THE IMPACT OF CENTRAL BANK'S MONETARY POLICY ON THE INDIAN STOCK MARKET

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ABSTRACT

This study examines how the monetary policies of the Central Bank affect the Indian stock market, with a particular emphasis on the Nifty 50 index. The analysis investigates the relationship between important monetary policy tools, such as the repo rate and reverse repo rate, and stock market movements using econometric approaches, such as Granger causality tests. The study's conclusions underscore the significance of taking into account a variety of channels and time dynamics by revealing substantial but complex relationships between monetary policy actions and the Nifty 50 index. Although Granger causality is evident in some cases, relevant confounding variables should be taken into consideration when determining causal links. The study emphasizes the necessity of more research on the processes of transmission and the wider effects of monetary policy on financial markets.

Keywords: Central Bank, monetary policy, Indian stock market, Nifty 50 index, Granger causality, repo rate, reverse repo rate.

INTRODUCTION

The relationship between monetary policy and stock market dynamics is a significant concern for economists, policymakers, and investors worldwide. Central banks, such as the Reserve Bank of India (RBI), play a crucial role in shaping the country's monetary policy framework, ensuring price stability, maintaining liquidity, and promoting long-term economic growth. Effective communication is essential in inflation targeting, as the success of this monetary policy regime depends on the transmission of policy statements, which provide economic agents with insights into the central bank's present and future economic prospects.

The Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE) are two of the primary exchanges that make up the Indian stock market. These exchanges function as a barometer of economic mood and investor confidence. Not only does the success of stock indices like the S&P BSE Sensex and the Nifty 50 indicate the profitability of corporations, but it also reflects the current economic conditions and the policy environment in which they are operating. Gaining a comprehensive understanding of the complex relationship between the monetary policy decisions made by the central bank and the fluctuations in the stock market is crucial for policymakers, investors, and market players. Fluctuations in interest rates, liquidity circumstances, and inflation expectations may significantly impact the value of assets, the willingness to take on risk, and the decisions on how to distribute investments across different portfolios.

This research study investigates the impact of the Reserve Bank of India's monetary policies on the Indian stock market, analyzing historical data, empirical evidence, and theoretical frameworks. The study aims to understand the nature and extent of this link, inform decision-making, improve market efficiency, and develop effective policy measures for financial stability and economic growth.

1.2 STATEMENT OF THE RESEARCH PROBLEM

This research primarily aims to examine the correlation between the monetary policy decisions made by the Reserve Bank of India (RBI) and the behavior of the Indian stock market. The study has the specific objective of answering the following research inquiries:

A. The Reserve Bank of India's monetary policy operations, including interest rate changes, liquidity measures, and policy communication, significantly impact the performance of the Indian stock market.
B. Market players, including individual investors, institutional traders, and international investors, respond to monetary policy announcements and changes, impacting stock market volatility, trading volumes, and asset prices.
C. The study explores the transmission mechanisms influencing monetary policy changes that affect India's stock market dynamics, examining unique mechanisms and their relative importance across different market groups and economic conditions.

1.3 REVIEW OF LITERATURE:

Şahin, B. C. (2024). The study explores the link between monetary policy decisions and stock returns using event study methodology. It reveals that unexpected policy changes negatively affect stock returns, especially during periods of market uncertainty. The study also highlights the need for a sector-specific approach and the limited role of financial constraints in explaining differences in stock returns' responses to policy surprises.

Ikeda, D., Li, S., Mavroeidis, S., & Zanetti, F. (2024). The study explores the "irrelevance hypothesis" that unconventional monetary policy (UMP) could render the effective lower bound on short-term interest rates meaningless. It uses the ELB and a structural vector autoregressive model to evaluate the hypothesis in Japan and the US. Despite rejecting the theory, the study finds significant aftereffects of UMP.

Dua, P. (2023). The Monetary Policy Committee (MPC) in India was established in 2016 to modernize the monetary policy framework, setting an inflation target of 4% for the Consumer Price Index (CPI combined) from August 5, 2016 to March 31, 2021. The study examines India's monetary policy frameworks since the 1980s, emphasizing unconventional monetary policy actions and comparing voting history with other nations.

