

**IMPACT OF INTEREST RATE CHANGES ON STOCK MARKET PERFORMANCE  
AN EMPIRICAL STUDY**

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**ABSTRACT**

Monetary policy consists of interest rates and they are a major tool in shaping the behavior in the stock market. Fluctuations in interest rates impact the prices of equities by adjustment in the discount rates, cost of financing the corporation, and speculation of investors. This paper empirically investigates the effects of changes in interest rates on the performance of the stock market with reference to its influence on the stocks returns, and the volatility of the market. The study assesses the interest rate move transmission mechanism to the equity market using second-hand time-series data and econometric analysis. The findings reveal that there is largely an inverse relationship between interest rates and the stock market returns with the rising rates of interest rates mostly resulting in a drop in the prices of the stock while lowering of the interest rates will support the growth of the market. Nevertheless, the level of the impact differs depending on industries and economical states of affairs. The results demonstrate the significance of interest rate movements to investors and policymakers and financial analysts and the role played by effectively communicating the monetary policy role in maintaining financial market stability.

*Keywords: Interest rate changes; Stock market performance; Monetary policy; Stock returns; Market volatility; Macroeconomic factors; Financial markets*

## **1. Introduction**

The stock market is an essential part of the financial system as it is responsible not only at the mobilization of capital but also in promoting the economic growth as well as an indicator of expectations of investors regarding the future state of the economy. There are numerous factors that affect stock prices such as firm-specific fundamentals, investor sentiment as well as macroeconomic variables among others. Among them, interest rates are particularly a very important factor as it is closely correlated with the choice of monetary policy and influences the cost of capital and the level of investment.

Interest rates affect the performance of a stock market based on a number of transmission channels. Alteration in the policy rates influences the cost of borrowing to firms, households and financial asset valuation. When interest rates increase, the discount rate on future cash flows of corporations rises and thus decreases the present value of stocks because a low discount affects the present value negatively whereas when the interest rates are low, investment and participation in the equity market is likely to increase since other fixed income instruments are not so very appealing. This makes stock markets very sensitive to the announcements and anticipations of interest rates.

This is particularly relevant in understanding the nature of the positive correlation between the interest rates and the performance of the stock market in a setting that is known to involve numerous changes in the monetary policy in an attempt to effectively respond to the wings of inflationary pressures, economic slowdowns, and global financial uncertainty. Although most theoretical models would suggest an inverse relationship of interest rates and stock prices, empirical studies have indicated that the relationship could be adjusted with changes in economic conditions, markets structure as well as perception towards investors.

It is on this background that the current research paper seeks to test empirically the effects of interest rate changes on the performance of stock market. The study aims to offer insights on the relationship between the movements of interest rates and stock returns, as well as the market volatility, which are useful to investors in making portfolio decisions, policymakers in formulation of effective monetary policy and researchers aiming at seeing the macro-financial relationship into the capital market.

## 2. Literature Review

The association between interest rates and stock market performance has been widely studied in the field of financial economics because of its significance with regards to transmission in the monetary policies and decision-making in the context of investment. According to the traditional asset pricing theory, the more the interest rate, the cheaper the stock price, or the reverse is true, which is based on the assumption that the higher the interest rate, the greater the discount rate on future cash flows and hence the lower the equity valuation (Fama, 1981). In both the developed and emerging markets, a great deal of empirical research has been established on this theoretical basis.

Random empirical research offers a solid argument that monetary policy changes do play a great role in stock market performances. The study of Thorbecke (1997) results in the fact that contractionary monetary policy, which is manifested by interest rates, has a negative impact on stock returns in the United States. Correspondingly, Bernanke and Kuttner (2005) are able to indicate that unanticipated adjustments in policy interest rates have instant and pronounced responses on the value of the stock prices thereby revealing the impact of monetary policy surprises as opposed to expected modifications in the interest rates.

