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Research Article

Impact Of Macroeconomic Variables On Bank Nifty Index Future

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ARTICLE INFO | **ABSTRACT**

Derivatives have been considered as the greatest advancement in World Capital market. It had brought many innovations and varied risk management strategies. Futures market assures risk transference and hedging of price risk. It helps in forecasting of spot market. Bank Nifty index comprises of 12 leading banking companies of India and used to assess the trends and functioning of Indian Capital market. This paper analyses Banknifty index future in NSE and the impact of macroeconomic variables on the traded price of Bank nifty index future by using regression analysis.

Keywords: Bank Nifty, Index Future, Capital Market, NSE, Derivatives, Future Market.

Introduction

Derivatives were one of the advancement in the world capital market. It was introduced for the purpose of risk coverage and risk transference. It was considered as the financial market innovation. It created the greatest changes in the financial market of various countries including India. Futures market was introduced to provide varied risk management strategies. Futures were mainly used for hedging the stock prices.
Index futures are used for hedging or speculation of underlying index. The futures market of any major trading index predicts the spot market and it helps in discovery of spot prices at the end of the contract. There are major indices traded at NSE India. One of the leading and benchmark index of NSE is the Bank Nifty index. Bank Nifty was launched in 2003. It consists of 12 leading banking companies of India. It analyse the capital market trends and functioning of Indian banking sector.
A bank nifty future is a derivative contract traded in NSE based on the underlying Banknifty index. Bank nifty is a contract with standard lot size of 25 units. It has been reduced to 15 units from July 2023. It can be traded in 15 or multiples of 15 units only. Bank Nifty futures contain both weekly expiring as well as monthly expiring contracts. Weekly contracts expire on Thursday of every week and there are 7 serial weekly contracts. There are three monthly contracts available for Bank Nifty futures. It expires on every Thursday of expiry month.

Review of Literature

Ruhi Kakkar, Geetanjali Batra and Meenakshi Gupta (2012) examined the relationship between the S&P CNX Nifty index and Nifty futures through VECM model, Granger causality and found the existence of long run relationship between the two variables.
The Karthika and Karthikeyan (2015) focused on the relationship between the Nifty index and its future index. The authors employed causality test and Johansen co integration test to identify the relationship between the two variables and confirmed that there was causal relationship between and the Nifty futures market and Nifty index.
Manasa N and Narayanasamy Rao (2019) studied the effect of changes in volatility in Indian Stock market by using Banknifty futures. GARCH model was used to analyze the data and the results obtained have proved that there was reduction in volatility in the spot market after the introduction of futures market.
Arya Kumar (2019) analyzed the interdependencies between the index futures of selected countries. The author analyzed the correlation and causality relationship between the chosen variables for ten years. It was

found that there was inter- relationship between Indian Nifty 50 futures and Future indices of Japan,China and Honkong.
Ashok Panigrahi et al (2021) focused on the development of investment strategy and profit making of small retail investors who were not aware of market information and also lack of application of right investment strategy at right time. The author had chosen bank nifty futures and applied their model for forecasting futures market and profit smaking. The model worked well at sixty per cent and also it would make lot of profits when used consistently over a period.
Parizad Phiroze and Hosi Sarosh (2021) tried to analyze the relationship between the volatility, volume and open interest of index futures of Indian stock market. The authors analyzed the data of Nifty index futures using GARCH models. It was found from the study that the relationship between volatility and volume of nifty index futures. It was also found that the futures contract was mainly used by the investors for hedging prices.

Objectives

i) To assess the relationship between traded price and contract involved.
ii) To examine the impact of macroeconomic variables closely related to stock market on the traded price of Bank Nifty future index.

Methodology

Daily trading data relating to bank nifty index future is collected from the website of National Stock Exchange of India from 2013-14 to 2022-23. Then yearly average is calculated for knowing the trend and for further analysis. Based on the review, the researcher found GDP growth, inflation, unemployment rate, crude oil price, Exchange Rate1 USD to INR, interest rate are very closely related to stock market and there were taken to assess the impact of that variables on traded price of bank nifty index future for the study period. Regression, correlation analysis were used in addition to the pictorial representation which is used to assess the trend of traded price.

Analysis and Interpretation

The relationship between traded price of Bank nifty index future and its volume of contract is analyzed by applying correlation and results are given Table 1.

