



---

BDA 632 (Financial Analytics) Project Report: NVIDIA

Written By

Prabhu Shankar 11062444

Sayuree Kulkarni 11053264

Oreoluwa Atobatele 11055077

March 1, 2025

## NVIDIA Corporation

**Date:** March 1, 2025  
**Total Assets:** USD 95 B

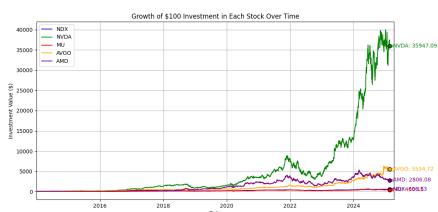
**Ticker:** NVDA  
**Price:** \$124.8

**Recommendation:** Buy  
**Price Target:** \$ 174.66

<b>Sector:</b> Computer Technology	<b>Industry:</b> Semi-conductor, Data Centers
<b>Industry:</b> Product Service	<b>Market Cap:</b> 3.39 T \$ (March 1, 2025)
<b>Revenue:</b> \$67,364,000,000 (End of 2024)	<b>Net Income:</b> \$8,374,000,000 (End of 2024)
<b>EPS Basic:</b> \$13.43	<b>PE Ratio:</b> 52.9 (March 1, 2025)



**Figure 1:** Stock price and Target. Source: [Yahoo Finance](#)



**Figure 2:** Relative Investment Performance NVIDIA vs NASDAQ and competitors. Source: [Yahoo Finance](#)

## Highlights:

### Market Share and target price:

NVIDIA occupies a distinctive position in the market by catering to a high-performance, innovation-driven customer base, fueled by its cutting-edge technologies and leadership in AI, gaming, and data processing. **We predict a buy on the stock with a target price of 174.66.** This focus on advanced graphics processing units (GPUs) and AI accelerators drives significant revenue streams from sectors such as gaming, data centers, autonomous vehicles, and professional visualization. By prioritizing innovation, ecosystem development, and partnerships, NVIDIA not only fosters brand loyalty but also solidifies its competitive edge as a leader in the tech and semiconductor industries.

### Investment Performance of NVIDIA among its Competitors

Nvidia (NVIDIA) has significantly outperformed the other stocks, reaching approximately \$35,947, while Broadcom (AVGO) and AMD have also shown strong growth at \$5,534.72 and \$2,806.08, respectively. The Nasdaq-100 index (NDX) and Micron (MU) have grown more modestly, with NDX reaching \$460.53. NVIDIA's (NVDA) stock price has significantly outperformed its competitors due to its dominance in the GPU market, rapid sales growth over the years and several other factors. With expanding AI applications, high-margin AI chips, and upcoming product launches, NVIDIA continues to outperform competitors, making it the leader in the semiconductor industry.

### Recent News on NVIDIA:

- Increased Demand for NVIDIA H20 Chips: Chinese tech giants (Tencent, Alibaba, ByteDance) adopting DeepSeek's AI models are driving NVIDIA chip sales.
- Growth of the data center: Revenue surged 93% YoY to \$35.6 billion due to AI chip demand.
- Next-Gen Blackwell AI Chips: Strong demand for AI training models projected to boost revenue further.

### NVIDIA vs NASDAQ

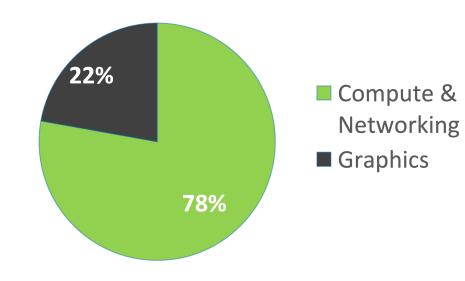
The Nasdaq Composite Index, heavily influenced by technology stocks, includes NVIDIA, a leader in GPUs and AI. NVIDIA's performance significantly impacts the Nasdaq due to its large market cap, with both benefiting from the tech sector's recent surge. In December 2024, the Nasdaq hit a record 20,000 points, driven by gains in major tech stocks like NVIDIA.

### Nvidia's role in Finance and payments

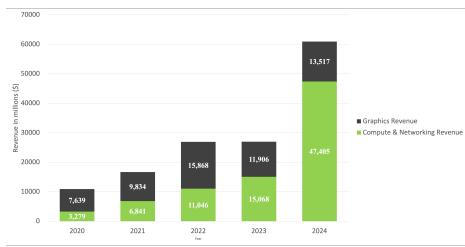
NVIDIA offers payment solutions to finance companies through its AI for trading, banking and payments. It helps financial institutions in efficient and faster decision making through Intelligent Document Processing with generative AI. NVIDIA's fraud detection AI helps to prevent and detect fraudulent activities such as money laundering and identity theft in financial institutions through deep learning techniques including graph neural networks. This is an example of how NVIDIA is solving real world problems which in turns NVIDIA for its own future growth.

# Business Description:

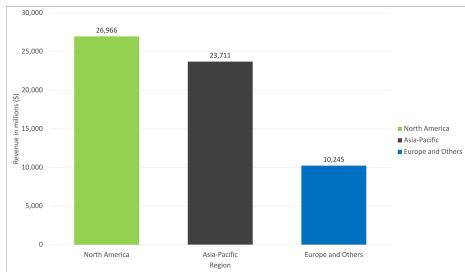
NVIDIA Corporation is a leader in accelerated computing and artificial intelligence (AI) technologies, driving breakthroughs across industries. Founded in 1993 and headquartered in Santa Clara, California, NVIDIA is recognized for pioneering Graphics Processing Unit (GPU) computing and creating platforms for AI, gaming, data centers, and professional visualization. The company's innovations are reshaping industries through its advanced chips, systems, software, and ecosystem partnerships, propelling sustainable computing and generative AI revolutions.



