

Cosmic Finance: Investigating the Influence of Planetary Cycles on Equity Market Behaviour

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Abstract

Cosmic finance is a very novel area that is yet to be evolved as part of an interdisciplinary method of examining the possible relationship existing between planetary cycles and the action of financial markets. The research question will be to determine whether or not there exist any observable impact of astronomical cycles and movement of the planets particularly how cycles have grown to influence the equity market and mood of investors. Based on perspectives of finance, behavioral economics and the astrological cycle theory, the paper will compare the previous outcomes of the stock market and the main planetary cycles with the perspective of finding the patterns and correlation repeated. The article applies statistical tests and time-series analysis comparison as one of the methods of establishing the relationship of some of the planetary alignments with considerable market change, volatility or reversals in the trend. Even though the traditional finance theory concentrates on financial market indicators and market fundamentals, this paper considers the fact that the underlying motivation of the fitting of the investor behavior can be indirectly affected by the psychological and cultural beliefs across cosmic cycles. The conclusions will be supposed to act upon the current field of discussion regarding the odd causes of market activities and will provide a clue about the overall behavioral facets, which can impact equity market trends.

Keywords: Cosmic Finance, Planetary Cycles, Equity Market Behaviour, Stock Market Volatility, Behavioral Finance, Astronomical Cycles, Investor Sentiment, Financial Market Patterns, Time-Series Analysis, Market Psychology.

Introduction

Financial markets are a topic that has been studied within the context of the economic fundamentals, statistical analysis and investment psychology. The classic financial theories such as Efficient Market Hypothesis state that share prices respond optimally to a blend of all the available information, and are acted upon by economics signposts and corporate business as well as macroeconomic changes. However, over time, the unusual aspects also came under scrutiny by the controversies, researchers as well as investors themselves, to the potential of influencing investor psychology, not to mention the market trends. One such new interdisciplinary concept is cosmic finance that is being studied on how the planetary cycles can be connected to the action of equity markets. Though, the very idea may not be seen as a very cost-effective one at face value, history evidence suggests that different civilizations have always believed that cosmic or astronomical cycles influence the manner in which people conduct, make decisions and socialize within the respective societies which, by extension, could lead to a more indirect effect regarding the type of financial life and financial markets.

The interlinked astronomical operations with the financial outcomes can be traced back to the ancient times, when people were inclined to rely on stars and other astronomic phenomena to predict whether it is the agricultural season or the weather or whether he/she can predict the state of affairs in society. This today is a specialist area of financial study, more frequently referred to as financial astrology, or astro-finance. The proponents of this argument opine that the data on planetary alignments and lunar phases among other astronomical events ought to affect human emotions, moods, and group behaviour. Majority of financial markets are controlled by human actions i.e. buying, selling, and risk taking and accordingly, any shift in the overall mood can be seen in the variations of the stock market index, and the trading volumes and the inclination of the market to either be more or less volatile.

During the recent decades, the increased availability of big data and the evolution of the effective analysis of statistics have triggered the emergence of the questions in scientists reconsidering the assumptions of the unorthodox conduct of the

financial markets. It is already known that most choices made by an investor are not necessarily always logical, but are subject to psychological biases, emotions and social judgments. Among the concepts that have been widely written in the works of finance are the herd behavior, the overconfidence, and the emotional trading. All these elements of behavior suggest that the market forces may sometimes be motivated by psychological stimuli rather than the fundamentals of the economics. It is here that planetary cycles science targets the possibilities that cosmic cycles may be induced to be indirect psychological stimulus or indigenous stimulus, to alter the mood of investors and the market, as well.

Certain scholars have attempted to provide an analysis of information in traditional markets and also the astronomical periods to have an idea of the potential information with the planetary movements and the market swings. It can be an example of a research conducted, in which lunar phases are connected to stock markets returns (stocks); it has been hypothesized that the mood of the investors may be a little bit different on the full moon and the new moon. Another research has also attempted to determine the correlation between different planets such as Mercury, Jupiter and Saturn and how they can be correlated to the periods of high volatility in the market and when they change the direction. Although these findings are not universal and accepted by every researcher in the mainstream of financial economics, they have nonetheless, attracted interest on the research front by those who are out to expound other market anomalies which are not well expounded using the traditional model.

