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Correlation Studies of Foreign Institutional Investor and Nifty of the Past Decade

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ABSTRACT

Foreign Institutional Investors were, are and will be the strong players in the stock markets. The inflow of investments from the overseas investors has shown the real dynamism of stock markets and also led to the highest peaks and sudden falls in the benchmark index CNX NIFTY. In this paper, we tried to explain the reasons why India is still attracting the foreign institutional investors. In addition to the above, this project also provides a clear view about the trading in S&P CNX Nifty. The data for the study uses the information obtained from the secondary resources like website of S&P CNX Nifty. This project also attempts to explain about the correlation between FII and S&P CNX Nifty, using Karl Pearson's Product-Moment coefficient of correlation (r)

KEYWORDS: FII *(Foreign Institutional Investment), S&P CNX Nifty, Correlation, Regulation Relating to FII Operations, Impact of FII on Indian Capital Markets,*

FOREIGN INSTITUTIONAL INVESTOR (FII)

A is an investor or investment fund registered in a country outside of the one in which it is investing. Institutional investors most notably include hedge funds, insurance companies, pension funds and mutual funds. The term is used most commonly in India and refers to outside companies investing in the financial markets of India.

An FII is any type of large investor who does business in a country other than the one in which the investment instrument is being purchased. In addition to the types of investors above, others include banks, large corporate buyers or representatives of large institutions. All FIIs take a position in a foreign financial market on behalf of the home country in which they are registered.

FII in India

Countries with the highest volume of foreign institutional investments are those that have developing economies. These types of economies provide investors with higher growth potential than in mature economies. This is why these investors are most commonly found in India, all of which must register with the Securities and Exchange Board of India to participate in the market. If, for example, a mutual fund in the United States sees an investment opportunity in an Indian-based company, it can purchase the equity on the Indian public exchange and take a long position in a high-growth stock. This also benefits domestic private investors who may not be

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able to register with the Securities and Exchange Board of India. Instead, they can invest in the mutual fund and take part in the high growth potential.

All FIIs are allowed to invest in India's primary and secondary capital markets only through the country's portfolio investment scheme (PIS). This scheme allows FIIs to purchase shares and debentures of Indian companies on the normal public exchanges in India.

However, there are many regulations included in the scheme. There is a ceiling for all FIIs that states the max investment amount can only be 24% of the paid-up capital of the Indian company receiving the investment. The max investment can be increased above 24% through board approval and the passing of a special resolution. The ceiling is reduced to 20% of the paid-up capital for investments in public sector banks.

The Reserve Bank of India monitors daily compliance with these ceilings for all foreign institutional investments. It checks compliance by implementing cut off points 2% below the max investment amounts. This gives it a chance to caution the Indian company receiving the investment before allowing the final 2% to be invested.

Nifty

The **NIFTY 50** index is National Stock Exchange of India's benchmark stock market index for Indian equity market, launched on 21st April 1996. Nifty is owned and managed by India Index Services and Products (IISL), which is a wholly owned subsidiary of the NSE Strategic Investment Corporation Limited. IISL had a marketing and licensing agreement with Standard & Poor's for co-branding equity indices until 2013. NIFTY 50 Index has shaped up as a largest single financial product in India, with an ecosystem comprising: exchange traded funds (onshore and offshore), exchange-traded futures and options (at NSE in India and at SGX and CME abroad), other index funds and OTC derivatives (mostly offshore).NIFTY 50 is the world's most actively traded contract. WFE, IOMA and FIA surveys endorse NSE's leadership position. The NIFTY 50 covers 13 sectors of the Indian economy and offers investment managers exposure to the Indian market in one portfolio.

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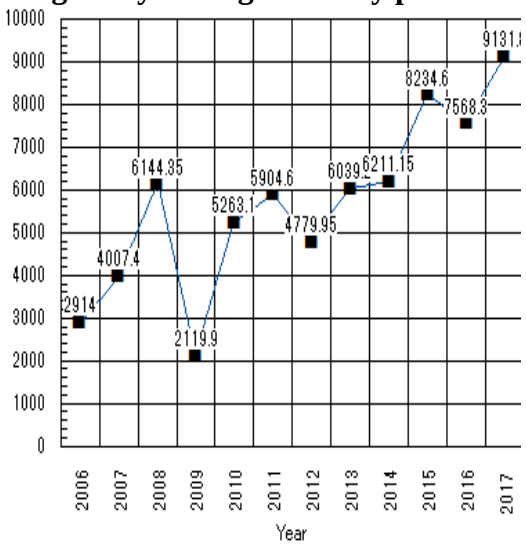
During 2008-12, NIFTY 50 50 Index share of NSE market capitalisation fell from 65% to 29% due to the rise of sectoral indices like NIFTY Bank, NIFTY IT, NIFTY Next 50, etc. The NIFTY 50 Index gives 29.70% weightage to financial services, 0.73% weightage to industrial manufacturing and nil weightage to agricultural sector. The NIFTY 50 index is a free float market capitalisation weighted index. The index was initially calculated on full market capitalisation methodology. From June 26, 2009, the computation was changed to free float methodology. The base period for the CNX Nifty index is November 3, 1995, which marked the completion of one year of operations of *National Stock Exchange Equity Market Segment*. The base value of the index has been set at 1000, and a base capital of ` 2.06 trillion.

Fig. Nifty during the study period



DIFFERENCE BETWEEN SENSEX AND NIFTY

Key difference: SENSEX is the stock market index for BSE Limited, previously known as the Bombay Stock Exchange. SENSEX Index is comprised of 30 of the largest and most actively-traded stocks on the BSE. Nifty is the stock market index for the National Stock Exchange (NSE). Nifty comprises of 50 of the largest and most actively traded stocks on the NSE that covers 22 sectors of the Indian economy.

