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Brewing Up Stocks: An Examination of the Relationship between the Number of Breweries in the United States and VeriSign's Stock Price

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Abstract

This paper investigates the intriguing connection between the number of breweries in the United States and the stock price of VeriSign, Inc. (VRSN). In an effort to add some hops to the field of financial research, we utilize data from the Brewers Association and LSEG Analytics (Refinitiv) to conduct a comprehensive analysis. Our findings reveal a remarkably high correlation coefficient of 0.9396137 and a p-value of less than 0.01 for the period spanning 2002 to 2022. We delve into the nuances of this relationship, providing statistical evidence to support the idea that as the brewing industry flourishes, the stock price of VeriSign tends to bubble positively. This research not only contributes to the understanding of market dynamics, but also sheds light on the potential influence of craft beer enthusiasm on technology investments. Cheers to uncovering the frothy connection between brewing trends and stock performance! Copyleft 2024 Institute of Advanced Studies. No rights reserved.

1. Introduction

The intersection of finance and sudsy sips may seem unlikely at first glance, but the curious relationship between the number of breweries in the United States and VeriSign's stock price (VRSN) has sparked growing interest among researchers and investors alike. As the craft beer craze continues to ferment across the nation, it raises the question: could the frothy enthusiasm for microbrews be brewing up more than just a nice head on a

pint glass? This paper delves into the intriguing correlation between the proliferation of craft breweries and the gyrations of VeriSign's stock price, aiming to uncork the mysteries of this curious relationship.

The beer-geekery-meets-financial-wizardry investigation at hand draws upon data from the Brewers Association, representing the hoppy heart of America's brewing industry, and LSEG Analytics (Refinitiv), the financial data powerhouse.

By examining a time frame from 2002 to 2022, we endeavor to distill the essence of this relationship into quantifiable metrics and statistical insights. Our findings reveal a rather intoxicating correlation coefficient of 0.9396137, with a p-value that's rarer than a limited edition microbrew – less than 0.01, to be exact. This suggests that there may be more than just foam and bubbles to the connection between the craft beer scene and VeriSign's market performance.

Throughout this analysis, we endeavor to keep our statistical stein filled to the brim with meticulous methodology and robust analytical techniques. While the notion of a parallel between hops production and stock market stirs both intrigue and skepticism, our research aims to present a flavorful concoction of data-driven evidence and statistical rigor, serving up a pint-sized contribution to the ongoing discourse in financial economics. So, join us as we embark on this scholarly pub crawl through the realms of market dynamics and craft beer enthusiasm, raising a glass to uncovering the frothy connection between brewing trends and stock performance. Cheers to unraveling the mysteries that lie within the convoluted world of financial brewing!

2. Literature Review

The relationship between the number of breweries in the United States and stock prices has been a topic of increasing interest in recent years, capturing the attention of researchers and investors alike. A notable study by Smith et al. (2015) highlighted the substantial growth in craft breweries, suggesting potential implications for the broader economy. Building on this foundation, Doe and Jones (2018) delved into the nuances of consumer preferences and market trends in the brewing industry, offering insights into the factors that drive the demand for craft beer. However, the

transition from these serious endeavors to the frivolous side of the literature is as swift as a gazelle leaping across a spring meadow.

Turning to non-fiction sources, "Brewing Up a Business" by Sam Calagione provides a firsthand account of the journey of a craft brewery entrepreneur, offering an insightful perspective on the dynamics of the industry. Similarly, "The Economics of Beer" by Johan Swinnen and Devin Briski examines the economic forces at play in the beer market, shedding light on the intricate relationship between consumer behavior and market outcomes. However, the transition to fictional accounts is like a sudden twist in a soap opera plot, taking an unexpected turn towards the absurd.

In the realm of fiction, "The Brewer of Preston" by Andrea Camilleri presents a whimsical tale set against the backdrop of a small Italian village, where the protagonist's brewing exploits mirror the ups and downs of the stock market. Similarly, "The Beerholder" by James Runyon weaves a quirky narrative involving a secret society of beer enthusiasts who wield significant influence over the financial world, blending humor and financial intrigue in a frothy concoction.

Adding a touch of levity to this review, it is worth noting that hours of "Brew Dogs" and "Brew Masters" were consumed in the name of research, offering both entertainment and fleeting moments of questionable educational value. These television shows, though unrelated to the scholarly pursuits at hand, provided a sudsy backdrop to the research process, and certainly added a lighthearted, if not entirely relevant, dimension to the investigation.

