

“A STUDY ON VOLATILITY OF SENSEX WITH SPECIAL REFERENCE TO MAJOR MARKET PLAYERS”

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Abstract

India is a developing economy which has undergone a series of developmental events in last five years. Demonetization, Introduction of GST, Launch of Make in India Initiative with Reforms in FDI Policy and Support of the Government for Start-Ups has given a new dimension to Indian mantra of development which in turn made India as a hub of investment for FII and FDI Investors.

The paper makes an attempt to identify Impact of FII in the Indian Stock Market. An attempt is made to study the relationship between Sensex movements, FII Inflow/Outflow, Investment by Mutual Funds in equity, Debt and Future & Options segments by applying Statistical Tools. Thus overall impact of these Players on the Stock Market and on Economy is studied. Paper has also made scrutiny into Banking Sector to identify impact of NPA on the economy and stocks. It also looks into the other policy matters which has resulted in vibrations in the market.

Paper concludes suggesting the measures to identify the major players and empower them as it is necessary to build future developing India.

Key Words- FII, Development, NPA, Reforms.

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INTRODUCTION

National Stock Exchange is one of the stock market, which acts as a key place in the circulation of currency where high volatility is maintained. In 1992 government Liberalized foreign investment into the Indian market and there was a huge inflow of foreign currency into the Indian market. The Indian economy has experienced large swings in growth and inflation over the past decade. GDP growth weakened sharply during the global financial crisis (GFC) due to a decline in export demand from advanced economies and a slump in investment. Nonetheless, activity rebounded and high inflation became entrenched after the GFC, supported by an increase in government spending and expansionary monetary policy. While growth subsequently softened due to the withdrawal of stimulus and the rising price of crude oil, more recently, conditions have improved along several dimensions. GDP growth has trended higher, inflation has come down, external fragilities (relating to currency volatility and the size of the current account deficit) have abated and the fiscal position has become more sustainable. The rapid pace of growth in recent years has seen India become the third largest economy in the world on a purchasing power parity (PPP) basis (International Monetary Fund 2017). While India's importance in global trade has grown over the past few decades, its share remains modest at less than 2 per cent. Nonetheless, the resurgence in domestic demand in recent years has underpinned a rebound in India's imports. The data observed in past few months gives a clear evidence that there is a huge investment going into the stock markets through various sources and the number of companies listed in the National stock exchange has also increased significantly. The current paper is prepared to study the relation between the stock index movement in the National stock exchange and the FII flow into Indian markets.

Recent Developments

With the improvement in the economic scenario, there have been various investments in various sectors of the economy. Some of the important recent developments in Indian economy are as follows:

- Exports from India increased 15.48 per cent year-on-year to US\$ 351.99 billion in April-November 2018.
- Nikkei India Manufacturing Purchasing Managers' Index (PMI) stood at 53.2 in December 2018, showing expansion in the sector.

- Mergers and Acquisitions (M&A) activity in the country has reached US\$ 82.1 billion in 2018 (up to November).
- Income tax collection in the country reached Rs 2.50 lakh crore (US\$ 35.88 billion) between April-November 2018.
- Companies in India have raised around US\$ 5.52 billion through Initial Public Offers (IPO) in 2018 (up to November).
- India's Foreign Direct Investment (FDI) equity inflows reached US\$ 389.60 billion between April 2000 and June 2018, with maximum contribution from services, computer software and hardware, telecommunications, construction, trading and automobiles.
- India's Index of Industrial Production (IIP) rose 5.6 per cent year-on-year in April-October 2018.
- Consumer Price Index (CPI) inflation rose moderated to 2.33 per cent in November 2018 from 3.38 per cent in October 2018.
- India is expected to have 100,000 Start-ups by 2025, which will create employment for 3.25 million people and US\$ 500 billion in value, as per Mr T V Mohan Das Pai, Chairman, Manipal Global Education.
- The World Bank has stated that private investments in India is expected to grow by 8.8 per cent in FY 2018-19 to overtake private consumption growth of 7.4 per cent, and thereby drive the growth in India's gross domestic product (GDP) in FY 2018-19.
- India is expected to retain its position as the world's leading recipient of remittances in 2018, with total remittances touching US\$ 80 billion, according to World Bank's Migration and Development Brief.

Major Players in the Indian Stock Market

○ Foreign institutional investors (FIIs)

Foreign Portfolio/Institutional Investors have been one of the biggest drivers of India's financial markets and have invested around Rs 12.51 trillion (US\$ 171.81 billion) in India between FY02-18. Highly developed primary and secondary markets have attracted FIIs/FPIs to the country. Investments by FIIs/FPIs in India are regulated by the Securities and Exchange Board of India (SEBI) while the ceilings on such investments are maintained by the Reserve Bank of India (RBI). Following are the few types of FIIs investing in India:

- Hedge Funds
- Foreign Mutual Funds
- Sovereign Wealth Funds
- Pension Funds
- Trusts
- Asset management Companies
- Endowments, University Funds, etc.

