

RISK RESEARCH REPORT

NVIDIA Report

An Extremely High Risk & Ill-Reasoned Bet

A Historical Analysis of the Technological Cycle and Competitive Forces at Work

February 26, 2025



EQUITY RISK SCIENCES

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Executive Summary

Investing in NVIDIA at today's valuations assumes its profitability and dominance will persist indefinitely. History and data suggest otherwise. Winning in investing, like betting on horse races, requires placing bets where others have yet to, not following the crowd. If everyone believes a stock will rise, they have likely already bought it—leaving little room for further price appreciation. Conversely, when a company perceived as mediocre outperforms expectations, its stock price has greater potential for significant gains.

A key risk for NVIDIA investors is **diminishing returns**. A company's earnings potential is constrained by its revenue and profit margins. If NVIDIA were to generate \$300 billion in profits, it would require roughly \$900 billion in sales at a 33% margin. However, the total global chip market was only about \$600 billion last year. Is it realistic to assume NVIDIA will control all future chip sales? History suggests otherwise.

This report examines historical data and technological trends to highlight the flaws in assuming NVIDIA's continued dominance. We analyze valuation compression—where soaring revenues and profits lead to inflated **Price-to-Sales (P/S) and Price-to-Earnings (P/E) ratios**, only to collapse when growth slows. Microsoft, Intel, and Cisco all experienced this in past decades, with stock price stagnation lasting years due to P/E and P/S compression.

Investors are asking the wrong questions. Instead of evaluating intrinsic business value, they rely on Wall Street salespeople whose business is selling stocks, not providing objective analysis.

Two critical considerations:

1. **True economic value:** A company's worth is based on the income it generates. If NVIDIA were valued at \$3 trillion with \$400 billion in revenues and a 25% profit margin (extraordinarily high), it would still be trading at 30x earnings—an unsustainable valuation.
2. **Risk vs. reward:** Comparing NVIDIA's valuation to smaller, financially sound companies highlights the excessive premium investors are paying. A prudent investor must assess the downside risks and avoid speculative hype.

This report leverages data science and historical analysis to provide investors with a rational framework for assessing risk and valuation, helping them make more informed investment decisions rather than following the crowd into overvalued stocks.

Introduction

Investors currently pricing NVIDIA (NVDA) as if its record-high profit margins will remain sustainable for years are ignoring key historical and economic realities. This report presents a logical analysis supported by historical examples that illustrate why NVIDIA's profits per chip are likely to decline within the next three to five years. The assumptions driving today's valuation are flawed for three fundamental reasons:

1. **Technological Disruption** – No chip has ever maintained a market-leading position for an extended period without significant price compression or obsolescence.
2. **Market Competition** – The semiconductor industry attracts fierce competition that inevitably drives down prices and profit margins.
3. **Paradigm Shifts in Computing** – Emerging technologies often render existing hardware obsolete, leading to the collapse of once-dominant firms.

This report examines historical precedents where highly complex and profitable technologies, once deemed indispensable, became obsolete, and provides specific data on past semiconductor product cycles that collapsed within five years.

I. The Inevitable Fall of Market-Leading Hardware: Lessons from History

Throughout history, hardware companies that dominated their industries with highly complex and profitable products saw their dominance eroded or entirely erased due to technological shifts and competitive forces. Below are three major examples:

1. Digital Equipment Corporation (DEC) – The Mini-Computer Giant That Vanished

- **Once a leader in computing:** DEC was one of the largest computer manufacturers in the world, with multi-billion-dollar revenues from its PDP and VAX minicomputers.
- **Technology shift killed the business:** The rise of personal computers (PCs) made DEC's expensive mini-computers obsolete.
- **Outcome:** By the late 1990s, DEC was acquired by Compaq for a fraction of its former value, and the brand disappeared.

2. Quantum and Maxtor – The Hard Drive Kings That Disintegrated

- **Once highly profitable:** Quantum, Maxtor, and other hard drive makers were worth billions in the late 1990s and early 2000s.
- **Technological shifts destroyed them:** The rapid rise of solid-state drives (SSDs) and cloud computing eliminated the demand for traditional hard drives in consumer and enterprise markets.
- **Outcome:** Quantum ceased to be a major player, and Maxtor was acquired by Seagate before being phased out entirely.

3. Blackberry – The Smartphone Innovator That Lost Everything

- **Pioneered the smartphone industry:** In the early 2000s, BlackBerry had over 50% of the global smartphone market share.
- **New technology rendered it irrelevant:** The launch of the iPhone in 2007, followed by Android, made BlackBerry's once-dominant hardware obsolete.
- **Outcome:** BlackBerry exited the smartphone business entirely, transitioning to software and licensing with minimal relevance today.

