

# A STUDY ON IMPACT OF MACROECONOMIC FACTOR ON INDIAN STOCK MARKET AT BSE

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## **Abstract**

*This paper is an endeavor to comprehend the connection between macroeconomic factors and Indian securities exchange. The examination explored the effect of macroeconomic factors on the working of Indian Stock Market. The month to month information of macroeconomic factors specifically, gold rate, silver rate, exchange rate, bond bill, cost price index, crude oil*

**Keywords:** BSE SENSEX50, Macroeconomic

## **INTRODUCTION**

*The Bombay Stock Exchange (BSE) is the first and biggest protections showcase in Quite a while and was set up in 1875 as the Native Share and Stock Brokers' Association. Situated in Mumbai, India, the BSE records near 6,000 organizations and is probably the biggest trade on the planet, alongside the New York Stock Exchange (NYSE), NASDAQ, London Stock Exchange Group, Japan Exchange Group, and Shanghai Stock Exchange. Sensex, also called the S&P BSE Sensex file, is the benchmark record of the Bombay Stock Exchange (BSE) in India. Sensex includes 30 of the biggest and most effectively exchanged stocks on the BSE, giving an exact check of India's economy. The list's creation is looked into in June and December every year. At first accumulated in 1986, the Sensex is the most established stock record in India. Investigators and financial specialists utilize the Sensex to watch the general development, improvement of specific enterprises, and blasts and busts of the Indian economy Macroeconomics is a part of financial matters that reviews how a general economy—the market frameworks that work for a huge scope—acts. Macroeconomics considers economy-wide wonders, for example, expansion rate, gold worth,*

*silver worth ,total national output, unrefined petroleum value, conversion scale, treasury yield bills*

## LITERATURE REVIEW

**Ray Pratik and Vani Vina (2002)** evaluated the relationship between the real economic variables and the movement of the stock market. The researcher used the macroeconomic variable namely Index of Industrial Production, Whole Sale Price Index, SBI prime lending rate, FII in capital market, Fiscal Deficit and money stock. Data for the period of 1994 to 2003 examined with the Artificial Neural Network and Vector Auto Regressive Model. The Study indicated that real economic variables affect the stock market in the post economic reform era in India and also explain that some macroeconomic variable doesn't affect the stock market.

**Robert D. Gay, Jr. (2008)** explicated the relationship between stock market index and the macroeconomic variables of oil price and exchange rate for Brazil, India, China and Russia. To analyse the data monthly average of respected stock market indices, oil prices and exchange for a period of 1999 to 2006 is examined. The Box Jenkins Autoregressive Integrated moving average (ARIMA) time series process was used to examine the relationship between the dependent variable (Stock Market Index) to the independent variables (Exchange rate and oil price). It was found that the effect of international macroeconomic factors of exchange rate and oil price on the stock market exchange index of Brazil, Russia, China and India did not reveal a significant relationship.

**D.V. Loke war Reddy (2011)** analysed the relationship between Inflation Rate, GDP and Interest Rates with respect to stock market returns. The researcher analyzed the data of 20 yrs. from 1990-91 to 2009-10. He has used correlation, Regression, Standard Deviation techniques of statistics for analyzing the data. The finding of the researcher indicates that the increased RDGP has a positive relation and a reduction in inflation and interest rate indicate the increase in stock returns.

**M.S. Rajaratnam, Jayaraman and V. Krishnamoorthy (2012)** investigated the correlation between Net FII (Foreign Institutional Investment) Flows and the SENSEX (Bombay stock market index). The Researcher has taken the data for three years i.e.2010-2012 for the inflow of FII's investment and movement in the Bombay stock exchange index (Sensex). To analyse the data researcher used Correlation, Linear Regression Model and also test the significant difference between FII and SENSEX through application of T test. The researchers found that there is momentous impact of FII on the BSE SENSEX and there is significant relationship between the variables of FII investment made by FII indicatively differs in terms of equity and debt segment.

**Syed Tabassum Sultana and S. Paradhasaradhi (2012)** examined the patterns and trends of foreign capital inflow and outflow in India in the form of FDI and FII. The researcher further investigated the impact of FDI and FII on Indian stock Market (Nifty and Sensex). The Researcher analyzed the data of 11years starting from 2001 to 2011 in order to analyse the data Multi

