



# Financial Analytics Project

## Equity Research

Report By: Goutham Yallapu  
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Date: 02/29/2024  
Ticker: **AMD:US**

Current Price: **\$192.53**  
Projected Price: **\$181.04**

Recommendation:  
**SELL**

## Market Profile

## INTRODUCTION

### Company Overview:

AMD is a multinational semiconductor company based in the United States that specializes in computer processors and related technologies for both consumer and business markets. AMD was established in 1969 and offers a variety of products, such as embedded processors, motherboard chipsets, graphics processors, and microprocessors. The company's early entry into the microprocessor market in 1975 and subsequent competition with Intel played a significant role in the development of the PC industry. With its Athlon and Opteron processors, AMD experienced rapid growth. In the late 2000s, it faced difficulties, but with the release of its Ryzen processors in the late 2010s, it was able to recover. Additionally, they have entered new markets like high-performance computing, gaming, and data centers. In 2008, AMD separated its manufacturing division to form GlobalFoundries, concentrating on chip design.

**Stock Information:** AMD is denoted by the ticker AMD on the New York Stock Exchange. The company's prominence in the financial markets and technology sector is demonstrated by the active trading of its shares.

**Market Position and Capitalization:** AMD is a major player in the tech sector, with a market capitalization of about \$327.424 billion, which reflects both its growth trajectory and investors' faith in its business plan.

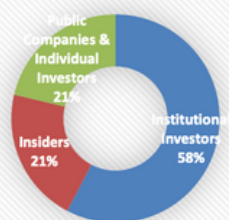
**Investment Recommendation:** Taking into account AMD's present stock price, market conditions, and potential for future growth, the Recommendation is to SELL. AMD is overvalued.

**Trading Volume and Liquidity:** Investors should pay close attention to AMD's liquidity, which shows how simple it is to trade its shares without having a big impact on price. The high trading volume of the company indicates the liquidity and investor interest in its stocks.

(Closing Price 02/29/23)	\$192.53
52 Week High	\$193.00
52 Week Low	\$78.52
Average Volume	73,982,469
Market Cap	\$311.088B.
Beta	1.63
EPS Ratio	0.53
Institutional ownership	94.46% of Outstanding shares

Source: Yahoo finance (02/29/2024)

### AMD's Market share breakdown



■ Institutional Investors ■ Insiders ■ Public Companies & Individual Investors

### AVERAGE OUTSTANDING SHARES



Source: Company Financial statement analysis



## Financial Analytics NYSE

## EQUITY RESEARCH IT, Semiconductor industry

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**SELL**

Historical Stock Price



Source: Yahoo Finance

**Product Innovation:** AMD is renowned for being at the forefront of processor technology, especially with its affordable and high-performing Ryzen and EPYC series.

**Market Expansion:** AMD has increased its revenue base by effectively entering new markets like data centers and enterprise solutions.

**Strategic Alliances:** By collaborating with other tech companies on chip development and supply, the company has increased sales.

**Competitive Pricing:** AMD has a reputation for offering high-quality solutions at reasonable prices, which makes it appealing in markets where costs are a factor.

**Industry Demand:** As a result of the growing popularity of gaming, remote work, and cloud computing, AMD is seeing an increase in demand for processing power.

**AI and Data Centers:** AMD is gaining traction in these markets, especially with its Instinct MI300 accelerator, which is being adopted by big players in the sector.

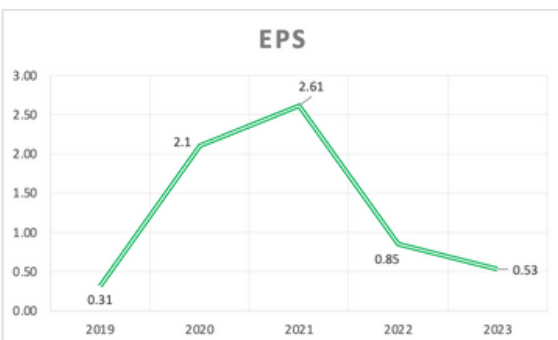
**Operational Efficiency:** Although AMD has made significant strides, there has been a recent drop in this area, which could raise questions about the company's ability to maintain profitability and competitiveness.

**Financial Stability:** By drastically lowering its debt-to-equity ratio and switching from a highly leveraged to a more conservative stance, AMD has increased its financial stability.

**Cash Generation:** AMD's Cash Flow per Share (CFPS) is increasing, which suggests that cash generation efficiency is improving; however, it is still lower than that of some of its competitors, indicating that there is still room for improvement.

**Asset Utilization:** AMD's overall asset turnover has fluctuated over time, with a recent decrease suggesting possible problems with asset administration.

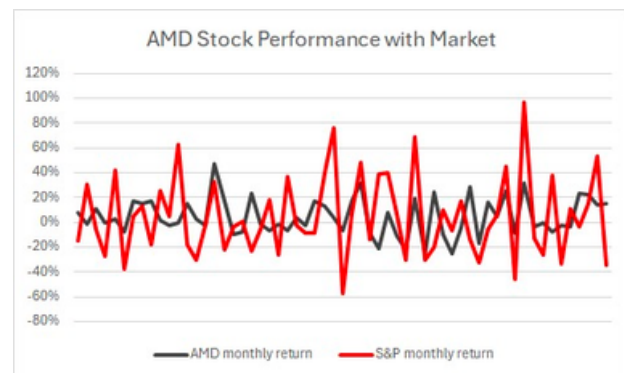
## EPS



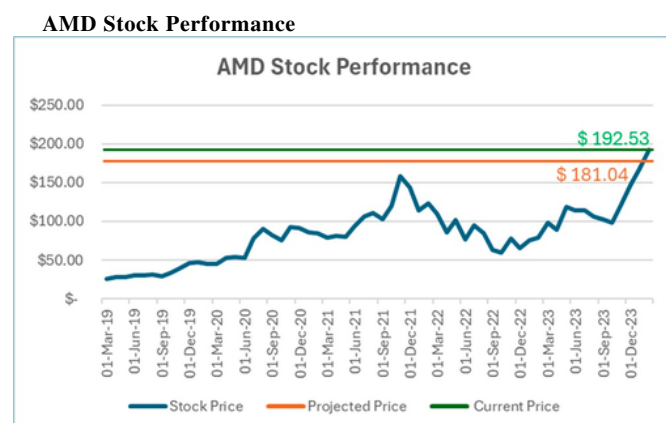
Source: Company Financial statement analysis



AMD Stock Performance with Market



Source: Yahoo Finance



Source: Company Financial statement analysis

## AMD Stock Performance

**Trend:** Since the beginning of 2019, AMD's stock price has been rising, pointing to a favorable prognosis for the market and growth.

**Projected Price:** The green line shows the anticipated price at which the stock was anticipated to trade. This estimate of the stock's value is a target estimation.

**Current Price:** As of December 2023, the orange line represents the current price level, which is \$181.04. This implies that the stock is trading below the \$192.53 target price.

Although AMD's stock has not reached the anticipated price targets by the end of 2023, this performance graph indicates that it has still increased significantly from its starting price point in early 2019. Several factors, such as market conditions, investor sentiment, and corporate performance, have contributed to the stock's performance in comparison to expectations.

## AMD Stock Performance with Market

**Volatility:** AMD's stock exhibits more notable peaks and troughs and is more volatile than the S&P 500. This implies that news or circumstances pertaining to AMD specifically may have a greater impact on the company's shares than on the market as a whole.

**Correlation:** AMD's stock occasionally moves in tandem with the S&P 500, suggesting that the same economic and market forces that impact the market as a whole occasionally have an impact on it as well. There are, nevertheless, also definite divergence times, which could be explained by industry-specific patterns or AMD's special business innovations.

**Performance Relative to Market:** AMD's monthly returns beat the S&P 500 in a number of cases, but it also underperforms the market in a few noteworthy cases. AMD has the potential to yield larger returns than the market, but this inconsistent performance suggests that there is a higher risk associated with it.



## BUSINESS DESCRIPTION

An industry leader in the technology sector, AMD (Advanced Micro Devices, Inc.) is renowned for its advancements in high-performance computing, graphics, and visualization technologies. It is well-established across a range of industries, including Fortune 500 companies and academic research institutes. AMD is committed to creating innovative, high-performance products that push the boundaries of technology. Their products are essential to many applications, enhancing daily living, employment, and leisure for billions of people worldwide. In the fiercely competitive semiconductor market, AMD consistently strives to develop cutting-edge products, demonstrating its dedication to innovation.

### Products offered by AMD

Category	Products	Description
CPUs	Ryzen™, EPYC™	Processors for personal computers, workstations, servers, and data centers.
GPUs	Radeon™	Graphics cards for gaming, professional use, and high-performance computing.
Semi-Custom	Custom SoCs for Game Consoles	Systems on Chips for gaming consoles like the PlayStation and Xbox.
Chipsets	Motherboard Chipsets	Chipsets for motherboards that connect the microprocessor to other components within PCs.
FPGAs	Xilinx FPGAs	Programmable logic devices for a range of applications, post-acquisition of Xilinx.
Embedded	AMD Embedded Solutions	Processors and graphics solutions for embedded systems across various industries.
Software	Radeon Software, Ryzen Master	Software solutions for graphics and performance tuning.
Technologies	RDNA and Zen Architectures	The architecture underlying GPUs and CPUs, respectively.
Pro Graphics	Radeon™ Pro Series	Professional graphics cards for workstations and demanding graphics applications.
Server GPUs	Radeon Instinct™	GPUs designed for deep learning, high-performance computing, and artificial intelligence.



## CORPORATE GOVERNANCE

### **Management Overview:**

Dr. Lisa Su is in charge of senior management at AMD. She has been the company's President and CEO since October 2014. A notable turnaround for AMD has occurred under her direction, as evidenced by the company's successful product launches and consistent market share growth. A combination of recent hires and long-tenured executives bring new insights and historical knowledge to the leadership team's combined experience with the company.

### **Capital Allocation Record:**

In order to increase AMD's product line and market reach, the current management has made strategic acquisitions like the acquisition of Xilinx while also placing a strong emphasis on research and development to spur innovation.

