

The relationship between macroeconomic factors and stock market indices performances in Indian stock market

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ABSTRACT

This study attempts in empirically testing the relationship between macroeconomic factors and the performances of two major Indian security market indices of BSE-Sensex and NSE- nifty. The yearly data of several macroeconomic factors of FIIs net investment, exchange rates, oil price, interest rates, inflation rates and gold rates from 1995-96 to 2014-15 are taken into consideration and it tries to reveal the most influence of these factors on the 'Stock indices performances' of the Indian stock market. In pursuance of this, the correlation analysis and multiple regression analysis was used to study the relationship between the two selected security market indices performances and the six selected macroeconomic factors from the Indian economy. The major finding is that macroeconomic factors influence stock market indices performances in India. It is recommended that the implementation of suitable economic policies will be beneficial to the stock market indices and it will result in needed growth in the Indian capital market.

KEYWORDS: Stock market indices, Stock Market, Stock Prices, FIIs net investment, Exchange Rates, Oil price, Interest Rates, Inflation Rates and Gold rates.

1. INTRODUCTION

A stock exchange is a regulated market place where listed securities are purchased and sold with the help of members or stock brokers present in stock exchange, by following an open system of two-way quotation and adhering to the bye-laws of the stock exchange.

Several economic theories and empirical studies have been used to consider stock prices and hence the stock market indices are considered as the best signs of variations in Indian economic actions. This knowledgeable inquisitiveness gained ascendancy due to the increasing belief that real economic events often impact on stock values. Chen et al. (1986) debated and offered that actions in macroeconomic factors affect future bonuses as well as discount proportions, thus distressing stock prices. Variations in intake and venture opportunities are assessed in the capital market; hence the stock value changes are associated to improvements in monetary variables (Goswami and Jung 1997).

A long-term relationship exists between the changes in stock prices and the macroeconomic variables, Fama (1981, 1990) &Chen et al. (1986) have long-established relationship with the US economic facts and figures. Fama (1981) study shows a strong positive correlation between the common stock returns and the real economic variables like - real GNP, capital expenditures, industrial production, money supply, lagged inflation and interest rates. Chen et al. (1986) found that the changes in total production, inflation, short term interest rates, the maturity risk premium and default risk premium are the relevant economic factors.

Fundamental analysts believe that stock prices are inclined by vagaries in currency supply, inflation rates, interest charges, and additional macroeconomic signs. It engages a general steadiness approach, emphasizing the interrelation amongst segments as central to the consideration of persistence and co-movement of macroeconomic period sequences.

The various economic literatures have been devoted to the studies on the relationship between security market indices performances and real macroeconomic activities in the developed economies like US and Japan, there are very few attempts at unraveling this linkage in developing economies such as India. The nature of association between stock indices and macroeconomic factors might differ between developed and emerging countries' frugalities; this study tries to examine the association between some macroeconomic factors (FIIs net investment, Exchange Rates, Oil price, Interest Rates, Inflation Rates and Gold rates) and stock market indices performances in Indian security market. The study covers twenty one years from the year 1995-96 to 2014-15.

Review of related literature: Researchers oblige that they have identified 30% to 35% of variations in stock value may be accredited to economy extensive factors (Chandra, 2004). Variables engaged in this study are essentially economy basics and this study therefore offers more facts on essential examination of economy, industry and corporate. The stock price movement rest on on the performance of fundamental aspects. Hence, it is argued that corporate earnings is the critical to stock value determination and it depends on number of elements such as economic progress, wealth and production, the readiness of excellent labor strength as well as availability of long term fund (Golob and Bishop, 1997). Other aspects which openly or secondarily sanction on economic growth and prosperity impact the stock behavior. (Oaikhena, 2002) identified short and long term interest charges, industrial production, the various price stages, the vivid exchange frequency and the money supply using co integration for security exchanges.