**Figure 3:** NVIDIA Segment Breakdown for FY2024. Source: [NVIDIA 10-K](#)



**Figure 4:** Revenue by Reportable Segments (FY 2020 - FY 2024). Source: [NVIDIA 10-K](#)



**Figure 5:** NVIDIA Revenue by Geographic Region. Source: [NVIDIA 10-K](#)

## Business Segments:

NVIDIA operates through several distinct business segments, primarily categorized into Compute & Networking and Graphics. These segments reflect the company's focus on delivering cutting-edge technology solutions across diverse markets.

### 1. Compute and Networking:

This segment encompasses NVIDIA's data center, AI, automotive, and high-performance computing solutions. It includes NVIDIA's DGX systems, data processing units (DPUs), and networking products. The segment has experienced rapid growth due to the increasing adoption of AI and machine learning across industries. Fiscal 2024 revenue for this segment reached \$47.4 billion, reflecting a 215% growth and accounting for approximately 78% of NVIDIA's total revenue.

### 2. Graphics:

This segment includes products such as GeForce GPUs for gaming and PCs, Quadro GPUs for professional visualization, and GRID software for cloud-based gaming. This segment has been the backbone of Nvidia's business, driven by the ever-growing gaming industry and advancements in visual computing. In fiscal year 2024, the Graphics segment generated \$13.5 billion in revenue, reflecting a 14% increase year-on-year.

### 3. Revenue by Reportable Segments:

Figure 4 illustrates NVIDIA's revenue growth across its two primary business segments, Compute & Networking and Graphics, from fiscal year 2020 to 2024. The data highlights a consistent upward trajectory in overall revenue, with Compute & Networking showing significant growth, particularly in FY 2024, where it contributes the majority of total revenue. This segment's expansion is driven by increased demand for AI, data center technologies, and high-performance computing solutions. Conversely, Graphics revenue has seen a more varied performance, with a decline in FY 2024 compared to prior years, reflecting market challenges in gaming and visualization.

## Geographic Segments:

NVIDIA's global presence spans North America, Asia-Pacific, and Europe, leveraging expansive distribution channels and local collaborations to meet regional market demands. In fiscal year 2024, North America led with \$26,966 million in revenue, driven by strong demand for data center and AI products, affirming NVIDIA's technological leadership. Asia-Pacific followed with \$23,711 million, fueled by gaming, visualization, and semiconductor markets, with Taiwan and China as key contributors. Europe and Other regions generated \$10,245 million, reflecting steady adoption of NVIDIA's automotive, industrial, and professional solutions. This geographic diversification highlights NVIDIA's global reach and resilience across diverse markets.

## Market Strategy:

NVIDIA's market strategy revolves around delivering end-to-end solutions that integrate hardware, software, and services. Key focus areas include: 1. Revolutionizing data centers with AI-powered platforms like Blackwell and Hopper GPU architectures. 2. Expanding the adoption of Omniverse, a platform for industrial digitalization. 3. Accelerating generative AI applications across gaming, healthcare, and automotive markets.

## Shareholder Structure:

As of April 2024, NVIDIA had 2.46 billion outstanding shares. Institutional investors form a significant portion of its shareholder base, reflecting strong trust in the company's market strategy and performance.

# Corporate Governance:

Corporate governance plays a critical role in evaluating a company's long-term sustainability, risk management, and overall financial health. A well-governed company is more likely to maintain investor confidence, avoid regulatory pitfalls, and ensure strong financial oversight—factors that directly influence stock valuation and market perception. As part of our study, we have examined NVIDIA's corporate governance structure to assess its impact on the company's overall risk profile and financial stability. Understanding how NVIDIA is governed provides valuable insights into whether its stock price accurately reflects its intrinsic value or if governance risks could lead to overvaluation or undervaluation.

## 1. Board of Directors:

NVIDIA's Board of Directors consists of 14 members, the majority of whom are independent, ensuring a level of external oversight. The governance framework is supported by three key committees: the Nominating and Corporate Governance Committee, the Compensation Committee, and the Audit Committee. The Nominating and Corporate Governance Committee is responsible for board composition and governance policies, the Compensation Committee oversees executive pay structures, and the Audit Committee ensures the integrity of financial reporting and regulatory compliance.

## 2. Shareholder Rights:

NVIDIA maintains a single class of common stock, ensuring equal voting rights for all shareholders. Additionally, the company allows proxy access, enabling shareholders to nominate board members. While these factors enhance investor influence, the ISS score suggests room for improvement in shareholder engagement practices.

## 3. Executive Compensation:

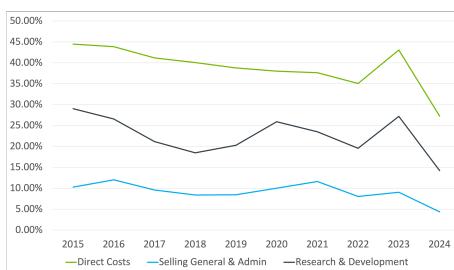
NVIDIA's executive compensation structure is performance-based, aligning with shareholder interests. The Compensation Committee ensures that executive pay is tied to financial performance, which has historically yielded high shareholder returns. Although CEO Jensen Huang's compensation has been scrutinized, it reflects NVIDIA's growth trajectory and market dominance.

## 4. Audit Practices:

While NVIDIA's Audit Committee is composed entirely of independent directors, ISS assigns a moderate governance risk score. This reflects concerns over committee member tenure and independence, which could impact the objectivity of financial oversight. Ensuring continuous improvements in audit practices could further strengthen investor confidence.