### **Compensation and Incentive Plans:**

AMD's senior management typically receives compensation and incentive plans that are in line with the interests of shareholders, with a sizeable percentage of compensation being based on performance indicators and stock price growth. This includes restricted stock units and stock options, which encourage the long-term creation of value.

### **Stock Ownership:**

It is customary for executives and board members to possess a significant portion of AMD stock, thereby bringing their interests into line with those of the shareholders and promoting choices that foster long-term, steady growth.

### **Succession Planning:**

Effective succession planning is essential to the ongoing operations of the business. It is anticipated that AMD will have a succession plan in place for important senior management roles in order to facilitate seamless changes and maintain business performance.

### **Board Composition:**

To ensure impartial oversight, AMD's board of directors should ideally be presided over by a majority of independent directors. To effectively guide the company's strategy, the board should include a diverse range of perspectives, experiences, and skill sets.

### **Independence and Entrenchment Risk:**

The independence of the board should be assessed, and its members should not have any substantial connections to management that would compromise their objectivity. Regular performance reviews and board refreshment measures, such as term limits or retirement ages for directors, help to reduce entrenchment risk.



## INDUSTRY OVERVIEW

With the release of its Instinct MI300 accelerator, AMD is taking major steps in the data center and AI markets to counter Nvidia and take advantage of the \$400 billion AI hardware market. In the PC market, the Ryzen series has proven resilient, and AMD anticipates growth from new AI applications and post-pandemic upgrades.

AMD is a cause for concern, though. Production and the supply chain need to grow efficiently to keep up with the growing demand for AI and data center products. With well-established competitors like Nvidia, AMD needs to keep up its innovative efforts if it hopes to increase its market share. Because the semiconductor industry is cyclical, AMD must adjust to shifts in demand brought on by changes in business and consumer spending as well as general economic conditions. Investing continuously in R&D is essential to stay up with the quick advancements in technology, particularly in AI.

AMD is positioning itself as a formidable rival in the semiconductor business by taking advantage of PC and AI market opportunities. AMD's focus on high-growth areas and efforts to increase production and diversify its product line are critical to its future success against industry giants like Nvidia, even in the face of fierce competition, complex supply chains, and the need for constant innovation.

### Porter's Five Forces analysis

An analytical framework for evaluating AMD's competitive landscape in the semiconductor industry is provided by Porter's Five Forces study. The dynamics influencing AMD's strategic positioning and operational effectiveness are better understood thanks to this analysis. AMD's position with respect to each of the five forces is as follows:

#### 1. Threat of New Entrants: (2/5)

Low to Moderate: New entrants are hindered by the semiconductor industry's high capital expenditure requirements in manufacturing and research and development. But there's a growing threat from new players, particularly in niche markets, as fabless semiconductor companies, which design and sell hardware while outsourcing manufacturing, proliferate.

#### 2. Bargaining Power of Suppliers: (3/5)

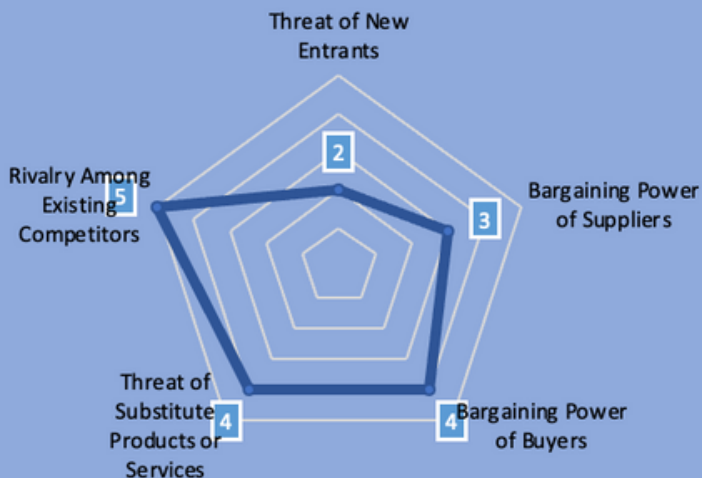
Moderate: AMD is dependent on a small group of suppliers, particularly semiconductor foundries like TSMC, for essential materials and services. The limited number of high-tech suppliers and AMD's reliance on advanced manufacturing technologies give these suppliers more negotiating power, even though AMD's size may provide it some leverage.

#### 3. Buyers' Bargaining Power: (4/5)

Moderate to High: Individual consumers as well as major OEMs and cloud service providers are among the buyers in the semiconductor industry. Because of their size and the abundance of options, large purchasers like data center operators and PC manufacturers have a lot of negotiating power. However, some of this power can be offset by AMD's innovative and competitive product offerings.



## Porter's Five forces



### 4. Threat of Substitute Goods or Services: (4/5)

High: As a result of the quick development of new, potentially disruptive technologies, there is a serious risk of substitutes. Discrete GPU and CPU products from AMD are also threatened by competition from integrated solutions, such as those provided by Intel with its CPUs and onboard graphics.

### 5. Competition Between Current Rivals: (5/5)

Very High: AMD is up against fierce competition from well-known companies like Nvidia in the GPU market and Intel in the CPU market. This competition is defined by a never-ending race for gains in market share, performance enhancements, and technological innovations. The growing applications of semi-

conductors in AI, gaming, and data centers further intensify competition; therefore, innovation and strategic alliances are essential to sustaining competitiveness.

The competitive environment in the semiconductor industry is ever-changing, and key factors influencing market positions are technological innovation and strategic alliances. Utilizing its strengths in innovation and product development, AMD must navigate this environment while addressing the difficulties presented by supplier dependencies, rivalry, and the negotiating power of big customers.

## S.W.O.T ANALYSIS

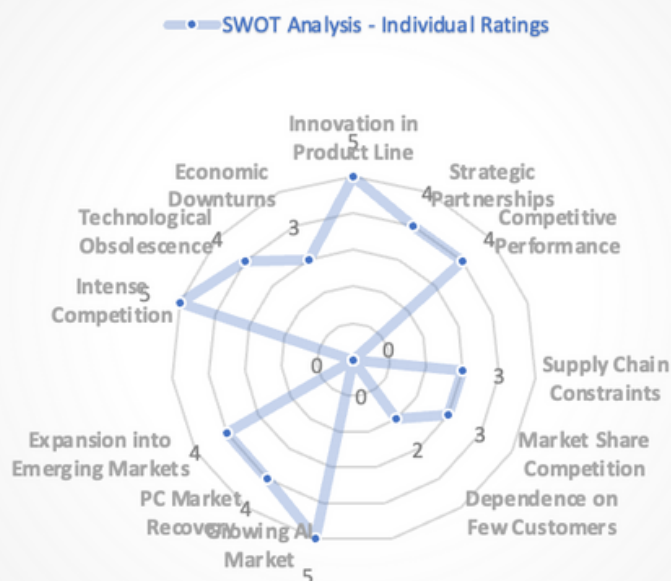
This SWOT analysis summarizes AMD's strengths, weaknesses, opportunities, and threats based on the knowledge gained from the earlier analyses and the overall picture of AMD's position within the semiconductor industry.

### Strengths:

**1. Innovation in Product Line:** AMD has a strong R&D team as evidenced by the creation of competitive goods like the Ryzen CPUs and Radeon GPUs, as well as its advancements in AI with the Instinct MI300 series.

**2. Strategic Partnerships:** AMD's market reach and product integration are improved through partnerships with important OEMs and hyperscalers, including Microsoft, Oracle, and Meta.

## SWOT Analysis - Individual Ratings







**3. Competitive Performance:** AMD is well-positioned against rivals like Nvidia in the expanding AI hardware market thanks to the MI300's industry-leading performance in AI inferencing and training.

#### **Weaknesses:**

- 1. Supply Chain Constraints:** AMD experiences supply chain reliability issues, similar to many others in the semiconductor industry, which may hinder its capacity to promptly meet demand.
- 2. Competition for Market Share:** AMD continues to lag behind Nvidia in the GPU market and Intel in the CPU market, despite recent improvements, particularly in markets for high-end computing and data centers.
- 3. Reliance on Limited Clientele:** AMD's financial performance is susceptible to fluctuations in its relationships with a small number of key customers, as these relationships account for a substantial portion of AMD's revenue.

#### **Opportunities:**

- 1. Growing AI Market:** AMD has a substantial growth opportunity due to the rising demand for AI and machine learning solutions, particularly in data centers and personal computers.
- 2. PC Market Recovery:** AMD's innovations, especially in AI-enhanced PCs, position it to gain a larger market share as the PC market recovers.
- 3. Expansion into Emerging Markets:** Expanding its presence in developing nations, where the pace of digital transformation is quickening, may open up new avenues for income.

#### **Threats:**

- 1. Intense Competition:** AMD's market share and pricing power are constantly in danger due to the competitive landscape, particularly with regard to industry titans like Nvidia and Intel.
- 2. Technological Obsolescence:** Due to the risk of new technologies making older products outdated, AMD must constantly invest in R&D to stay relevant in light of the rapid advancements in technology.
- 3. Economic Downturns:** Shifts in the world economy may result in less money spent on technology, which would affect AMD's earnings and sales.

#### **Average SWOT Ratings:**

##### **Strengths:**

- Product Line Innovation: 5/5** - AMD's steady innovation in CPUs and GPUs is a significant advantage.
- Strategic Partnerships: 4/5** - Alliances with top IT firms expand AMD's market penetration.
- Competitive Performance: 4.5 out of 5** - AMD products frequently provide competitive performance at a more affordable cost.

##### **Weaknesses:**

- Constraints in the Supply Chain: 3/5** - Production may be impacted by supply chain problems, but AMD is less affected than some of its rivals because of strategic alliances.
- Competition for Market Share: 3/5** - AMD has increased its share of the market but is still up against bigger companies like Nvidia and Intel.
- Dependency on Few Customers: 2/5** - AMD's substantial reliance on a small number of important clients may present a risk, despite the company's broad customer base.

