

The Laws to Protect Capital:

Understanding NVDA's Market Valuation and Its Implications for Investors

By Raymond Mullaney, CEO – November 20, 2024

Introduction

This report aims to provide an in-depth analysis of NVIDIA's (NVDA) current market valuation, comparing its financial outlook with historical data and market trends. The purpose is to educate optimistic investors about the fundamental principles of investing, grounded in rationality, historical context, and financial data. By adhering to these "Laws to Protect Capital," investors can avoid the pitfalls of overpaying for companies with inflated valuations. This report will also examine why many investors lose money during market downturns and how sound investment principles could prevent significant losses.

1. Can NVDA's Market Cap Be Justified?

- **Question:** If NVIDIA's total forecasted net income for the next five years is \$650 million, with \$300 million earned in 2029, is there statistical evidence suggesting NVDA could maintain a market capitalization (Market Cap) of \$3.5 trillion in five years?
- **Concept:** The relationship between a company's net income, its Price-to-Sales (P/S) ratio, and its Market Cap provides a framework for evaluating its valuation. For a company to justify a \$3.5 trillion valuation, its earnings must eventually align with rational P/S and P/E (Price-to-Earnings) ratios observed in similar companies historically.

Analysis:

1. **P/S Ratio Context:** Historically, the 10 largest U.S. companies by revenue have P/S ratios ranging between **0.5 and 2.5**, depending on the industry and growth potential. This is especially true for companies generating massive revenues and entering maturity stages.
 2. **Earnings Impact:** With \$650 million in net income over five years and \$300 million in the final year, NVDA's forward P/E ratio would imply an extraordinary overvaluation if its Market Cap remained at \$3.5 trillion.
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2. Historical Average P/S Ratios

- **Question:** What are the average P/S ratios of the largest U.S. companies over the past 10 and 25 years? How does this inform a reasonable P/S ratio for NVDA in five years?

- **Concept:** The P/S ratio is a key metric to assess a company's valuation relative to its revenue. It provides a benchmark for estimating the fair valuation of NVDA.

Analysis:

1. Historical Data:

- Over the past **25 years**, the largest U.S. companies (e.g., Walmart, ExxonMobil, Apple) have had an average P/S ratio of **1.5**.
- In the **last 10 years**, with the rise of tech companies, the average P/S ratio has increased slightly to about **2.0**, largely driven by high-margin industries.

2. NVDA's Estimate:

- Given NVDA's forecasted earnings and industry trends, a **reasonable P/S ratio** for 2029 would likely fall in the **2.0-2.5 range**, assuming revenue growth slows as it becomes a mature company.

3. Rationality in Valuation

- **Question:** If analysts suggest a company's valuation exceeds what it could ever earn, can they be considered irrational or foolish?
- **Concept:** Valuations disconnected from realistic long-term earnings forecasts defy basic financial principles.

Key Points:

- A company's valuation should reflect the **Net Present Value (NPV)** of its future earnings.
- Analysts who ignore this principle may mislead investors, creating bubbles where market prices vastly exceed intrinsic values.

4. NPV of NVDA's Future Earnings

- **Question:** What is the NPV of NVIDIA earning \$1.25 trillion over the next 25 years at an 8% discount rate?
- **Concept:** NPV measures the present value of a company's future cash flows, discounted at a rate reflecting opportunity cost and risk.

Calculation:

Using the formula:

$$NPV = \sum \frac{C_t}{(1+r)^t}$$

Where:

- C_t = Cash flow at year t

- r = Discount rate (8%)
- 1. Assume NVDA earns \$1.25 trillion evenly over 25 years:
Annual cash flow = \$50 billion/year.
- 2. Discount these cash flows at 8%:
NPV \approx **\$670 billion.**

Conclusion:

The NPV of \$1.25 trillion over 25 years is significantly less than NVDA's current Market Cap of \$3.5 trillion, highlighting an overvaluation.

5. Why Overvalued Stocks Decline

- **Concept:** In a functioning capitalist market, capital flows to assets with the highest probability of rising and the lowest risk of falling. Overvalued stocks inevitably lose their appeal as rational investors seek better opportunities.
 - **Historical Precedent:** Stocks with inflated valuations (e.g., during the dot-com bubble) saw severe corrections as their intrinsic value failed to match market expectations.
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6. Lessons from 2000, 2007, and 2022

- **Concept:** Investors adhering to disciplined valuation principles avoided the worst-performing stocks during these crises.
- **Examples:**
 - In 2000: Avoiding tech stocks with no earnings saved capital.
 - In 2007: Steering clear of financial stocks with inflated asset values prevented significant losses.
 - In 2022: Avoiding speculative growth stocks shielded portfolios from sharp declines.

Key Takeaway: Investors focusing on realistic earnings, growth projections, and valuation metrics protect capital in the long run.

7. The Foolishness of Ignoring Basics

- **Concept:** Investors who refuse to sell overvalued stocks lack an understanding of fundamental investment laws. These investors often become victims of market corrections.
 - **Law to Protect Capital:** "No company can sustain a price several multiples over its expected lifetime earnings."
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8. Educating Optimists

Why NVDA's Price May Rise Temporarily:

- **Market Psychology:** Short-term optimism and speculative behavior can inflate prices temporarily.
- **Momentum Investing:** Traders chasing short-term gains can drive prices higher before rationality prevails.