These cases prove that no matter how advanced or profitable a hardware company is, it is not immune to competition or market shifts.

II. The Semiconductor Cycle: Why NVIDIA's Chips Will Not Command Premium Prices Forever

Historically, semiconductors that once sold for thousands of dollars quickly depreciated due to competition and technological advancements. Below is data on Intel's historical chip pricing collapse:

Intel Chip Model	Launch Year	Initial Price	Price 5 Years Later	Price Drop (%)
Intel 386	1985	\$1,000	<\$50	-95%
Intel Pentium 4	2000	\$700	<\$40	-94%
Intel Itanium 2	2002	\$4,000	<\$100	-98%
Intel Core i7-980X Extreme Edition	2010	\$999	<\$100	-90%
Intel Core i9-10900K	2020	\$488	<\$200	-59%

The pattern is clear: once-revolutionary chips rapidly decline in price due to competition, newer technology, and cost reductions. NVIDIA's GPUs, no matter how advanced today, will follow the same trajectory.

III. Three Reasons Why NVIDIA's Current Profits Are Unsustainable

1. Competition from Established Players and New Entrants

- **AMD and Intel** are aggressively developing competing AI chips, with significant advances expected within three years.
- **Google, Amazon, and Microsoft** are investing in their own AI accelerators (TPUs), reducing reliance on NVIDIA.
- **China's semiconductor expansion** aims to produce competitive GPUs, increasing global supply and pricing pressure.

2. AI Hardware Commoditization and Price Declines

- In the early 2000s, high-end CPUs commanded premium pricing, but the industry quickly shifted to lower-cost alternatives.

- AI accelerators, including NVIDIA's GPUs, will face cost-reduction strategies and commoditization, as seen in every past semiconductor cycle.

3. The Potential for a Radical Computing Paradigm Shift

- Just as minicomputers were replaced by PCs and hard drives were replaced by SSDs, AI computing could evolve beyond GPUs.
- Neuromorphic computing, photonic chips, or even quantum computing could emerge within five years, rendering NVIDIA's GPUs outdated.
- Major cloud providers may shift away from GPUs entirely, favoring custom-designed silicon that is cheaper and more efficient.

Conclusion: The Illusion of NVIDIA's Permanent Profitability

Investors must recognize that NVIDIA's current profit margins and market dominance are temporary. Betting that today's premium chip pricing will persist for five years ignores:

- The history of **technological obsolescence** (e.g., DEC, Quantum, BlackBerry).
- The **inevitable price collapse** of advanced semiconductors (e.g., Intel's past chips).
- The **high probability of AI computing evolving beyond GPUs**.

No semiconductor company has ever maintained its pricing power indefinitely. Investors who ignore these historical lessons are assuming that NVIDIA's fate will be different—despite overwhelming evidence to the contrary.

Those who choose to believe the hype pushed by brokerage firms and Wall Street salespeople do so at their own peril. The hard data suggests that NVIDIA's peak profitability is fleeting, and history shows that investing in technology companies at their peak pricing power is a costly mistake.

Recommendation: Investors should exercise extreme caution when evaluating NVIDIA's long-term profitability. The assumption that NVIDIA's AI chips will retain their current price premium for years is historically unfounded, and betting against the cycle of technology disruption has never ended well for investors.

Exploring NVIDIA Through ERS's Analytical Tools

The following section presents five screenshots of Equity Risk Sciences' online investment analysis platform (www.InvestLabs.ai).

These charts highlight different methods for evaluating NVIDIA's price risks and the range of its future stock performance based on ERS's proprietary ratings.

Each chart focuses on a different aspect of analysis, including Net Present Value (NPV) modeling, future returns based on P/S and P/E ratios, and historical risk ratings.

It is important to understand that ERS's tools are not designed to predict what *will* happen, but rather to help investors explore a range of possible outcomes based on different assumptions.

By adjusting key variables such as revenue growth rates, profit margins, and valuation multiples, investors can model various scenarios to assess their potential impact on future returns. This flexibility enables them to explore different outcomes and make informed decisions based on their own projections for NVIDIA's revenue growth, profitability, and anticipated future P/S and P/E ratios. These models also enable users to evaluate potential outcomes based on different selling dates, allowing them to assess the impact of timing on their investment returns.