Some of the recent significant FII/FPI developments are as follows:

- The total market capitalization (M-cap) of all the companies listed on Bombay Stock Exchange (BSE) rose to a record high level of Rs 142.25 trillion (US\$ 1.95 trillion) in 2017-18.
- In 2018-19 (up to December 31, 2018), FIIs have pulled Rs 94,070 crore (US\$ 13.48 billion) from the Indian financial markets.
- Union Bank of Switzerland (UBS) maintained its Nifty target at 9,500 by March 2019.
- In December 2018, Morgan Stanley raised its one year Sensex target to 47,000.
- Investments by foreign portfolio investors (FPIs) in Indian capital markets have reached Rs 6,310 crore (US\$ 904.11 million) in November 2018 (up to November 22, 2018).
- In September 2018, Embassy Office Parks filed the papers for India's first Real Estate Investment Trusts (REIT).
- A report filed by a panel appointed by the Securities and Exchange Board of India (SEBI) on December 04, 2018 has proposed direct overseas listing of Indian companies and other regulatory changes.
- In September 2018, the Securities and Exchange Board of India relaxed the Know-Your-Client (KYC) requirement for Foreign Portfolio Investors (FPIs).
- In September 2018, SEBI allowed Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) to start commodity derivate segments.
- SEBI has also allowed foreign entities to participate in the commodity derivatives segment of Indian stock exchanges, to help them hedge their exposures. It has also proposed to allow NonResident Indians (NRIs) to invest through FPI route after meeting specific KYC norms.
- In August 2018, SEBI reduced the timeline for public issue of debt securities from 12 days to six days.

- Foreign Portfolio Investors are also allowed to invest up to 25 per cent in Category III Alternative Investment Funds (AIF) in India. Different types of funds such as hedge funds, Private Investment in Public Equity (PIPE) funds, etc. are operating in India as Category III AIFs.
- Investments by FPIs have also been allowed in Real Estate Investment Trusts (REITs) and Infrastructure Investment Trust (InvITs).

- **Banks**

As per the Reserve Bank of India (RBI), India's banking sector is sufficiently capitalised and well-regulated. The financial and economic conditions in the country are far superior to any other country in the world. Credit, market and liquidity risk studies suggest that Indian banks are generally resilient and have withstood the global downturn well. Indian banking industry has recently witnessed the roll out of innovative banking models like payments and small finance banks. RBI's new measures may go a long way in helping the restructuring of the domestic banking industry. The digital payments system in India has evolved the most among 25 countries with India's Immediate Payment Service (IMPS) being the only system at level 5 in the Faster Payments Innovation Index (FPII).*

Key investments and developments in India's banking industry include:

- As of September 2018, the Government of India launched India Post Payments Bank (IPPB) and has opened branches across 650 districts to achieve the objective of financial inclusion.
- The total value of mergers and acquisition during 2017 in NBFC diversified financial services and banking was US\$ 2,564 billion, US\$ 103 million and US\$ 79 million respectively.
- In May 2018, total equity funding's of microfinance sector grew at the rate of 39.88% to Rs 96.31 billion (Rs 4.49 billion) in 2017-18 from Rs 68.85 billion (US\$ 1.03 billion).
- As of September 2018, the Government of India has made the Pradhan Mantri Jan Dhan Yojana (PMJDY) scheme an open ended scheme and has also added more incentives.

NEED FOR THE STUDY

The study is undertaken with a need to identify promotion or regulation of FII investment in India as in the recent years FII are playing a very important role in the volume of turnover in NSE and BSE

OBJECTIVE OF STUDY

The objective of this study is to find out the significant relation between the FII, DII Mutual Funds and the Indian stock market (NSE).

SCOPE OF STUDY

This study will help us to know the importance of financial Investment in the Indian Financial market. It is helpful to identify the impact of FII on Sensex. The study will help us to give valuable recommendations to from suitable strategies to encourage or regulate FII, DII, Mutual Funds investments in India.

RESEARCH METHODOLOGY

The data has been collected for the past 13 months from the NSDL relating to 2018 January to 2019 January and the following test has been performed to find out the impact of FII in Indian stock market.

Study has used statistical tools such as and Karl Pearson correlation for data of the past 13 months to find out the relationship between FII, DII, Mutual Funds and Sensex movement. The sources used for secondary Data collection are NSE, BSE, NSDL reports, Business Line, Economic Times, The Hindu and few books on Statistics.

LIMITATIONS OF STUDY

- The study is undertaken by analysing data relating to a particular time only (For period of 13 months).
- The analysis is done by using some statistical techniques such as Karl Pearson Correlation, which have few limitations.

Tools of Analysis

- **Correlation Analysis**

The degree of relationship between the variables under consideration is measured through the correlation analysis. The measure of correlation called the correlation coefficient the degree of relationship is expressed by coefficient which range from correlation $-1 \leq$ or $\geq +1$. A sign indicates the direction of change. The correlation analysis enables us to have an idea about the degree and direction of the relationship between the two variables under study.