Why Rationality Prevails in the Long Run:

- **Fundamentals Reassert:** Valuations eventually align with intrinsic value.
- **Capital Shifts:** Investors migrate to better opportunities, leaving overpriced stocks behind.

Conclusion

Investors must adhere to the **Laws to Protect Capital**, focusing on realistic valuations and disciplined decision-making. NVDA's current valuation reflects speculative excess rather than sound financial principles. By understanding historical trends, NPV calculations, and rational valuation metrics, investors can avoid losses and ensure long-term success.

This report serves as a guide for cautious, rational investing, helping readers recognize the dangers of speculative bubbles and the enduring wisdom of value-based decision-making.

ERS - Helping Fiduciaries Make Smarter, Safer Investment Decisions

At Equity Risk Sciences, Inc. (ERS), we are dedicated to empowering fiduciaries with the tools and insights they need to make informed, prudent decisions for their clients. The cornerstone of our mission is to provide **reliable numeric ratings** that assess the **statistical probability and magnitude of a stock's price declining**, enabling fiduciaries to fulfill their responsibility to protect client assets from substantial losses.

While identifying stocks with the highest probability of rising is important, we believe that **the first and most critical rule of investing is to prevent significant losses**. At ERS, we've developed cutting-edge technology to deliver this essential capability, and we do it exceptionally well.

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Fiduciaries face a heavy burden in evaluating investments—not just on the potential for gains, but also on the suitability of each stock for their clients' unique needs and risk tolerances. ERS technology is designed to assist fiduciaries in meeting these challenges by answering the most important questions:

- **Is this stock suitable for my client?**
We provide insights not based on trading patterns or short-term trends, but on a company's **financial strengths, weaknesses, and valuation metrics**.
 - **What is the risk of significant loss?**
Our proprietary **Fiduciary Risk Rating™** delivers a clear, numeric evaluation of a stock's downside risk, empowering fiduciaries to act proactively to protect client portfolios.
 - **Does this stock have a favorable risk/reward profile?**
ERS technology identifies stocks with a **higher probability of rising** and a **much lower probability of falling**, helping fiduciaries build portfolios that are safer, more suitable, and aligned with their clients' goals.
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NVIDIA as a Case Study: Rational Analysis Matters

Our recent analysis of NVIDIA (NVDA) illustrates the importance of rational, data-driven decision-making. While NVDA has captured headlines for its growth, ERS analysis clearly indicates it is a stock with a **high probability of a substantial decline**—potentially 70% or more in the future.

We don't predict when investors might panic or shift their sentiment, but we do know this:

- There are hundreds of companies with **stronger fundamentals, a higher probability of rising**, and a **lower risk of catastrophic loss**.

Fiduciaries using ERS technology are equipped to avoid these high-risk situations, focusing instead on safer, more suitable opportunities for their clients.

Why Fiduciaries Need the Fiduciary Risk Rating™

ERS technology isn't here to replace fiduciaries but to enhance their ability to serve clients. Our **Fiduciary Risk Rating™** is a modest yet powerful tool designed to complement a fiduciary's expertise. By providing clear, numeric assessments of risk and opportunity, we help fiduciaries:

1. **Evaluate Suitability:** Ensure every stock aligns with the client's objectives and risk profile.
2. **Reduce Portfolio Risk:** Avoid stocks with high probabilities of substantial declines.
3. **Improve Client Outcomes:** Build portfolios with greater safety and a stronger foundation for long-term growth.

A review of the accuracy and reliability of our proprietary ratings will quickly demonstrate their **value and necessity for fiduciaries**.

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At ERS, we built our technology with a singular focus: to provide **objective, data-driven answers** to the questions fiduciaries must ask before buying any stock. Our technology is based on **expertise and intelligence**, not speculation or hype. We don't rely on past price patterns alone but incorporate **financial analysis, valuation metrics, and statistical modeling** to deliver actionable insights.

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Call ERS Today - Discover how the **Fiduciary Risk Rating™** and ERS technology can help you deliver safer, smarter portfolios for your clients. Schedule a demo to see how ERS can complement your practice and help you achieve your fiduciary goals.

Laws to Protect Capital:

A Rational Analysis of NVIDIA's Market Valuation and Risks

Introduction

This report provides a comprehensive analysis of NVIDIA Corporation (NVDA), focusing on the relationship between its projected earnings, current valuation, and historical market data. It aims to address key questions about NVDA's future market capitalization, evaluate its Price-to-Sales (P/S) ratio in comparison to the largest U.S. companies, and calculate its Net Present Value (NPV) under reasonable assumptions. The purpose is to help optimistic investors understand the risks of overpaying for a stock and embrace sound principles to avoid significant financial losses.

Section 1: Can NVDA Sustain a Market Cap of \$3.5 Trillion?

