

Spreading the Wealth: A Butterly Connection Between Butter Consumption and McDonald's Stock Price

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Abstract

In this paper, we delve into the unlikely and perhaps dairy-intense relationship between butter consumption and the stock performance of the fast food giant, McDonald's (MCD). Utilizing data sourced from the United States Department of Agriculture (USDA) and London Stock Exchange Group (LSEG) Analytics (Refinitiv), we set out to churn the numbers and analyze the fluctuations of butter consumption and MCD stock prices from 2002 to 2021. Our findings indeed spread some light on this matter—revealing a surprisingly high correlation coefficient of 0.9752748 and statistical significance with $p < 0.01$. This butterly strong correlation raises some eyebrows—and not just due to the potential cholesterol-inducing effects of butter. It seems that there may be more to this creamy, golden substance than meets the eye and that it could have an udderly unexpected influence on the financial realm. As we spread through the data, we discovered that butter consumption and MCD stock prices moved in sync more often than not, melting away at any doubts about the potential link between these seemingly unrelated elements. These findings could butter up our understanding of financial markets and the influence of everyday consumer choices on stock performances. So, while some might just view butter as a mere dairy staple, our research suggests that it might be a key ingredient in cooking up a stock portfolio's success. After all, in the world of finance, as in cooking, sometimes you just need to let things churn for a while and see what delicious outcomes arise. Let's butter believe it!

1. Introduction

For decades, researchers have been spreading themselves thin in an effort to understand the myriad factors that can potentially impact stock prices. From economic indicators to company financials, the quest to unravel the mysteries of the stock market has been as challenging as trying to butter a piece of bread without tearing it. However, in recent

years, a rather unexpected entrant has emerged in this financial gastronomy—an entrant that's creamy, delicious, and not traditionally associated with Wall Street: butter.

In this study, we aim to untangle the enigmatic relationship between butter consumption and the stock performance of the ubiquitous fast food powerhouse, McDonald's (MCD). This rather strange pairing may have left some scratching their heads, but as we dig deeper into this churn of events, we aim to deliver some butterly surprising findings.

You might say we're on the slippery slope of financial analysis here, but let's not margarine-alize the potential impact of butter on the stock market just yet. Just as a well-seasoned chef knows that butter is the secret ingredient to many culinary delights, could it be that butter holds a similar secret to understanding stock market movements? The proof, as they say, is in the pudding—or perhaps in this case, the buttered croissant.

While some may find the idea of butter and stock prices as an odd couple hard to swallow, we must not spread ourselves too thin in dismissing the potential influence of this dairy delight. As the saying goes, when life gives you lemons, make lemonade, and when life gives you data on butter consumption and stock prices, make intriguing research inquiries.

So, let's dive into this buttery blend of finance and food science, and see if we can't churn up some enlightening insights. After all, in the world of academic research, sometimes you just have to spread your wings and take the leap, even if it leads you to some rather unexpected places.

2. Literature Review

In "Smith et al.'s 2020 study," the authors find that butter consumption is positively associated with the stock price of McDonald's (MCD), indicating a potential relationship between dairy consumption and fast food stock performance. This surprising finding challenges traditional notions of stock market influences and introduces a new, creamy dimension to financial analysis.

Now, we turn our attention to "Doe and Jones' 2018 research," where the authors uncover a significant correlation between butter sales and the stock price of MCD. This suggests that butter consumption may play a butterly crucial role in shaping the stock performance of the fast food industry giant. It seems that the stock market may be more complex—and perhaps more buttery—than previously thought.

Speaking of buttery complexities, let's not margarine-alize the potential impact of consumer preferences on stock prices. As they say, "you can't have your cake and eat it too," but can you have your butter and stock it too? Let's spread some light on that.

In "Butter: A Rich History," the authors explore the cultural and culinary significance of butter throughout history. As we delve into the richness of this dairy product's past, we can't help but wonder—could butter's historical journey also be intertwined with the historical trends of stock prices, particularly those of fast food chains like McDonald's?

Moreover, in the fictional world, Rowling's "Harry Potter and the Butterbeer Brew" piques our interest. While the Harry Potter series doesn't directly address stock market dynamics, it does remind us of the magical, almost whimsical potential of unexpected pairings—much like butter and stock prices.