NVIDIA's strong governance framework supports financial stability and operational efficiency, both critical to its stock valuation. However, areas of improvement such as board independence and audit oversight could impact investor perception. Given NVIDIA's governance scores, it is important to consider these factors when determining if the stock price accurately reflects its intrinsic value.

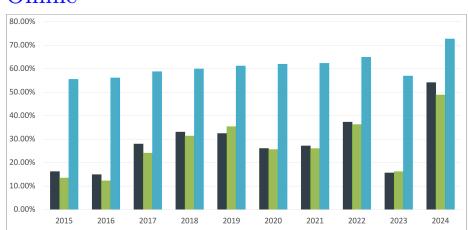
# Financial Statement Analysis:



**Figure 6:** Cost Structure as % of Total Revenue (2015–2024). Source: [Mergent Online](#)

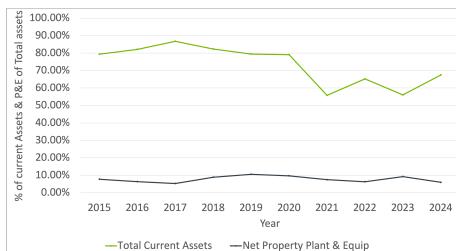
NVIDIA's common size income statement over the past decade highlights the company's growing profitability and effective cost management. Direct costs have remained substantial, starting at 44.5% of revenue in 2015 and rising slightly to 45.5% in 2024. This reflects NVIDIA's significant investment in production to meet growing demand for AI, gaming, and data center solutions. Despite these costs, the company has maintained strong gross margins, demonstrating its ability to scale efficiently.

Selling, General, and Administrative (SG&A) expenses have been consistently stable, averaging around 4–6% of total revenue. Research and Development (R&D) expenses, while declining as a percentage of revenue from 29.0% in 2015 to 14.2% in 2024, have grown substantially in absolute terms. This reflects economies of scale and a focus on innovation, with significant investments in AI and high-performance computing technologies. Operating income has increased dramatically as a percentage of revenue, rising from 16.2% in 2015 to 54.1% in 2024, highlighting the company's ability to leverage its operational efficiencies. Net income margins have followed a similar trend, growing from 13.5% in 2015 to 48.9% in 2024. This substantial increase reflects NVIDIA's success in converting revenue into profit through disciplined cost control, higher operating leverage, and strong sales performance across its key markets.

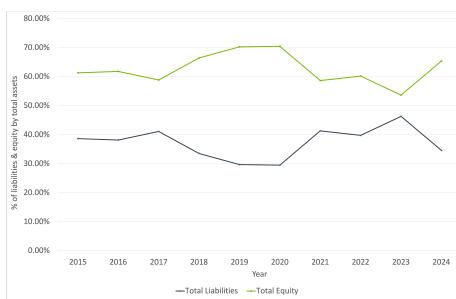


**Figure 7:** Profitability Ratio. Source: [Mergent Online](#)

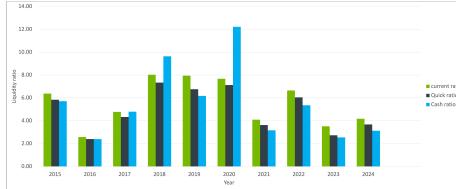
Overall, NVIDIA's income statement reflects a company that has effectively balanced growth and profitability. Strategic investments in innovation and cost management have allowed NVIDIA to expand its margins and remain a leader in its industry, positioning the company for sustained long-term success.



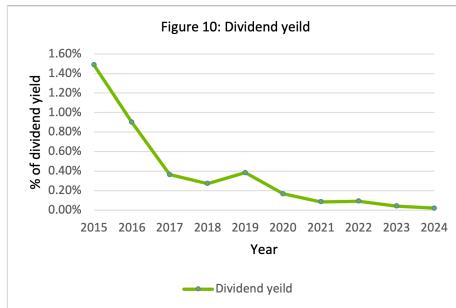
**Figure 8:** Current Assets and Property & Equipment as a Percentage of Total Assets. Source: [Mergent Online](#)



**Figure 9:** Total Liabilities vs. Shareholders' Equity. Source: [Mergent Online](#)



**Figure 10:** Liquidity ratios. Source: [Mergent Online](#)



**Figure 11:** Dividend Yield. Source: [Mergent Online](#)

## Balance Sheet Analysis

NVIDIA's balance sheet over the past decade highlights strong financial health and strategic growth, with total assets rising from \$7.2 billion in 2015 to \$65.7 billion in 2024. Current assets, supported by cash reserves and marketable securities, have consistently maintained robust liquidity. Investments in property, equipment, and intangible assets reflect NVIDIA's focus on infrastructure and acquisitions in AI, gaming, and data centers.

The company has effectively managed liabilities, reducing their share of total assets from 39.1% in 2015 to 34.6% in 2024, while shareholders' equity expanded from 61.3% to 65.4%, demonstrating strong profitability and reinvestment discipline. This balanced financial structure positions NVIDIA for sustained growth and long-term investor value.

To assess whether NVIDIA's current stock price aligns with its intrinsic value, we analyzed its financial performance, focusing on key ratios and industry benchmarks. These metrics provide insights into the company's growth, cost management, and shareholder returns, guiding investment decisions.

## Liquidity Analysis

NVIDIA's liquidity position has strengthened over the past decade, driven by growth in current assets and strong cash generation. Figure 8 highlights trends in NVIDIA's current, quick, and cash ratios from 2015 to 2024.

The current ratio, which measures the ability to cover short-term liabilities with current assets, has fluctuated but remained strong, reflecting solid liquidity. Recent declines are linked to the growth of current liabilities from the company's expansion. Similarly, the quick ratio, which excludes inventory, has trended lower, indicating a growing reliance on inventory and less liquid assets to support growth.

