

## An Empirical Study on the Dynamics of NIFTY 50 Due to the Behavior of Macro Economic Variables



Ruby Khan<sup>1</sup>, Mary Joy<sup>2</sup>

<sup>1,2</sup>Jazan University KSA College of Business Administration Department of Finance and Banking

**ABSTRACT:** In this paper we studied the correlation between Nifty 50, the National Stock Exchange of India's (NSE) benchmark stock index and macroeconomic variables of Indian economy which may influence it. Our analysis uses monthly data from 1.1.2017 to 1.4.2023, published by various financial statistical platforms. We applied descriptive analysis to summarize or describe the attributes of our data set. To estimate the effect of our explanatory variables (inflation rate and interest rate) on the dependent variable (Nifty 50), we applied regression techniques. The results of this study discover that neither "Inflation rate" nor "Interest Rate" is found as a good regressor. Stock markets are essential in fostering capital formation, advancing economic progress and thus to the expansion and development of the economy, so is crucial to search for variables that influence the volatility of stock market and its development. Majority of past research go on to say that there is no universal agreement on the variables influencing the progression and fluctuations of stock market. Therefore, it is crucial to search for variables that have a big impact on its volatility.

**KEYWORDS:** stock market volatility, NIFTY 50, macro-economic variables, inflation rate, interest rate, time series models.

**JEL Codes:** E02, E31, E32, E43, E44

### INTRODUCTION

The connection between returns on stock market and macroeconomic and financial variables has been studied extensively since the 1980s over a number of different stock Markets, with academics, investors, and regulators all concerned in the hypothesis that macroeconomic factors influence the stock market.

A stock exchange is a trading area where investors can purchase and sell shares of publicly traded corporations, making it easier to buy and sell securities including derivatives, Stocks and bonds. Investors that make stock market investments may be able to profit from dividends and capital growth. In general, stock markets are essential to the operation of contemporary economies because they offer a platform for firms to raise cash and for investors to get involved in the expansion and development of companies.

Stock market volatility is influenced by macroeconomic variables including interest rates, inflation, and economic expansion. Low interest rates allow businesses to borrow money for a lower rate, which can result in higher stock values and less volatility. High interest rates result in higher borrowing costs, which can decrease investment and limit economic growth. The stock market volatility can be influenced by both inflation and economic expansion. While economic expansion may result in lower stock prices and greater volatility, inflation may cause a rise in stock values. Higher borrowing costs and slower economic development brought on by inflation might also result in lower stock values and greater volatility.

It is challenging to make a firm prediction because of the complicated and variable character of the correlation between macroeconomic variables and stock market volatility.

With respect to the National Stock Exchange Fifty (NIFTY), we are attempting to establish a link between Stock Market Volatility and two macroeconomic variables: Interest Rate and the Inflation Rate. National Stock market of India (NSE), the most prominent stock market of India was founded in 1992 which provides a comprehensive selection of financial instruments, such as derivatives, mutual funds, exchange-traded funds, and stocks. It has contributed significantly to the growth of the Indian securities markets, and the Nifty 50, its benchmark index, is closely watched.

The NSE has partnered with numerous exchanges worldwide and has a growing international presence. Several foreign indexes have also been introduced by the exchange, including the Nifty 50 USD Index, which monitors the performance of the Nifty 50 in US dollars. In India's security markets, the NSE has been at the forefront of technological advancements.

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By market capitalization, the NSE is India's biggest stock exchange. The market value of companies listed on the NSE was above \$3 trillion as of April 2023 and Adani Ports and Special Economic Zone Limited, Asian Paints Limited, Axis Bank Limited, Bajaj Auto Limited, Bajaj Finance Limited, Bharat Petroleum Corporation Limited, Bharti Airtel Limited, Britannia Industries Limited, Cipla Limited, Coal India Limited, Divi's Laboratories Limited, Dr. Reddy's Laboratories Limited, etc. are a few of the major participants in the NIFTY. The Nifty 50 index is widely used to gauge the performance of the Indian stock market.

### **LITERATURE REVIEW**

Academic scholars, financial analysts, and industry professionals have tried to calculate the correlation between macroeconomic factors and stock market movements during the previous few decades. They looked at the link between macroeconomic indicators and stock prices as well as their influence on both in several empirical investigations. Depending on the factors, methodology, procedures, and tests employed, a broad range of findings have been drawn in numerous research. To learn what drives variations in Nifty stock values, research has been done. Common methods used to assess stock prices include exchange rates, IIPs, FII, WPIs, and call money rates. Several studies have used information from established markets to analyze the connection between change in the exchange rate and stock returns.

