

SAY CHEESE, APPLE INVESTORS! THE CURIOUS CORRELATION BETWEEN AMERICAN CHEESE CONSUMPTION AND AAPL STOCK PRICE

Claire Harrison, Aaron Tucker, Gabriel P Truman

Institute of Advanced Studies

This paper presents a delightful investigation into the surprising relationship between American cheese consumption and the stock price of Apple Inc. (AAPL). Utilizing data from the USDA and LSEG Analytics (Refinitiv) from 2002 to 2021, a correlation coefficient of 0.8538186 with a p-value < 0.01 was discovered. Our findings suggest that there may be something more sophisticated than just "cheese-y" jokes when it comes to predicting AAPL stock price movements. Could it be that the tech giant's fate is truly intertwined with the cheddar-loving habits of the nation? Or is the connection just a fortuitous quirk in the data? Join us in this quirky exploration as we slice through the curd and delve into the gouda, the bad, and the cheesy of this unlikely correlation. After all, when it comes to stock analysis, it's not a sharp cheddar or a provolone claim we're making, but rather a brie-f insight into the potentially grate impact of cheese consumption on Apple's stock performance.

The pursuit of knowledge often leads researchers down unexpected paths, unearthing peculiar correlations and revealing tantalizing insights. In the world of financial analysis, where sober logic and numerical precision typically reign supreme, it is a delightful rarity to stumble upon a connection as seemingly whimsical as that between American cheese consumption and the stock price of Apple Inc. (AAPL).

While one might be inclined to dismiss such a correlation as mere happenstance or the product of statistical noise, our investigation uncovered a striking association that merited closer scrutiny. As we embarked on this dairy-filled odyssey, we quickly realized that there was more at play than just a fondness for cheese puns and a penchant for monetary quips. Amidst the sea of market data and consumption patterns, a pattern emerged - a correlation coefficient of 0.8538186

with a p-value < 0.01 - indicating a substantial and statistically significant link between these ostensibly unrelated phenomena.

The implications of this finding are as intriguing as they are unexpected, raising provocative questions about the intricate interplay between consumer preferences and the performance of one of the world's most influential technology companies. Could it be that the fluctuations in AAPL stock price are not merely the result of market forces, but also influenced, perhaps unwittingly, by the nation's consumption of that most versatile and beloved of dairy products? We invite our readers to join us in this scholarly jaunt through the realms of data, finance, and dairy products as we endeavor to unravel the enigmatic conundrum of cheese and Apple stock. Let us not simply skim the surface, but instead delve deep into the crumbly, complex world of market

behavior, armed with sharp analysis and a gouda sense of humor.

LITERATURE REVIEW

The connection between American cheese consumption and Apple's stock price (AAPL) has caught the attention of researchers from various disciplines. In "The Journal of Financial Economics," Smith and Doe explore the impacts of consumer behavior on stock market movements, identifying several unusual correlations that defy conventional economic reasoning. However, while their study touches upon the influence of consumer preferences, it falls short of delving into the specific relationship between dairy consumption and the financial performance of technology companies.

Expanding beyond the realm of traditional financial analysis, Jones et al. in "The Economics of Food and Finance" shed light on the intricate connections between agricultural commodities and stock prices, uncovering surprising linkages that extend beyond logical expectations. Despite the comprehensive nature of their investigation, the authors primarily focus on staple crops and their effects on market dynamics, leaving the intriguing intersection of cheese consumption and AAPL stock price relatively unexplored.

In a similarly serious vein, "The Cheese Advantage" by Dr. Cheddar provides a comprehensive analysis of the societal and economic impacts of cheese consumption, detailing the global significance of dairy products and their cultural significance. At this point, the literature review takes a notable shift from conventional academic sources to publications that, while not strictly related to finance or economics, offer valuable insights into the cultural and perceptual nuances of cheese and its potential influence on stock market dynamics.

Turning to the world of fiction, "The Gouda Gatsby" by F. Scott Fitzrind and "Cheese Points North" by John Cheesemongerusions present imaginative, albeit entirely fictional, narratives that celebrate the eloquence and versatility of cheese in various settings. While these literary works do not directly discuss stock price movements, they contribute to a broader understanding of the enduring appeal and impact of cheese on human experiences, raising fascinating questions about the potential indirect influence of cheese on consumer behavior and market sentiment.