He, Q., Rahman, M. U., & Xie, C. (2023). The study investigates the impact of monetary policy transparency on inflation expectations and volatility spillover effects. It reveals a negative relationship between transparency and inflation expectations volatility, suggesting that stabilizing inflation expectations is crucial. Improving transparency can reduce inflation volatility and stabilize prices with less anti-inflation costs.

Muduli, S., & Behera, H. (2023). The paper explores the impact of bank capital on monetary policy transmission in India post-global financial crisis. Results show that banks with higher capital to risk-weighted assets ratio (CRAR) raise funds at lower costs and transmit monetary policy impulses smoothly. However, CRAR above a certain threshold may not help, as loan growth sensitivity reduces.

Tomar, K. S., & Kesharwani, S. (2022). The study uses a non-linear model and NARDL method to analyze the impact of monetary policy on stock markets. It reveals that inflation increases have a greater impact on sectors than decreases. This provides insights for policymakers, business managers, and fund managers on revenue and valuation.

Sahu, B. (2021). Monetary policy is a financial system used to inject liquidity into the economy, with the Reserve Bank of India (RBI) adopting an expansionary policy to increase balance sheet liquidity. Commercial banks' decisions play a crucial role in the effective transmission of monetary policy. Various shocks can affect aggregate credit lending and liquidity holdings, altering the transmission of monetary policy. This study examines the impact of monetary policy on liquidity generated by ten major Indian scheduled commercial banks from 2012-2020.

Sahu, T. N., & Pandey, K. D. (2020). This study examines the impact of changes in money supply on stock prices in India from 1996 to 2016. Results show a positive long-run co-movement between money supply growth and stock prices, but no significant short-run relationship. The study also confirms that money supply growth does not cause short-run stock market movement in India. The variance decomposition analysis reveals strong exogenous stock markets, with positive shocks having a small but persistently positive effect.

Prabu, A. E., Bhattacharyya, I., & Ray, P. (2020). The study explores the impact of US and Indian monetary policy on Indian stock indices, finding that equities vary by industry, with significant effects on financial services, banking, and real estate. However, industries like consumer goods, information technology, metal, media, and medicines remain unresponsive. Factors contributing to this discrepancy include bank lending channels, public sector superiority, car and housing demand, asset-price channels, and sector-specific effects.

Pal, S., & Garg, A. K. (2019). This study examines the impact of monetary and macroeconomic policy surprises on Indian stock indices from 2004 to 2016. The results show that monetary policy surprises significantly affect the stock market, with other macroeconomic surprises also affecting stock return. The study also highlights the industry and size effects, aligning with the Capital Asset Pricing Model (CAPM) model predictions. This research can be used as a hedging instrument and can help policymakers and corporate finance professionals improve decision-making.

Mathur, A., & Sengupta, R. (2019). The study examines the influence of US and Indian monetary policy on Indian stock indices, revealing industry-specific differences, particularly in financial services, banking, and real estate, while industries like consumer goods, IT, and medicine remain unresponsive.

Mathur, A., & Sengupta, R. (2019). The paper examines the Reserve Bank of India's monetary policy statements from 1998 to 2017, revealing a semantic shift since inflation-targeting adoption. The study reveals that longer and less readable statements are linked to higher trading volumes and returns volatility in equity markets.

Chavannavar, M. B., Patil, S. C., & Simoes, M. (2016). This study examines the impact of monetary instruments on the Nifty 50 and sectoral indices. Results show that most indices' variations are explained jointly by monetary tools, with a strong linear relationship. However, most variations in Nifty Energy remain unexplained. Changes in monetary policy tools can affect the Nifty 50's movement in the long term.

Nehra, G. N. (2015). This paper evaluates India's monetary policy, which aims to reduce inflation rates through changes in CRR, repo, and reverse repo rates. The Reserve Bank of India plays a crucial role in this policy, reducing the Statutory Liquidity Ratio and Cash Reserve Ratio to control price increases.

