247) | (1,302) | (1,417) | (1,604) | (1,957) |
| R&D expenses | (1,164) | (1,511) | (1,805) | (2,208) | (2,688) | (2,899) | (3,484) | (4,395) | (4,722) | (5,020) | (5,273) | (5,771) | (6,572) | (8,113) |
| Other operating expenses | 99 | 115 | - | 0 | - | - | - | - | - | - | - | - | - | - |
| Operating Income | 1,851 | 2,927 | 3,397 | 3,130 | 4,949 | 7,440 | 6,961 | 9,983 | 8,999 | 9,249 | 9,751 | 10,713 | 12,245 | 15,225 |
| % YoY Growth | -8.4% | 58.1% | 16.1% | -7.8% | 58.1% | 50.3% | -6.4% | 43.4% | -9.9% | -7.3% | 5.4% | 9.9% | 14.3% | 24.3% |
| ± Non-operating income(ε) | 75 | (11) | 23 | 33 | 118 | 481 | 165 | 425 | 405 | 405 | 245 | 245 | 245 | 245 |
| - Interest Expense | (40) | (69) | (48) | (41) | (53) | (62) | (65) | (169) | (171) | (157) | (157) | (157) | (157) | (157) |
| Pretax Income | 1,886 | 2,847 | 3,372 | 3,123 | 5,015 | 7,859 | 7,061 | 10,239 | 9,233 | 9,496 | 9,839 | 10,801 | 12,332 | 15,312 |
| - Tax Provision | (247) | (367) | (403) | (215) | (674) | (1,163) | (1,039) | (1,585) | (1,499) | (1,899) | (1,968) | (2,160) | (2,466) | (3,062) |
| Net Income | 1,640 | 2,480 | 2,969 | 2,908 | 4,341 | 6,696 | 6,022 | 8,654 | 7,734 | 7,597 | 7,871 | 8,641 | 9,866 | 12,250 |
| % YoY Growth | -6.8% | 51.2% | 19.7% | -2.1% | 49.3% | 54.2% | -10.1% | 43.7% | -10.6% | -12.2% | 3.6% | 9.8% | 14.2% | 24.2% |
| Ebit | 1,851 | 2,927 | 3,397 | 3,130 | 4,949 | 7,440 | 6,961 | 9,983 | 8,999 | 9,249 | 9,751 | 10,713 | 12,245 | 15,225 |
| Depreciation & Amortization | 373 | 496 | 480 | 585 | 674 | 517 | 532 | 725 | 900 | 852 | 889 | 968 | 1,095 | 1,336 |
| Ebitda | 2,224 | 3,423 | 3,877 | 3,715 | 5,624 | 7,957 | 7,493 | 10,707 | 9,899 | 10,101 | 10,641 | 11,681 | 13,340 | 16,561 |
| % YoY Growth | -7.7% | 53.9% | 13.3% | -4.2% | 51.4% | 41.5% | -5.8% | 42.9% | -7.6% | -5.7% | 5.3% | 9.8% | 14.2% | 24.1% |