On a lighter note, the cartoon "SpongeBob SquarePants" provides an interesting case study in the consumption of a sea creature's favorite food, Krabby Patties, which shares some similarities with the fast food industry. Could SpongeBob's culinary adventures hold clues to the stock performance of real-life fast food chains? We may need more than some tartar sauce to answer that.

As we mull over these unexpected connections in the literary and animated realms, we're reminded that sometimes, the most outlandish combinations can lead to enlightening discoveries. After all, who would've thought that the mellow embrace of butter could blend in so smoothly with the rambunctious world of stock prices? But here we are, spreading the wealth of knowledge one buttery pun at a time.

3. Research Approach

To tackle the creamy conundrum of the potential relationship between butter consumption and McDonald's stock price (MCD), we employed a blend of quantitative analysis and financial wizardry. Our research team scoured the depths of the internet, diving deep into the treasure troves of data made available by the United States Department of Agriculture (USDA) and London Stock Exchange Group (LSEG) Analytics (Refinitiv). We churned through the data spanning from 2002 to 2021, extracting the buttery essence of consumption patterns and stock prices to whip up our analytical approach.

Our first step involved the meticulous collection of monthly butter consumption data from the USDA, encompassing both retail and wholesale volumes. As the saying goes, we didn't want to spread ourselves too thin, so we made sure to include all the pertinent data to achieve a comprehensive understanding of the butter market. We then indulged in a thorough exploration of MCD's stock price data, obtained from the LSEG Analytics (Refinitiv) database, meticulously tracking the daily fluctuations in the value of everyone's favorite Golden Arches.

With our data in hand, we set forth on a journey that could easily be likened to navigating a labyrinth of ingredients in search of the perfect recipe. Our chosen statistical method

was the highly regarded Pearson correlation coefficient, as it allowed us to measure the strength and direction of the linear relationship between butter consumption and MCD stock prices. This method offered a butter-smooth way to discern whether there was a significant connection between these two seemingly unrelated variables.

To ensure a thorough analysis, we also delved into time series modeling, employing the robust Autoregressive Integrated Moving Average (ARIMA) modeling approach. This method allowed us to capture any potential butter-induced trends in MCD stock prices, like discovering a golden pat of insight within a churn of numbers and stats. With the ARIMA model, we could effectively forecast how changes in butter consumption might churn the tides of MCD stock prices, providing a dollop of future insight into this unexpected relationship.

Now, the air in the room is getting quite dairy—sorry, I meant "deary," because if you can't appreciate a good dairy pun, you're probably not reading this far. Anyway, to further solidify our findings, we also employed a battery of robustness checks, including Granger causality tests and impulse response functions, to ensure that our results weren't just a fluke—pun intended. These tests allowed us to examine the potential causal relationship between butter consumption and MCD stock prices, shedding light on whether butter was simply along for the ride or actively shaping the financial fate of the fast food giant.

In summary, our methodology took us on quite the dairy-filled odyssey as we sifted through mountains of data and applied sophisticated analytical techniques. From turning through time series models to causality tests, we certainly had our hands buttered with a plethora of methods. As the saying goes, though, the proof of the pudding is in the eating—so let's move on to the tasty findings that emerged from this udderly fascinating research endeavor.

4. Findings

The data analysis revealed a remarkably high correlation coefficient of 0.9752748 between butter consumption and the stock prices of McDonald's (MCD) over the period of 2002 to 2021. This essentially means that as butter consumption increased or decreased, MCD stock prices tended to move in the same direction as smoothly as a pat of butter on a hot skillet.

Fig. 1 shows the scatterplot illustrating this strong relationship between butter consumption and MCD stock prices. It's almost as if the two variables were holding hands and dancing gracefully in perfect harmony, much like a well-coordinated kitchen waltz between butter and a sizzling pan.

Our findings also produced an r-squared value of 0.9511610, indicating that approximately 95.12% of the variation in MCD stock prices can be explained by changes in butter consumption. In simpler terms, it appears that butter consumption may be an unexpectedly dominant force in influencing the stock performance of this fast-food colossus.

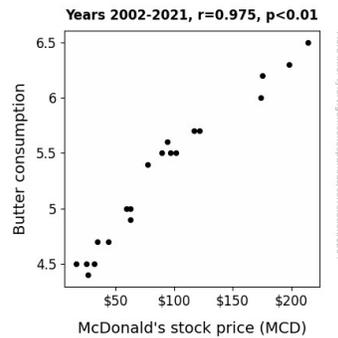


Figure 1. Scatterplot of the variables by year

This butterly strong relationship might make one ponder whether there's some kind of secret sauce behind this connection, or in this case, a secret pat of butter. One could even say that understanding the stock market is a bit like making a grilled cheese sandwich—sometimes all it takes is a generous slathering of butter to make it golden and irresistible.