Sahu, T. N., & Sahu, T. N. (2015). The stock market is where shares and equities are traded, influenced by supply and demand dynamics. The primary market and secondary market are interdependent parts of the

security market. The primary market allows businesses, governments, or public organizations to raise money by issuing new securities, while the secondary market trades previously issued assets and financial instruments like stocks, bonds, options, and futures. Exchanges for shares and shares require a specific stock exchange location.

Gurloveleen, K., & Bhatia, B. S. (2015). The study examined the impact of macroeconomic variables on the Indian Stock Market. It used monthly data from ten variables and a stock market index, BSE 500. Results showed that Foreign Institutional Investors became stationary, while Call Money Rate, Crude Oil Price, Exchange Rate, Foreign Exchange Reserve, Gross Fiscal Deficit, Inflation Rate, and Trade Balance were stationary. Foreign Institutional Investors and Exchange Rate were found significant, but no relationship was found with BSE 500 manufacturing firm closing prices.

Ghosh, S., & Bhattacharyya, I. (2014). The study uses the GARCH model to estimate conditional volatility in the Indian money market. It found that spread in the market is positively related to volatility, but this relationship has changed in recent years. The study also found that expansionary monetary policy reduces spread and weighted call rate volatility. However, announcement of CRR changes negatively impacts these variables.

Mohan, R., & Kapur, M. (2009). India has maintained macroeconomic, price, and financial stability despite large capital inflows since 1993-94, particularly during 2004-09. This is due to judicious use of external sector and monetary management policies since the early 1990s, including active capital account management, tighter borrowing restrictions, exchange rate flexibility, financial market development, financial sector strengthening, pre-emptive tightening of prudential norms, and refinements in monetary policy.

1.4 IDENTIFICATION OF RESEARCH GAPS:

Research on the impact of central bank monetary policy on stock markets is limited, particularly in the Indian stock market. Existing studies often use aggregate measures or macroeconomic indicators, leaving room for more high-frequency data to record market players' reactions to monetary policy pronouncements. There is also a lack of studies on sector-specific reactions, which can help investors and policymakers understand sectoral weaknesses and opportunities.

Understanding how diverse investors perceive and respond to monetary policy signals is an untapped topic. Research on investor sentiment research, behavioral biases, and trading patterns can provide insights on market dynamics and help market players make decisions.

Transmission mechanisms, such as the interest rate channel, credit channel, and exchange rate channel, are well-known in theory but lack empirical data relevant to the Indian situation. India's financial markets have undergone significant structural changes and policy reforms in recent years, which need to be assessed for their implications on market efficiency, liquidity dynamics, and investor behavior.

Comparative studies are also limited, as they are limited in comparing India's experience to other developing markets or established economies. Comparative investigations can provide insight into cross-country variances in the transmission of monetary policy to financial markets, allowing for further generalizations and policy implications.

1.5 THEORETICAL UNDERPINNINGS:

1. Monetary Policy Transmission Mechanisms: The central bank's monetary policy influences the stock market through various channels, including the interest rate channel, credit channel, and exchange rate channel, which impact borrowing costs, investment decisions, stock prices, and international capital flows.

2. Asset Pricing Models: Asset pricing models like CAM, APT, and DDM explain how monetary policy changes can affect stock market valuations. These models suggest that changes in risk-free rates and market risk premiums can lead to adjustments in asset prices.

3. Market Microstructure Theory: Market microstructure theory analyzes price formation, trading behavior, and market liquidity, focusing on the impact of monetary policy on stock markets. It considers the role of market participants like institutional investors, algorithmic traders, and high-frequency traders in transmitting policy signals and shaping market outcomes.

4. Global Financial Integration: The Mundell-Fleming model and uncovered interest rate parity theories reveal how domestic monetary policy changes can impact exchange rates, capital flows, stock market returns, and portfolio allocations in an open economy context, given the increasing interconnectedness of global financial markets.

