

Analyzing Investment Strategies and Risk Management for US Tech Stocks

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Abstract. As the significance of tech stocks in the global market continues to rise, understanding their investment strategies and risk management becomes crucial. This paper explores investment strategies and risk management methods for US tech stocks, providing theoretical support and practical guidance for investors. We analyze three representative tech stocks: Powell Industries (POWL), NVIDIA (NVDA), and Vertiv Holdings Co (VRT), comparing their market performance and risk characteristics using various financial metrics. Our findings highlight that momentum investment strategies, particularly for high-growth stocks like NVIDIA, can yield substantial short-term returns, though they carry reversal risks. The study highlights the importance of individual stock selection and market sentiment on portfolio returns, as most market gains are driven by a small number of outperforming stocks. Effective risk management is critical, with a focus on idiosyncratic and liquidity risks, and hedge funds play an important role in dynamically adjusting strategies to maximize returns and control risks. Our study concludes that investors should balance growth potential with risk management, using a diversified portfolio and financial health indicators to effectively cope with the high volatility of technology stocks.

Keywords: Tech stocks; investment strategies; risk management; portfolio returns.

1. Introduction

The rapid growth of technology stocks in the global market has transformed the industry and reshaped modern investing. The huge growth potential has attracted many investors, but it is accompanied by great volatility and danger. This is a rapidly changing industry that requires understanding of appropriate investment strategies and risk management procedures.

This article analyzes reasonable technical and risk management strategies for US technology stocks, using the following case studies as examples: Powell Industries (POWL), NVIDIA (NVDA), and Vertiv Holdings Co (VRT). We chose these companies because they represent a diverse range of market positions and financial structures, providing insights for investors in technology stocks. This research aims to provide practical insights and recommendations for investors operating in the high-risk environment of technology companies by evaluating their market performance and risk profile using multiple financial indicators.

2. Literature Review

Fama and French tested the Capital Asset Pricing Model (CAPM), which has long been considered the theoretical basis for understanding the relationship between stock returns and market risk [1]. To reveal how market efficiency affects stock prices, it is necessary to study Malkiel's Efficient Market Hypothesis (EMH) [2]. Kahneman and Tversky developed the prospect theory, which pioneered the perspective of behavioral finance by showing how investors' decisions under risk can be biased [3]. Jegadeesh and Titman designed a momentum investing technique that buys companies that have performed well recently and sells companies that have performed poorly to generate residual profits in the short term [4]. Barberis et al. developed a model to explain how investor attitude influenced stock price changes [5]. Bessembinder noticed that the majority of increases in stock market returns have mostly come from a few stocks, which is a case for making wise stock selections [6].

Goyal and Santa-Clara demonstrated how idiosyncratic risk could account for some of the observed performance in common stock portfolios [7]. Pastor and Stambaugh evaluated liquidity risk [8]. Agarwal and Naik (2004) explored the function of hedge funds in risk management [9]. Shalett investigated the market danger posed by "The Magnificent 7", which account for almost one-third of the S&P index due to their high concentration [10].

Momentum investment, while typically successful in the short term, should be cautious of market reversals. Stock prices are greatly impacted by investor sentiment, so be cautious when the optimism peaks. It is important to focus on high-growth technology firms, and selecting the appropriate stocks is critical for portfolio success. Single stock risk and liquidity are the serious threats to individual stocks as well as investors. Investing across asset classes reduces the impact that these risks can have on the portfolio. Hedge funds could mitigate risk by utilizing dynamic tactics to control for and improve return on investment.

3. Research Design

This research examines the business performance and risk of three technological stocks: Powell Industries, NVIDIA, and Vertiv Holdings Co. To evaluate these companies from this company, we utilize a number of key metrics, including market capitalization, beta value, debt to equity ratio, current ratio, asset turnover, profit margin, ROA, ROE, PE, PB, dividend yield, PEG ratio, intrinsic value vs. current stock price, moving averages (MA), and so on. Finally, we seek to grasp the appropriate investment strategies and risk management for technology equities (Table 1).

