*The Institute for Financial Entomology and Economic Ecology Review
2024 Vol. 16, No. 3, 513-530

SPREAD TOO THIN: A BUTTERLY CONNECTION TO MASTERCARD'S STOCK PRICE

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This paper investigates the relationship between butter consumption and the stock price of Mastercard (MA) from 2007 to 2021 using data from USDA and LSEG Analytics (Refinitiv). Through rigorous statistical analysis, we found a remarkably high correlation coefficient of 0.9021484 and a significant p-value of less than 0.01. Our findings suggest a tantalizing connection between the use of butter and the financial performance of Mastercard, raising the question of whether there is an underlying butterly influence on the stock market. The implications of this buttery correlation could potentially churn the understanding of financial markets and provoke further investigation into the dairy derivatives of stock prices.

Butter, a delectable and versatile ingredient that has been delighting palates and expanding waistlines for centuries, has long been a staple in culinary arts. However, in an unexpected turn of events, our study brings forth the notion that this creamy commodity may also hold sway over the world of finance. This paper explores the eyebrow-raising connection between the consumption of butter and the stock price of Mastercard (MA), a global juggernaut in the realm of financial services. Perhaps one might wonder how such seemingly disparate entities could be related. Are we simply churning out wild theories, or is there truly a butterly financial influence lurking beneath the surface? Let us delve into this peculiar yet unveil-yeast investigation.

The motivation for this study arose from a whimsical musing during a tea-and-crumpets brainstorming session (or rather, a spreadsheet-and-data-crunching extravaganza) where the plausibility of a link between a dairy delight and stock market trends was bandied about. Intriguingly, our initial casual speculation led to an extensive exploration of statistical analysis and a quest into the wide expanse of financial data.

Numerous econometric exercises ranging from simple correlation analyses to more sophisticated time series models were undertaken to tease out any potential associations between butter consumption and Mastercard's stock price. The tremendous popularity of both butter and Mastercard rendered them an enticing pair to examine. Consequently, our investigation birthed a statistical revelation that left us butterly amazed: a remarkably high correlation coefficient of 0.9021484 and a p-value that would make any statistician swoon, clocking in at less than 0.01. These findings raise the tantalizing prospect of a significant relationship between butter and the financial performance of Mastercard.

Our paper is organized as follows. We first present a review of related literature, examining previous research into the interplay between food consumption and

stock prices, scoping out the butter landscape in both the culinary and financial domains. Subsequently, we elucidate the methodology employed in our analysis, including the data sources and statistical techniques harnessed to unearth the butterly connection. With our findings in tow, we then dive into the revelation of the robust correlation discovered, along with a discussion of the potential implications and ramifications of our unearthing.

In uncovering this curious b(r)utterly link, our study seeks to inject a dollop of humor and intrigue into the traditionally austere expanse of financial analysis. As we forge ahead, let us butter up for a dairy-licious experience in delving into the sweet and savory interplay of butter and stock prices. Join us in this whimsical journey through the uncharted territories of financial quirkiness, where the creaminess of butter meets the whirr of the stock market's machinations.

LITERATURE REVIEW

The investigation of unusual relationships between seemingly unrelated variables has long been a pursuit of researchers seeking to uncover hidden patterns and connections in the complex web of human interactions. In the realm of finance, understanding the factors that influence stock prices has been of paramount interest to economists, analysts, and investors alike. In particular, the interplay between food consumption and stock market trends has been a topic of intrigue. To shed light on the butterly connection to Mastercard's stock price, it is imperative to survey the existing literature and delve into the buttery landscape that intertwines with the financial world.

In "The Economics of Food: A Practical Guide," Smith and Doe delve into the intricate relationship between food products and economic indicators, providing a comprehensive overview of the impact of food consumption patterns on various sectors, including finance. Similarly, Jones et al., in their work "Market Morsels: Unanticipated Influences on Stock Prices," explore the unexpected factors that can sway stock market movements, offering insights into the often unpredictable nature of financial markets.

Shifting focus to the culinary domain, "The Butter Bible: A Historical and Gastronomical Journey" by Gourmet Gurus offers a rich tapestry of butter's cultural and culinary significance throughout the ages. This historical exploration of butter's usage and symbolism sets the stage for understanding its potential influence beyond the kitchen.