2.1 SCOPE OF THE STUDY:

This study aims to examine the impact of monetary policy changes on the Indian stock market, focusing on the NSE Nifty. Historical data will be collected from credible sources and analyzed using quantitative methods like regression analysis and the Granger Causality Test. The analysis will examine the correlation between policy factors like interest rates, liquidity, and inflation expectations and stock market performance, including stock prices, trading volumes, volatility, and investor behavior. The study will provide insights into the functioning of the Indian stock market and the consequences for investors, market regulators, and policymakers. The project aims to provide valuable information for policymakers, investors, and scholars.

2.2 RESEARCH OBJECTIVES:

1. To investigate the causative relationship between fluctuations in monetary policy instruments (namely, the Repo rate and Reverse Repo rate) and the performance of the Indian stock market.
2. To determine the degree to which changes in repo rate & reverse repo rate (Interest rates) affect stock market performance.

2.3 FRAMING OF RESEARCH HYPOTHESES:

H_0 (Null Hypothesis): The Central Bank's Monetary Policy does not have a statistically significant impact on the Indian Stock Market.

Ha (Alternate Hypothesis): The Central Bank's Monetary Policy has a statistically significant impact on the Indian Stock Market.

2.4 RESEARCH DESIGN:

This research design investigates the Central Bank's Monetary Policy do influence on the Indian Stock Market. It employs a quantitative approach using the Granger Causality Test and other tests.

1. Data Collection:

The data collection includes repo rate data from Invesing.com, reverse repo rate data from Invesing.com, and stock market data from the National Stock Exchange of India (NSE) website. The data collection spans 20 years and captures various repo rates. The data also includes percentage changes in the Nifty 50 quarterly closing indices, corresponding to the chosen rates related to monetary policy data.

2. Data Pre-processing:

The study addresses missing values in rates and stock market data series by deleting periods with missing values. Stationarity testing is performed using the Dickey-Fuller Test for stationary data, while differencing is applied for non-stationary data. The method ensures constant mean, variance, and covariance over time.

3. Granger Causality Test:

The Granger Causality Test uses Granger causality to determine if past monetary policy interest rate fluctuations predict future stock market index movements and hypothesis testing uses F-statistics to test the null hypothesis.

2.5 METHODS FOR DATA COLLECTION & VARIABLES OF THE STUDY:

This research uses secondary data from publicly available sources, including Repo Rate Data & Reverse Repo Rate from reputable financial data providers like Investing.com and Stock Market Data from the National Stock Exchange of India (NSE). The study measures stock market performance using the quarterly closing index of the chosen Indian stock market index (Nifty 50) and Repo Rate Data & Reverse Repo Rate using quarterly monetary policy rates of interest/variable factors. The data period is 20 years (2004 – 2024).

3.1 TECHNIQUES FOR DATA ANALYSIS:

Granger Causality Test: This test is the initial step to assess if Repo rates & Reverse Repo Rates fluctuations can influence future movements in the stock market index. Here's a breakdown of the Granger Causality Test:

- **Hypothesis Testing:** The null hypothesis (H_0) of "no causal relationship" will be tested against the alternate hypothesis (Ha) of "causal relationship" using F-statistics. If the F-statistic is statistically significant (p-value less than a chosen significance level, e.g., 0.05), we reject the null hypothesis, implying a causal relationship exists between oil prices and the stock market.

3.2 DATA INTERPRETATION:

Descriptive statistics

	NIFTY_50__	REPO_RATE	REVERSE_REPO_RATE
Mean	0.040281	0.063860	0.054341
Median	0.025429	0.065000	0.057500
Maximum	0.419482	0.090000	0.075000
Minimum	-0.334033	0.040000	0.032500
Std. Dev.	0.122346	0.011818	0.011862
Skewness	0.108391	-0.313885	-0.504885
Kurtosis	4.508527	2.529957	2.321785
Jarque-Bera	7.935709	2.101370	5.055338
Probability	0.018914	0.349698	0.079845
Sum	3.303003	5.236500	4.456000
Sum Sq. Dev.	1.212446	0.011312	0.011397
Observations	82	82	82

Figure 1: Descriptive statistics

NIFTY_50:

The NIFTY_50 index has an average performance of approximately 0.0403 over the observed period, with a median value of 0.0254. The highest value is 0.4195, while the lowest is -0.3340. The standard deviation measures the dispersion of data points around the mean, with higher values indicating greater variability. The skewness value indicates a slight positive skew towards higher values, while the kurtosis value of 4.509 indicates a leptokurtic distribution with heavier tails and more peaked values. The Jarque-Bera statistic, approximately 7.936, suggests a departure from normality in the distribution of NIFTY_50 values, with a higher value indicating a departure from normality. Overall, the NIFTY_50 index's distribution is symmetric and slightly skewed towards higher values.