The SENSEX and Nifty are both stock market indexes. A stock market index, also known as a stock index is a method of measuring the value of a section of the stock market. The stock index consists of a selected number of stocks, which represent the strength of the stock market exchange as a whole. The stock index is calculated by taking an average, usually weighted of the selected number of stocks as included in the index.

SENSEX is the stock market index for BSE Limited, previously known as the Bombay Stock Exchange. Located on Dalal Street in Mumbai, BSE was established in 1875. BSE has emerged as one of the leading exchange groups of India. Two major shareholders of the BSE are prominent global exchangers – Deutsche Bourse and Singapore Exchange. As mentioned in Wikipedia, BSE is the first exchange in the world to obtain 9001-2002 certification on its on-line trading system.

The main difference between SENSEX and Nifty is that SENSEX is the stock market index for BSE Limited, while Nifty is the stock market index for National Stock Exchange (NSE). Another is that SENSEX is comprised of 30 stocks, while Nifty is comprised of 50 stocks.

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NIFTY AND FII

NIFTY: S&P CNX Nifty is a well diversified 50 stock index accounting for 21 sectors of the economy. It is used for a variety of purposes such as benchmarking fund portfolios, index based derivatives and index funds.

S&P CNX Nifty is owned and managed by India Index Services and Products Ltd. (IISL). which is a joint venture between NSE and CRISIL. IISL is India's first specialised company focused upon the index as a core product. IISL has a Marketing and licensing agreement with Standard & Poor's (S&P) who are world leaders in index services.

The traded value for the last six months of all Nifty stocks is approximately 44.89% of the traded value of all stocks on the NSE

Nifty stocks represent about 58.64% of the total market capitalization as on March 31. 2008.

Impact cost of the S&P CNX Nifty for a portfolio size of Rs.2 million is 0.15% S&P CNX Nifty is professionally maintained and is ideal for derivatives trading

The NIFTY moves up and down based on movement of 50 companies share prices listed in NSE sensitivity index. The reasons of the rise and fall of the Sensex may be due to macro-level or micro-level factors such as Government policies. Inflation rate. FDI & FII etc. In our research .we have only considered the FII factor to find out that is there any impact of the FII on the movement of NIFTY. So we have taken the help of the Regression and Correlation tools to measure it.

FIIs pulling money from the market has resulted in a fall:

There were only two instances in the last decade where FIIs pulled out money from the stock market and at both these times the stock market went down. The pull out was fairly severe in 2008, and the market fall was very bad as well. You may argue that just two years aren‘t enough to form a conclusion but I‘d say that it is fairly safe to say that if FIIs were to pull out money then the stock market will go down.

Net positive investments by FIIs don’t guarantee an up market

The market fell in 2001 and FIIs were actually net buyers in that year so that also shows that the market can fall even if FIIs pump in money, so just positive net investments from FIIs don‘t guarantee an upmarket.

Biggest up moves don’t coincide with biggest FII inflows:

One thing that struck about this chart is that the biggest bars don‘t coincide with sharp up-movements in the line. The biggest percentage gains in the Nifty weren‘t always in the same year when FII investments were at a peak.

If you look at 2003, the market went up quite a bit, and there were healthy in flows as well, but if you look at 2004, there were bigger in flows but the market didn‘t rise up as much that year. Similarly, 2009 and 2010 follow the same pattern. This can be explained with the high base effect since the market rose so muchin2003and2009thattherewasn‘tasmuchroomto grow in 2004 and 2010.

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Influence of FII on Indian Stock Market

Positive fundamentals combined with fast growing markets have made India an attractive destination for foreign institutional investors (FIIs). Portfolio investments brought in by FIIs have been the most dynamic source of capital to emerging markets in 1990s. At the same time there is unease over the volatility in foreign institutional investment flows and its impact on the stock market and the Indian economy. Apart from the impact they create on the market, their holdings will influence firm performance. For instance, when foreign institutional investors reduced their holdings in Dr. Reddy's Lab by 7% to less than 18%, the company dropped from a high of around US$30 to the current level of below US$15. This 50% drop is apparently because of concerns about shrinking profit margins and financial performance. These instances made analysts to generally claim that foreign portfolio investment has a short term investment horizon. Growth is the only inclination for their investment. Some major impact of FII on stock market:

- Increased depth and breadth of the market.
- They played major role in expanding securities business.
- Their policy on focusing on fundamentals of share had caused efficient pricing of share. These impacts made the Indian stock market more attractive to FII & also domestic investors. The impact of FII is so high that whenever FII tend to withdraw the money from market, the domestic investors fearful and they also withdraw from market.

OBJECTIVES OF STUDY:

- To find out the causes for the investment by the FIIs in India even after the deteriorating economic conditions.
- To know the trend of investment of Foreign Institutional Investors in India from January2006 to April, 2017
- To study the correlation between S&P CNX NIFTY and FIIs between the period 2006 to 2017

SCOPE AND NEED OF STUDY:

Scope of study is broader and it covers both FIIs in the form of equity and debt investments. But, study is only going to cover only one stock index, i.e. NSE (NIFTY). The time period under study is limited from January 2008 to May 2014, as it will give exact impact in both bullish and bearish trend. This study also provides a clear picture about how FIIs impact the Indian capital market and also NSE. It will also describe the market trends due to FIIs inflow and outflow.
The present work is designed to study

RESEARCH PROBLEM

1. Impact of Foreign Institutional Investors on Indian Capital Market
2. The relation between Foreign Institutional Investments and one of the stock indices i.e., S&P CNX Nifty. To identify the degree of relation between S&P CNX Nifty and Foreign Institutional Investments, both equity and debt investments under FIIs are considered.