## Opportunities:

**Growing AI Market: 5/5** - AMD has a great deal of room to grow thanks to the expanding AI industry.

**PC Market Recovery: 4/5** - With AMD's robust CPU lineup, a recovering PC market has the potential to increase sales.

**Expansion Into Emerging Markets: 4/5** - Growth can create new sources of income and lessen reliance on developed markets.

## Threats:

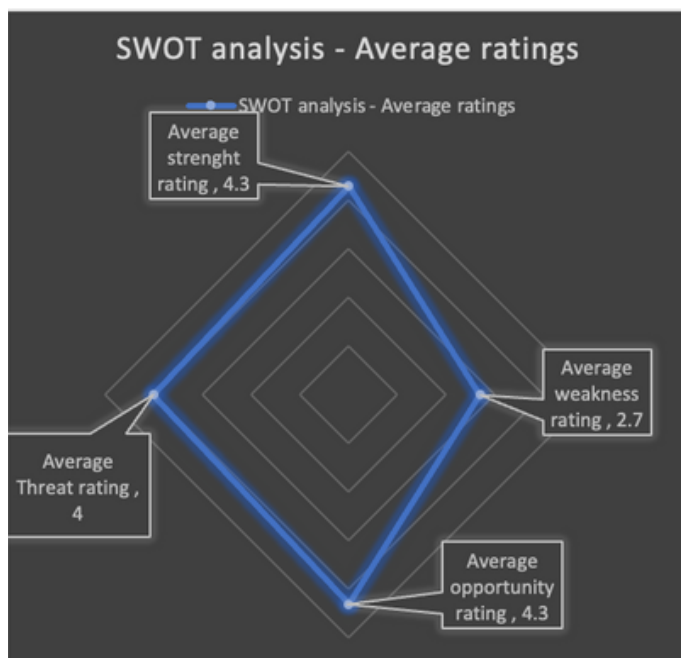
**Intense Competition: 5/5** - The semiconductor industry faces intense competition, which necessitates ongoing marketing and innovation.

**Technological Obsolescence: 4/5** - AMD needs to continuously invest in R&D to stay ahead of the rapid advancements in technology.

**Economic Downturns: 3/5** - Consumer and business spending on technology products may be curtailed during economic downturns.

It is possible to average each component separately to get an overall SWOT rating, but opportunities and threats are usually not averaged in the same way as strengths and weaknesses because they are external factors that call for different strategic approaches. But for a simple overview, we combined the averages of individual strengths, weaknesses, opportunities and threats.  $(4.3 + 2.7 + 4.3 + 4.0) / 4 = 3.825/5$  is the combined SWOT rating. This combined rating gives a general sense of AMD's strategic position, suggesting that its strengths and opportunities are robust and may help to mitigate its weaknesses and the threats it faces.

AMD's strategic position and the many opportunities and challenges it faces are summarized in this SWOT analysis. Sustained growth and competitiveness of the company will be contingent upon its capacity to innovate, adjust to market demands, and strategically position its product offerings.





# Competitive Positioning

AMD is compared to its industry, especially to its primary rival Nvidia, it demonstrates the company's strategic positioning and ability to navigate a range of market opportunities and challenges.

## Comparison to Industry and Strategic Positioning:

With the introduction of its Instinct MI300 accelerator, AMD has been advancing significantly in the AI and data center markets, establishing itself as a formidable rival to Nvidia's products. AMD's increasing presence in this profitable industry is demonstrated by the MI300's performance in AI inferencing and its adoption by major hyperscalers such as Microsoft, Oracle, and Meta Platforms. AMD stands to gain a great deal from the \$400 billion AI hardware market, especially considering the growing need for AI inferencing capabilities.

AMD has also demonstrated growth and resilience in the PC market recovery, especially with its Ryzen series. The company anticipates that the PC market will accelerate due to post-pandemic upgrade cycles and new AI opportunities. AMD is well-positioned to benefit from the trend toward AI-first computing thanks to its Ryzen AI portfolio, which includes the first integrated AI engine for Windows workstations in the industry.

AMD's revenue fell by 4% in 2023, which presented financial challenges. However, the company anticipates that growth in data center and PC sales will propel its performance in 2024. The company's strategic efforts to keep a competitive edge in the industry are highlighted by its focus on high-growth areas like AI-enhanced PC hardware and data center GPUs.

## Primary Concerns for AMD:

- 1. Supply Chain and Production Increase:** It is crucial that AMD be able to supply the rapidly increasing demand in the AI and data center sectors, particularly for its MI300 accelerators. Although the company is rapidly increasing production, any interruptions in the supply chain may affect its capacity to process orders and seize market opportunities.
- 2. Competition:** Even though AMD is outperforming Nvidia, there is still fierce competition, especially in the data center and artificial intelligence sectors. Because of Nvidia's well-established brand and product portfolio, AMD must keep up its innovative work in order to gain market share through alliances and better performance.
- 3. Market Demand Fluctuations:** The semiconductor business is renowned for being cyclical, and changes in demand have an effect on revenue and sales. Although AMD's guidance is upbeat, it is still susceptible to changes in consumer and business spending patterns as well as more general economic conditions.
- 4. Technological Advancements:** Constant investment in R&D is necessary due to the rapid changes in technology. Future growth for AMD hinges on its capacity to maintain technological leadership, particularly as AI applications develop and call for increasingly sophisticated computing solutions.



In summary, AMD is utilizing chances in AI and the PC market to establish itself as a formidable rival in the semiconductor business. But fierce rivalry, complicated supply chains, and the constant need for innovation present difficulties. Its focus on high-growth markets, along with initiatives to increase output and diversify its product line, will be essential to its ability to navigate the main risks it faces and to succeed against industry heavyweights like Nvidia.

## INDUSTRY ANALYSIS

Industry analysis is a thorough method for comprehending the intricacies and dynamics of particular market niches, assisting in the formulation of well-informed investment and strategic business plans. This involves conducting an industry analysis which assess the competitive rivalry, threat of new competitors, threat of substitute goods and services, supplier bargaining power, and customer bargaining power. Determining the industry's attractiveness and potential for profit requires an understanding of these factors.

Financial Analysis of AMD with companies from the same Industry: **Intel, Nvidia, Broadcom**

Using a variety of financial ratios, we can compare AMD to its rivals Nvidia, Intel, and Broadcom in order to get a better understanding of each company's operational effectiveness, liquidity, and profitability.

### ROI Analysis:

**AMD:** Over the years, AMD's ROI has fluctuated significantly. The ROI for the company was negative in 2016, but it increased dramatically in 2021. But in 2022, there was a noticeable decline, which might indicate a decline in operating efficiency or a rise in investment without a corresponding rise in operating income.

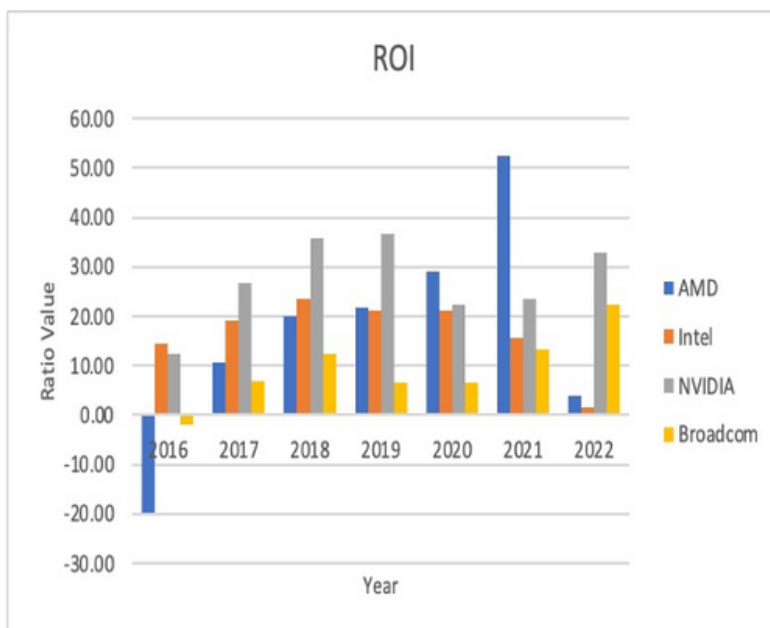
**Intel:** Compared to AMD, Intel's return on investment has been comparatively stable, peaking in 2018. The return on investment (ROI) has marginally declined in the last few years; 2022 has the lowest ROI during the period shown, which may be a sign of difficulties with operations profitability or growth.

**Nvidia:** Nvidia has a robust and steady return on investment, especially from 2018 to 2020. Despite a decline in 2021, Nvidia's return on investment (ROI) was still much higher in 2022 than it was for Intel and Broadcom, suggesting a strong operating performance.

**Broadcom:** With a decline in 2017 and 2020, Broadcom's return on investment has improved over time. A significant increase from the year prior is evident in 2022, indicating gains in operational efficiency or profitability.

When compared to its competitors, Nvidia has continuously maintained a high ROI, demonstrating strong operational performance. The most volatile company has been AMD, which peaked in 2021 and saw a sharp decline in 2022. There may be reasons to be concerned about Intel's operational efficiency or how the market is affecting its profitability given the company's recent downward trend. Even though it didn't reach Nvidia or AMD's peak highs, Broadcom exhibits a consistent uptrend and a strong comeback in 2022.

According to this data, Nvidia might be outperforming its rivals in terms of market positioning or operational efficiency. Investors should look into the underlying reasons for these trends and how they might impact performance in the future.