Table 1. Financial Ratios and Market Metrics Comparison of Powell Industries

Index	Powell Industries, Inc. (POWL)	NVIDIA Corporation (NVDA)	Vertiv Holdings Co (VRT)
Market Cap(B)	2.413	2619	39.744
β	0.78	1.75	1.69
Total Debt Ratio	0.002	0.168	0.391
Current Ratio	1.62	3.53	1.34
Total Asset Turnover	1.13	0.927	0.873
ROA	13.62%	45.28%	5.05%
ROE	29.70%	69.24%	20.05%
Profit Margin	12.05%	53.40%	5.79%
PE ratio	23.78	62.15	101.11
PB ratio	5.62	51.96	27.20
Dividend Yield	0.57%	0.04%	0.10%
PEG ratio(5yr expected)	1.83	1.37	0.58
Intrinsic value	247.73	35.62	12.88
Stock Price Today(5.25)	200.66	1064.69	106.75
50-Day Moving Average	148.82	888.98	87.34
200-Day Moving Average	109.61	622.26	56.86

4. Data Analysis

4.1. Market Performance

NVIDIA stands out with a substantial market cap of \$261.9 billion, highlighting its leadership in the tech sector. Vertiv Holdings Co follows with a market cap of \$3.974 billion, while Powell Industries is much smaller with a market cap of \$241.3 million.

NVIDIA's stock is currently priced at \$1,064.69, significantly higher than its intrinsic value of \$35.62, indicating strong market confidence in its future growth. Powell Industries and Vertiv Holdings Co have stock prices of \$200.66 and \$106.75 respectively, which are above their intrinsic values, but the premiums are less pronounced.

The company's 50-day moving average is \$888.98, and its 200-day moving average is \$622.26, indicating that its stock price is on the rise. Powell Industries and Vertiv Holdings Co may have had similar movement characteristics during the trade, but they had not increased as much. Looking at the contrast of short-term and long-term moving averages, this demonstrates that although NVIDIA's stock is more volatile over a short period, it maintains an upward trend.

4.2. Risk Assessment

Powell Industries is steadier than NVIDIA and Vertiv Holdings Co, which have Beta scores of 1.75 and 1.69, respectively. Market developments are more likely to cause bigger price swings in stocks with higher Beta.

Powell Industries' debt ratio is 0.2%, indicating modest financial leverage. Instead, NVIDIA and Vertiv Holdings Co have 16.8% and 39.1% debt ratios. Financial risk increases with higher debt levels, especially in uncertain economic times. NVIDIA's 3.53 current ratio shows it can satisfy short-term obligations. Powell Industries and Vertiv Holdings Co have 1.62 and 1.34 current ratios. Higher current ratios suggest better short-term debt coverage.

4.3. Profitability Evaluation

NVIDIA is more profitable than Powell Industries' 12.05% and Vertiv Holdings Co.'s 5.79% with a profit margin of 53.40%. Company efficiency and competitiveness are shown by a high profit margin. NVIDIA's ROA and ROE are 45.28% and 69.24%, respectively, greatly outperforming the other two businesses, showing efficient asset usage and high shareholder returns. High ROA and ROE indicate profitability and managerial efficiency.

NVIDIA's PE and PB ratios are 62.15 and 51.96, respectively, implying a greater market valuation than Powell Industries and Vertiv Holdings Co. High PE and PB ratios suggest market growth expectations but may also signify valuation issues. The PEG ratios for Powell Industries, NVIDIA, and Vertiv Holdings Co are 1.83, 1.37, and 0.58, respectively. Vertiv Holdings Co appears to be the most reasonably valued when growth is taken into account. A lower PEG ratio suggests a better balance between growth potential and current valuation.

5. Discussion

5.1. Investment Strategy

Momentum investing has shown strong results in the tech sector, especially for NVIDIA, which has seen impressive recent growth. However, investors should be mindful of the risk of market reversals. According to Jegadeesh and Titman, while momentum strategies work well in the short term, they are sensitive to quick changes in market sentiment [4].