As you review these charts, keep in mind that different inputs will lead to different outcomes. The data and models presented here serve as a framework for understanding risk and valuation, it is NOT a forecast by ERS of NVIDIA's future stock price. The inputs that the user controls will provide mathematically accurate and precise price changes, based strictly on the users estimates and assumptions.

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Assumptions

 Years of Income

 Revenue Growth Rate (%)

 Profit Margin (%)

 Terminal Value Multiplier

(X times final year's revenue)

 Discount Rate (%)
[Calculate](#)

Net Present Value Summary

Net Present Value	\$960.9 billion
Market Cap	\$3,098.0 billion
Market Cap as % of NPV	322%

Current Metrics

Market Cap	Revenue	Net Income	P/S Ratio	P/E Ratio	Tangible Equity	Revenue Growth Rate	Profit Margin
\$3,097,985	\$113,269	\$63,074	27.4	49.1	\$60,337	50%	50%

3-Year Revenue Projections

Year	Revenue (\$ billion)	Net Income (\$ billion)	NPV of Net Income (\$ billion)
0	\$113.3	\$56.6	\$56.6
1	\$169.9	\$85.0	\$77.2
2	\$254.9	\$127.4	\$105.3
3	\$382.3	\$191.1	\$143.6
3-Year Total	\$807.0	\$403.5	\$326.1

Terminal Value Calculation

Revenue in Future Year 3	\$382.3 billion
Terminal Value: 2 x Revenue in Year 3	\$764.6 billion
Discount Rate	10%
NPV of Terminal Value	\$574.4 billion

Net Present Value Calculation

NPV of 3 Years' Net Income	\$326.1 billion
Current Tangible Equity	\$60.3 billion
NPV of Terminal Value	\$574.4 billion
Net Present Value	\$960.9 billion
Market Cap	\$3,098.0 billion
Market Cap as % of NPV	322%

Net Present Value

Understanding This Chart

This chart represents an NPV (Net Present Value) model, which helps estimate what NVIDIA (NVDA) might be worth today based on future financial expectations. **Importantly, this is not a prediction.** Instead, it's a way to explore different possibilities based on various assumptions.

1. What This Chart Shows

- The **Net Present Value Summary** (top right) compares the **NPV estimate (\$960.9 billion)** with NVIDIA's **current market cap (\$3,098.0 billion)**.
- The **Market Cap as a % of NPV (322%)** suggests that NVIDIA's stock is currently valued at over **3 times** what this particular model estimates as its intrinsic worth.
- The **3-Year Revenue Projections** (middle) show assumed revenue and profit growth over the next three years.

- The **Terminal Value Calculation** (bottom right) estimates NVIDIA's value at the end of the forecast period, based on revenue multiples.
- **Current Metrics** (middle-right) provide key financial figures like revenue, net income, and valuation ratios (Price-to-Sales and Price-to-Earnings).

2. Key Assumptions in This Model

This model is built on **several key assumptions** (shown in the input fields on the left):

- **Revenue Growth Rate: 50% per year:** meaning NVIDIA's revenue is expected to grow by half every year.
- **Profit Margin: 50%:** For every \$1 in revenue, NVIDIA keeps **50 cents as profit**.
- **Discount Rate: 10%:** Used to adjust future cash flow estimates to today's value.
- **Terminal Value Multiplier: 2x revenue in year 3,** estimating the company's future worth.

These **aren't forecasts**, just example inputs. If any of these change—like lower revenue growth or smaller profit margins—the estimated NPV will also change.

3. Why These Assumptions Matter

The purpose of this tool is to help investors see how different assumptions impact estimated value. If an investor believes revenue growth will be lower or higher than 50%, they can change the inputs and see how that affects the results.

4. Understanding the "What-If" Scenarios

ERS **does not predict** the future. Instead, we provide a way to analyze different possibilities.

- If NVIDIA's revenue grows **slower than 50%**, its actual value could be **lower** than what's shown.
- If NVIDIA's profit margins **drop**, the company might not be worth as much as this model suggests.
- If future investors demand a **lower P/S or P/E ratio**, the stock price could decline.

This model does not tell you what will happen—it helps you understand what could happen based on different inputs.

5. Next Steps for Investors

Investors should use this tool as a **starting point**, but they must also consider:

- **Industry trends** (e.g., AI demand, semiconductor cycles)
- **Competitive landscape** (e.g., AMD, Intel)
- **Economic conditions** (e.g., interest rates, inflation)

This is just one model. ERS provides additional tools to help analyze future revenue growth, price-to-sales ratios, and price-to-earnings ratios separately.