Direction of the Correlation Indicated by sign; (+) or (-)

Positive relationship – Variables change in the same direction. As X is increasing, Y is increasing, As X is decreasing, Y is decreasing.

Negative relationship – Variables change in opposite directions. As X is increasing, Y is decreasing as X is decreasing, Y is increasing

Karl Pearson's Coefficient of Correlation

A ratio between the co-variance between two variables to the product of their standard deviations is called Karl Pearson's correlation coefficient.

- ✓ Pearson's 'r' is the most common correlation coefficient.
- ✓ Karl Pearson's Coefficient of Correlation denoted by- 'r'
- ✓ The coefficient of correlation 'r' measure the degree of linear relationship between two variables say x & y.
- ✓ Karl Pearson's Coefficient of Correlation denoted by- $-1 \leq r \leq +1$
- ✓ Degree of Correlation is expressed by a value of Coefficient
- ✓ Direction of change is Indicated by sign (- ve) or (+ ve).
- ✓ When deviation taken from actual mean: $r(x, y) = \frac{\sum xy}{\sqrt{\sum x^2 \sum y^2}}$
- ✓ When deviation taken from an assumed mean: $r = \frac{N \sum dx dy - \sum dx \sum dy}{\sqrt{N \sum dx^2 - (\sum dx)^2} \sqrt{N \sum dy^2 - (\sum dy)^2}}$

Interpretation of Correlation Coefficient (r)

- ✓ The value of correlation coefficient 'r' ranges from -1 to +1
- ✓ If $r = +1$, then the correlation between the two variables is said to be perfect and positive
- ✓ If $r = -1$, then the correlation between the two variables is said to be perfect and negative

- ✓ If $r = 0$, then there exists no correlation between the variables

Assumptions of Pearson's Correlation Coefficient

- There is linear relationship between two variables, i.e. when the two variables are plotted on a scatter diagram a straight line will be formed by the points.
- Cause and effect relation exists between different forces operating on the item of the two variable series.

Limitation of Pearson's Coefficient

- ✓ Always assumes linear relationship
- ✓ Interpreting the value of r is difficult.
- ✓ Value of Correlation Coefficient is affected by the extreme values.
- ✓ Time-consuming method

Analysis and Interpretation of data

Table No. 1

Study of FII Investment in Equity and Debt Segment and its Relationship with Sensex (Correlation Analysis)					
Date	Sensex (X)	Net Purchase / Sales - FII Equity (Y)	Date	Sensex (X)	Net Purchase / Sales - FII Debt (Y)
Jan-19	36,256.69	-504.54	Jan-19	36,256.69	-2,601.07
Dec-18	36,068.33	2,299.61	Dec-18	36,068.33	5,804.98
Nov-18	36,194.30	10,563.51	Nov-18	36,194.30	2,262.77
Oct-18	34,442.05	-27,622.96	Oct-18	34,442.05	-10,019.22
Sep-18	36,227.14	-9,622.83	Sep-18	36,227.14	-10,527.94
Aug-18	38,645.07	-2,028.81	Aug-18	38,645.07	2,366.77
Jul-18	37,606.58	490.67	Jul-18	37,606.58	178.22
Jun-18	35,423.48	-1,899.55	Jun-18	35,423.48	-10,005.65
May-18	35,322.38	-4,977.30	May-18	35,322.38	-17,543.09
Apr-18	35,160.36	-6,467.90	Apr-18	35,160.36	-11,868.30
Mar-18	32,968.68	13,372.40	Mar-18	32,968.68	-7,297.82
Feb-18	34,184.04	-12,491.36	Feb-18	34,184.04	-2,771.36
Jan-18	35,965.02	13,383.76	Jan-18	35,965.02	8,931.55
	Correlation	0.117848692	Correlation		0.440639997
	S.D (Y)	10782	S.D (Y)		7519.550015
	S.D (X)	1448.771165	S.D (X)		1391.934312
	Average (y)	-1,961.95	Average (Y)		-4,083.86
	Average (X)	35,728.01	Average (X)		35,728.01

Analysis of FII Equity and Sensex

From the study it is found that there is a positive correlation(0.117) between FII investment (in equity market) and Sensex Movement. Whenever the SENSEX shows an increasing trend, the FII investors slightly increase their equity holdings by increasing the investment. Of course, in some months they have sold their investments even though the SENSEX was showing a positive movement as they were booking profits. It is observed that the pattern of investment and sale is purely based on SENSEX movement. As the elections are nearing the gross purchase and sales is also coming down. In the month of December, the volume was low as most of the FII's cleared their holdings and book profits. AS we analyse equity investment and Sensex Movement, we can

conclude that even though there is a positive correlation the association is not very close. The average investment in FII equity is – 1961.92 which indicates selling trend.