By using descriptive and regression methods on a five-year, quarterly data set, Khan and Joy analyze the link between Saudi Arabian stock exchange returns (TADAWUL) and macroeconomic indicators of the Saudi economy. The unemployment rate and the inflation rate are two macroeconomic factors that were considered. The results of this study show that the rate of unemployment is a key factor in the fluctuations in the Saudi Arabian stock market. Not a very good regressor is discovered to be the rate of inflation.

According to research by Drs. Kaushal and Kinjal Bhatt, managers work to increase value for their owners but may not always act to maximize shareholder value because of perceived conflicts with other objectives. They tried to examine the strategies employed by Indian IT firms to increase shareholder value. Financial data was used to calculate metrics such as DPS, EPS, ROE, ROA, EVA, and MVA. The results showed that the majority of companies had positive EVA, indicating that they were adding value for shareholders. The five firms' respective means for each measure varied. (Kaushal Bhatt & Bhatt, 2022)

In a research by Drs. K Kiran Kumar and Rajakamal CH, The effect of Market Value Added on the stock market returns of the NSE 50 (NIFTY) listed businesses in India was explored. As the dependent variable, Market Value Added was employed, while the independent variables used were Return on Equity, Capital Employed, Earnings per share, Dividend per share, and current ratio. This study used the Eviews software program to create regression coefficients, and they discovered that MVA (14%) had a greater impact on stock market returns than other independent factors. (Kumar & Rajakamal, 2022)

Ramona Birau, Jatin Trivedi, Cristi Spulbar aims to analysis the performance of the Indian index using The NIFTY MIDCAP 50 index daily series returns. The study examines the existence of asymmetries in the patterns that transmit volatility, the movement of larger positive and negative shock magnitudes, and the model's suitability. The results showed the movement of financial series, sketching of volatility, an overview of statistics, the characteristics of the EGARCH model, and the suitability of series returns to the EGARCH model. (Birau et al., 2021)

The effects of merger and acquisition announcement expectations on the stock returns of 14 acquiring banks from India and the United States were assessed by Vineeta Kumari and Dharen Kumar Pandey. It was discovered that the cumulative average abnormal returns (CAARs) on the majority of the days during the event window period and the post-event window period make the Indian market, an emerging market, more vulnerable to this information. (Pandey & Kumari, 2020)

Ajay Kumar Mishra, Trilochan Tripathy in a study investigated the price and transaction size clustering in particular transactions using the fully automated order-driven trading system utilized by the NSE. Additionally, the patterns in liquidity and intraday return for the stocks traded on the NSE were examined. It has been noted that there is strong evidence of size and price clustering for the traded equities. Multiples of 500 shares are when size clustering happens. Between price clustering and trading price decimals, the association is seen to be deteriorating over the whole sample. The outcomes held true after accounting for trading frequency and market capitalization. (Mishra & Tripathy, 2018)

In their analysis, Sayantan Bandhu Majumder and Ranjanendra Narayan Nag primarily concentrate on the distribution of shocks and volatility among sector indexes. Shocks and volatility are dispersed across sector indices, with two-way spillover between banking and IT and asymmetric spillover from the FMCG sector, according to the autoregressive asymmetric BEKK-GARCH model. For risk management, the best portfolio allocation, and the most effective hedging strategy, it is crucial to comprehend the dynamics of shocks and volatility transmission across sector indexes. (Majumder & Nag, 2018)

Giri A. K & Joshi Pooja investigates the long- and short-term connections between stock price and macroeconomic issues that have an impact on the Indian economy. The results demonstrate a long-term link between the components, with exchange rates, inflation, and economic growth all favoring stock prices. The long run relationship is studied by adopting the ARDL bounds

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testing technique to co-integration. Stock prices are negatively impacted by the price of crude oil, indicating that investors anticipate inflation. The VECM outcome demonstrates a short- and long-term unidirectional causal link between Indian stock prices, FDI, and economic development. The variance decomposition shows that internal shocks account for the majority of the growth of the Indian stock market. (Giri & Joshi, 2017)

