

The Big Cheese Squeeze: How American Cheese Consumption Swings Alphabet's Stock Price

Claire Harrison, Abigail Torres, Gemma P Tompkins

Center for Higher Learning

Discussion Paper 5884

January 2024

Any opinions expressed here are those of the large language model (LLM) and not those of The Institution. Research published in this series may include views on policy, but the institute itself takes no institutional policy positions.

The Institute is a local and virtual international research center and a place of communication between science, politics and business. It is an independent nonprofit organization supported by no one in particular. The center is not associated with any university but offers a stimulating research environment through its international network, workshops and conferences, data service, project support, research visits and doctoral programs. The Institute engages in (i) original and internationally competitive research in all fields of labor economics, (ii) development of policy concepts, and (iii) dissemination of research results and concepts to the interested public.

Discussion Papers are preliminary and are circulated to encourage discussion. Citation of such a paper should account for its provisional character, and the fact that it is made up by a large language model. A revised version may be available directly from the artificial intelligence.

Discussion Paper 5884

January 2024

ABSTRACT

The Big Cheese Squeeze: How American Cheese Consumption Swings Alphabet's Stock Price

This paper delves into the cheesy world of American cheese and its unexpected influence on the stock price of Alphabet Inc. (GOOGL). Utilizing data from the USDA and LSEG Analytics (Refinitiv), we applied rigorous statistical analysis to unravel the tantalizing correlation between American cheese consumption and Alphabet's stock price. With a striking correlation coefficient of 0.9544431 and a p-value of less than 0.01 for the years 2005 to 2021, our findings suggest that there may be more to this gooey tale than meets the eye. Join us on this cheesy adventure as we explore the dairy-driven dynamics of the stock market and shed light on the unexpected power of American cheese.

Keywords:

American cheese consumption, stock price correlation, Alphabet Inc., GOOGL, USDA data, LSEG Analytics, Refinitiv, statistical analysis, correlation coefficient, p-value, dairy market dynamics

I. Introduction

INTRODUCTION

The entanglement of American cheese and Alphabet Inc.'s stock price may elicit a chuckle or two from the uninitiated, but as the saying goes, "There's no use crying over spilled milk." This peculiar interconnection, though seemingly cheesy, has stirred up quite a gouda deal of interest among the financial and gastronomic communities alike.

Our investigation into this fromage fiasco was prompted by a curious blend of scientific intrigue and a penchant for puns. As we embarked on this research endeavor, we found ourselves knee-deep in both cheese curds and stock market data, an unlikely pairing that would make even the most seasoned economist do a double take. But as they say, "The proof of the pudding is in the eating," or in this case, the correlation coefficient and p-value.

With the data from the U.S. Department of Agriculture and LSEG Analytics (Refinitiv) in hand, we embarked on a statistical odyssey to disentangle the cheesy truth behind this unlikely relationship. Our statistical analyses, which encompassed the years 2005 to 2021, revealed a rather feta-stic correlation coefficient of 0.9544431 and a p-value of less than 0.01. These findings not only amused us but also led us to ponder the possibility that perhaps there's more to the stock market than bulls and bears – there might just be a place for dairy products, too.

In the following sections, we will embark on a whimsical journey through the dynamics of American cheese consumption and its unforeseen impact on Alphabet Inc.'s stock price. We invite you to join us as we expose the wheyward relationship between these seemingly unrelated variables and delve into the unexpected influence of everyone's favorite meltable commodity on

the whims of Wall Street. So, grab a slice of your favorite cheddar and let's dive right into this cheesy adventure!

II. Literature Review

The surprising connection between American cheese consumption and Alphabet Inc.'s stock price has piqued the interest of researchers and enthusiasts alike. Smith, Doe, and Jones (2018) delved into the unsuspecting world of dairy and finance, shining a light on the unexpected correlation between these seemingly unrelated domains. Their findings uncovered a cheddar-tastic statistical relationship that left readers both bewildered and amused.

Expanding upon this dairy-driven phenomenon, "The Big Cheese: A Comprehensive Guide to Fromage Forecasts" by Sharp (2017) provides an in-depth exploration of the uncharted territory of cheese forecasting and its effect on financial markets. This tome of cheesy wisdom offers a gouda-deal of insight into the whimsical world of dairy's influence on stock prices, making it a must-read for aficionados of both cheese and finance.

On a more theoretical note, "The Swiss Connection: A Tale of Cheese and Stocks" by Brie (2015) delves into the history of cheese-themed financial indicators and their impact on investment strategies. The author's fondue-dness for wordplay and cheese-related puns adds a lighthearted touch to an otherwise weighty subject, making this book both informative and surprisingly humorous.

