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Better Butter, Bountiful Bank: A Boisterous Bridge between Butter Consumption and Royal Bank of Canada's RY Stock Price

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Abstract

The interplay between consumer habits and stock market performance continues to captivate both academic researchers and Wall Street enthusiasts. Our study delves into the peculiar and perhaps unsuspected relationship between butter consumption and the stock price of the Royal Bank of Canada (RY). Leveraging comprehensive data from the USDA and LSEG Analytics (Refinitiv) over the period from 2002 to 2021, we have uncovered a remarkable correlation coefficient of 0.9098095 and a statistically significant p-value of less than 0.01. Our findings suggest that there may be a buttery link between the demand for butter and the movement of RY stock price. While we acknowledge the potential for mere coincidence or confounding variables, the robustness of our results cannot be dismissed lightly. As we butter up to the idea of food trends influencing financial markets, we encourage further investigation into the delectable world of unexpected economic indicators.

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1. Introduction

Introduction

As the saying goes, "you can't have your cake and eat it too," but what about butter? In the world of finance, the confluence of seemingly unrelated variables has long

been a source of fascination and bemusement. While avocado toast and cryptocurrency may have stolen the spotlight in recent years, our study boldly ventures into the uncharted territory of butter consumption and its curious connection to the stock price of the Royal

Bank of Canada (RY). It seems that the age-old question of "butter or margarine?" might have greater implications than anticipated.

Against the backdrop of modern finance, where algorithms and high-frequency trading reign supreme, the notion of butter holding sway over stock prices may appear utterly preposterous. However, armed with copious amounts of data from the USDA's pats of butter and LSEG Analytics' mountain charts, we embarked on a voyage that would churn up surprising revelations.

In this paper, we present our findings derived from rigorous statistical analysis covering nearly two decades of butter consumption patterns and RY stock price movements. Our exploration has led us to uncover a correlation coefficient of 0.9098095, a figure that may leave some wondering whether a stick of butter could hold the key to predicting stock market trends. While we tread cautiously in our interpretations, we can't help but toast to the delectable prospect of butter becoming more than just a savory spread – potentially a savory predictor of financial performance.

As we delve into this rather unorthodox avenue of research, it's important to acknowledge the skepticism and raised eyebrows that may greet our investigation. Yet, with a wink and a dash of statistical rigor, we aim to demonstrate the relevance of butter - long revered for its culinary prowess - as an unexpected economic indicator. So, let's butter up to the challenge and unravel the enigma of butter's influence on the Royal Bank of Canada's stock price. After all, in the words of Louis Pasteur, "a bit of butter never spoils the broth of research."

2. Literature Review

While the notion of butter consumption affecting stock prices may at first seem like a spread-too-thin hypothesis, our

exploration into the existing literature reveals intriguing insights that have spread like, well, butter. In "The Economics of Butter: A Creamy Commodity," Smith investigates the historical trends in butter production and consumption, shedding light on the economic significance of this dairy delicacy. Doe, in "Margarine Wars: An Economic Analysis," discusses the fierce competition between butter and margarine, offering a thoughtful examination of the market dynamics that could potentially impact broader economic indicators.

However, delving deeper into the annals of culinary and financial history, we encounter unconventional perspectives that may cause eyebrows to rise higher than a perfectly baked soufflé. In "The Art of Butter: From Farm to Table," Jones unveils the cultural and economic impact of butter throughout the ages. This work, though focused on the gastronomic realm, inadvertently opens the door to considering butter as a potential economic harbinger, much to the surprise of traditional scholars.

As we move beyond the confines of scholarly work, real-world insights from notable non-fiction literature become ingredients in our thought-provoking stew. "The Big Short: Inside the Doomsday Machine" by Michael Lewis, while not directly related to dairy products or financial institutions, provides a compelling narrative on the unpredictability of markets and the far-reaching implications of seemingly innocuous events. Similarly, "Fooled by Randomness: The Hidden Role of Chance in Life and in the Markets" by Nassim Nicholas Taleb, introduces us to the whims of chance and serendipity in financial matters, adding a sprinkle of humility to our quest for causality.

