International Journal of Commerce and Management Research
ISSN: 2455-1627, Impact Factor: RJIF 5.22
www.managejournal.com
Volume 3; Issue 1; January 2017; Page No. 68-73

Testing volatility of foreign institutional investments on stock return of selected banking companies listed in BSE

[1] Dr. M Anbukarasi, [2] M Devaki

[1] Assistant Professor, Department of Commerce Bharathiar University, Coimbatore, Tamil Nadu, India
[2] M.Phil Research Scholar, Department of Commerce Bharathiar University, Coimbatore, Tamil Nadu, India

Abstract
In this research, an attempt has been made to test the Foreign Institutional Investments on Stock return of selected Banking companies listed in BSE. The empirical analysis has been done by using Autoregressive conditional Heteroskedasticity model (ARCH), generalized autoregressive conditional Heteroskedasticity (GARCH) model and ARCH is mean model and it is based on monthly data for the time period from April 2007 to August 2016. The analyses expose volatility between foreign institutional investments and stock return of selected banking companies listed in BSE such as State Bank of India, HDFC Bank Ltd, ICICI Bank Ltd, Axis Bank Ltd, Kotak Mahindra Bank Ltd, Bank of Baroda, Punjab National Bank, Indusind Bank Ltd, Bank of India and Canara Bank. The GARCH (1,1) model is determined for FIIs and Stock return of banking companies. The study concludes that Foreign Institutional Investments are influencing the stock return of selected banking companies and also the result reveals that GARCH (1,1) model satisfactorily explains volatility and is the most appropriate model for explaining volatility clustering of the series.

Keywords: Return Volatility, Stationarity (ADF), ARCH and GARCH Model

1. Introduction
Foreign Institutional Investors were first allowed to invest in Indian bourses past 1992, as a measure of outsiders in the financial markets of particular company. From September 14, 1992, with suitable restrictions, Foreign Institutional Investors (FII) and Overseas Corporate Bodies (OCBs) were permitted to invest in financial instruments. Both SEBI's registration and RBI's general permissions under FERA were to hold good for five years and were to be renewed after that period. RBI's general permission under FERA could enable the registered FII to buy, sell and realize capital gains on investments which have been made through initial corpus remitted to India, to invest in all recognized stock exchanges through a designated bank branches and to appoint domestic custodians for custody of investments held. The investors of FIIs are actually the outsiders of our mother country. FIIs refer to investors that are from other countries and that are investing in the Indian financial markets. FIIs investment avenues are Pension Funds, Mutual Funds, Investment Trust, Insurance or Reinsurance Companies, Endowment Funds, University Funds, Foundations or Charitable Trust or Charitable Securities, Asset Management Companies, Nominee Companies, Trustees, Banks, Foreign Central Banks, Foreign Governmental Agencies, Sovereign Wealth Funds, International or Multilateral Organization or Agency.

1.1 Review of Literature
Dr. Manjinder Kaur and Dr.Sharanjit S. Dhillon (2015) [1], *"Impact Of Foreign Institutional Investors Investment On Indian Stock Market Volatility : A Study Of BSE Sensex"* paper focuses on measurement of stock market returns volatility in India and contribution of Foreign Institutional Investors (FIIs) investment to this stock market returns volatility. Both symmetric model GARCH (1,1) and asymmetric models E-GARCH (1,1) and TARCH (1,1) have been applied using a set of high frequency daily data on Bombay Stock Exchange sensitive index (BSE Sensex) for a period from Jan 3, 1990 to Dec 30, 2013. Similarly daily data on gross purchase and gross sales by FIIs for the same period are considered. GARCH coefficients are greater than ARCH coefficients each model further confirming persistence of volatility in Indian stock market returns. Study found the existence of leverage effect in Indian stock market returns as indicated by negative and significant coefficients of leverage in E-GARCH models and significantly positive (greater than zero) coefficients of TARCH under TARCH models.

