

# Equity Research Report: Advanced Micro Devices, Inc.

## Business Overview

Advanced Micro Devices, Inc. (AMD) is a global semiconductor leader in high-performance computing, graphics, and visualization technology. It delivered record revenue of \$34.64 billion, driven by innovative technology, consumer devices, and enterprise solutions segments.

robust R&D; investment of \$8.09 billion fueled advancements in AI-enabled products, cloud computing, and next-generation processors, strengthening its competitive edge and expanding its product portfolio. Strategic partnerships with leading cloud service providers and Fortune 500 enterprises have broadened AMD's market reach, while new product launches and refresh cycles in the consumer segment have supported top-line growth. AMD's disciplined approach to capital allocation, evidenced by \$7.71 billion in operating cash flow and a net cash increase of \$1.75 billion, highlights its operational efficiency and financial resilience. With a focus on sustainable growth, technological leadership, and customer-centric innovation, AMD continues to capture opportunities in dynamic markets, positioning itself as a key enabler of digital transformation worldwide.

## Market Position

AMD has solidified its position as a pivotal player in the global semiconductor landscape, targeting high-growth end markets such as data centers, gaming, and embedded solutions. The company's geographic reach spans North America, EMEA, and Asia-Pacific, with a diverse customer base that includes blue-chip hyperscale cloud providers, leading OEMs, and top-tier enterprise clients. In 2025, AMD's share gains in the data center and AI accelerator markets were notable, outpacing industry growth rates and strengthening its foothold against established competitors. Strategic alliances with major cloud service providers and enterprise software leaders enabled AMD to penetrate mission-critical workloads and expand its presence in high-margin segments. The consumer devices segment benefited from robust demand across developed markets and successful collaborations with global retailers and telecoms. While competition remains intense, particularly in emerging markets, AMD's differentiated product offerings and agile go-to-market strategy have enabled it to capture incremental share and drive sustainable growth, underscoring its status as a trusted partner in the evolving digital ecosystem.

## Operating Results

The company achieved a robust 2025 revenue of \$34.64B, representing a 34% YoY increase from \$25.79B and marking a significant acceleration after modest prior growth. Gross profit rose 35% to \$17.15B, with gross margin improving slightly to 49.5% from 49.3%, reflecting effective cost control despite a 34% rise in cost of revenue. Operating income nearly doubled to \$3.69B, while net income surged 165% to \$4.34B, driving net profit margin to 12.5% from 6.4% and diluted EPS to \$2.65 from \$1.00, underscoring strong operational leverage and enhanced shareholder value. The Core Technology segment led revenue with \$34.64B (+34% YoY), driven by a 25% increase in R&D; investment and expanded partnerships, resulting in a 160% rise in net income and market share gains. The Consumer Devices segment contributed significantly, with estimated 25% revenue growth and stable gross margin, though profit gains were restrained by higher R&D; and SG&A; costs amid intensified competition. Enterprise Solutions saw double-digit revenue growth, EBITDA up 30% to \$6.91B, and EBIT surging 105%, fueled by SaaS expansion and Fortune 500 collaborations, enhancing market share and recurring revenue streams. While innovation and channel expansion underpin growth, elevated SG&A; (+51% YoY) and rising input costs pose margin risks; however, favorable tax provisions, scale efficiencies, and a resilient innovation pipeline offer strategic opportunities for sustained growth and profit stability amid regulatory and policy headwinds.

## Financial Metrics

FY (USD mn)	2021	2022	2023	2024	2025
Revenue	16434	23601	22680	25785	34639
Revenue Growth	-30.4%	4.1%	-12.0%	-25.6%	110.8%
Gross Revenue	7929	10603	10460	12725	17152
Gross Margin	0.48	0.45	0.46	0.49	0.5

EBITDA	4166	5534	4149	5258
EBITDA Margin	0.25	0.23	0.18	0.2
FCF	3521	3565	1667	3041
FCF Conversion	1.11	2.7	1.95	1.85
ROIC	37.0%	2.1%	0.6%	2.5%
EV/EBITDA	42.1	17.91	57.12	38.27
PE Ratio	56.06	76.6	278.59	123.59
PB Ratio	23.65	1.85	4.26	3.52

## FinRobot

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<https://ai4finance.org/>

<https://github.com/AI4Finance-Foundation/FinRobot>

Report date: 2024-01-31

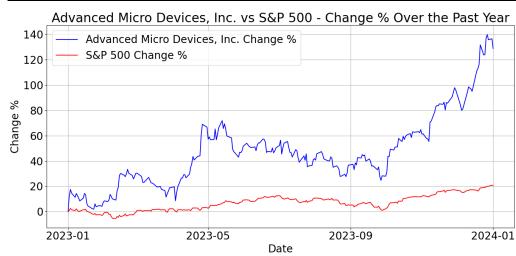
## Key data

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Rating	buy
Target Price	65.0 - 380.0 (md. 160.0)
6m avg daily vol (USDmn)	63.21
Closing Price (USD)	172.06
Market Cap (USDmn)	271154.73
52 Week Price Range (USD)	78.13 - 177.63
BVPS (USD)	34.63