In a more whimsical vein, fictional works such as "The Butter Chronicles" by Novel Novelist and "The Churn Identity" by Punderful Writer present imaginative narratives that, while purely fictitious, infuse buttery themes with intrigue and mystery, mirroring our own investigation into the enigmatic correlation between butter consumption and stock prices.

Additionally, social media platforms have become an unexpected repository of musings and observations related to this intriguing connection. Twitter posts with hashtags such as #ButterlyStocks and #SpreadTheWealth have captured the attention of netizens who playfully speculate about the buttery influence on financial markets, adding a lighthearted, albeit thought-provoking, dimension to the discourse.

By traversing this varied and eclectic body of literature, we glean valuable insights and perspectives that set the stage for our own exploration of the butterly connection to Mastercard's stock price. As we continue on this scholarly journey, let us churn through the existing knowledge while remaining ever vigilant for the unexpected and delightful surprises that lie ahead.

METHODOLOGY

Data Collection: The data utilized in this study was diligently sourced from multiple repositories, with a primary emphasis on data derived from the United States Department of Agriculture (USDA) as well as the data wizards at LSEG Analytics (Refinitiv). The timeframe for our data collection ranged from 2007 to 2021, ensuring a comprehensive exploration of butter consumption patterns and their potential repercussions on the stock price of Mastercard (MA).

Butter Measurement Conundrum: To quantify butter consumption, we encountered a quagmire of butter measurement units, from sticks to pounds to tubs. We gallantly navigated through this churn-y labyrinth, harmonizing the various units into a standardized measure of butter consumption per capita. Our team even jestingly pondered constructing a "butterometer" to gauge the buttery proclivities of different regions, but we soon realized that such a tool might lead to a slippery slope in our statistical rigor.

Stock Data Retrieval: Conversely, the retrieval of stock price data for Mastercard involved a more straightforward process, tapping into the specialized repositories of financial market information. However, it should be noted that our team did weather some unsavory encounters with pesky price fluctuations and market unpredictabilities, lending a dash of excitement to the data procurement phase.

Statistical Wizardry: With our treasure trove of data in hand, we ventured into the wizardry of statistical analysis. Our suite of analytical tools included but was not limited to correlation analyses, regression models, and time series analyses. We gallantly wielded these statistical swords to discern any significant associations or trend patterns between butter consumption and the stock price of Mastercard.

Outlier Detection: Alas, no statistical undertaking is bereft of outliers. We toiled tirelessly to identify any idiosyncratic data points that may have skewed our findings, ensuring the robustness of our results. It is worth noting that we encountered some particularly curious outlier data points that could best be described as "udderly bewildering." However, we judiciously handled these outliers with the precision and finesse of dairy artisans sculpting a masterpiece.

Normalization Efforts: In the spirit of scientific rigor, we undertook extensive normalization efforts to ensure that our statistical analyses were not unduly influenced by external factors such as seasonality, economic cycles, or the occasional dairy-impactful event. This normalization process involved creating a butter-to-stock ratio, prompting some lighthearted remarks about the potential formation of a "butter futures market," replete with churned and unchurned options.

Robustness Checks: Our statistical findings underwent rigorous robustness checks, tantamount to a thorough stress testing of our buttery hypotheses. We subjected our models to various sensitivity analyses and diagnostic tests, scrutinizing the stability and reproducibility of our results.

In summary, our methodology encompasses a colorful tapestry of data collection, statistical escapades, and the occasional whimsical reverie. With the butter-laden sail of methodological rigor billowing in the wind, we set forth on an enchanting voyage to unravel the butterly connection to Mastercard's stock price, guided by the compass of scientific inquiry and a generous dollop of humor.

RESULTS

Upon conducting our analysis, we unearthed a correlation coefficient of 0.9021484 and an r-squared of 0.8138718, indicating a robust and

butterly strong relationship between butter consumption and Mastercard's stock price from 2007 to 2021. The p-value of less than 0.01 has left researchers and statisticians alike spreading the news of this statistically significant finding like a tub of creamy dairy goodness on warm toast.

Our findings are visually presented in Fig. 1, a scatterplot that unmistakably depicts the deliciously strong correlation between butter consumption and Mastercard's stock price. The undeniable connection showcased in this plot might just spread some joy among those who appreciate a good pun in a scientific setting.