## COMPARATIVE ANALYSIS

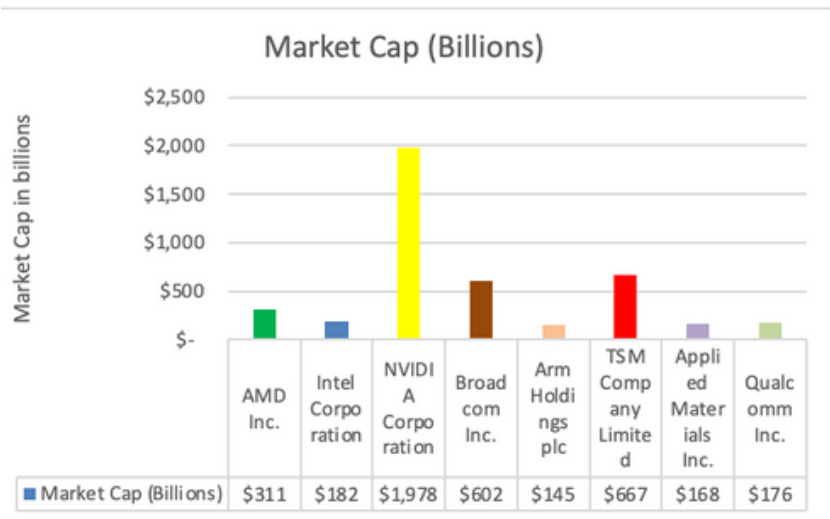
"Semiconductor Industry Financial Metrics: A Comparative Analysis" This table gives a quick overview of important financial metrics for well-known semiconductor companies, such as AMD Inc., Intel Corporation, and NVIDIA Corporation, including market capitalization, net income, profit margin, and return on equity (ROE).

Company Name	Market Cap (In Billions)	Net Income	Profit Margin	ROE
AMD Inc.	\$ 311.00	\$ 2,723,000.00	10.44%	18.33%
Intel Corporation	\$ 182.00	\$ 1,689,000.00	3.11%	202.78%
NVIDIA Corporation	\$ 1,978.00	\$ 29,760,000.00	48.85%	70.55%
Broadcom Inc.	\$ 602.00	\$ 14,082,000.00	39.31%	66.97%
Arm Holdings plc	\$ 145.00	\$ 524,000.00	19.56%	151.21%
TSM Company Limited	\$ 667.00	\$ 325,408,164.80	44.92%	219.30%
Micron Technology Inc	\$ 105.83	\$ 6,856,000.00	-37.54%	283.91%
Applied Materials Inc.	\$ 168.00	\$ 6,856,000.00	25.86%	61.65%
Qualcomm Inc.	\$ 176.00	\$ 6,856,000.00	19.14%	60.25%



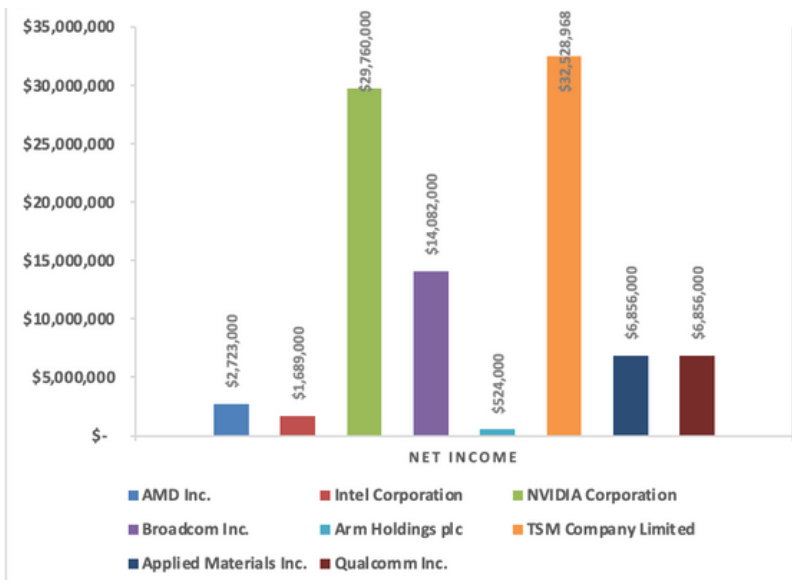
## Market Capitalization:

- With a valuation of \$311 billion, AMD is not as valuable as NVIDIA Corporation, which is the largest of its peer group at \$1,978 billion.
- Direct rival Intel Corporation is worth \$182 billion less on the market than it is.
- With a \$667 billion market capitalization, TSM Company Limited is a large company, particularly in the foundry industry.



## Net Income:

- AMD is estimated to have a net income of \$2,723,000 (or \$2.72 billion if expressed in thousands). This is a small amount in comparison to the biggest, \$29,760,000 (\$29.76 billion), held by NVIDIA.
- AMD may be more successful in the market or operating more efficiently than Intel, as seen by the latter's \$1,689,000 (\$1.68 billion) net profits.



## Profit Margin:

With a profit margin of 10.44%, AMD is not as profitable as NVIDIA, Broadcom Inc., Arm Holdings plc, and TSM Company Limited, which all have higher margins—NVIDIA leading the pack at 48.85%. Nonetheless, AMD does appear to turn a good amount of revenue into profit. At 3.11%, Intel Corporation has the lowest profit margin, which could be a result of increased expenses or pressure on prices.





## Return on Equity (ROE):

- AMD has a return on equity (ROE) of 18.33%, which shows how well the company uses equity to make money.
- Intel Corporation's exceptionally high ROE of 202.78% could be the consequence of lower equity basis or exceptionally high earnings in the prior period.

Arm Holdings plc and TSM Company Limited both have excellent ROEs, demonstrating efficient use of shareholder money. Qualcomm Inc. has the lowest ROE of any company at 60.25%, but it's still a good return.

## DCF Model Analysis:

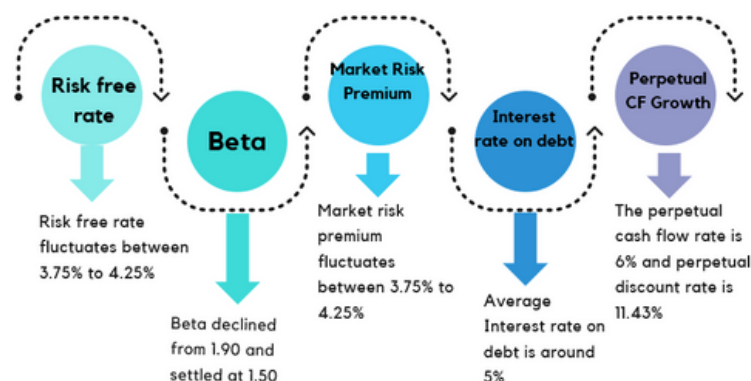
A valuation technique called discounted cash flow (DCF) analysis is used to calculate an investment's value based on anticipated future cash flows.

In our DCF model, we have evaluated parameters to account for market conditions and company-specific risks. The risk-free rate is expected to range between 3.75% and 4.25%, providing a baseline for evaluating investment returns in the context of zero default risk. Our stock's beta has been calculated at 1.50, down from a previous estimate of 1.90, indicating lesser volatility relative to the overall market. The market risk premium is also expected to fluctuate within the same range as the risk-free rate, reflecting the additional return investors would expect for taking on more risk. Our cost of debt is estimated at roughly 5%, reflecting the current borrowing cost. To determine the terminal value, we assume a perpetual cash flow growth rate of 6%, with a discount rate of 11.43%. These estimations are critical to the credibility of our financial research since they provide a quantitative perspective on future expectations and investment evaluation.

**Net Debt:** \$10,472,974. This is the total debt less cash and cash equivalents, showing the amount of debt the business has left over after taking its available liquidity into account.

## Projected Stock Price:

This is the estimated value per share derived from the DCF analysis, which includes growth rates, the present value of anticipated future cash flows, and a discount rate that accounts for investment risk.



Particulars	Value (In \$)
Enterprise Value	\$ 303,035,487
EV per share	\$ 187.52
Net Debt	\$ 10,472,974
Equity Value	\$ 292,562,513
Projected Stock Price	\$ 181.04



The DCF analysis indicates that the expected fair value of the stock is \$181.04 per share, which is less than the enterprise value per share of \$187.52, based on estimated future cash flows and the company's debt and ownership structure. A number of variables, such as the capital structure of the business, the state of the market, and the DCF model's underlying assumptions, may contribute to this discrepancy.

**Enterprise Value (EV):** \$303,035,487. This is the total value of the business as shown on the balance sheet, taking into account the market capitalization, debt, and cash. Since it shows the value that is available to debt and equity investors, it is a metric that is frequently employed in valuation.

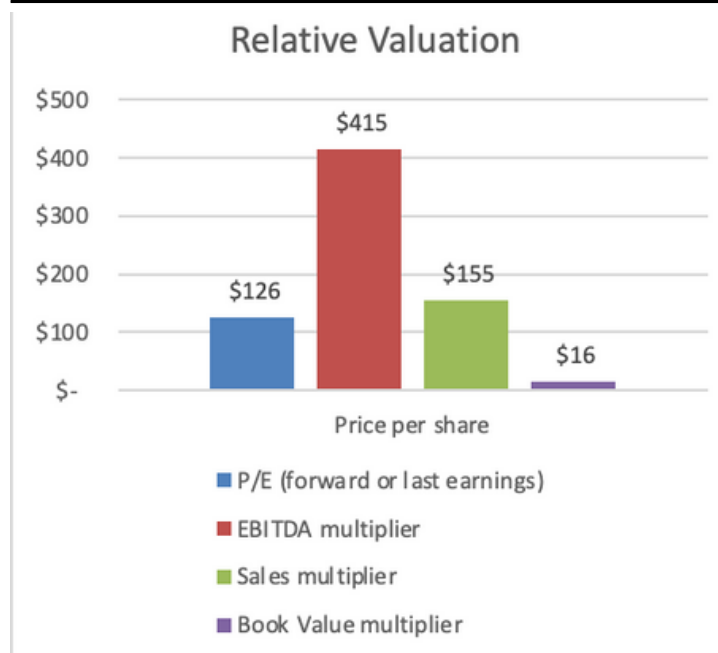
**Enterprise Value per Share:** \$187.52. An estimate of the value per share from the viewpoints of equity and debt holders is given by dividing the EV by the total number of outstanding shares.

