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AN EMPIRICAL STUDY ON THE IMPACT OF MARCO ECONOMIC VARIABLES ON INDIAN STOCK MARKET

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Abstract: The magnitude of this study comprises the significance of knowledge about the volatility of exchange rate in Indian currency market. Exchange rate plays an imperative role in the working of foreign exchange market. The major functions of foreign exchange market include transfer of finance and purchasing power of one country to another; provide credit assistance for international trade and also helps in buying and selling of spot and forward foreign exchange. Knowledge of the exchange rate volatility and the reasons behind its instability is also important in making various international trade and investment decisions. Thus, it is very essential to analyse and forecast the exchange rate volatility of the Rupee against US Dollar for the benefits of international investors; Indian currency market, in order to regulate the functions appropriately and other related institutions. To find the causality relationship between the exchange rate i.e., USD/INR and the macroeconomic variables taken in the study i.e., sensex, crude oil, imports, exports, bank rate.

Keywords: Indian currency market, international trade and investment decisions, international investors

INTRODUCTION

The field of economics is divided into two subfields: macroeconomics and microeconomics. Macroeconomics is the study of the economy as a whole. It examines the cyclical movements and trends in economy-wide phenomena, such as unemployment, inflation, economic growth, money supply, budget deficits, and exchange rates. By contrast, microeconomics focuses on the individual parts of the economy. It studies decision making by households and firms and the interaction among households and firms in the marketplace. It considers households both as suppliers of factors of

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production (labor, land, capital, entrepreneurship) and as ultimate consumers of final goods and services. It also analyses firms both as suppliers of goods and services and as demanders of factors of production. Macroeconomic events and the state of the economy affect all members of society. Businesspeople forecasting the demand for their products and services should anticipate how consumers' incomes will grow. Pensioners and people living on fixed incomes have concerns about potential price increases that could affect the cost of living. Unemployed persons looking for jobs always hope that the economy will grow fast so that firms will increase their labor force. Even politicians are affected by the state of the economy, which could influence the outcome of presidential or congressional elections. For instance, in purely democratic societies, the popularity of political leaders currently in office could fade in the event of adverse macroeconomic conditions (e.g., high inflation and/or unemployment) because voters are keenly aware of such conditions and their potential impact. It is, therefore, no surprise that economic policy is always a primary issue of debate for candidates during campaigns. Economists assess the success of an economy's overall performance by studying how it could achieve high rates of output and consumption growth. For the purpose of such an assessment, three macroeconomic variables are particularly important: gross domestic product (GDP), the unemployment rate, and the inflation rate.The Macroeconomic variables which are discussed here are USD/INR, BSE SENSEX, CRUDE OIL, IMPORTS, EXPORTS, BANK RATE.

REVIEW OF LITERATURE

Bilson *et al.* (2001) tested the ability of the local macroeconomic variables (money supply, goods prices and real activity) in explaining the stock returns in 20 exchange emerging markets for the period 1985-1997. The results indicated that the exchange rate variable is clearly the most influential macroeconomic variable, and money supply has greater importance.

Dr. Nishat (2004) studied the long-term association among macroeconomic variables, stock prices and employed money supply, CPI, IPI, and foreign exchange rate as explanatory variable using Karachi stock exchange 100 index prices from 1974 to 2004. The result indicated that there exists a causal relationship among the stock price and macroeconomics variables. Most of the time series data is non-stationary hence unit root technique was employed to make data into stationary. Further, the result also indicates that industrial production significantly affects to macroeconomic variables. Granger causality test was used to find the correlation among the variables the results indicated that the interest rate is not granger cause by stock price.

Roa & Radjeswari (2000) conducted study incorporating a big number of macro variables in order to predict the asset returns. The study concluded that the factors that influence the returns of assets are industrial production, agricultural production, money supply, interest rate, exchange reserves and inflation.

Lambrick(2005) examined the relationship between sixteen macroeconomic variables and the equity returns in Australian stock market. The sixteen variables were classified under five different heads namely real, monetary, labour variables, price level variables and external variables. The US dollar exchange rate and the composite leading indicator possibly decide the prices in stock market. Further, the impact of variables retail sales and industrial production hold true for the entire period of the study.