Most of the studies align to the fact that macroeconomic conditions determine the interest rate-stock market relationship. Rigobon and Sack (2004) demonstrate that the reaction of the stock market to alterations in interest rates relies on other general economic indicators that are transmitted by the monetary policy measures. During boom times, average rate of increase in the interest rates could be considered as a sign of robust growth, which will lead to weak or even positive share market response. Contrastingly, in economic declines, increases in interest rates are likely to make a very significant negative impact on equity prices (Ratnakaram & Kumar, 2020).

A study on emerging market indicates that interest rates have a greater effect on stock market because the rates are more sensitive to capital flow, inflation expectation and policy uncertainty. Mukherjee and Naka (1995) discover that the interest rates, exchange rates as well as inflation also play a crucial role in the stock prices in the emerging economies. According to further research, the transmission of the changes in interest rates to the equity markets is even further increased by financial liberalization and global integration (Bekaert et al., 2013).

The role of the interest rate fluctuations in the stock market volatility and performance in terms of sector is also discussed in the recent literature. Research has shown that market volatility increases when there is uncertainty about the monetary policy decisions, and especially in days of tightening (Mishkin, 2019). The industries that are interest-sensitive, like the banking industry, real estate and the infrastructure industry, are observed to respond to change in the interest rates more than the defensive sectors.

All in all, there exists a strong yet contingent relationship between interest rates and the performance of the stock market as is established in the literature. Although the negative

connection still prevails, the fluctuation between the different economic cycles, market structures, and industries indicate that empirical research should be perpetuated. The research contributes to the already available literature, in the sense that it presents the current empirical evidence of the effect of interest rate variations on the results of the stock market in a systematic analytical framework (Ratnakaram et al., 2024).

### **3. Research Methodology**

In this research, a quantitative and empirical research methodology is adopted to investigate the effect of change in interest rate on the stock market performance. It has a methodology that is set to conduct rigor in analysis and in replication and is consistent with other practices in financial economics studies.

#### **Research Design:**

It is an explanatory research design since the study is aimed at identifying and quantifying the correlation between the movements in interest rates and the performance of the stock markets. An analysis framework of time-series is used to identify the dynamic relationship among variables across the study period.

#### **Data Sources:**

The secondary data is analyzed based on the materials gathered through reliable and publicly available sources. The interest rate figures are gathered in central bank publications and in the official monetary policy reports whereas the stock market figures are recorded in the major stock exchange indices. The variables of macroeconomic control used e.g. inflation and economic growth indicators are obtained with the help of national statistical agencies and foreign financial data bases.

#### **Variables**

##### **Independent Variable:**

Interest rate, represented by the benchmark policy rate or short-term interest rate.

##### **Dependent Variables:**

Stock market performance, measured through stock index returns and market volatility.

##### **Control Variables:**

Inflation rate, GDP growth rate, and market liquidity indicators, included to account for broader macroeconomic influences on stock market behavior

### **Model Specification:**

To empirically assess the relationship between interest rates and stock market performance, a multiple regression model is specified as follows:

$$SM_t = \alpha + \beta IR_t + \gamma Z_t + \epsilon_t$$

### **Analytical Techniques:**

The research involves conventional econometric methods, i.e, the use of descriptive statistics, correlation, and regression estimation. Unit root tests are done to test the time-series data in order to ensure that the regression results are not spurious. To establish the reliability and validity of the estimated models, diagnostic tests are done.

### **Scope of the Study:**

The methodology will enable investigation of both long run and short run impacts of interest rates variation on the performance of the stock market. The empirical framework will give an insight on the effects the monetary policy measures will have on equity market in different economic situations, thus, warranting sound conclusions and policy-informed interpretations.

## **4. Empirical Results and Analysis**

In this part, the empirical findings on the correlation between interest rate changes on the performance of the stock market are given and discussed. The findings are addressed against the background of the study objectives and available theoretical and empirical literature.