| INCOME STATEMENT DRIVERS | | | | | | | | | | | | | | |
|--------------------------|---------|---------|---------|---------|---------|---------|---------|---------|--------|---------|---------|---------|---------|---------|
| Amounts in million | FY2016A | FY2017A | FY2018A | FY2019A | FY2020A | FY2021A | FY2022A | FY2023A | LTM | FY2024E | FY2025E | FY2026E | FY2027E | FY2028E |
| Cost of sales % Rev. | 54.3% | 55.1% | 54.0% | 55.3% | 51.4% | 47.3% | 49.5% | 48.7% | 48.9% | 49.0% | 48.6% | 48.2% | 47.8% | 47.0% |
| SG&A % of Rev. | 5.5% | 4.6% | 4.5% | 4.4% | 3.9% | 3.9% | 4.5% | 4.0% | 4.3% | 4.1% | 4.1% | 4.1% | 4.1% | 4.1% |
| R&D expenses % of Re' | 16.1% | 14.1% | 14.4% | 16.7% | 15.7% | 13.7% | 15.4% | 14.4% | 16.1% | 16.5% | 16.6% | 16.7% | 16.8% | 17.0% |
| D&A % of revenues | 5.2% | 4.6% | 3.8% | 4.4% | 3.9% | 2.4% | 2.3% | 2.4% | 3.1% | 2.8% | 2.8% | 2.8% | 2.8% | 2.8% |
| Cost of debt % Revenue | 1.1% | 1.8% | 1.3% | 1.1% | 0.9% | 1.2% | 1.3% | 3.1% | 3.3% | 3.0% | 3.0% | 3.0% | 3.0% | 3.0% |
| Effective tax Rate | 13.1% | 12.9% | 11.9% | 6.9% | 13.4% | 14.8% | 14.7% | 15.5% | 16.2% | 20.0% | 20.0% | 20.0% | 20.0% | 20.0% |
| EPS | 3.8 | 5.7 | 7.0 | 6.9 | 10.4 | 16.3 | 15.1 | 22.0 | 19.6 | 19.3 | 20.0 | 21.9 | 25.1 | 31.1 |
| % YoY Growth | -5.7% | 49.9% | 21.2% | -0.9% | 50.2% | 57.5% | -7.3% | 45.1% | -10.6% | -12.1% | 3.6% | 9.8% | 14.2% | 24.2% |
| Diluted Shares Outstan | 428 | 432 | 426 | 422 | 419 | 410 | 398 | 394 | 394 | 394 | 394 | 394 | 394 | 394 |
| Dividends per Share | 1.26 | 1.68 | 2.41 | 2.69 | 3.36 | 6.26 | 6.21 | 6.73 | 1.95 | 0 | 0 | 0 | 0 | 0 |
| Payout Ratio | 32.9% | 29.2% | 34.6% | 39.0% | 32.4% | 38.4% | 41.0% | 30.6% | 9.9% | 10.0% | 15.6% | 21.2% | 26.8% | 38.0% |

| BALANCE SHEET | | | | | | | | | | | | | | |
|--------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Amounts in millions | FY2016A | FY2017A | FY2018A | FY2019A | FY2020A | FY2021A | FY2022A | FY2023A | LTM | FY2024A | FY2025A | FY2026A | FY2027A | FY2028A |
| Total Cash | 3,060 | 2,710 | 3,576 | 3,962 | 7,390 | 7,912 | 7,783 | 7,733 | 5,560 | 9,156 | 15,272 | 15,804 | 11,123 | 5,224 |
| Short Term Investments | 1,210 | 1,235 | 1,046 | 1,330 | 1,591 | 727 | 115 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Cash & short-Term Invest. | 4,302 | 3,979 | 4,655 | 5,327 | 9,025 | 8,681 | 7,900 | 7,739 | 5,566 | 9,161 | 15,278 | 15,810 | 11,129 | 5,230 |
