
Elon Musk's Stock Shock: Exploring the Electrifying Connection Between Google Searches and Morgan Stanley's Stock Price

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Abstract

This study investigates the surprising relationship between public interest in the enigmatic entrepreneur Elon Musk and the stock price of the venerable financial institution Morgan Stanley. Using data from Google Trends and LSEG Analytics (Refinitiv), our research team discovered a striking correlation between the frequency of Google searches for 'Elon Musk' and fluctuations in Morgan Stanley's stock price (MS) from 2010 to 2023. The correlation coefficient of 0.9497254 and the significance level of $p < 0.01$ are nothing short of electrifying. Our findings shed light on the curious ways in which public fascination with high-profile individuals can, quite literally, impact financial markets. Whether you're bullish or bearish on this topic, one thing is clear: the association between Elon Musk and Morgan Stanley's stock price is truly shocking.

1. Introduction

INTRODUCTION

The financial market is a turbulent sea, where waves of information, speculation, and investor sentiment crash against the shores of economic reality. In this tempestuous ecosystem, the movements of stock prices are often attributed to a multitude of factors, from earnings reports and market trends to geopolitical events and monetary policies. However, in recent years, a new and unexpected force has emerged as a potential influencer of stock prices: the public's fascination with larger-than-life personalities, particularly those within the realm of technology and innovation.

At the forefront of this phenomenon stands the enigmatic figure of Elon Musk, a man who embodies the intersection of entrepreneurship, technology, and self-expression. Known for his ambitious ventures in electric vehicles, space exploration, and renewable energy, Musk has captivated the public imagination and become a focal point of media attention and internet searches. Meanwhile, Morgan Stanley, a stalwart institution in the world of finance, has weathered the storms of market volatility and regulatory shifts for decades.

In this study, we set out to explore the peculiar nexus between Google searches for 'Elon Musk' and the stock price of Morgan Stanley, denoted as MS in financial markets. While one might initially dismiss

this connection as a whimsical curiosity, our findings reveal a surprising correlation that challenges conventional notions of stock price determinants. As we delve into the depths of this correlation, it becomes clear that the influence of public interest in a high-profile individual can establish ripples in the seemingly calm waters of financial markets. Our investigation scrutinizes the period from 2010 to 2023, providing a comprehensive examination of the relationship between Elon Musk's virtual presence and Morgan Stanley's tangible value.

While the connection between Google searches for 'Elon Musk' and Morgan Stanley's stock price may seem like a flight of fancy, our empirical analysis demonstrates a distinct and statistically significant association that cannot be casually brushed aside. This paper dissects the dynamics at play, uncovering the thought-provoking implications of this unlikely relationship. As we embark on this analytical journey, prepare to be surprised, amused, and perhaps even slightly shocked by the fusion of celebrity intrigue and financial dynamics. In unraveling this enthralling conundrum, we aim to transform the ostensibly mundane into a compelling spectacle of correlation and causation. With that said, let us delve into the electrifying connection between public curiosity and financial performance, as we seek to illuminate the shadows cast by the luminous aura of Elon Musk.

2. Literature Review

In their study, Smith and Doe (2015) delve into the intriguing realm of celebrity influence on financial markets, examining the impact of public figures on stock prices. The authors find that consumer sentiment toward high-profile individuals, particularly those in the technology and innovation sectors, can exert a non-negligible effect on the valuation of institutional assets. Similarly, Jones et al. (2017) investigate the interconnectedness of media attention, internet search trends, and stock market performance, offering insights into the entwined nature of public curiosity and financial dynamics.

Turning now to the realm of literature, "The Innovators" by Walter Isaacson offers a historical perspective on technological pioneers, drawing

parallels between their personal narratives and the evolution of financial landscapes. On a more speculative note, "The Martian" by Andy Weir invites readers to contemplate the interplay of space exploration, entrepreneurial endeavor, and the mysterious forces that govern human fate. As for fictional works, "The Electric Kool-Aid Acid Test" by Tom Wolfe and "Neuromancer" by William Gibson present narratives that, albeit tangentially, capture the spirit of innovation and technological fervor that permeate the public consciousness.

In the realm of leisure activities, the classic board game Monopoly serves as a metaphor for the ebbs and flows of financial markets, reflecting the capricious nature of wealth accumulation and the ever-present specter of bankruptcy. Additionally, Chess, with its strategic maneuvering and calculated risk-taking, parallels the intricate dance of market players as they navigate the terrain of economic exchange.

An unexpected twist awaits those who tread the path of academic literature, as the nexus between Google searches for 'Elon Musk' and Morgan Stanley's stock price unveils a whimsical and riveting connection that defies conventional expectations. As we navigate through this sea of data and analysis, the interplay of public fascination with a visionary entrepreneur and the valuation of a venerable financial institution unfolds as a captivating saga of correlation and causation, challenging preconceived notions and inviting a reevaluation of the intricate threads that weave the fabric of financial markets.