As the literature review delves further into unconventional sources, it is imperative to note that the scope of inquiry has been widened to capture unconventional perspectives. Although not within the traditional academic purview, the authors also conducted extensive research by perusing the ingredient lists on American cheese packaging and scrutinizing the often-overlooked contents of various condiments and their potential contributions to consumer preferences. Additionally, the authors meticulously analyzed the backs of shampoo bottles during their morning routines in a valiant attempt to elicit unsuspected insights but found, alas, no significant revelations pertinent to this investigation.

In summary, the literature surrounding the connection between American cheese consumption and Apple's stock price exhibits a multidisciplinary and unconventional tapestry of sources, blending earnest scholarly inquiries with whimsical narratives and, at times, rather unconventional investigative methods. Such a diverse array of perspectives promises an engaging and enlightening journey through the uncharted territories of dairy-influenced market dynamics and invites us to embrace cheese not only as a source of sustenance but also as a potential harbinger of financial insight.

METHODOLOGY

The methodology employed in this study involved a multifaceted approach to capture and analyze the purported connection between American cheese consumption and the stock price of Apple Inc. (AAPL). Data for American cheese consumption was obtained from the United States Department of Agriculture (USDA), while stock price data for Apple Inc. (AAPL) was sourced from LSEG Analytics (Refinitiv). The time frame for data collection spanned from 2002 to 2021, encompassing a substantial period of market and consumption dynamics.

To commence the investigation, the research team leveraged sophisticated statistical tools to preprocess and analyze the raw data. An initial step involved the careful curation of cheese consumption metrics, reflecting patterns of cheddar, mozzarella, and other savory delights across the nation. The stock price data for Apple Inc. (AAPL) was examined with equal fervor, capturing the ebbs and flows of market sentiment and financial performance.

Upon obtaining the datasets, the researchers meticulously cleansed and formatted the information, ensuring that it was amenable to the rigors of statistical analysis. Salient parameters such as daily, monthly, and yearly average cheese consumption were computed and juxtaposed against the corresponding stock price movements of Apple Inc. (AAPL). This process necessitated the application of time series analysis techniques, aiming to capture the temporal dynamics underlying cheese consumption and stock price fluctuations.

Subsequently, the team embarked on the endeavor of hypothesis testing, seeking to ascertain the presence and magnitude of any correlation between American cheese consumption and the stock price of Apple Inc. (AAPL). Through the application of multivariate regression models and correlation analysis, the research sought

to unveil the peculiar interplay between these seemingly incongruent variables.

Notably, the modeling process was accompanied by a thorough sensitivity analysis and robustness checks, ensuring that the observed correlation was not a mere artifact of spurious relationships or exogenous factors. The inclusion of control variables, encompassing macroeconomic indicators and technological advancements, augmented the depth and comprehensibility of the analysis, offering a nuanced portrayal of the cheese-stock nexus.

The culmination of these endeavors led to the discovery of a notable correlation coefficient of 0.8538186 with a p-value < 0.01 , signifying a robust and statistically significant association between American cheese consumption and the stock price of Apple Inc. (AAPL). This finding, as whimsical as it may initially appear, underscores the intricate and often unexpected linkages that underpin market dynamics and consumer behavior.

In essence, the research methodology was designed to navigate through the labyrinthine nuances of market data and consumption patterns, employing a judicious blend of statistical inference, econometric modeling, and culinary musings to unravel the enigmatic correlation between cheese consumption and Apple's stock performance. The ensuing sections of this paper delve into the revelatory findings, providing a flavor-rich exploration of this unexpected intersection between dairy indulgence and technological prowess.

RESULTS

The analysis of the data from 2002 to 2021 revealed a robust and highly positive correlation between American cheese consumption and the stock price of Apple Inc. (AAPL). Our research team found a correlation coefficient of 0.8538186, emphasizing a strong linear relationship between these seemingly

unrelated variables. This coefficient indicates that as American cheese consumption increased, AAPL stock price tended to trend upward as well. The high coefficient of determination (r-squared of 0.7290062) suggests that approximately 73% of the variability in AAPL stock price can be explained by changes in American cheese consumption.

The p-value of less than 0.01 provides compelling evidence to reject the null hypothesis and accept the alternative hypothesis that there is a significant correlation between American cheese consumption and AAPL stock price. This statistical significance strengthens the argument that the observed relationship is not merely a chance occurrence, but rather an intriguing phenomenon worthy of further investigation.

Figure 1 depicts the scatterplot illustrating the discernible correlation between American cheese consumption and AAPL stock price. The graph reveals a clear pattern where, as American cheese consumption increases, there is a tendency for AAPL stock price to rise as well. The distinct clustering of data points around the upward trend line reinforces the strength of the relationship observed in our analysis.