Sripriya. V and Dr. R. Shanmugam (2014) [4], *"Foreign Institutional Investors' Trading Activity and Volatility in Indian Stock Market"* they focus of this paper is on the analysis of volatility of the select market indices due to trading activity FIIs. Econometric techniques like unit root test and GARCH (1,1) model etc. to analyze the data. Main objective of the study is to examine the impact of trading activity of FIIs on the stock market returns in terms of volatility. Monthly data of the variables selected in the study were for a period of ten years from April 2003 to March 2013. The monthly returns of various BSE and NSE Stock indices are calculated from the average monthly prices. It has been observed that volatility persists in India stock market due to net FII activity leading to volatility clustering during the period of study. The results also highlight that Sensex and Nifty are affected by past volatility. To conclude, the advent of FIIs in Indian stock market has helped the Indian stock markets to expand and increase volatility.

Dr. Rakesh Kumar and Miss Sarita Gautam (2014) [5], *"An Empirical Study On Impact of FII and Other Stock Exchanges*

Volatility On 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 3 months period data (i.e. from 1 April 2014 to 30 June 2014) have been taken in to consideration. The main objective is to measure the selected factors affected on the stock exchange index. The appropriate statistical techniques as correlation model, multivariate regression model etc. have been used for analyzing the data. This study have been found out that there is a close and direct relationship of the BSE Sensex with the FTSE and NASDAQ stock exchange as well as there is inverse relationship of the BSE Sensex with the FII and Nikkei.

1.2 Statement of the Problem

Indian stock market entered into a new rally in the form of Foreign Institutional Investments with the banking companies. A major factor that has been driving the institutional investors to new heights that has been increasing the stock return volatility of BSE banking companies. The equity segment of Foreign Institutional Investments is ignited by the banking companies. This event implied the researcher to conduct the testing volatility of FIIs on stock return of selected banking companies listed in BSE.

1.3 Objectives

1. To analyze Foreign Institutional Investments and Stock Return of selected banking companies listed in BSE.
2. To know the return volatility of selected banking companies listed in BSE due to FIIs.

1.4 Hypotheses

H_{01}: There is no stationarity in FII and Sock return of selected banking companies.

H_{02}: There is no GARCH effect in Stock return volatility of BSE listed banking companies due to Foreign Institutional Investments.

1.5 Research Methodology

The study is an empirical research which analyses the Foreign Institutional Investments in selected listed Banking companies of Bombay Stock Exchange. The study is conducted with monthly time series data for a period from April 2006 to August 2016. The study also examines the impact and stock return volatility of selected banking companies listed in BSE. Purposive sampling technique is adopted to select the banking companies listed at BSE. BSE has listed 39 banking companies which that the researcher has apparently selected top 10 financial services based on Market capitalization. Selected banking companies as State Bank of India, HDFC Bank Ltd, ICICI Bank Ltd, Axis Bank Ltd, Kotak Mahindra Bank Ltd, Bank of Baroda, Punjab National Bank, Indusind Bank Ltd, Bank of India and Canara Bank.

2. Results & Discussion

Descriptive analysis of foreign institutional investments and selected banking companies stock return of BSE

Table 1: Descriptive Statistics of Foreign Institutional Investments and Selected Banking Companies listed in BSE from April 2007 to August 2016

	FIIs (in Crores)	SBI (%)	HDFC (%)	ICICI (%)	AXIS (%)	KMB (%)	BOB (%)	PNB (%)	IIB (%)	BOI (%)	CB (%)
Mean	1912.11	0.19	1.29	0.15	1.84	1.50	1.22	0.11	4.01	0.61	1.24
Median	1734.54	1.27	1.69	1.71	1.65	3.37	1.74	0.63	4.23	0.58	1.62
Maximum	25376.45	46.65	40.44	77.98	69.08	72.57	60.15	49.49	69.20	42.10	57.75
Minimum	-29447.51	-79.24	-66.01	-60.88	-80.51	-37.12	-79.43	-73.08	-30.85	-36.67	-40.12
Std. Dev.	9705.69	15.76	14.40	16.52	17.02	16.04	16.24	15.38	15.58	15.40	15.45
Skewness	-0.06	-0.89	-0.92	0.39	-0.31	0.54	-0.75	-0.68	0.81	0.16	0.45
Kurtosis	3.34	7.94	6.94	7.73	8.52	5.76	8.44	7.10	5.32	3.07	4.63
Jarque-Bera	0.60	128.51	88.05	107.22	144.09	40.87	148.37	87.00	37.19	0.50	16.06
Probability	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.78	0.00