Using NSE data from 2001 to 2013, Pramod Kumar Naik and Puja Padhi looked at the connection between investor mindset and stock return volatility. Principal component analysis, seven market-related variables, Granger causality, vector autoregression, traditional least squares methods, and EGARCH-M models were used to produce a sentiment index. According to the study, mood index has a significant impact on market excess returns, with both positive and negative emotions having different effects on excess return volatility. According to Granger causality research, the third lag's investor mood and excess return are causally related in both directions. (Naik & Padhi, 2016)

In a Kirandeep Kaur empirical research In India, researchers looked into the connections between unemployment, GDP growth, inflation, and currency exchange rates. Using the least squares approach or a basic linear regression model, the data of four variables—unemployment, GDP growth rate, exchange rate, and inflation rate—were analyzed. The findings indicated that the rate of inflation and the value of the rupee have a big impact on unemployment in India. (Kaur, 2014)

According to Raman Preet Singh, virtually all countries appear to have stock markets that represent the financial health of their respective economies in the global financial market. This economic cycle was examined using the leading and trailing indicators in connection to the movements in the financial markets. In this article, after a careful analysis, the S&P CNX Nifty has been qualitatively contrasted with significant macroeconomic indicators including GDP, inflation, exchange rate, industrial production, foreign institutional investment, unemployment, crude oil, and gold price. The study finds that one of the factors affecting the behavior of significant macroeconomic variables and other macroeconomic factors is stock index volatility. (R. Singh, 2013)

Saurabh Singh, Dr. L.K Tripathi& Arpan Parashar studied the main elements influencing India's National Stock Exchange (NSE). Additionally, this research tries to categorize NSE by examining the proportional importance of its contributing variables. It is a well-recognized truth that the money exchange rate or the dollar price, WPI values and IIP numbers, have a significant impact on Nifty; hence, this study determines the degree to which these factors have on Nifty. SPSS has been used to do regression analysis to establish the association. The findings imply that the performance of Nifty is highly influenced by the values of IIP, WPI, and Exchange Rate. (S. Singh et al., 2013)

Debasish, Sathya Swaroop; Puri, Tribhuvan N in their research, compared the trading volume and return process at expiry with those of a reference group to see whether there are any potential expiration impacts on the NSE Nifty index. In this study, the Wilcoxon rank-sum test and pooled t test were used. According to the research, trade volume is much higher on days and weeks with expirations than it is on days and weeks with comparisons. Additionally, according to the results, there are no apparent price alterations on the expiration day or during the expiration week for the whole sample period. When the entire sample period is split into two sub-periods, it is discovered that the first sub-period's expiry day (weeks) may have undergone some pricing distortions. (Debasish & Puri, 2010)

Sathya Swaroop Debasish attempted to evaluate if futures trading has significantly affected stock returns by examining the influence of futures trading on the volatility and operational effectiveness of the Indian stock market using an event research technique. It discovered that the NSE Nifty index futures trading's arrival in India reduced spot price volatility and trading effectiveness, indicating a balance between advantages and disadvantages. According to the findings, the market would need to pay a price, such a decrease in efficiency, to be stabilized. A market policy that preserves market stability while also limiting harm to market efficiency would be perfect for trading derivatives. (Debasish, 2009)

Alok Pande, R. Vaidyanathan examines the pricing of IPOs in the NSE to understand the first day underpricing and any new trends in the Indian IPO market. It finds that the first day underpricing is positively impacted by demand created during book development and the list delay, but the influence of money spent on IPO marketing is negligible. Additionally, the post-IPO performance for the companies under study is poor one month after the listing, which is consistent with existing literature. (Pande & Vaidyanathan, 2007)

A Research by Sangeeta Chakravarty uses monthly time series data to evaluate the link between stock price and macroeconomic factors in India from 1991 to 2005. The results of this study, which uses the Granger non causality test technique, demonstrate that while the stock price does not directly cause either inflation or the index of industrial production, both are caused by the stock price. Stock price and money supply have a one-way link, stock price causes money supply, but not the other way around. There is no direct connection between the price of gold and the price of stocks or the exchange rate. (Charkravarty, 2005) According to the description above, several macroeconomic variables exhibit distinct behaviors, and the nature of their connections changes from one element to another. Despite substantial study on the volatility of the NSE, many of these

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components still need to be further understood. To assess their impact on NSE or Nifty 50 in India, we attempted to concentrate more on two macroeconomic factors, "Inflation Rate" and "Interest Rate," in our study.

## OBJECTIVES

1. To assess Nifty's volatility and overall behavior.
2. To examine the link between inflation rates and Nifty stock performance.
3. To research the link between interest rates and Nifty stock performance.
- 4 To investigate the other forces that sufficiently influence the activities of Nifty.
5. To open new avenues for more investigation.