Analysis of FII Debt and Sensex

From the study it is found that there is a positive correlation (0.44) between FII investment (in debt market) and Sensex Movement. Whenever the SENSEX shows an increasing trend the FII investors increase their Debt holdings by increasing the investment. It is observed that the volume of investment and sale is less in debt securities as profitable opportunities are less in debt. In most of the cases debt market call for holding of investments, as most of the FII invests in Debt market to balance their investment. As the elections are nearing the gross purchase and sales is also coming down. In the month of December the volume was low as most of the FII's clear their holdings and book profits. When we analyse data closely in the month of April, May June, September, October, we could see more sale of investment as it indicates quarter end, half yearly maturity of certain securities. We can conclude that there is a positive correlation and the association is better compared to FII equity and Sensex.

Table No. 2

FII investment in stock Futures and Options its relationship with Sensex (Correlation Analysis)					
Date	Sensex (X)	FII Stock Futures (Y)	Date	Sensex (X)	FII Stock Options (Y)
<u>Jan-19</u>	36,256.69	3660.23	<u>Jan-19</u>	36,256.69	253.66
<u>Dec-18</u>	36,068.33	-2521.59	<u>Dec-18</u>	36,068.33	921.69
<u>Nov-18</u>	36,194.30	-3196.49	<u>Nov-18</u>	36,194.30	247.85
<u>Oct-18</u>	34,442.05	8457.13	<u>Oct-18</u>	34,442.05	8457.13
<u>Sep-18</u>	36,227.14	-1334.94	<u>Sep-18</u>	36,227.14	-1334.94
<u>Aug-18</u>	38,645.07	4058.56	<u>Aug-18</u>	38,645.07	4058.56
<u>Jul-18</u>	37,606.58	8290.05	<u>Jul-18</u>	37,606.58	8290.05
<u>Jun-18</u>	35,423.48	1007.46	<u>Jun-18</u>	35,423.48	1007.46
<u>May-18</u>	35,322.38	2632.45	<u>May-18</u>	35,322.38	2632.45
<u>Apr-18</u>	35,160.36	4992.71	<u>Apr-18</u>	35,160.36	4992.71

<u>Mar-18</u>	32,968.68	4418.16	<u>Mar-18</u>	32,968.68	4418.16
<u>Feb-18</u>	34,184.04	12666.95	<u>Feb-18</u>	34,184.04	12666.95
<u>Jan-18</u>	35,965.02	12207.74	<u>Jan-18</u>	35,965.02	12207.74
Correlation	-0.197734813		Correlation	-0.207416606	
S.D (X)	1391.934312		S.D (X)	1391.934312	
S. D (y)	5121.711347		S. D (y)	4430.807821	
Average (X)	35,728.01		Average (X)	35,728.01	
Average (Y)	4,256.80		Average (Y)	4,524.57	

Analysis of FII investment in Stock futures and Sensex.

From the study it is found that there is a negative correlation (-0.19) between FII investment in stock futures and Sensex Movement. Whenever the SENSEX was showing an increasing trend the FII investors had slightly decreased their holdings by selling the holdings. Of course, in some months they have increased their investments even though the SENSEX was showing a positive movement as they were taking positions. It is observed that the pattern of investment and sale is purely based on anticipation of currency movements. As we are aware, future contracts are entered in to cover the risk exposures and the main reasons for the companies or corporations to use future contracts is to offset their risk exposures and limit themselves from any fluctuations in price. The ultimate goal of an investor using futures contracts to hedge is to perfectly offset their risk. In real life, however, this can be impossible. Therefore, individuals attempt to neutralize risk as much as possible instead.

As the elections are nearing the gross purchase and sales is also coming down. In the month of December the volume was low as most of the FIIs clear their holdings and book profits. When we analyse FII investment in Futures and Sensex Movement we can conclude that even though there is a negative correlation the association is not very close. The average investment in FII Futures is Rs.4, 256.80Crore which shows more contracts are entered as market is becoming more volatile as a measure to cover the risk exposure.

Analysis of FII investment in Stock Options and Sensex.

From the study it is found that there is a negative correlation(-0.20) between FII investment in stock Options and Sensex Movement. Whenever the SENSEX is showing an increasing trend the FII investors had slightly decreased their option holdings by selling the holdings by exercising the right to sell. Of course, in some months they have increased their investments even though the SENSEX was showing a positive movement as they were taking positions with bullish view. It is observed that the pattern of investment and sale is purely based on anticipation of market volatility as a measure to cover the risk. Since option contract are conditional derivative contracts that allow buyers of the contracts (option holders) to buy or sell a security at a chosen price. Option buyers are charged an amount called a "premium" by the sellers (writers) for such a right. The average investment in FII Option is Rs. 4,524.57 crore which shows more contracts are entered as market is becoming more volatile as election are the way as a measure to cover the risk exposure.

