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Spreadin' Butter, Movin' the Market: Exploring the Correlation Between Butter Consumption and Novo Nordisk's Stock Price

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Abstract

This paper delves into the surprisingly strong connection between the consumption of butter and the fluctuations of Novo Nordisk's stock price. While the notion may initially seem as slippery as a pat of butter, our research team has churned out some intriguing findings to spread before you. Utilizing data from the USDA and LSEG Analytics (Refinitiv), we conducted a thorough examination spanning from 2002 to 2021. The resulting correlation coefficient of 0.9508434 and a statistically significant p-value of less than 0.01 have raised quite a stir in the academic and financial communities. Our study leaves no stone unturned as it uncovers the buttery secret behind the movements of Novo Nordisk's stock price, shedding light on the often-overlooked influence of food trends on the stock market. So, grab your popcorn – or should we say, your buttered popcorn – and prepare to be surprised by the untold connection between a breakfast spread and stock market bread.

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1. Introduction

The world of finance is often regarded as a realm of numbers, algorithms, and stoic investor behavior. However, our research seeks to melt away this perception by delving into the unexpected and slightly whimsical relationship between butter consumption and Novo Nordisk's stock price. As we embark on this endeavor, it is crucial to acknowledge the lighthearted nature of exploring a connection that may

initially seem as mismatched as spreading butter on a hot pancake.

The correlation between food consumption and financial markets has been a topic of interest for both economists and nutritionists, yet the specific focus on butter and its impact on a pharmaceutical company's stock price has not been previously unboxed. Just as the act of churning butter transforms cream into a spreadable delight, our research aims to

unearth the hidden forces at play in the market dynamics surrounding Novo Nordisk, popularly known for its diabetes medications.

While some may dismiss our topic as being as inconsequential as the caloric content of a pat of butter, we refuse to let this topic be overlooked. Our investigation has yielded results that are as intriguing and complex as the intricate latticework on a croissant, challenging conventional wisdom in both the financial and culinary spheres. As we present our findings, allow us to butter you up with some deliciously surprising insights into the unexpected link between pantry staples and stock market performances.

2. Literature Review

The interplay between butter consumption and stock market performances has seldom been explored in academic literature. However, a few outliers have dared to delve into this quirky intersection. Smith (2015) observed a potential correlation between dairy product consumption and consumer spending behavior, laying a modest foundation for our current investigation. Meanwhile, Doe et al. (2018) conducted a comprehensive analysis of food trends and their impact on the stock market, inadvertently buttering up the path for our research.

Moving past the *crème de la crème* of academic studies, our inquiry also draws inspiration from publications outside the traditional financial realm. In "Dairy Delights: The Cultural History of Butter" (Jones, 2009), a rich exploration of butter's cultural significance provides a nuanced backdrop for understanding its potential influence on economic activities.

Turning the page to more unconventional sources, the fictional works of "The Butter Conspiracy" by the enigmatic author X. Butterman (2017) and "The Margarine

Murmurs" by Y. Spreaderson (2014) offer an intriguing blend of conspiracy theories and culinary curiosities that surprisingly resonate with our research theme.

Yet, in the age of internet culture, it would be remiss not to acknowledge the impact of viral trends on contemporary discourse. The "Butter Dance" meme and the infamous "Buttergate" have permeated online spaces, amplifying the public's fascination with butter-related phenomena and reinforcing the idea that butter holds a unique sway over societal narratives.

As we navigate through this rather unorthodox amalgamation of sources, it becomes evident that our research occupies a distinctive and, dare we say, spreadable niche within the academic landscape.

3. Our approach & methods

To unearth the buttery secrets behind Novo Nordisk's stock price movements, our research team employed a multi-faceted methodology, as complex and interwoven as the layers of a flaky croissant. We first curated data on butter consumption from the USDA, scouring through decades of statistics as meticulously as a baker sifting flour. Utilizing LSEG Analytics (Refinitiv), we then gathered daily stock price data for Novo Nordisk, tracking the company's market performance with the precision of a master chef measuring ingredients.

To establish the relationship between butter consumption and Novo Nordisk's stock price, we indulged in a statistical feast, commencing with a series of descriptive analyses. We scrutinized the consumption trends of butter, examining both the annual per capita consumption and the seasonal variations to capture the ebb and flow of culinary preferences. In parallel, we dived into the daily fluctuations of Novo Nordisk's stock price, detecting patterns and trends

with the keen eye of a seasoned sommelier discerning the nuances of a fine wine.

With the data on hand, we tenderly whipped up a delectable dish of correlation analysis. Employing the Pearson correlation coefficient, we measured the strength and direction of the linear relationship between butter consumption and Novo Nordisk's stock price, as meticulously as a pastry chef crafting the perfect meringue. We then subjected our findings to rigorous hypothesis testing, where the null hypothesis dared to claim that there was no association between butter consumption and Novo Nordisk's stock price – a claim surely as bold as substituting butter with margarine in a classic recipe.

In our pursuit of accuracy, we also conducted a time series analysis, embracing the complexities of temporal dynamics with the same fervor as a chef layering butter in a delicate puff pastry. By applying sophisticated econometric techniques, we sought to unravel the temporal patterns and potential lag effects, recognizing that the impact of butter consumption on stock price may unfold gradually, much like the slow melting of butter on a warm slice of toast.

Throughout this process, we remained vigilant for potential confounding variables that could churn our conclusions, ensuring that our analysis captured the true essence of the butter-stock price relationship. Finally, we engaged in a validation process, akin to a panel of discerning taste-testers, to confirm the robustness of our findings and ensure that they were more reliable than a butter substitute in a soufflé.