3. This project also studies the trends in the investment of FIIs along with the economic figures provided

To describe the relation between FII's and S&P CNX Nifty, a hypothesis is set in relation with the study being conducted.

- Null Hypothesis (Ho): There is a close correlation between S&P CNX Nifty volatility and FIIs.
- Alternate Hypothesis (Ha): There is no correlation between S&P CNX Nifty volatility and FIIs. In this study, foreign institutional investment is considered as an independent variable and S&P CNX Nifty is considered as a dependent variable

DATA COLLECTION

Secondary Data: Data is collected from various literatures, journals, magazines, books, web links are used. As there are no possibilities of collecting data personally, there is no questionnaire prepared. The past decade, 2006 up to May 2017 is the period of the study.

STATISTICAL TOOLS FOR THE ANALYSIS OF DATA: Trend analysis, Correlation analysis and Regression Analysis using the statistical software package, SPSS 21.

SIGNIFICANCE OF THE STUDY:

This study:

- Provides a clear picture about the trends in FIIs inflows and why there was a bias in the FIIs inflows during a particular time period.
- Gives an idea about how even a small movement of FII can impact the stock market.
- Focuses on the relation between S&P CNX Nifty with the Foreign Institutional Investments in equity and debt segments.

LIMITATIONS OF THE STUDY

Even though sincere attempts were made to provide a clear picture of FIIs impact on Indian economy, this study has faced certain limitations. They are:

- This study considers only one stock index, i.e., S&P CNX Nifty. Nifty does not have a good number of companies listed with, compared to Sensex. This factor limited the research only to a few companies.
- This study focuses on the market capitalization of S&P CNX Nifty and there is no sectoral comparison of data. Under sect oral comparison, the data provided would have been more exhaustive.
- The data is taken on monthly basis. The data on daily basis can give more positive results.
- As secondary data was used for this study, there is a possibility that this study may not provide the true picture of the concern.
- Due to certain time and information constraints, this project report is not fully exhaustive.

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LITERATURE SURVEY

The study of **Sushil Bajaj (1)** aims to examine the changes in the dynamic relationship between return registered by stocks and trading volume because of the changes in the flow of Foreign Institutional Investments in the Indian stock market. Author has tested the relationship using daily data of S&P CNX Nifty (that is, NSE's index) from 2000 to 2013 and methodologies, Generalized Auto Regressive Conditional Heteroskedasticity (GARCH) (1, 1), Exponential Generalized Auto Regressive Conditional Heteroskedasticity (EGARCH) (1, 1), Vector Auto regression (VAR), Granger causality, Variance Decomposition (VDC) and Impulse Response Function (IRF). The empirical analysis evidences the significant role of trading volume in lessening volatility and also adjudges the Indian stock market highly inefficient due to the presence of volatility persistence.

Outward foreign direct investment (FDI) of firms from Brazil, Russia, India and China has increased significantly during the last few years. Despite this trend, comprehensive research on the specific determinants and antecedents of outward FDI from BRIC countries is still underrepresented.

The study by Pramod Kumar Naik and Puja Padhi **(2)** examines the dynamic interaction of institutional fund flows and stock returns volatility using daily data. Foreign institutional investors (FIIs) and mutual funds' net equity investment have been considered simultaneously using the vector auto-regression (VAR) model. The findings show that both mutual funds' as well as FIIs' net investment on equity jointly influences the stock market. While the mutual funds' net investments positively influence stock market volatility, the FIIs' net investments negatively impact volatility. However, in the presence of market fundamentals, it is found that FII's net flow does not show significant influence on market volatility, but mutual funds net flow has a significant impact on market volatility at least at the second lags. It has also been observed that the investment activities of FIIs and mutual funds are interrelated. Causality test indicates that there exists a bidirectional causation between FII's net flow and market volatility, whereas mutual funds flows do not cause volatility.

In their article "Impact of Foreign Institutional Investors on the Indian Capital Market",**Mohanamani and Sivagnanasithi, (3)** observed that foreign institutional investment signifies investments made by individual investors or companies in foreign lands. India have been witnessing a surge in FII activity since the opening of its capital markets. Owing to its high growth potential, India has become a favorite destination for FII activity. FIIs, convinced of India's economic progress ad strong corporate earnings, are continuously investing in the country. Fast GDP growth has made India a preferred destination for foreign investors post the 2008 financial crisis. This paper analyses the role ahead for the Foreign Institutional investors in the present Indian economic Scenario with the focus on the impact on the Indian Capital Market.

Paramita Mukherjee**,** Malabika Roy **(4)**in their article, "What Drives the Stock Market Return in India? An Exploration with Dynamic Factor Model" examined the role of the institutional investors, both domestic and foreign, in driving the return on the Indian equity market in the last decade. An attempt is made to identify the influence of other possible determinants, more specifically domestic and international financial variables, on the market returns as well. Whether there is a change in the relationship is also studied. The results uncover some interesting

facts. First, there is evidence of institutional investors driving the market return after 2008, though it did not have any impact before 2008. Second, the return is significantly led by the movement of interest rates within and outside the country for the entire decade. Third, most of the major and emerging stock markets and the US market also have significant influence on Indian equity market return. Fourth, gold return used to affect the equity market return in pre-2008 years, but it ceased to do so after 2008. The results show that the determinants of the Indian equity market return have changed after the recent economic crisis of 2008.