## RELATIVE VALUATION

The Relative valuation table (refer appendix) presents a comparative analysis of the market capitalization, net income, and valuation multiples of semiconductor industry companies:

- With a market capitalization of \$280.97 billion and a P/E ratio of 103.19, AMD is more highly valued by the market than TSM, which has a ratio of 2.17. Moreover, AMD has a greater EBITDA multiplier than TSM, which again reflects stronger market expectations.
- With a market capitalization of \$181.76 billion and a P/E ratio of 107.61, which is comparable to AMD's, Intel has the lowest sales multiplier of the group at 3.35, which could be a sign of undervaluation in relation to sales.
- With a far bigger market cap of \$1.94 trillion than AMD and an EBITDA multiplier of 58.90 and sales multiplier of 31.88, NVIDIA is clearly more profitable and in a strong market position.
- With robust ROEs of 66.97% and 60.25%, respectively, Broadcom and Qualcomm demonstrate effective use of equity, while MU displays negative values in certain multipliers as a result of a net loss.
- Applied Materials and Qualcomm have comparable market capitalizations, but Applied Materials's sales multiplier is greater, indicating a better revenue valuation.

Particulars	Cap Based on AVG	Price per share
P/E (forward or last earnings)	\$ 203,512,556	\$ 126
EBITDA multiplier	\$ 1,691,072,044	\$ 415
Sales multiplier	\$ 421,886,679	\$ 155
Book Value multiplier	\$ 83,144,927	\$ 16
	Average	\$ 178





- With a high Book Value multiplier of 58.78 as opposed to Intel's 1.65, AMD stands out and suggests the market may be placing a higher value on the company's net assets. In contrast to NVIDIA and Broadcom, its sales multiplier, which is mild at 10.77, suggests a more cautious price in relation to sales.

Though, in comparison to peers such as NVIDIA and TSM, AMD is more moderately valued in terms of sales and assets, providing a balanced investment profile between growth and value. Overall, AMD's financial indicators point to a market expectation of growth.

The table presents an examination of AMD's valuation based on several financial parameters that establish the capitalization and share price of the company. Among the techniques of valuation employed are:

A market capitalization estimate of around \$178 million and an average share price of \$178 are obtained by averaging these estimations.

Because diverse valuation models have inherent volatility and unpredictability, this comprehensive approach to AMD's valuation suggests a wide range of possible values. The significant discrepancy seen between the valuation techniques implies that a more thorough analysis of the fundamental presumptions is required to account for these variations.

## FINANCIAL ANALYSIS

### Summary of Financial Statements (Refer Appendix):

#### Projected Financial Statements:

**Risk Free Rate** – This is the return on an investment in which there is no chance of losing money. It is obtained by looking at the yield on government bonds, which are regarded as being almost completely risk-free.

**Beta** – AMD's stock volatility in relation to the S & P 500's market volatility as a whole is measured by its beta. It gauges the responsiveness of AMD's stock returns to shifts in the returns on the market. A beta of one means that the stock price moves in lockstep with the market; a beta of more than one means that the stock is more volatile than the market; and a beta of less than one means that the stock is less volatile than the market.

**Market Risk Premium** – The extra return that investors anticipate receiving for holding riskier assets (like stocks) as opposed to risk-free assets (like government bonds). It represents the return that investors expect from AMD's stock in exchange for taking on the systematic risk of the market as a whole. The difference between the expected return on the market portfolio and the risk-free rate is used to compute the market risk premium.

**Interest rate on debt (cost of debt)** – The interest rate that a business pays on its borrowings, such as loans, bonds, or other types of debt. It is used to determine the weighted average cost of capital (WACC), a metric for a company's cost of capital, and it represents the cost of financing through debt. We have taken the interest rate as 7% which is constant throughout the years projected.

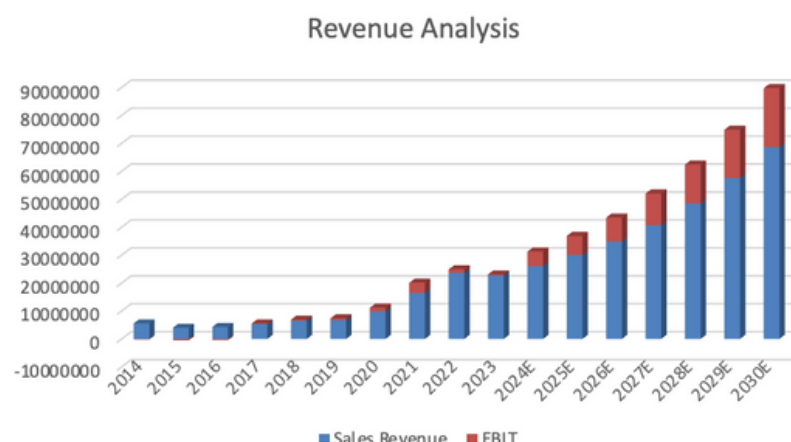


**Annual sales growth rate** – This is the anticipated annual growth rate of a company's sales revenue over a given time frame, and is obtained by taking into account the averages of previous years.

**Cost of equity** – It is the rate of return that an organization needs to produce in order to meet the demands of its investors and make up for the risk associated with purchasing company stock. Due to the increased risk that equity investors incur, the cost of equity is usually higher than the cost of debt. We have obtained the rate by adding Risk free rate and beta and multiplying them by market risk premium.

## REVENUE ANALYSIS:

An examination of AMD's income from 2014 to 2030E is shown in the chart (E stands for estimated or predicted values). For each year, it displays the sales revenue (in blue) and EBIT (Earnings Before Interest and Taxes), which is displayed in red.



**Historical Trend (2014–2023):** Over the previous years, there has been a discernible increase in both sales revenue and EBIT. This suggests that AMD's operating earnings (EBIT) have been rising in tandem with its top line (sales revenue), indicating either increased operational efficiency or greater market demand for AMD's goods.

**Future Projections (2023E–2030E):** According to the projections, revenue and EBIT are expected to continue growing. As the years go by, the predicted growth rates are rising, indicating a positive future for AMD's standing in the market and financial results.

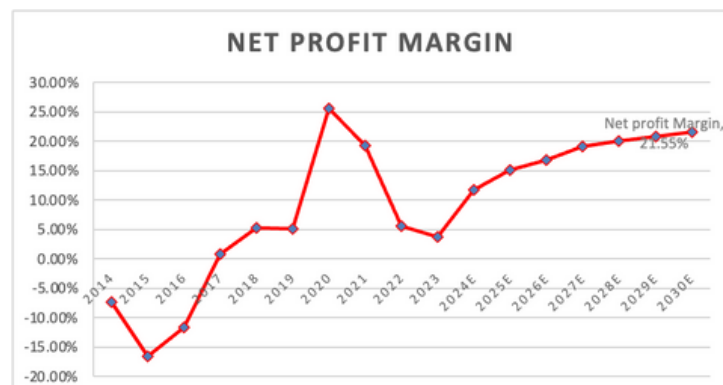
**Sales Revenue vs. EBIT:** Over time, EBIT has continuously remained a small portion of sales revenue, which is to be expected given that EBIT is determined after subtracting other operating and goods-sold costs.

**Margins:** AMD's profit margins, which is rising over time and suggest that the company could be growing more efficient or acquiring pricing power, is roughly estimated by looking at the difference between sales revenue and EBIT.

**Trends and Cyclicalities:** Although the graph indicates a continuous rise, it's crucial to take into account how cyclical the semiconductor sector is. Sales and EBIT peaks could be associated with successful product launches or times of high demand, whereas dips might be associated with market downturns or heightened competition.

## NET PROFIT MARGIN:

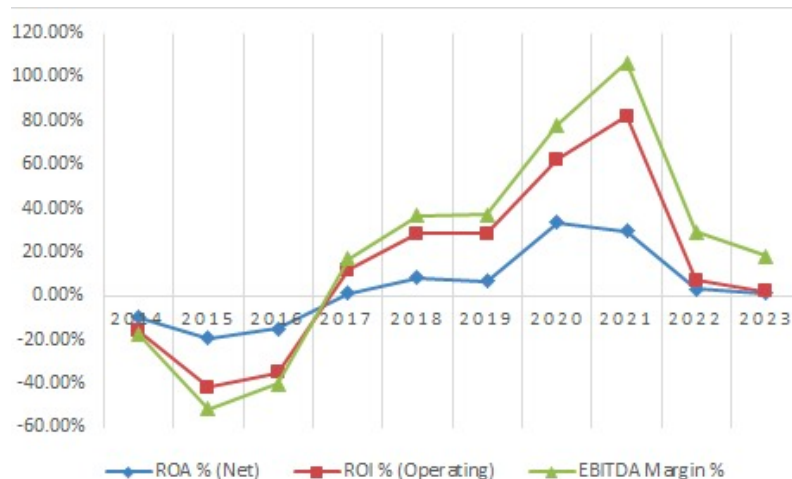
The graph displays AMD's net profit margin from 2014 through the anticipated year 2030, together with its historical and predicted trends. The percentage of revenue that remains as profit after all costs are subtracted from sales is displayed by the net profit margin, a crucial performance measure.



- AMD's net profit margins were negative from 2014 to 2016, meaning the company lost money during that time. 2017 saw a strong rebound with a significant rise in net profit margin, indicating a potential turnaround in profitability brought on by effective cost-cutting measures or new product introductions.
- After 2017, there's a little decline in 2018 and then a steady increase in the margin until 2021. This is a sign of bettering market circumstances, increasing efficiency, or a combination of things leading to a stronger bottom line.
- The net profit margin is predicted to be continuously positive and growing from 2022 to 2030, with a little dip in 2024. The rising trend in the projections, which could be the result of strategic growth initiatives, market expansion, and robust demand for AMD's products, raises hopes for AMD's capacity to improve profitability over time.
- AMD is predicted to keep more than five percent of its revenue as profit after all costs, which is fairly strong for the semiconductor business, according to the line that reached about 21.55% in the previous year. These estimates, however, should be regarded with caution as a number of variables, including as market conditions, rivalry, cost constraints, and AMD's own operational performance, could cause them to alter.

## Profitability Ratios:

**ROA % (Net):** It is a metric that expresses a company's net earnings in relation to its total assets. It demonstrates how well the business is turning its investment capital into net income. From negative values in 2014 and 2015 to a peak around 2018, the line exhibits a notable turnaround before dropping and stabilizing.