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Assumptions

 Years Later:

 Annual Revenue Growth (%):

 Projected Future P/S Ratio:
[Calculate](#)

Results

Current Financials

Current P/S Ratio	Current Revenue	Current Market Cap	Current Price
27.35	\$113,269	\$3,097,985	\$126.50

Revenue Growth As Projected

	Future P/S Ratio	Revenue Growth	Future Revenue	Future Market Cap	Future Price	Gain (Loss)
Probable P/S	1.11	50.00%	\$860,136	\$952,343	\$38.89	-69.3%
-75% Below Projected P/S	1.25	50.00%	\$860,136	\$1,075,171	\$43.90	-65.3%
-50% Below Projected P/S	2.50	50.00%	\$860,136	\$2,150,341	\$87.80	-30.6%
-25% Below Projected P/S	3.75	50.00%	\$860,136	\$3,225,512	\$131.71	4.1%
Projected P/S	5.00	50.00%	\$860,136	\$4,300,682	\$175.61	38.8%
25% Above Projected P/S	6.25	50.00%	\$860,136	\$5,375,853	\$219.51	73.5%
50% Above Projected P/S	7.50	50.00%	\$860,136	\$6,451,024	\$263.41	108.2%

Revenue Growth 25% Above Projected

	Future P/S Ratio	Revenue Growth	Future Revenue	Future Market Cap	Future Price	Gain (Loss)
Probable P/S	1.11	62.50%	\$1,283,447	\$1,421,032	\$58.03	-54.1%
-75% Below Projected P/S	1.25	62.50%	\$1,283,447	\$1,604,309	\$65.51	-48.2%
-50% Below Projected P/S	2.50	62.50%	\$1,283,447	\$3,208,617	\$131.02	3.6%
-25% Below Projected P/S	3.75	62.50%	\$1,283,447	\$4,812,926	\$196.53	55.4%
Projected P/S	5.00	62.50%	\$1,283,447	\$6,417,234	\$262.03	107.1%
25% Above Projected P/S	6.25	62.50%	\$1,283,447	\$8,021,543	\$327.54	158.9%
50% Above Projected P/S	7.50	62.50%	\$1,283,447	\$9,625,851	\$393.05	210.7%

Revenue Growth 25% Below Projected

	Future P/S Ratio	Revenue Growth	Future Revenue	Future Market Cap	Future Price	Gain (Loss)
Probable P/S	1.11	37.50%	\$556,704	\$616,383	\$25.17	-80.1%
-75% Below Projected P/S	1.25	37.50%	\$556,704	\$695,880	\$28.41	-77.5%
-50% Below Projected P/S	2.50	37.50%	\$556,704	\$1,391,761	\$56.83	-55.1%
-25% Below Projected P/S	3.75	37.50%	\$556,704	\$2,087,641	\$85.24	-32.6%
Projected P/S	5.00	37.50%	\$556,704	\$2,783,521	\$113.66	-10.2%
25% Above Projected P/S	6.25	37.50%	\$556,704	\$3,479,402	\$142.07	12.3%
50% Above Projected P/S	7.50	37.50%	\$556,704	\$4,175,282	\$170.49	34.8%

Future Returns Based on Revenue Growth and P/S Ratio

Understanding This Chart

This chart presents a range of potential future stock prices for NVIDIA (NVDA) based on different assumptions about future revenue growth and future Price-to-Sales (P/S) ratios.

1. What This Chart Shows

- The base case scenario assumes that NVIDIA's revenue will grow 50% per year for 5 years and that its future P/S ratio will be 5.
- The table then shows what happens to NVIDIA's future market value and stock price under different assumptions about growth and valuation.
- If revenue growth is higher or lower than projected, or if the P/S ratio is different from 5, the expected stock price will change dramatically.

2. Key Assumptions in This Model

On the left-hand side, you'll see the main inputs:

- **Years Later:** 5 (meaning we're looking ahead five years).
- **Annual Revenue Growth:** 50% (meaning NVIDIA's revenue is assumed to increase by half each year).
- **Projected Future P/S Ratio:** 5 (this is what we assume investors will pay for each \$1 of NVIDIA's sales in five years).

3. How to Read the Results

- The top section (Revenue Growth as Projected) assumes 50% annual revenue growth. It shows a range of future P/S ratios and how they affect the stock price.
- If NVIDIA's P/S ratio falls below expectations, the stock could be worth far less than today.
- If NVIDIA's P/S ratio stays high or increases, the stock could see strong gains.
- The middle section (Revenue Growth 25% Above Projected) explores what happens if revenue grows 62.5% instead of 50%.
- The bottom section (Revenue Growth 25% Below Projected) looks at what happens if revenue grows only 37.5% instead of 50%.