The paper "Role of Foreign Direct Investment (FDI) in India's Economic Development-An Analysis" of **Syed Ibrahim and Muthusamy (5)** attempts to review the importance of foreign direct investments in Indian economy, particularly after a decade of economic reforms and analyze the role played by the FDI in the economic development of the country. The study is diagnostic and exploratory in nature and makes use of secondary data. The study finds and concludes that the foreign direct investment in India have significantly improved and developed the economy as well.

The study by Harsh Vardhan **and** Pankaj Sinha**, (6)** "Influence of Foreign Institutional Investments (FIIs) on the Indian Stock Market: An Insight by VAR Models" examines the influence of foreign institutional investments (FIIs) on the Indian equity market and its role in integration with the United States (US) equity market. Different vector auto regression (VAR) models have been employed for sub-periods created by the structural breaks.

Mrunal Joshi **et al. (7)** observed that Initiation of reform process in early 1990's transformed India's policy stance on development strategy completely. Initial approach of financing current account deficit mainly through debt flows and official development assistance has changed to harnessing non-debt creating capital flows. Under this strategy from September 14, 1992; Foreign Institutional Investors (FIIs) were permitted to invest in financial instruments in India. Since then Indian financial markets have changed substantially in its size, depth and character. In this period, Indian and world markets have seen good times and periods of crises both on external fronts and in financial markets this paper tries to evaluate role of FIIs in Indian markets and also tries to draw likely challenges which country might face due to increasing share of FIIs in financial markets in India.

Hariprasad (8) studies the stock ownership in Indian firms by Foreign Institutional Investors during 2013 to 2015. Several firm-level characteristics are used to measure the extent to which information asymmetry affects the level of FII ownership in these firms. The analysis reveals that the firm-size and the book-to-market ratio are significant variables in selecting the equity investments by this investor group. There is not much empirical support for beta or the export ratio as determinants of firm-level ownership. In their holdings of large-firm stocks, there is a strong evidence that FIIs prefer to hold more shares of high exports firms.

Anubha Shrivastav (9) in his paper "A Study of Influence of FII Flows on Indian Stock Market" observes that, since Indian stock market is vast and attract investors as a hotspot of investment This paper examines whether market movement can be explained by these investors and their impact on the stock markets. FII, because of its short-term nature, can have bidirectional causation with the returns of other domestic financial markets such as money markets, stock markets, and foreign exchange markets. Hence, understanding the determinants of FII is very important for any emerging economy as FII exerts a larger impact on the domestic

financial markets in the short run and a real impact in the long run. The present paper is an attempt to find out determinants of foreign institutional investment in India, a country that opened its economy to foreign capital following a foreign exchange crisis. The objective of the study is to find out whether there exist relationship between FII and Indian stock market.

The research article by **Hemkant Kulshrestha (10)** envisages Indian capital market is vast and attract investors as their investment destination. The Indian market is steadily growing and had allured domestic investors community and foreign investors group in the past. The major part of investment in Indian capital market is attributed to institutional investors among whom foreign institutional investors (FIIs) are of primary importance. One eminent concern in the matter is whether these foreign institutional investors (FIIs) regulate the Indian capital market. This paper examines whether market movement can be explained by these investors and their impact on the capital markets. FIIs, because of their short-term nature, can have bidirectional causation with the returns of other domestic financial markets such as money markets, stock markets, and foreign exchange markets. Hence, the understanding of determinants of FII is very important for any emerging economy as FII exerts a larger impact on the domestic financial markets in the short run and a real impact in the long run. The present paper is an attempt to find out determinants of foreign institutional investment in India, a country that opened its economy to foreign capital due to their foreign exchange crisis. The objective of the study is to find out whether there exist relationship between FII and Indian capital market.

The paper of **Ashok Banerjee &Sahadeb Sarkar (11)** shows that the Indian stock market experiences volatility clustering and hence GARCH-type models predict the market volatility better than simple volatility models, like historical average, moving average etc. It is also observed that the asymmetric GARCH models provide better fit than the symmetric GARCH model, confirming the presence of leverage effect. Finally, our results show that the change in volume of trade in the market directly affects the volatility of asset returns. Further, the presence of FII in the Indian stock market does not appear to increase the overall market volatility. These findings have profound implications for the market regulator.

Pardhasaradhi (12) found that the flow of FDI & FII was moving in tandem with Sensex and Nifty. The study concludes that Flow of FDIs and FIIs in India determines the trend of Indian stock market.

Equity market in India has evolved over time with the market practices and conditions generally reflecting the policies put in place. The present paper focuses on the impact of Foreign Institutional Investors' trading behavior on Indian Equity market by using the data obtained from the SEBI statistical reports i.e., FIIs investments during the period 2002-2012 and also analyzes the impact on India's leading exchanges' indices such as Sensex and CNX Nifty The present research paper of **Santosh Chauhan (13)** is an attempt to find out the impacts of FDI (Foreign Direct investment), FIIs (Foreign Institutional Investment), and FPIs (Foreign Portfolio investment) inflows on the movement of BSE (Bombay Stock Exchange) and NSE (National stock exchange) during period under study. The study is purely based on secondary data which were analyzed through Regression (OLS Model), Karl Pearson's correlation, Analysis of Variance, etc., and found that FDI affects the most both Sensex and Nifty up to 61% and 86% respectively and is associated highly and positively with both the markets with a score of 0.78 and 0.92 respectively according to the Karl Pearson's coefficient of correlation. However, the

FPIs showed a very low impact on Sensex and a comparative high impact on NSE. During the study period the least significant factor with lowest impact on Sensex and nifty was FIIs.