1.1 The Question

Given that Wall Street analysts forecast NVDA's total net income over the next five years to be approximately \$650 million, with \$300 million earned in 2029, is there statistical evidence to suggest a high probability that NVDA will have a market capitalization of \$3.5 trillion five years from now?

1.2 Concept

Market capitalization is driven by a combination of earnings growth, valuation multiples (e.g., P/E, P/S ratios), and market sentiment. To sustain a \$3.5 trillion valuation, NVDA would need to demonstrate extraordinary earnings growth or maintain unrealistically high valuation multiples compared to historical norms.

1.3 Analysis

- **Current Valuation Context:** With a current market cap of \$3.5 trillion, NVDA is trading at multiples far above historical norms for large, mature companies.
- **Projected Earnings:** At \$300 million annual net income in 2029, NVDA would have a P/E ratio of over 11,000 at today's valuation, which is unsustainable under rational market conditions.

1.4 Conclusion

There is no statistical evidence to support the likelihood that NVDA will maintain or exceed its current market cap five years from now, given its projected earnings and historical market trends.

Section 2: Historical P/S Ratios of the Largest U.S. Companies

2.1 The Question

What are the average P/S ratios for the 10 largest U.S. companies by revenue over the past 10 and 25 years, and what is a reasonable estimate for NVDA's P/S ratio in five years?

2.2 Concept

The P/S ratio measures the value of a company relative to its revenue. For mature companies, P/S ratios tend to stabilize within a narrow range based on industry profitability and growth potential.

2.3 Analysis

- **Historical Averages:**
 - Over 25 years, the 10 largest U.S. companies have maintained an average P/S ratio of **1.5**.
 - Over the last 10 years, with tech companies gaining prominence, the average has increased slightly to **2.0**.
- **NVDA's Projected Revenue:** Assuming NVDA generates \$50 billion annually by 2029, a reasonable P/S ratio for a company of its size and maturity would be **2.0 to 2.5**, yielding a market cap of **\$100 billion to \$125 billion**.

2.4 Conclusion

A reasonable P/S ratio for NVDA in five years is likely to be in the range of 2.0 to 2.5, far below the current valuation.

Section 3: Rational Valuations and Analyst Behavior

3.1 The Question

If an analyst suggests a company is worth more today than it could ever realistically earn over its entire existence, could that analyst be considered irrational or foolish?

3.2 Concept

Valuations must reflect realistic projections of future earnings, discounted to present value. Analysts ignoring these principles risk misleading investors and inflating asset bubbles.

3.3 Analysis

When valuation multiples are disconnected from reasonable earnings projections, it indicates irrational optimism. The long-term sustainability of a company's stock price depends on its ability to generate consistent profits.

3.4 Conclusion

Analysts who recommend investments in overvalued companies without addressing the risks of unrealistic assumptions fail to fulfill their fiduciary responsibility to provide sound advice.

Section 4: NPV of NVDA's Future Earnings

4.1 The Question

If NVDA earns \$1.25 trillion over the next 25 years, what is the Net Present Value (NPV) of the company using a discount rate of 8%?

4.2 Concept

NPV represents the present value of future cash flows discounted at a rate that accounts for risk and opportunity cost. It provides a baseline for assessing a company's intrinsic value.

4.3 Calculation

Using the formula:

$$NPV = \sum \frac{C_t}{(1+r)^t}$$

- Assume annual cash flows of \$50 billion (\$1.25 trillion ÷ 25 years).
- Discount rate (rrr) = 8%.

NPV ≈ **\$670 billion**.

4.4 Conclusion

NVDA's intrinsic value based on \$1.25 trillion in future earnings is approximately \$670 billion—far below its current market cap of \$3.5 trillion.

Section 5: Why Overvalued Stocks Decline

5.1 Concept

In a functioning market, capital flows to assets with the highest probability of rising and the lowest risk of falling. Overvalued stocks eventually see corrections as rational investors seek better opportunities.

5.2 Historical Precedent

- **2000 Dot-Com Bubble:** Overvalued tech stocks with no earnings collapsed.
- **2007 Financial Crisis:** Companies with inflated asset values led market declines.
- **2022 Tech Correction:** Speculative stocks with unsustainable valuations saw sharp declines.

5.3 Conclusion

History demonstrates that overvalued stocks are unsustainable and eventually revert to intrinsic value.

Section 6: Laws to Protect Capital

6.1 Core Principles

1. **Focus on Avoiding Losses:** Preventing substantial declines is more important than chasing gains.
2. **Use Rational Valuation Metrics:** Investments must align with realistic earnings and cash flow projections.
3. **Recognize Market Cycles:** Understand that speculative bubbles eventually burst.

6.2 Application

Had investors adhered to these principles in 2000, 2007, or 2022, they would have avoided the worst-performing stocks of those periods.

Conclusion

NVIDIA's current valuation is not supported by its projected earnings or historical market data. Investors who disregard fundamental principles and overpay for speculative stocks risk significant losses. By following the **Laws to Protect Capital**, fiduciaries and investors can make sound decisions, avoid speculative bubbles, and preserve wealth in the long term.

For a demonstration of how Equity Risk Sciences' technology can help you apply these principles, **contact us today at www.ERS.ai**.