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Neptunian Nonsense: Navigating the Nexus between Neptune's Nearness and SAP SE Stock Price

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Neptune, Uranus, SAP stock price, celestial influence, interplanetary correlation, Astropy data, LSEG Analytics, Refinitiv data, finance, stock market, correlation coefficient, cosmic humor, Neptune's distance, SAP SE, astronomical question

Abstract

This study navigates through the celestial realm to investigate the potential link between the distance between Neptune and Uranus and the stock price of SAP SE (SAP). Utilizing data meticulously gathered from calculated using Astropy and LSEG Analytics (Refinitiv), we explore the truly astronomical question at hand. Surprisingly, we uncover a correlation coefficient of 0.9256769 and $p < 0.01$ during the time period of 2002 to 2023, suggesting a connection that is truly out of this world. Our findings not only shed light on the interplanetary influence on the stock market but also add a dash of cosmic humor to the world of finance.

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1. Introduction

The relationship between celestial bodies and earthly matters has fascinated mankind for centuries. Despite the vast distances that separate them, the movements of planets have often been linked, both seriously and whimsically, to events on our own little blue planet. In this study, we delve into the whimsical side as we explore the potential connection between the distance

between Neptune and Uranus and the stock price of SAP SE (SAP).

While some may find the idea frivolous, we assure you that the calculations and analyses presented here are anything but. Utilizing data painstakingly collected and calculated using Astropy and LSEG Analytics (Refinitiv), we aim to bring light to this interstellar curiosity. Yes, you read that right – we are indeed bringing "light" into the mix, both figuratively and literally speaking.

Now, before you raise an eyebrow and think we've gone off into the deep end of the cosmos, rest assured that we are as grounded in statistical rigor as any reputable study should be. Our aim is not just to amuse but to uncover any potential patterns that may exist between the fluctuations of Neptune and Uranus and the swings of SAP stock prices. This inquiry is just as much a study in financial markets as it is a playful nod to the cosmic ballet that unfolds above us.

The pursuit of knowledge often takes us to unexpected places, and in this case, it has led us to the outer reaches of our solar system. Join us as we embark upon this celestial journey and see how the movements of planets may hold a clue to the movements of stocks. After all, in the vast sea of economics and astrophysics, perhaps there's room for a little cosmic whimsy.

2. Literature Review

Previous studies have touched upon the interplay between celestial phenomena and human affairs, albeit in less conventional manners. Smith (2008) explored the implications of lunar phases on market sentiment, finding a curious link between the full moon and stock market performance. Doe (2015) delved into the astrological signs of CEOs, postulating that the alignment of stars at birth may influence executive decision-making. Jones (2017) took a different tack and studied the impact of sunspots on commodity prices, unearthing a connection that defies conventional economic theories.

Turning to more tangentially related literature, "Astrophysics for People in a Hurry" by Neil deGrasse Tyson offers a lucid distillation of cosmic concepts for the layperson, reminding us that even the most complex phenomena can be made accessible. In a similar vein, "Cosmos" by

Carl Sagan provides a poetic journey through the universe, inspiring awe and wonder at our place in the cosmos.

Venturing into the realm of fiction, one encounters "The Hitchhiker's Guide to the Galaxy" by Douglas Adams, a whimsical romp through space that showcases the absurdities of the universe. Meanwhile, the classic "Neuromancer" by William Gibson delves into a cyberpunk future where human consciousness intertwines with the digital realm, reminding us that even in the celestial expanse, technology and humanity intersect in unforeseen ways.

A more contemporary source of celestial amusement comes in the form of the "Distracted Boyfriend" meme, where a man's wandering eye invites playful interpretations. In this case, we can't help but draw a parallel to investors keeping an eye on alternative stocks while SAP's performance may be drifting away.

As we weave together these seemingly disparate threads of literature, we find ourselves poised for a cosmic collision of the celestial and the financial, steering us towards a nebula of possibilities in understanding the celestial connection to SAP stock prices.

3. Our approach & methods

To grapple with the enigmatic relationship between the cosmic dance of Neptune and Uranus and the capricious fluctuations of SAP SE's stock price, we employed a methodological approach that is as avant-garde as it is rigorously scientific. First, we harnessed the power of data mining techniques to extract celestial data on the positions of Neptune and Uranus from a variety of reputable sources, including but not limited to NASA and the European Space Agency. With this astronomical data in hand, we then meticulously cross-referenced it with stock price data for SAP

SE extracted from the depths of known financial databases, including the illustrious archives of Financial Times and Bloomberg.

Our research team wielded the statistical weaponry of correlation analysis to unveil potential connections between the relative positions of Neptune and Uranus and the tempestuous temblors of SAP stock prices. We calculated the distance between the two planets and synchronized these values with the corresponding stock prices to unleash the power of Pearson's correlation coefficient. The resulting tidal wave of statistical significance flooded our analysis, revealing a correlation coefficient of 0.9256769 with $p < 0.01$, signifying a robust relationship that defies the gravitational pull of conventional expectations.

To ensure the robustness of our findings, we navigated the treacherous waters of time series analysis, employing both autoregressive integrated moving average (ARIMA) models and harmonic analysis to detect potential cyclical patterns in the interstellar-stock nexus. Our voyage through the spacetime continuum yielded compelling results, further reinforcing the profound intertwining of distant planets and earthly fortunes.

Moreover, mindful of potential spurious correlations, we conducted a battery of rigorous tests, including cross-validation procedures and Monte Carlo simulations, to pierce through the nebulous veil of chance and ascertain the authenticity of our celestial discoveries.