4. Key Insights from the Table

- **High valuations are risky:** Even if revenue grows as expected, a lower P/S ratio (investors paying less for each dollar of sales) could cause significant stock price declines.
- **Revenue growth matters, but so does valuation:** Even if revenue growth is strong, if the market decides to value NVIDIA at a lower multiple, the stock price could still fall.
- **Extreme outcomes are possible:** If NVIDIA's revenue grows much faster than expected and investors continue to pay a high P/S ratio, the stock price could **more than double** from today's levels. Conversely, if growth slows or valuations drop, major losses are possible.

5. Why This Matters for Investors

- This chart **does not forecast the future** but **helps you see the risks and rewards** of different potential outcomes.
- Investors should ask:

- **What growth rate is realistic?** (Historically, few large companies sustain 50% growth for long).
- **What P/S ratio is reasonable?** (Tech companies have had high P/S ratios, but history shows they usually decline as revenue grows).
- **How much risk am I willing to take?**

6. Final Thought: Use This as a Decision-Making Guide

- If you believe NVIDIA's revenue will grow **faster than 50% and its P/S ratio will remain high**, the stock could still rise.
- If you think revenue growth will slow **or** investors will pay less for each dollar of sales, the stock could fall significantly.
- The key takeaway? **Your assumptions matter**—and ERS's tools help you test different ones to make more informed investment decisions.

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Assumptions

Projected Future P/E Ratio:
 Years Later:
 Estimated Annual Revenue Growth (%):
 Estimated Future Profit Margin (%):

Calculate

Results

	Current	Future	Explanation
Revenue	\$113,269	\$382,283	Based on your assumption of a 50.00% annual rate of revenue growth, NVDA's revenue would increase from \$113,269 million to \$382,283 million .
Profit Margin	55.69%	50%	You assumed that NVDA's future profit margin in 3 years would be 50% .
Net Income	\$63,074	\$191,141	Based on your assumption of a 50% profit margin, NVDA's net income would change from \$63,074 million to \$191,141 million .
P/E Ratio	49.12	30	You assumed that NVDA's future P/E ratio in 3 years would be 30 .
Market Cap	\$3,097,985	\$5,734,243	With a P/E ratio of 30, NVDA's market cap would change from \$3,097,985 million to \$5,734,243 million .
Shares O/S	24,490	24,490	You assume no future dilution or share buybacks in the next 3 years. Is that likely?
Price	\$126.50	\$234.15	Based on the current number of shares outstanding, NVDA's price would increase from \$126.50 to \$234.15 .
Gain (Loss)		85.1%	Based on your assumptions, NVDA's shares would gain 85.1% after 3 years.

Future Returns Based on P/E Ratio

Understanding This Chart

This chart presents one possible scenario for NVIDIA's future stock price, based on certain assumptions about future revenue growth, profit margins, and its price-to-earnings (P/E) ratio.

1. What This Chart Shows

- The base case scenario assumes:
 - Revenue will grow 50% per year for 3 years**, increasing from **\$113.3 billion** to **\$382.3 billion**.
 - Profit margin will be 50%**, meaning NVIDIA keeps half of its revenue as net profit.
 - Future P/E ratio will be 30** (compared to its current P/E of 49.12).
- The table then calculates what NVIDIA's market cap, stock price, and potential gain would be under these conditions.
- Based on these inputs, NVIDIA's stock price could rise from \$126.50 to \$234.15, an **85.1% gain** over 3 years.

2. Key Assumptions in This Model

On the **left-hand side**, you'll see the main inputs:

- Projected Future P/E Ratio:** 30 (what investors will pay for each dollar of earnings in 3 years).
- Years Later:** 3 (meaning we're looking ahead three years).
- Estimated Annual Revenue Growth:** 50% (assuming revenue increases by half each year).

- **Estimated Future Profit Margin:** 50% (how much of the revenue becomes profit).

3. How to Read the Results

- If NVIDIA's revenue actually grows as assumed, it will increase to \$382.3 billion.
- If NVIDIA maintains a 50% profit margin, its net income will rise from \$63.1 billion to \$191.1 billion.
- If NVIDIA's P/E ratio drops to 30, its market cap will be \$5.73 trillion, and its stock price will rise to \$234.15.
- The assumption of no dilution (same number of shares outstanding) means all of this increase translates into a stock price gain.