Table No.3

Study of Mutual Fund Investment In Equity and its Relationship with Sensex (Correlation Analysis)		
Date	Sensex (X)	Equity Y (Net Purchase / Sales, Rs. in Crore)
Jan-19	36,256.69	6,541.54
Dec-18	36,068.33	2,918.97
Nov-18	36,194.30	4,895.60
Oct-18	34,442.05	24,047.32
Sep-18	36,227.14	7,904.92
Aug-18	38,645.07	4,094.53
Jul-18	37,606.58	3,995.02
Jun-18	35,423.48	6,485.78
May-18	35,322.38	13,618.82
Apr-18	35,160.36	11,293.46

Mar-18	32,968.68	9,255.50
Feb-18	34,184.04	15,832.27
Jan-18	35,965.02	8,990.75
	Correlation	-0.611415165
	Standard Deviation (Y)	5654.32443
	Standard Deviation (X)	1,391.93
	Average (Y)	9,221.11
	Average (X)	35,728.01

Analysis of Mutual Fund Investment in Equity and Sensex

From the study it is clear that there is a negative correlation (-0.60) between Mutual Fund Investment in Equity and Sensex Movement. Whenever the SENSEX is found increasing, the Mutual Funds Companies are found selling their holdings, except in some months where they have increased their investments in spite of SENSEX showing a positive movement as they were taking positions with bullish view. It is observed that the pattern of investment and sale is purely based on the anticipation of market volatility. Since majority of the mutual funds make investments in a falling market and sell the investments in the raising market, we can see a strong negative correlation as they anticipate profit or capital appreciation when compared with that of future and options. The average investment by Mutual Funds in Equity is Rs. 9221.11 crore which shows more amount is invested by Mutual Funds in the equity market as compared with FII Future and Options.

Table No. 4

Relationship between FII & DII net Investment and Sensex Movement (Correlation Analysis)					
Date	SENSEX (X)	FII Net Purchase / Sales(Y)	Date	SENSEX (X)	DII Net Purchase / Sales (Y)
Jan-19	36,256.69	127.67	Jan-19	36,256.69	2,146.87
Dec-18	36,068.33	-1,103.37	Dec-18	36,068.33	375.55
Nov-18	36,194.30	4,934.11	Nov-18	36,194.30	1,309.47
Oct-18	34,442.05	-29,201.20	Oct-18	34,442.05	26,033.90
Sep-18	36,227.14	-9,468.68	Sep-18	36,227.14	12,504.04
Aug-18	38,645.07	-2,228.53	Aug-18	38,645.07	2,822.72
Jul-18	37,606.58	-2,768.75	Jul-18	37,606.58	3,845.87
Jun-18	35,423.48	-10,249.17	Jun-18	35,423.48	14,146.15
May-18	35,322.38	-12,359.71	May-18	35,322.38	15,054.48
Apr-18	35,160.36	-9,620.56	Apr-18	35,160.36	8,663.88
Mar-18	32,968.68	7,904.85	Mar-18	32,968.68	6,693.91
Feb-18	34,184.04	-18,619.15	Feb-18	34,184.04	17,813.01
Jan-18	35,965.02	9,568.00	Jan-18	35,965.02	398.73
Correlation		0.24271721	Correlation		-0.512064198
Standard Deviation (Y)		10454.20075	Standard Deviation (Y)		7675.110297
Standard Deviation (X)		1391.934312	Standard Deviation (X)		1,391.93431172629
Average (Y)		-13,326.17	Average (Y)		8,600.66
Average (X)		35,594.48	Average (X)		35,594.48

Analysis of FII Investment in Equity and Sensex

From the study it is found that there is a positive correlation(0.24) between FII investment (in equity market) and Sensex Movement. Whenever the SENSEX is showing an increasing trend the FII investors had slightly increased their equity holdings by increasing the investment. In some months they have sold their investments even though the SENSEX was showing a positive movement as they were booking profits. It is also observed that as the elections are nearing, the gross purchase and sales is also coming down. In the month of December, the volume was low as most of the FII's clear their holdings and book profits. When we analyse equity investment and Sensex movement, we can conclude that even though there is a positive correlation the

association is not very close. The average investment in FII equity is – 13,326.17 Crore which shows selling trend.

Analysis of DII Equity and Sensex

From the study it is found that there is a negative correlation (-0.51) between DII investment (in equity market) and Sensex movement. Whenever the SENSEX showed an increasing trend the DII investors had sold their equity holding. It is observed that the pattern of investment and sale is purely based on SENSEX movement. As the elections are nearing the gross purchase and sales is also coming down. In the month of December, the volume was low as most of the DII's clear their holdings and book profits as majority of the DII take off for a month. When we analyse equity investment and Sensex Movement, we can conclude that even though there is a negative correlation the association is good but in opposite direction. The average investment in DII equity is 8,600.66 Crore which shows a positive trend.

Analysis of DII Equity and FII Equity Inter Relationship

When we analyse the relationship between FII and DII, we find that there is a close association but in opposite direction in majority of the months. Whenever FIIs have withdrawn their investment, DIIs have increased their investment (2018 February, March, April, May, June, July, August, September, October, December) which clearly shows that FIIs are giving a direction to the market. They have more influence on Sensex with the volume they trade. On the other hand, DIIs just follow the market once correction takes place. It is true in majority of the markets that FIIs dominate the market and gives a direction to trade, of course with different views and sentiments.