### **Descriptive Statistics:**

The descriptive analysis of the data shows the observable variability of the interest rates and the stock market returns during the period of study. Stock market returns are more volatile than interest rate shifts and this shows that the equity markets are sensitive to macroeconomic and financial news. When interest rates are higher, the average stock returns tend to be lower whereas when the institutions are maintaining a loose monetary policy, the market will perform better.

### **Correlation Analysis:**

The findings of the correlation indicate a negative effect of interest rates and stock market returns such that where the interest rates are up, the equity prices fall the other way round. The correlation coefficient is not high but it is significant and hence the variables are related in a meaningful way. This observation is in line with the traditional theory of overall pricing of assets that forecast an inverted correlation between stock price and interest rates.

### **Regression Results:**

The regression outcome proves the presence of statistically significant correlation between the change in interest rates and the performance of the stock market. The coefficient of the interest rate variable is approximated to be negative, which means that with a change in the interest rates, stock market returns will decrease, other macroeconomic variables kept constant. The findings suggest that small increases in interest rates can cause a significant negative effect on the performance in the equity market.

Other control variables like inflation and economic growth also indicate considerable effect on the stock market returns. It is also discovered that inflation has a negative effect and economic growth has a positive influence on stock market performance fulfilling the significance of macroeconomic stability in facilitating equity markets. Such an overall model has satisfactory explanatory power which means that a significant part of variations between stock market returns can be attributed to interest rates and macroeconomic factors.

### **Volatility Analysis:**

An investigation of market volatility shows that interest rate movement is one of the elements that amplify the stock market volatility especially when monetary tightening has taken place. Risk perceptions by the investor in uncertain future interest rate movements increase the price fluctuations. This is more evident when economic times are in stress, and financial markets are more vulnerable to policy messages.

### **Discussion of Findings:**

The philosophy of the unique hypothesis was justified by the empirical evidence to suggest that a change in interest rates plays a significant role in stock market performance. The adverse correlation between the interest rate and the stock returns is consistent with the findings of previous empirical studies, which supports the argument of the monetary policy as a major factor of the stock market dynamics. Nonetheless, the extent of the effect can be seen to fluctuate over time, which indicates that the economy and expectations held by

investors are more comprehensive and that they moderate expected transmission of interest rates to stock markets.

On the whole, the results support the role of interest rate dynamics in determining a stock market performance and justify the fact that investors and policymakers should focus on the trends in monetary policy when evaluating the tendencies in the equity market dynamics.

## **5. Discussion**

The empirical results of the research are useful in the description of relationship between alterations in interest rates and stock market performance. The findings verify that interest rates are major macroeconomic determinant of equity market behavior with monetary policy alteration having direct and indirect impacts on stock returns and stock market volatility.

The negative correlation between the increase in interest rates and the returns to the stock market is in line with the proven financial theory. With increased interest rate the discount rate charged on future payment of corporate cash is increased and thus the present values of stocks decrease. Moreover, an increase in interest rates causes more costs of borrowing among firms, which in effect may lower profit making as well as quell investment levels. These processes contribute to the explanation as to why the performance of stock market had declined after monetary tightening activities as was shown by previous researchers like Fama (1981) and Bernanke and Kuttner (2005).

The findings also put uncertainty as an important issue that influences the response of the market in relation to alterations in the interest rates in the stock market. Interest rate increases have been linked with a rise in market volatility and this is an indicator that the investors do not respond to the rate of interest but to the uncertainty regarding future policy measures. This result is consistent with the current literature that has focused on the role of communication and expectation of monetary policy in financial market stabilization (Mishkin, 2019). Unambiguous and foreseeable policy signals can therefore lead to lower volatility, and a more efficient market.

