
A STUDY OF RELATIONSHIP BETWEEN BANK NIFTY AND VOLATILITY ON INDIAN STOCK MARKET DURING FINANCIAL YEAR 2016-17

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Abstract

Since the Globalization of Indian Economic Market in 1991 considerable amount of foreign inflows have been seen making this Stock Market Volatile. This paper focuses on Volatility of National Stock Market and its impact on Bank Nifty Index. As Volatility is the level of fluctuation in the stock indices as the result of various internal as well as external factors, it would be ideal to have a correlation of Volatility of Indian stock market which is represented by INDIA VIX with the Bank Nifty Index pattern to improve our understanding of the stock market. This research paper will explore the trading pattern that has been done during the financial year 2016-17.

Key Words : Bank Nifty, VIX, Volatility, Index, Stock Market.

INTRODUCTION

The capital market in India is a very robust market and has undergone drastic changes in the last two or more decades. Stock markets in India have now become more transparent than ever before. Stock markets in general are considered volatile and volatility plays a key role in measuring the risk –return trade-offs. While there are so many factors that make the stock market volatile, it is of general interest to understand if the volatility of the stock market in India in line with the volatility of the different sectors in India. Banks have been major contributors to the fluctuations in the stock market index. Estimating volatility enables the pricing of securities and understanding stock market volatility or individual stock price volatility enables good decisions on the part of investors. Investors who are risk-averse would not be happy to invest in a highly fluctuating stock, whereas those with a thirst for riskiness would happily invest in a highly volatile market. Volatility is simply a measure of variability or dispersion from the mean values. If the dispersion is more it is considered more volatile.

This paper will explore into the relationship between the Volatility of Indian stock market with the Bank Nifty Index. The NIFTY Bank Index comprises of the most liquid and large Indian Banking stocks. It provides investors and market intermediaries a benchmark that captures the capital market performance of the Indian banks. The Index has 12 stocks from the banking sector which trade on the National Stock Exchange of India Ltd.(NSE). NIFTY Bank Index is computed using free float market capitalization method. NIFTY Bank Index can be used for a variety of purposes such as benchmarking fund portfolios, launching of index funds, ETFs and structured products. The methodology for analyzing this portfolio is to analyze Free Float Market Capitalization, as already told it comprises of 12 top positioned Banking organizations, it was launched on September 15, 2003. Calculation frequency is Daily that to online. Index Rebalancing is done every half yearly.

REVIEW OF LITERATURE

William and Vimala (2015) examined the volatility of equity share price of five select private banks listed in the National Stock Exchange. Considering that banks play an important role in the economy of India, an attempt was made to analyse the market volatility of the selected banks by using mean, standard deviation and beta values using the opening and closing prices. It was concluded that the volatility of the closing prices was similar for all the five banks selected for the study.

Anbukarasi and Nithya (2014) made an attempt to bring out the correlation between select stock indices and the NIFTY from January 2013 to June 2014. It was found that there was a significant correlation of all the selected indices except Metal, Pharma, Bank and Realty indices. It was also concluded that the Pharma and Bank indices have a strong impact on NIFTY movements.

Rajamohan.S and Muthukamu.M (2014), conducted a comparative study between bank Index and other sectoral indices using Pearsonian correlation coefficient. It was found that Bank index positively influenced almost all the other sectoral indices. Investors, before investing in any sector, hence need to check the patterns in the banking sector as it could influence the behaviour of other sector stocks.

Bhowmik.D (2013) evaluated the framework of stock market volatility at the country level. According to the study volatility would be spurred by political turmoil or instability and high volatility reduces growth rate of the economy. Volatility also influences the volume of international trade and increases current account deficits

Shanmugasundram and Benedict (2013) conducted a study on the volatility of the sectoral indices with reference to NSE. In this study the risk relationship in different time intervals of the CNX NIFTY index and five sectoral indices including Auto index, Bank index, FMCG index, Infrastructure index and IT index was examined. The results of the study did not support any significant difference across the risk of sectoral indices and NIFTY.