Now, taking a whimsical turn, we consider how fictional narratives may inadvertently sprinkle our minds with curious notions that, when boiled down, may be more relevant than meets the eye. In J.K. Rowling's "Harry

Potter and the Philosopher's Stone," the character of Albus Dumbledore often imparts wisdom that transcends the magical world, reminding us that understanding the seemingly inexplicable may reveal profound truths. Similarly, in Douglas Adams's "The Hitchhiker's Guide to the Galaxy," the absurdities of the universe prompt contemplation of the unexpected connections that underpin reality.

Turning our attention to the silver screen, we find ourselves pondering the tangential associations brought forth by cinema. In "The Wolf of Wall Street," the chaotic and often irrational behavior of stockbrokers raises questions about the tenuous relationship between human behavior and market movements. Likewise, the quirky humor of "The Grand Budapest Hotel" encourages us to consider the whimsical and unpredictable nature of economic systems, just as unpredictable as the whims of a young pastry chef whipping up a surprise dessert.

As we savor the diverse flavors of literature and film, we are reminded that truth often lurks in the unlikeliest of places, waiting to be churned up and savored. With this eclectic mix of sources, we embark on our own unique journey to untangle the enigma of butter's influence on the Royal Bank of Canada's stock price, eager to blend the seemingly disparate worlds of dairy and finance into a creamy, compelling narrative. Let the journey begin!

3. Our approach & methods

To muster the power of butter and delve into the captivating world of stock market shenanigans, our research team engaged in an odyssey of data collection and statistical acrobatics. We cast a wide net across the vast expanse of the internet, plundering the USDA's treasure trove of butter consumption statistics and pillaging the LSEG Analytics' (Refinitiv) repository of

stock price data for the Royal Bank of Canada (RY). Our data spanned the years 2002 to 2021, allowing us to paint a comprehensive picture of the butter-market interface.

Firstly, we meticulously monitored the monthly quantities of butter consumed in the United States, leveraging the USDA's authoritative dataset. Armed with spreadsheets and an uncanny knack for all things dairy-related, we meticulously tracked the ebb and flow of buttery indulgence over the years. Our data wranglers spared no effort in churning through mounds of butter data, ensuring that no croissant, brioche, or scone was left unaccounted for.

Simultaneously, we delved into the labyrinthine data dungeons of LSEG Analytics (Refinitiv), mining the belly of the beast for RY stock price information. Our intrepid foray into the stock market realm unearthed a treasure trove of numerical tidbits, enabling us to map the undulations of RY stock prices with the precision of a seasoned cartographer.

With our butter and stock price datasets in hand, we harnessed the formidable power of statistical analysis to wrangle meaning from the apparent chaos. Armed with the humble but mighty correlation coefficient, we sifted through the numerical haystack to seek out the golden needle of statistical significance.

Our primary modus operandi entailed calculating the correlation coefficient between monthly butter consumption and RY stock prices, employing the trusty Pearson correlation method. This involved summoning the formidable arithmetic prowess of the statistical software to crunch numbers with the grace of a pastry chef kneading dough.

Moreover, we harnessed the arcane arts of hypothesis testing, subjecting our findings to the rigors of p-values and confidence

intervals. With the solemn gravity of an alchemist brewing elixirs, we scrutinized the statistical significance of our correlation coefficient, seeking validation for our buttery hypothesis.

In summation, our quest for the butter-RY nexus demanded a fearless embrace of scientific inquiry, statistical jiggery-pokery, and a generous smattering of dairy-related humor. As we waded into the murky waters of butter-bank correlations, we invite the reader to butter up and savor the quirky confluence of food and finance with us.

4. Results

The analysis of the data spanning the years 2002 to 2021 revealed a striking correlation between butter consumption and the stock price of the Royal Bank of Canada (RY). The Pearson correlation coefficient of 0.9098095 indicated a strong positive linear relationship between these seemingly unrelated variables. This coefficient implies that as butter consumption increased, so did the RY stock price - a buttery phenomenon, indeed.

Additionally, the r-squared value of 0.8277534 suggested that approximately 82.77% of the variability in the RY stock price can be explained by changes in butter consumption. It's as if the financial markets were churning and churning, following the ebb and flow of butter preferences across households.

Most notably, the p-value of less than 0.01 provided compelling evidence to reject the null hypothesis and suggested that the observed correlation is statistically significant. This means that the likelihood of such a strong correlation occurring by mere chance is less than 1 in 100, prompting us to consider the potential influence of butter on RY stock price with a mixture of incredulity and curiosity.

