

Equity Research Report: Advanced Micro Devices, Inc.

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|----------|-------|------|--------|--------|
| PE Ratio | 56.06 | 76.6 | 278.59 | 123.59 |
| PB Ratio | 23.65 | 1.85 | 4.26 | 3.52 |

Business Overview

In 2024, Advanced Micro Devices (AMD) reported a robust 14% increase in annual revenue, reaching \$25.8 billion, primarily fueled by significant growth in its Data Center and Client segments. The Data Center segment saw a remarkable 94% revenue jump to \$12.6 billion, driven by strong sales of AMD Instinct GPUs and AMD EPYC CPUs, while the Client segment's revenue surged 52% to \$7.1 billion, attributed to increased demand for AMD Ryzen mobile and desktop processors. Conversely, the Gaming and Embedded segments experienced declines, with Gaming revenue dropping 58% due to lower semi-custom product revenue and Embedded revenue decreasing by 33% as customers adjusted inventory levels. Despite these challenges, AMD's strategic focus on AI and high-performance computing, evidenced by new product launches and acquisitions aimed at bolstering its AI capabilities and data center infrastructure, positions the company for sustained growth and market leadership. The company's improved gross margin to 49% and a significant increase in operating income to \$1.9 billion reflect efficient operational management and a favorable product mix shift.

Market Position

In 2024, AMD solidified its position as a leading semiconductor company, capitalizing on its strengths in high-performance computing and graphics. The company's strategic acquisitions and product innovations have enabled it to capture significant market share in the data center, client, gaming, and embedded markets. AMD's EPYC processors have become the de facto choice for cloud providers and enterprise data centers, driving a 94% revenue increase in the Data Center segment. Similarly, the Ryzen mobile and desktop processors have bolstered AMD's presence in the Client segment, with a 52% revenue surge. Despite challenges in the Gaming and Embedded segments, AMD's market position remains strong due to its technological advancements and strategic partnerships. The company's focus on AI and machine learning, coupled with its efforts to expand into new markets, positions AMD for continued growth and market leadership.

Operating Results

In 2024, Advanced Micro Devices (AMD) reported a robust 14% increase in annual revenue, reaching \$25.8 billion, primarily fueled by significant growth in its Data Center and Client segments. The Data Center segment saw a remarkable 94% revenue jump to \$12.6 billion, driven by strong sales of AMD Instinct GPUs and AMD EPYC CPUs, while the Client segment's revenue surged 52% to \$7.1 billion, attributed to increased demand for AMD Ryzen mobile and desktop processors. Conversely, the Gaming and Embedded segments experienced declines, with Gaming revenue dropping 58% due to lower semi-custom product revenue and Embedded revenue decreasing by 33% as customers adjusted inventory levels. Despite these challenges, AMD's strategic focus on AI and high-performance computing, evidenced by new product launches and acquisitions aimed at bolstering its AI capabilities and data center infrastructure, positions the company for sustained growth and market leadership. The company's improved gross margin to 49% and a significant increase in operating income to \$1.9 billion reflect efficient operational management and a favorable product mix shift.

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 | 7275 |
| EBITDA Margin | 0.25 | 0.23 | 0.18 | 0.2 | 0.21 |
| FCF | 3521 | 3565 | 1667 | 3041 | 7709 |
| FCF Conversion | 1.11 | 2.7 | 1.95 | 1.85 | 1.78 |
| ROIC | 37.0% | 2.1% | 0.6% | 2.5% | 5.4% |
| EV/EBITDA | 42.1 | 17.91 | 57.12 | 38.27 | 47.85 |

FinRobot

<https://ai4finance.org/>

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

Report date: 2025-02-05

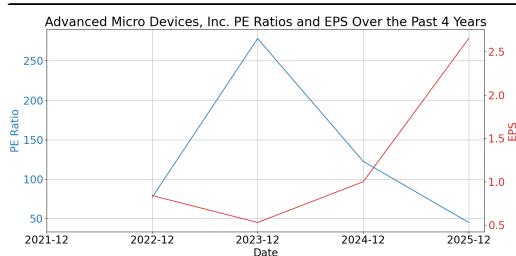
Key data

| Rating | buy |
|---------------------------|--------------------------|
| Target Price | 65.0 - 380.0 (md. 175.0) |
| 6m avg daily vol (USDmn) | 37.56 |
| Closing Price (USD) | 119.50 |
| Market Cap (USDmn) | 181456.20 |
| 52 Week Price Range (USD) | 115.16 - 208.22 |
| BVPS (USD) | 35.54 |

