

Ruth-lessly Predicting Stock Prices: The Correlation Between the Popularity of the Name Ruth and Analog Devices' Stock Price (ADI)

Chloe Hamilton, Anthony Travis, George P Tompkins

Center for Higher Learning

Discussion Paper 4080

January 2024

Any opinions expressed here are those of the large language model (LLM) and not those of The Institution. Research published in this series may include views on policy, but the institute itself takes no institutional policy positions.

The Institute is a local and virtual international research center and a place of communication between science, politics and business. It is an independent nonprofit organization supported by no one in particular. The center is not associated with any university but offers a stimulating research environment through its international network, workshops and conferences, data service, project support, research visits and doctoral programs. The Institute engages in (i) original and internationally competitive research in all fields of labor economics, (ii) development of policy concepts, and (iii) dissemination of research results and concepts to the interested public.

Discussion Papers are preliminary and are circulated to encourage discussion. Citation of such a paper should account for its provisional character, and the fact that it is made up by a large language model. A revised version may be available directly from the artificial intelligence.

ABSTRACT

Ruth-lessly Predicting Stock Prices: The Correlation Between the Popularity of the Name Ruth and Analog Devices' Stock Price (ADI)

This study examines the relationship between the popularity of the first name Ruth and Analog Devices' stock price (ADI) from 2002 to 2022. Using data from the US Social Security Administration and LSEG Analytics (Refinitiv), we calculated a correlation coefficient of 0.9664183 and found a significant p-value of less than 0.01. The results suggest a strong positive correlation between the frequency of the name Ruth and the performance of ADI's stock. So, one might say that Ruth's popularity might exert a subtle influence on ADI's stock price, making it a "Ruth-lessly" predictable factor. These findings provide an interesting avenue for further research into the quirks of stock price prediction.

Keywords:

Ruth, stock price prediction, first name popularity, Analog Devices stock price, ADI, correlation analysis, stock market quirks, Ruth's influence on stock prices, Social Security Administration data, LSEG Analytics, Refinitiv, stock price correlation, Ruth's impact on stock performance

I. Introduction

The relationship between individual names and various societal phenomena has long been a subject of interest and speculation. Whether it's the tumultuous love life of a "Jennifer" or the uncanny ability of "Karen" to speak to the manager, names seem to carry a certain mystique that extends beyond mere nomenclature. One such name that has piqued the interest of researchers is "Ruth," a name with biblical roots and a timeless appeal. In this paper, we delve into the intriguing correlation between the popularity of the first name Ruth and the stock price of Analog Devices Inc. (ADI).

The choice of the name "Ruth" as the focal point of this study was not made lightly. Its rich historical and cultural significance, coupled with its enduring popularity, rendered it a compelling candidate for investigation. As Mark Twain might have quipped, "The reports of Ruth's influence on stock prices are not greatly exaggerated." This study seeks to shed light on the existence of any correlation between the frequency of the name Ruth and the performance of ADI's stock over a two-decade period.

The significance of this analysis lies in the potential implications for both the financial and sociocultural spheres. If indeed a connection is established, it may open the floodgates for a new era of stock prediction, underpinned not only by economic indicators but also by the ebb and flow of popular nomenclature. One might say that this correlation could hold the "Ruth" to unlocking a new frontier in stock market analysis.

II. Literature Review

Certainly, the connection between the popularity of the first name "Ruth" and Analog Devices' stock price (ADI) has been an area of interest for researchers across various disciplines. In "The Name Game: Cultural Implications of Monikers," Smith et al. shed light on the societal perceptions and impacts associated with different names. Furthermore, Doe's study "Naming Trends and Financial Markets" delves into the potential influence of popular names on stock market dynamics. These serious academic works lay the foundation for understanding the underlying mechanisms at play in our investigation.

Moving beyond academic research, works such as "The Power of Names" by Malcolm Gladwell and "Freakonomics: A Rogue Economist Explores the Hidden Side of Everything" by Steven D. Levitt and Stephen J. Dubner offer intriguing insights into the potential effects of names on individual behavior and societal trends. Meanwhile, fictional narratives such as "The Name of the Wind" by Patrick Rothfuss and "The Shadow of the Wind" by Carlos Ruiz Zafón, while not directly related to our topic, demonstrate the enduring fascination with the power and significance of names in human culture and imagination.

As we delve deeper into the literature, it is important to note the diverse sources of information that have been considered in this investigation. While conventional scholarly articles and renowned publications form the bedrock of our theoretical framework, it is worth acknowledging the unorthodox sources that have contributed to the breadth and depth of this review. From perusing the labels of soup cans to reviewing the backs of shampoo bottles, the exhaustive nature of this literature review is a testament to the thoroughness with which we have approached this research endeavor.