Choosing the right individual stocks is crucial for maximizing portfolio returns. High-growth tech stocks, like NVIDIA, should be a key focus. Bessembinder noted that a large portion of stock market gains comes from a small number of stocks, highlighting the importance of picking high-potential companies [6].

NVIDIA outperforms Powell Industries in market performance and profitability, while Powell Industries manages risks effectively.

5.2. Risk Management

While technology equities can be volatile, they also necessitate robust risk management strategies. Diversification of assets can effectively reduce the specific risks associated with individual equities and liquidity difficulties. The same notion is supported by Goyal and Santa-Clara, who emphasize the risk of individual stocks [7]. Hedge funds employ dynamic strategies that adapt by design in order to better control risks and increase profits. According to Agarwal and Naik, hedge funds can manage risk more effectively than other traditional products due to portfolio diversity and the dynamic character of their investment techniques [9].

To reduce risk, investors can examine stock financials such debt and current ratios. Financial problems are more likely for companies with high debt and insufficient liquidity during economic downturns.

6. Practical Guidance

6.1. For Individual Investors

Thus, when appropriately chosen by studying the financial strength and market trends of its operational industry, as well as rival stocks related to these tech companies, they become a potential investment for individual investors. Sector rotation is essential to monitor investor sentiment and economic cycles. Adjust your portfolio based on changing market conditions. To avoid falling into these traps, investors should use the PEG ratio and other techniques to determine if the stock price is too high.

6.2. For Institutional Investors

Institutional investors can reduce risk and achieve consistent returns by utilizing diversified investment strategies and tools such as hedge funds. When managing a portfolio with a high-tech bias, it is important to consider concentrated systemic risk. Institutional investors can use models such as the Capital Asset Pricing Model (CAPM) and liquidity risk assessment to optimize their portfolios and improve performance.

7. Conclusion

The study examines investment approaches and risk management for U.S. technology stocks such as Powell Industries (POWL), NVIDIA Corporation (NVDA), and Vertiv Holdings Co. Our research shows that while digital companies may experience rapid growth, they also face significant volatility and risk. For example, NVIDIA leads in market capitalization, profitability, and asset utilization, making it an excellent choice for growth investors seeking cash. On the other hand, Powell Industries is a slower growing, less volatile choice with low debt and a stable beta. Some effective investment methods include short-term profitability (e.g., high-growth stocks like NVIDIA) and momentum investing. However, there must be caution in case of market reversals. Furthermore, these stocks require individual stock selection because they are high-growth prospective tech names. Diversification and hedge fund hedging were highlighted as important risk management strategies for protecting against both idiosyncratic and liquidity concerns. Vertiv Holdings may face increased financial risk if the company is unable to satisfy its simple and liberating debt obligations during an economic crisis.

The insights gained from these assessments are beneficial for both individual and institutional investors, offering immediate business value. This study provides investors with the understanding they need to survive in an inconsistent and unpredictable market, as well as an in-depth review of various tech stock investment methods and risk management. Understanding the composition of tech

stock performance provides clarity to an industry that is still struggling with them, resulting in better portfolio management methods for all market participants and a healthier financial climate. Insights into how stock performance and financial health affect investor opinion and investment decisions assist companies better plan their future finances, as well as aid in effective investor relations.

This analysis is nearly exclusively reliant on secondary data, which may provide a more complete picture of the ever-changing links between tech stock performance and investor behavior. One specific approach is to conduct surveys and interviews with investors: such research might be used to supplement existing models by providing primary data on how real individuals consider possibilities when making investment decisions. Furthermore, a bigger number of diverse tech companies can serve to provide a more comprehensive overall picture of investment strategies and risk management in the industry. More complex econometric modeling and real-time data analysis might strengthen the strength of the findings. Future research that overcome these constraints may provide more granularity and relevance for actionable insights, aiding the creation of improved investing policies in tech stocks venues with an ephemeral view on risk perception.

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