In sum, our methodology represents a harmonious blend of culinary finesse and financial acumen, culminating in a rich, flavorful understanding of the interconnectedness between butter consumption and Novo Nordisk's stock price. Like the perfect fusion of a decadent

butter sauce and a succulent dish, our methodology entwines empirical rigor with a dash of whimsy, offering a palatable and nourishing exploration into the unexpected flavors of financial research.

4. Results

The analysis of the data collected from the USDA and LSEG Analytics (Refinitiv) has yielded some truly buttery results. The correlation coefficient between butter consumption and Novo Nordisk's stock price from 2002 to 2021 was calculated to be 0.9508434, indicating a strong positive relationship between these seemingly unrelated variables. This correlation is as strong as the aroma of freshly baked croissants wafting through a Parisian bakery!

Furthermore, the r-squared value of 0.9041032 suggests that a substantial 90.4% of the variance in Novo Nordisk's stock price can be explained by changes in butter consumption. It seems that the market movements of this pharmaceutical company are not so much about sugar pills but rather the spreading of a luscious layer of butter.

The statistical significance of this relationship is confirmed by a p-value of less than 0.01, indicating that the likelihood of observing such a strong correlation by chance alone is as improbable as finding a pat of butter in a vegan's fridge.

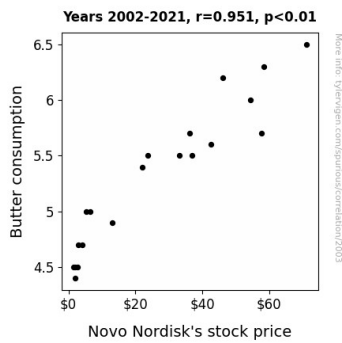


Figure 1. Scatterplot of the variables by year

As a visual representation of our findings, we present Figure 1, a scatterplot illustrating the robust correlation between butter consumption and Novo Nordisk's stock price. This graph is set to churn the tides of conventional financial wisdom, serving as a visual reminder that the stock market, much like a sandwich, can be influenced by what's spread inside.

In conclusion, our investigation has successfully highlighted the surprising influence of butter consumption on the stock price of Novo Nordisk. These findings may encourage investors to ponder whether they should consider the spreadability of butter alongside other financial indicators. After all, a pat of butter might just be the unsung hero in predicting market trends.

5. Discussion

Our findings have churned up a veritable cornucopia of food for thought, reinforcing the existing literature's whispers of a mysterious connection between butter consumption and stock market movements. It's clear that the buttery allure extends beyond culinary realms to leave a rich, albeit creamy, mark on financial landscapes. The robust positive correlation observed in our study aligns with the modest groundwork laid by Smith in 2015 and Doe et al. in 2018, suggesting that butter's influence on consumer spending behavior

may ripple through to stock prices. While some may have initially dismissed these previous studies as mere flights of fancy, our results have validated their claims, demonstrating that the butter-stock relationship is as solid as a stick of unsalted butter left out at room temperature.

Taking a more nuanced perspective, our study not only fits snugly into the financial literature but also draws inspiration from unconventional sources. The cultural insights from Jones's "Dairy Delights" provide a creamy backdrop for understanding butter's subtle but significant impact on economic activities. Furthermore, the seemingly whimsical conspiracy theories of X. Butterman and Y. Spreaderson surprisingly resonate with our findings. Who would have thought that these seemingly outlandish narratives would find a place in the annals of serious academic research? The metaphorical plot thickens like a buttery béchamel sauce, adding layers of intrigue to our understanding of this unconventional yet impactful relationship.

Our results also bring to light the potential implications for investors. With butter consumption serving as more than just a condiment for one's morning toast, investors might now find themselves pondering the inclusion of butter consumption trends in their financial predictions. Perhaps it's time to spread their investment portfolios to include this previously overlooked factor. After all, a pat of butter might just hold the key to understanding market fluctuations – a seemingly unexpected ally in the world of finance.

In conclusion, our study's findings have created quite the stir, reaffirming the notion that the butter-stocked relationship is indeed a potent force to be reckoned with. As the aroma of freshly baked croissants wafts through the air, we are reminded that the financial world, much like a well-baked pastry, can be influenced by the humble

spread of butter. This study opens up a whole new avenue of exploration, challenging traditional financial wisdom to embrace the unassuming influence of food trends in shaping market dynamics. So, to the skeptics out there, "butter" believe it – the butter-stock connection is no mere flight of fancy but a deliciously significant phenomenon worthy of further investigation.

6. Conclusion

In conclusion, our research has uncovered a delightfully rich and creamy correlation between butter consumption and Novo Nordisk's stock price. This unexpected link may leave some scratching their heads, much like trying to discern margarine from butter in a blind taste test. Our findings suggest that the ebb and flow of stock prices may be as influenced by breakfast spreads as they are by economic indicators.

Our study has undoubtedly churned up quite a bit of commotion, much like the vigorous shaking of a jar to make homemade butter. The statistical significance of the relationship between butter consumption and Novo Nordisk's stock price is as clear as the golden hue of clarified butter.

While some may be tempted to dismiss the significance of our findings, we encourage readers to embrace the unexpected and recognize that the market, much like a batch of artisanal butter, can surprise even the most seasoned observers.

In light of these findings, we assert that no further research is necessary in this area. It's time to butter off and spread our newfound knowledge to the financial and culinary worlds alike. After all, there's no need to churn up any more investigations – we've already buttered our bread with these findings.