Flannery and Protopapadakis (2001) studied seventeen macroeconomic risk factors by analysing the impact of those economic variable announcements on the level and the conditional volatility of the daily stock returns. They identified that six of them for price factors in nominal and real terms. The nominal category included three elements CPI, PPI and money aggregate while real category included the employment report, housing starts and the balance trade.

RESEARCH METHODOLOGY

The study is based on secondary data. The data were collected from the official web site. The published annual reports of the selected stock markets taken from their websites is used as sources of data. To assess the comparative analysis of Indian stock markets with international stock market. The study covers a period of five years from 2015 – 2019.Sample include macroeconomic variable such as BSE Sensex, Crude oil, Imports, Exports, Bank rate and Exchange rate such as USD/INR. Purposive sampling is adopted for analysis. Since, these selected macroeconomic variables play crucial in determining exchange rate. i.e., USD/INR, these variables are selected for this study.

OBJECTIVES OF THE STUDY

- To study the relationship between macro-economic variables and USD/INR.
- To study the impact of macro-economic variables with USD/INR.

ANALYSIS AND INTERPRETATION

Regression Analysis

Model Summary, Impact Between Macro Economic Variable And Dollar

Model	*R*	*R Square*	*Adjusted R Square*	*Std. Error of the Estimate*
1	.644[a]	.414	.360	2.2760902

a. Predictors: (Constant), bank, crude, EXPORTS, SENSEX, IMPORTS

Based on the above table, it is found that R^2 is 0.414. It indicates that the determinant independent variables i.e., Sensex, Crude oil, Imports, Exports and Bank rate jointly affect 41.4% of dependant variable i.e., Exchange rate. The remaining 58.6% is probably affected by other Macro-economic factors which cause fluctuation in exchange rates.

Anovafor Macroeconomic Variables and Dollar

Model		*Sum of Squares*	*Df*	*Mean Square*	*F*	*Sig.*
1	Regression	198.002	5	39.600	7.644	.000[a]
	Residual	279.752	54	5.181		
	Total	477.754	59			

a. Predictors: (Constant), bank, crude, EXPORTS, SENSEX, IMPORTS

b. Dependent Variable: USD

Based on the above table, the F value is 7.644 with significant value of 0.000 [a]. Therefore, the significant value is lesser than significance level (0.05), it can be concluded that the predicted variables i.e., Sensex, Crude oil, Imports, Exports, Bank rate simultaneously affect dependant variables i.e., exchange rate.

SUGGESTIONS

The descriptive statistics reveals that independent variables i.e., BSE Sensex, Crude oil, Imports, Exports, Bank rate jointly affects 81.2% of dependent variable i.e., Exchange rate. The role of stock market is to raise capital and also to ensure that the funds raised are used in the profitable opportunities. This analysis becomes an empirical contribution to the ongoing debate on the effect of macroeconomic variables on stock market returns. The domestic stock market is highly intergraded with the world stock market and it has become a challenge for investors to know the impact of world market on the price movement of world stock market before investing in the domestic stock market. The response of stock market returns to shock in macroeconomic variables is varied in terms of impact and level of significance in each market and results may prove to achieve better risk-return trade-offs.

CONCLUSION

The analytical study highlights the impact of macroeconomic determinants on exchange rate volatility in India. This study shows that most of the selected macroeconomic determinants have significant relation with the exchange rate and impact the exchange rate of Indian Rupee to greater extent in the long run perspective. It is found from the study that the macroeconomic determinants like FDI equity inflows, Nifty Index price, Sensex index price, Crude oil price, Money supply, Forex reserves, Trade balance and Lending Interest rate has causal relationship with the exchange rate volatility.

These macroeconomic determinants have crucial function over the fluctuation of Indian exchange rate against US Dollar. The study suggests that the Government should take serious steps to control exchange rate volatility, by considering the macroeconomic determinants, while formulating policies and plans.

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