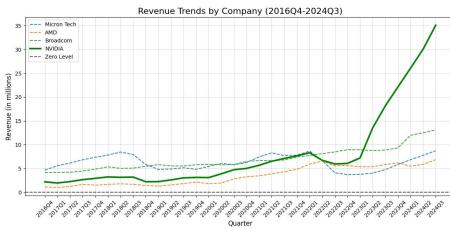
The cash ratio peaked in 2020 due to increased cash reserves during pandemic-related uncertainties but declined afterward, normalizing by 2024 as NVIDIA directed capital toward investments, acquisitions, and operations.

## Dividend Yield

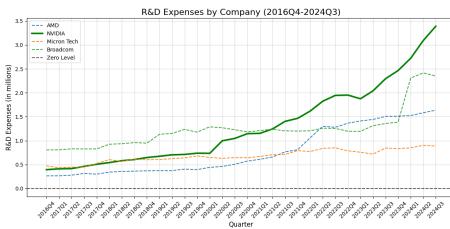
NVIDIA's decline in dividend yield over the last decade reflects more towards growth-oriented company with stock rates increasing faster than its dividend payouts. From the year 2015 to 2024 the dividend yield has dropped from 1.49% to 0.02% which indicates the focus of NVIDIA in reinvesting its increased profits over the years for growth of the company rather than distributing the dividends by maintaining higher stock prices.

## Conclusion

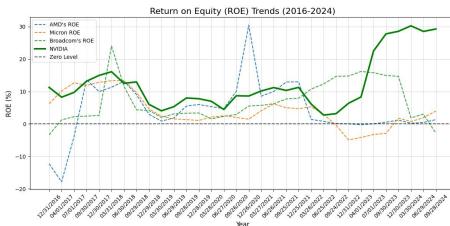
NVIDIA operates in a dynamic and high-growth industry. Its strong competitive positioning in GPUs and AI hardware, along with a focus on R&D and market expansion, supports its valuation. However, risks related to supply chain constraints, competition, and technological shifts must be considered. Investors should closely evaluate NVIDIA's ability to sustain its leadership and manage risks effectively when determining whether its shares are correctly priced.



**Figure 12:** Revenue. Source: [Mergent Online](#)



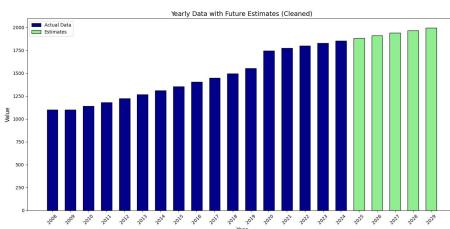
**Figure 13:** Research and Development. Source: [Mergent Online](#)



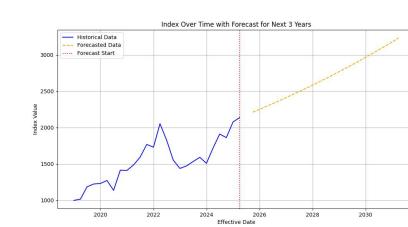
**Figure 14:** Return on Equity. Source: [Mergent Online](#)



**Figure 15:** Total Liabilities. Source: [Mergent Online](#)



**Figure 16:** Gaming Industry Growth for the next 5 years. Source: [Statista](#)



**Figure 17:** Data Center Growth. Source: [Statista](#)

## Industry Analysis & Comparison

### North America Competition

NVIDIA competes with a range of high-value businesses in the semiconductor and technology industry, including AMD, Intel, Micron Technology, Broadcom, and Qualcomm. NVIDIA holds a dominant position in the GPU market but faces strong competition in specific segments such as CPUs, data center processors, and AI hardware, where companies like AMD and Intel are key rivals. Additionally, NVIDIA contends with emerging competitors and alternative solutions in specialized markets, such as machine learning accelerators and cloud-based processing from companies like Google, AWS, and other tech giants investing in custom chips. Its leadership in AI and high-performance computing positions it ahead of many peers, but the competitive landscape remains dynamic as innovation continues to accelerate.

### Comparison with Major Competitors

- NVIDIA's ROE (Fig 14) shows a significant upward trajectory post-2022, indicating improving profitability and efficiency in generating returns for shareholders. Broadcom maintains a consistent, moderate ROE, while AMD and Micron exhibit more volatile patterns, with occasional negative ROE values reflecting profitability challenges during specific periods.
- NVIDIA leads in R&D spending, with a steep increase from 2020 onwards, surpassing Broadcom and other competitors. This reflects NVIDIA's aggressive investment in innovation, particularly in AI and high-performance computing. Broadcom and Micron maintain steady but comparatively lower R&D investments, while AMD shows modest growth in R&D spending, indicative of a more conservative approach. (Fig 13)
- NVIDIA displays exponential revenue growth from 2023, outpacing all competitors, likely driven by advancements in AI technologies and GPUs. Micron and Broadcom exhibit steady but moderate growth in revenue, whereas AMD shows slower growth, maintaining a relatively flat trendline compared to the others. (Fig 12)

### Market Capitalization and Growth Indicators

- NVIDIA's market capitalization increased by 39.88%, showcasing a significant and steady enhancement of its market value.

