

## Understanding NVDA's Market Valuation: The Laws to Protect Capital

By Raymond Mullaney, CEO – November 20, 2024

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### 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.

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### 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.

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## 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.

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## 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.

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## 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.

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## 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.

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## 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.

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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.

For a demonstration of how Equity Risk Sciences' technology can help you apply these principles, **contact us today at [www.ERS.ai](http://www.ERS.ai).**