The study presented by **Ranjan Dasgupta (14)** aims at investigating the driving factors as found and discussed in various relevant studies pushing the FIIs in pouring money to the Indian stock market over the years post liberalization. All useful studies as available from internet-searching and print-publications dealing with mainly the determinants of FIIs post-liberalization of the Indian stock market have been accounted for under this study. Then, these studies are thoroughly read out to pinpoint the driving factors behind FII flows, other related issues, and overall the limitations of such studies which should be avoided by future ones. This study finds that domestic stock market returns, domestic macroeconomic fundamentals, and India-specific stock market-driven factors have been the most influential determinants amidst contradictions and similarities in empirical studies. However, there is ample scope for future studies to look into the nature and behavior of FIIs with advanced time series techniques such as ARCH methods. Also, the role of international push factors as drivers of FII flows should be studied by future researchers. Thus, this study is of immense help to future researchers, stock market practitioners, investors, and other stakeholders to do literature review and find their required information in regard to determinants of FIIs flows. It is also one of a pioneering nature in the field of literature review in the Indian stock market investigating the drivers behind FII flows.

The research of **Jasneek Arora and Santhosh Kumar (15)** makes an attempt to study the effects of trading behaviour of foreign institutional investors on the Indian capital market. We found out that there are no significant changes in the Indian capital market returns and volatility is significantly reduced after opening up of the market to foreign investors.

Main purpose of this research paper of **Rakesh Kumar et al. (16)** is to measure impact of FII and other stock exchange volatility on the BSE stock Exchange volatility. In this paper various factors are considered under scope of the study which are BSE Sensex, FII (Foreign Institutional Investment), Relationship among different foreign stock exchange which are from the UK, USA and Japan. For the purpose of analyzing the data a period of 3 months (i.e. from 1 April 2014 to 30 June 2014) has been taken into consideration. The appropriate statistical techniques as correlation model, multivariate regression model etc. have been used for analyzing the data.

The paper by **Shweta Goel and Harmpret Kaur (17)** attempts to study relation between flow of foreign institutional investors with Indian stock market which was opened for world investors with the reforms of 1991. The study takes into consideration data for over past 13 years covering period from January 2001 to September 2013. Hypothesis testing has been undertaken to find whether there is a significant relation between foreign institutional investor flow and stock market performance. The data has been analyzed using regression model by regressing stock prices data over foreign institutional investor's data. The results showed there exist a positive relation between the variables in question and nearly one tenth variation in stock performance can be explained by foreign institutional investors flow.

Karthikeyan et al. (18) in their project examined whether market movement can be explained by these investors and their impact on the capital markets. FIIs, because of their short-term nature, can have bidirectional causation with the returns of other domestic financial markets such as money markets, stock markets, and foreign exchange markets. Hence, the understanding of determinants of FII is very important for any emerging economy as FII exerts a larger impact on

the domestic financial markets in the short run and a real impact in the long run. So, it attempted to find out determinants of foreign institutional investment in India, a country that opened its economy to foreign capital due to their foreign exchange crisis For the present study, **Ram Kumar Goyal (19)** has selected Capital Market –SENSEX for study which is most important factor of market movement. For the purpose of basic analysis, graphical data will be derived from the monthly data and compared with monthly net investment of FIIs. Using line chats the movements in both the variables are studied, compared and analyzed.

Table.2. Correlations	FII	GDP

Pooja Nagpal ***(20)*** *made an attempt to study the impact of FDI and FII flow on Indian Stock market (BSE Sensex and NSE Nifty). The study covers the time horizon of 10 years from 2005-06 to 2014-15.*

Analysis and Interpretation

GDP and Investment by FII in India

FII refers to 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.

FII is different from FDI. FDI targets a specific enterprise with the aim of increasing its productivity or changing its management control whereas in case of FII investment flows into secondary market with the aim to increase capital availability in general rather than capital availability to a particular enterprise. It is imperative to study the association between FII and economic growth of India.

Table.1. GDP and FDI Inflows in India

Year	FII`(Bn)	GDP	Year	FII`(Bn)	GDP
2006	3,564,364	8,547,123	**2012**	38955.4	8,391,691
2007	34910.26	3,953,276	**2013**	166049.1	9,388,876
2008	80089.18	4,582,086	**2014**	257067.49	10,472,807
2009	-40711.3	5,303,567	**2015**	62308.42	10,522,686
2010	88826	6,108,903	**2016**	-17308.8	11,357,529
2011	194940	7,248,860	**2017**	88766.95	12,165,481

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FII	Pearson Correlation	1	.582
	Sig. (2-tailed)		.502
	N	12	12
GDP	Pearson Correlation	.582	1
	Sig. (2-tailed)	.502	
	N	12	12

Table.3. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error (Estimate)
1	.215[a]	.36	.04	87308.98669

a. Predictors: (Constant), FII

Table.4. ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3705993204.305	1	3705993204.305	.486	.502[b]
	Residual	76228591563.056	10	7622859156.306		
	Total	79934584767.361	11			

a. Dependent Variable: GDP
b. Predictors: (Constant), FII

Table.5. Association between GDP and FII

Variables	GDP (Dependent) and FII (Independent)	Result & Interpretation
Correlation Coefficient between GDP and FII	0.582	The correlation between GDP and FII is moderate and at 1% level of significance, this correlation is insignificant because the value of LOS 0.001 is less than Sig Value 0.026. It means the association between FII and economic growth in India is insignificant.
Regression Coefficient of GDP on FII	22.668	At 1% level of significance, the regression coefficient of GDP on FII is insignificant because the value of LOS 0.001 is less than Sig Value 0.026. Thus the dependence of economic growth of India on FII is insignificant.
R-Square	0.36	The value of R-square is 0.35 which means 35% changes in GDP are due to changes in FII and remaining 65% changes in GDP are due to other factors like interest rate , exchange rate, savings, inflation rate, governance etc.