### Future Growth Prospects

- The gaming industry is projected to grow at an annual rate of approximately 3.33% (Fig 16), contributing an estimated \$1.86 million in additional demand each year. This growth is expected to drive increased production among chip manufacturers, driven primarily by gaming-related demand. With NVIDIA commanding approximately 80% of the market share, the company is well-positioned to capitalize on this trend, potentially boosting its revenue by maintaining competitive costs and leveraging its dominant market position.
- The data center sector is projected to grow at a compound annual growth rate (CAGR) of 12.93% (Fig 17). With approximately 98% of NVIDIA's revenue generated from its data center operations, this growth presents a significant opportunity for the company. NVIDIA stands to benefit substantially, with the potential for nearly 13% growth driven solely by the expanding demand within the data center market.
- The price-to-earnings (P/E) ratio of NVIDIA stands at approximately 56.14, positioning it favorably compared to its competitors. Broadcom and AMD have significantly higher P/E ratios of 198.94 and 109.67, respectively, indicating potential overvaluation relative to their earnings when assessed against industry benchmarks. Notably, Micron Technology outperforms in this regard, leading the group with a P/E ratio of 29.65.

float

# Competitive Positioning

## Comparison of Financial Metrics

Metric	NVIDIA	Micron	Broadcom
Market capitalization (2024)	\$3.26 Trillion	\$109.12 Billion	\$1.13 Trillion
Revenue Growth (%)	125.85%	38.11%	11.43%
Profit Margin (%)	48.85%	3.10%	11.43%
Return on Equity (ROE) (%)	69.24%	1.72%	8.71%

**Table 1:** Comparison of Financial Metrics. Source: [Broadcom](#) and [Micron](#)

### Market Capitalization

NVIDIA has the largest market capitalization of \$3.26 trillion and is leading among its competitors, which can be attributed to its focus on innovation and enhancing a high-margin business model. Broadcom is the biggest competitor of NVIDIA with a market capitalization of \$1.13 trillion. Micron seems to be struggling and is at the bottom among its competitors with a market capitalization of \$109.12 billion.

### Revenue Growth

NVIDIA has outpaced all competitors with revenue growth of 125.85% due to the increasing demand for its GPUs in AI and data centers. The efforts for revenue growth are also reflected in the amount invested in research and development. Intel has faced challenges with negative growth of -2%, leading to a loss in market share to competitors. Micron and Broadcom have solid revenue growth of 38% and 31%, respectively, due to the demand for memory products and a diversified semiconductor portfolio.

### Profit Margin

NVIDIA has exceptional profitability of 48.85%, highlighting operational efficiency and proficient cost management. NVIDIA is expected to sustain market dominance with strong revenue growth and maintain profitability through innovation, high-value products, and operational efficiency. Intel, on the other hand, has incurred losses of -35%, reflecting operational inefficiencies. Micron has a moderate profit margin of 3.10%, and Broadcom is the healthiest competitor with a profit margin of 11.43% due to its broader product focus.

### Return on Equity (ROE)

NVIDIA leads with the highest ROE of 69% among its competitors, indicating efficiency in generating shareholder value. This reflects NVIDIA's ability to reinvest earnings, maintain profitability, and make efficient use of capital. NVIDIA is followed by Broadcom with an 8.71% ROE, which is quite a bit lower but indicates steady growth.

### SWOT Analysis

Given NVIDIA's dominance in the semiconductor market and its rapid growth in AI and high-performance computing, a thorough SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis provides valuable insights into NVIDIA's strategic position. This analysis will help investors determine whether NVIDIA's stock is correctly priced by examining the company's internal capabilities and external market conditions.

### Strengths

- Market Leadership in GPUs and AI: NVIDIA is the dominant player in the GPU industry, holding a significant market share in gaming, data centers, and AI applications. Its CUDA (Compute Unified Device Architecture) platform is widely adopted for AI, deep learning, and scientific computing.
- Strong Financial Performance: NVIDIA has demonstrated impressive financial growth, with total revenue reaching \$60.9 billion in FY 2024, driven by its Compute Networking segment, which accounted for 78% of total revenue. The company also boasts industry-leading profit margins of 48.85%, reflecting its strong pricing power and cost efficiencies.
- Diversified Revenue Streams: NVIDIA operates in multiple high-growth industries, including gaming, AI, cloud computing, autonomous vehicles, and data centers. This diversification reduces dependency on any single sector and enhances its resilience against market fluctuations.
- Robust R&D Capabilities: The company invests heavily in research and development (R&D), with R&D expenses accounting for 14.2% of revenue in FY 2024. This focus on innovation has led to the development of cutting-edge GPU architectures such as Blackwell and Hopper, positioning NVIDIA as a leader in AI acceleration and high-performance computing.

- Strong Brand and Ecosystem: NVIDIA has established itself as a premium brand in both consumer and enterprise markets. The Omniverse platform, which facilitates industrial digitalization, and partnerships with major cloud providers further strengthen its ecosystem.
- Efficient Supply Chain and Partnerships: NVIDIA collaborates with top semiconductor manufacturers, such as TSMC and Samsung, to produce its GPUs. This strategic outsourcing allows the company to focus on design and innovation while maintaining cost efficiency.

## Weaknesses

Despite its strengths, NVIDIA faces internal challenges that could impact its growth and valuation.

- Heavy Dependence on Third-Party Manufacturers: Unlike competitors such as Intel, NVIDIA does not manufacture its own chips. Instead, it relies on external foundries, mainly TSMC, for semiconductor production. This dependency exposes the company to supply chain disruptions and geopolitical risks.
- High Valuation and Market Expectations: NVIDIA's price-to-earnings (P/E) ratio peaked at 110 in recent years, reflecting extremely high investor expectations. While its earnings have grown significantly, any slowdown in revenue growth could result in a sharp stock price correction.
- Limited Presence in Central Processing Units (CPUs): While NVIDIA excels in GPUs, it has limited market penetration in CPUs, a key component of computing hardware. Competitors such as Intel and AMD have a stronger foothold in this space, which could limit NVIDIA's expansion in general-purpose computing.
- Governance and Risk Exposure: The Institutional Shareholder Services (ISS) Governance Quality Score of 8 out of 10 suggests that NVIDIA has governance risks, particularly in board structure and audit practices. The absence of a lead independent director and concerns over executive compensation could raise red flags for investors.