4. What Could Change These Results?

Since this model depends on assumptions, the actual outcome could be very different:

- **Revenue might not grow 50% per year**—Few companies can sustain this level of growth long-term. If growth slows, NVIDIA's future stock price could be lower than the chart suggests.
- **Profit margins might shrink**—Competition, costs, or changing business conditions could reduce NVIDIA's ability to maintain a 50% margin.
- **The P/E ratio could be lower or higher**—Historically, large companies see their P/E ratios shrink as they grow. If NVIDIA's future P/E is **lower than 30**, the stock price will be lower than estimated.

5. Why This Matters for Investors

- This model **does not forecast the future** but helps you **see the risks and rewards** of different possible outcomes.
- Investors should ask:
 - **Is 50% annual growth realistic?** Few large companies maintain this pace.
 - **Will NVIDIA's profit margin hold at 50%?** Tech companies sometimes see margins shrink as they expand.
 - **What will future investors pay for NVIDIA's earnings?** If the market decides a P/E of 30 is too high, the stock could underperform expectations.

6. Final Thought: Use This as a Decision-Making Guide

- If you believe NVIDIA will hit these targets, the stock price could rise significantly.
- If you think growth will slow or the market will pay a lower P/E ratio, the upside may be smaller.
- The key takeaway? Your assumptions matter—and ERS's tools help you test different ones to make more informed investment decisions.

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Assumptions

Projected Future P/E Ratio:

Years Later:

Estimated Annual Revenue Growth (%):

Estimated Future Profit Margin (%):

[Calculate](#)

Results

	Current	Future	Explanation
Revenue	\$113,269	\$310,810	Based on your assumption of a 40.00% annual rate of revenue growth, NVDA's revenue would increase from \$113,269 million to \$310,810 million .
Profit Margin	55.69%	40%	You assumed that NVDA's future profit margin in 3 years would be 40% .
Net Income	\$63,074	\$124,324	Based on your assumption of a 40% profit margin, NVDA's net income would change from \$63,074 million to \$124,324 million .
P/E Ratio	49.12	20	You assumed that NVDA's future P/E ratio in 3 years would be 20 .
Market Cap	\$3,097,985	\$2,486,481	With a P/E ratio of 20, NVDA's market cap would change from \$3,097,985 million to \$2,486,481 million .
Shares O/S	24,490	24,490	You assume no future dilution or share buybacks in the next 3 years. Is that likely?
Price	\$126.50	\$101.53	Based on the current number of shares outstanding, NVDA's price would decrease from \$126.50 to \$101.53 .
Gain (Loss)		-19.7%	Based on your assumptions, NVDA's shares would lose -19.7% after 3 years.

A Different P/E Scenario for NVIDIA's Future Returns

Understanding This Chart

This chart presents a different possible scenario for NVIDIA's future stock price, based on a new set of assumptions about revenue growth, profit margins, and its price-to-earnings (P/E) ratio.

1. What This Chart Shows

This model is based on different assumptions than the previous chart:

- **Revenue growth:** 40% per year for 3 years (compared to 50% in the previous model).
- **Profit margin:** 40% (compared to 50% in the previous model).
- **Future P/E ratio:** 20 (compared to 30 in the previous model).

2. How These Assumptions Affect NVIDIA's Future Value

- With **40% revenue growth per year**, NVIDIA's revenue is projected to rise from **\$113.3 billion** to **\$310.8 billion** in 3 years.
- With a **40% profit margin**, net income is expected to increase from **\$63.1 billion** to **\$124.3 billion**.
- If investors are only willing to pay a **P/E ratio of 20**, the total market cap would be **\$2.85 trillion**, and the projected stock price would be **\$101.53**—a **19.7% decline** from today's price.

3. What This Means for Investors

This scenario shows a **very different outcome** from the previous chart, where revenue grew faster, margins were higher, and the P/E ratio remained higher:

- **Lower growth and lower profitability = lower projected value.**
- **A lower P/E ratio reduces the stock's valuation even further.**

This illustrates a crucial point: **Even if NVIDIA continues to grow, if investors are willing to pay a lower valuation (P/E ratio), the stock price can still decline.**

4. What Could Change These Results?

This outcome depends entirely on **assumptions**, and the actual outcome could be **very different**:

- If NVIDIA grows faster than 40% per year, its stock price could be higher.
- If NVIDIA's profit margins are higher than 40%, earnings would be stronger.
- If investors are willing to pay a higher P/E ratio than 20, the stock price could be significantly higher.
- However, if growth slows even more, or if margins shrink further, the stock could fall more than this model suggests.