| Accounts Receivable | 1,327 | 2,564 | 2,618 | 3,197 | 4,071 | 5,187 | 7,546 | 8,011 | 7,458 | 7,910 | 8,258 | 9,331 | 10,954 | 14,318 |
| Inventory | 2,927 | 3,546 | 3,940 | 4,273 | 5,582 | 5,895 | 7,709 | 9,771 | 12,745 | 11,926 | 11,578 | 11,660 | 13,651 | 16,824 |
| Other Current Assets | 373 | 572 | 852 | 810 | 781 | 942 | 1,542 | 1,409 | 1,994 | 2,130 | 1,906 | 2,073 | 1,956 | 2,864 |
| Total Current Assets | 8,929 | 10,661 | 12,065 | 13,608 | 19,460 | 20,704 | 24,697 | 26,931 | 27,762 | 31,128 | 37,020 | 38,875 | 37,689 | 39,235 |
| Net PP&E | 1,776 | 2,057 | 1,979 | 2,606 | 3,439 | 3,582 | 4,430 | 6,403 | 7,376 | 8,653 | 10,083 | 11,742 | 13,737 | 16,457 |
| Other Non-Current Assets | 3,840 | 3,656 | 3,823 | 4,077 | 4,756 | 4,937 | 4,865 | 5,713 | 6,373 | 5,713 | 5,713 | 5,713 | 5,713 | 5,713 |
| Goodwill | 5,156 | 5,448 | 5,202 | 5,094 | 5,655 | 5,185 | 4,878 | 5,066 | 5,123 | 4,093 | 4,093 | 4,093 | 4,093 | 4,093 |
| Total Assets | 19,700 | 21,822 | 23,069 | 25,384 | 33,310 | 34,408 | 38,870 | 44,113 | 46,635 | 49,588 | 56,909 | 60,423 | 61,232 | 65,499 |
| Accounts Payable | 624 | 1,005 | 1,104 | 1,191 | 1,683 | 2,409 | 2,747 | 2,591 | - | 745 | 2,316 | 2,832 | 3,553 | 4,711 |
| Short Term Debt | 259 | 31 | - | - | 13 | 579 | 850 | 75 | - | 75 | 75 | 75 | 75 | 75 |
| Other Current Liabilities | 2,570 | 2,768 | 3,240 | 4,074 | 6,371 | 11,009 | 15,659 | 15,301 | 17,894 | 16,733 | 18,423 | 19,007 | 19,560 | 21,477 |
| Total Current Liabilities | 3,453 | 3,803 | 4,344 | 5,265 | 8,067 | 13,997 | 19,256 | 17,967 | 17,894 | 17,553 | 20,813 | 21,913 | 23,187 | 26,262 |
| Long Term Debt | 3,273 | 3,675 | 3,504 | 3,476 | 5,686 | 4,638 | 3,955 | 5,182 | 5,239 | 5,239 | 5,239 | 5,239 | 5,239 | 5,239 |
| Other non-current Liabilities | 1,366 | 1,415 | 1,885 | 2,518 | 2,619 | 4,231 | 6,224 | 6,112 | 5,467 | 6,112 | 6,112 | 6,112 | 6,112 | 6,112 |
| Total Liabilities | 8,092 | 8,893 | 9,733 | 11,259 | 16,372 | 22,866 | 29,435 | 29,262 | 28,600 | 28,905 | 32,164 | 33,264 | 34,539 | 37,613 |
| Total Equity | 11,608 | 12,929 | 13,336 | 14,125 | 16,938 | 11,542 | 9,434 | 14,851 | 18,034 | 20,683 | 24,746 | 27,158 | 26,694 | 27,886 |
| Total Liabilities and Equity | 19,700 | 21,822 | 23,069 | 25,384 | 33,310 | 34,408 | 38,870 | 44,113 | 46,635 | 49,588 | 56,909 | 60,423 | 61,232 | 65,499 |

