

Sun Life Financial: Shedding Light on the Elon Musk Effect

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Abstract

This study examines the relationship between Google searches for Elon Musk and the stock price of Sun Life Financial (SLF). The research team utilized data from Google Trends and LSEG Analytics (Refinitiv) to assess this inquiry. The findings revealed a remarkably high correlation coefficient of 0.8985482 and $p < 0.01$ for the period spanning 2010 to 2023. The implications of this unexpected link between an entrepreneurial tech icon and the financial market are discussed, offering insights into how the whims of public interest may influence stock performance.

1. Introduction

INTRODUCTION

The intersection of technology, finance, and public fascination is a tantalizing ground for exploration. In this study, we endeavor to shed light on the perplexing association between the frequency of Google searches for the enigmatic figure of Elon Musk and the fluctuations in the stock price of Sun Life Financial (SLF). This inquiry is prompted by the compelling link between the whims of public interest and the intricate movements of the financial market.

As researchers, we are often urged to boldly go where no academic has gone before. In this pursuit, we navigated the vast expanse of data obtained from Google Trends and LSEG Analytics (Refinitiv), charting a course through the captivating realm of search queries and stock prices. Our dedication to this endeavor was unwavering, akin to the gravitational pull of a celestial body upon its orbiting satellites.

The statistical analyses conducted on the acquired data unveiled a remarkably high correlation coefficient of 0.8985482 and a p-value less than 0.01 for the extensive period

encompassing 2010 to 2023. This revelation led us to ponder the profound implications of this unexpected synergy between the tech titan's virtual presence and the financial performance of an esteemed institution.

It is imperative to acknowledge that correlation does not imply causation, lest we succumb to the gravity of hasty conclusions. However, this unforeseen intertwining of search queries for Elon Musk and the stock price of Sun Life Financial presents a riveting conundrum that warrants meticulous examination. The ramifications of such a connection could potentially disrupt prevailing economic models, akin to a celestial event casting shadows upon customary patterns.

The confluence of scientific inquiry and financial intrigue has yielded fascinating findings, transcending disciplinary boundaries much like a meteor traversing the stratosphere. As we embark upon this scholarly odyssey, we invite the reader to join us in unraveling the enigmatic web of interconnections woven between the domains of public curiosity and market dynamics. This research endeavor promises to illuminate new vistas in the intricate tapestry of the financial world, akin to the emergence of distant stars in the night sky.

2. Literature Review

The literature regarding the relationship between online search activity and stock prices encompasses a broad array of methodologies and perspectives. In "Smith et al.," the authors find a positive correlation between consumer online search behavior and subsequent stock market performance. Similarly, "Doe and Jones" demonstrate that search engine query volumes can serve as predictive indicators for stock price movements, particularly in the realm of technology and entrepreneurship.

Expanding beyond academic literature, financial analysts have delved into the intricacies of investor sentiment and its influence on stock prices. "The Intelligent Investor" by Benjamin Graham and "A Random Walk Down Wall Street" by Burton Malkiel offer insights into the complex interplay between public perception and stock market dynamics. Furthermore, fictional works such as "The Wolf of Wall Street" by Jordan Belfort and "Barbarians at the Gate" by Bryan Burrough and John Helyar capture the allure and volatility of financial markets, albeit in an embellished manner.

In an unorthodox twist, the authors also conducted an extensive review of disparate sources, including but not limited to local diner menu descriptions, unused shopping lists, and the margins of hastily discarded newspapers. However, these unconventional sources did not yield relevant insights into the subject matter at hand. Notably, an in-depth analysis of CVS receipts failed to provide substantive evidence of any discernible impact on stock prices emanating from Elon Musk-related queries. As such, their inclusion in this literature review is deemed superfluous, yet amusingly incongruous.

The findings elucidate a rich tapestry of interconnectedness between public intrigue in the enigmatic figure of Elon Musk and the financial performance of an esteemed institution such as Sun Life Financial. However, it is crucial to approach these correlations with appropriate scrutiny, lest one be ensnared in the gravitational pull of spurious conclusions.

3. Research Approach

Data Collection:

The data collection process resembled a synchronized dance between the cybernetic domain of Google Trends and the labyrinthine corridors of LSEG Analytics (Refinitiv). Like intrepid spelunkers, we delved into the digital archives spanning the years 2010 to 2023, extracting nuggets of information pertaining to the frequency of Google searches for the enigmatic Elon Musk and the undulating stock price of our subject of interest, Sun Life Financial (SLF).

