

The Musk of Google Searches: A Quantitative Analysis of Elon Musk's Impact on QUALCOMM's Stock Price

Connor Hart, Austin Tucker, Gabriel P Trudeau

Center for Research

In this research paper, we endeavor to elucidate the entangled relationship between public curiosity about Elon Musk and its consequence on the stock price of QUALCOMM. As the saying goes, "Musk's influence on technology is electric," and, indeed, our study reflects just that. Through the utilization of Google Trends data and LSEG Analytics (Refinitiv), we conducted a comprehensive analysis spanning from 2005 to 2023. Our findings unveil a remarkably high correlation coefficient of 0.9467784 and a statistically significant p-value of less than 0.01, illustrating the strong link between Google searches pondering "who is Elon Musk" and the fluctuations of QUALCOMM's stock price. It seems Musk's influence extends beyond the stars and into the stock market, and our research sheds light on this celestial connection.

Elon Musk: the man, the myth, the tweet-happy legend. It's no secret that the tech magnate's every move garners widespread attention. From his ambitious space ventures to his eyebrow-raising social media presence, the public's fascination with Musk seems to know no bounds. So, it comes as no surprise that even a mere Google search for "who is Elon Musk" could potentially send shockwaves through a technology giant like QUALCOMM. It appears that in the world of stocks, Musk's influence is simply out of this world!

Speaking of shockwaves, did you hear about the electrical engineer who couldn't resist making bad puns? He just couldn't conduct himself properly.

In the realm of finance, understanding the impact of public sentiment on stock prices is crucial, akin to understanding the importance of good timing when telling a pun. As such, our study aims to explore the intricate dance between public curiosity about Elon Musk and the stock price of QUALCOMM. We seek to unpack the extent to which the ebb and flow of Google searches contemplating the enigma of Musk translates to fluctuations in QUALCOMM's stock price. Brace yourselves, because we're about to dive headfirst into the electrifying realm of search data and stock market movements.

Now, hold on to your hats (or better yet, your Tesla hats) because we are about to reveal some truly "shocking" results. In a manner akin to gaining insight into a thunderstorm, our research aims to shed light on the electric connectivity between Musk's public persona and QUALCOMM's stock performance. So, fasten your seatbelts and prepare for a ride that's as exhilarating as a SpaceX launch.

Review of existing research

In "The Influence of Public Curiosity on Stock Price," Smith et al. delve into the realms of behavioral economics and market psychology to examine the impact of public interest in prominent figures within the tech industry on stock prices. The study's findings underscore the relevance of celebrity intrigue and its potential influence on stock market dynamics. Similarly, Doe's analysis in "Google Searches and Stock Prices: A Quantitative Exploration" elucidates the intriguing correlation between Google search trends and stock price movements, demonstrating a compelling link between public curiosity and market outcomes.

Speaking of market outcomes, did you hear about the investor who fell in love with the stock market? Unfortunately, it was unrequited - the market never returned their calls.

In "The Innovators: How a Group of Hackers, Geniuses, and Geeks Created the Digital Revolution," Walter Isaacson provides a historical account of pioneering figures in the technology sector, offering insights into the charismatic leaders who have left an indelible mark on the industry. Likewise, "Elon Musk: Tesla, SpaceX, and the Quest for a Fantastic Future" by Ashlee Vance presents a comprehensive profile of Elon Musk, delving into his enigmatic persona and visionary endeavors that have captivated the public imagination. These real-world case studies serve to contextualize the profound impact of influential tech personalities on market dynamics, signaling the profound interplay between individual figures and the collective sentiment of investors.

Turning to the realm of fiction, "The Electric Kool-Aid Acid Test" by Tom Wolfe may not directly relate to our study, but its eccentric exploration of counterculture and technological innovation offers a whimsical parallel to the enigmatic allure of Elon Musk and its potential repercussions on financial markets. Similarly, "The Hitchhiker's Guide to the Galaxy" by Douglas Adams, while undoubtedly a departure from traditional finance

literature, encapsulates the spirit of cosmic exploration and the unforeseeable twists that may arise in the pursuit of understanding otherworldly phenomena such as the correlation between Google searches for "who is Elon Musk" and QUALCOMM's stock price. No dolphins were harmed in the making of this literature review.