**ROI % (Operating):** This measure, which is dependent on operating income, shows how well a business uses its capital to produce profits before interest and taxes (EBIT). The trajectory resembles ROA in pattern, although it peaks later in 2019, suggesting a lag in the development of operational revenue and asset utilization.



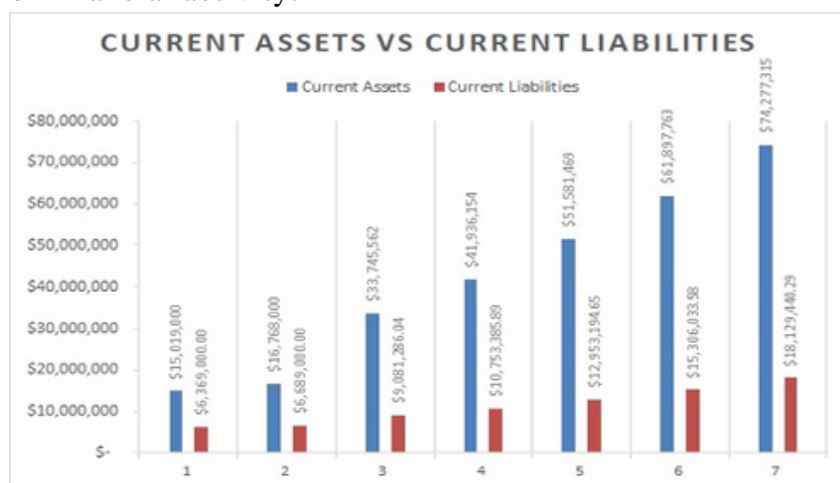
**EBITDA Margin%:** As a percentage of total revenue, EBITDA Margin reflects how profitable a business is functioning. To display the pure performance of the activities, it eliminates the influence of accounting and financial decisions. Additionally, this statistic peaks around 2019, indicating that this was the most profitable year for AMD's core activities.

Overall, the graph demonstrates that following a difficult phase in 2014 and 2015, AMD's operational effectiveness and profitability have greatly improved. When it comes to asset and investment returns as well as operational profitability, AMD appears to have had exceptionally successful years in 2018 and 2019. But in 2022, there's a considerable decline, which was brought on by a number of things, including heightened competition, market saturation, and rising costs. Judging by the downward trend, it seems to be continuing into 2023. This suggests that AMD has to modify its approach, or it may be a reflection of more general economic difficulties or industry-specific difficulties.

### Current Assets VS Current Liabilities:

Throughout all years, Total Current Assets have continuously exceeded Total Current Liabilities, demonstrating AMD's favorable working capital position. Liabilities and assets both show an upward trend over time, indicating a growth in the AMD's scale or financial activity.

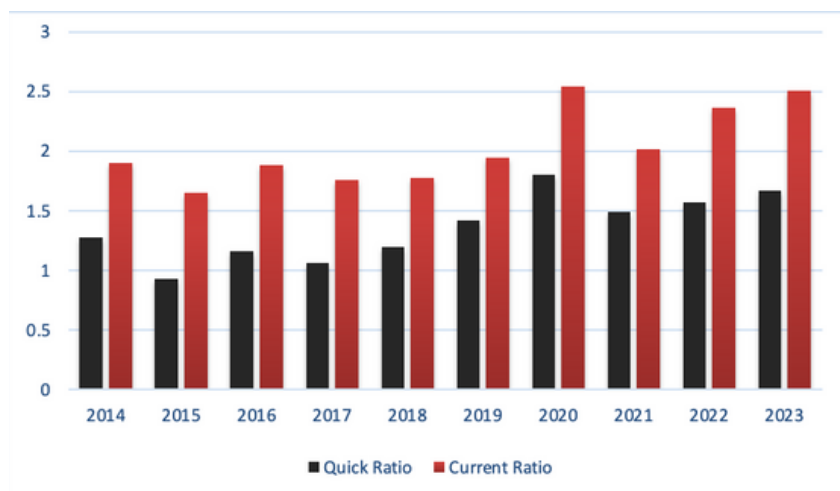
Both assets and liabilities are increasing at different rates; certain years exhibit a steeper rise than others, indicating variability in the AMD's yearly financial growth. There is overall good financial health, with assets increasing faster than liabilities. This could be a sign of efficient administration and a solid business plan that enables AMD to increase its resources more quickly than its debts.



### LIQUIDITY ANALYSIS

The Quick Ratio and Current Ratio, two financial ratios, are used in the bar chart to show AMD's liquidity status from 2014 to 2023.

The Quick Ratio, represented by the black bars, shows how well-positioned the company is to pay its immediate obligations using its most liquid assets—that is, those that can be swiftly turned into cash—apart from inventories.







A quick ratio larger than one indicates that the business has more liquid assets than short-term liabilities, which is often regarded as a sign of liquidity that is favorable.

With the current ratio constantly larger than the quick ratio—which makes sense given that it takes inventory assets into account—both ratios demonstrate an increasing trend in liquidity over time. The ratios peaked in the most recent years (2021–2023), indicating that AMD has a more robust liquidity position that gives it room to pay short-term obligations and to potentially invest in expansion prospects or withstand market downturns.

## INVESTMENT RISKS

### Tech & Innovation

**Overview:** AMD is a part of the semiconductor sector, which is known for its quick technical development. It needs constant innovation and technological adaption to be competitive.

#### Risks:

**Obsolescence Risk:** Given the speed at which technology is advancing, AMD may run the danger of its products becoming outdated.

**R&D Investment:** A company's competitiveness may be impacted if its innovations fail due to a heavy reliance on research and development (R&D).

### Production

**Overview:** Taiwan Semiconductor Manufacturing Company (TSMC) is one of the manufacturing facilities that AMD uses to manufacture the semiconductors that it creates and sells.

#### Risks:

**Disruptions to the Supply Chain:** AMD's ability to deliver products may be impacted by any disruptions to the semiconductor supply chain, including problems with manufacturing, shortages, or geopolitical tensions that affect foundries.

**Dependency on Suppliers:** AMD runs the risk of its manufacturing partners' performance and dependability if it depends on outside foundries.

### Ability to Sell

**Overview:** Demand, market positioning, and customer relationships all affect the company's capacity to sell its goods.

#### Risks:

**Market Demand:** Variations in the demand for AMD's products may have an impact on sales. These variations may be caused by the state of the economy or shifts in consumer tastes.

**Competition:** AMD's market share and pricing power may be impacted by the fierce rivalry in the semiconductor sector.

### Finance & Corporate:

**Overview:** Corporate governance, shareholder returns, and financial soundness are all included in this category.



#### **Risks:**

**Debt Levels:** Having a lot of debt can be risky financially, particularly if interest rates or the economy decline.

**Shareholder Value:** Business choices that have an effect on shareholder value, like dividends or share buybacks, would have an influence on investor confidence.

#### **Legal & Regulatory:**

**Overview:** Legal and regulatory risks concern adherence to the law and possible legal disputes.

#### **Risks:**

**Patent Disputes:** AMD could be subject to legal action pertaining to trade secrets, patents, or intellectual property.

**Regulatory Changes:** AMD's business operations could be impacted by regulatory shifts, especially those pertaining to the technology sector.

#### **Macro & Political:**

**Overview:** The performance of the corporation can be impacted by political developments and macroeconomic variables.

#### **Risks:**

**Global Economic Conditions:** Downturns in the economy could result in a decrease in the total demand for AMD's goods.

**Geopolitical Tensions:** AMD's global operations could be impacted by political unrest or trade disputes between large economies.

## **CONCLUSIONS AND RECOMMENDATIONS**

In a sector marked by quick innovation and fierce competition, AMD has proven to be remarkably resilient and strategic-minded. The business has established itself as a major participant in the semiconductor industry, especially in the CPU and GPU areas, by skillfully navigating changes in technology and market dynamics.

**Financial Performance and Outlook:** Revenue and profitability have grown steadily, and AMD's financial performance has shown notable improvements. The company's strategy of concentrating on the gaming, data center, and high-performance computer areas has paid off, and its development pipeline seems solid. Financial ratios show a strong liquidity position, although cautious optimism is warranted given the industry's cyclical nature.

**Market positioning:** AMD has successfully tapped into the need for more potent computing products and broken into industries that its rivals have historically controlled. AMD's market position is anticipated to be strengthened and its product offerings significantly diversified as a result of the acquisition of Xilinx.



**Investment Risks:** Although AMD is well-positioned for expansion, there are a number of possible hazards to consider, including supply chain weaknesses, technical disruptions, intense competition, and the semiconductor industry's cyclical nature. Concerns that might have an effect on the investment thesis include any significant flaws in financial reporting and changes to regulations.

**Corporate Governance:** AMD appears to have a structure that is in line with industry best practices, with a mix of fresh and experienced leadership. But to make sure that the board and management uphold the highest levels of responsibility and independence, constant watchfulness is needed.

**Investment consideration:**

AMD's stock is currently trading at \$192.53. You should think about the company's strong recovery, improved financial stability, and operational efficiency when determining whether to invest in it. Using the comparative set of multipliers, AMD's stock price is above the average valuation of \$178.32, suggesting that it may be overvalued.

The future success of the company hinges on its strategic focus on high-growth areas such as AI-enhanced PC hardware and data center GPUs, in addition to efforts to diversify and increase production. The Competitive environment shifts in consumer demand, and possible problems with the supply chain could all have an effect on AMD's capacity to continue growing and holding its market share. Our recommendation would be to SELL.