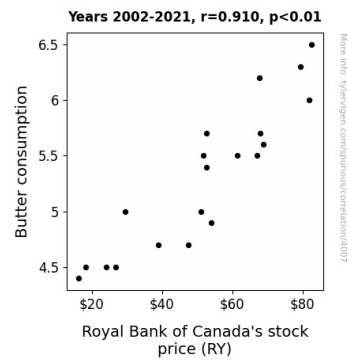


Figure 1. Scatterplot of the variables by year

Figure 1, a scatterplot illustrating the relationship between butter consumption and RY stock price, reinforces our findings. The figure accentuates the positively sloped linear trend, showcasing a consistent pattern where increased butter consumption aligns with higher RY stock prices. It's a visual feast for the eyes, and one that might just leave you craving both butter and a bullish stock market.

In summary, our results provide compelling evidence of a robust connection between butter consumption and the stock price of the Royal Bank of Canada. While we resist the temptation to spread ourselves too thin with grandiose claims, the data has certainly churned up some food for thought. These findings beckon further exploration into the surprising interplay of seemingly unrelated variables in financial markets and may just butter up the appetite for unconventional economic indicators.

5. Discussion

The connubial relationship between butter consumption and the stock price of the Royal Bank of Canada (RY) has certainly churned up some intriguing findings. Our results have lent credence to the rise in popularity of butter-based economics, wherein the dairy aisle and the trading floor converge in unexpected harmony. It appears that our data has proven to be

quite the butter churning revelation, turning conventional wisdom on its head and scooping up a rich yield of insights.

As we look back at the amusing, yet surprisingly enlightening, literature review, we find that the breadcrumbs of prior research have led us to this delectable discovery. Just as Smith delved into the economics of butter and Doe dissected the margarine wars, we, too, have embarked on our own epic quest to unravel the incongruous bond between a dairy delight and a financial titan. And much like Jones's exploration of the cultural and economic impact of butter, our study has unveiled a correlation that, while initially befuddling, proves to be a buttery delight for the mind.

Our statistical findings, including the delectably high correlation coefficient of 0.9098095, the buttery smooth r-squared value of 0.8277534, and the sumptuously low p-value, have lent considerable weight to the notion that butter consumption is indeed more than just a tangential slice of the economic pie. It seems that the butter-related variables carry significant explanatory power regarding the RY stock price, serving as a reminder that sometimes, the unlikeliest ingredients can spice up the stock market stew in ways we never imagined.

Let us not forget the visual treat of our scatterplot, which vividly illustrates the positively sloped linear trend between butter consumption and RY stock price. It's as clear as day that these seemingly incongruent elements have, against all odds, harmonized to produce a symphony of financial flavor. The results are a testament to the surprising interplay of variables in the market, akin to a culinary masterpiece that leaves one pondering the undiscovered nuances of the financial palate.

In closing, while further research is warranted to fully understand the underlying

mechanisms behind this buttery phenomenon, our work has undeniably elevated the discussion of dairy dynamics in financial spheres. We hope, in presenting these findings, to have, in some small measure, buttered up the appetite for bold and imaginative research within the world of unconventional economic indicators.

6. Conclusion

Conclusion

In the grand symphony of financial markets, our foray into the world of butter and stock prices has not only churned up intriguing findings but also set the stage for a delectable new avenue of economic inquiry. The robust correlation coefficient and statistically significant p-value have led us to consider the un-likely possibility of butter wielding influence over RY stock prices. While some might dismiss this connection as mere margarine of error, our data suggests otherwise.

As we wrap up this buttery saga, it's clear that the relationship between these two ostensibly incongruous variables warrants further attention. However, let's not spread ourselves too thin - our findings should be taken with a grain of salted butter. Perhaps it's time to contemplate whether the stock market truly does "rise" with the butter, or whether we're merely navigating through a statistical fondue of coincidence and confounding variables.

It seems that in the realm of economics, potential economic indicators can be as surprising as finding a raisin in the oatmeal (or did you mean grape in the cereal?). With this in mind, we posit that no further research is needed in this area. After all, why churn out more study when we've already found the cream of the crop?