REPO_RATE:

The REPO_RATE has an average performance of 0.0639 over the observed period, with a median value of 0.0650. The highest value is 0.0900, while the minimum is 0.0400. The standard deviation measures data points' dispersion around the mean, with higher deviations indicating greater variability. The skewness value indicates a slight negative skew towards lower values, but is relatively small, indicating a symmetric distribution. The kurtosis value of 4.509 indicates a leptokurtic distribution with heavier tails and more peaked

values. The Jarque-Bera statistic for REPO_RATE is approximately 2.101. This indicates less evidence of departure from normality, but it's still essential to assess its statistical significance.

REVERSE_REPO_RATE:

The Reverse Repo Rate index has an average performance of 0.0543 over the observed period, with a median of 0.0575. The highest value is 0.0750, while the minimum is 0.0325. The standard deviation measures data points' dispersion around the mean, with higher deviations indicating greater variability. The skewness value of -0.505 indicates a moderate negative skew towards lower values, with a tail extending to the left. The kurtosis value of 2.322 indicates slightly heavier tails than a normal distribution, with some degree of leptokurtosis. The Jarque-Bera statistic for REVERSE_REPO_RATE is approximately 5.055, falling between NIFTY_50 and REPO_RATE values, indicating a departure from normality. Further analysis is needed to determine the significance of this departure.

Augmented Dickey-Fuller Test:

Augmented Dickey-Fuller Unit Root Test on D(NIFTY_50___CHANGE)

Null Hypothesis: D(NIFTY_50___CHANGE) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=11)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-14.86326	0.0001
Test critical values:	1% level	-3.514426	
	5% level	-2.898145	
	10% level	-2.586351	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(NIFTY_50___CHANGE,2)
Method: Least Squares
Date: 04/10/24 Time: 12:39
Sample (adjusted): 2002Q3 2022Q2
Included observations: 80 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(NIFTY_50___CHANGE(-1))	-1.474685	0.099217	-14.86326	0.0000
C	0.000561	0.016350	0.034297	0.9727

R-squared	0.739058	Mean dependent var	-0.001399
Adjusted R-squared	0.735712	S.D. dependent var	0.284458
S.E. of regression	0.146237	Akaike info criterion	-0.982498
Sum squared resid	1.668044	Schwarz criterion	-0.922947
Log likelihood	41.29991	Hannan-Quinn criter.	-0.958622
F-statistic	220.9165	Durbin-Watson stat	2.203123
Prob(F-statistic)	0.000000		

Figure 2: Augmented Dickey-Fuller Test (Nifty 50)

This test statistic is -14.86326, and the associated p-value is 0.0001. This indicates strong evidence against the null hypothesis, suggesting that the first difference of the NIFTY_50 index is stationary. The critical values at the 1% level are -3.514426, at the 5% level are -2.898145, and at the 10% level are -2.586351.

Augmented Dickey-Fuller Unit Root Test on D(REPO_RATE)

Null Hypothesis: D(REPO_RATE) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=11)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.230066	0.0000
Test critical values:	1% level	-3.514426	
	5% level	-2.898145	
	10% level	-2.586351	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(REPO_RATE,2)
Method: Least Squares
Date: 04/10/24 Time: 12:40
Sample (adjusted): 2002Q3 2022Q2
Included observations: 80 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(REPO_RATE(-1))	-0.534389	0.102176	-5.230066	0.0000
C	-0.000145	0.000348	-0.415000	0.6793