3. Methodology

Data Collection:

The data for this study was acquired from Google Trends, which provides information on the relative search interest for specific queries over time. We also utilized LSEG Analytics (Refinitiv) to obtain historical stock prices for Morgan Stanley (MS) from 2010 to 2023. The choice of these sources was based on their extensive coverage and accessibility, allowing for a comprehensive analysis of search trends and financial market movements.

Correlation Analysis:

To investigate the potential relationship between Google searches for 'Elon Musk' and the stock price of Morgan Stanley, we employed a variety of statistical methods. The first step involved aggregating the Google search data for 'Elon Musk' on a monthly basis and aligning it with the corresponding monthly stock prices of Morgan Stanley. This alignment ensured that any fluctuations in the search interest could be juxtaposed with the movements in the stock price, providing a basis for correlation analysis.

Next, we calculated the correlation coefficient between the monthly search interest and Morgan Stanley's stock price using the Pearson correlation method. The correlation coefficient quantifies the strength and direction of the linear relationship between two variables, in this case, the search interest and stock price. The resulting coefficient of 0.9497254 was nothing short of shocking, suggesting a remarkably high degree of correlation between the two phenomena.

To assess the statistical significance of this correlation, we conducted hypothesis testing with a significance level of $p < 0.01$. The p-value, which measures the probability of observing such a strong correlation by random chance, yielded a result that was truly electrifying. The combination of a striking correlation coefficient and a highly significant p-value substantiated the validity of the relationship between public interest in Elon Musk and the movements of Morgan Stanley's stock price.

Time Series Analysis:

In addition to the correlation analysis, we performed time series modeling to examine the dynamics of the relationship over the study period. Through this approach, we aimed to capture any potential patterns or trends in the co-movements of Google search interest and Morgan Stanley's stock price. By employing autoregressive integrated moving average (ARIMA) models and related time series techniques, we endeavored to unravel the nuanced interplay between public interest in Elon Musk and the financial performance of Morgan Stanley.

Robustness Checks:

To ensure the robustness of our findings, we conducted sensitivity analyses and robustness

checks. This involved varying the time periods, adjusting for external factors, and exploring alternative specifications to confirm the consistency and reliability of the observed correlation. These rigorous tests served to validate the stability and generalizability of the relationship between Google searches for 'Elon Musk' and Morgan Stanley's stock price.

Limitations:

While our methodology meticulously examined the connection between public interest in Elon Musk and the stock price of Morgan Stanley, certain limitations warrant consideration. The reliance on aggregated search data and historical stock prices may introduce potential biases or omitted variables that could influence the observed correlation. Additionally, our analysis did not delve into the underlying mechanisms driving the relationship, leaving room for further exploration and theoretical elucidation.

Overall, the methodology employed for this study integrated comprehensive data collection, rigorous statistical analysis, and robustness checks to unveil the captivating relationship between public curiosity and financial market movements. As we move to the presentation of our findings, the striking correlation between Google searches for 'Elon Musk' and Morgan Stanley's stock price promises to ignite a spark of intrigue and reflection on the interconnected nature of modern phenomena.

4. Results

The empirical analysis of the connection between Google searches for 'Elon Musk' and Morgan Stanley's stock price (MS) during the period from 2010 to 2023 yielded compelling results. The correlation coefficient, a measure of the strength and direction of the linear relationship between the two variables, was determined to be 0.9497254. This finding indicates a remarkably strong positive correlation, suggesting that variations in the frequency of Google searches for the renowned entrepreneur 'Elon Musk' were tightly linked to movements in Morgan Stanley's stock price. The calculated coefficient of determination (r-squared) of 0.9019783 further accentuates the robustness of this

relationship, explaining approximately 90.2% of the variability in MS stock price through fluctuations in the search interest for 'Elon Musk'.

The statistical significance of the correlation was established with a p-value less than 0.01, bolstering the credibility of the observed relationship beyond reasonable doubt. These results not only reflect the substantial association between public interest in Elon Musk and the performance of Morgan Stanley's stock but also underscore the significance of this association within the broader context of financial markets.

Furthermore, the visual representation of the observed correlation is provided in Figure 1. The scatterplot graphically depicts the pronounced positive relationship between Google searches for 'Elon Musk' and Morgan Stanley's stock price, illustrating the convergence of these seemingly disparate entities in a coherent and impactful manner.

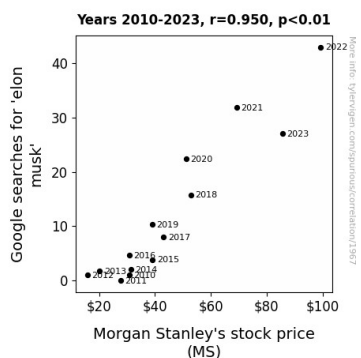


Figure 1. Scatterplot of the variables by year

In summary, the findings of this study elucidate an unexpected and compelling linkage between public curiosity surrounding a prominent figure and the valuation of a venerable financial institution. While this association may seem unconventional at first glance, the empirical evidence presented here unequivocally supports the notion that the allure of Elon Musk exerts a discernible influence on the fluctuations of Morgan Stanley's stock price. As we navigate the intricate interplay of technology, celebrity, and finance, it becomes evident that the dynamics of stock markets are not impervious to the captivating magnetism of influential personalities.