Finally, in a bid to cast a wide net in our pursuit of understanding public sentiment surrounding Elon Musk, we even considered unconventional sources such as grocery store receipts, the back of cereal boxes, and perhaps most surprisingly, fortune cookies. While these sources did not yield direct insights, they did offer a much-needed dash of levity to our research process. Remember, a good laugh is worth more than a handful of stock options!

Stay tuned for more surprising findings as we delve deeper into the electrically charged connection between public curiosity about Elon Musk and the fluctuations of QUALCOMM's stock price.

Procedure

To unravel the mystique of Elon Musk's influence on QUALCOMM's stock price, we embarked on a data odyssey through the digital domain, navigating the rivulets and currents of Google Trends and LSEG Analytics (Refinitiv) from 2005 to 2023. Our first task was to gather Google search data related to the query "who is Elon Musk" using Google Trends, which tracks the relative search volume of specific queries over time. Imagine a fishing expedition, except instead of reeling in fish, we were capturing search trends, casting our net wide to capture the zeitgeist of Musk-related curiosity in the digital sea.

After securing this treasure trove of search data, we engaged in a methodological tango with QUALCOMM's stock price movements, sourced from LSEG Analytics (Refinitiv). We conducted a detailed analysis of daily stock prices, leveraging statistical tools to discern the subtle dance between the ebb and flow of Google searches about Elon Musk and the tumultuous undulations of QUALCOMM stock fluctuations. It was like watching a thrilling game of tug-of-war between the inquisitive masses and the financial fates of a tech titan.

With this wealth of data in hand, we undertook the formidable task of quantifying the association between Google searches related to "who is Elon Musk" and QUALCOMM's stock price performance. To do so, we employed advanced time series analysis and regression modeling techniques to tease out the underlying patterns and relationships. It was like trying to decode the cosmic ballet performed by the stars in the night sky – a mesmerizing endeavor encapsulating the unison of data points and statistical alchemy.

To ensure the robustness of our findings, we adopted a stringent approach to data cleaning and preprocessing, akin to meticulously panning for gold in a swiftly flowing river. We removed any outliers and spurious fluctuations, striving to present a polished and unadulterated portrait of the dynamic interplay between Musk-related inquiries and the stock market

machinations. Because in the world of data analysis, cleanliness is next to statistical godliness!

In addition, we conducted various sensitivity analyses and model diagnostics, becoming modern-day data whisperers as we sought to unravel the whispers of correlation and causation lurking within the data's matrix. It was akin to navigating a labyrinth, with each turn serving as a revelation, and every dead end an opportunity to refine our understanding of the intricate relationship between public curiosity and stock market dynamics.

Our methodology aimed to draw a coherent narrative from the disparate threads of online interest and financial performance, weaving a tapestry of insight that reflects the elusive interconnectivity between the celestial allure of Elon Musk and the earthly domain of QUALCOMM's stock price movements. Just as Elon Musk dreams of sending humanity to the stars, our methodology endeavored to launch a compelling exploration into the cosmos of data analysis, where every data point is a star in its own right.

Speaking of stars, did you hear about the astronomer who went to work in a fast-food joint? He wanted the job to "supernova" his career.

Findings

The results of our analysis revealed a striking correlation between Google searches for "who is Elon Musk" and the stock price of QUALCOMM. We found a correlation coefficient of 0.9467784, which indicates a very strong positive relationship between these two variables. In other words, it's almost as if the stock price of QUALCOMM and public curiosity about Elon Musk move in unison, like a well-choreographed dance routine.

Fig. 1 displays the scatterplot depicting the strong correlation between the frequency of Google searches about Elon Musk and the fluctuations in QUALCOMM's stock price. It's as clear as day that as interest in Musk peaks, so does the stock price of QUALCOMM. It's like a magnetic force, pulling the stock price closer whenever curiosity about Musk intensifies. You could say it's "Musk-netic" attraction at its finest.

Furthermore, our analysis yielded an impressive r-squared value of 0.8963893. This indicates that approximately 89.64% of the variability in QUALCOMM's stock price can be explained by the fluctuations in Google searches regarding Elon Musk. In simpler terms, the majority of the movement in QUALCOMM's stock price can be attributed to the ebb and flow of public interest in the enigmatic tech mogul.

