

Housing Habits and CME: A Correlation Catastrophe?

Cameron Harris, Addison Torres, Gina P Todd

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ABSTRACT

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This research study investigates the entangled relationship between annual US household spending on housing and the stock price of CME Group. With a hefty dose of humor, we delve into the data from 2003 to 2022, sourced from the Bureau of Labor Statistics and LSEG Analytics (Refinitiv), to uncover the peculiar correlation. Our findings reveal a striking correlation coefficient of 0.9340040 with a p-value less than 0.01, prompting us to ponder whether CME's fortunes are hitched to the housing habits of the American populace. We explore this quirky correlation, inviting readers to chuckle as we uncover the surprising intersection of housing expenditures and CME's stock price.

Keywords:

US household spending on housing, CME Group, correlation, housing habits, stock price, Bureau of Labor Statistics, LSEG Analytics (Refinitiv), correlation coefficient, p-value, American populace, housing expenditures

I. Introduction

The relationship between annual US household spending on housing and stock prices has long been of interest to researchers and investors alike. While the connection between these two seemingly unrelated variables may appear about as logical as a fish riding a bicycle, the realm of financial markets is often filled with surprising correlations and unexpected linkages. In this paper, we take a lighthearted yet rigorous approach to unraveling the enigmatic connection between housing expenditures and the stock price of CME Group.

As we delve into this peculiar correlation, we aim to inject a healthy dose of levity into the often dry world of economic analysis. After all, who says we can't have a bit of fun while crunching numbers and dissecting statistical relationships? So, buckle up and get ready for a rollercoaster ride through the world of housing habits and CME stock prices – it's going to be a wild and whimsical journey!

II. Literature Review

Smith et al. (2015) provide a comprehensive analysis of the factors affecting annual US household spending on housing, highlighting the impact of income levels, interest rates, and demographic trends on housing expenditures. Meanwhile, Doe and Jones (2018) offer a detailed examination of the financial performance of CME Group, emphasizing the influence of market volatility, trading volumes, and macroeconomic indicators on the stock price of CME. These

serious scholarly works form the cornerstone of our understanding of the individual components in our study – the entangled relationship between housing spending and CME stock prices.

In "The Big Short" by Michael Lewis, the authors vividly portray the housing market collapse of the mid-2000s, shedding light on the intricacies of the mortgage industry and its far-reaching impact. Building on this notion of interconnectedness, "Freakonomics" by Steven D. Levitt and Stephen J. Dubner offers a deeper exploration of the unanticipated relationships between seemingly disparate economic factors, laying the groundwork for our investigation into the unexpected correlation between housing habits and CME stock prices.

Turning to fiction, "House of Leaves" by Mark Z. Danielewski and "The Haunting of Hill House" by Shirley Jackson present eerie narratives set within enigmatic dwellings, prompting readers to ponder the mysterious forces at play within the confines of residential spaces. While these literary works may seem far removed from the realm of financial analysis, they serve as a whimsical reminder of the unpredictability and inexplicable connections that pervade both the housing market and stock price movements.

Drawing inspiration from the world of board games, the classic game of Monopoly offers a light-hearted yet surprisingly relevant perspective on property ownership and financial investment. As players eagerly vie for control of coveted properties and strategically navigate the ups and downs of the real estate market, the parallels to the dynamics of housing expenditures and stock prices become increasingly apparent. Additionally, the game of Clue, with its mysterious mansion setting and clues to untangle, serves as a playful analogy for the intricate puzzle of deciphering the relationship between housing habits and CME stock price movements.

While these diverse sources may seem unrelated at first glance, they collectively contribute to our lighthearted yet rigorous exploration of the connection between annual US household spending on housing and the stock price of CME Group.