Table No. 5**Advances and NPAs of Domestic Banks by Priority and Non-Priority Sectors ***

(Amount in ` Billion)

Year	Priority Sector			Non-Priority Sector			Total		
	Gross Advances	Gross NPAs	Gross NPAs as Per Cent of Total	Gross Advances	Gross NPAs	Gross NPAs as Per Cent of Total	Gross Advances	Gross NPAs	Gross NPAs as Per Cent of Total
Public Sector Banks									
2017	19,599.15	1,542.76	24.1	31,823.09	4,867.80	75.9	51,422.24	6,410.56	100.0
2016	18,737.48	1,281.16	25.5	32,084.08	3,739.52	74.5	50,821.56	5,020.68	100.0
2015	16,859.54	936.85	35.7	31,593.15	1,690.60	64.3	48,452.69	2,627.45	100.0
2014	15,192.98	791.92	36.5	30,711.60	1,375.47	63.5	45,904.58	2,167.39	100.0
2013	12,790.00	669.00	42.9	27,769.00	890.00	57.1	40,559.00	1,559.00	100.0
Nationalised Banks**									
2017	14,061.51	1,241.83	26.4	20,703.61	3,458.57	73.6	34,765.12	4,700.40	100.0
2016	13,417.72	988.69	25.5	21,000.28	2,890.16	74.5	34,417.71	3,878.84	100.0
2015	12,506.58	679.61	35.4	21,717.87	1,239.25	64.6	34,224.45	1,918.86	100.0
2014	10,711.41	530.44	37.7	21,248.82	876.66	62.3	31,960.23	1,407.09	100.0
2013	8,891.00	405.00	42.2	19,170.00	554.00	57.8	28,061.00	959.00	100.0
SBI Group									
2017	5,537.64	300.93	17.6	11,119.48	1,409.23	82.4	16,657.12	1,710.16	100.0
2016	5,319.77	292.47	25.6	11,083.79	849.36	74.4	16,403.56	1,141.83	100.0
2015	4,352.96	257.24	36.3	9,875.27	451.35	63.7	14,228.23	708.59	100.0
2014	4,481.57	261.49	34.4	9,462.78	498.81	65.6	13,944.35	760.30	100.0
2013	3,899.00	264.00	44.1	8,599.00	335.00	55.9	12,498.00	599.00	100.0
Private Sector Banks									
2017	6,520.04	132.93	18.0	14,528.76	605.49	82.0	21,048.80	738.42	100.0
2016	5,619.77	101.39	21.0	12,297.04	382.41	79.0	17,916.81	483.80	100.0
2015	4,427.62	72.11	22.8	9,945.77	243.65	77.2	14,373.39	315.76	100.0
2014	3,830.55	60.55	26.6	8,286.76	166.89	73.4	12,117.31	227.44	100.0
2013	3,157.00	52.00	26.0	7,309.00	148.00	74.0	10,466.00	200.00	100.0
All SCBs (Excluding Foreign Banks)									
2017	26,119.19	1,675.69	23.4	46,351.85	5,473.29	76.6	72,471.04	7,148.98	100.0
2016	24,357.25	1,382.55	25.1	44,381.11	4,121.93	74.9	68,738.37	5,504.48	100.0
2015	21,287.16	1,008.96	34.3	41,538.92	1,934.25	65.7	62,826.08	2,943.21	100.0
2014	19,023.53	852.47	35.6	38,998.36	1,542.36	64.4	58,021.90	2,394.83	100.0
2013	15,947.00	721.00	41.0	35,078.00	1,038.00	59.0	51,025.00	1,759.00	100.0

Year	Banks	Gross NPAs	Gross Advances	Gross NPAs to Gross Advances
2018	NATIONALISED BANKS	8956013	61416982	14.58
	PRIVATE SECTOR BANKS	1258629	27258907	4.62
	FOREIGN BANKS	138297	3633047	3.81
	STATE BANK OF INDIA & ITS ASSOCIATES	1778106	19519311	9.11
2017	NATIONALISED BANKS	5069217	39144423	12.95
	PRIVATE SECTOR BANKS	919146	22667207	4.05
	FOREIGN BANKS	136210	3436112	3.96
	STATE BANK OF INDIA & ITS ASSOCIATES	1219686	19107755	6.38
2016	NATIONALISED BANKS	4179878	39111756	10.69
	PRIVATE SECTOR BANKS	558531	19726588	2.83
	FOREIGN BANKS	157980	3765043	4.20
	STATE BANK OF INDIA & ITS ASSOCIATES	735084	17191685	4.28
2015	NATIONALISED BANKS	2049595	38975490	5.26
	PRIVATE SECTOR BANKS	336904	16073394	2.10
	FOREIGN BANKS	107578	3366090	3.20
	STATE BANK OF INDIA & ITS ASSOCIATES	798165	16087376	4.96
2014	NATIONALISED BANKS	1474474	36071821	4.09
	PRIVATE SECTOR BANKS	241835	13602528	1.78
	FOREIGN BANKS	115678	2995755	3.86
	STATE BANK OF INDIA & ITS ASSOCIATES	627785	14188827	4.42
2013	NATIONALISED BANKS	1016831	31412859	3.24
	PRIVATE SECTOR BANKS	203817	11512463	1.77
	FOREIGN BANKS	79256	2604049	3.04