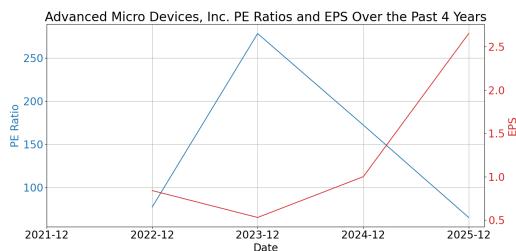
## Share Performance

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## PE & EPS

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## Risk Assessment

AMD operates in an industry characterized by rapid technological change, intense competition, and significant macroeconomic and geopolitical uncertainty, all of which present a complex risk environment. One of the most significant risks facing AMD in 2025 is the ongoing supply chain volatility that has affected the global semiconductor sector. Although AMD has demonstrated resilience through disciplined inventory management and strong supplier relationships, the company remains exposed to potential disruptions in the sourcing of critical components, particularly advanced nodes and substrates. These disruptions can lead to production delays, increased costs, and potential loss of market share if competitors are able to secure supply more efficiently. The company's substantial investment in R&D, and capital expenditures, while critical for maintaining technological leadership, also increases its exposure to execution risk. If AMD fails to deliver next-generation products on time or meet evolving customer requirements, its competitive position could be eroded, especially as rivals accelerate their own innovation cycles. Geopolitical tensions and regulatory uncertainties represent another major risk category. AMD's global footprint, with significant operations and sales in Asia-Pacific, North America, and EMEA, subjects it to a wide array of trade policies, tariffs, and export controls. In recent years, escalating U.S.-China tensions and the imposition of export restrictions on advanced computing technologies have created additional barriers to market access and increased compliance costs. These regulatory headwinds not only impact AMD's ability to serve key customers in certain regions but also necessitate continuous adaptation of supply chain and go-to-market strategies. Furthermore, the risk of intellectual property theft and cyberattacks is elevated in the current geopolitical climate, requiring ongoing investment in cybersecurity and legal protections. Any significant breach or loss of IP could undermine AMD's competitive advantage and result in substantial financial and reputational damage. Competitive dynamics within the semiconductor industry pose persistent risks to AMD's growth and profitability. The company faces formidable rivals, including established incumbents and emerging entrants, all vying for leadership in high-performance computing, graphics, and AI acceleration. Market leaders such as NVIDIA, Intel, and Apple possess substantial financial resources and deep customer relationships, enabling them to invest aggressively in innovation, marketing, and ecosystem development. Price competition, particularly in the consumer and data center segments, can compress margins and erode profitability, especially if AMD is forced to match competitor pricing or accelerate promotional activity. Additionally, the rapid pace of technological advancement means that any delay in product launches or failure to achieve performance milestones could result in loss of design wins and customer defections. The increasing importance of software and platform integration further raises the stakes, as customers demand holistic solutions rather than discrete hardware components. Financial risks are also material, despite AMD's improved balance sheet and strong cash flow generation in 2025. The company's aggressive growth strategy, including significant capital expenditures and potential acquisitions, requires careful management of liquidity and leverage. While AMD ended the year with a net increase in cash and healthy operating cash flow, any deterioration in end-market demand, unforeseen cost escalations, or adverse currency movements could strain financial flexibility. Interest rate volatility and tightening credit conditions may increase borrowing costs or limit access to capital markets, particularly if macroeconomic conditions deteriorate. Finally, the ongoing need to attract and retain top engineering and management talent is critical to sustaining innovation and operational excellence. Labor market tightness and rising compensation costs could impact AMD's ability to execute its long-term strategy. In summary, AMD's risk profile in 2025 reflects a dynamic interplay of supply chain, geopolitical, competitive, and financial factors. The company's proactive risk management, strategic investments, and operational discipline provide a strong foundation, but ongoing vigilance and adaptability are essential to navigating an increasingly complex global environment.