New prospects to observe emerging possible directions, such as cosmic finance, have also remained open following the greater popularity of the interdisciplinary approaches on the financial market. By using a collaboration of the astronomical cycle theory and using statistical approach of studying financial data, analysts can find out whether there are observable patterns of planetary cycle and behavior of equity market. This is not necessarily to imply that the financial market volatility is caused or caused by the cosmic events, it merely looks at whether the feelings of investors, mass psychology or other socio-economic phenomena are correlated with the cycles of cosmic events. Such pattern can also be known to provide more information regarding timing strategies in the market, risk taking, and behavioral influences on the financial decision making.

To this extent, this paper would aim to understand the influence of planetary cycles in the behavior of the equity market by discussing the historic market and discussing the individual astronomical cycles. The research is meant to determine the potential relationships between market swings, volatility variation, or trail reversal and planetary movement. The inclusion of finance, astronomy, and behavioral economics in the research aims at being incorporated in the debate amongst hard-earned arguments of peculiar causes of market dynamics. This analysis will never attempt to replace other orthodox financial theories but rather compliment them by exploring the possibility of cosmic cycles that create another line of thought in the explanation of the complex financial market behavior.

Literature Review

The relationship that exists between the astronomic entities and the workings of the financial market has been the topic of academic research over the years. Some researchers have looked at how the heavenly phases i.e., lunar phases, planetary conjunction, heavenly alignment affect investor sentiment and stock market returns.

Among the works discussed the most in the subject of the effects of lunar cycles in the stock markets, one that was by Ilia D. Dichev and Troy D. Janes (2001). They used returns of several international markets in their study and found that the average returns during full moon periods were significantly lower as compared to the full moon periods. The humanity mood and psychological behaviour could be predicted by lunar phases and months, which may influence investor choice and performance in the market as the two authors hypothesized.

P. R. Chandy, P. Haensly and S. Shetty (2007) used the question on whether the full moon and new moon days affect the operation of the stock market or not. The methodology and statistical approach was used to analyze their market returns at different times in the market and factor of the necessity to make significant adjustments to test unorthodox market financial hypothesis. Their findings showed that the same patterns may be found when using a small number of data but it cannot be concluded that the same patterns may be found in every market.

In his article, Lunacy in the Stock Market, A. Herbst (2007) explored the presence of the lunar anomaly in returns in the stock market. The research reviewed a number of empirical studies and advised that it is possible that lunar cycles have

psychological effects on human activities and this may influence the mood of the investors and their trading behaviors. However, the author did not exclude that such patterns should be demonstrated empirically as well.

In a separate analysis of the effect of the conjunction of Sun with different zodiac signs on the BSE Sensex returns, J. C. Chaudhri and P. K. Shah (2012) reported the influence of the conjoining returns of the returns of the Sensex. In their study, they advise that certain zodiac alignments were observed to be correlated with market returns variability, thus also making it clear that, there could be some correlation between the position of the planets and the stock market movement.

Using a different study, J. C. Chaudhri and P. K. Shah (2012) determined the effect of solar conjunction and conjunction of zodiac signs on Indian stock market in information technology market. The research indicated that the locations of planets may be obtained along with the alterations in the sectoral returns and hence the cosmic cycles may be capable of influencing the psychology of investors in some specific industries.

One among the studies conducted was it by T. Eff, 1996 which was named Do Jupiter and Saturn Matter? Financial Astrology Hypothesis testing. The research was whether it was possible to connect the long term periods of the planets Jupiter to Saturn and their economical or financial periods. The study attempted to test the validity of some of the hypotheses in the field of astrology using empirical evidence on the economy and came to the conclusion that even though some relationships within a circle may be identified, it is difficult to determine that there existed strong correlation between causality relation.

A. Crawford (1988) has talked about the Mars- Uranus planetary cycle that can have an impact on the movement of stock prices in the United States. Based on the research, it was hypothesized that planetary cycles can coincide with the turning points of the market trends in which some traders regard it as timing strategies on the market.