5. Why This Matters for Investors

- This chart does not predict the future—it helps investors see the risks and rewards of different possible outcomes.
- Investors should ask:
 - Is 40% revenue growth realistic? Many large companies struggle to maintain this pace long-term.
 - Will NVIDIA's profit margin hold at 40%? Competitive pressures and costs could impact this.
 - What will investors be willing to pay for earnings in 3 years? If the P/E is lower than 20, the stock price could drop further.

6. Final Thought: Use This as a Decision-Making Guide

- If you believe growth will stay strong and valuations will remain high, NVIDIA's stock could perform well.
- If you think growth will slow or valuations will shrink, investors should be prepared for potential declines.
- **Your assumptions matter—ERS's tools help you explore different ones so you can make informed investment decisions.**

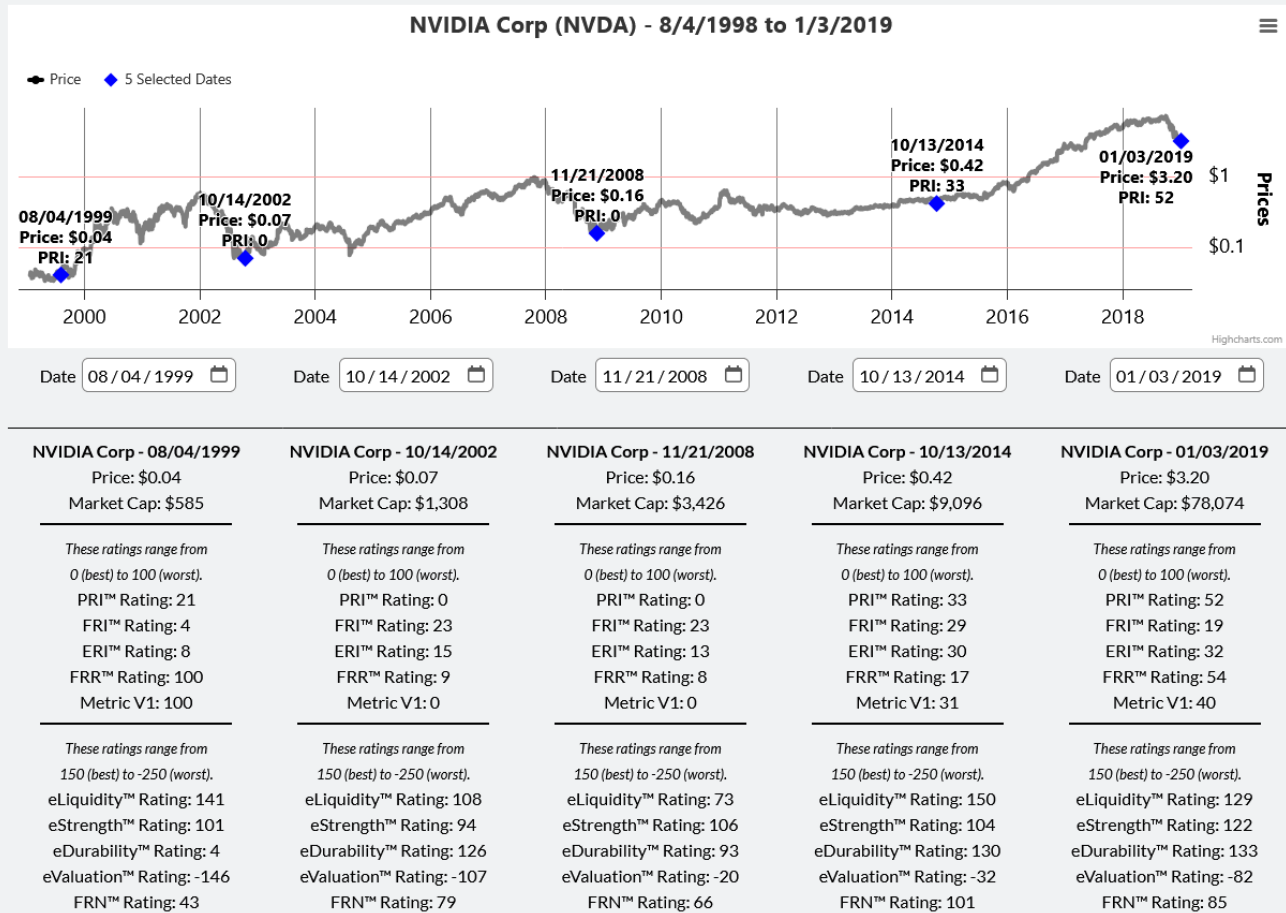
Compare 5 Dates

 Symbol:

In the 5 boxes below, you may select up to 5 dates to examine tables which compare the select stock's financial metrics on those days.