## APPENDIX:

### AMD Financial Ratios



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#### Advanced Micro Devices Inc (NMS): AMD

Profitability Ratios	12/27/2014	12/26/2015	12/31/2016	12/30/2017	12/29/2018	12/28/2019	12/26/2020	12/25/2021	12/31/2022	12/30/2023
ROA % (Net)	-9.97	-19.25	-15.21	1.26	8.35	6.46	33.31	29.66	3.25	1.26
ROE % (Net)	-110.56	AvgEqty<0	-24448.11	8.4	36.01	16.71	57.64	47.56	4.17	1.55
ROI % (Operating)	-6.22	-22.7	-19.78	10.61	20	21.71	28.96	52.34	3.82	0.7
EBITDA Margin %	-1.73	-9.75	-5.22	4.99	8.42	8.81	15.68	24.29	22.01	16.07
Calculated Tax Rate %	EBT<0	EBT<0	EBT<0	27.54	-2.73	8.33	-94.9	13.98	-10.3	-70.18
Revenue per Employee	569188	439776	512550	600409	642850	592061	776970	1063171	928773	874704
Liquidity Ratios	12/27/2014	12/26/2015	12/31/2016	12/30/2017	12/29/2018	12/28/2019	12/26/2020	12/25/2021	12/31/2022	12/30/2023
Quick Ratio	1.28	0.93	1.16	1.06	1.2	1.42	1.8	1.49	1.57	1.67
Current Ratio	1.9	1.65	1.88	1.76	1.78	1.95	2.54	2.02	2.36	2.51
Net Current Assets % TA	34.4	29.5	35.65	32.09	34.15	37.13	41.58	34.97	12.8	14.85
Debt Management	12/27/2014	12/26/2015	12/31/2016	12/30/2017	12/29/2018	12/28/2019	12/26/2020	12/25/2021	12/31/2022	12/30/2023
LT Debt to Equity	10.88	Equity<0	3.45	2.17	0.88	0.17	0.06	0	0.05	0.03
Total Debt to Equity	11.83	Equity<0	3.45	2.28	0.99	0.17	0.06	0.04	0.05	0.04
Interest Coverage	-	-	-	1.7	3.73	7.99	35.1	140.31	54.96	-
Asset Management	12/27/2014	12/26/2015	12/31/2016	12/30/2017	12/29/2018	12/28/2019	12/26/2020	12/25/2021	12/31/2022	12/30/2023
Total Asset Turnover	1.36	1.16	1.31	1.56	1.6	1.28	1.31	1.54	0.58	0.34
Receivables Turnover	6.69	5.92	9.96	15.03	7.94	4.36	4.99	6.91	6.8	4.79
Inventory Turnover	4.67	4.27	4.58	4.71	5.09	4.23	4.55	5.07	4.03	2.78
Accounts Payable Turnover	11.82	11.53	11.69	12.97	14.24	8.9	13.45	18.42	12.18	10
Accrued Expenses Turnover	10.15	7.77	9.74	11.47	9.96	7.31	6.8	7.81	8.44	7.39
Property Plant & Equip Turnover	17.04	16.33	23.88	25.15	21.32	15.92	17.16	24.54	20.97	14.66
Cash & Equivalents Turnover	5.17	4.39	4.1	4.36	5.55	5.08	6.32	7.98	6.3	5.19
Per Share	12/27/2014	12/26/2015	12/31/2016	12/30/2017	12/29/2018	12/28/2019	12/26/2020	12/25/2021	12/31/2022	12/30/2023
Cash Flow per Share	-0.13	-0.29	0.11	0.07	0.03	0.45	0.91	2.91	2.25	1.04
Book Value per Share	0.24	-0.52	0.44	0.63	1.26	2.42	4.82	6.21	33.96	34.59

### Competitors Analysis

Companies	Market Cap	Shares outstanding	Net Income (Last)	EBITDA	SALES	Book Value (Equity)
AMD	\$ 280,973,920.00	1,616,000	\$ 2,723,000	\$ 5,156,247	\$ 26,082,000	\$ 4,780,372
Intel	\$ 181,761,720.00	4,228,000	\$ 1,689,000	\$ 93,000	\$ 54,228,000	\$ 109,965,000
NVIDIA	\$ 1,942,050,880.00	2,464,000	\$ 29,760,000	\$ 32,972,000	\$ 60,922,000	\$ 42,978,000
Broadcom	\$ 536,697,180.00	414,000	\$ 14,082,000	\$ 16,207,000	\$ 35,819,000	\$ 23,988,000
Arm	\$ 136,704,701.56	1,025,234	\$ 524,000	\$ 671,000	\$ 2,679,000	\$ 4,051,000
TSM	\$ 706,493,000.00	8,297,722	\$ 325,289,680	\$ 358,809,232	\$ 724,445,213	\$ 942,609,022
Applied Materials	\$ 164,234,280.00	833,000	\$ 6,856,000	\$ 7,654,000	\$ 26,517,000	\$ 16,349,000
Qualcomm	\$ 172,569,740.00	1,114,000	\$ 6,856,000	\$ 7,788,000	\$ 35,820,000	\$ 21,581,000



## APPENDIX:

### DCF Model - Calculation of WACC

Particulars	2022	2023	2024	2025	2026	2027	2028	2029	2030
Risk Free Rate	3.75%	3.90%	3.90%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%
Beta	1.90	1.95	1.63	1.63	1.63	1.63	1.63	1.50	1.50
Market risk premium	3.80%	4.00%	4.50%	4.50%	4.60%	4.60%	4.60%	4.60%	4.60%
Interest rate on debt (cost of debt)	4.50%	5.00%	5.20%	5.20%	5.20%	5.50%	5.50%	5.50%	6.00%
Annual sales growth rate	44%	-4%	15%	15%	16%	17%	19%	19%	19%
Cost of equity	10.97%	11.70%	11.24%	11.59%	11.75%	11.75%	11.75%	11.15%	11.15%
Capital structure (Debt)	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%
WACC (discount rate)	11.22%	12.03%	11.44%	11.80%	11.97%	11.99%	11.99%	11.38%	11.43%
Perpetual CF growth	6%								
Perpetual discount	11.43%								

### DCF Model - Projected Income Statement

Particulars	2,022	2,023	2,024	2,025	2,026	2,027	2,028	2,029	2,030
Other Revenue	23,601,000	22,680,000	26,082,000	29,994,300	34,793,388	40,708,264	48,442,834	57,646,973	68,599,897
<b>Total Revenue</b>	<b>23,601,000</b>	<b>22,680,000</b>	<b>26,082,000</b>	<b>29,994,300</b>	<b>34,793,388</b>	<b>40,708,264</b>	<b>48,442,834</b>	<b>57,646,973</b>	<b>68,599,897</b>
Direct Costs	12,998,000	12,220,000	13,150,267	14,822,864	16,846,589	19,303,426	22,486,649	26,182,642	30,471,346
<b>Gross Profit</b>	<b>10,603,000</b>	<b>10,460,000</b>	<b>12,931,733</b>	<b>15,171,436</b>	<b>17,946,799</b>	<b>21,404,838</b>	<b>25,956,185</b>	<b>31,464,330</b>	<b>38,128,552</b>
Selling General & Admin	2,336,000	2,352,000	2,559,086	2,942,949	3,413,820	3,994,170	4,753,062	5,656,144	6,730,811
Research & Development	5,005,000	5,872,000	5,216,400	5,398,974	5,914,876	6,106,240	7,266,425	8,647,046	10,289,985
Other Operating Expense	(102,000)	(34,000)							
<b>Total Indirect Operating Costs</b>	<b>7,239,000</b>	<b>8,190,000</b>	<b>7,775,486</b>	<b>8,341,923</b>	<b>9,328,696</b>	<b>10,100,409</b>	<b>12,019,487</b>	<b>14,303,190</b>	<b>17,020,796</b>
<b>Operating Income (EBIT)</b>	<b>3,364,000</b>	<b>2,270,000</b>	<b>5,156,247</b>	<b>6,829,513</b>	<b>8,618,103</b>	<b>11,304,428</b>	<b>13,936,698</b>	<b>17,161,140</b>	<b>21,107,756</b>
Interest Income	(23,000)	100,000	-	-	-	-	-	-	-
Gains on Sale of Assets	(62,000)	-							
Other Non-Operating Income	5,000	(8,000)							
<b>Total Non-Operating Income</b>	<b>(80,000)</b>	<b>92,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Earnings Before Tax</b>	<b>3,284,000</b>	<b>2,362,000</b>	<b>5,156,247</b>	<b>6,829,513</b>	<b>8,618,103</b>	<b>11,304,428</b>	<b>13,936,698</b>	<b>17,161,140</b>	<b>21,107,756</b>
Taxation	(122,000)	(346,000)	1,082,812	1,434,198	1,809,802	2,373,930	2,926,707	3,603,839	4,432,629
<b>Equity Earnings</b>	<b>14,000</b>	<b>15,000</b>							
<b>Net Income</b>	<b>3,420,000</b>	<b>2,723,000</b>	<b>4,073,435</b>	<b>5,395,315</b>	<b>6,808,301</b>	<b>8,930,498</b>	<b>11,009,991</b>	<b>13,557,301</b>	<b>16,675,127</b>
Preference Dividends & Similar	-	-	-	-	-	-	-	-	-
<b>Net Income to Common</b>	<b>3,420,000</b>	<b>2,723,000</b>	<b>4,073,435</b>	<b>5,395,315</b>	<b>6,808,301</b>	<b>8,930,498</b>	<b>11,009,991</b>	<b>13,557,301</b>	<b>16,675,127</b>