Table 1 *Correlation between traded price and volume of contract*

Traded Price	0.664*
Volume of contract	Sig. (2-tailed) Significant at 0.05 % level

Source: Computed from Secondary Data

Positive Correlation 0.664 between traded price and volume of trade of bank nifty index future tells that there is high degree of positive correlation between volume of trade and traded price of Bank nifty index future.

Figure 1 *Trend line of traded price of Bank nifty index future*

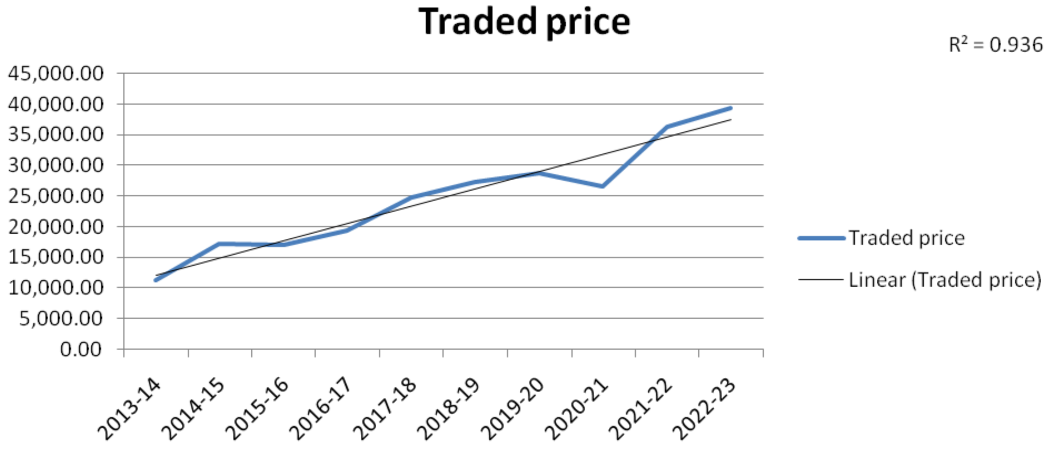

Figure 1 clearly stated that the trend in traded price of Bank nifty index future shows an upward trend except in the year 2020-21. The R^2 0.936 explains that the trend line almost equal to the actual line. Bank nifty index future has sufficient demand that is reflected through upward trend in its trading price.
Many study reveal that GDP growth, inflation, unemployment rate, crude oil price, Exchange Rate1 USD to INR, interest rate are the macroeconomic factors which are having impact on the securities prices. These macroeconomic variables are taken as independent variables and traded price of bank nifty index future is

taken as dependent variable and regression is applied to know the impact on these macro economic variables on the traded price of bank nifty index future.

Table 2 *Impact of macroeconomic variables on the traded price of Bank Nifty index future*

Variables	Unstandardized Coefficients		Standardized Coefficients	t-value	sig	
	B	*Std. Error*	*Beta*			
(Constant)	-72787.931	19453.282		-3.742	.033	**R square** = 0.999 **F** = 24.906 **p** = 0.012
GDP growth	-271.947	374.048	-.133	-.727	.520	
Inflation	.702	.669	.128	1.050	.371	
Unemployment Rate	-4064.473	2021.539	-.531	-2.011	.138	
Exchange Rate 1 USD to INR	1785.356	354.657	1.505	5.034	.015	
Crude Oil Price	-129.576	102.072	-.206	-1.269	.294	
Interest rates	526.699	1073.386	.080	.491	.657	

Source: Computed from Secondary Data

The Macroeconomic variables GDP growth, inflation, unemployment rate, exchange rate 1 USD to INR, crude oil price and interest rates have collectively influence the traded price of Bank nifty index futures that is reflected through p-value 0.012 at 5 per cent levels of significance. The R square 0.999 infers that the macro economic factors have 99 per cent impact on the traded price of Bank nifty index future. The macroeconomic variable exchange rate 1 USD to INR has significantly influence the traded price of Bank nifty index future.

Conclusion

Bank nifty index future is one of the highly liquid indexes which attract investors nationally and globally. Investors invest in this index only because of its diversified risk. Investing low margin money, investors buy huge contract and gain more than other investment.
Capital market will flourish mainly because of these indexes (bank nifty index, bank nifty future, and bank nifty option) both in cash and derivative segments. Investors includes this index into their portfolio to minimize risk and get a desired return.

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