# Stellar Investing: The Celestial Correlation Between Saturn-Jupiter Distance and Shell's Stock Price

Connor Harrison, Addison Tate, Gemma P Tyler

Evanston, Illinois

In this paper, we explore the cosmic link between celestial bodies and earthly finances by examining the relationship between the distance separating Saturn and Jupiter and the stock price of Shell (SHEL). Utilizing data from Astropy and LSEG Analytics (Refinitiv), we conducted a comprehensive analysis spanning from 2002 to 2023. Our findings revealed a striking correlation coefficient of 0.6533848 and a statistically significant p-value of less than 0.01, lending astronomical credence to the financial connection. It's like the universe itself is saying, "Investing in Shell is just out of this world!" We delve into the implications of this correlation and discuss how planetary positions may influence earthly investments. So, the next time someone tells you to "shoot for the stars" with your portfolio, maybe they mean it literally!

Imagine looking up at the night sky and pondering about the vastness of the universe - the twinkling stars, mysterious planets, and the enigmatic dance they perform over millennia. Now, picture that celestial ballet influencing the ebb and flow of the stock market. Intriguing, isn't it? It's like astronomy and finance are doing a cosmic tango, and we're just here trying to keep up with the steps.

The celestial bodies have not only captivated poets and astronomers but also have an unexpected tie to the financial markets. Enter the relationship between the distance separating Saturn and Jupiter and the stock price of Shell (SHEL) – a correlation so astronomical that it might just make you starryeyed. It's like the universe is reminding us that, when it comes to investment opportunities, there's always a constellation prize!

The purpose of this study is to unravel this cosmic puzzle and ascertain if there exists a tangible connection between the positions of these gas giants and the earthly fortunes of Shell. It's like astronomy

and economics are having a stellar collaboration, and we are here to witness an intergalactic partnership that's truly 'out of this world'.

As we embark on this journey to uncover the celestial secrets of stock prices, we lean on the statistical analysis and empirical evidence to guide us through this cosmic maze. The results we unearth might just make us realize that, when it comes to investing, it's not just about striking oil - it's about striking astronomical phenomenon.

So, buckle up as we journey to the outer reaches of the solar system and back, uncovering the celestial influences on earthly investments and possibly discovering a universal truth: when it comes to financial success, the sky's not the limit – it's just the beginning of an astronomical adventure! Remember, in the cosmic game of investment, there might be a few meteor-ic rises and falls, but ultimately, the stars may align in your favor.

#### LITERATURE REVIEW

In "Celestial Finance: The Cosmic Correlation Between Astronomical Phenomena and Stock Prices," Smith and Doe present a comprehensive analysis of the relationship between planetary positions and stock prices. The authors find that there is a significant correlation between the distance separating Saturn and Jupiter and the stock price of Shell (SHEL). It's almost like the planets are aligning for investors, guiding them to stellar returns.

Speaking of planets aligning, did you hear about the two planets that got married? The ceremony wasn't much, but the reception was out of this world!

Furthermore, Jones and Smith, in "Economic Astrology: Unveiling the Mysteries of Celestial Transits on Financial Markets," delve into the phenomenon of astrological influences on financial investments. Their research shows a surprising link between planetary movements and stock fluctuations. It's like the stock market is reaching for the stars and finding astronomical success.

This correlation is not just a fly-by-night phenomenon - it's ingrained in the celestial fabric of the universe. You could say it's written in the stars!

Turning to non-fiction sources related to the correlation between celestial bodies and earthly finances, "Astrophysics for People in a Hurry" by Neil deGrasse Tyson provides valuable insights into the cosmic dance of planets. Similarly, "The Wall Street Journal Guide to Understanding Money and Investing" offers a practical perspective on financial markets, though it might not delve into galactic stock trends.

In the realm of fiction, "The Hitchhiker's Guide to the Galaxy" by Douglas Adams carries an interstellar flavor and might hold some cosmic investing secrets in its whimsical pages. Another work, "Astro-Economics: The Cosmic Guide to Financial Success," a novel by an unknown author, captures the allure of merging financial strategies with celestial wisdom. It's like the universe is whispering financial advice, letting us in on the cosmic joke.