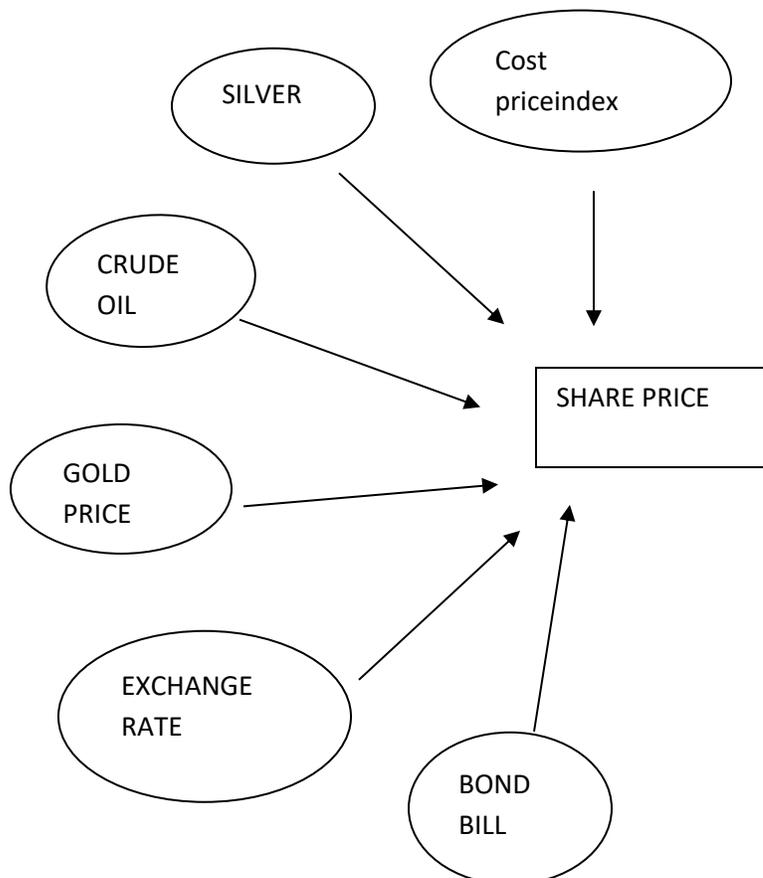
Regression OLS model and correlation statistical techniques were used. The Study finds that there is a high degree of positive correlation between FDI and Nifty. Also finds that there is moderate positive correlation between FII and SENSEX.

**Pramod Kumar Naik and Puja Pasha (2012)** analyzed the relationship between BSE Sensex and various macroeconomic variables. The researchers used Time series analysis, Johansen's co-integration model and vector correction model to explore the long run and short run equilibrium relationship between the stock market index and macroeconomic variables. The study reveals that stock market index, money supply and industrial index of production (IIP) are positively related or exchange rate and short-term interest rate are insignificant in determining stock price. Inflation rate is negatively correlated with the stock market index (BSE SENSEX).

#### **.OBJECTIVES:**

- To identify the macroeconomic factors that influence the share price.
- To analyze the impact of macroeconomic variables on price of the share with special reference to BSE.
- To investigate the relationship among macroeconomic factors and price of the share

#### **FRAME MODEL:**



## HYPOTHESIS

H0: price of share is not influenced by any of the macroeconomic variable.

H1: price of share is influenced by any of the macroeconomic variable.

### Proposed work:

This proposed investigation will break down the effect of macroeconomic factors on the Indian financial exchange the examination kind of this investigation is systematic in nature. With the end goal of this examination auxiliary information will be gathered from the 20 organizations at BSE in regards to the day by day shutting value development of offers for 2years (from 1-2-2019 to 31-1-2020) for breaking down the effect of macroeconomic factors on the Indian securities exchange. The instruments are utilized connection and relapse will be utilized. The SPSS is used and regression analyze is conducted to test the influence of macroeconomic variable on share price

## RESEARCH METHODOLOGY

With the end goal of the exploration study, optional information has been utilized to break down the impact and the impact of macroeconomic determinants on the stock costs of India. The end costs of the Macroeconomic determinants and BSE 50 has been accumulated on a month to month premise from Bloomberg terminal for the investigation. The Macroeconomic factors being Gold, Silver, Crude Oil, Bond Bill, , Exchange rate, cost price index. The investigation was directed for a timeframe running from March2018 to Feb 2020. Different tests like Regression investigation were performed with the utilization of the product E-Views so as to infer the outcomes and to know the effect of macroeconomic factors on the Stock costs of BSE for example CNX BSE 50. Regression test which was applied in the investigation to test the stationarity of the information and to discover the stationarity of the time arrangement in the long run. Another test utilized in the examination was Pearson's Correlation investigation which advises about the degree to which two factors are associated. Multivariate Regression investigation was utilized to break down the effect of the macroeconomic factors on the Stock Market. the examination study to look at the bearing of the causation that exits between the macroeconomic factors and the stock list

## REGREAATION ANALYSIS

### Descriptive Statistics

	N	Minimu m	Maximu m	Mean	Std. Deviation
bond	560	5	7	6.11	.611
cpi	506	81	180	131.47	22.166
crude	528	43	76	60.25	6.958
gold	529	1173	1670	1369.24	121.644
silver	625	14	20	16.29	1.218
exchange	521	65	74	70.02	2.034
BSE	493	488.90	989.00	703.8417	137.83246
Valid N (listwise)	493				