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Table.6. presents the data for the investment of FII for the present decade, 2006 to 2017 in the form of equity and debts and Table.7 presents the equity to debt ratio.

Table.6. NetFII (equity)and FII (debt)investment inflows from2006to March,2017

Previous FII Trading Activities						
	Equity (`Billions)			**Debt (`Billions)**		
Year	Gross Purchase	Gross Sales	Net Purchase/ Sales	Gross Purchase	Gross Sales	Net Purchase/ Sales
2006	435,804.30	404,523.22	31281.08	9,549.23	6,255.65	3629.18
2007	805,167.57	734,227.52	70940.05	31,210.58	22,061.45	9149.13
2008	720,757.80	773,809.50	-53051.70	48,586.10	36,245.70	12340.40
2009	626,004.50	540,636.90	85367.60	110,438.70	106,980.30	3458.40
2010	768,402.60	634,110.70	140497.20	213,849.20	161,749.00	54442.80
2011	608,086.40	611,728.80	-3642.40	288,365.70	245,767.90	42597.80
2012	673,845.20	543,698.40	130146.80	212,148.90	176,246.60	35902.30
2013	799,053.40	686,671.80	112381.60	228,336.90	270,069.50	-41732.60
2014	1,031,892.72	933,714.82	98177.90	387,246.90	228,357.31	158889.59
2015	1,135,266.57	1,122,211.0	13055.57	266,408.11	217,155.26	49252.85
2016	1,074,922.81	1,059,820.31	15102.50	294,351.92	326,763.27	-32411.35
2017	430,134.11	389,084.91	41049.20	115,146.71	67,428.96	47717.75
Total	9,109,337.98	8,434,237.88	681305.40	2,205,638.95	1,865,080.9	343,236.25

Fig.1. FII Investments during the study period, 2006 to May 2017

The above table shows the net investment by FIIs, Sensex and Nifty from 2006 to 2017 (Up to May).During the year 2000 net investment was 6703.48 billionsand nifty was 1263.55 points. Net FIIs nifty grew positively over the years and achieved □.80089.18 crores during 2008then it experienced a sudden drift of negative investments during 2009 to the tune of □-40711.3 millions. In the same period nifty was also at the low of 9647.31 points. During the next year the market showed a positive movement as the net FIIs and Sensex and nifty was on the raising front

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Table.7 and Fig.2. Equity/Debt values

(a) Table

year	Equity	Debt	Equity/Debt
2006	31281.08	3629.18	8.6193
2007	70940.05	9149.13	7.7537
2008	-53051.7	12340.4	-4.2990
2009	85367.6	3458.4	24.684
2010	140497.2	54442.8	2.5806
2011	-3642.4	42597.8	-0.0855
2012	130146.8	35902.3	3.6250
2013	112381.6	-41732.6	-2.6929
2014	98177.9	158889.5	0.6179
2015	13055.57	49252.85	0.2651
2016	15102.5	-32411.35	-0.4660
2017	41049.2	47717.75	0.8603

(b) Figure

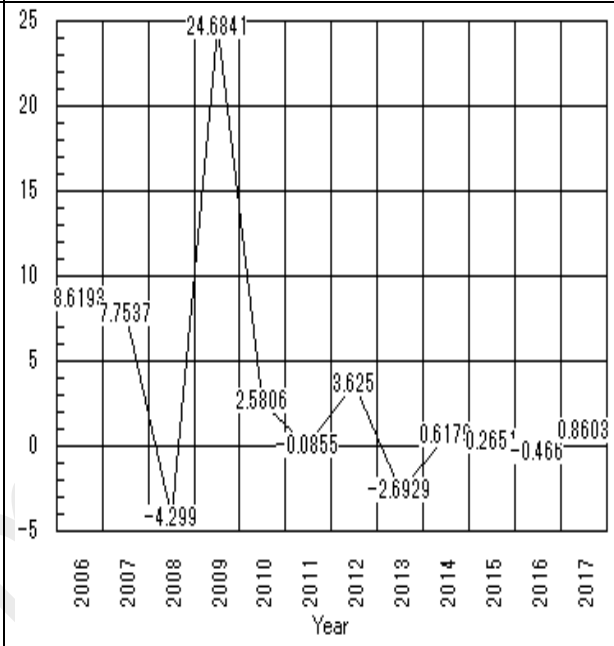
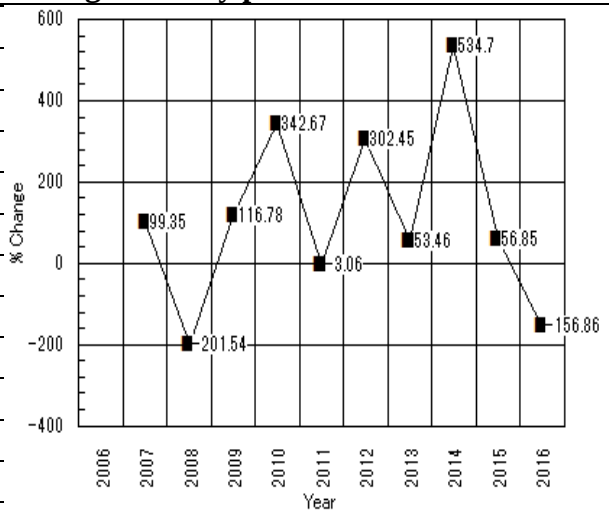