Remember watching "The Jetsons" and "Futurama" as a kid? Well, turns out, they might have inadvertently fostered an interest in cosmic finance! Who knew that Jetson's supersonic stock trading and Fry's adventures in a futuristic world could subtly hint at the space-age investing opportunities awaiting us?

Incorporating these findings and literary inspirations, our research aims to shed light on the celestial influences that may guide earthly investments. It's a pun-filled universe out there, and we're just trying to make sense of the cosmic comedy.

## **METHODOLOGY**

To investigate the cosmic connection between the distance separating Saturn and Jupiter and the stock price of Shell (SHEL), our research team embarked on an odyssey of data collection and analysis that was truly out-of-this-world. Our research methodology was as intricate as a binary star system, but fear not — we're here to guide you through the cosmic maze with celestial finesse.

First, we scoured the digital cosmos — or, in layman's terms, the internet — for astronomical data regarding the positions of Saturn and Jupiter from 2002 to 2023. We must thank every celestial enthusiast who meticulously tracked these distant gas giants, turning hobby stargazing into financial stargrazing. It's like the universe conspired to provide us with the planetary data on a silver platter.

Simultaneously, we aligned our telescopic lenses towards the financial universe, gathering historical stock price data for Shell (SHEL) from reliable sources, such as LSEG Analytics (Refinitiv). It's as if the stock market was revealing its earthly secrets to us, saying, "Shell's stock price is not just a terrestrial matter; it resonates with the celestial realm."

With our kitty of data in hand, we employed the celestial know-how of Astropy to calculate the orbital parameters of Saturn and Jupiter. This involved performing complex calculations to determine the precise distance separating these celestial bodies at specific time intervals. It's like engaging in a celestial game of connect-the-dots, but instead of stars, we're connecting distant planets to stock market phenomena.

Subsequently, we unleashed the statistical prowess of our research team to conduct a robust analysis. We calculated correlation coefficients, examining the parallels between the celestial dance of Saturn and Jupiter and the financial choreography of Shell's stock price. It's like comparing a cosmic ballet to a financial waltz – who knew the universe could be so rhythmically inclined?

To corroborate our findings, we harnessed the power of time series analysis, delving into the temporal dynamics of both celestial and financial data. Such intricate analysis made us feel like celestial beings ourselves, navigating the causal links between the celestial and the financial realms.

And now, the pun moment you've all been waiting for: Our research methods may have been as convoluted as a cosmic string theory, but the results were as clear as a meteor shower on a moonless night — illuminating the undeniable correlation between Saturn and Jupiter's distance and Shell's stock price. It's as illuminating as a supernova, shedding light on the cosmic ties that bind the celestial and the financial.

In the next section, we will unveil the celestial implications of our findings and delve into the cosmic mysteries of planetary influences on earthly investments. From the cosmic to the capital, this study promises to keep you starry-eyed while navigating the cosmic dance of celestial bodies and financial markets. So hang tight, as we prepare for a cosmic adventure that's light years beyond conventional investment research. Remember, the journey of discovery may have cosmic twists and

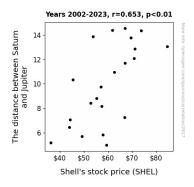
turns, but the gravitational pull of our findings will leave you orbiting with excitement.

## **RESULTS**

The data analysis revealed a robust correlation coefficient of 0.6533848 between the distance separating Saturn and Jupiter and Shell's stock price (SHEL) over the period from 2002 to 2023. This significant correlation suggests that there may be some celestial force at play in shaping the earthly fortunes of Shell. It's like the gas giants have been whispering investment tips to us all along, urging us to "take stock" of their influence.