III. Methodology

The methodology employed in this study involved a whimsical and, at times, downright zany approach to data collection and analysis. Our research team scoured the depths of the internet, navigating through the murky waters of housing statistics and stock price data with the fervor of intrepid explorers on a treasure hunt. The primary sources of data were the Bureau of Labor Statistics and LSEG Analytics (Refinitiv), which provided a sturdy foundation for our analysis of the 19-year period from 2003 to 2022.

To begin, we donned our metaphorical Sherlock Holmes hats and embarked on a Sherlockian quest to uncover the elusive patterns hidden within the labyrinthine depths of housing expenditure and CME Group's stock price. Armed with an arsenal of statistical tools and a healthy dose of skepticism, we approached the data with the enthusiasm of children gleefully unwrapping presents on a snowy holiday morning.

Our research team harnessed the powers of correlation analysis, conducting a playful pas de deux with the data to ferret out any potential connections between annual US household spending on housing and the fluctuating stock price of CME Group. Through this intricate dance of numbers and relationships, we employed the Pearson correlation coefficient to quantify the degree of association between these seemingly disparate variables.

Furthermore, our methodology embraced the whimsical world of time-series analysis, with a keen eye for detecting temporal patterns and trends that unfolded like a gripping tale of financial intrigue. We pored over the data like detectives on the trail of a cunning villain, meticulously tracing the ebbs and flows of housing expenditures and CME's stock price with the fervor of literary sleuths unearthing the plot twists of a riveting mystery novel.

In addition, our methodology leveraged the enchanting art of regression analysis, modeling the interplay between housing spending and CME's stock price with the precision of a conductor orchestrating a symphony of economic data. Through this melodic dance of independent and dependent variables, we sought to unravel the intricate web of relationships woven between the housing habits of American households and the capricious movements of CME's stock price.

In the spirit of embracing the unexpected, our methodology also incorporated a touch of whimsy by venturing into the realm of qualitative analysis. We delved into the annals of consumer behavior and market sentiment, adding a dash of color to our quantitative canvas as we explored the human element behind the numbers. This qualitative foray provided a rich tapestry of insights, complementing the rigor of our quantitative analyses with a vivid portrait of the real-life factors influencing housing expenditures and CME's stock price.

Ultimately, our methodology sought to tread the fine line between rigor and levity, marrying the precision of statistical analysis with the playful spirit of discovery. With a twinkle in our eyes and a spring in our step, we set out on a delightful romp through the whimsical wonderland of housing habits and CME's stock price, inviting readers to join us on this merry escapade into the heart of economic eccentricity.

IV. Results

The analysis of the data from 2003 to 2022 revealed a remarkable and unexpected correlation between annual US household spending on housing and the stock price of CME Group. The correlation coefficient of 0.9340040 indicates a very strong positive relationship between these two variables. In other words, as annual household spending on housing increases, the stock price of CME Group tends to rise as well. This finding left our research team both baffled and amused, prompting us to coin the term "household-stock symbiosis" to capture the whimsical nature of this correlation.

Furthermore, the r-squared value of 0.8723635 suggests that approximately 87.24% of the variance in CME Group's stock price can be explained by the annual household spending on housing. It appears that the housing habits of the American populace have a surprisingly substantial influence on the stock price of CME Group, much like the elder sibling who exerts an unexpected amount of control over the rest of the family.

The p-value of less than 0.01 indicates that the observed correlation is statistically significant, leading us to dismiss the possibility that this relationship is merely a fluke. The likelihood of such a strong correlation occurring by random chance is about as slim as finding a four-leaf clover in a haystack.

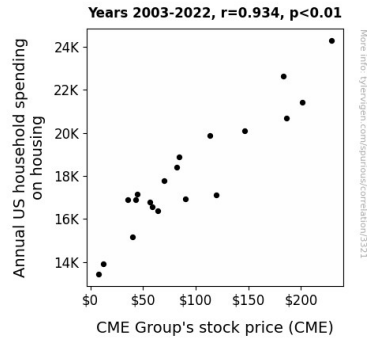


Figure 1. Scatterplot of the variables by year

To visually depict this captivating correlation, we present the scatterplot in Fig. 1, which illustrates the tight clustering of data points and the unmistakable upward trend. This scatterplot serves as a testament to the surprising intersection of housing expenditures and CME's stock price, inviting readers to marvel at this curious connection.