R-squared	0.259636	Mean dependent var	6.25E-05
Adjusted R-squared	0.250144	S.D. dependent var	0.003575
S.E. of regression	0.003096	Akaike info criterion	-8.692877
Sum squared resid	0.000748	Schwarz criterion	-8.633327
Log likelihood	349.7151	Hannan-Quinn criter.	-8.669002
F-statistic	27.35359	Durbin-Watson stat	2.165230
Prob(F-statistic)	0.000001		

Figure 3: Augmented Dickey-Fuller Test (Repo Rate)

The test statistic is -5.230066, and the associated p-value is 0.0000. This indicates strong evidence against the null hypothesis, suggesting that the first difference of the REPO_RATE series is stationary. The critical values at the 1%, 5%, and 10% levels are -3.514426, -2.898145, and -2.586351, respectively.

Augmented Dickey-Fuller Unit Root Test on D(REVERSE_REPO_RATE)

Null Hypothesis: D(REVERSE_REPO_RATE) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=11)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.952804	0.0000
Test critical values:	1% level	-3.514426	
	5% level	-2.898145	
	10% level	-2.586351	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(REVERSE_REPO_RATE,2)
Method: Least Squares
Date: 04/10/24 Time: 12:36
Sample (adjusted): 2002Q3 2022Q2
Included observations: 80 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(REVERSE_REPO_RATE(-1))	-0.616254	0.103523	-5.952804	0.0000
C	-0.000180	0.000415	-0.434327	0.6653

R-squared	0.312387	Mean dependent var	6.25E-05
Adjusted R-squared	0.303571	S.D. dependent var	0.004424
S.E. of regression	0.003692	Akaike info criterion	-8.340642
Sum squared resid	0.001063	Schwarz criterion	-8.281091
Log likelihood	335.6257	Hannan-Quinn criter.	-8.316766
F-statistic	35.43588	Durbin-Watson stat	2.050037
Prob(F-statistic)	0.000000		

Figure 1: Augmented Dickey-Fuller Test (Reverse Repo Rate)

The test statistic is -5.952804, and the associated p-value is 0.0000. This provides strong evidence against the null hypothesis, suggesting that the first difference of the REVERSE_REPO_RATE series is stationary. The critical values at the 1%, 5%, and 10% levels are -3.514426, -2.898145, and -2.586351, respectively.

GRANGER CAUSALITY INTERPRETATION (Repo Rate):

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
REPO_RATE does not Granger Cause NIFTY_50	82	4.67162	0.0122
NIFTY_50 does not Granger Cause REPO_RATE		1.29766	0.2791

Figure 5: Granger Causality Test (Repo Rate)

This data shows the results of a pairwise Granger causality test for long-run relationships between the differenced series of the Repo rate and the NIFTY_50 stock market index.

Interpretation:

1. **REPO_RATE to NIFTY_50:**

   The null hypothesis, which states that changes in REPO_RATE do not have a causal relationship with changes in NIFTY_50, is rejected at a significance level of 5% due to the p-value (0.0122) being less than 0.05. This indicates that there is statistically considerable evidence to support the idea that previous values of REPO_RATE have a causal effect on changes in NIFTY_50.

2. **NIFTY_50 to REPO_RATE:**

   The null hypothesis stating that changes in NIFTY_50 do not have a causal relationship with changes in REPO_RATE cannot be rejected at a significance level of 5% because the p-value (0.2791) is higher than 0.05. This indicates that there is not enough data to establish a causal relationship between previous values of NIFTY_50 and changes in REPO_RATE.

GRANGER CAUSALITY INTERPRETATION (Reverse Repo Rate):

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
REVERSE_REPO_RATE does not Granger Cause NIFTY_50	82	1.92933	0.1522
NIFTY_50 does not Granger Cause REVERSE_REPO_RATE		0.73681	0.4820

Figure 6: Granger Causality Test (Reverse Repo Rate)

Interpretation:

- **REVERSE_REPO_RATE to NIFTY_50:**

  The null hypothesis, which asserts that alterations in the REVERSE_REPO_RATE do not have a Granger causal effect on changes in NIFTY_50, is refuted at a significance level of 5% due to the p-value (0.1522) being lower than 0.05. Hence, there is a substantial amount of statistical evidence indicating that previous values of the REVERSE_REPO_RATE have a causal relationship with fluctuations in the NIFTY_50.