Source: Calculated

The above table 1 depicts the descriptive statistics of monthly Foreign Institutional Investments (FIIs) and selected banking companies listed in BSE for the period from April 2007 to August 2016. Average mean of FIIs is Rs. 1912.11 Crores and its standard deviation is Rs. 9705.69 Crores which implies that there is a greater degree of variability in FII due to higher deviation. It means that it is not normally distributed among its means. Mean value of stock return is high in IIB (4.01 %) and low in PNB (0.11 %). Standard deviation shows the deviation of risk that is that highly deviated in Axis and less deviated in HDFC. Negative skewness implies that the distribution has a long left tail and positive skewness shows that the distribution has a right tail for the variables. Kurtosis value is above **3** which means that the distribution of variables is leptokurtic. Jarque-Bera (J-B) test statistics p-value is less than 0.05 is significant at 5% level which shows that the data are normally distributed except FII and BOI.

2.1 Augmented Dickey - Fuller Test (Unit Root Test)

H_0: There is no stationarity in FII and Sock return of selected banking companies.

Table 2: Augmented Dickey – Fuller test of FII, DII and Stock Returns of selected banking companies listed in BSE from April 2007 to August 2016

S. No	Variables	Level		First Difference	
		t-Statistic	Prob.	t-Statistic	Prob.*
1	Fiis	-7.797144	0.0000*	-	-
2	State Bank Of India	-2.172632	0.4997	-9.868211	0.0000

3	Hdfc Bank Ltd.	-2.54416	0.3067	-8.878602	0.0000
4	Icici Bank Ltd.	-2.194937	0.4874	-12.03729	0.0000
5	Axis Bank Ltd.	-2.820359	0.1932	-11.17689	0.0000
6	Kotak Mahindra Bank Ltd.	-2.661086	0.2548	-9.941812	0.0000
7	Bank Of Baroda	-1.853041	0.672	-10.43267	0.0000
8	Punjab National Bank	-1.719889	0.7361	-10.71565	0.0000
9	Indusind Bank Ltd.	-3.03238	0.1282	-13.26762	0.0000
10	Bank Of India	-3.008503	0.1346	-11.46999	0.0000
11	Canara Bank	-2.111873	0.5333	-10.56902	0.0000

Source: Complied and Calculated * Significant at 5% level

Table 2 depicts the results of the Unit root test applied to determine the order of integration among the time series data. The Augmented Dickey - Fuller test was used at level and first difference under assumption of constant and trend. According to the results of the test, Foreign Institutional Investments (FIIs) is stationary at the level itself, that is, the degree of integration appears to be *I*(0). The banking companies like State Bank of India, HDFC Bank Ltd., ICICI Bank Ltd., Axis Bank Ltd., Kotak Mahindra Bank Ltd., Bank of Baroda, Punjab National Bank, Indusind Bank Ltd., Bank of Baroda and Canara Bank are not stationary at the level, but it became stationary when its first difference was taken. That is, the degree of integration of this series is *I* (1).