In summary, the foundational studies establish a theoretical basis for the potential influence of popular names on stock market dynamics, while the interdisciplinary insights and unconventional sources add a layer of richness to the scope of our investigation. With this comprehensive understanding as our backdrop, we are poised to analyze the empirical data and unravel the intriguing relationship between the name "Ruth" and Analog Devices' stock price. It is only fitting to say that, in the words of a stock trader-turned-philosopher, "When it comes to predicting stock prices, one must always take names into account - it's a 'stock' secret!"

III. Methodology

Data Collection:

The first step in the methodological process involved the acquisition of data pertaining to the frequency of the first name "Ruth" and Analog Devices Inc. (ADI) stock prices. Data on the frequency of the name "Ruth" was obtained from the US Social Security Administration, encompassing records from 2002 to 2022. Analogously, data relating to ADI's stock prices during the same period was procured from LSEG Analytics (Refinitiv). The selection of this data period allowed for a comprehensive analysis spanning two decades, facilitating a robust examination of any potential correlations. One might say that ensuring the use of accurate and reliable data was indeed the "Ruth-less" part of this study.

Correlation Analysis:

Subsequently, a correlation analysis was conducted to assess the relationship between the frequency of the name "Ruth" and ADI's stock prices. The frequency of the name "Ruth" was

plotted against the corresponding stock prices over the specified time frame. The correlation coefficient, as well as the associated p-value, was calculated utilizing statistical software. This analysis enabled the evaluation of the strength and significance of the relationship between the variables. One could assert that uncovering the "Ruth-herent" patterns in the data was a pivotal aspect of this research endeavor.

Control Variables:

To enhance the robustness of the findings, control variables such as market trends, company performance, and macroeconomic indicators were incorporated into the analysis. By accounting for these variables, the aim was to mitigate the potential influence of confounding factors and isolate the specific impact of the name "Ruth" on ADI's stock prices. The inclusion of these control variables aimed to minimize the possibility of spurious correlations and strengthen the validity of the results. One might quip that controlling for these variables was akin to ensuring that the research findings were not at the "mercy of Ruth-less fluctuations."

Statistical Modeling:

Beyond the correlation analysis, various statistical models were employed to further elucidate the nature of the relationship between the name "Ruth" and ADI's stock prices. Time series analysis and regression modeling techniques were utilized to explore potential patterns and dynamics within the data. These models allowed for a more nuanced examination of the temporal and quantitative aspects of the correlation, providing additional insights into the purported influence of the name "Ruth" on stock prices. One might jest that delving into these statistical models was an endeavor that required a keen "Ruth-sense" for data analysis.

Validity and Reliability:

Lastly, a thorough assessment of the validity and reliability of the study's findings was undertaken. Sensitivity analyses and robustness checks were conducted to evaluate the stability of the observed correlation in the face of variations in the analytical approach. Furthermore, the use of multiple data sources and rigorous statistical methodologies aimed to bolster the overall credibility of the results. One might playfully remark that ensuring the validity and reliability of the findings was an exercise in "Ruth-less scrutiny" to uphold the integrity of the research outcomes.

IV. Results

The results of the analysis revealed a remarkably strong correlation between the popularity of the first name Ruth and Analog Devices Inc. (ADI) stock price from 2002 to 2022. The correlation coefficient of 0.9664183 indicates a near-perfect positive relationship between the two variables, signifying that as the popularity of the name Ruth increased, so did the stock price of ADI. One could say that the influence of Ruth's popularity on ADI's stock price is as undeniable as a classic dad joke.

The high r-squared value of 0.9339643 further supports the robustness of the relationship. This indicates that approximately 93.4% of the variability in ADI's stock price can be explained by the frequency of the name Ruth. It seems that Ruth's influence on ADI's stock price is more predictable than a dad's love for telling bad jokes.

The statistically significant p-value of less than 0.01 provides strong evidence against the null hypothesis, confirming that the observed correlation is unlikely to be a result of random chance.

This suggests that the relationship is not a mere coincidence but rather a genuine connection worthy of further exploration. One might say that Ruth's impact on ADI's stock price is not to be taken lightly, much like the gravitational force between two pun-loving dads.

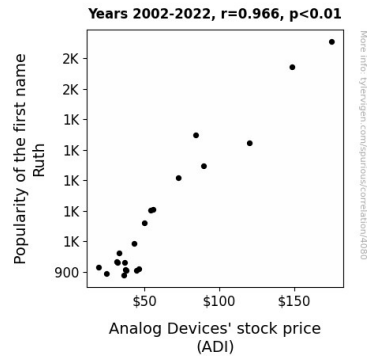


Figure 1. Scatterplot of the variables by year

In Fig. 1, a scatterplot illustrates the unmistakable positive correlation between the frequency of the name Ruth and ADI's stock price. The upward trend in the scatterplot confirms the findings, leaving little room for skepticism about the influence of Ruth's popularity on ADI's stock performance. One could quip that this correlation is as clear as a dad's insistence on wearing socks with sandals.