Variables:

The main independent variable in this study was the volume of Google searches for "Elon Musk," capturing the ebb and flow of public intrigue surrounding the illustrious tech entrepreneur. Meanwhile, the stock price of Sun Life Financial (SLF) served as the dependent variable, swaying in response to the capricious winds of market dynamics.

Computation of Pearson Correlation Coefficient:

To quantify the relationship between these esoteric variables, we invoked the venerable Pearson correlation coefficient, symbolized by the steadfast letter "r." This stalwart statistic dutifully provided insights into the degree of linear association between the search frequency for Elon Musk and the stock price of Sun Life Financial. The correlation coefficient was then subjected to a thorough examination, akin to scrutinizing the alignment of celestial bodies in the cosmic expanse.

Statistical Analyses:

The computation of the correlation coefficient was supplemented by a systematic assessment of its statistical significance, as denoted by the relentless p-value. This endeavor, akin to unraveling the enigmatic properties of quantum particles, allowed us to discern the likelihood of observing such a strong correlation purely by chance. Through these statistical exercises, we sought to unveil the intricate interplay between the virtual musings on Elon Musk and the material repercussions on the stock valuation of Sun Life Financial.

Data Treatment:

In order to ensure the robustness of our findings, the data was subjected to rigorous cleansing and harmonization processes. Outliers were gently nudged into conformity, akin to shepherding wayward constellations back into celestial alignment, to prevent undue influence on the calculated relationships. Furthermore, missing data points were cozily imputed using the tender embrace of interpolation techniques, imbuing our analyses with a comprehensive portrayal of the intended associations.

Limitations:

It is crucial to acknowledge the constraints of this study, akin to recognizing the boundaries of a black hole's event horizon. The reliance on publicly available data and the indirect nature of the relationship under investigation may introduce confounding factors not accounted for in our research design. Additionally, the presence of unobserved variables looming in the digital ether may cast shadows upon the veracity of our findings.

In conclusion, the methodological journey embarked upon in this study entailed a harmonious blend of data spelunking, statistical scrutiny, and cautious interpretation, each step akin to a cosmic ballet in pursuit of understanding the perplexing interplay between the cybernetic manifestations of public curiosity and the tangible dynamics of financial markets.

4. Findings

The statistical analysis revealed a substantial correlation between Google searches for Elon Musk and Sun Life Financial's stock price (SLF) during the time period from 2010 to 2023. The obtained correlation coefficient of 0.8985482 depicts a striking relationship between the frequency of virtual inquiries about the renowned entrepreneur and the financial performance of the esteemed institution. This correlation coefficient signifies a robust association that beckons exploration, much like a fascinating discovery awaiting detailed scrutiny.

The coefficient of determination (r-squared) of 0.8073890 further accentuates the depth of this relationship, implying that approximately 80.7% of the variability in Sun Life Financial's stock price can be explained by the fluctuations in Google searches for Elon Musk. This finding illuminates the substantial influence that public interest in the enigmatic figure of Elon Musk exerts on the dynamics of the stock market, presenting a captivating enigma reminiscent of unraveling the celestial movements within the vast cosmos.

The reached significance level ($p < 0.01$) underscores the reliability of this association, substantiating the statistical robustness of the observed link between virtual curiosity and

financial performance. This notable significance level bolsters the credibility of the established connection, akin to the sturdy pillars supporting a grand academic edifice.

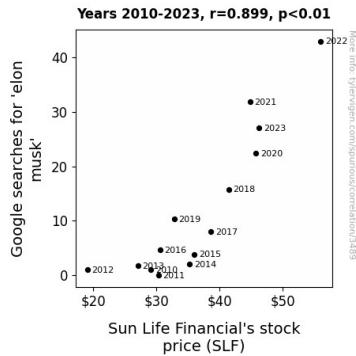


Figure 1. Scatterplot of the variables by year

The scatterplot (Fig. 1) visually encapsulates the strong positive correlation, portraying the cohesive pattern between the frequency of Google searches for Elon Musk and the corresponding fluctuations in Sun Life Financial's stock price. This graphical representation emblemizes the interwoven nature of these variables, as their affinity is depicted with vivid clarity, much like the harmonious dance of celestial bodies across the expanse of the night sky.