From these researches, it therefore means that there are some key variables that are used to define the form of the macro economy that an investor needs to monitor and estimate. The core idea is to get an impression of the forthcoming corporate earnings and the payment of dividends and interests. The key variables included are: the Gross Domestic Product (GDP), industrial growth percentage, the capacity utilization, level of savings and investment, the consumer price level, inflation, balance of payments, interest rates, foreign exchange reserves, exchange rates, and the supply of money. In this work, the researchers have established some empirical proof relating designated macroeconomic variables to security market indices.

A. Foreign Institutional Investors Net Investment (FIIs) and Stock Prices: Foreign institutional investors' investment net flows are considered to increase domestic investment without increase debt. FIIs may raise the stock prices and stimulate investment by Indian companies and lead to improvement in securities market. When FIIs started to withdraw money from the stock market, the domestic investors became fearful and then they withdraw money from the market. This indicate that a relationship exist between FIIs net investment and security market indices performances in India.

B. Exchange Rate and Stock Prices: Exchange is the price of a unit of a given currency in relation to other exchanges. The performance, viability and profitability of various industries and companies which are major importers or have been heavy users of import services are considerably impacted by the exchange rate of Naira against major exchanges in the world (Osamwonyi 2003). Exchange rate is the creation of a country's external business and straightly related to the balance of payments. The balance of payment deficit and the intensity of external reserve frequently influence exchange rate. The hypothetical statement states that there is an optimistic relationship between exchange rate and stock prices.

C. Oil price and Stock Prices: High in Oil price have negative impact on the economy. The higher the prices of Oil ,other things being equal, leads higher prices for the products and may be favorable for the stock market. Equity share prices of the companies may raise due to higher profits form a healthy business climate.

D. Interest Rate and Stock Prices: Interest proportion varies with time, threat, inflation percentage, and output of capital among others (Chandra 2004). Disparities in interest percentage encourage substitution among stock market, money market outfits, and speculative activities. According to Kevin (2000), the interest charges in systematized and synthesized financial segment of the economy are focused within anticipated range over monetary strategy. The disorganized or muddled financial segments of the various rates are not ordered and may fluctuate generally subject to the demand and the supply of resources in the markets. The stakeholder has to deliberate the level and movement in interest duties prevailing in the different sectors of the economy and assesses their influence on the overall presentation and effectiveness of companies.

D. Inflation Rate and Stock Prices: Chandra (2004) stated in the work that the effect of inflation rate towards the corporate sector has been found to be bi-directional. Certain businesses may profit while others are bound to suffer. Researchers have calculated the relationship among inflation and stock values. Fama (1981) presented a proof that stock values are negatively linked together for both the anticipated and the unanticipated module of Consumer Price Index. It is believed that common stock should be a hedge in contradiction of inflation. Debates that increase in the rate of inflation reduces share prices because of the interaction of inflation with the tax system and procedures. Summers (1981) also claim that the above effect can explain a large fraction of the decline in share prices. The source of this effect is that, the "historical Cost's" technique of devaluation and the tax on insignificant capital gains, together because the net return on stocks to decrease when inflation increases (Amadi and Odubo, 2002).

E. Gold rate and Stock Prices: Gold rate creates an impact in the economic activities and that is why it is believed that its control has been the chief function of the central authority of any country. Increase in gold rate drives the stock market performances downwards. When stock market experiences downwards, then the investors will approach the gold market. This indicates the relationship between gold rate and stock market performances. That is why it is considered as a leading indicator.

F. Specific Purpose of the Study: To examine the trends in the Macroeconomic factors and security market indices performances in Indian security market. To empirically examine the relationship between Macroeconomic factors and security market indices performances

Hypotheses: Based on the results of previous studies, this article hypothesizes certain or various relationships amid macroeconomic factors like FIIs net investment, Exchange rate, Oil price. Interest rate, Inflation rate, Gold rate and security market indices performances of Indian capital market.

H1: FIIs net investment will positively influence Stock Indices Performances (SIP). If FIIs is high then SIP will be high.