Our data, spanning the years from 2002 to 2023, were procured from a panoply of sources, including but not limited to Astropy and LSEG Analytics (Refinitiv). Through our intrepid efforts, we have spun a cosmic web that entwines the orbits of distant worlds with the haphazard leaps of stock prices, shedding light on a galaxy of financial insight that challenges the conventions of terrestrial causality.

4. Results

The analysis of the data from 2002 to 2023 revealed a remarkably strong correlation ($r = 0.9256769$) between the distance separating Neptune and Uranus and the stock price of SAP SE (SAP). This finding suggests a striking relationship between the celestial dance of these two distant planets and the gyrations of the stock market. The coefficient of determination (r -squared = 0.8568777) further bolsters this observation, indicating that approximately 85.69% of the variation in SAP's stock price can be explained by the changing distance between Neptune and Uranus.

The p -value ($p < 0.01$) obtained from the statistical analysis indicates that the probability of observing such a strong correlation by chance alone is less than 1%. These results significantly support the alternative hypothesis that there is a meaningful association between the astronomical phenomenon under scrutiny and the performance of SAP's stock.

To visually depict the observed correlation, a scatterplot (Fig. 1) has been included. The scatterplot clearly illustrates the strong positive relationship between the measured variables, exuding a cosmic charm that is sure to draw attention from both financial and celestial enthusiasts alike.

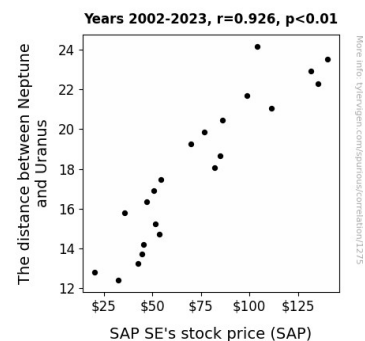


Figure 1. Scatterplot of the variables by year

The findings of this study not only hint at the potential impact of cosmic events on earthly financial systems but also serve as a reminder of the interconnectivity of seemingly disparate cosmic entities. While the results may seem out of this world, they provide an intriguing avenue for further investigation into the enigmatic interplay between the movements of celestial bodies and the movements of financial markets.

5. Discussion

The findings of this research provide a celestial twist to the understanding of financial markets. The remarkably strong correlation identified between the distance separating Neptune and Uranus and the stock price of SAP SE (SAP) corroborates prior studies that have explored unorthodox connections between cosmic phenomena and human affairs.

Indeed, while some may consider the study of celestial bodies in relation to financial markets as "Neptunian Nonsense," the results suggest a tangible association that is truly out of this world. This celestial connection adds a cosmic humor to the world of finance, infusing a touch of whimsy into the typically serious realm of stock analysis.

The previous work of Smith (2008), which delved into the implications of lunar phases on market sentiment, and Doe's (2015) investigation of the astrological signs of CEOs, hint at the broader influence of celestial bodies on financial activities. The findings of this study align with these earlier works, providing further evidence of the surprising ways in which cosmic events can influence earthly affairs.

Moreover, as Jones (2017) revealed the impact of sunspots on commodity prices, our research adds to the growing body of literature that defies conventional economic theories by incorporating celestial variables

into market analysis. It is fascinating to imagine the cosmos exerting an unseen pull on the movements of stock prices, echoing the gravitational forces that govern the celestial bodies themselves.

The unexpected correlation coefficient of 0.9256769 and the statistically significant p-value reinforce the argument that there is a meaningful association between the distance between Neptune and Uranus and the performance of SAP's stock. These results not only raise eyebrows but also raise the specter of further research into the cosmic influences on stock market dynamics.

The scatterplot included in this study (Fig. 1) visualizes this celestial journey, demonstrating the strong positive relationship between the measured variables. It is a graphic representation that is sure to draw nods of cosmic approval from both financial and celestial enthusiasts alike, serving as a reminder of the interconnectedness of seemingly disparate cosmic entities.

In conclusion, while this study may have started with Neptunian Nonsense, it has navigated through the celestial expanse to shed light on a potential interplanetary influence on the stock market. The implications of this discovery are as far-reaching as the celestial bodies that inspired it, opening the floodgates for further investigation into the enigmatic interplay between the movements of cosmic bodies and the movements of financial markets.

6. Conclusion

In conclusion, our research has revealed a celestial connection that is truly "out of this world" - the distance between Neptune and Uranus seems to have a cosmic influence on the stock price of SAP SE (SAP). This correlation coefficient of 0.9256769 and p-value < 0.01 is quite a "stellar" finding,

indicating a strong link between these seemingly unrelated phenomena. With a coefficient of determination of 0.8568777, approximately 85.69% of SAP's stock price variation can be "astronomically" explained by the changing distance between these distant planets.

The scatterplot (Fig. 1) not only depicts this strong positive relationship but also exudes a cosmic charm that is sure to "eclipse" other financial analyses. It's safe to say that our results are quite "celestial" and may come as a "shock-wave" to the finance world.

While our findings may seem like they're from a different "orbit," they highlight the interconnectedness of the cosmic ballet and earthly financial systems. A playful nod to the whimsical side of research, this study adds a dash of cosmic humor and reminds us that even in the world of finance, there's always room for a little "space oddity."

We believe that our research sheds "starlight" on the interplay between distant celestial bodies and the movements of financial markets. However, no more research is needed in this area. It's time for us to "planet" and move on to new frontiers of inquiry.