Table No. 6**Analysis of Non-Performing Assets and Its impact on Sensex and Stock Market**

When we analyse Non-Performing Assets data, we come to know that majority of the NPAs belong to Nationalised banks (Gross NPA to Gross Advances Ratio) when compared with private sector banks, which clearly indicates poor quality of the assets and poor accountability. Majority of the nationalised banks have not evaluated its customers in terms of their credit worthiness and ability to repay liability. They just lent money to improve their business and in some cases influence of local authorities has also worked. When we analyse the position majority of NPA belongs to Non Priority sector which shows poor evaluation of customers and

liberal lending policies. NPA is highest in the recent years since many scandals came in to picture during this period which has led to strict provisioning for NPA.

When we analyse the private sector banks NPA (Gross NPA to Gross Advances Ratio) is lowest during all the years when compared with Nationalised banks, which clearly indicates better quality of assets and strict lending policies.

When we analyse SBI and its associate's largest group in the country its NPA (Gross NPA to Gross Advances Ratio) is maximum in the recent years the group alone has significant amount of NPA which calls for immediate correction of lending policy.

Impact of banking shares on Sensex movement can be analysed when we go through the share prices of some of the reputed banks. It's remarkable to know that 12 banks comes under NIFTY 50 list. When we analyse SBI Bank its share prices has hit as low as Rs.156 because of creeping NPA and its merger with its associate banks in the month of March 2016 which has affected Sensex very badly. Similarly banks like PNB has fallen to Rs. 59 in November 2018 all-time lowest in last 5 years after Neerav Modi Scandal of course one of the largest scandals in banking sector which made the investors to move away from banking stocks which in turn resulted in fall of Sensex. From last two years Indian Stock Market is witnessing more volatility because of reforms, measures and changes that have taken place in the field of Indirect Taxation, Merger of banks, Real estate reforms, and measures to strengthen the loan recovery.

Findings Suggestions and Conclusion

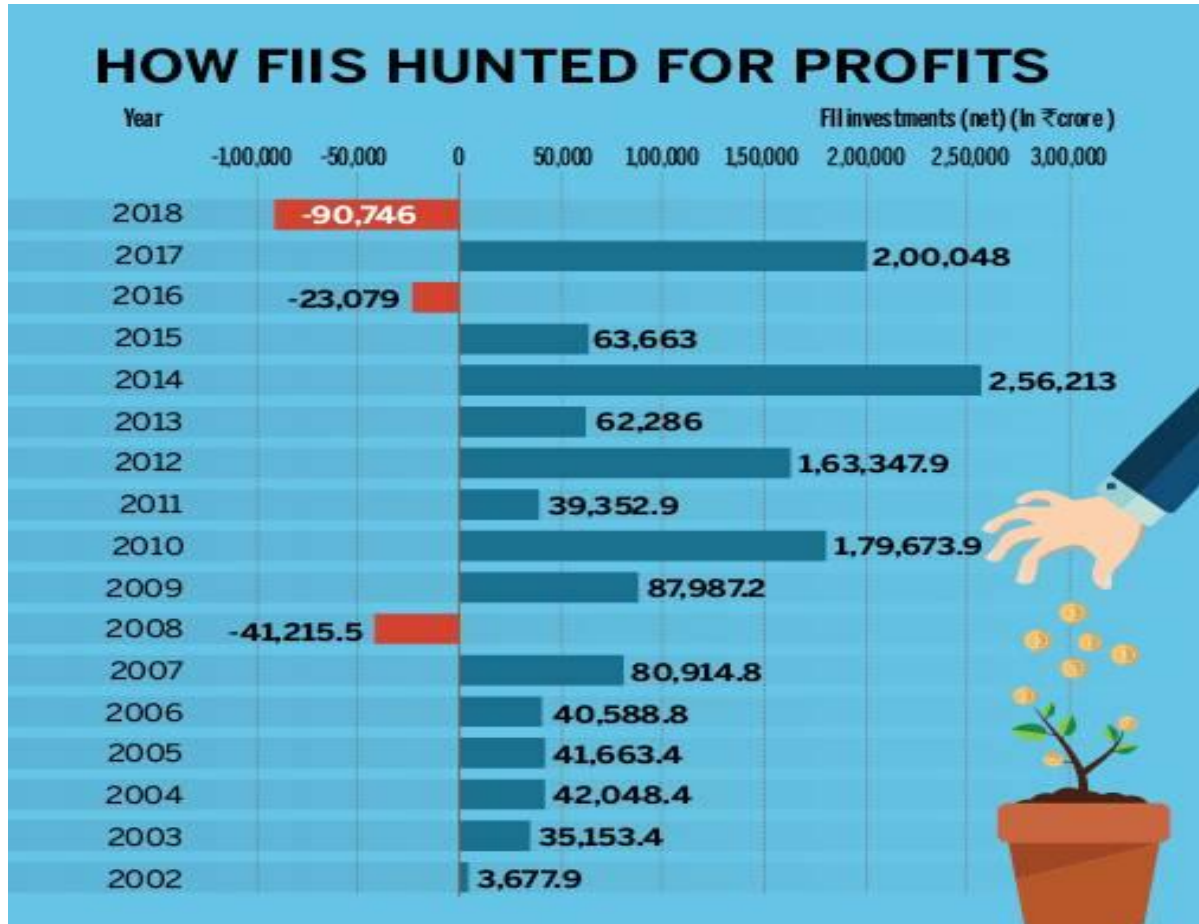
When we look into Indian stock market Foreign investor fund flows are very important for Indian markets to grow, particularly when there is no growth or hardly any growth in the equity assets under management of the mutual fund industry and premium collection is not growing in the insurance sector for a sustained period of time. The net FII withdrawals could well cross the psychological mark of Rs 1 lakh crore.