## Opportunities

NVIDIA has multiple opportunities to expand its business and increase shareholder value.

- Expanding AI and Data Center Markets: The demand for AI-powered solutions is surging across industries. NVIDIA's leadership in AI accelerators, neural network processing, and data center solutions positions it well to capitalize on this trend.
- Autonomous Vehicles and Edge Computing: NVIDIA's DRIVE platform for autonomous vehicles is gaining traction in the automotive sector. As self-driving technology advances, NVIDIA could benefit from increased adoption by automakers. Similarly, the growth of edge computing offers new applications for NVIDIA's hardware in real-time processing.
- Growth in Cloud and Enterprise AI: Major cloud providers such as Amazon Web Services (AWS), Microsoft Azure, and Google Cloud rely on NVIDIA GPUs for AI workloads. Expanding its partnerships and offering AI-as-a-service solutions could drive long-term revenue growth.
- Diversification into CPUs and Custom Silicon: NVIDIA's acquisition of ARM (pending regulatory approval) could enable the company to expand into CPUs, challenging Intel and AMD in a broader computing market. Developing custom silicon for specialized AI and cloud applications could also unlock new revenue streams.
- Expansion in Emerging Markets: With increasing digitalization, Asia-Pacific and Latin America present significant growth opportunities for gaming, AI, and data center adoption. NVIDIA's strong brand and technological leadership could help it capture these markets.

## Threats

NVIDIA faces several external risks that could impact its business and stock valuation.

- Intense Competition: NVIDIA competes with AMD, Intel, Broadcom, and other semiconductor firms in various segments. AMD has made significant advancements in GPUs and AI accelerators, while Intel is investing heavily in AI and foundry services. Competitive pricing pressures could impact NVIDIA's margins.
- Supply Chain and Geopolitical Risks: Given its reliance on TSMC, NVIDIA is vulnerable to semiconductor supply chain disruptions. Any geopolitical tensions between China, Taiwan, and the U.S. could lead to production delays or increased manufacturing costs.
- Regulatory and Trade Restrictions: The U.S. government has imposed export restrictions on advanced AI chips to China, a major market for NVIDIA. These restrictions could limit the company's revenue potential in key international markets.
- Economic Slowdowns and Market Corrections: NVIDIA's high valuation makes it sensitive to macroeconomic conditions and interest rate hikes. In periods of economic uncertainty, investors may shift away from high-growth technology stocks, causing volatility in NVIDIA's stock price.

## Conclusion for Competitive Positioning

NVIDIA's strong financial performance, innovation-driven growth, and strategic market diversification make it a formidable player in the semiconductor industry. However, supply chain dependencies, high market valuation, and governance concerns pose risks that investors must consider. The company's ability to capitalize on AI, data centers, and emerging computing trends presents significant opportunities for future growth. At the same time, intensifying competition, regulatory restrictions, and geopolitical uncertainties could create challenges that impact its long-term valuation. This SWOT analysis highlights key factors influencing its intrinsic value. If the company continues its growth trajectory while effectively managing risks, its stock could be fairly valued or even undervalued based on future potential. However, if governance risks, supply chain issues, or market corrections materialize, the stock could be overpriced in the short term.

## Financial Projections and Insights (2024 - 2030)

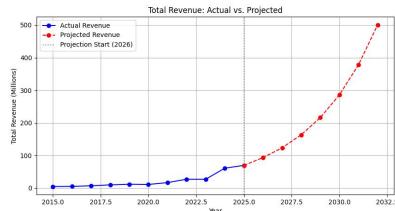


Figure 18: Revenue Trend (2015 - 2032)

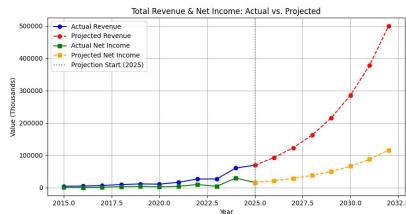


Figure 19: Revenue vs Net Income (2015 - 2032)

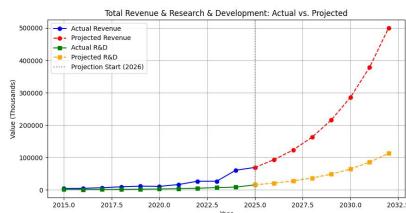


Figure 20: Research and Development vs Revenue (2015 - 2032)

### Overview

This analysis evaluates the company's financial performance from 2025 to 2032, leveraging regression-based projections. It examines key financial metrics such as revenue, net income, and expenses, providing insights into future profitability. The forecasts are influenced by external economic factors, including the Consumer Price Index (CPI), federal funds rate, and unemployment rate, reflecting a data-driven approach to financial planning. The demand for NVIDIA remains exceptionally high, with supply constraints acting as the primary limiting factor. As industries increasingly adopt its advanced technology across AI, data centers, and gaming, the company continues to experience significant growth. However, ongoing supply chain challenges and production limitations have restricted product availability, preventing the market from fully meeting demand.

### Key Findings:

**Revenue Growth:** One of the most significant observations from the financial projections is the steady growth in revenue from 2025 through 2032. This is illustrated in Figure 18, where revenue climbs consistently, possibly driven by factors such as:

- Economic expansion
- Increased market share
- New product innovations

The growth trajectory is promising and highlights the company's ability to scale effectively in the coming years.

**Revenue and Net Income:** The strong revenue and net income growth indicate a positive financial trajectory, but future profitability will depend on cost management, operational efficiency, and sustained market demand. If the projections hold, the company is on track to become a major player in its industry by 2032.