Calculate

New Date List ▼



Historical Analysis of NVIDIA's Ratings and Price Performance

Understanding This Chart

This chart provides a historical analysis of NVIDIA's stock performance over a 20-year period from 1999 to 2019. It highlights five key dates, showing NVIDIA's stock price on those days and the proprietary ERS risk ratings assigned at each point in time.

1. What This Chart Shows

- The top graph displays NVIDIA's historical stock price from 1999 to 2019, with five selected dates marked.
- The data tables below show NVIDIA's market cap, stock price, and ERS's ten proprietary risk ratings on each of these dates.

- Investors can review these ratings and compare them to NVIDIA's stock performance in the years that followed each date.
-

2. Understanding ERS's Ratings

ERS provides ten proprietary risk ratings, which assess NVIDIA's financial health, liquidity, valuation, durability, and other factors.

- Some ratings range from **0 (best) to 100 (worst)**, while others range from **150 (best) to 250 (worst)**.
 - These ratings help investors assess whether a stock is in a high-risk or low-risk position at a given time.
 - By looking at past data, investors can see whether higher risk ratings were followed by declines and lower risk ratings were followed by gains.
-

3. How to Use This Data

- **Look at the dates where NVIDIA had high or low risk ratings.**
 - On 11/21/2008, the Price Risk Indicator™ (PRI™) was 0, meaning extremely low risk—shortly after this, NVIDIA's stock rose significantly.
 - On 10/14/2002, the PRI™ rating was 0 as well, and NVIDIA's stock price eventually climbed.
 - Conversely, on 1/3/2019, the PRI™ rating was 52—indicating higher risk, and shortly after this period, NVIDIA experienced some volatility.
 - **Compare the ratings with price performance.**
 - If low-risk ratings tend to precede major stock increases and high-risk ratings tend to precede declines, that suggests the ratings were effective in identifying risk levels.
 - **Use this as a learning tool for future investing.**
 - This historical model does not predict the future, but it provides a framework for understanding risk.
 - Investors can use similar ratings today to assess whether a stock is in a high-risk or low-risk state and make informed decisions.
-

Next Steps for Investors

- Review how ERS's risk ratings correlated with NVIDIA's past performance.
- Use ERS's current ratings to assess whether NVIDIA (or other stocks) may be in a high-risk or low-risk position today.
- Consider other ERS models for forecasting potential future price changes based on growth, margins, and valuation scenarios.

Closing Thoughts

Investing is about understanding risk, not simply following market trends. The history of investing is filled with examples of overconfidence in seemingly unstoppable companies—only for those valuations to collapse under the weight of reality.

As the CEO of Equity Risk Sciences, I have spent over four decades studying how investors can better protect and grow their capital. Our work in investment data analytics and AI is not just a profession; it is a mission. I began investing in 1976 as a graduate student in New York, and over the years, I have witnessed firsthand how markets punish those who ignore history and reward those who apply careful, data-driven analysis.

This principle is not new. More than 180 years ago, a doctor urged his peers to wash their hands to prevent the spread of disease. At the time, the idea was seen as radical, even absurd. He was dismissed, ridiculed, and ultimately confined to a mental institution. Only later did the discovery of germs validate his findings, forever changing medical science.

Today, investors face a similar challenge. The vast majority have not seen how accurate and powerful data science can be in evaluating financial risk. Many assume that past performance ensures future gains. But data-driven analysis, like the work we do at ERS, demonstrates otherwise.

Our research strongly suggests that NVIDIA has a far greater probability of significant decline than sustained growth at its current valuation. This is not speculation; it is based on statistical probabilities, historical patterns, and fundamental financial analysis.

Investors must ask themselves: Are they relying on wishful thinking, or are they applying rigorous, time-tested evaluation methods? The stakes are high. Understanding risk—rather than simply hoping for continued success—can mean the difference between preserving wealth and suffering catastrophic losses.

The tools to make better investment decisions exist, and exploring them comes at no risk. A simple conversation could open the door to valuable insights, offering a new way to incorporate real science into investment decisions—science that can help and never hurt.

I welcome your confidential, exploratory call on how Equity Risk Sciences might serve your goals.

Raymond Mullaney, CEO

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