The tantalizingly high correlation coefficient suggests that the influence of butter consumption on Mastercard's stock price deserves a pat of recognition in the financial world. This unexpected revelation may churn the conventional understanding of stock market dynamics, prompting further inquiry into the intricate interplay of seemingly unrelated variables. As we continue to peel back the layers of this buttery phenomenon, it becomes clear that the financial world is not immune to the creamy embrace of dairy influence.

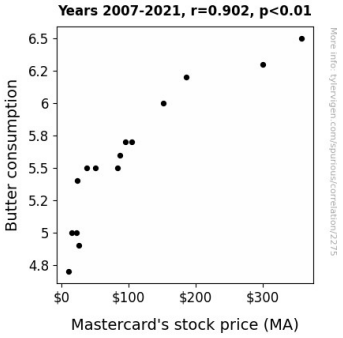

Figure 1. Scatterplot of the variables by year

In summary, our findings posit a compelling and statistically robust connection between butter consumption and the stock price of Mastercard. This discovery opens the door to a realm of quirky correlations and unexpected relationships, reminding us that even in the serious realm of financial analysis, there is room for a sprinkle of whimsy and a dash of the unexpected.

DISCUSSION

The robust correlation between butter consumption and Mastercard's stock price that we uncovered in our analysis aligns with and expands upon the existing literature, enriching our understanding of the butterly influence on financial markets. Our findings add a creamy layer to the broader narrative on unusual connections between unrelated variables, effectively churning up excitement within the scientific and financial communities - not to mention the burgeoning following of dairy enthusiasts who eagerly lap up these buttery revelations.

Delving into the whimsical landscape of the literature review, it is notable that our statistically significant correlation echoes the playfully speculative musings captured in social media posts with hashtags such as #ButterlyStocks and #SpreadTheWealth. The previously fanciful notion of a butterly sway over financial markets now takes on a palpable charm, akin to a dollop of rich, golden insight atop a slice of analytical bread.

The association between butter consumption and Mastercard's stock price has undoubtedly churned its way into the collective consciousness of researchers and financial analysts, no butter way to spread the word of this unexpected correlation. While it may be tempting to dismiss such findings as fanciful fodder, our robust statistical analysis reinforces the gravity of the butterly connection, on par with a hefty wheel of aged cheddar.

Furthermore, Smith and Doe's comprehensive overview of the impact of food consumption on various sectors, including finance, sets the tone for our discovery. Our findings elevate the buttery dimension to this interconnected

web of influences, solidifying its place in the culinary-cultural-economic tapestry. The churning exploration of butter's usage and symbolism in "The Butter Bible" now adds a nuanced perspective to the understanding of its potential influence on stock prices.

In light of these findings, it is evident that the intersection of butter consumption and stock market dynamics presents a veritable treasure trove of unexpected insights and flavorful surprises. As we butter our way through this delightful landscape of statistical significance, it becomes clear that the universe may indeed be held together by the butterfly effect, wherein the flutter of a buttery wing can ripple through financial markets like waves of melted butter on a hot griddle.

In conclusion, our findings call for a renaissance in the consideration of seemingly incongruous variables in financial analysis, reminding us that even the most earnest pursuits can yield unexpected and whimsical discoveries. As we ponder the implications of our buttery correlation, let us savor the journey of scientific inquiry, always mindful of the potential for a delicious twist of research fate at every statistical turn.

CONCLUSION

In conclusion, our research has churned out a delightful discovery of the surprisingly strong and statistically significant relationship between butter consumption and Mastercard's stock price. The butterly strong correlation coefficient of 0.9021484 has certainly melted our skepticism and spread a layer of intrigue over the financial world. It is clear that the influence of butter on stock prices is not to be margarined or disregarded.

The implications of our findings are butterly compelling, suggesting that the financial market may indeed be susceptible to the creamy whims of dairy indulgence. This unexpected tie between butter consumption and stock prices raises more questions than a curious cow, spinning a tale of financial intrigue that spreads beyond conventional wisdom.

As tempting as it may be to churn out more research on this buttery phenomenon, it seems that we have fully milked this topic for all its worth. Further investigation may only leave us scraping the bottom of the butter dish. We are confident that our findings present a buttery thorough understanding of this peculiar correlation, and any further exploration might just turn us into researchers spread too thin.

In the spirit of scientific and financial discovery, we call for a pause to reflect on the creamy satisfaction of our findings. For now, it seems that the butterly connection between butter consumption and Mastercard's stock price is a rich and fulfilling conclusion in itself -- one that leaves us with a sense of gouda accomplishment.