H2: Exchange Rate (ER) will positively influence stock indices performances. If ER is high then SIP will be high

H3: Oil Price (OP) will positively influence stock indices performances. If OP is high then SIP will be high.

H4: Interest Rate (IR) will negatively influence stock indices performances. If IR is high then SIP will be low.

H5: Inflation Rate (IFR) will negatively influence stock indices performances. If IFR is high then SIP will be Low.

H6: Gold rate (GR) will negatively influence stock indices performances. If GR is high then SIP will be Low

2. METHODOLOGY

The data requirements for the methodology include secondary information on key Indian macroeconomic variables such as stock indices values, FIIs net investment, Exchange Rates, Oil price, Interest Rates, Inflation Rates and Gold rates. Data on stock indices values, FIIs net investment, Exchange Rates, Oil price, Interest Rates, Inflation Rates and Gold rates were sourced from various websites of BSE and NSE, SEBI Annual Reports and Statement of Accounts of the Reserve Bank of India. The sample period covers 1995-96 to 2014-15, consisting of 21 annual observations for each factor.

The equation specified is based on the intuitively plausible assumption that stock prices and thus stock market index can be explained by extraneous factors (market fundamentals in this case). The six hypotheses could be mathematically written as follows:

$$\text{SIP} = f(\text{FIIs}, \text{ER}, \text{OP}, \text{IR}, \text{IFR}, \text{GR}) \quad (1)$$

With the variables defined as follows:

Where,

- SIP - Stock Market Indices Performances (BSE-Sensex & NSE-Nifty)
- FIIs - Foreign Institutional Investors Net Investment
- ER - Exchange Rate
- OP - Oil Prices
- IR - Interest Rate
- IFR - Inflation Rate
- GR - Gold Rate

Equation (1) States that Stock indices performances depends upon the FIIs net investment, Exchange rate, Oil price, Interest rate, Inflation rate and Gold rate. For the method of analysis, this study will employ correlation analysis and Multiple regression analysis which will help in investigation of the impacts of the identified variables on the stock market indices performances namely BSE-sensex, NSE-Nifty.

3. EMPIRICAL ANALYSIS, RESULTS AND DISCUSSION

The first section tries to examine the trends of macroeconomic variables and two major stock indices performances, which are BSE-Sensex and NSE- Nifty. Fig. 1 & 2 displays that the trends in the macroeconomic factors and stock indices performances for the past 21 years. It is observed from the Fig. 1 & Fig. 2, that the drivers of the fall or rise in both BSE- Sensex and NSE- Nifty are macroeconomic factors.