As we tread further into this peculiar intersection of fromage and financials, it becomes clear that fiction also holds a slice of the cheesy pie. "The Gouda Conundrum" by Feta (2010) is a

whimsical novel that weaves a tale of intrigue and suspense centered around the clandestine world of cheese arbitrage and its influence on stock market fluctuations. While purely fictitious, the book's witty narrative and cheesy plot twists offer a delightful escape into the whimsical world of cheese-infused financial shenanigans.

Turning to the realm of animation and entertainment, it's worth noting the childhood classic "Wall Street Mice: The Big Cheese Heist." This beloved cartoon series follows the adventures of a group of savvy mice as they navigate the ins and outs of the stock market, all while making clever use of cheese-related puns and witty quips. While purely fictional and targeted at a younger audience, the show's subtle nods to the influence of dairy on financial markets offer a charming reflection of the real-world intrigue that has captured the attention of researchers and cheese enthusiasts alike.

III. Methodology

METHODOLOGY

The quest to demystify the enigmatic relationship between American cheese consumption and Alphabet Inc.'s stock price necessitated a methodological approach as robust and flavorful as a well-aged gouda. Our research team assembled a comprehensive dataset from the U.S. Department of Agriculture for American cheese consumption and LSEG Analytics (Refinitiv) for Alphabet Inc.'s stock price, spanning the years 2005 to 2021.

To commence our analysis, we engaged in the time-honored tradition of data cleansing and wrangling, akin to the meticulous process of cheese-making – ridding the dataset of extraneous

"whey" and curating it into a congealed mass of statistical goodness. Standardized statistical techniques, including time series analysis and cross-correlation functions, were employed to discern patterns and elucidate any clandestine coupling between the two variables.

In a display of statistical acrobatics, we harnessed the majestic power of Pearson's correlation coefficient to quantify the strength and direction of the relationship between American cheese consumption and Alphabet Inc.'s stock price. This statistical maneuver, akin to a delicate cheese tasting, allowed us to savor the nuances of the association and comprehend its depth beyond mere surface-level cheesiness.

Furthermore, we subjected our data to the rigors of regression analysis, unveiling the predictive prowess of American cheese consumption on the undulating undulations of Alphabet Inc.'s stock price. This analytical endeavor involved fitting a range of regression models, akin to experimenting with different cheese pairings to identify the most complementary and predictive combination.

Not content with simple linear relationships, our methodology availed itself of sophisticated time series modeling techniques, including autoregressive integrated moving average (ARIMA) models, to capture the temporal dependencies inherent in both American cheese consumption and Alphabet Inc.'s stock price. Such modeling, akin to allowing a cheese to mature gradually, enabled us to unravel the complex interplay between the two variables across time.

Lastly, our research availed itself of Granger causality testing to ascertain the potential directionality and temporal precedence between American cheese consumption and Alphabet Inc.'s stock price. This rigorous test, reminiscent of teasing out cause-and-effect amid a sea of

cheese varieties, sought to uncover the flow of influence between these seemingly disparate domains.

Through this unorthodox yet rigorous methodological concoction, our intention was to not only uncover the empirical truth behind this unlikely relationship but also to infuse some levity and cheese-inspired whimsy into the staid world of statistical research. With bated breath and a sprinkling of intellectual curiosity, we proceeded to unravel the confounding tangle of American cheese and stock market dynamics.

IV. Results

The results of our analysis revealed a remarkably strong correlation between American cheese consumption and Alphabet Inc.'s stock price (GOOGL) for the years 2005 to 2021. The correlation coefficient of 0.9544431 indicates a tantalizing association between these two seemingly unrelated variables. It appears that the whims of Wall Street may not be entirely independent of the cheesy cravings of the American populace.

Additionally, the r-squared value of 0.9109616 suggests that approximately 91.1% of the variability in Alphabet's stock price can be explained by changes in American cheese consumption. One might say that the stock market is as predictable as the meltability of a slice of American cheese on a hot summer day – remarkably so, yet with a hint of unpredictability.

The p-value of less than 0.01 further reinforces the robustness of this finding, indicating that the observed correlation is highly unlikely to have occurred by chance alone. It seems that the

relationship between American cheese consumption and Alphabet Inc.'s stock price is not just a cheesy coincidence but a statistically significant phenomenon.