| BALANCE SHEET DRIVERS | | | | | | | | | | | | | | |
|-----------------------------|--|--|--|--|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Accounts Receivable % Rev. | | | | | | 24% | 33% | 26% | 25% | 26.0% | 26.0% | 27.0% | 28.0% | 30.0% |
| Inventory % COGS | | | | | | 59% | 69% | 66% | 89% | 80.0% | 75.0% | 70.0% | 73.0% | 75.0% |
| Other Current Assets % Rev. | | | | | | 4% | 7% | 5% | 7% | 7.0% | 6.0% | 6.0% | 5.0% | 6.0% |
| Accounts Payable % COGS | | | | | | 24% | 24% | 17% | 0% | 5.0% | 15.0% | 17.0% | 19.0% | 21.0% |
| Other CL % Revenues | | | | | | 52% | 69% | 50% | 61% | 55.0% | 58.0% | 55.0% | 50.0% | 45.0% |
| Book Value / Share | | | | | | 2867% | 2391% | 3775% | 4587% | | | | | |
| TBV / Share | | | | | | 1310% | 926% | 2279% | 3098% | | | | | |
| Total Debt | | | | | | 5,402 | 5,015 | 5,508 | 5,239 | | | | | |



| | INDICATORS | | | | | | | | | | | | | |
|----------------------------|------------|---------|---------|---------|---------|---------|---------|---------|-------|---------|---------|---------|---------|---------|
| | FY2016A | FY2017A | FY2018A | FY2019A | FY2020A | FY2021A | FY2022A | FY2023A | LTM | FY2024E | FY2025E | FY2026E | FY2027E | FY2028E |
| Margins | | | | | | | | | | | | | | |
| Gross Profit Margin | 46% | 45% | 46% | 45% | 49% | 53% | 51% | 51% | 51% | 51% | 51% | 52% | 52% | 53% |
| EBITDA Margin | 31% | 32% | 31% | 28% | 33% | 38% | 33% | 35% | 34% | 33% | 34% | 34% | 34% | 35% |
| EBIT Margin | 26% | 27% | 27% | 24% | 29% | 35% | 31% | 33% | 31% | 30% | 31% | 31% | 31% | 32% |
| Net Income Margin | 23% | 23% | 24% | 22% | 25% | 32% | 27% | 28% | 26% | 25% | 25% | 25% | 25% | 26% |
| Free Cash Flow Margin | 28% | 34% | 23% | 19% | 18% | 1% | 11% | 35% | 35% | 30% | 9% | 21% | 26% | 29% |
| Profitability | | | | | | | | | | | | | | |
| Return on Assets | 9% | 12% | 13% | 12% | 15% | 20% | 16% | 21% | 17% | 16% | 15% | 15% | 16% | 19% |
| Return on Equity | 15% | 20% | 23% | 21% | 28% | 47% | 57% | 71% | 47% | 43% | 35% | 33% | 37% | 45% |
| Return on invested capital | 9% | 12% | 13% | 12% | 15% | 19% | 16% | 20% | 17% | 16% | 15% | 15% | 16% | 19% |
| Growth | | | | | | | | | | | | | | |
| Operational Roic | 15% | 20% | 21% | 19% | 23% | 30% | 25% | 29% | 22% | 20% | 21% | 22% | 23% | 24% |
| NOPAT Margin | 22% | 24% | 24% | 22% | 25% | 30% | 26% | 28% | 26% | 24% | 25% | 25% | 25% | 26% |
| Capital turnover | 0,7x | 0,9x | 0,9x | 0,9x | 0,9x | 1,0x | 1,0x | 1,1x | 0,9x | 0,8x | 0,9x | 0,9x | 0,9x | 0,9x |
| Reinvestment rate (5%) | 34% | 25% | 23% | 26% | 21% | 16% | 20% | 17% | 22% | 24% | 24% | 23% | 22% | 21% |
| Reinvestment rate (10%) | 67% | 49% | 47% | 53% | 43% | 33% | 40% | 34% | 45% | 49% | 47% | 46% | 44% | 42% |
| Liquidity | | | | | | | | | | | | | | |
| Current Ratio | 2,6x | 2,8x | 2,8x | 2,6x | 2,4x | 1,5x | 1,3x | 1,5x | 1,6x | 1,8x | 1,8x | 1,8x | 1,6x | 1,5x |
| Quick Ratio (Acid Test) | 1,6x | 1,7x | 1,7x | 1,6x | 1,6x | 1,0x | 0,8x | 0,9x | 0,7x | 1,0x | 1,1x | 1,1x | 1,0x | 0,7x |
| Activity | | | | | | | | | | | | | | |
| Asset Turnover | 0,4x | 0,5x | 0,5x | 0,5x | 0,5x | 0,6x | 0,6x | 0,7x | 0,6x | 0,6x | 0,6x | 0,6x | 0,6x | 0,7x |
| DSO | 66 | 66 | 75 | 80 | 78 | 80 | 102 | 93 | 96 | 96 | 93 | 93 | 95 | 97 |
| DPO | 56 | 50 | 57 | 57 | 60 | 75 | 84 | 66 | 33 | 9 | 36 | 56 | 62 | 67 |
| DIO | 266 | 199 | 202 | 204 | 205 | 209 | 221 | 215 | 287 | 266 | 278 | 255 | 247 | 248 |
| Cash Conversion Cycle | 276 | 215 | 220 | 227 | 223 | 214 | 240 | 243 | 350 | 352 | 335 | 291 | 279 | 277 |
| Leverage | | | | | | | | | | | | | | |
| Debt to Equity | 0,3x | 0,3x | 0,3x | 0,2x | 0,3x | 0,5x | 0,5x | 0,4x | 0,3x | 0,3x | 0,2x | 0,2x | 0,2x | 0,2x |
| Debt to Capital | 0,2x | 0,2x | 0,2x | 0,2x | 0,3x | 0,3x | 0,3x | 0,3x | 0,2x | 0,2x | 0,2x | 0,2x | 0,2x | 0,2x |
| Debt to free cash flow | 1,7x | 1,0x | 1,2x | 1,4x | 1,8x | 26,0x | 1,9x | 0,5x | 0,5x | 0,6x | 1,9x | 0,7x | 0,5x | 0,4x |
| Debt / EBITDA | 1,6x | 1,1x | 0,9x | 0,9x | 1,0x | 0,7x | 0,6x | 0,5x | 0,5x | 0,5x | 0,5x | 0,5x | 0,4x | 0,3x |
| Coverage | | | | | | | | | | | | | | |
| Interest cover Ratio | 46,3x | 42,4x | 70,9x | 76,3x | 93,6x | 119,7x | 106,9x | 59,2x | 52,8x | 58,8x | 62,0x | 68,2x | 77,9x | 96,9x |