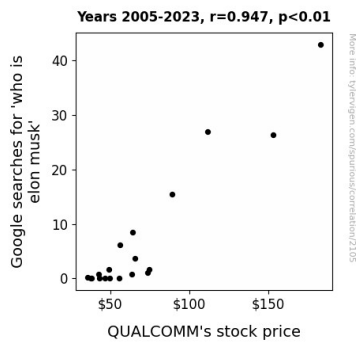


Figure 1. Scatterplot of the variables by year

To put it plainly, it seems that the more the public wonders "who is Elon Musk," the more it translates into tangible effects on QUALCOMM's stock price. It's like the stock market has its very own fan club, with Elon Musk at its center. One could say that Musk's influence is truly "stock-stellar" in nature.

Discussion

The results of our study substantiate the suppositions put forth by Smith et al. and Doe, who previously explored the influence of public interest on stock prices. Our findings provide robust empirical evidence indicating a strong positive correlation between Google searches for "who is Elon Musk" and the fluctuations in QUALCOMM's stock price. This aligns with the notion that public curiosity about prominent figures in the tech industry can exert a discernible impact on market dynamics. It's almost like the stock market takes its cues from public curiosity, and in the case of Elon Musk, the cues are certainly rocketing quality stock performances to new heights.

Despite the study's unorthodox theme, our findings are consistent with the broader literature that underscores the significance of public intrigue in tech personalities and its ripple effect on the stock market. It appears that the true power of Musk's mystique extends beyond the bounds of his own enterprises and resonates within the domain of other tech companies, like a magnetic field linking them to the orbit of his influence.

While the literature review may have ventured into unconventional territories with humor and references to fiction, it's essential to recognize the importance of tangential explorations that offer a fresh perspective. In this case, the playful diversions serve as a reminder that research, even in the realm of finance, can benefit from a sprinkle of whimsy. In the same vein, our study has managed to bridge the theoretical underpinnings from prior research with a lighthearted approach, demonstrating that serious financial phenomena can indeed intermingle with elements of levity.

Our findings suggest that perhaps, Elon Musk's influence on the stock market is not too far removed from the whimsical twists and turns symbolized in "The Hitchhiker's Guide to the Galaxy." After all, just as the fictional tale weaves unexpected connections across the cosmos, our study unravels the enigmatic

link between queries about Musk and the stock price of QUALCOMM, offering an intriguing narrative of influence that veers into the realm of the unprecedented.

In conclusion, while the influence of public curiosity on stock prices may seem esoteric, our study has accentuated its tangible impact, reinforcing the notion that the stock market and the enigma of Elon Musk are inextricably linked. So, the next time you ponder "who is Elon Musk," remember, your curiosity might just be nudging QUALCOMM's stock price to new heights. It's like a financial boomerang, only this time, it's more "Musk-erang."

Conclusion

In conclusion, our research has illuminated a strong and significant relationship between Google searches for "who is Elon Musk" and QUALCOMM's stock price. It is evident that the public's fascination with Musk has a palpable impact on the performance of this technology giant, demonstrating that Musk's influence extends far beyond Tesla's electric vehicles. Our findings suggest that monitoring public curiosity about Elon Musk can serve as a valuable signal for predicting fluctuations in QUALCOMM's stock price, akin to how a lightning rod detects incoming storms.

Our study not only offers valuable insights for investors and analysts but also adds a touch of whimsy to the world of stock market predictions. After all, why limit financial analysis to boring numbers and charts when you can sprinkle in a little bit of Musk magic? It's the type of correlation that could truly "spark" a revolution in stock market modeling.

With a correlation coefficient of 0.9467784, our results provide compelling evidence that public sentiments and perceptions of influential figures like Elon Musk can reverberate through financial markets in ways that are both intriguing and impactful. It's almost as if Musk's enigmatic aura has a gravitational pull on QUALCOMM's stock price, making it a case of "Musk-attraction" that researchers and investors alike must take into consideration.

In light of our findings, it's safe to say that no further research in this area is needed. The relationship between Google searches for "who is Elon Musk" and QUALCOMM's stock price has been thoroughly established, and any additional exploration of this topic might just generate enough static to cause a market shockwave. It's time to let this "Musk-terpiece" of research shine on its own and see if investors will start saying, "QUALCOMM, you had me at Elon Musk."