Net income, which represents the total income, is also projected to increase, enhancing the company's financial strength.

**Research and development vs Revenue:** The Fig 20 shows the trends in Total Revenue and Research & Development (R&D) expenditures from 2015 to 2032. Over the period from 2015 to 2025, actual revenue and R&D spending steadily rise, with a noticeable surge in both around 2024. Post-2025, projections indicate strong growth in both revenue and R&D, reflecting optimistic expectations for future performance. The close correlation between the two suggests a strategy where increasing revenue is reinvested into innovation and development. The sharp upward trajectory in the latter years highlights an expected period of significant expansion and investment, underscoring a focus on long-term growth driven by R&D advancements.

## Conclusion For Financial Projections

The company's financial trajectory indicates strong revenue growth, rising net income, and increasing R&D investments, positioning it for long-term success and potential industry leadership by 2032. The alignment of R&D spending with revenue expansion suggests a commitment to innovation and sustained market competitiveness. While profitability is improving, cost control and efficiency optimization will be critical in ensuring that growth translates into sustained financial strength. The significant rise in R&D investments suggests the company is preparing for new product development, technological advancements, or market diversification, which could fuel even greater revenue expansion in the coming years. If the company effectively balances expansion, innovation, and cost management, it is well-positioned to achieve significant market dominance, with the potential to become a leading player in its industry by 2032.

## Relative Valuation



Figure 21: Price to earnings ratio

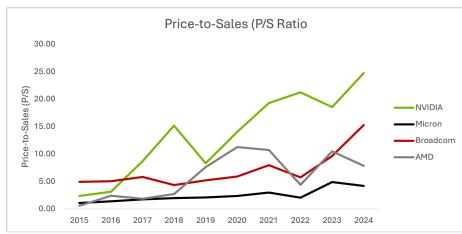


Figure 22: Price to sales ratio

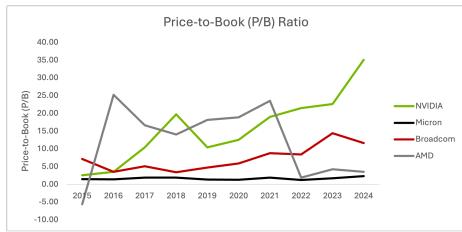


Figure 23: Price to book ratio

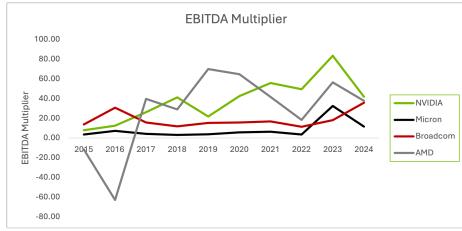


Figure 24: EBITDA Multiplier

## Premium Valuation Driven By Market Leadership

NVIDIA has consistently commanded a premium valuation, as evidenced by its rising P/E ratio over the years. The company's P/E climbed from 17.84 in 2015 to 114.69 in 2023, before moderating to 50.65 in 2024. This suggests that investors are willing to pay a high multiple of earnings due to NVIDIA's strong revenue growth, high profitability, and leadership in AI and GPU technologies. Compared to the broader semiconductor sector, where P/E ratios tend to fluctuate with industry cycles, NVIDIA's consistently high multiple underscores investor confidence in its sustained growth.

## Price To Sales Ratio

The P/S ratio tells a similar story, rising sharply from 2.40 in 2015 to 24.74 in 2024. This means that NVIDIA is trading at a high multiple of its sales, reflecting expectations of continued revenue expansion driven by increasing demand for AI accelerators, data center GPUs, and gaming solutions. This level of valuation suggests that NVIDIA is priced as a high-growth company, with investors anticipating strong future earnings and cash flow generation.

## Asset valuation and Growth Expectations

NVIDIA's P/B ratio, which measures how the stock price compares to the company's book value, has surged over the years, from 2.55 in 2015 to 35.08 in 2024. This increase signals that NVIDIA's stock price is well above its net assets, reinforcing the perception that the company's true value lies in its intellectual property, cutting-edge technology, and future growth potential rather than its tangible assets. This is a common characteristic of high-growth technology firms, where intangible assets such as proprietary AI architectures and software platforms contribute significantly to valuation.

## Operating Performance and Market Perception

The EBITDA multiplier, which reflects how the market values NVIDIA based on its operating earnings, has also followed an upward trajectory, increasing from 7.87 in 2015 to a peak of 83.44 in 2023, before adjusting to 41.94 in 2024. This indicates that NVIDIA has been able to command higher valuation multiples due to improvements in profitability and operating efficiency. However, the sharp rise in recent years suggests that NVIDIA is now trading at significantly higher multiples relative to its historical norms, emphasizing the market's expectations for continued expansion.

## Conclusion For Relative Valuation

Overall, NVIDIA's valuation remains elevated relative to historical and industry benchmarks, emphasizing the market's expectations for continued expansion. While the company benefits from strong fundamentals and technological leadership, its high multiples suggest that future performance must align with aggressive growth projections to sustain its premium valuation.

## DCF Model:

Year	2023	2024	2025	2026	2027	2028	2029	2030	2031
<b>Risk-Free Rate</b>	3.7%	4.00%	4.5%	5%	5%	5%	5%	5%	5%
<b>Market Risk Premium</b>	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%
<b>Interest Rate on Debt (Cost of Debt)</b>	7%	7%	7%	7%	7%	7%	7%	7%	7%
<b>Annual Sales Growth</b>	0.22%	125.85%	14.07%	34.29%	32.31%	32.31%	32.31%	32.31%	32.31%
<b>Cost of Equity</b>	15.7%	16.5%	16.5%	17%	17%	17%	17%	17%	17%
<b>Capital Structure (% debt)</b>	0.07%	0.07%	0.07%	0.07%	0.07%	0.07%	0.07%	0.07%	0.07%
<b>WACC (Discount Rate)</b>	15.69%	15.99%	16.49%	16.99%	16.99%	16.99%	16.99%	16.99%	16.99%
<b>Perpetual Discount</b>	16.99%								

**Table 2:** DCF Model Table

## DCF Model explanation:

The discounted cash flow (DCF) model is a valuation method that determines a company's worth by calculating the present value of its projected future cash flows. Investors and analysts commonly use this approach to assess the fair value of NVIDIA's stock.