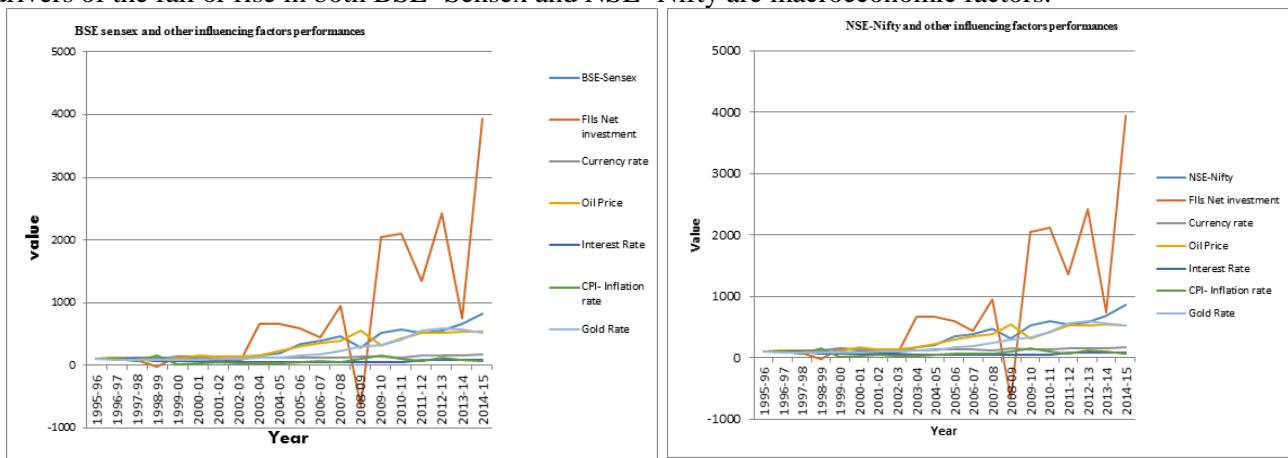


Fig.1: Explains the trends of BSE Sensex and Other Influencing Factors of Stock Index Performance

Fig. 2: Explains the Trend of NSE-Nifty Sensex & Other Influencing Factors of Stock Index Performance

Correlation analysis on macro-economic factors and BSE-Sensex stock index performances:**Table.1.**Shows Pearson correlation coefficient between macro-economic factors and BSE Sensex performances

Macro Economic Factors	BSE Sensex Stock Index Performances
FII's net Investment	0.829**
Currency Rate	0.668**
Oil Price	0.881**
Interest Rate	-0.079
Inflation Rate	0.239
Gold Rate	0.908**

Note: ** - Indicates Significance at 1%. Source- Processed Secondary Data
 * - Indicates Significance at 5%.

The correlation coefficient between FII's net investment and Stock index performances is 0.829, which indicate 82.9 percentage positive relationships between FII's net investment and Stock index performances and is significant at 1% level. The correlation coefficient between Currency rate and Stock indices performances is 0.668, which indicate 66.8 % positive relationships between Currency rate and Stock index performances and is significant at 1% level. The correlation coefficient between Oil price and Stock index performances is 0.881, which indicate 88.1 percentage positive relationships between Oil price and Stock indices performances and is significant at 1% level. The correlation coefficient between Interest rate and Stock index performances is -0.079, which indicate 7.9 % negative relationships between Interest rate and Stock index performances and is not significant at 5% level. The correlation coefficient between Inflation rate and Stock index performances is 0.239, which indicate 23.9 % positive relationships between Inflation rate and Stock index performances and is not significant at 5% level and similarly the correlation coefficient between Gold rate and Stock index performances is 0.908, which indicates 90.8 % positive relationships between Gold rate and Stock index performances and is significant at 1% level.

Multiple regression analysis of BSE -Sensex performances on factors influencing stock market: In this study, the dependent variable is BSE - Sensex performances. Independent variables are FII's net investment, Currency Rate, Oil price rate, Interest rate, Inflation rate and Gold rate and analysis are discussed as follows:

The multiple correlation co-efficient is used to measure the degree of association between the actual values and the projected values of the stock index performances.

Coefficient of determination R-square measures the goodness-of-fit of the projected Sample Regression Plane (SRP), in relation to the proportion of the variation in the dependent variables described by the built-in sample regression equation.

Dependent Variable : BSE Sensex Performances (Y)

Independent Variables : 1. FII's Net Investment (X_1)
 2. Currency Rate (X_2)
 3. Oil Price (X_3)
 4. Interest Rate (X_4)
 5. Inflation Rate (X_5)
 6. Gold Rate (X_6)

Multiple R Value : 0.969

R Square Value : 0.939

F Value : 33.262

P Value : <0.001**

Table.2.Variables in the Multiple Regression Analysis

Variables	Unstandardized Co-efficient		Standardized Co-efficient	t Value	P Value
	B	Std Error			
Constant	5857.815	7669.653		0.764	0.459
X₁	0.046	0.011	0.454	4.149	0.001**
X₂	-110.898	140.595	-0.092	-0.789	0.444
X₃	135.360	56.830	0.515	2.382	0.033*
X₄	-145.301	388.546	-0.034	-0.374	0.714
X₅	18.005	159.735	0.009	0.113	0.912
X₆	1.602	2.474	0.183	0.647	0.529

Note: ** - Indicates Significance at 1%. Source- Processed Secondary data

* - Indicates Significance at 5%.