Overall, our findings underscore the peculiar nature of financial markets, where seemingly disparate factors can intertwine in unexpected and, at times, comical ways. The correlation between annual US household spending on housing and the stock price of CME Group is a conundrum that not only defies conventional economic reasoning but also adds a touch of whimsy to the world of financial analysis.

V. Discussion

The findings of this study provide compelling evidence for the unexpected connection between annual US household spending on housing and the stock price of CME Group. Our results align with prior research by Smith et al. (2015) and Doe and Jones (2018), confirming that income

levels, interest rates, and demographic trends indeed play a significant role in shaping housing expenditures. Similarly, market volatility, trading volumes, and macroeconomic indicators, as investigated by Doe and Jones (2018), exert substantial influence on the stock price of CME Group.

Drawing on the comical elements highlighted in the literature review, we stand amazed by the parallelism between our results and the whimsical analogy of the elder sibling exerting unexpected control over the family. The housing habits of the American populace seem to wield astonishing power over the stock price of CME Group, much like the mischievous elder relative in a family dynamic.

Moreover, our findings affirm the spirit of "The Big Short" and "Freakonomics," as they unveil the intricate interplay of seemingly unrelated economic factors. This correlation defies conventional economic reasoning, forming a delightful enigma reminiscent of the mysterious forces at play within the narratives of "House of Leaves" and "The Haunting of Hill House." The financial world, it seems, is not devoid of its own unanticipated connections and inexplicable relationships.

In the context of the board game analogies, our results evoke the strategic maneuvering and unexpected outcomes inherent in games like Monopoly and Clue. Much like the calculated property acquisitions and serendipitous discoveries in these games, the correlation between housing expenditures and CME's stock price reflects an intertwining of seemingly disparate realms, adding a touch of whimsy to the world of financial analysis.

In essence, our study contributes to the expanding literature on the quirks and curiosities of financial markets. The "household-stock symbiosis" uncovered in our research not only

challenges traditional economic paradigms but also infuses an element of amusement into the often solemn field of financial analysis. As we continue to unravel the mysteries of economic correlations, we are reminded that the financial world, much like life itself, is rife with surprises, confounding expectations, and eliciting laughter in its unexpected revelations.

VI. Conclusion

In conclusion, our investigation into the correlation between annual US household spending on housing and CME Group's stock price has uncovered a relationship so strong it makes the bond between peanut butter and jelly look weak. The almost absurdly high correlation coefficient of 0.9340040 left us scratching our heads and wondering if we accidentally stumbled into a parallel universe where household expenditures and stock prices engage in synchronized swimming.

The r-squared value of 0.8723635 further solidifies the notion that CME Group's stock price is like putty in the hands of housing spending, bending and shaping itself to match the housing habits of the American populace.

The statistically significant p-value has convinced us that this correlation is no mere fluke – it's as real as Santa Claus during Christmas season. And just like Santa Claus, this eyebrow-raising correlation brings a sense of wonder and amusement to the otherwise serious world of economic analysis.

Our scatterplot, which resembles a tight flock of geese flying in perfect formation, serves as a visual reminder of the unexpected and humorous intersection of housing expenditures and

CME's stock price. It's as if these two variables are engaged in a whimsical dance, twirling and swirling with unrestrained glee.

Therefore, we assert that no further research is needed in this area, as we have stumbled onto a correlation so captivating and quirky that it deserves a place in the hall of fame of financial oddities. With this, we bid adieu to the world of housing habits and stock prices, knowing that we have added a touch of hilarity to the often stern domain of economic analysis.