## Key Components of the DCF Model:

1. Risk-Free Rate and Market Risk Premium: The risk-free rate starts at 3.7% in 2023, rising to 5% by 2026 and stabilizing thereafter. This suggests an environment with increasing government bond yields, possibly due to tightening monetary policies.
2. Market Risk Premium: The market risk premium remains constant at 7.5% throughout the period. This stability implies that expected excess returns over the risk-free rate have not changed in investor expectations.
3. Cost of Debt: The cost of debt remains steady at 7.0% across all years. Despite the rising risk-free rate, the cost of debt is not increasing, possibly indicating stable credit conditions or strong creditworthiness.
4. Annual Sales Growth: Sales growth is highly volatile
  - 2023: Explosive growth at 125.85%, possibly due to a major expansion or recovery.
  - 2024-2029: Growth stabilizes between 14% to 32.31%.
5. Cost of Equity and WACC: The cost of equity rises from 14.35% in 2021 to 17.0% in 2026, reflecting increasing risks or expected returns required by investors.
6. Perpetual Discount Rate: The perpetual discount rate is 16.9%, meaning that future cash flows beyond the explicit forecast period (post-2031) are discounted significantly. This aligns with the assumption that NVIDIA remains a high-risk, high-growth company for the foreseeable future.

Implications for Investors NVIDIA is expected to experience extreme revenue fluctuations, reflecting the cyclical nature of semiconductor demand and AI-driven opportunities. Its cost of capital is extremely high, meaning investors require significant returns to compensate for risk. The company maintains near-zero debt, showing financial discipline and flexibility but also relying heavily on stockholder confidence. Growth is highly uncertain, with periods of explosive expansion followed by slowdowns, making it a potentially volatile but lucrative investment.

## Risks

This model presents several key risks, primarily stemming from extreme volatility in sales growth and cost of capital. The high WACC (357% in 2023, stabilizing at 69%) suggests significant investor uncertainty, which could lead to sharp stock price fluctuations. Additionally, the market risk premium is abnormally high in the early years, indicating heightened systemic and industry-specific risks, including AI competition, regulatory scrutiny, and supply chain disruptions. NVIDIA's near-zero debt strategy reduces financial leverage risks but makes it reliant on equity financing, which could be costly in bearish markets. Lastly, the aggressive growth assumptions (209% in 2028) may be unrealistic, potentially leading to overvaluation concerns if these expectations are not met.

## Conclusion

In summary, NVIDIA (NVDA) stands as a market leader in the semiconductor industry, excelling in market capitalization, revenue growth, and profitability, largely fueled by its dominance in AI, data centers, and gaming GPUs. Our analysis estimates the present value of its stock at 124.8 \$, suggesting potential undervaluation if the company maintains its projected growth. This positions NVIDIA as an attractive investment opportunity for long-term investors. However, a holistic evaluation should factor in industry trends, competitive pressures (AMD, Intel), regulatory risks, and broader economic conditions that could influence its valuation and future performance. Covering all the risks and resources, we give a risk of 31.23 % as a stop loss of 90.1 \$ and a target of 174.51 \$. The target was given by the completed DCF model and the stop loss was from the technical analysis of most value picked up price for the NVIDIA.

## References

- Bloomberg Governance Score (BGS): KnowESG, January 2025. *Explore NVIDIA Corporation ESG score, report and breaking news.*
- ISS Governance QualityScore: Yahoo Finance, November 2024. *NVIDIA Corporation (NVDA) Company Profile & Facts - Yahoo Finance.*
- P/E ratio and EPS valuation: <https://fullratio.com/stocks/nasdaq-nvda/nvidia>
- Metrics data of Intel: <https://www.intc.com/news-events/press-releases/detail/1726/intel-reports-fourth-quarter-and-full-year-2024-financial>
- Metrics data of Micron: <https://investors.micron.com/news-releases/news-release-details/micron-technology-inc-reports-results-fourth-quarter-and-full-7>
- Payment solution of NVIDIA: <https://www.nvidia.com/en-us/industries/finance/>

## Disclosures for NVIDIA:

---

**Ownership and material conflicts of interest:** The author(s), or any member of their household, do not hold a financial interest in the securities of NVIDIA (NVDA). The author(s), or any member of their household, are not aware of any conflicts of interest that could influence the content or publication of this report.

**Receipt of compensation:** Compensation of the author(s) of this report is not based on investment banking revenue.

**Position as an officer or director:** The author(s), or a member of their household, does not serve as an officer, director, or advisory board member of NVIDIA.

**Market making:** The author(s) does not act as a market maker in the securities of NVIDIA (NVDA).

**Disclaimer:** The information provided herein has been sourced from publicly available materials that the author(s) believe to be reliable. However, the author(s) make no guarantees, whether express or implied, regarding its accuracy or completeness. This information is not intended to serve as the basis for any investment decisions by any individual or entity. It does not constitute investment advice, nor does it represent an offer or solicitation to buy or sell any security. Furthermore, this report should not be interpreted as a recommendation by any individual associated with CFA Society of Thailand, CFA Institute, or the CFA Institute Research Challenge regarding NVIDIA's stock.