Table. 8. And Fig.3. Absolute and % Change of FII during the study period

Year	Net Investment	Change	
		Absolute	%
2006	40588.8		
2007	80914.8	40326	99.35
2008	-41215.5	-81804.3	-201.54
2009	87987.2	47398.4	116.78
2010	179673.9	139085.1	342.67
2011	39352.9	-1235.9	-3.06
2012	163347.9	122759.1	302.45
2013	62286	21697.2	53.46
2014	256213	215624.2	534.7
2015	63663	23074.2	56.85
2016	-23079	-63667.8	-156.86



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EMPIRICAL ANALYSIS

FII & Nifty

Table. 9 Nifty and FII values during the study period

Year	Nifty	FII
2006	2914	40589.2
2007	4007.4	80914.8
2008	6144.35	-41,215.5
2009	2119.9	87987.6
2010	5263.1	179,674.6
2011	5904.6	39352.8
2012	4779.95	91,086.4
2013	6039.2	80,504.1
2014	6211.15	1,190,782.3
2015	8234.6	63663
2016	7568.3	-23079
2017 Upto May	9131.8	68627

Table.10 Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of th Estimate
1	.654[a]	.428	.371	381857.00306

a. Predictors: (Constant), Nifty b. Dependent Variable: FI

Table. 11. Correlations		Nifty	FII
Nifty	Pearson Correlation	1	.654*
	Sig. (2-tailed)		.021
	N	12	12
FII	Pearson Correlation	.654*	1
	Sig. (2-tailed)	.021	
	N	12	12

***. Correlation is significant at the 0.05 level (2-tailed).**

Table.12. ANOVA[a]

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1090726712170.198	1	1090726712170.198	7.480	.021[b]
Residual	1458147707849.051	10	145814770784.905		
Total	2548874420019.249	11			

a. Dependent Variable: FIIb. Predictors: (Constant), Nifty

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Figure. 4 & 5

a. Histogram,

b. Normal P-P Plot of Regression Standardized Residual Dependable variable : FII

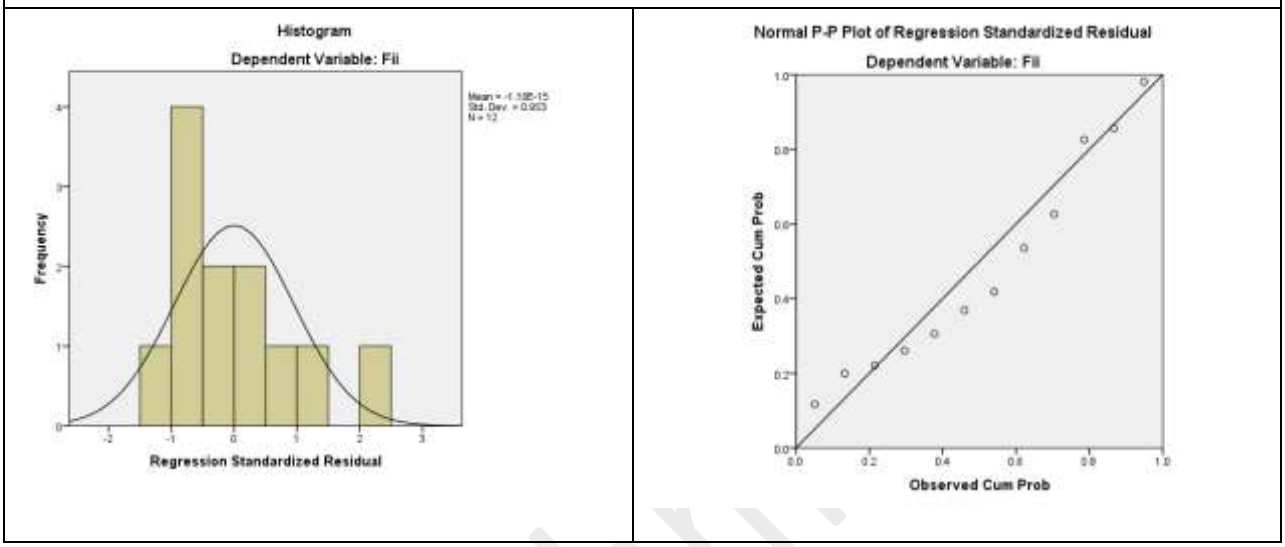
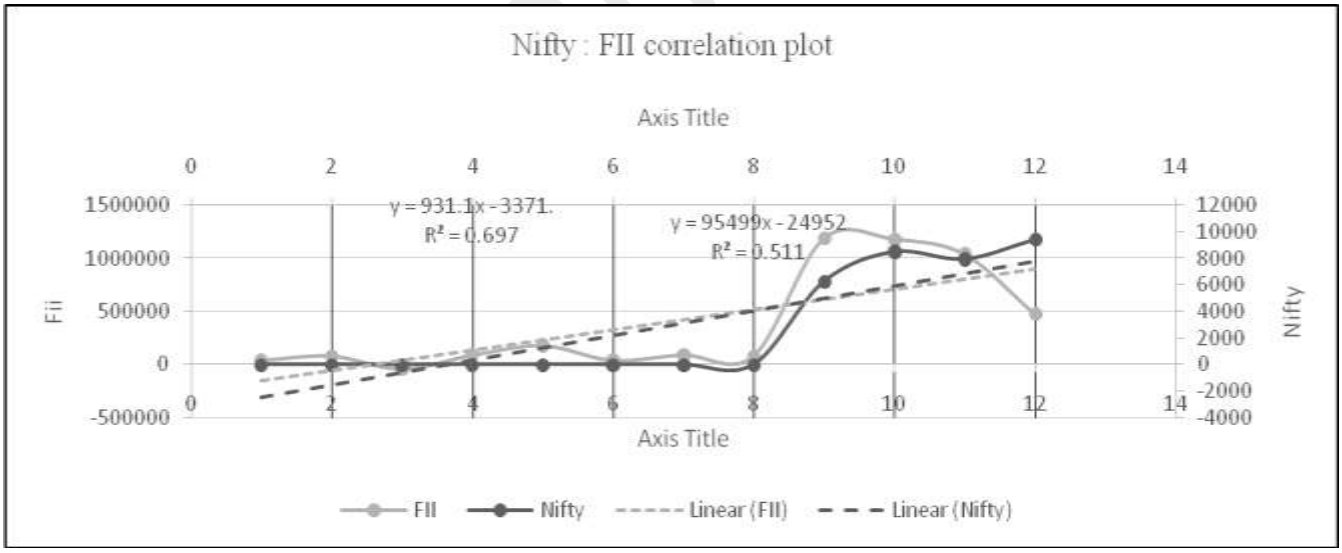