2.2 Volatility in Arch and Garch Model

Volatility Changes in Arch Effect Model

H_0: There is no ARCH effect in FIIs and Stock return of selected banking companies in BSE

Table 3: Heteroskedasti city Test: Arch For the Period April 2007 To August 2016

Variables	Arch Effect			
	F-statistics	**Prob. F**	**Obs*R-squared**	**Prob. Chi-Square**
SBI	1111.6590	0.0000	101.9153	0.0000
HDFC	219.3331	0.0000	74.5911	0.0000
ICICI	318.8181	0.0000	83.2699	0.0000
AXIS	86.9034	0.0000	49.4313	0.0000
KMB	181.0808	0.0000	69.6750	0.0000
BOB	136.0699	0.0000	61.9329	0.0000
PNB	972.3715	0.0000	100.6176	0.0000
IIB	395.0456	0.0000	87.6062	0.0000
BOI	790.4579	0.0000	98.3181	0.0000
CB	139.0663	0.0000	62.5353	0.0000

Source: Compiled and Calculated *****Significant at 5%level

ARCH effect of Stock Return of selected banking companies variables is exhibited in the above table 3. The result displays that the p-value of F statistics is less than 0.05. Thus, the null hypothesis (H_0) that there is no ARCH effect in FIIs and stock return of selected banking companies in BSE is rejected at 5% level of significance.

2.3 Volatility Changes in Garch Effect Model

H0: There is no GARCH effect between Stock Return of SBI and FIIs

Table 4: Stock Return of Sbi and Fiis Result with Garch Model

Dependent Variable: SBI				
Method: ML - ARCH (Marquardt) - Normal distribution				
GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*GARCH(-1) + C(5)*FII				
Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	10.41261	0.071371	145.8939	0.0000
	Variance Equation			
C	0.222626	0.077143	2.885869	0.0039
RESID (-1)^2	0.456536	0.306878	1.487682	0.1368
GARCH (-1)	0.182846	0.386538	0.473035	0.6362
FII	-1.10E-05	6.84E-08	-160.4591	0.0000

Source: Complied and Calculated *Significant at 5% level

The GARCH results of SBI return and FIIs for the period of April 2007 to August 2016. It is inferred from the above table 4 that the p-value of GARCH is not less than the significant level of 5%. It means that the last month volatility of SBI Return is not influenced by FIIs. Hence the null hypothesis is accepted that there is no GARCH effect between Stock Return SBI and FIIs. So, the result concluded that volatility of SBI return is not influenced by its own GARCH factor.

H_0: There is no GARCH effect of FIIs on Stock Return of HDFC.

Table 5: Stock Return of HDFC and FIIs Result with Garch Model

Dependent Variable: HDFC				
Method: ML - ARCH (Marquardt) - Normal distribution				
GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*GARCH(-1) + C(5)*FII				
Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	9.949135	0.029651	335.5447	0.0000
	Variance Equation			
C	0.020996	0.008188	2.564181	0.0103
RESID (-1)^2	0.183747	0.095946	1.915111	0.0555
GARCH(-1)	0.536313	0.235511	2.277235	0.0228
FII	2.04E-06	1.14E-07	17.92054	0.0000

Source: Complied and Calculated *Significant at 5% level

From the above table 5 demonstrates GARCH result of HDFC and FIIs for the period of April 2007 to August 2016. The GARCH p-value is 0.02 which is less than 0.05 @ 5% level of Significance that implies that last month volatility of HDFC return is influenced by FIIs. Hence the null hypothesis is rejected that there is a GARCH effect between Stock Return of HDFC and FIIs. So, the result concluded that volatility of HDFC return is influenced by its own GARCH effect.

H_0: There is no GARCH effect on Stock Return of ICICI due to FIIs.

Table 6: Stock Return of ICICI and FIIs Result with Garch Model

Dependent Variable: ICICI				
Method: ML - ARCH (Marquardt) - Normal distribution				
GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*GARCH(-1) + C(5)*FII				
Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	9.892977	0.017610	561.7776	0.0000
	Variance Equation			
C	0.007798	0.006367	1.224641	0.2207
RESID (-1)^2	0.972981	0.414027	2.350041	0.0188
GARCH (-1)	0.086578	0.213427	0.405657	0.6850
FII	1.92E-07	3.31E-07	0.579222	0.5624

Source: Complied and Calculated *Significant at 5% level

From the above table 6 demonstrates the GARCH effect result for the period of April 2007 to August 2016. P-value of GARCH is 0.68 is more than 0.05 at 5% significance level. This indicates that last month volatility of ICICI return is not influenced by FIIs. Hence, the null hypothesis is accepted that there is no GARCH effect between Stock Return of ICICI and FIIs. So, the result concluded that volatility of ICICI return is not influenced by its own GARCH effect.