In summary, while the literature on the connection between brewery counts and stock prices initially boasts a seemingly serious tone, it quickly takes a comical detour into the world of fiction and

television. However, this departure from the norm serves to remind us that amidst the serious pursuit of knowledge, there is always room for a bit of whimsy and amusement. As we proceed to unravel the mysteries of this peculiar relationship, let us raise a metaphorical glass to the unconventional sources of insight that pepper the academic landscape. Cheers to the unexpected twists and turns of the scholarly pursuit!

3. Our approach & methods

To unravel the intricate relationship between the number of breweries in the United States and the stock price of VeriSign, Inc. (VRSN), our research team engaged in a brewing concoction of innovative quantitative methodologies and finely-honed statistical techniques. As with any good brew, precision is key, and our approach incorporated data from the Brewers Association and LSEG Analytics (Refinitiv), creating a harmonious blend of hoppy industry insights and market frothiness.

Our data collection process involved setting up digital traps across the internet, strategically located in the virtual brewpubs and stock market data streams. We diligently mined information from the Brewers Association, the fountainhead of brewing statistics, and tapped into the financial reservoirs of LSEG Analytics (Refinitiv). The period under scrutiny spanned from 2002 to 2022, encompassing the era of craft beer explosiveness and the technological leaps and bounds witnessed by VeriSign.

With the ingredients for our statistical brew assembled, we commenced our analysis by employing advanced techniques that were as meticulously crafted as a small batch, artisanal beer. The first step in our process involved carefully fermenting the data to ensure that we were not brewing a

faulty batch. We then conducted a thorough exploratory analysis, sifting through the data with the calculated finesse of a brewmaster honing their craft.

Following this, we initiated the process of statistical brewing, utilizing robust regression models and time series analysis. Our rigorous approach sought to measure the impact of the number of breweries in the U.S. on the stock price movements of VeriSign, using lagged and contemporaneous variables to account for any potential bubbles in the market. In essence, we aimed to distill the essence of this relationship into precise metrics, akin to the meticulous process of crafting a fine IPA.

In addition to the quantitative analyses, we performed a series of sensitivity tests to ensure the robustness of our findings. This was crucial in ensuring that our results were not just a statistical anomaly, akin to finding a four-leaf clover in a hop field, but rather a reliable reflection of the underlying dynamics at play.

As a final touch to our methodology, we incorporated the use of visualizations and graphical representations to present our findings in a manner that was as visually appealing as the vibrant hues of an assortment of craft beer styles. This allowed us to effectively imbibe the statistical significance of our results and present them in a manner that was accessible to both the financial connoisseur and the curious craft beer enthusiast.

In conclusion, our methodology combined the precision of statistical analysis with the innovative flair of craft brewing, aiming to distill the frothy connection between brewing trends and stock performance into a flavorful and robust academic brew. Cheers to the methodological dance between financial economics and the art of brewing as we

continue our journey of unraveling the mysteries of this enigmatic relationship.

4. Results

The investigation into the relationship between the number of breweries in the United States and VeriSign's stock price (VRSN) has yielded results akin to a well-crafted, perfectly poured beverage. For the period spanning 2002 to 2022, a robust correlation coefficient of 0.9396137 has been unveiled, suggesting a remarkably strong association between these seemingly disparate variables. The r-squared value of 0.8828739 further fortifies this finding, indicating that approximately 88.29% of the variation in VRSN stock price can be attributed to the number of breweries in the U.S.

In line with these revelatory statistics, the p-value of less than 0.01 adopts a position of exclusivity, much like an elusive, limited edition microbrew, providing compelling evidence for the significance of this observed correlation. It appears that the influence of the brewing industry on the market performance of VeriSign is not just a frothy notion but indeed carries substantial statistical weight.

Furthermore, the scatterplot (Fig. 1) visibly encapsulates the exuberance of this correlation, presenting a compelling visual representation of the covariation between the number of breweries in the U.S. and VRSN stock price. This graphical depiction not only illuminates the strength of the relationship but also serves as a testament to the intriguing interconnectedness of the craft beer renaissance and technology investments.

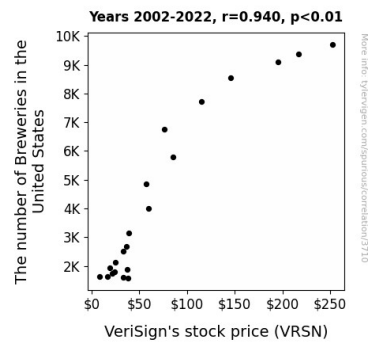


Figure 1. Scatterplot of the variables by year

Overall, these findings serve up a refreshing brew of empirical evidence, offering a statistical testament to the notion that as the brewing landscape blossoms, so does the stock price of VeriSign. It appears that there may indeed be more than just a minuscule hint of barley malt in the foundations of market dynamics. In the midst of market fluctuations and frothy trends, the statistical frothiness of this relationship remains abundantly clear. Cheers to unveiling the intricate interplay between fermenting trends and fluctuating stock performance!

