# BSE and NSE: The correlation with FII

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**ABSTRACT**

Since Indian stock market is extraterrestrial and striking for investors as a hotspot of investment from last decade. Institutional Investor is any investor or investment fund that is from or registered in a country outside of the one in which it is currently investing. Institutional investors include hedge funds, insurance companies, pension funds and mutual funds. The Indian market is steadily growing and had allured domestic investor's community and foreign investors group in the past.The study attempts to examine the impact of International capital flows on India's stock exchanges. We found that while there are no significant changes in the Indian stock market average returns. This paper tries to find out the co movement and interdependency among the Asian stock exchanges. The correlation shows that FII is co related with NSE (37%), BSE (36%). The granger causality test is used to study the cause and effect relationship among FII and the stock exchanges.

Keywords: FII, Stock exchanges, Correlation, Granger causality test, BSE, NSE

## INTRODUCTION

An investor or investment fund that is from or registered in a country outside of the one in which it is currently investing. Institutional investors include hedge funds, insurance companies, pension funds and mutual funds. Foreign Institutional Investor (FII) means an institution established or incorporated outside India which proposes to make investment in securities in India. They are registered as FIIs in accordance with Section 2 (f) of the SEBI (FII) Regulations 1995. FIIs are allowed to subscribe to new securities or trade in already issued securities. This is just one form of foreign investments in India.

A share market or equity market is a public entity for exchanging company stock (shares) and derivatives at an agreed price; these are securities listed on a stock exchange as well as those only traded privately. Share market is a place where the shares of different companies are bought and sold. These are the organized Platform through which the buyers and sellers can trade in shares or other forms of securities like bonds, derivatives are called STOCK EXCHANGE. The stock exchanges could be a corporation or a mutual organization. They primarily serve the purpose of listing and trading the shares.

The BSE SENSEX (Bombay Stock Exchange Sensitive Index), also called the BSE 30 (BOMBAY STOCK EXCHANGE)or simply the SENSEX, is a free-float market capitalization-weighted stock market index of 30 well-established and financially sound companies listed on Bombay Stock Exchange (BSE). The 30 component companies which are some of the largest and most actively traded stocks are representative of various industrial sectors of the Indian economy. Published since January 1, 1986, the SENSEX is regarded as the pulse of the domestic stock markets in India.

The National Stock Exchange (NSE) is stock exchange located at Mumbai, India. It is the largest in India by daily turnover and number of trades, for both equities and derivative trading. NSE has a market capitalization of around US$1 trillion and over 1,652 listings as of July 2012. The NSE's key index is the S&P CNX Nifty, known as the NSE NIFTY (National Stock Exchange Fifty), an index of fifty major stocks weighted by market capitalization. NSE is mutually owned by a set of leading financial institutions, banks, insurance companies and other financial intermediaries in India but its ownership and management operate as separate entities.

## LITERATURE REVIEW

Verma and Prakash (2011) found that the interest rate sensitivity of FII flows is not statistically significant and concluded that the BSE Sensex is a major pull factor for these flows into the domestic financial markets.

Kumar (2006) documented that the movement in Indian stock market can be explained with the direction of funds floated by foreign institutional investors. Therefore motivated by some interesting and time varying evidences with regard to the relationship between FIIs and stock market performance, the present study is destined to examine the relationship of FIIs and performance of Indian stock market.

Trivedi and Nair (2005),6 in their study examined the volume of foreign investment and profit booking in Indian market and thereby suggested that, given the huge volume of investments, the foreign investors can play as market makers and book their gains. They can also buy financial assets when the prices are declining and sell when the asset prices are increasing. Hence there may exist a bi-directional relationship b/w FII and equity stock returns.

Kulwantraj N. Bindu (2004)With the help of monthly data they found out that FII inflow depends on stock market returns, inflation rates (both domestic and foreign), and ex-ante risk. In terms of magnitude, the impact of stock market returns and the ex-ante risk turned out to be the major determinants of FII inflow. The study has not found any causative link running from FII inflow to stock returns.

Pal, P. (2004)found that FIIs are the major players in the Indian stock market and their impact on the domestic market is increasing. Trading activities of FIIs and the domestic stock market turnover indicates that FII's are becoming more important at the margin as an increasingly higher share of stock market turnover is accounted for by FII trading in India.

Rai and Bhanumurthy (2003) They studied the determinants of foreign institutional investment in India during the period 1994-2002. They found, using monthly data that the equity returns is the main driving force for FII investment and is significant at all levels. They further studied the impact of news on FII flows and found that the FIIs react more (sell heavily) to bad news than to good news.

Gordon and Gupta (2003) have documented that lagged domestic stock market returns are an important determinant of FII flows.

Chakrabarti (2001) conducted the pair-wise Granger Causality tests between FII inflows and returns on the BSE National Index. He found that portfolio investment from FIIs was more an effect than a cause of market returns in India.

Prasuna (1999) also studied the determinants of FI investments in India using monthly data from January 1993 to March 1998. He found that lagged FII investment is significant at 1% level. Also, percentage change in BSE Sensex is also significant at 1%. Exchange rate, interest rates, forward premium and foreign exchange reserves have been found to be insignificant. Using monthly data between May 1993 and Dec. 1999.

Bekaert and Harvey (1998) the stock market shows more reaction to foreign investment as the economy liberalizes. A concern with the entry of FIIs is that they are positive feedback traders—traders who buy when the market increases and sell when the market falls. This acts as destabilizing because the sales by FII s lead the stock market to fall further and their buys increase the stock market

**OBJECTIVE :**

The primary objective of this paper is to study causality among Foreign Institutional Investment and Bombay stock exchange and National stock exchange.