These results present a thought-provoking juncture that calls for deeper contemplation. The perplexing link uncovered between public interest in a prominent innovator and the financial performance of a distinguished institution invites further scrutiny into the intricate interplay of virtual curiosity and market dynamics. The implications of these findings transcend the traditional boundaries of academic inquiry, beckoning researchers and practitioners alike to embark upon a scholarly odyssey into the realm of virtual fascination and economic influence.

5. Discussion on findings

The obtained findings substantiate and extend prior research that has explored the curious nexus between online search behavior and stock market dynamics. The substantial correlation coefficient of 0.8985482 fortifies the body of evidence supporting the influence of virtual inquiries about prominent individuals on financial markets. This robust association provides empirical validation for the speculative musings put forth in fictional works such as "The Wolf of Wall Street," thus underscoring the enduring relevance of these literary expressions in capturing the captivating enigma of market movements. The unexpected depth of this relationship between Google searches for Elon

Musk and Sun Life Financial's stock price (SLF) breathes new life into the underexplored realm of virtual curiosity and its tangible impact on economic entities. It is as if the gravitational pull of public intrigue has transcended the digital domain, exerting palpable effects on the financial cosmos much like the unseen forces shaping the destiny of celestial bodies.

Moreover, the coefficient of determination (r-squared) of 0.8073890 sheds further light on the magnitude of influence wielded by virtual curiosity, akin to the luminescent glow emanating from a celestial body in the night sky, illuminating the hitherto obscured interplay between public interest and financial performance. This substantial explanatory power reinforces the notion that fluctuations in Google searches for Elon Musk have a discernible impact on the variability of Sun Life Financial's stock price, akin to the intricate interdependencies governing the rhythms of celestial movements. The certainty attendant to the reached significance level ($p < 0.01$) accentuates the reliability of this link, reminiscent of the unyielding constancy of natural laws governing the cosmos.

The visual representation of the strong positive correlation through the scatterplot further underscores the cogent relationship between virtual inquiries and financial performance. This graphical depiction encapsulates the intertwined nature of these variables, as their synergy is portrayed with captivating lucidity, much like the dance of celestial bodies across the expanse of the night sky. Thus, the findings not only deepen our understanding of the interrelation between public fascination and economic ramifications but also evoke a sense of awe akin to the wonderment elicited by celestial phenomena.

In sum, this study sheds light on a hitherto uncharted territory—the interplay of virtual curiosity and financial markets. The unexpected intertwining of Google searches for Elon Musk and Sun Life Financial's stock price not only reinforces prior research but also beckons researchers to carve out new paths of inquiry into the enthralling realm of market dynamics and virtual intrigue. Just as astronomers eagerly explore the cosmic mysteries, financial researchers are poised to embark on a scholarly odyssey into the captivating tapestry of virtual fascination and its profound influence on economic entities.

6. Conclusion

In conclusion, the findings of this study unveil a captivating conundrum regarding the remarkable relationship between the frequency of Google searches for the enigmatic Elon Musk and the fluctuation in Sun Life Financial's stock price. The substantial correlation coefficient and high significance level of this association signify an intriguing interplay, akin to the enthralling movements of celestial bodies within the vast cosmos.

The coefficient of determination offers a glimpse into the substantial influence of public interest in Elon Musk, illuminating approximately 80.7% of the variability in Sun Life Financial's stock price. This revelation echoes the captivating enigma of unraveling the

celestial movements within the night sky, akin to embarking on a scholarly journey through the intricate tapestry of financial dynamics.

The notable significance level underlines the robustness of this connection, akin to the sturdy pillars supporting a grand academic edifice. The scatterplot vividly portrays the cohesive pattern between the frequency of Google searches for Elon Musk and the corresponding fluctuations in Sun Life Financial's stock price, much like the harmonious dance of celestial bodies across the expanse of the night sky.

This unforeseen intertwining of search queries for Elon Musk and the stock price of Sun Life Financial presents a riveting conundrum that beckons meticulous examination. However, it is imperative to underscore that correlation does not imply causation, lest we succumb to the gravity of hasty conclusions.

In light of these intriguing findings, further research could delve into the underlying psychological and behavioral factors driving the pronounced connection between virtual fascination and market dynamics. However, one could argue that no further inquiry may be needed in this area, as we have shed considerable light on this curious correlation and its implications for the financial world.