Foreign institutional investors (FIIs) have given Indian capital markets a big thumbs-down this year, withdrawing Rs 90,746 crore so far, the highest ever. Interest rate hike by Federal Reserve

and a falling rupee led the FIIs out of the Indian market. With two and a half months still remaining in the current calendar year, the net FII withdrawals could well cross the psychological mark of Rs 1 lakh crore. FIIs have been on the withdrawing spree on the back of US providing more attractive options for investing. FIIs pulled out funds from Indian markets mainly on account of sharp depreciation in Indian rupee, present rate hike as well as in expectation of future rate hikes by Federal Reserve, tight liquidity condition in money market and IL&FS event triggered pulling out of funds by FIIs in Indian markets. What has saved the markets from a potential mayhem is the Rs 97,739.02-crore investment by domestic institutional investors (DIIs) in 2018 which has kept the indices in the green zone on a year-to-date basis. Since 2002, FIIs have made net withdrawals from the Indian market only three times: 2008, 2016 and 2018. In 2008, when the recession hit the US market and Indian markets tanked, FIIs withdrew Rs 41,215.5 crore in search of safe havens for their funds. In 2016 too, FIIs were in bearish mood on the Indian markets withdrawing Rs 23,079 crore from the country. And this year, the markets have moved in a see-saw mode keeping investors and traders guessing about their future course. Earlier in the year, Sensex and Nifty hit their all-time highs of 36,443 and 11,171 levels, respectively.

However, markets came off their highs on imposition of 10% LTCG tax in Union Budget on February 1, ripple effects of rising bond yields in US on global markets and prospects of trade war between the US and its trading partners. On August 29, as part of another leg of rally, the market scaled all-time highs on better corporate earnings, higher global markets and surging midcap and small cap stocks. While the Sensex hit a new high of 38,989 intraday, Nifty hit new peak of 11,760 level. The Sensex had gained 14% on an year-to-date basis, Nifty clocked 11.19% rise during the same period. Currently, the Sensex and Nifty have pared gains to 3.25% and 0.51% on an year-to-date basis. With market hit by heightened volatility in 2018, FIIs looked in no mood to stay in India. They withdrew a massive Rs 90,746 crore till October 15. In 2017, FIIs infused Rs 2,00,048 crore into the Indian market. Analysts have attributed the increase in FII outflows to high valuations of the Indian stock market and rising yields in the US bond market.

Fig. No.1



As we are aware that India is also an economy influenced by global trends FII's should be given more opportunities to make investments with more friendly initiatives as it is very clear from the study that FIIs are giving a direction to Indian economy by making the investment thus helping the growth of Sensex and Market. During February 2000, Sensex was over 6000 points which has reached 38,990 points in December 2018. This clearly indicates the contribution of FII and DII for the development of market and trade. It is believed that Sensex will continue its march further and within 20 years it may cross 60,000 points. India being one of the powerful emerging economies where nearly 65% of the population are below the age group of 35 years has better future prospects as it will attract more investments across various sectors in the future. The government should bring policy reforms which helps in attracting inflows and help in economic growth.

References

1. <https://dbie.rbi.org.in/DBIE/dbie.rbi?site=home> (Reserve bank of India/ Data base on Indian Economy/ Bank Performance Indicators)
2. <https://www.nseindia.com/> (NSE India Web site)
3. <https://www.businesstoday.in/markets/stocks/fiis-take-exit-route-in-2018-log-worst-ever-outflows/story/285389.html> (Business today/ markets/ stocks/ Author- Aseem Thapliyal, Title- “Foreign investors make historic run from India! Over Rs 90,000 crore withdrawn from markets in 2018” Date- October 17, 2018)
4. <https://www.ibef.org/industry/banking-presentation>
5. <https://www.ibef.org/industry/banking-india.aspx>
6. <https://corporatefinanceinstitute.com/resources/knowledge/other/non-performing-assets-in-indian-banks/>