The anticipated standards are obtained as a linear combination of FIIs net investment (X_1), Currency rate (X_2), Oil price (X_3), Interest rate (X_4), Inflation rate (X_5), and Gold rate (X_6). The multiple correlation coefficient value of 0.969 represents that the association between BSE-Sensex performances and the six independent variables is quite robust and constructive.

The value of R square is 0.939 and significant at 1 % level, means that about 93.90% of the variation in stock index performances is explained by the estimated SRP that uses FIIs net investment, Currency rate, Oil price, Interest rate, Inflation rate, and Gold rate, as the independent variables.

The multiple regression equation is

$$Y = 5857.815 + 0.046 X_1 - 110.898X_2 + 135.360 X_3 - 145.301X_4 + 18.005X_5 + 1.602X_6$$

Here the coefficient of X_1 is 0.046 and significant at 1% level, represents the partial affect of FIIs net investment on BSE-Sensex stock index performances, holding the other variables as constant. The proposed optimistic sign implies that such effect is optimistic that stock index performances would rise by 0.046 for every unit rise in FIIs net investment. The coefficient of X_2 is -110.898 and not significant at 5% level; denote the partial effect of Currency rate on stock index performances, holding the other variables as constant. The projected negative sign implies that such effect is negative that stock index performances would decrease by 110.898 for every unit increase in Currency rate. The coefficient of X_3 is 135.360 and significant at 5% level represents the partial effect of Oil price on stock indices performances, holding the other variables as constant. The projected positive sign implies that such effect is positive that stock index performances would increase by 135.360 for every unit increase in Oil price. The coefficient of X_4 is - 145.301 and not significant at 5% level; represent the partial effect of interest rate on stock index performances, holding the other variables as constant. The estimated negative sign implies that such effect is negative that stock index performances would decrease by - 145.301 for every unit increase in interest rate. The coefficient of X_5 is 18.005and not significant at 5% level represents the partial effect of inflation rate on stock index performances, holding the other variables as constant. The projected positive sign implies that such effect is positive that stock index performances would increase by 18.005 for every unit increase in Inflation. The coefficient of X_6 is 1.602and not significant at 5% level, represents the partial effect of Gold rate on stock index performances, holding the other variables as constant. The projected positive sign implies that such effect is positive that stock index performances would increase by 1.602 for every unit increase in Gold rate.

Based on standardized co-efficient, Oil price (0.515) is the most important factor to extract BSE Sensex stock index performances, followed by FIIs net investment (0.454), and Gold rate (0.183).

Correlation analysis on macro-economic factors and NSE-Nifty stock index performances: The correlation coefficient between FIIs net investment and Stock index performances is 0.832, which indicate 83.2 percentage positive relationships between FIIs net investment and Stock index performances and is significant at 1% level. Here, the correlation coefficient between Currency rate and Stock indices performances is 0.680, which indicate 68 percentage positive relationships between Currency rate and Stock index performances and is significant at 1% level.

Table 3. Pearson Correlation Coefficient between Macro-Economic Factors and NSE- Nifty Stock Index Performances

Macro Economic Factors	NSE Nifty Stock Index Performances
FIIs Net Investment	0.832**
Currency Rate	0.680**
Oil Price	0.885**
Interest Rate	-0.088
Inflation Rate	0.227
Gold Rate	0.910**

Note: ** - Indicates significance at 1%. * - Indicates significance at 5%.

The correlation coefficient between Oil price and Stock index performances is 0.885, which indicates 88.5 percentage positive relationships between Oil price and Stock indices performances and is significant at 1% level. Correlation coefficient between Interest rate and Stock index performances is -0.088, which indicates 8.8 percentage negative relationships between Interest rate and Stock index performances and is not significant at 5% level. Correlation coefficient between Inflation rate and Stock index performances is 0.227 which indicates 22.7 percentage positive relationships between Inflation rate and Stock index performances and is not significant at 5% level and similarly the correlation coefficient between Gold rate and Stock index performances is 0.910, which indicates 91percentage positive relationships between Gold rate and Stock index performances and is significant at 1% level.