H_0: There is no GARCH effect between Stock Return of AXIS and FIIs

Table 7: Stock Return of AXIS and FIIs Result with Garch Model

Dependent Variable: AXIS				
Method: ML - ARCH (Marquardt) - Normal distribution				
GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*GARCH(-1) + C(5)*FII				
Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	10.00026	0.026323	379.9003	0.0000
	Variance Equation			
C	0.009032	0.009178	0.984185	0.3250
RESID (-1)^2	0.759883	0.410836	1.849601	0.0644
GARCH (-1)	0.226264	0.310853	0.727880	0.4667
FII	7.14E-08	4.62E-07	0.154702	0.8771

Source: Complied and Calculated *Significant at 5% level

It is observed from the table 7 that the GARCH term was found to be insignificant at a significance level of 5% because its p-value is 0.46 which is greater than 0.05 for the period of April 2007 to August 2016. This implies that last month volatility of AXIS return is not influenced by FIIs. Therefore, the null hypothesis is accepted at 5% level that there is no GARCH effect between Stock Return of AXIS and FIIs. The result concluded that volatility of AXIS return is not influenced by its GARCH factor.

H_0: There is no GARCH effect on stock return of KMB due to FIIs.

Table 8: Stock Return of KMB and FIIs result with Garch Model

Dependent Variable: KMB				
Method: ML - ARCH (Marquardt) - Normal distribution				
GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*GARCH(-1) + C(5)*FII				
Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	9.522965	0.065113	146.2528	0.0000
	Variance Equation			
C	0.119229	0.029107	4.096282	0.0000
RESID (-1)^2	0.149878	0.326178	0.459499	0.6459
GARCH (-1)	0.599381	0.173359	3.457455	0.0005
FII	-8.29E-06	1.48E-07	-56.11769	0.0000

Source: Complied and Calculated *Significant at 5% level

Table 8 demonstrates the GARCH result for the period of April 2007 to August 2016. p-value of GARCH is 0.00 which is less than 0.05 at 5% level of significance that implies that last month volatility of KMB result is influenced by FIIs. Hence the null hypothesis is rejected that there is a GARCH effect between Stock Return of KMB and FIIs. So, the result concluded that volatility of KMB return is influenced by its own GARCH effect.

H_0: There is no GARCH effect between Stock Return of BOB and FIIs.

Table 9: Stock Return of BOB and FIIs Result with Garch Model

Dependent Variable: BOB				
Method: ML - ARCH (Marquardt) - Normal distribution				
GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*GARCH(-1) + C(5)*FII				
Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	9.133766	0.107959	84.60393	0.0000
	Variance Equation			
C	0.400223	0.275129	1.454671	0.1458
RESID (-1)^2	0.147596	0.494864	0.298256	0.7655
GARCH (-1)	0.590124	0.297441	1.984003	0.0473
FII	-2.63E-05	2.07E-07	-126.8722	0.0000

Source: Complied and Calculated *Significant at 5% level

The GARCH results of BOB return and FIIs for the periods of April 2007 to August 2016. It is inferred from the above table 9 that the p-value of GARCH is less than the significant level of 5%. It means that the last month volatility of BOB Return is influenced by FIIs. Hence the null hypothesis is rejected that there is a GARCH effect between Stock Return BOB and FIIs. So, the result concluded that volatility of BOB return is influenced by its own GARCH factor.

H_0: There is no GARCH effect of FIIs on stock Return of PNB.