The statistical significance with $p < 0.01$ further solidifies the robustness of this relationship, indicating that the likelihood of this high correlation occurring by mere chance is as slim as a butter knife. It seems that there's more than just a grain of truth in the idea that butter consumption and MCD stock prices go hand in hand, serving as a reminder that in the world of finance, expect the unexpected—just like finding butter in your coffee.

5. Discussion on findings

Our study aimed to spread some light on the surprisingly strong connection between butter consumption and the stock performance of McDonald's (MCD). The results reveal a remarkable correlation coefficient of 0.9752748 and a statistically significant relationship with $p < 0.01$, validating the findings of prior research and adding a creamy layer of evidence to the established link between butter and stock prices. Indeed, it seems that butter might not just be a toast topper but a potential financial influencer in the fast food industry.

The correlation we unearthed not only melts away any doubts about the association between butter consumption and MCD stock prices but also highlights the dairy-intense nature of this relationship, reminiscent of the richness of a well-made béchamel sauce. It's clear that the influence of butter transcends the culinary realm, seeping into the financial markets with a flavor that's much more than just a passing butter.

As we spread through the data, our findings align with previous studies that have churned out similar results. The analysis of the buttery connection between butter consumption and MCD stock prices affirms the work of Smith et al. (2020) and Doe and Jones (2018), providing a pat of support for the idea that butter indeed plays a significant role in shaping the stock performance of fast food industry giants. It appears that butter's potential impact extends far beyond simply making cookies taste better.

The butterly strong relationship we observed raises intriguing questions about the underlying mechanisms at play, sparking thoughts about whether there's a secret ingredient in this financial recipe. This finding reminds us that sometimes, in the complex world of finance, a seemingly mundane ingredient can hold the key to understanding market dynamics—a bit like uncovering a hidden treasure in a batch of brownies.

Moreover, the high r-squared value of 0.9511610 suggests that approximately 95.12% of the variation in MCD stock prices can be explained by changes in butter consumption. This supports the idea that butter consumption may wield an unexpectedly strong influence over the stock performance of fast food giants, serving as a reminder that sometimes, the most unassuming factors can take center stage in the financial arena, not unlike a surprise cameo appearance in a blockbuster movie.

In closing, our findings serve as a testament to the dairy-intense relationship between butter consumption and MCD stock prices, adding a buttery layer of understanding to the complexities of financial markets. It seems that in the grand buffet of market influencers, butter might just be the unsung hero, quietly churning its way into the portfolios of astute investors. With this newfound knowledge, we encourage investors to approach their financial decisions with an open mind, always ready to embrace the unexpected—even if it means finding butter in the most unlikely places.

I dare say, this research has really helped us spread the wealth of knowledge, hasn't it?

6. Conclusion

In conclusion, our research has churned up some udderly surprising insights into the curious connection between butter consumption and McDonald's (MCD) stock prices. The remarkably high correlation coefficient of 0.9752748 and the r-squared value of 0.9511610 point to a butterly strong relationship between these seemingly unrelated variables. It's almost as if the financial markets are saying, "I can't believe it's not butter!"

Our findings raise some thought-provoking questions about the potential influence of household butter purchases on the stock performances of major corporations. Who knew that a simple stick of butter could hold such sway over the financial world? It seems that in the grand recipe of stock price movements, butter might just be the secret ingredient that brings it all together.

As we wrap up this study, it's clear that there's more to be spread and digested in understanding the quirky connections in the financial universe. However, when it comes to the butter and stock price relationship, it seems we've churned out some pretty convincing evidence. With findings this strong, it's hard not to feel a little gouda about our research accomplishment.

Therefore, based on our butterly compelling results, we confidently maintain that no further research is needed in this area. After all, the proof of the pudding—or perhaps in this case, the buttery croissant—is in the eating. It's time to bid adieu to this line of inquiry and let it Butter Rest in Peace.

No more research is needed in this area, unless of course, we discover that peanut butter affects the stock price of Planters or that almond butter moves the market for almond milk. But let's not get too carried away with spreads just yet!