Swarna Lakshmi (2013) used the ARCH model to measure the volatility in NIFTY and other 11 select sectoral indices in India for the period 2008 to 2013. A conclusion was made on the 11 sectors volatility in comparison with the NIFTY and it was found that among the 11 sectors, the realty sector was the most volatile than any other sector. The paper also has discussions on the reasons for the same.

RESEARCH METHODOLOGY

Data Collection: The present study covers secondary data. Data and information have been extracted from websites of National Index and Moneycontrol.com. The researcher has collected the historic data of stock market Volatility (INDIA VIX) and Bank Nifty Index from NSE portal.

Sampling: The sample for this research paper is historical data of NSE Index Bank Nifty values, INDIA VIX values (Volatility) for financial year 2016-17 i.e. 248 values representing the 248 days of trading performed.

Tools & Techniques of the Study: The researcher has used the tools as per the need and type of the study. As relationship between various variables is to be determined, the researcher banks on Regression analysis to establish the relationships as an equation will be established keeping in mind the dependent and independent variable.

Significance of the Study: It is important for common Citizens, Economists, Businesspersons, Academicians, Researchers and Students to know and understand the various components of National Stock Index. With this research paper we are trying to establish the relationship between Banking sector Index i.e. Bank Nifty; also impact of Volatility will also be considered here. This will give one and all the clear picture of the National Stocks Index of the past financial year i.e.2016-17

HYPOTHESIS

Following hypothesis are taken by the researchers:

H₁: There is some amount of association between Bank Nifty and Volatility of Stock Market.

H₀₁: There is no association between Bank Nifty and Volatility of Stock Market.

H₂: There is some amount of correlation between Bank Nifty and Volatility of Stock Market.

H₀₂: There is no correlation between Bank Nifty and Volatility of Stock Market.

DATA ANALYSIS

Lets us test the Hypothesis for their correctness:

Hypothesis 1:

H₁: There is some amount of association between Bank Nifty and Volatility of Stock Market.

H₀₁: There is no association between Bank Nifty and Volatility of Stock Market.

Table 1 : Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.717	.514	.512	957.398	.514	260.395	1	246	.000

Table 2 : ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	238680905.871	1	238680905.871	260.395	.000
	Residual	225486247.982	246	916610.764		
	Total	464167153.853	247			

Table 3 : Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	28329.782	595.559		47.568	.000
Volatility	-623.411	38.633	-.717	-16.137	.000

Upon performing the Linear Regression on the Bank Nifty and Volatility it was found that significance of Regression from Table 2, that comes out to be 0.000 (< 0.05) which means that regression model can be justifiably established. Referring to Table 3 we get the coefficients of Regression Model, hence the model will be as follows.

Now the regression model can be established as:

$Y = a + b X$ where Y (Bank Nifty) is dependent variable & X (Volatility) is independent variable

So, ***Bank Nifty = 28329.782 + (-623.411) Volatility***

Hence it can be stated that the null hypothesis (H01) is rejected and alternative hypothesis (H1) is accepted i.e. There is some amount of association between Bank Nifty and Volatility of Stock Market.

Hypothesis 2:

H₂: There is some amount of correlation between Bank Nifty and Volatility of Stock Market.

H₀₂: There is no correlation between Bank Nifty and Volatility of Stock Market.

Upon performing the Linear Regression on the Bank Nifty and Volatility it was found that Correlation between the two variables is 0.717 as shown in Table 1, and significance is 0.00 which is less than 0.05. this implies that there is good amount of positive correlation between the Bank Nifty and Volatility.

Hence it can be stated that the null hypothesis (H01) is rejected and alternative hypothesis (H1) is accepted i.e. There is some amount of correlation between Bank Nifty and Volatility of Stock Market.

CONCLUSION

It is clear from the above research that Volatility does have a significant impact on the Bank Nifty stock for the financial year 2016-17. We can clearly establish the association between the Bank Nifty and Volatility of National Index. Also the correlation has been found out between the above said variables for the financial year 2016-17 On the basis of this we can also forecast that similar impact can be expected in the present as well as in future years. It will be of great help to the traded to look at the impact at the given point of time and trade wisely.

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