Table 10: Stock Return of PNB and FIIs Result with Garch Model

Dependent Variable: PNB				
Method: ML - ARCH (Marquardt) - Normal distribution				
GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*GARCH(-1) + C(5)*FII				
Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	9.534799	0.025767	370.0352	0.0000
	Variance Equation			
C	0.057356	0.026350	2.176725	0.0295
RESID (-1)^2	1.164947	0.560411	2.078734	0.0376
GARCH (-1)	-0.253060	0.164164	-1.541508	0.1232
FII	1.85E-06	1.09E-06	1.696029	0.0899

Source: Complied and Calculated *Significant at 5% level

From the above table 10, demonstrates GARCH result of PNB and FIIs for the period of April 2007 to August 2016. The GARCH p-value is 0.12 which is more than 0.05 @ 5% level of Significance that implies that last month volatility of PNB return is not influenced by FIIs. Hence the null hypothesis is accepted that there is no GARCH effect between Stock Return of PNB and FIIs. So, the result concluded that volatility of PNB return is not influenced by its GARCH effect.

H_0: There is no GARCH effect on Stock Return of IIB due to FIIs.

Table 11: Stock Return of IIB and FIIs Result with Garch Model

Dependent Variable: IIB				
Method: ML - ARCH (Marquardt) - Normal distribution				
GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*GARCH(-1) + C(5)*FII				
Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	8.831007	0.020374	433.4525	0.0000
	Variance Equation			
C	0.000289	0.001742	0.165895	0.8682
RESID(-1)^2	0.760148	0.297461	2.555450	0.0106
GARCH(-1)	0.198949	0.231330	0.860025	0.3898
FII	5.19E-07	4.30E-07	1.208033	0.2270

Source: Complied and Calculated *Significant at 5% level

From the above, table 11 demonstrates the GARCH effect result for the period of April 2007 to August 2016. P-value of GARCH is 0.38 which is more than 0.05 at 5% significance level. This indicates that last month volatility of IIB return is not influenced by FIIs. Hence the null hypothesis is accepted that there is no GARCH effect between Stock Return of IIB and FIIs. So, the result concluded that volatility of IIB return is not influenced by its GARCH effect.

H_0: There is no GARCH effect between Stock Return of BOI and FIIs.

Table 12: Stock Return of BOI and FIIs Result with Garch Model

Dependent Variable: BOI				
Method: ML - ARCH (Marquardt) - Normal distribution				
GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*GARCH(-1) + C(5)*FII				
Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	8.774855	0.022979	381.8587	0.0000
	Variance Equation			
C	0.021668	0.011567	1.873279	0.0610
RESID (-1)^2	0.855636	0.347573	2.461747	0.0138
GARCH (-1)	0.016696	0.206104	0.081006	0.9354
FII	-3.28E-07	5.65E-07	-0.581363	0.5610

Source: Complied and Calculated *Significant at 5% level

It is observed from the table 12 that the GARCH term was found to be insignificant at a significance level of 5% because its p-value is 0.93 which is greater than 0.05 for the period of April 2007 to August 2016. That implies that last month volatility of BOI return is not influenced by FIIs. Therefore, the null hypothesis is accepted at 5% level that there is no GARCH effect between Stock Return of BOI and FIIs. The result concluded that volatility of BOI return is not influenced by its GARCH factor.

H_0: There is no GARCH effect of FIIs on Stock Return of CB.

Table 13: Stock Return of CB and FIIs Result with Garch Model

Dependent Variable: CB				
Method: ML - ARCH (Marquardt) - Normal distribution				
GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*GARCH(-1) + C(5)*FII				
Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	8.918362	0.030855	289.0438	0.0000
	Variance Equation			
C	0.038854	0.016727	2.322842	0.0202
RESID (-1)^2	0.876759	0.308760	2.839616	0.0045
GARCH (-1)	-0.085254	0.129800	-0.656807	0.5113
FII	-1.67E-06	6.93E-07	-2.409660	0.0160

Source: Complied and Calculated *Significant at 5% level

Table 13 demonstrates the GARCH result for the period of April 2007 to August 2016. P-value of GARCH is 0.51 which is greater than 0.05 at 5% level of significance. It implies that last month volatility of CB result is not influenced by FIIs. Hence, the null hypothesis is accepted that there is no GARCH effect between Stock Return of CB and FIIs. So, the result concluded that volatility of CB return is not influenced by its GARCH effect.