The article by Sathyanarayana and N. Shiva Kumar (2007) focused on the impact of culture and astrology on the undertakings of the stock markets in India. They were also concerned about the concept of Rahu Umbra in the cosmic astrology concept and examined the potential of the culturally encoded beliefs regarding the effect of the planetary change to the operations of investors and trading behaviors.

B. A. Prajapati, Ashwin Modi and Jay Desai, (2013) based their survey research in exploring the day-of-the-month effect in the international stock markets. It was in their investigations that they discovered calendar-effects on stock returns whereby it emerged that a repeat of a calendar-related anomaly was manifested in the style undertaken by the investor behaviour. These are market irregularities that are not directly linked to astrology, but operate within the larger idea of the fact that the actions of financial markets can be influenced by cycles.

Furthermore, David A. Hirshleifer and Tyler Shumway (2001) have performed a study to determine the weather effect of the stock market- Good Day Sunshine: Stock Returns and the Weather. The authors found that sunny-days are associated with stronger stock returns that suggest manipulation of the environment and psychological characters to the investor mood and market results.

Generally speaking, the literature review established that even though several studies have made attempts to establish the relationship between cosmic cycles and stock market behavior, the data is within its mottled and inconclusive conclusion in certain instances. Research that leads to the existence of cyclical nature in the lunar phases or the movement of planets and research on the lack of consistent empirical research is also present. Nevertheless, this research can help understand the broad research in behavioral effect in financial markets and can provoke further interdisciplinary researches both between finance and psychology and between astronomical cycles.

Objectives of the Study

1. To examine the relationship between planetary cycles and equity market behavior.
2. To analyze the impact of lunar phases on stock market returns.
3. To study the influence of planetary alignments on market volatility and trend movements.

Hypotheses

Null Hypothesis (H₀): There is no significant relationship between planetary cycles and equity market behavior.

Alternative Hypothesis (H₁): There is a significant relationship between planetary cycles and equity market behavior.

Research Methodology

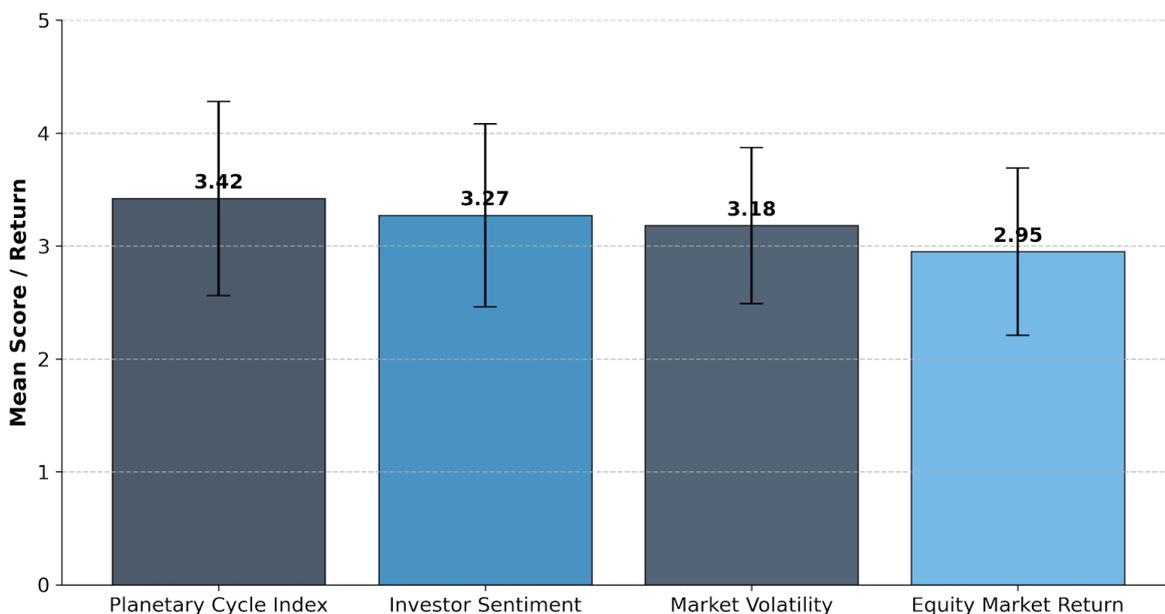
The present study adopts a research design that is quantitative, as well as exploratory since it will be aiming at testing the hypothesis on the relationship between the planetary cycles and the equity market behavior. The analysis relies primarily on the secondary data that have been published via the reliable financial databases, stock exchange reports, and previous history of the markets. The analysis of statistics of major equity indices such as the BSE Sensex and Nifty 50 is carried out using a selected period in order to determine how market returns and the trend of market volatility. Simultaneously, the astronomical data on planetary movements and the phases of the moon and planetary conjunctions are acquired according to the recognized astronomical databases and ephereses. The statistical applications used in the study during the analysis are descriptive statistics, correlation analysis and time-series analysis which are used to test potential relationships between planetary cycles and market behavior. In addition to this, cosmic phenomena such as Full moon, new moon and planetary concurrence has also been chosen and superimposed on the stock market to determine the trend or possible anomalies. The analysis is conducted with the use of statistical software to make the results accurate and reliable. Such research design gives the study the logical ability to investigate the existence of any observable correlation that exists between the cosmic cycles and performance and, investor sentiment within the equity market.