Multiple regression analysis of NSE-Nifty stock index performances on factors influencing stock market:
In this study, the dependent variable is NSE- Nifty stock index performances. Independent variables are FIIs Net investment, Currency Rate, Oil Price Rate, Interest Rate, Inflation Rate and Gold Rate and Analysis are discussed Table 4 as follows:

Dependent Variable: NSE- Nifty Stock Index Performances (Y)

Independent Variables: 1. FIIs Net Investment (X_1)

2. Currency Rate (X_2)
3. Oil Price (X_3)
4. Interest Rate (X_4)
5. Inflation Rate (X_5)
6. Gold Rate (X_6)

The Multiple R Value : 0.972

The R Square Value : 0.944

The F Value : 36.869

The P Value : <0.001**

Table 4: Variables in the Multiple Regression Analysis

Variables	Unstandardized Co-efficient		Standardized Co-efficient Beta	t Value	P Value
	B	Std Error			
Constant	1625.872	2197.253		0.740	0.472
X_1	0.014	0.003	0.453	4.347	0.001**
X_2	-27.938	40.279	-0.077	-0.694	0.500
X_3	40.722	16.281	0.515	2.501	0.027*
X_4	-48.682	111.313	-0.038	-0.437	0.669
X_5	0.146	45.762	0.000	0.003	0.997
X_6	0.467	0.709	0.177	0.659	0.522

Note: ** - Indicates Significance at 1%; * - Indicates Significance at 5%

The projected values are obtained as a linear combination of FIIs Net Investment (X_1), Currency Rate (X_2), Oil Price (X_3), Interest Rate (X_4), Inflation Rate (X_5), and Gold Rate (X_6). The multiple correlation coefficient value of 0.972 denotes that there exist the positive relationship between NSE-Nifty stock index performances and the six independent variables. R square is 0.944 and significant at 1 % level, means that about 94.40% of the variation in stock index performances is explained by the estimated SRP that uses FIIs Net Investment, Currency Rate, Oil Price, Interest Rate, Inflation Rate, and Gold Rate, as the independent variables.

The multiple regression equation is

$$Y = 1625.872 + 0.014 X_1 - 27.938 X_2 + 40.722 X_3 - 48.682 X_4 + 0.146 X_5 + 0.467 X_6$$

Here the coefficient of X_1 is 0.014 and significant at 1% level, represents the partial affect of FIIs net investment on NSE Nifty stock index performances, holding the other variables as constant. The projected positive sign infers that such effect is optimistic that stock index performances would surge by 0.014 for every unit increase in FIIs net investment. The coefficient of X_2 is -27.938 and not significant at 5% level, represents the partial effect of Currency rate on stock index performances, holding the other variables as constant. The estimated negative sign implies that such effect is negative that stock index performances would decrease by 27.938 for every unit increase in Currency rate. The coefficient of X_3 is 40.722and significant at 5% level, represents the partial effect of Oil price on stock indices performances, holding the other variables as constant. The projected positive sign implies that such effect is positive that stock index performances would rise by 40.722 for every unit increase in Oil price. The coefficient of X_4 is -48.682 and not significant at 5% level represent the partial effect of interest rate on stock index performances, holding the other variables as constant. The estimated negative sign implies that such effect is negative that stock index performances would decrease by - 48.682 for every unit increase in interest rate. Coefficient of X_5 is 0.146 and not significant at 5% level signifies the partial effect of inflation rate on stock index performances, holding the other variables as constant. The projected positive sign implies that such effect is positive that stock index performances would increase by 0.146 for every unit increase in Inflation. Similarly, the coefficient of X_6 is 0.467 and not significant at 5% level, signifies the partial effect of Gold rate on stock index performances, holding the other variables as constant. The projected positive sign implies that such effect is positive that stock index performances would increase by 0.467 for every unit increase in Gold rate. Bombay stock exchange and the national stock exchange indices are given Table 5 and Table 6 respectively.