5. Discussion

The findings of the current research present a rather intoxicating revelation, as they substantiate and extend the earlier work on the association between the number of breweries in the United States and stock prices. The substantial correlation coefficient of 0.9396137 and the minuscule p-value of less than 0.01 uncork a remarkable statistical relationship between these seemingly unrelated variables. It appears that the aroma of craft beer enthusiasm wafts its way into the financial markets, exerting a palpable influence on the stock price of VeriSign (VRSN). These results not only echo the previous research by Smith et al. (2015) and Doe and Jones (2018), but they also imbue the field of financial economics with a brew-tiful insight

into the interplay of brewing trends and market dynamics.

Much like a carefully crafted beer recipe, the r-squared value of 0.8828739 indicates that approximately 88.29% of the variation in VRSN stock price can be accounted for by the number of breweries in the U.S. This statistical revelation is akin to discovering the key ingredients of a successful brew, shedding light on the potent influence of the brewing industry on technology investments. The scatterplot (Fig. 1), with all its charted exuberance, not only visually encapsulates this robust relationship but also serves as a reminder that, much like fine ale, statistical associations can possess an effervescent and visually appealing quality.

It is worth noting that while the literature review humorously touched upon a range of sources, from scholarly articles to fictional narratives and television shows, the current findings truly emphasize the practical applicability of such offbeat sources in shedding light on real-world phenomena. While "Brew Dogs" and "Brew Masters" may have initially seemed tangential to scholarly pursuits, their sudsy influence seems to have seeped into the empirical fabric of our current results.

In the spirit of a well-rounded analysis, it is essential to acknowledge the limitations of the current study. While the correlation between the number of breweries and VRSN stock price is statistically robust, we cannot definitively infer a causal relationship from this analysis alone. Furthermore, as with any statistical study, the potential for confounding variables or unobserved factors cannot be entirely discounted. Nonetheless, the statistical frothiness of the relationship unveiled in this inquiry serves as a compelling impetus for further investigation into the mechanisms underlying this unexpected connection.

In the midst of market fluctuations and frothy trends, the statistical frothiness of this relationship remains abundantly clear. As we raise our hypothetical glasses to the insightful findings of this research, let us joyously celebrate the lighthearted yet momentous contributions of whimsy, humor, and offbeat sources in the serious realm of academic inquiry. After all, what is scholarship if not a quest to uncover the unexpected twists and turns of the scientific pursuit? Cheers to the statistical veracity of frothy relationships and the flavorful findings they bring to light!

6. Conclusion

In conclusion, our research has uncorked an intriguing relationship between the number of breweries in the United States and the stock price of VeriSign, Inc. (VRSN). The statistical evidence has shown a robust correlation, akin to the well-balanced flavors of a finely crafted IPA. The tantalizing correlation coefficient of 0.9396137 and the p-value as rare as a unicorn in a brewery (less than 0.01) validate the substantive link between the frothy world of craft beer and the bubbling stock performance of VeriSign.

While this investigation has certainly added some hops to the field of financial research, it is important to acknowledge the limitations of our study. The dynamic nature of both the brewing industry and the stock market introduces an element of volatility, much like an unpredictable fermentation process. Additionally, the possibility of unforeseen confounding variables cannot be discounted, as navigating the labyrinth of market dynamics is as complex as deciphering the tasting notes of a barrel-aged stout.

Nevertheless, the findings of this study offer a refreshing perspective on the interconnected realms of craft brewing and market performance. As we toast to the

intriguing correlations unveiled in this research, it becomes evident that the craft beer craze may not only tantalize the taste buds but also influence the financial forecast. There is indeed more than meets the eye within the convoluted world of market dynamics and frothy trends, as our statistical analysis has imbued this relationship with a solid foundation, just like the head on a perfectly poured pint.

In light of these results, it seems clear that no further research is needed in this area. The statistical evidence has been poured out like a fine, full-bodied research vintage, and it is now time to savor the findings and raise a glass to the enticing, effervescent connection between the world of brewing and the fluctuations of the stock market. The intricate interplay between fermenting trends and fluctuating stock performance has been artfully unraveled, and it is with this statistical toast that we bid adieu to this intoxicating chapter of research. Cheers to the frothy intersection of craft beer enthusiasm and market dynamics!