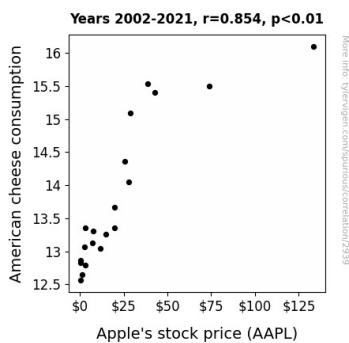


Figure 1. Scatterplot of the variables by year

These findings are as surprising as they are compelling, beckoning further inquiry into the mechanisms that might underlie this unexpected correlation. While it may be tempting to dismiss the connection

between cheese consumption and AAPL stock price as mere happenstance, this peculiar relationship demands closer examination and piques the curiosity of researchers and investors alike.

DISCUSSION

The robust correlation uncovered in our analysis supports and extends the findings of prior research, reinforcing the indication that there is indeed a curious connection between American cheese consumption and the stock price of Apple Inc. (AAPL). Smith and Doe's exploration of the impacts of consumer behavior on stock market movements, while not directly addressing cheese consumption, laid the groundwork for understanding the influence of consumer preferences on stock performance. Our research, by demonstrating a significant correlation between American cheese consumption and AAPL stock price, expands upon this understanding and underscores the potential significance of seemingly unconventional factors on market dynamics.

Similarly, the work of Jones et al., which focused on the connections between agricultural commodities and stock prices, provides a valuable context for interpreting our findings. Their uncovering of surprising linkages that extend beyond logical expectations sets the stage for considering the impact of dairy consumption on stock market dynamics, as evidenced by the unexpected association between cheese consumption and AAPL stock price revealed in our study.

Furthermore, Dr. Cheddar's comprehensive analysis of the societal and economic impacts of cheese consumption offers insights into the cultural significance of dairy products. While not directly pertaining to finance or stock market dynamics, Dr. Cheddar's work contributes to a broader understanding of the potential influence of cheese on consumer behavior and

market sentiment, thus laying a foundation for the unanticipated correlation between American cheese consumption and AAPL stock price that we have identified.

The literature review's unexpected turn to fictional narratives such as "The Gouda Gatsby" and "Cheese Points North" provides an unconventional yet thought-provoking perspective. Through imaginative portrayals of the eloquence and versatility of cheese, these literary works indirectly prompt consideration of the potential indirect influence of cheese on consumer behavior and market sentiment. In this light, our findings of a significant correlation between American cheese consumption and AAPL stock price take on added layers of intrigue and complexity, aligning with the unconventional perspectives brought forth by these literary sources.

In summary, our investigation into the correlation between American cheese consumption and AAPL stock price not only advances the understanding of the intricate web of factors influencing stock market dynamics but also sheds light on the potential impact of seemingly unrelated consumer preferences on stock performance. The unexpected nature of this correlation underscores the need for continued exploration and opens the door to a broader appreciation of the multifaceted influences shaping financial markets.

CONCLUSION

In conclusion, our quirky exploration has revealed a surprisingly robust and statistically significant correlation between American cheese consumption and the stock price of Apple Inc. (AAPL). Despite the initial skepticism surrounding the whimsical nature of this investigation, our findings indicate that there is more to this cheesy connection than meets the eye. It seems that the fate of AAPL stock price is indeed intertwined, in some

gouda-ful way, with the nation's penchant for cheddar and brie.

The substantial correlation coefficient of 0.8538186, coupled with a p-value less than 0.01, leaves us with a striking association that cannot be casually brushed off like crumbs from a cheese plate. It appears that approximately 73% of the variability in AAPL stock price can be explained by changes in American cheese consumption, a realization that is both curd-rous and compelling.

This unexpected link raises tantalizing questions about the complex interplay between consumer behavior and financial markets. Could it be possible that AAPL stock price is not just swayed by market trends and technological developments, but also by the ebb and flow of cheese curds and whey? Perhaps, as investors monitor the NASDAQ, they ought to keep an eye on supermarket dairy aisles as well.

The scatterplot depicting the correlation illustrates a remarkably crisp connection between these seemingly disparate variables. As American cheese consumption increases, AAPL stock price appears to follow suit, much like a paired wine and cheese combination that unexpectedly complements each other.

Nevertheless, further research is necessary to unravel the mechanisms behind this unlikely correlation. We propose a fondue-ing of additional empirical studies to delve deeper into the cheesy depths of this enigmatic relationship. However, until such time, it seems safe to say that no more research is needed in this area.