Based on standardized co-efficient, Oil price (0.515) is the most important factor to extract NSE Nifty stock index performances, followed by FIIs net investment (0.453), and Gold rate (0.177).

Table.5.Bombay Stock Exchange 1995-96 to 2014-15

Year	BSE-Sensex	FII's Net Investment	Currency Rate	Oil Price	Interest Rate	CPI- Inflation Rate	Gold Rate
1995-96	100	100	100	100	100	100	100
1996-97	99.82852	123.5229	104.556	122.1491	100	107.4304	90.69746
1997-98	115.6264	85.82499	114.9782	111.2835	95.45454	64.9123	78.43534
1998-99	111.088	-22.8175	123.5371	71.1044	72.72727	158.1012	82.02941
1999-00	148.553	145.8074	126.9432	98.86557	72.72727	4.850362	84.98923
2000-01	107.0609	143.0849	135.7787	163.5222	63.63636	35.91332	81.18374
2001-02	103.0501	126.231	142.067	137.3133	59.09091	53.25079	97.03994
2002-03	90.55613	38.73505	138.2969	136.179	56.81818	33.02374	101.9025
2003-04	166.0576	659.2304	126.4774	165.3133	54.54545	38.3901	117.5473
2004-05	192.8562	660.9014	127.3799	224.8356	54.54545	39.0093	120.2957
2005-06	335.0487	597.3321	129.8544	298.746	54.54545	57.48195	165.3273
2006-07	388.2806	444.2646	126.9141	348.0593	54.54545	67.38908	182.0292
2007-08	464.6868	953.3085	116.4047	383.2832	54.54545	56.86276	234.8832
2008-09	288.3716	-659.907	148.3115	546.1487	54.54545	100.1032	292.8112
2009-10	520.6274	2054.988	131.3974	319.2832	54.54545	154.4892	324.5236
2010-11	577.5814	2109.439	129.9709	425.1339	54.54545	97.72964	411.2041
2011-12	516.957	1350.123	148.9374	519.6412	86.36364	66.97628	551.7958
2012-13	559.4789	2425.327	158.3386	516.1786	77.27273	115.2735	587.7365
2013-14	664.9394	744.0038	158.8617	544.2979	81.81818	94.22087	567.652
2014-15	830.4213	3944.608	178.2096	531.8203	77.27273	60.47473	522.1975

Source: www.bseindia.com

Table.6.National Stock Exchange 1995-96 to 2014-15

Year	NSE-Nifty	FII's Net Investment	Currency Rate	Oil Price	Interest Rate	CPI- Inflation Rate	Gold Rate
1995-96	100.0001	100	100	100	100	100	100
1996-97	98.295	123.5229	104.556	122.1491	100	107.4304	90.69746
1997-98	113.3564	85.82499	114.9782	111.2835	95.45454	64.9123	78.43534
1998-99	109.4135	-22.8175	123.5371	71.1044	72.72727	158.1012	82.02941
1999-00	155.1254	145.8074	126.9432	98.86557	72.72727	4.850362	84.98923
2000-01	116.5331	143.0849	135.7787	163.5222	63.63636	35.91332	81.18374
2001-02	114.6403	126.231	142.067	137.3133	59.09091	53.25079	97.03994
2002-03	99.27947	38.73505	138.2969	136.179	56.81818	33.02374	101.9025
2003-04	179.8337	659.2304	126.4774	165.3133	54.54545	38.3901	117.5473
2004-05	206.6022	660.9014	127.3799	224.8356	54.54545	39.0093	120.2957
2005-06	345.3316	597.3321	129.8544	298.746	54.54545	57.48195	165.3273
2006-07	387.8568	444.2646	126.9141	348.0593	54.54545	67.38908	182.0292
2007-08	480.5139	953.3085	116.4047	383.2832	54.54545	56.86276	234.8832
2008-09	306.6023	-659.907	148.3115	546.1487	54.54545	100.1032	292.8112
2009-10	532.7417	2054.988	131.3974	319.2832	54.54545	154.4892	324.5236
2010-11	592.079	2109.439	129.9709	425.1339	54.54545	97.72964	411.2041
2011-12	537.4763	1350.123	148.9374	519.6412	86.36364	66.97628	551.7958
2012-13	576.7334	2425.327	158.3386	516.1786	77.27273	115.2735	587.7365
2013-14	680.4227	744.0038	158.8617	544.2979	81.81818	94.22087	567.652
2014-15	861.7686	3944.608	178.2096	531.8203	77.27273	60.47473	522.1975