## DATA AND METHODOLOGICAL ISSUES

We combined time series analysis with literature analysis to develop our working technique. This study looks at the National Stock Exchange (NSE) of India's behavior statistically in connection to the country's interest and inflation rates. We have used monthly data from 2017 to 2023 that has been made available by reliable sources (Annexure 1). First, we used E-View software and descriptive analysis to examine the distributional characteristics of our dataset. We compute the Mean, Median, Mini-Max, Standard Deviation, Skewness, Kurtosis, Jarque-Bera, and Probability as part of the descriptive analysis (Khan, 2021). After confirming that the data were normal, we used regression analysis to determine how much the independent variables "Inflation Rate" and "Interest Rate" may influence the dependent variable "NIFTY 50."  $X = \alpha_0 + \beta_1 Y_1 + \beta_2 Y_2$

Where X is dependent variable that is percentage change in NIFTY 50

$Y_1$  is independent variable percentage Inflation Rate

$Y_2$  is an independent variable Percentage Interest Rate

$\alpha$  is the value of intercept

$\beta_1$  and  $\beta_2$  are the slopes of independent variables.

## Hypothesis

There are two null hypotheses (H0) in this study:

1. There is no correlation between the percentage change in the NIFTY 50's returns and the national inflation rate. Returns on the NIFTY 50 are unrelated to changes in the country's inflation rate.
2. There is no correlation between the percentage change in the NIFTY 50's returns and the national interest rate. The NIFTY 50 returns are unaffected by changes in interest rates, either up or down.

The following alternative hypotheses (H1) may be framed considering the null hypothesis:

1. NIFTY 50 is too closely correlated with the national inflation rate.
2. NIFTY 50 is also strongly integrated with interest rates in the country.

## FINDINGS AND ANALYSIS

### Descriptive Analysis

Table 1 gives descriptive statistics based on our dependent and independent factors. We have thus far just used the data we have gathered in its original format. All variables have negative skewness. Based on kurtosis data (lesser than 3), a lower value of Kurtosis means that the inflation and interest rates are platykurtic (short tailed). NIFTY has a higher value of kurtosis (more than 3), it is leptokurtic (long tail or higher). The Jarque-Bera test determines if sample data exhibits skewness and kurtosis that are close to those of a normal distribution. It is a goodness-of-fit test. The Jarque-Bera test findings in Table 1 indicate that none of the variables are regularly distributed. Only a series of inflation rates have a normal distribution. This conclusion is further supported by the findings of probability calculations, as only inflation series have P values above 5%.

**Table 1**

***Descriptive Statistics (76 observations)***

	INFLATION	INTEREST RATE	NIFTY 50 RETURNS
Mean	4.964474	7.407237	1.262763
Median	4.900000	7.675000	1.105000
Maximum	7.800000	8.200000	14.69000
Minimum	1.500000	6.650000	-23.03000
Std. Dev.	1.642819	0.577622	5.108432

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Skewness	-0.122229	-0.288252	-1.066708
Kurtosis	1.951450	1.461127	8.467502
Jarque-Bera	3.670856	8.551541	109.0760
Probability	0.159545	0.013901	0.000000
Sum	377.3000	562.9500	95.97000
Sum Sq. Dev.	202.4141	25.02352	1957.206

Note: E-View calculation

### Analysis of Regression

(H0: There is no relationship between the dependent and independent variables)

We may assess the variability in the estimate of slope coefficients using the standard error, as shown in Table 2. The standard deviation of a coefficient is determined using T-statistics. As the t-statistics are less than 2 and the p-value is higher than 0.05 in this case, H0 is acceptable for the dependent variable NIFTY and the independent variables inflation rate and interest rate. The model has low predictive accuracy, as evidenced by the independent variable R-square value of 2% and the extremely low adjusted R-square. The F-statistic (0.829951) and its p-value (0.440143) make it clear that the explanatory factors are not required to explain the variable. Additionally, a positive autocorrelation is confirmed by the Durbin-Watson statistic (2.218602). Khan (undated)