- **NIFTY_50 to REVERSE_REPO_RATE:**

  The null hypothesis, which asserts that alterations in NIFTY_50 do not have a causal influence on changes in REVERSE_REPO_RATE according to the Granger causality test, cannot be refuted at the 5% significance level because the p-value (0.4820) above the threshold of 0.05. Hence, there is inadequate data to establish that previous values of NIFTY_50 had a Granger causal effect on changes in REVERSE_REPO_RATE.

4.1 RESEARCH OUTCOME AND FINDINGS:

The study examines the correlation between Repo Rate and Reverse Repo Rate fluctuations and the Indian stock market, specifically the NIFTY_50 index. Statistical tests reveal a significant relationship between the Central Bank's monetary policy, particularly regarding repo and reverse repo rates and the performance of the Indian stock market. Granger causality analysis shows that changes in the reverse repo rate Granger cause fluctuations in the NIFTY 50 index, suggesting that these fluctuations may influence the Indian stock market. However, the analysis suggests that the NIFTY 50 index does not Granger cause changes in the reverse repo rate, suggesting a limited direct impact of stock market fluctuations on Central Bank decisions.

4.3 MANAGERIAL IMPLICATION:

The study on the impact of Repo Rates and Reverse Repo Rate fluctuations on the Indian stock market, particularly the NIFTY_50 index, offers valuable insights for various managerial decisions across different sectors. It can help financial organizations improve their risk management strategies, improve portfolio management, guide corporate finance decisions, and improve investor relations. The research can also help publicly listed companies understand the implications of Central Bank actions on their stock prices, enabling proactive communication of their financial health, growth prospects, and resilience to macroeconomic shocks. Regulatory bodies can use the findings to enhance regulatory frameworks and promote market stability, while financial advisors and wealth managers can provide informed guidance to clients, offering tailored investment advice, risk management strategies, and wealth preservation techniques to navigate market uncertainties associated with changes in monetary policy.

4.4 LIMITATIONS OF THE STUDY:

The study examined the correlation between Repo Rates & Reverse Repo rate fluctuations and the Indian stock market, specifically the NIFTY_50 index. However, the study has several limitations, including data limitations due to data granularity, accuracy, and coverage, as well as model limitations due to the choice of econometric models and statistical techniques. Factors such as global economic conditions, domestic policy changes, company-specific news, and exchange rates also influence the Indian stock market.

The study may also rely on assumptions and simplifications, such as assuming linear relationships or ignoring non-linear effects, which could lead to inaccuracies in the findings. The findings may not be generalizable to other stock markets globally due to their unique characteristics and dynamics. Additionally, the study may face data mining or publication bias, where only statistically significant results or findings supporting the study's

assumptions are disclosed. These limitations may result in an inadequate picture of the connection being studied.

4.5 CONCLUSIONS:

In conclusion, our study provided light on the complex interaction between the Central Bank's monetary policy and the Indian stock market. Several major findings have been derived from a thorough data analysis and rigorous econometric approaches. First, it was discovered that the Central Bank's activities, as represented in changes to the repo rate and reverse repo rate, have a clear influence on the movements of the Nifty 50 index. However, the direction and size of this impact varied between channels and historical periods. Second, while the study shows evidence of Granger causality between specific variables, caution should be exercised in interpreting causation since other factors may also play a substantial role. Thirdly, the findings underscore the importance of considering not only the immediate effects but also the broader implications and transmission mechanisms of monetary policy on financial markets. Additionally, the study highlights the need for further research to explore the nuanced dynamics between monetary policy and the stock market, considering factors such as market sentiment, regulatory changes, and global economic conditions. Overall, this research contributes to a deeper understanding of the interactions between monetary policy and the stock market, providing valuable insights for policymakers, investors, and researchers alike.

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