Fig.6. Nifty: FII Correlation Plot



STATISTICAL ANALYSIS

For the purpose of statistical analysis we have considered 11 years data from 2006 to 2017 of FIIs net investment, BSE SENSEX, NSE S&P CNX NIFTY. Statistical analysis is carried out to find the association between FIIs and SENSEX, NIFTY during the study period. Since the data was taken for 11 years the internal and extraneous factors have been changing overtime which

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might have impact on the capital market. In this study correlation and regression was used taking FII as Independent variable and NIFTY as dependent variable.

Table.9.shows the net investment by FIIs and Nifty from 2006 to May 2017.During the year 2000 net investment was 6703.48 billions Nifty was 1263.55 points. Net FIIs Sensex and nifty grew positively over the years and achieved □. 80914.8 crores during 2007then it experienced a sudden drift of negative investments during 2008 to the tune of □.-41,215.5 millions. In the same period Sensex and nifty was also at the low of 2959.15 points and 9647.31points. During the next year the market showed a positive movement as the net FIIs and Sensex and nifty was on the rising front.

Correlation helps to measure the degree of relationship between the variables. Correlation of Foreign Institutional Investment and NSE nifty is 0.654 showing strong positive correlation. This is further supported by the Nifty: FII correlation plot wherein the trend lines are almost parallel,

R Square is the coefficient of simple determination. It expresses the extent of variation in the dependent variable as explained uniquely or jointly by the independent variables. The value of R square ranges from 0 to 1.Small values indicate the model does not fit the model well. From the Table10the value of R square for FII and Nifty is 0.428,implying that 42.8% of the change in dependent variable was explained by the independent variable.

Hence the Null hypothesis(Ho).i.e., S&P CNX NIFTY Indices does not rise with the increase in the Foreign Institutional Investment, is rejected and the Alternate Hypothesis (H_a): S&P CNX NIFTY Indices rise with the increase in the Foreign Institutional Investment, is accepted.
The above analysis shows that NIFTY is highly dependent on FIIs

The ANOVA tests the acceptability of the model from a statistical perspective. The Regression row displays information about the variation accounted for by the model. The Residual row displays information about the variation that has not been accounted by the model. The regression is much less than residual sums of squares, which indicates that around 82% of the variation in NIFTY is explained by the model. However, F statistic is found significant, since the p value (0.000) less than 0.05.

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Observations

- Impact of FIIs on S&P CNX Nifty: From the above discussion, it is clear that FIIs and will influence S&P CNX Nifty movement to a greater extent. Further, it is evident that S&P CNX Nifty has seen an increase when the FII inflows into the market were increased. While, increase m the cash outflows of FIIs has decreased the S&P CNX Nifty points. The Pearson correlation values indicate positive correlation between the foreign institutional investments and the movement of Nifty.
- There is no correlation between equity and debt flow of FII.
- In the year 2008, the investments made in equity are very less compared to other years, due to global meltdown.
- The year 2010 has the highest inflow of funds by FII, due to the movement of funds by

FIIs into different financial asset classes, including emerging Indian Capital Markets.

- FII are driven by different factors, like market size, Stable corporate governance, productivity costs, lower exchange rates, better infrastructure and initiatives, operating conditions, liberalized trade policies and labour costs.
- The main reason why FIIs are attracted to Indian markets is due to the provision of goods and services at convincing costs, and also availability of qualified and skilled personal at minimal incentives, the scarcity of employment opportunities in India, drive FIIs to hire well qualified professionals at lower costs.

CONCLUSION

The important result of this analysts is that FIIs influence the stock market behaviour upto a certain extent, but there are numerous other reasons which determine the volatility of the S&P CNX Nifty. Also FII investment decisions are major factors for stock market boom and crash in India but there are numerous other reasons which determine the trend of FIIs inflow and outflows. Also India's rapid annual growth rate for more than X per cent is reflected in the performance of funds investing in the country In 2008 FIIs have withdrawn □. 60.905.90 Croce and on the contrary FIIs invested □91. 067.60 cr in 2009 which reflect that strong economic conditions plays very vital role in influencing FIIs inflows in the country.

In developing countries like India foreign capital helps in increasing the productivity of labor and to build up foreign exchange reserves to meet the current account deficit. Foreign Investment provides a channel through which country can have access to foreign capital. Higher Senses indices and high price earnings ratio are die country level factors attracting more foreign investments in India.

Finally from the above data analysis and findings, it can be concluded that FIIs have a significant impact on S&P (CNX Nifty apart from other numerous factors and hence the Null hypothesis is accepted)

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