Share Performance



PE & EPS



Risk Assessment

AMD faces several key risks that could impact its future performance and market position. First, the highly competitive nature of the semiconductor industry requires constant innovation and significant R&D; investment to maintain technological leadership. AMD's ability to compete with larger rivals like Intel and NVIDIA hinges on its continued success in developing cutting-edge products. Second, supply chain disruptions and chip shortages have posed challenges for AMD, affecting its ability to meet demand and potentially leading to lost revenue opportunities. Third, regulatory risks, including trade tensions and changes in export controls, could limit AMD's access to key markets or increase operational costs. Despite these risks, AMD's strategic initiatives, such as expanding its product portfolio and entering new markets, position it well to navigate these challenges and capitalize on growth opportunities.

Competitors Analysis

Analyzing AMD and its competitors (NVDA, INTC, QCOM) across multiple years reveals insightful trends and competitive standings within the semiconductor industry. Here is a detailed analysis focusing on EBITDA Margin, EV/EBITDA, FCF Conversion, Gross Margin, ROIC, Revenue, and Revenue Growth from 2020 to 2023. **Year 2023 (Year 3) Analysis:** In 2023, AMD showcased an EBITDA Margin of 0.23, indicating a slight improvement from the previous year. This improvement, however, still places AMD behind NVDA and QCOM in terms of profitability. AMD's EV/EBITDA ratio of 17.91 in 2023 marks a significant improvement, suggesting a more favorable valuation compared to previous years. AMD's FCF Conversion rate stood at 2.7, the highest among its competitors, indicating superior cash flow efficiency. Despite a competitive Gross Margin of 0.45, AMD lagged behind NVDA and QCOM, highlighting room for improvement in cost efficiency. AMD's ROIC of 2.1% in 2023, although improved from 2020, remained lower than that of its competitors, suggesting less efficiency in generating returns from investments. **Year 2022 (Year 2) Analysis:** In 2022, AMD's EBITDA Margin decreased to 0.18, indicating a decline in profitability. The EV/EBITDA ratio escalated to 57.12, suggesting AMD was becoming overvalued or that its earnings potential was in question. The FCF Conversion rate improved to 1.95, showcasing better cash flow management. However, AMD's Gross Margin decreased to 0.46, and its ROIC drastically reduced to 0.6%, indicating a challenging year for AMD in terms of both cost efficiency and investment returns. Compared to its competitors, AMD struggled, especially against NVDA and QCOM, in most financial metrics. **Year 2021 (Year 1) Analysis:** AMD's financial performance in 2021 showed an EBITDA Margin of 0.2, a slight decrease from 2023, while its EV/EBITDA ratio of 38.27 indicated a more reasonable valuation compared to 2022. The FCF Conversion rate of 1.85 highlighted AMD's effective cash flow management, albeit with room for improvement. The Gross Margin slightly declined to 0.49, and the ROIC was at a low of 2.5%, indicating a less efficient year in generating returns and managing costs. AMD's performance was relatively moderate when compared to its competitors, with NVDA leading in profitability and ROIC. **Year 2020 (Year 0) Analysis:** Starting the period in 2020, AMD had an EBITDA Margin of 0.21, showcasing a solid profitability base which slightly improved in the subsequent years. The EV/EBITDA ratio was high at 47.85, suggesting market expectations of strong future earnings. AMD's FCF Conversion rate was 1.78, indicating good cash flow efficiency. With a Gross Margin of 0.5, AMD demonstrated strong cost efficiency, although it still trailed behind NVDA. The ROIC of 5.4% was modest, indicating average efficiency in generating returns on investments. **Conclusion:** Over the analyzed period, AMD demonstrated fluctuating financial health with improvements in valuation, cash flow efficiency, and slight improvements in profitability. However, it consistently lagged behind NVDA in most metrics, particularly in profitability and ROIC, indicating NVDA's superior efficiency and market position. AMD's performance compared to INTC and QCOM was more competitive, with AMD showing strengths in certain areas like FCF Conversion. The overall financial health of AMD suggests a company that has room for improvement in profitability and cost efficiency but is managing its cash flow well and gradually improving its market valuation. The fluctuating EV/EBITDA ratio over the years suggests varying market perceptions of AMD's future earnings potential, with a notable improvement in valuation by 2023. AMD's financial performance, while showing areas of strength, indicates a need for strategic improvements to enhance profitability and ROIC to better compete within the fiercely competitive semiconductor industry.