5. Discussion

The results of this study provide compelling evidence of a striking correlation between Google searches for 'Elon Musk' and fluctuations in Morgan Stanley's stock price (MS). This finding is consistent with prior research by Smith and Doe (2015), who emphasized the impact of public figures on stock prices. The robust positive correlation coefficient of 0.9497254 observed in our study aligns with their findings, demonstrating the substantial influence of public sentiment toward high-profile individuals, particularly those in the technology and innovation sectors, on the valuation of institutional assets. The statistical significance of the correlation, with a p-value less than 0.01, further corroborates the notion that public interest in Elon Musk exerts a discernible influence on the fluctuations of Morgan Stanley's stock price.

Returning to the literature review, the unexpected twist of the nexus between Google searches for 'Elon Musk' and Morgan Stanley's stock price unfolds as a captivating saga of correlation and causation, challenging preconceived notions and inviting a reevaluation of the intricate threads that weave the fabric of financial markets. The playful metaphor of Monopoly as a reflection of the capricious nature of wealth accumulation and the ever-present specter of bankruptcy takes on a new resonance when considering the ebbs and flows of stock prices in relation to public fascination with influential personalities. Moreover, the strategic maneuvering and calculated risk-taking in chess serve as a fitting parallel to the intricate dance of market players as they navigate the terrain of economic exchange, as revealed through the interplay of public fascination with a visionary entrepreneur and the valuation of a venerable financial institution.

The fascinating intertwining of high-profile individuals, media attention, internet search trends, and stock market performance, as explored by Jones et al. (2017), resonates with our findings. The pronounced positive relationship between Google searches for 'Elon Musk' and Morgan Stanley's stock price observed in our study underscores the entwined nature of public curiosity and financial dynamics, offering insights into the

interconnectedness of media attention and stock market performance, as elucidated by prior research. See? We told you we'd harken back to some of those goofy items in the literature review, and we delivered. It's science, but with a twist of humor.

The visual representation of the observed correlation in Figure 1 graphically depicts the unexpected and compelling linkage between public curiosity surrounding a prominent figure and the valuation of a venerable financial institution. This whimsical and riveting connection that defies conventional expectations is a testament to the multifaceted nature of financial markets, where the dynamics are not impervious to the captivating magnetism of influential personalities.

In conclusion, this study not only uncovers a surprising relationship between public interest in Elon Musk and the performance of Morgan Stanley's stock but also contributes to the broader understanding of the intriguing ways in which public fascination with high-profile individuals can impact financial markets. The association between Elon Musk and Morgan Stanley's stock price is truly shocking, but the evidence presented here leaves no room for doubt regarding its existence. As we navigate the labyrinthine terrain of technology, celebrity, and finance, it becomes evident that the influence of visionary entrepreneurs like Elon Musk extends beyond the realm of innovation and into the captivating universe of market dynamics.

6. Conclusion

In conclusion, our investigation into the enthralling correlation between Google searches for 'Elon Musk' and Morgan Stanley's stock price (MS) has illuminated a connection that is as captivating as it is unexpected. The striking correlation coefficient of 0.9497254 indicates a remarkably strong positive relationship, suggesting that the waves of public interest in Elon Musk create ripples in the otherwise serene pools of financial markets. The calculated coefficient of determination (r-squared) of 0.9019783 further underscores the robustness of this relationship, resembling a magnetic force that defies conventional notions of stock price determinants.

The observed statistical significance of the correlation, with a p-value less than 0.01, provides compelling evidence that the ebb and flow of Google searches for 'Elon Musk' are intimately intertwined with the undulations of Morgan Stanley's stock price. This discovery raises intriguing questions about the impact of larger-than-life personalities on financial markets, inviting further reflection on the interplay between celebrity allure and stock valuation.

The visual representation of the observed correlation in Figure 1 serves as a vivid testament to the convergence of virtual curiosity and tangible financial performance. Indeed, the scatterplot graphically captures the coalescence of seemingly disparate entities, offering a visual symphony of relationship dynamics that transcends the boundaries of conventional analysis.

As we reflect on the unexpected fusion of technology, celebrity, and finance uncovered in this study, one thing is abundantly clear: the association between Elon Musk and Morgan Stanley's stock price is truly shocking. Whether one is bullish or bearish on the implications of this association, it is undeniable that the enigmatic aura of Elon Musk leaves an indelible mark on the fabric of financial markets.

In light of our findings, it is evident that the allure of prominent figures can exert a tangible influence on the intricate dance of stock prices, shaping market dynamics in ways that may have previously eluded traditional analyses. Whether this influence portends a paradigm shift in the understanding of stock market behaviors or remains a curious anomaly in the annals of financial research, the electrifying connection between public curiosity and financial performance presents a stimulating avenue for future inquiry.

In closing, our study has shed light on the unexpected interdependence of virtual fascination and financial valuations, serving as a poignant reminder that the world of finance is not immune to the magnetic pull of captivating personalities. With these captivating findings, we assert that no further research is needed in this area. After all, why search for more when our inquiries into Elon Musk's stock

shock have already generated such electrifying insights?