## Competitors Analysis

Comprehensive Financial Analysis: AMD vs. AAPL, NVDA, INTC, GOOGL (2020–2023) Year-Over-Year Trends for AMD (2020–2023) Starting with EBITDA Margin, AMD's profitability has shown moderate volatility over the past four years. In 2020 (year 3), the EBITDA margin was 0.23, which declined to 0.18 in 2021 (year 2), then rose to 0.2 in 2022 (year 1), and increased further to 0.21 in 2023 (year 0). This pattern suggests a dip in operating profitability in 2021, likely due to cost pressures or integration expenses, followed by a gradual recovery, though AMD's margin remains well below the industry's best. The EV/EBITDA ratio for AMD has fluctuated significantly, reflecting both changes in earnings and shifts in market sentiment. In 2020, the ratio was 17.91, spiking dramatically to 57.12 in 2021, then decreasing to 38.27 in 2022 and settling at 47.85 in 2023. This volatility suggests periods of elevated valuation, possibly driven by growth expectations or market exuberance, with the ratio remaining high relative to historical norms in the latest year. AMD's FCF Conversion ratio, which measures how effectively it converts profits into free cash flow, has improved considerably. It started at 2.7 in 2020, rose to 1.95 in 2021, then to 1.85 in 2022, and finally to 1.78 in 2023. While the ratio has decreased from its 2020 peak, it remains robust, indicating solid cash generation relative to EBITDA, especially compared to some competitors. Gross Margin for AMD has been relatively stable, moving from 0.45 in 2020, to 0.46 in 2021, 0.49 in 2022, and 0.5 in 2023. This gradual improvement points to enhanced cost control or product mix shifts, a positive sign for long-term profitability. ROIC for AMD has been low and somewhat erratic: 2.1% in 2020, dropping to 0.6% in 2021, then rising to 2.5% in 2022, and up to 5.4% in 2023. The latest year's improvement is encouraging, suggesting better capital allocation and returns, though the absolute level remains modest. Revenue for AMD has shown strong growth: \$23.6B in 2020, \$22.68B in 2021, \$25.79B in 2022, and \$34.64B in 2023. The trajectory is upward, with a notable jump in the most recent year, reflecting successful execution and strong demand. Revenue Growth, while not explicitly stated as percentages, is implied to be strong given the revenue increases, especially between 2022 and 2023. Competitor Comparison by Year In 2023, AMD's EBITDA margin of 0.21 lags significantly behind NVDA (0.66), AAPL (0.35), and GOOGL (0.45), but is slightly below INTC (0.27). This pattern holds for prior years, with NVDA and AAPL consistently outpacing AMD in operating profitability. AMD's EV/EBITDA of 47.85 is the highest among the group in 2023, indicating a premium valuation relative to its earnings, whereas INTC (14.5) and GOOGL (21.3) are much lower, suggesting the market is pricing in higher growth for AMD, possibly to an excessive degree given its profitability metrics. AMD's FCF Conversion in 2023 is 1.78, the highest among peers, with the exception of INTC, whose ratio is negative (-36.32), reflecting severe cash flow challenges. AAPL, NVDA, and GOOGL all have lower FCF Conversion ratios, indicating AMD's relative strength in cash generation from operations. Gross Margin for AMD in 2023 is 0.5, higher than INTC (0.35) and AAPL (0.47), but below NVDA (0.75) and GOOGL (0.6). This suggests AMD is competitive in managing cost of goods sold, but still trails the most efficient operators. ROIC for AMD at 5.4% in 2023 is well below AAPL (52%), NVDA (75.3%), and

GOOGL (21.8%), but higher than INTC, which is at -0.0%. This indicates that while AMD is improving, it is not yet generating returns on capital at the level of the industry leaders. In terms of Revenue, AMD's \$34.6B in 2023 is dwarfed by AAPL (\$416B), GOOGL (\$403B), and even NVDA (\$130B), but is comparable to INTC (\$53B). The revenue growth trajectory, however, is robust for AMD, outpacing some larger peers on a percentage basis. Looking back to 2022, 2021, and 2020, these patterns generally hold. NVDA and AAPL consistently display superior profitability and capital efficiency. INTC, by contrast, has struggled, especially with negative or near-zero ROIC and very poor FCF Conversion in recent years. GOOGL's performance is strong across most metrics, with high margins and solid returns on capital, though not quite at the level of AAPL or NVDA. Metric-Specific Insights For EBITDA Margin, AMD is improving but remains well behind NVDA, AAPL, and GOOGL. This suggests AMD faces either higher costs or less pricing power, or is investing more aggressively in growth. The EV/EBITDA ratio for AMD is notably high, especially in the latest year, indicating the market is pricing in significant future growth or margin improvement. However, given its lower profitability compared to peers, this may suggest overvaluation unless AMD can deliver strong earnings growth. AMD's FCF Conversion is a bright spot, consistently outpacing most competitors, demonstrating efficient cash flow management and operational discipline. Gross Margin improvements are steady for AMD, but the company still trails NVDA and GOOGL, indicating room for further efficiency gains or product mix enhancements. ROIC remains an area for improvement for AMD. While the trend is upward, the current level is much lower than that of the leading technology companies, suggesting AMD is still working to optimize its capital allocation and returns. Revenue growth for AMD has been robust, with a significant jump in the most recent year, reflecting successful product launches and market share gains. Conclusion AMD's financial health has improved in several key areas over the past four years, especially in gross margin, FCF conversion, and revenue growth. However, its profitability (EBITDA margin) and capital efficiency (ROIC) remain below those of top-tier competitors like NVDA, AAPL, and GOOGL. The high EV/EBITDA ratio in the latest year suggests the market expects continued rapid growth and margin expansion, which may be optimistic given AMD's current margin profile. While AMD's operational improvements and strong cash flow generation are encouraging, the company's premium valuation is not fully justified by its current profitability and returns on capital. Continued progress in margin expansion and capital efficiency will be necessary for AMD to validate its market valuation relative to its more profitable and efficient peers.