### Correlations

		BSE	bond	cpi	crude	gold	silver	exchange
Pearson Correlation	BSE	1.000	.768	-.081	.615	-.890	-.775	.785
	bond	.768	1.000	-.523	.235	-.878	-.735	.821
	cpi	-.081	-.523	1.000	.148	.272	.262	-.463
	crude	.615	.235	.148	1.000	-.531	-.551	.497
	gold	-.890	-.878	.272	-.531	1.000	.870	-.870
	silver	-.775	-.735	.262	-.551	.870	1.000	-.793
	exchange	.785	.821	-.463	.497	-.870	-.793	1.000
Sig. (1-tailed)	BSE	.	.000	.035	.000	.000	.000	.000
	bond	.000	.	.000	.000	.000	.000	.000
	cpi	.035	.000	.	.000	.000	.000	.000
	crude	.000	.000	.000	.	.000	.000	.000
	gold	.000	.000	.000	.000	.	.000	.000
	silver	.000	.000	.000	.000	.000	.	.000
	exchange	.000	.000	.000	.000	.000	.000	.
N	BSE	493	493	493	493	493	493	493
	bond	493	493	493	493	493	493	493
	cpi	493	493	493	493	493	493	493
	crude	493	493	493	493	493	493	493
	gold	493	493	493	493	493	493	493
	silver	493	493	493	493	493	493	493
	exchange	493	493	493	493	493	493	493

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.932 <sup>a</sup>	.868	.866	50.43394

a. Predictors: (Constant), exchange, cpi, crude, silver, bond, gold

b. Dependent Variable: BSE

**Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-911.175	285.704		-3.189	.002
	bond	106.482	10.638	.501	10.010	.000
	cpi	1.851	.155	.294	11.959	.000
	crude	4.538	.489	.234	9.286	.000
	gold	-.301	.070	-.274	-4.307	.000
	silver	1.537	3.572	.015	.430	.667
	exchange	11.980	2.909	.166	4.118	.000

a. Dependent Variable: BSE

**Residuals Statistics**

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	394.1562	944.3347	703.8417	128.39480	493
Std. Predicted Value	-2.412	1.873	.000	1.000	493
Standard Error of Predicted Value	2.615	10.309	5.902	1.136	493
Adjusted Predicted Value	391.5644	943.6140	703.7509	128.43522	493
Residual	-110.64406	117.91756	.00000	50.12547	493
Std. Residual	-2.194	2.338	.000	.994	493
Stud. Residual	-2.207	2.355	.001	1.001	493
Deleted Residual	-111.94482	119.62355	.09080	50.82018	493
Stud. Deleted Residual	-2.216	2.366	.001	1.002	493
Mahal. Distance	.325	19.559	5.988	2.718	493
Cook's Distance	.000	.015	.002	.003	493
Centered Leverage Value	.001	.040	.012	.006	493

a. Dependent Variable: BSE

**Interpretation:**

It is discovered that BSE SENSEX had a positive connection with every single free factor aside from Gold, Exchange rate, and Silver. As per the connection framework acquired above in the table, it can be seen that different autonomous factors are between corresponded to one another however some are noteworthy and can be utilized in further investigation. It was discovered that Gold has a positive connection with all other free factors like Crude Oil, had a positive relationship with every single other variable aside from with swapping scale, mechanical creation and exchange balance. Raw petroleum supposedly has a negative relationship with swelling, cash gracefully, modern creation and exchange equalization, and it has a positive connection with Gold, silver, exchange. Crude oil had a negative connection with all other free factors with the exception of Gold, Cost price exchange equalization and loan costs. Likewise, positive relationship is found among all other macroeconomic factors.

**CONCLUSION**

The investigation inspected the impact of different macroeconomic variables on the Stock Market of India.

Factors like Gold costs, Silver costs, Exchange rate, bond bill, cost price index, were taken into study. Utilizing the regression test, factors were seen as fixed. The after effects of different tests were examined and different patterns were deciphered. The test gave some valuable outcomes like, between factor connection between various free factors utilized. Clever Index was found to have a positive connection with Silver Prices, Oil costs, Inflation, Index of Industrial Production and Interest rates and furthermore it had a negative connection with Gold costs

**LIMITATIONS**

1. In the investigation factors which are of fundamental significance, for example, financial execution of a nation CPI has not been dissected which could be investigated in further examinations.
2. As the financial exchange is affected by different factors so it is improper to relate the stock development to Macroeconomic factors as it were.
3. Tests, for Regression examination for causality were utilized to draw the discoveries and the outcomes. Along these lines, different devices could be utilized to do a similar report.

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