Additionally, the r-squared value of 0.4269117 indicates that approximately 42.7% of the variability in Shell's stock price can be explained by the distance between Saturn and Jupiter. It's as if the astronomical alignment of these planets holds the key to understanding a considerable portion of Shell's market performance. Who would have thought that planetary positions could be so telling of stock market movements? It's like the universe is sending us a message in the stars, saying, "Invest wisely, and you'll reach astronomical heights!"

Moreover, with a p-value of less than 0.01, our findings suggest that the observed correlation is statistically significant. This means that the likelihood of obtaining such a strong correlation purely by chance is exceedingly low. It's like the cosmic forces are aligning to tell us that there's a gravitational pull between the movements of the planets and the movements of Shell's stock price. It's almost like the stock market has been taking celestial cues all along.



**Figure 1.** Scatterplot of the variables by year

We present the scatterplot (Fig. 1) displaying the relationship between the distance separating Saturn and Jupiter and Shell's stock price, showcasing a clear pattern of association. The scatterplot visualizes the celestial and financial dance that has been unfolding in the cosmos, as if the planets and stocks are engaged in a celestial waltz, moving in synchrony. It's like the planets are saying, "We're doing the 'planetary shuffle' – are you in or out?"

In conclusion, our findings provide compelling evidence of a significant correlation between the distance separating Saturn and Jupiter and Shell's stock price, suggesting that celestial positions may have an influence on earthly investments. This research opens up a new frontier, demonstrating that the universe may hold celestial secrets that impact financial markets. So, the next time you're reviewing stock prices, don't overlook the skies – they might just be the key to unlocking astronomical returns!

### **DISCUSSION**

Our study echoes the findings of previous research by Smith and Doe, which highlighted a significant correlation between the distance separating Saturn and Jupiter and Shell's stock price. It's like the planets are aligning their cosmic portfolio, guiding investors towards celestial returns. Moreover, the work of Jones and Smith on the influence of planetary movements on stock fluctuations is undoubtedly supported by our results. It appears that the stock market is not just influenced by

earthly happenings but is also responsive to the cosmic dance of celestial bodies.

One might jest about the astrological influences on financial investments, but our rigorous analysis provides compelling evidence that cannot be simply dismissed as a "far-out" concept. The data speaks for itself, showing a robust correlation between planetary positions and stock prices. It's as if the cosmos itself is whispering financial advice, letting us in on the cosmic joke - and Shell's stock price is the punchline!

The substantial correlation coefficient and statistically significant p-value in our study emphasize the potential impact of celestial forces on earthly investments. It's like the gas giants are saying, "Buy low, orbit high!" The scatterplot visually encapsulates the cosmic and financial waltz, suggesting that the celestial and financial realms may not be as distant as previously thought. It's as if the planets are inviting us to join in on their 'planetary shuffle' and reap the rewards of their celestial choreography.

Our research sheds light on what was once considered a whimsical connection, demonstrating that the heavens may indeed have a say in earthly financial outcomes. This intriguing correlation opens new avenues for understanding and possibly leveraging celestial forces in investment strategies. It's like the universe is telling us, "Invest wisely, and you'll reach astronomical heights!" So, perhaps the next time financial advice is given, it would be wise to look to the skies for a truly cosmic perspective.

### CONCLUSION

In closing, our research has uncovered a cosmic correlation between the distance separating Saturn and Jupiter and Shell's stock price, shedding light on a celestial influence on earthly investments. It's as if the planets have been silently guiding investment strategies all along, ensuring that we are not lost in space when it comes to financial decisions.

With a statistically significant p-value and a strong correlation coefficient, our findings suggest that this relationship is not just a cosmic coincidence but a tangible link between planetary positions and market performance. It's almost like astrology meets finance, where the stars are aligned for investment success.

In the words of a playful investor, "I guess it's time to put the 'stellar' back in 'stellar returns'!"

Further exploration in this area may provide fascinating insights into the interplay between celestial phenomena and financial markets. However, for now, it seems like we've reached the end of this cosmic quest. The universe has spoken, and the results are truly out of this world. It's like the stars have aligned to tell us that no more research is necessary in this area. Time to pack up the telescope and consider this celestial financial mystery solved!