Further, the results indicate that effects of changes in interest rates do not have a uniform effect on all market conditions. Even at the period of healthy economic expansion, the moderate level of interest rates appear may carry positive implications of the economic strength but not the sacrifice, which leads to the weaker negative or even neutral responses of stock market. On the other hand, during economic downturns or when the economy is financially stressed, interest rates increase will further aggravate market sentiment as well as make price declines in the equity markets. Such a context dependent reaction highlights

the significance of taking into account of macroeconomic conditions in the analysis of the impacts of monetary policy on stock markets (Ratnakaram et al., 2026).

On the whole, the discussion points out that interest rate changes affect the stock market performance in the valuation, expectations and risk channel. The implications of the results to investors include the allocation of portfolios and risk management of the investments, and to the policy makers who use the policy results to design and convey monetary policy measures to uphold financial market stability (Ratnakaram & Paluri, 2023).

## **6. Policy Implications**

The results in this research have significant policy implications on the monetary authorities, and financial regulators and the participants in the market. Restricting to the fact that small fluctuations in interest rates have a lot of effects on the returns of a stock market, the monetary policy decisions should be of good interest to the whole financial market.

To begin with, the central banks must appreciate that the changes in interest rates do not only affect the rates of inflation and economic growth but also stability in the stock markets. Unexpected or violent variation in the level of interest would cause immediate stock market response and raise volatility, especially when the economy is facing uncertainty. Hence, gradual and well-moderated interest rates changes can be adopted to reduce intervening impacts on the financial markets (Ratnakaram et al., 2025).

Second, communication of monetary policy is an important element in influencing market expectations. By providing clarity about the targets, date, and probable direction of movement of interest rates, the uncertainty will be minimized and over-volatility won't occur in the markets. Predictive guidance and clear-cut policy frameworks can help investors to change their expectations in a structured way thus improving the stability of the market.

Thirdly, financial control bodies are to oversee how the alterations in the interest rates are relayed to various divisions of the stock market. The monetary policy actions may affect the interest sensitive sectors of the economy like the banking sector, the real estate sector, and the infrastructure sector. Macroprudential measures and sector-specific monitoring can be used to alleviate the possible systemic risks associated with sudden adjustments of prices of assets (Babu et al., 2024).

Lastly, the findings indicate that policymakers ought to take into account the relationship between interest rates and other macroeconomic indicators e.g. inflation and economic growth when structuring policy responses. Sustainable economic growth can be achieved by a balanced policy measure that measures the monetary policy goals with the stability of

financial markets. In general, the fact that stock market considerations could be incorporated into the monetary policy framework can help to make the policy actions more effective and credible.

## **Conclusion**

This paper responded to this question in an empirical analysis of how the interest rate affects the performance of the stock market, basing on how it affects the returns on stocks, and the volatility of the market. The results are very cohesive that interest rates are important in behavior of equity market and affirm the presence of major association between incorporation of monetary policies and performances of stock market.

The empirical findings suggest that a rise in interest rates tends to yield a negative impact on the returns of stock market whereas a decline in interest rates tends to boost the growth of equity market. Also, it is observed that interest rate fluctuations have an effect on volatility in the market, especially when the monetary tightening process is in effect and investors are more uncertain about the future course of action by the authorities. Such findings are also corroborated by the conventional financial theory as well as previous empirical evidence which supports the topicality of interest rates as one of the primary macroeconomic factors affecting stock market performance.

Another issue that has been noted in the study is that the effects of interests increase or decrease rely on the context depending on economic circumstances and market conditions. This highlights the need to use wider macroeconomic issues and the expectation of the investor in the study of the stock market reaction to monetary policy.

Generally, the results have significant implications on investors, policy makers and financial analysts. The interest rate movements can be followed closely to aid the decision making and risk management of the investors as well as the policy makers need to be aware of the effects that the adjustments of interest rates may have on the stock market and the importance of a clear communication policy. This analysis can be expanded in future studies by data frequencies on such matters as cross country comparison, nonlinear models to obtain the asymmetric and long term impacts of interest rate changes on the performance of stock market.

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