Source: www.nseindia.com

Findings of the study: The outcomes display that there exist some relationship between macroeconomic factors and leading stock indices performances. From the tables 1.2 and 2.2, the outcome shows that FII's net investment, Exchange rate, Oil prices, Interest rate, Inflation rate, and Gold prices do affect Share market indices. FII's net investment is positively significant at 1% level, while Oil price is positively significant at 5% level. It is also found that Exchange rate and Interest rate influence adversely on share indices performances, though not statistically significant. But inflation rate and gold rate are positively affected to stock indices performances, though not statistically significant. The most important factor that influences stock market indices is Oil price followed by FII's and Gold rate.

The outcomes of the research confirm the Hypothesis 1 (H1). FII's net investment is positively related to security indices performances. This is similar to findings of Azad, 2013, they found that the FII's net investment are not only correlated with the stock market return but fairly explains the behavior of the share

market. All over the study implies that if FIIs are confident about Indian markets, there is a general perception that market is on the rise.

Exchange rates are negatively related to BSE-Sensex and NSE-Nifty. Hence the Hypothesis 2 (H2) is not confirmed. The Indian economy is an open economy where foreign sector play a major role in the capital intensive oil and gas sector. Exchange rate impacts negatively as the long term growth is impaired as well as the balance- of payments by appreciating Exchange rate. This explains why it is not significant.

Oil price is positively related to stock indices performances. Here the Hypothesis 3 (H3) is confirmed. The explanation for this relationship is that increase in oil price impacts generally all prices in the economy including stock prices. Interest rate adversely affects BSE-Sensex and NSE-Nifty. The Hypothesis 4 (H4) is also confirmed. They have been found to be consistently not statistically significant at 5% level. The negative sign is consistent with theory as low rates mean more investment in stocks both due to portfolio effects and affordable sources of financing.

Inflation rate is positively related to Stock indices performances. It is not significant at 5 % level. Therefore the hypothesis 5 (H5) is not confirmed. The explanation for this relationship is that rising inflation pushes the prices of shares and thus market index upward, especially when returns to shares are expected that a high and rising inflation rate serve to erode the real value of financial assets, stock prices inclusive. It is indicative that wealth holders would tend to shift their wealth holding in favor of real assets to the relative neglect of financial assets. Gold rate is positively related to stock indices performances. Therefore hypothesis 6 (H6) is also not confirmed.

4. CONCLUSION

The prime aim of the study was to design and examine, factors influencing relationship between the selected macroeconomic factors influencing stock market behavior and Stock indices performances in Indian capital market. We expected a relationship between Stock indices performances as proxy for stock prices in Indian capital market and selected macroeconomic variables. This relationship model was tested by using Correlation analysis and multiple regression analysis with the past 21 Year's data and we found that Stock market indices are influenced by some macro economic factors. In line with this, the grades also suggest the need for policy makers to design policies that will help to curtail rapid growth in money supply. There is also the need to formulate policies that are capable of enhancing the national income of the country. Export policies should be encouraged, as they rise to issue of balance of payments, their deficit or surplus and also responsible for the appreciation or otherwise of a nation's foreign exchange.

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