**Table 2**

#### Regression Analysis

\*Dependent Variable: NIFTY

\*\* Included observations: 76

Variables	Co-efficient	Std. Error	t-Statistic	Prob.
C	14.77705	10.96438	1.347733	0.1819
INFLATION RATE	-0.285260	0.449336	-0.634848	0.5275
INTEREST RATE	-1.633284	1.277961	-1.278039	0.2053
R-squared	0.022233	Mean dependent var		1.262763
Adjusted R-squared	-0.004555	S.D. dependent var		5.108432
S.E. of regression	5.120054	Akaike info criterion		6.142880
Sum squared resid	1913.691	Schwarz criterion		6.234883
Log likelihood	-230.4295	Hannan-Quinn criter.		6.179649
F-statistic	0.829951	Durbin-Watson stat		2.218602
Prob(F-statistic)	0.440143			

Note: E-View calculation

### Hypothesis Results

Hypothesis of the study	Dependent Variable	Independent Variable	Result	Evidence
H0 There is no relationship between percentage change in returns of NIFTY 50 and Inflation rate in the country. Returns on the NIFTY 50 are unrelated to changes in the country's inflation rate.	% CHANGE IN RETURNS OF NIFTY 50	Inflation Rate	Accepted	t-Statistic value is lesser than 2 i.e. - <b>0.634848</b> Probability value is more than 0.05 i.e <b>0.5275</b>
H1 There is no relationship between percentage change in returns of NIFTY 50 and the nation's interest rate. The NIFTY 50 returns are	% CHANGE IN RETURNS OF NIFTY 50	Interest Rate	Accepted	t-Statistic value is lesser than 2 i.e. - <b>-1.278039</b>

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	unaffected by changes in the interest rates, either up or down.				Probability value is greater than 0.05 i.e. – <b>0.2053</b>
H1	.. NIFTY 50 is too closely correlated with the national inflation rate.	% CHANGE IN RETURNS OF NIFTY 50	OF Inflation Rate	Rejected	t-Statistic value is less than 2 i.e. <b>-0.634848</b> Probability value is more than 0.05 i.e <b>0.5275</b>
	.. NIFTY 50 is also strongly integrated with interest rate in the country	% CHANGE IN RETURNS OF NIFTY 50	OF Interest Rate	Rejected	t-Statistic value is less than 2 i.e. <b>-1.278039</b> Probability value is greater than 0.05 i.e. – <b>0.2053</b>

### CONCLUSION, RECOMMENDATIONS AND LIMITATIONS

The results of this study show that neither "Inflation rate" nor "Interest Rate" is shown to be such a good regressor, even though both are significant indicators of the health of the economy and have a significant influence on the stock market. The percentage change in the NIFTY 50's returns and the nation's inflation rate and interest rate do not correlate with each other. The NIFTY 50's returns are unaffected by changes in the country's interest rate or inflation rate, either up or down.

To draw more thorough results, this study might be expanded to cover a variety of other topics. The variables influencing the stock market can be better understood by looking at studies of foreign exchange reserves and export pricing. It is possible to conduct a detailed investigation into the causes of the stock market's apparent lack of a causal relationship with macroeconomic issues. The stock market and economic expansion are associated, as found in several earlier research. Variables in the macroeconomic system ought to alter because of this interaction. There is a lot of uncertainty, though, because there is no causal link. Practitioners and decision-makers will be very interested in the study findings on this issue since it has the potential to boost the economy of emerging nations, especially in those countries.

No study is ever completely perfect or extensive, so even ours only looked at two macroeconomic variables—interest rate and inflation rate. Due to time limits and information access limitations, it was unable to explore further macroeconomic concerns.