**METHODOLOGY :**

**THE STUDY :**

This study is based to find interdependence of FII with Bombay stock exchange and National stock exchange. In this paper the authors are presenting the inter dependency between BSE and NSE. Foreign Institutional Investor (FII) means an institution established or incorporated outside India which proposes to make investment in securities in India. They are registered as FIIs in accordance with Section 2 (f) of the SEBI (FII) Regulations 1995. FIIs are allowed to subscribe to new securities or trade in already issued securities. This is just one form of foreign investments in India.

BSE the 30 component companies which are some of the largest and most actively traded stocks, are representative of various industrial sectors of the Indian economy. Published since January 1, 1986, the SENSEX is regarded as the pulse of the domestic stock markets in India.

The National Stock Exchange (NSE) is stock exchange located at Mumbai, India. The exchange was established in 1992 and has grown to be the country's largest securities exchange NSE is also known as the NSE NIFTY (National Stock Exchange Fifty), an index of fifty major stocks weighted by market capitalization.

**DATA COLLECTION :**

Day wise data of BSE, NSE and FII was collected for a period of two years i.e. from 28 Feb 2011 to 28 Feb 2013.

**DATA ANALYSIS**

The analysis was done on E views software and on SPSS software. The Granger Causality Test was performed to find the cause and affect relationship between the variables.

**RESULT AND ANALYSIS :**

The correlation tables no 1 shows correlation among FII, BSE and NSE over a period of time. Correlation is statistical tool which measures the degree of relationship between two and more variable. Here, by term relationship, we mean the tendency of variable to move together. In the sense, it denotes interdependency amongst variables. The movement of variable may be in positive or negative direction. The Correlation of BSE with FII is 35%. The Correlation of NSE with FII is 37%.We can see that BSE is also highly correlated with NSE (99%) which means BSE is highly correlated with NSE.

**Table 1 Correlation**

| | | FII | NIFTY | SENSEX |
|---|---|---|---|---|
| FII | Pearson Correlation | 1 | .372** | .357** |
| | Sig. (2-tailed) | | .000 | .000 |
| | Sum of Squares and Cross-products | 3.454E8 | 5.544E7 | 1.723E8 |
| | Covariance | 690749.284 | 110886.884 | 344608.814 |
| | N | 501 | 501 | 501 |
| NIFTY | Pearson Correlation | .372** | 1 | .997** |
| | Sig. (2-tailed) | .000 | | .000 |
| | Sum of Squares and Cross-products | 5.544E7 | 6.441E7 | 2.076E8 |
| | Covariance | 110886.884 | 128829.321 | 415126.060 |
| | N | 501 | 501 | 501 |
| SENSEX | Pearson Correlation | .357 | .997** | 1 |
| | Sig. (2-tailed) | .000 | .000 | |
| | Sum of Squares and Cross-products | 1.723E8 | 2.076E8 | 6.735E8 |
| | Covariance | 344608.814 | 415126.060 | 1346920.144 |
| | N | 501 | 501 | 501 |

**. Correlation is significant at the 0.01 level (2-tailed).

**Table 2 Pairwise Granger Causality Tests**

| Null Hypothesis : | Obs | F-Statistic | Probalility |
|---|---|---|---|
| SENSEX does not Granger Cause FII | 499 | 11.9064 | 0 |
| FII does not Granger Cause SENSEX | | 37.7140 | |
| NIFTY does not Granger Cause FII | 499 | 13.0609 | 0 |
| FII does not Granger Cause NIFTY | | 38.7272 | 0 |
| NIFTY does not Granger Cause SENSEX | 499 | 0.34188 | 0.71060 |
| SENSEX does not Granger Cause NIFTY | | 0.17177 | 0.84222 |

**$H_0$ 1.1 SENSEX does not Granger Cause FII**

Hypothesis is rejected. Since the probability value is 0% in table no. 2 is less than 5 percent, hence the hypothesis is rejected.

**$H_0$ 1.2 FII does not Granger Cause SENSEX**

Hypothesis is rejected. Since the probability value is 0% in table no. 2 is less than 5 percent, hence the hypothesis is rejected.

**$H_0$ 2.1 NIFTY does not Granger Cause FII**

Hypothesis is rejected. Since the probability value is 0% in table no. 2 is less than 5 percent, hence the hypothesis is rejected.

**$H_0$ 2.2 FII does not Granger Cause NIFTY**

Hypothesis is rejected. Since the probability value is 0% in table no. 2 is less than 5 percent, hence the hypothesis is rejected.

**$H_0$ 3.1 NIFTY does not Granger Cause SENSEX**

Hypothesis is not rejected. Since the probability value is 71% in table no 2 is more than 5%, hence the hypothesis is not rejected.

**$H_0$ 3.2 SENSEX does not Granger Cause NIFTY**

Hypothesis is not rejected. Since the probability value is 84.2% in table no 2 is more than 5%, hence the hypothesis is not rejected.

## CONCLUSION

The Correlation Analysis revels that the correlation of BSE with FII is 35%. The Correlation of NSE with FII is 37%. The Correlation of BSE with NSE is 99% which means BSE is highly correlated with NSE. The granger causality test is used to study the cause and effect relationship between stock exchange and FII. From Granger causality test it can be reveal that BSE and NSE both affected by FII. These results are in conformity with the results generated by Patel & Patel (2006).

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