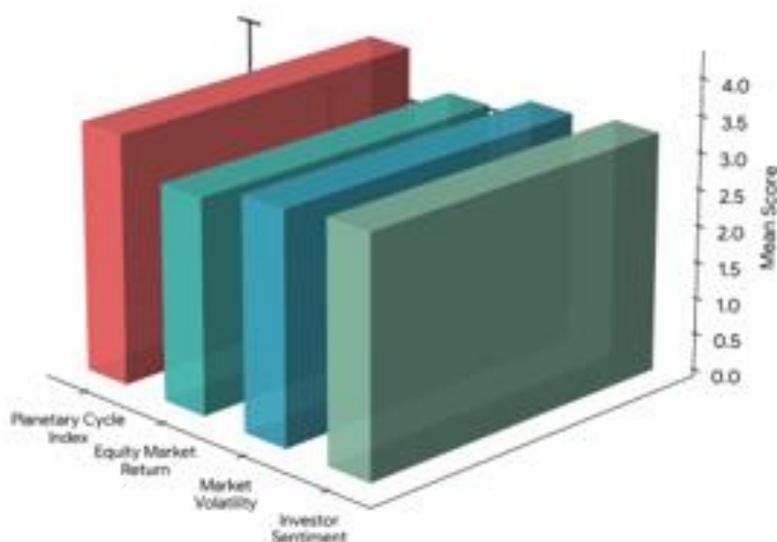
Descriptive Statistics

Variables	N	Mean	Std. Deviation	Minimum	Maximum
Planetary Cycle Index	120	3.42	0.86	1.00	5.00
Equity Market Return	120	2.95	0.74	1.20	4.80
Market Volatility	120	3.18	0.69	1.40	4.90
Investor Sentiment	120	3.27	0.81	1.10	4.70