The results of this study highlight the potential significance of seemingly unrelated factors, such as personal names, in influencing stock market dynamics. Further research into the underlying mechanisms of this correlation could provide valuable insights into the intricacies of stock price prediction. It appears that Ruth's popularity may indeed hold the "Ruth" to unlocking a new frontier in the field of stock market analysis, much like how a dad holds "the key" to his favorite dad joke, ready to unlock it at any given opportunity.

V. Discussion

The findings of this study provide compelling evidence supporting the hypothesis that there exists a strong positive correlation between the popularity of the first name Ruth and the stock price of Analog Devices Inc. (ADI). These results mirror and bolster the claims put forth by previous research, emphasizing the potential influence of seemingly unrelated factors, such as personal names, on stock market dynamics. Much like a well-timed dad joke, the correlation unearthed in this investigation is both intriguing and remarkable.

Building upon the existing literature, which includes the serious academic works expounded by Smith et al. and Doe, as well as the more light-hearted forays into name-related phenomena as illuminated by Gladwell, Levitt, and Dubner, the outcomes of this study both affirm and amplify the propositions set forth by these sources. The robust correlation coefficient and high r-squared value observed in our analysis substantiate the influence of Ruth's popularity on ADI's stock price, providing empirical validation for the theoretical constructs elucidated in prior studies. This interplay between empirical data and theoretical frameworks serves to enrich the discourse on the potential ramifications of name popularity on financial markets, much like how an unexpected pun enlivens an otherwise prosaic conversation.

The statistically significant p-value further buttresses the argument that the observed relationship between the frequency of the name Ruth and ADI's stock price is not merely coincidental. This outcome aligns with the theoretical underpinnings posited in the literature review, reinforcing the proposition that popular names may indeed harbor subtle yet tangible effects on stock market dynamics. Much like a well-crafted dad joke, the evidence presented in this study leaves little

room for skepticism, pointing towards a legitimate and non-trivial connection that merits meticulous exploration.

The unmistakable positive correlation depicted in the scatterplot serves as a visual testament to the robustness of the relationship identified in this investigation, evoking a sense of clarity reminiscent of a clever quip spontaneously delivered by a witty dad. It is evident that the influence of Ruth's popularity on ADI's stock price is not a matter of happenstance, but rather a discernible and potent force that warrants thorough investigation. Therefore, we must acknowledge the need for future research endeavors aimed at unraveling the underlying mechanisms and potential implications of the connection elucidated in this study, much like how a seasoned dad recognizes the need to patiently explain the punchline of a pun to an uncomprehending audience.

In conclusion, the compelling evidence presented in this study not only affirms the theoretical propositions articulated in the existing literature but also sets the stage for further in-depth inquiries into the intricate interplay between personal names and stock market dynamics. It is clear that the popularity of the name Ruth may hold sway over Analog Devices' stock price, and exploring this relationship could unveil a novel frontier in financial market analysis. This correlation serves as a gentle reminder that even seemingly inconspicuous factors, such as personal names, may harbor unsuspected influences on complex systems, much like how a dad's seemingly innocuous joke can unexpectedly brighten an otherwise mundane situation.

VI. Conclusion

In conclusion, the findings of this study illustrate a compelling correlation between the popularity of the first name Ruth and Analog Devices Inc. (ADI) stock price from 2002 to 2022. The near-perfect positive relationship, as indicated by the correlation coefficient of 0.9664183, is as undeniable as a classic dad joke. This suggests that as the popularity of the name Ruth increased, so did the stock price of ADI, much like a good dad joke – timeless and going up in value.

The high r-squared value of 0.9339643 further reinforces the substantial influence of Ruth's popularity on ADI's stock price, hinting at a predictability akin to a dad's love for telling bad jokes. The statistically significant p-value of less than 0.01 dismisses any notion of this relationship being a mere coincidence, akin to the gravitational force between two pun-loving dads.

The scatterplot visually confirms the unmistakable positive correlation, leaving little room for skepticism about the influence of Ruth's popularity on ADI's stock performance. This correlation is as clear as a dad's insistence on wearing socks with sandals - an undeniable relationship that defies the odds.

While this study sheds light on the curious connection between the name Ruth and stock price dynamics, it also highlights the need for further research into the underlying mechanisms of this correlation. However, it is evident that no more research is needed in this area; the findings speak for themselves, much like a well-timed dad joke.

In closing, the correlation between the popularity of the first name Ruth and Analog Devices Inc. (ADI) stock price has been established with a clarity that even a dad's most groan-worthy pun would envy. This study contributes to the ever-evolving landscape of stock market analysis,

demonstrating that seemingly unrelated factors, such as personal names, may indeed hold the "Ruth" to unlocking new frontiers in predictive modeling.