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Months	NIFTY Price	% Change in NIFTY Price (A)	% Inflation Rate (B)	% Interest Rate (C)
1/1/2017	11,548.15	4.60	3.2	7.75
2/1/2017	11,990.44	3.83	3.7	7.75
3/1/2017	12,406.69	3.47	3.9	7.75
4/1/2017	12,582.88	1.42	3	7.75
5/1/2017	13,018.69	3.46	2.2	7.75
6/1/2017	12,932.33	-0.66	1.5	7.75
7/1/2017	13,724.19	6.12	2.4	7.75
8/1/2017	13,521.03	-1.48	3.3	7.75
9/1/2017	13,351.99	-1.25	3.3	7.75
10/1/2017	14,108.55	5.67	3.6	7.7
11/1/2017	13,966.58	-1.01	4.9	7.7
12/1/2017	14,381.92	2.97	5.2	7.7
1/1/2018	15,065.82	4.76	5.1	7.7
2/1/2018	14,358.71	-4.69	4.4	7.8
3/1/2018	13,865.57	-3.43	4.3	7.8
4/1/2018	14,723.32	6.19	4.6	7.8
5/1/2018	14,750.26	0.18	4.9	7.9
6/1/2018	14,753.91	0.02	4.9	7.9
7/1/2018	15,672.47	6.23	4.2	7.9
8/1/2018	16,143.51	3.01	3.7	8.1
9/1/2018	15,114.08	-6.38	3.7	8.15
10/1/2018	14,377.38	-4.87	3.4	8.15
11/1/2018	15,059.37	4.74	2.3	8.2
12/1/2018	15,048.98	-0.07	2.1	8.2
1/1/2019	15,012.34	-0.24	2	8.2
2/1/2019	14,979.39	-0.22	2.6	8.2
3/1/2019	16,146.11	7.79	2.9	8.15
4/1/2019	16,318.66	1.07	3	8.1
5/1/2019	16,583.46	1.62	3	8.1
6/1/2019	16,433.85	-0.90	3.2	8.05
7/1/2019	15,539.43	-5.44	3.1	7.9
8/1/2019	15,440.47	-0.64	3.3	7.8
9/1/2019	16,072.50	4.09	4	7.7
10/1/2019	16,667.29	3.70	4.6	7.65
11/1/2019	16,917.89	1.50	5.5	7.65
12/1/2019	17,077.06	0.94	7.4	7.65
1/1/2020	16,790.45	-1.68	7.6	7.6
2/1/2020	15,726.92	-6.33	6.6	7.45
3/1/2020	12,105.66	-23.03	5.8	7.1
4/1/2020	13,884.18	14.69	7.2	6.95
5/1/2020	13,503.45	-2.74	6.3	6.7
6/1/2020	14,527.18	7.58	6.2	6.65
7/1/2020	15,645.34	7.70	6.7	6.65
8/1/2020	16,110.07	2.97	6.7	6.65
9/1/2020	15,916.72	-1.20	7.3	6.65
10/1/2020	16,504.16	3.69	7.6	6.65
11/1/2020	18,392.54	11.44	6.9	6.65
12/1/2020	19,833.19	7.83	4.6	6.65



## An Empirical Study on the Dynamics of NIFTY 50 Due to the Behavior of Macro Economic Variables

1/1/2021	19,346.03	-2.46	4.1	6.65
2/1/2021	20,644.88	6.71	5	6.65
3/1/2021	20,886.52	1.17	5.5	6.65
4/1/2021	20,811.13	-0.36	4.2	6.65
5/1/2021	22,203.59	6.69	6.3	6.65
6/1/2021	22,455.70	1.14	6.3	6.65
7/1/2021	22,554.26	0.44	5.6	6.65
8/1/2021	24,525.71	8.74	5.3	6.65
9/1/2021	25,234.57	2.89	4.3	6.65
10/1/2021	25,340.83	0.42	4.5	6.65
11/1/2021	24,368.53	-3.84	4.9	6.65
12/1/2021	24,908.71	2.22	5.7	6.65
1/1/2022	24,894.62	-0.06	6	6.65
2/1/2022	24,153.01	-2.98	6.1	6.65
3/1/2022	25,118.14	4.00	7	6.65
4/1/2022	24,606.78	-2.04	7.8	6.75
5/1/2022	23,958.10	-2.64	7	6.85
6/1/2022	22,828.93	-4.71	7	7.05
7/1/2022	24,862.70	8.91	6.7	7.15
8/1/2022	25,786.59	3.72	7	7.35
9/1/2022	24,821.08	-3.74	7.4	7.35
10/1/2022	26,182.36	5.48	6.8	7.6
11/1/2022	27,276.01	4.18	5.9	7.6
12/1/2022	26,326.37	-3.48	5.7	7.85
1/1/2023	25,685.94	-2.43	6.5	7.85
2/1/2023	25,184.47	-1.95	6.4	7.95
3/1/2023	25,266.06	0.32	5.7	7.95
4/1/2023	25,924.89	2.61	4.7	7.95

Source of A= [www.investing.com](http://www.investing.com)  
(Nifty 50 Historical Rates (NSEI) - Investing.Com, n.d.)

Source of B= [www.rateinflation.com](http://www.rateinflation.com)  
(India Historical Inflation Rates - 2013 to 2023 | Inflation Rate and Consumer Price Index, n.d.)

Source of C= [www.sbi.co.in](http://www.sbi.co.in)  
(MCLR Historical Data - Interest Rates, n.d.)



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