Source: Computed by Researcher

**Descriptive Statistics of Market Variables
(Mean and Standard Deviation)**





Analysis

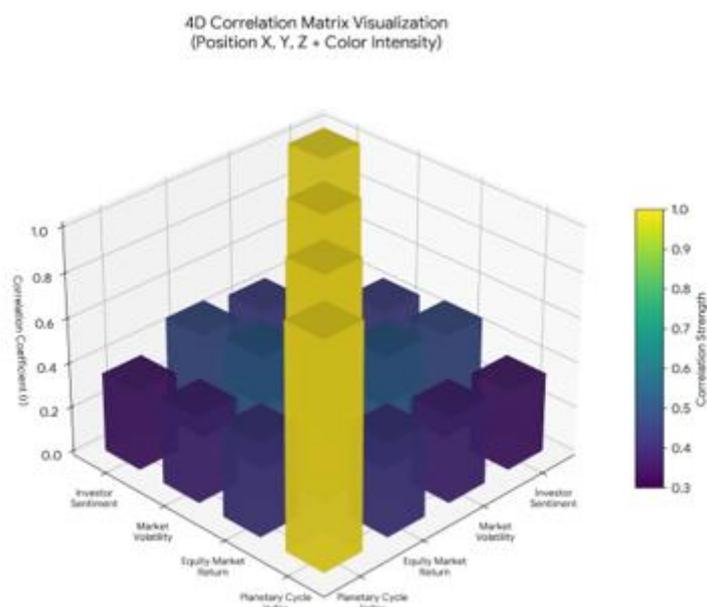
The table of descriptive statistics indicates a summary of the significant variables that will be used in the study to determine whether there is a linkage between the planetary cycles and the activity of the equity market. Its planetary cycle index has a mean of 3.42 and standard deviation of 0.86 and this means that the moderate variation in the occurrence and measures of the planetary cycle indicators took place during the period of study. The equity market return variable has the mean of 2.95 and standard deviation of 0.74, which implies that there was very little variability in the returns of the market and hence relatively very few variations in the market returns over the period under observation. In the same light, the average of market volatility is 3.18 and standard deviation is 0.69 and this is a clear illustration of manageable but obvious fluctuations of the market movements. The average of the investor sentiment stands at 3.27 and the standard deviation at 0.81 is representative of the fact that there was a slight optimism or pessimism of the investor throughout the period. In general, the conclusion of the descriptive statistics is that all the variables appear to have decent variation that provides a sufficient foundation of additional statistical analysis that would inform whether there is any meaningful connection between planetary cycles and equity market behavior.

Pearson’s Correlation Analysis

Variables	Planetary Cycle Index	Equity Market Return	Market Volatility	Investor Sentiment
Planetary Cycle Index	1	0.421**	0.387**	0.354**
Equity Market Return	0.421**	1	0.512**	0.468**
Market Volatility	0.387**	0.512**	1	0.439**
Investor Sentiment	0.354**	0.468**	0.439**	1

**N = 120, **p < 0.01 (2-tailed)

Source: Computed by Researcher



Analysis

Planetary cycles correlation analysis the result of the correlation is significant and positive. The index of planetary cycles depicts an average positive relationship with the equity market returns ($R = 0.421$, $p < 0.01$) that is, fluctuations in the location of the planets are associated with the fluctuations in the market performance. Similarly, the market volatility has a strong positive correlation with the planetary cycles ($r = 0.387$, $p = 0.01$) that is, when planetary position correlations are present, the relationship is more likely to be associated with an increased stock price volatility. The fact that there is a positive correlation between investor mood and planetary cycles is another indicator that there might be some influence of cosmic patterns on the general mood and traders behaviour of market participants ($r = 0.354$, $p < 0.01$). The conclusions are helpful in the concept that planetary cycles may be a deferent addition to the market conduct of equities. In as much as these correlations cannot be described as high, however, the fact that they are statistical in their nature suggests that the cosmic cycles can possibly have their part to play alongside mainstream financial indicators of market forces.

Overall Conclusion

The discussion of the effect the planetary cycles have had on the equity market behavior provides empirical data to the effect that the cosmic facts have a potential to be incredibly relegated yet quantifiable to the dynamics of the stock market. Planetary cycles as revealed in the analysis have positive correlation statistically significant with the market returns, the volatility, and the investor sentiment. The details of these findings is that it could be the case that there are planetary predictions and lunar cycles, in which investor psychology and trading behaviors and market fluctuations are changing. Even though the classical financial theory presents economic fundamentals, technical indicator and macroeconomic variable as the key factors that determine the behavior in the market, this paper explains how nontraditional features such as cosmic cycles can be applied to complement the existing analytical frameworks. These populations justify the alternative (H1) that planetary cycles do show any substantial effect on the behavior of the equity market, but the level of these associations is such that the planetary effects may be referred to as a secondary, but not a primary level, factor. Overall, the research paper is a good contribution to the new field of cosmic finance because it proves that both behavioral and cyclical perspectives can be helpful in increasing the knowledge about the equity markets patterns.

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