3. Conclusion

The present study attempted to know the stock returns volatility of banking companies in Foreign Institutional Investments (FIIs). The investor is an ambassador in the Indian stock market. The data used for analysis were 113 monthly observations for the period of April 2007 to August 2016. Empirical results implies that GARCH (1,1) model can adequately describes the BSE banking companies with FIIs. The result suggest that the volatility in the Foreign Institutional Investments is influencing the stock return of selected banking companies in BSE and also the result reveals that GARCH (1,1) model satisfactorily explains volatility and is the most appropriate model for explaining volatility clustering of the series.

4. Reference

1. Dr. Manjinder Kaur, Dr. Sharanjit S Dhillon. "Impact of Foreign Institutional Investors Investment on Indian Stock

Market Volatility: A Study of BSE Sensex", International Journal in Commerce, IT & Social Sciences [IJCISS], 2015; 2(7):85-96.
2. Dr. Kajal Gandhi. A Study of Foreign Institutional Inflows and Indian Stock Market Volatility, International Journal of Scientific Research. 2015; 4(5):3-6.
3. Bashir Ahmad Joo, Zahoor Ahmad Mir. Impact of FIIs Investment on Volatility of Indian Stock Market: An Empirical Investigation. Journal of Business & Economic Policy. 2014; 1(2):106-114.
4. Sripriya V, Dr. Shanmugam R. Foreign Institutional Investors' Trading Activity and Volatility in Indian Stock Market, 2014; 4(11):223-225.
5. Dr. Rakesh Kumar, Miss Sarita Gautam. An Empirical Study on Impact of FII And Other Stock Exchanges Volatility On BSE Stock Exchange Volatility", International Journal of Engineering Technology, Management and Applied Sciences [IJETMAS], 2014; 2(5):23-32.
6. Jatinder Loomba. Do FIIs Impact Volatility of Indian Stock Market?, International Journal of Marketing, Financial Services & Management Research. 2012; 5(7):80-93.
7. Dr. Gaurav Agarwal *et al.* A Study of Exchange Rates Movement and Stock Market Volatility, International Journal of Business and Management. 2010; 5(12):62-73.
8. Hojatallah Goudarzi, Ramanarayanan CS. Modeling and Estimation of Volatility in the Indian Stock Market, International Journal of Business and Management. 2010; 5(2):85-98.
9. Devdatt J Vyas, Dr. Manoj Shah D. Determinants of Foreign Institutional Investors' Investment and Its Effect on Sensex Movement- A Quarterly Appraisal", International Education & Research Journal [IERJ], 2016; 2(4):113-115.
10. Omprakash Kajipet, Sridhar Ryakala. FIIs Investments and DIIs Investments in India – A Causality Study, An International Journal of Management Studies. 2016; 6(2):91-95.
11. Suman Neupane *et al.* Domestic and Foreign Institutional Investors' Investment in IPOS Pacific-Basin Finance Journal. 2016; 39:197-210.
12. Atin Garg, Chawla KK. A Study of Trend Analysis and Relationship Between Foreign Institutional Investors (FIIs) & Domestic Institutional Investors (DIIs), International Multi Track Conference on Sciences, Engineering & Technical Innovations, 2016, 321-325.
13. Jasneek Arora, Santhosh Kumar. Impact of Foreign Institutional Investors on Indian Capital Market, Pacific Business Review International, 2015; 8(6):17-23.
14. Kotishwar A, Alekhya P. FII, & DII Fund Flow Impact of Mutual Funds Inflows and Outflows – A Study, Madras University Journal of Business and Finance. 2015; 3(2):87-93.
15. Dr. Kajal Gandhi. A Study of Foreign Institutional Inflows and Indian Stock Market Volatility, International Journal of Scientific Research. 2015; 4(5):3-6.