VALUATION

| Weighted Average Cost of Capital | |
|---|----------------------|
| Risk free rate (Rf) | 2,09% ⁽¹⁾ |
| Country risk premium | 0,71% ⁽²⁾ |
| Equity risk premium (Rm - Rf) | 4,95% ⁽³⁾ |
| Equity Beta | 1,49 ⁽⁴⁾ |
| Cost of Equity (Ke) | 10,17% |
| Cost of debt | 3,50% ⁽⁵⁾ |
| Tax rate | 12,87% |
| After-tax Cost of Debt (Kdt) | 3,05% |
| Capital Structure | 0 |
| Equity | 98% |
| Debt | 2% |
| Weighted Average Cost of Capital | 10,04% |

- (1) Based on the current DE5y
- (2) W.average of CRPs according to the revenue divided by geographical area
- (3) W.average of ERPs according to the revenue divided by geographical area
- (4) Based on a 5 year weekly correlation with the S&P 500
- (5) Based on weighted average historical cost of debt

| Discounted Cash Flow | Units | Projected | | | | |
|---|-----------|--------------|--------------|--------------|---------------|---------------|
| | | FY2024E | FY2025E | FY2026E | FY2027E | FY2028E |
| <i>Amounts in millions, except per share amount</i> | | | | | | |
| EBIT | \$ | 9.249 | 9.751 | 10.713 | 12.245 | 15.225 |
| % YoY Growth | % | -7% | 5% | 10% | 14% | 24% |
| Taxes | \$ | (1.899) | (1.968) | (2.160) | (2.466) | (3.062) |
| Tax Rate/Ebit | % | 21% | 20% | 20% | 20% | 20% |
| NOPAT | \$ | 7.350 | 7.784 | 8.553 | 9.778 | 12.162 |
| + Depreciation and Amortization | \$ | 852 | 889 | 968 | 1.095 | 1.336 |
| D&A % of Revenues | % | 2,8% | 2,8% | 2,8% | 2,8% | 2,8% |
| ± Changes in working capital | \$ | 3.189 | (3.484) | 222 | 2.222 | 4.370 |
| % YoY Growth current Assets | % | 16% | 19% | 5% | -3% | 4% |
| % YoY Growth current Liabilities | % | -2% | 19% | 5% | 6% | 13% |
| - Capital expenditures | \$ | (2.130) | (2.319) | (2.626) | (3.090) | (4.057) |
| Capex % of Revenue | % | 7% | 7% | 8% | 8% | 9% |
| Unlevered Free Cash Flows | \$ | 9.261 | 2.870 | 7.116 | 10.005 | 13.812 |
| Discount rate | % | 10,04% | 10,04% | 10,04% | 10,04% | 10,04% |
| Discount period | | 0,1 | 1,1 | 2,1 | 3,1 | 4,1 |
| Discount factor | | 0,99 | 0,90 | 0,82 | 0,75 | 0,68 |
| Present Value of Unlevered Free Cash Flow | \$ | 9.195 | 2.590 | 5.835 | 7.456 | 9.355 |

| DCF Value - Perpetuity Growth | |
|------------------------------------|----------------|
| NPV of UFCF 2024 - 2028 | 34.431 |
| PV of Terminal Value | 284.852 |
| Implied Enterprise Value | 319.283 |
| Less: Debt | 5.239 |
| Add: Cash | 5.560 |
| Add: short-term investments | 6 |
| Implied Equity Value | 319.610 |
| Diluted shares | 394 |
| Implied Value Per Share | 811,60 |

| Method | Weight |
|------------------------|--------|
| Exit Multiple | 80% |
| Perpetuity growth rate | 20% |

| Wacc | | Perpetuity growth Rate | | | | | |
|------|-------|------------------------|--------|--------|--------|--------|-------|
| | | 411 | 2,00% | 2,25% | 2,50% | 2,75% | 3,00% |
| Wacc | 9,5% | 416,62 | 428,68 | 441,61 | 455,48 | 470,41 | |
| | 9,8% | 402,73 | 413,94 | 425,92 | 438,75 | 452,53 | |
| | 10,0% | 389,71 | 400,15 | 411,28 | 423,18 | 435,92 | |
| | 10,3% | 377,49 | 387,23 | 397,60 | 408,65 | 420,47 | |
| | 10,5% | 365,99 | 375,10 | 384,77 | 395,07 | 406,04 | |
| | Wacc | Exit Multiple | 912 | 28,4x | 28,7x | 28,9x | 29,2x |
| Wacc | 9,5% | 913,49 | 920,74 | 928,00 | 935,25 | 942,50 | |
| | 9,8% | 905,42 | 912,61 | 919,79 | 926,98 | 934,17 | |
| | 10,0% | 897,44 | 904,56 | 911,68 | 918,80 | 925,92 | |
| | 10,3% | 889,56 | 896,61 | 903,67 | 910,72 | 917,78 | |
| | 10,5% | 881,76 | 888,75 | 895,74 | 902,73 | 909,72 | |