### DCF Model - Projected Balance Sheet

Particulars	2022	2023	2024	2025	2026	2027	2028	2029	2030
Cash & cash equivalents	4,835,000	3,933,000	1,825,740	2,099,601	2,435,537	2,849,578	3,390,998	4,035,288	4,801,993
Accounts Receivables	4,128,000	5,385,000	2,608,200	2,999,430	3,479,339	4,070,826	4,844,283	5,764,697	6,859,990
Inventory	3,771,000	4,351,000	3,833,869	4,499,145	5,219,008	6,106,240	7,266,425	8,647,046	10,289,985
Other current assets	2,285,000	3,099,000	1,304,100	1,499,715	1,739,669	2,035,413	2,422,142	2,882,349	3,429,995
<b>Total current assets</b>	<b>15,019,000</b>	<b>16,768,000</b>	<b>9,571,909</b>	<b>11,097,891</b>	<b>12,873,554</b>	<b>15,062,058</b>	<b>17,923,849</b>	<b>21,329,380</b>	<b>25,381,962</b>
Property & equipment, gross	3,020,000	6,181,000	3,912,300	4,499,145	5,219,008	6,106,240	7,266,425	8,647,046	10,289,985
Accumulated depreciation	1,507,000	1,787,000	2,796,330	3,637,475	4,609,290	5,741,815	7,079,081	8,670,428	10,564,131
Other non-current assets	51,048,000	46,723,000	1,304,100	1,499,715	1,739,669	2,035,413	2,422,142	2,882,349	3,429,995
<b>Total assets</b>	<b>67,580,000</b>	<b>67,885,000</b>	<b>17,584,639</b>	<b>20,734,226</b>	<b>24,441,521</b>	<b>28,945,525</b>	<b>34,691,497</b>	<b>41,529,203</b>	<b>49,666,073</b>
AP, ST debt, Accrued expenses and liabilities	6,033,000	5,500,000	6,994,714	8,043,921	9,330,949	10,917,210	12,991,480	15,459,861	18,397,235
Other current liabilities	336,000	1,189,000	505,554	581,387	674,408	789,058	938,979	1,117,385	1,329,688
<b>Total Current Liabilities</b>	<b>6,369,000</b>	<b>6,689,000</b>	<b>7,500,268</b>	<b>8,625,308</b>	<b>10,005,357</b>	<b>11,706,268</b>	<b>13,930,459</b>	<b>16,577,246</b>	<b>19,726,923</b>
LT debt and other long term liabilities	6,461,000	5,304,000	5,304,000	5,304,000	5,304,000	5,304,000	5,304,000	5,304,000	5,304,000
<b>Total Long-term Liabilities</b>	<b>6,461,000</b>	<b>5,304,000</b>	<b>5,304,000</b>	<b>5,304,000</b>	<b>5,304,000</b>	<b>5,304,000</b>	<b>5,304,000</b>	<b>5,304,000</b>	<b>5,304,000</b>
<b>Total liabilities</b>	<b>12,830,000</b>	<b>11,993,000</b>	<b>12,804,268</b>	<b>13,929,308</b>	<b>15,309,357</b>	<b>17,010,268</b>	<b>19,234,459</b>	<b>21,881,246</b>	<b>25,030,923</b>
<b>Total Equity</b>	<b>54,750,000</b>	<b>55,892,000</b>	<b>4,780,372</b>	<b>6,804,918</b>	<b>9,132,164</b>	<b>11,935,257</b>	<b>15,457,038</b>	<b>19,647,956</b>	<b>24,635,150</b>





## APPENDIX:

### DCF Model - Parameter Estimates

Particulars		2022	2023	2024	2025	2026	2027	2028	2029	2030
COGS/Sales		55.07%	53.88%	50.42%	49.42%	48.42%	47.42%	46.42%	45.42%	44.42%
SGA/Sales		9.90%	10.37%	9.81%	9.81%	9.81%	9.81%	9.81%	9.81%	9.81%
Depreciation/Fixed Assets		20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
RD/Sales		21.21%	25.89%	20.00%	18.00%	17.00%	15.00%	15.00%	15.00%	15.00%
Operating Income		5.36%	1.77%	2.05%	2.05%	2.05%	2.05%	2.05%	2.05%	2.05%
Interest Income		-0.10%	0.44%							
Tax rate		-0.52%	-1.53%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%
Cash/Sales		20.49%	17.34%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%
AR/Sales		17.49%	23.74%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
Inventory/Sales		15.98%	19.18%	14.70%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
Fixed Assets/Sales		6.41%	19.37%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
Other non current assets/Sales		216.30%	206.01%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
ST debt, Accrued expense		25.56%	24.25%	26.82%	26.82%	26.82%	26.82%	26.82%	26.82%	26.82%
Other current liabilities/Sales		1.42%	5.24%	1.94%	1.94%	1.94%	1.94%	1.94%	1.94%	1.94%
Number of shares	1,616,000									
Market Cap	280,973,920									

### DCF Model - Investment Module

Particulars	2022	2023	2024	2025	2026	2027	2028	2029	2030
Current Asset Investment	4,136,000	2,651,000	(5,088,831)	1,252,121	1,439,726	1,774,463	2,320,371	2,761,242	3,285,877
Investment in new Fixed Assets	1,184,000	3,161,000	(2,268,700)	586,845	719,863	887,231	1,160,186	1,380,621	1,642,939
Replacement of Depreciated Assets	2,100,000	1,869,000	1,009,330	841,145	971,815	1,132,525	1,337,266	1,591,347	1,893,703
Fixed Asset Investment	3,284,000	5,030,000	(1,259,370)	1,427,990	1,691,679	2,019,756	2,497,452	2,971,968	3,536,642
Total Investment	7,420,000	7,681,000	(6,348,201)	2,680,110	3,131,405	3,794,219	4,817,823	5,733,209	6,822,519

### DCF Model - Financing Module

Particulars	2022	2023	2024	2025	2026	2027	2028	2029	2030
Required financing	7,420,000	7,681,000	(6,348,201)	2,680,110	3,131,405	3,794,219	4,817,823	5,733,209	6,822,519
Sources of funds:									
Net income	3,420,000	2,723,000	3,064,105	4,554,171	5,836,486	7,797,974	9,672,725	11,965,954	14,781,424
Depreciation	373,000	280,000	1,009,330	841,145	971,815	1,132,525	1,337,266	1,591,347	1,893,703
Earnings CF	3,793,000	3,003,000	4,073,435	5,395,315	6,808,301	8,930,498	11,009,991	13,557,301	16,675,127
Minimum Dividend	-	-	-	-	-	-	-	-	-
Internal Financing	3,793,000	3,003,000	4,073,435	5,395,315	6,808,301	8,930,498	11,009,991	13,557,301	16,675,127
Spontaneous Financiag (CL)	2,129,000	320,000	811,268	1,125,040	1,380,049	1,700,911	2,224,191	2,646,787	3,149,677
Total int and spont financing	5,922,000	3,323,000	4,884,703	6,520,355	8,188,351	10,631,409	13,234,182	16,204,088	19,824,804
Required external financing	1,498,000	4,358,000	(11,232,904)	(3,840,245)	(5,056,946)	(6,837,190)	(8,416,359)	(10,470,879)	(13,002,285)
Debt issued	1,498,000	4,638,000	-	-	-	-	-	-	-
Equity issued	-	-	-	-	-	-	-	-	-
Total discretionary financing	1,498,000	4,638,000	-	-	-	-	-	-	-
Total financing	7,420,000	7,961,000	4,884,703	6,520,355	8,188,351	10,631,409	13,234,182	16,204,088	19,824,804

### DCF Model - Cash Flow

Particulars	2022	2023	2024	2025	2026	2027	2028	2029	2030
			0	1	2	3	4	5	6
Operating CF	5,586,000	4,485,000	5,082,765	6,236,460	7,780,117	10,063,023	12,347,258	15,148,648	18,568,830
Net CAPEX	1,184,000	3,161,000	(2,268,700)	586,845	719,863	887,231	1,160,186	1,380,621	1,642,939
Net NWC	6,436,000	1,749,000	(7,196,091)	1,525,982	1,775,663	2,188,504	2,861,791	3,405,531	4,052,582





## APPENDIX:

### Industry Analysis

Company Name	Market Capitalization	Net Income	Profit Margin	ROE
AMD Inc.	\$ 280,973,920	\$ 2,723,000	10.44%	18.33%
Intel Corporation	\$ 181,761,720	\$ 1,689,000	3.11%	202.78%
NVIDIA Corporation	\$ 1,942,050,880	\$ 29,760,000	48.85%	70.55%
Broadcom Inc.	\$ 536,697,180	\$ 14,082,000	39.31%	66.97%
Arm Holdings plc	\$ 136,704,702	\$ 524,000	19.56%	151.21%
TSM Company Limited	\$ 706,493,000	\$ 32,528,968	44.90%	130.11%
Applied Materials Inc.	\$ 164,234,280	\$ 6,856,000	25.86%	61.65%
Qualcomm Inc.	\$ 172,569,740	\$ 6,856,000	19.14%	60.25%

### Relative Valuation

Particulars	AMD	Intel	NVIDIA	Broadcom	Arm	TSM	Applied Materials	Qualcomm
Market Cap	\$ 280,973,920	\$ 181,761,720	\$ 1,942,050,880	\$ 536,697,180	136,704,702	706,493,000	164,234,280	172,569,740
Shares outstanding	1,616,000	4,228,000	2,464,000	414,000	1,025,234	8297721.6	833000	1114000
Net Income	4,073,435							
Net Income (Last)	\$ 2,723,000	\$ 1,689,000	\$ 29,760,000	\$ 14,082,000	524,000	325289679.7	6,856,000	6856000
EBITDA	\$ 5,156,247	\$ 93,000	\$ 32,972,000	\$ 16,207,000	671,000	358809232.3	7,654,000	7788000
Sales	\$ 26,082,000	\$ 54,228,000	\$ 60,922,000	\$ 35,819,000	2,679,000	724445213.4	26,517,000	35820000
Book Value (Equity)	\$ 4,780,372	\$ 109,965,000	\$ 42,978,000	\$ 23,988,000	4,051,000	942609022.4	16,349,000	21581000

P/E	68.98								Industrial Average
P/E (forward or last earnings)	103.19	107.61	65.26	38.11	260.89	2.17	23.95	25.17	74.74
EBITDA multiplier	54.49	1954.43	58.90	33.12	203.73	1.97	21.46	22.16	327.97
Sales multiplier	10.77	3.35	31.88	14.98	51.03	0.98	6.19	4.82	16.18
Book Value multiplier	58.78	1.65	45.19	22.37	33.75	0.75	10.05	8.00	17.39

#### AMD

Particulars	Cap Based on AVG	Price per share
P/E (forward or last earnings)	\$ 203,512,556	\$ 126
EBITDA multiplier	\$ 1,691,072,044	\$ 415
Sales multiplier	\$ 421,886,679	\$ 155
Book Value multiplier	\$ 83,144,927	\$ 16
Average		\$ 178