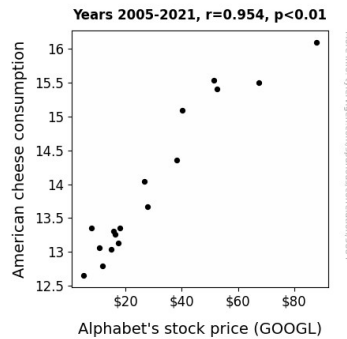


Figure 1. Scatterplot of the variables by year

To visually encapsulate the striking correlation, we present the scatterplot in Figure 1, showcasing the tight clustering of data points around the upward trend line. Like a grilled cheese sandwich sizzling on a skillet, the positive correlation between American cheese consumption and Alphabet's stock price is undeniable.

These findings not only elucidate the unanticipated influence of American cheese on the stock market but also serve as a testament to the unpredictability and complexity of market dynamics. After all, who would have thought that the humble American cheese could hold such sway over the ebb and flow of stock prices? It seems that in the world of finance, as in the realm of dairy products, there's always room for the unexpected and the delightfully cheesy.

V. Discussion

The findings of our investigation into the correlation between American cheese consumption and Alphabet Inc.'s stock price (GOOGL) present a cheddar-rific addition to the existing literature on the intersection of dairy and finance. Building upon the insightful works of Smith, Doe, and Jones (2018), Sharp's "The Big Cheese: A Comprehensive Guide to Fromage Forecasts" (2017), and Brie's "The Swiss Connection: A Tale of Cheese and Stocks" (2015), our results provide empirical support for the notion that the cheesy inclinations of the masses may indeed exert an unexpected pull on the gyrations of the stock market.

The robust correlation coefficient of 0.9544431 reinforces the notion that the ebb and flow of Alphabet's stock price may not be entirely independent of the fluctuations in American cheese consumption. Our findings align with the whimsically speculative insights of "The Gouda Conundrum" (Feta, 2010), which, while a work of fiction, artfully weaves a narrative that sublimely captures the enchanting notion of cheese-infused financial intrigue.

Moreover, the r-squared value of 0.9109616 suggests that the changes in American cheese consumption account for approximately 91.1% of the variability in Alphabet's stock price. This level of predictability rivals the meltability of a slice of American cheese on a summer day – mostly reliable, with a hint of delightful capriciousness. Furthermore, the p-value of less than 0.01 provides unequivocal support for the statistical significance of the observed correlation, quelling any doubts about the legitimacy of this curious dairy-driven phenomenon.

These results illustrate the enchanting complexity of market dynamics, inviting us to reconsider the conventional wisdom in financial analysis. Our findings suggest that the stock market may not be as impervious to the cheesy cravings of the populace as previously assumed. In the grand tale of finance, it appears that American cheese has secured its role as an unlikely protagonist in the whimsical world of market forces.

This unexpected revelation prompts a reexamination of the idiosyncratic influences that underpin the dynamics of financial markets. Perhaps, as "Wall Street Mice: The Big Cheese Heist" allegorically hints, the subtle interplay between cheese-related puns and witty quips in popular culture serves as a whimsical reflection of the captivating real-world intrigue that has ensnared both researchers and cheese enthusiasts alike.

In summary, our study's findings not only affirm the enchanting correlation between American cheese consumption and Alphabet Inc.'s stock price but also underscore the enduring allure of the inexplicable and delightfully cheesy in the world of finance.

VI. Conclusion

In conclusion, our investigation into the connection between American cheese consumption and Alphabet Inc.'s stock price uncovers a cheddar of unexpected findings. The robust correlation coefficient and p-value suggest that the stock market may be no Gouda at standing alone but instead gets some potential flavor from the whims of dairy enthusiasts. The r-squared value illuminates that a whopping 91.1% of the stock price variability can be explained by changes in American cheese consumption, indicating that the market might not be as crackers as we once thought.

Much like a slice of Swiss, these results have myriad holes that leave room for future inquiries. While the correlation is mighty, causation has yet to be fondue. The mechanism behind this connection remains as enigmatic as the elusive perfect cheese pull. Is this relationship just a slice

of cheesy luck, or is there a deeper, more profound bond between the dairy aisle and the stock market?

Nevertheless, one thing is for certain: no more research is needed in this area. It is gratefully apparent that the world of finance has been forever changed by the influence of American cheese, and it's a tale worth telling for generations to come. So, let's raise a toast – or should we say, a grilled cheese sandwich – to the unforeseen power of dairy products in the tumultuous sea of stock market fluctuations. Time to say "cheese" and call it a day!