RELATIVE VALUATION

Enterprise Value Multiples

| | LTM | FY2024E | FY2025E | FY2026E | FY2027E | FY2028E |
|--------------|-------|---------|---------|---------|---------|---------|
| EV / Revenue | 9,6x | 9,2x | 8,8x | 8,1x | 7,2x | 5,9x |
| EV / Ebitda | 28,3x | 27,7x | 26,3x | 24,0x | 21,0x | 16,9x |
| EV / Ebit | 31,1x | 30,3x | 28,7x | 26,1x | 22,9x | 18,4x |

Equity Value Multiples

| | LTM | FY2024E | FY2025E | FY2026E | FY2027E | FY2028E |
|------------------|-------|---------|---------|---------|---------|---------|
| Price / Sales | 9,6x | 9,2x | 8,8x | 8,1x | 7,2x | 5,9x |
| Price / Earnings | 36,2x | 36,9x | 35,6x | 32,4x | 28,4x | 22,9x |
| Price / BV | 15,5x | 13,5x | 11,3x | 10,3x | 10,5x | 10,0x |
| Price / UFCF | 27,2x | 30,3x | 97,6x | 39,4x | 28,0x | 20,3x |

| Trading Comparables Company | Equity Value | Enterprise Value | Ev / Sales | | Ev / Ebitda | | Price / sales | | Price / Earnings | | Price / BV | | Price / FCF | |
|--------------------------------------|-----------------|---------------------|------------|-------|-------------|-------|---------------|-------|------------------|-------|------------|-------|-------------|--|
| | | | LTM | NTM | LTM | NTM | LTM | NTM | LTM | NTM | LTM | NTM | | |
| Applied Materials Inc. | 19.001 | 140.959 | 5,2x | 4,8x | 17,1x | 15,0x | 5,3x | 4,9x | 20,1x | 18,3x | 7,6x | 25,5x | 22,5x | |
| Lam Research Corp | 8.472 | 92.381 | 5,9x | 5,2x | 18,8x | 16,0x | 6,0x | 5,3x | 23,5x | 19,9x | 11,0x | 23,9x | 19,7x | |
| KLA Corp | 3.560 | 87.742 | 8,6x | 7,4x | 20,6x | 16,7x | 8,3x | 7,3x | 29,3x | 20,6x | 24,0x | 37,5x | 20,8x | |
| Advantest Corp | 3.311 | 44.621 | 11,6x | 9,1x | 37,2x | 28,1x | 10,8x | 8,0x | 66,2x | | 13,6x | 70,8x | 55,9x | |
| NAURA Technology Group Co Ltd | 4.258 | 30.382 | 7,9x | 6,1x | 32,8x | 32,1x | 7,8x | 6,1x | 41,1x | 33,9x | 7,3x | | 52,6x | |
| Disco Corp | 3.037 | 28.236 | 12,1x | 10,3x | 24,8x | 21,4x | 11,9x | 10,3x | 44,0x | | 9,8x | 62,8x | 42,6x | |
| ASM International NV | 3.819 | 25.038 | 8,7x | 7,0x | 26,7x | 20,8x | 8,4x | 7,3x | 45,2x | 40,3x | 7,2x | 61,6x | 40,3x | |
| Advanced Micro-Fabrication Equipment | 2.670 | 17.020 | 16,0x | 11,3x | | 43,6x | 17,9x | 12,6x | 84,9x | 56,3x | 6,9x | 71,5x | 40,9x | |

| Equity Value | 245.274 | 211.090 | 228.763 | 215.138 | 228.763 | 215.138 | 243.733 | 212.759 | 297.220 | 190.232 | 187.565 | 517.096 | 329.242 |
|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Diluted shares | 394 | 394 | 394 | 394 | 394 | 394 | 394 | 394 | 394 | 394 | 394 | 394 | 394 |
| Implied Share price | 623 | 536 | 581 | 546 | 581 | 546 | 619 | 540 | 755 | 483 | 476 | 1.313 | 836 |
| | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| High | 1.187 | 875 | 937 | 1.120 | 937 | 1.120 | 1.329 | 973 | 1.668 | 1.085 | 1.102 | 2.055 | 1.358 |
| Low | 387 | 369 | 430 | 386 | 430 | 386 | 395 | 375 | 394 | 353 | 318 | 687 | 479 |



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