Government Policy and Foreign Portfolio Investment Challenges with Reference to Indian Stock Market

Dr. S. Vanitha,

Assistant Professor,
Department of Commerce and Financial Studies,
Bharathidasan University, Tiruchirappalli,
Tamil Nadu, India.

ABSTRACT

A portfolio is a grouping of financial assets such as stocks, bonds, commodities, currencies and cash equivalents, as well as their fund counterparts, including mutual, exchange-traded and closed funds. A portfolio can also consist of privately tradeable securities like real estate, art and private investments. Portfolios are held directly by investors and/or managed by financial professionals and fund managers. In this article the impact of FDI on Indian stock market and the behaviour and trend of FDI on Indian Stock market is analysed by using GARCH(1,1), Co-integration, Granger Causality and Vector error correction models The study found the coefficient value to be positive at any significant level. In this study analysed correction of past would not be correct the present in significant level during the study.

Keywords: Portfolio, Stock Market, Financial Assets, Investment, Indian Economy.

INTRODUCTION:

Foreign portfolio investment includes, in addition to equity securities and debt securities in the form of bonds and notes, money market instruments and financial derivatives such as options. The foreign portfolio investment is a cross-border investment in securities, with the intention of profit-making rather than management or legal control. IMF (1993) defined foreign portfolio investment as equity and debt issuances, including country funds, depository receipts and direct purchases by foreign investors of less than 10 percent control. The need for foreign capital to supplement domestic resources is being felt by the developing economies, in view of growing mismatch between their domestic capital stock and capital requirements. This is evidenced in the recent attention being given to the drive for foreign capital, especially in developing economies. Fosu and Magnus (2006) and Omisakin et al (2009) pointed out rightly that foreign capital inflow is an important vehicle for augmenting the supply of funds for domestic investment. In this context the proposed project has been designed to identify the policy initiatives towards economic reforms in Indian stock market, particularly with reference to select macro-economic variables. This proposed project will also identify the different types of investors from various countries and their investments, under FPI, for their risk profile etc. for two consecutive periods and compare it with other advanced countries, for a long run perspective.

The term "Portfolio" refers to any combination of financial assets such as stocks, bonds and cash. Portfolios may be held by individual investors and/or managed by financial professionals, hedge funds, banks and other financial institutions. It is a generally accepted principle that a portfolio is designed according to the investors' risk tolerance, time frame and investment objectives. The monetary value of each asset may influence the risk/reward ratio of the portfolio. There are many types of portfolios, including the market portfolio and the zero-investment portfolio. Investors should construct an investment portfolio, in accordance with their risk tolerance and their investing objectives. Investors can also have multiple portfolios for various purposes. It all depends on objectives of the investors.

REVIEW OF LITERATURE:

The paper entitled, 'Foreign Portfolio Investment, Stock Market and Economic Development: A Case Study of India', by Parthapratim Pal (2006), examined the impact of Foreign Portfolio Investment on India's economy and industry. As FPI essentially interacts with the real economy through the stock market, the effect of stock market on the country's economic development was also be examined. The findings of this paper show that the perceived benefits of foreign portfolio investment have not been realized in India. From the results of this study, it can be said that the mainstream argument that the entry of foreign portfolio investors will boost a country's stock market and consequently the economy, does not seem be working in India.

According to the study entitled, 'Net FII Flows into India: A Cause and Effect Study', by Maram Srikanth and Braj Kishore (2012), many developing countries, including India, restricted the flow of foreign capital till the early 1990s and depended on external aid and official development assistance. Later, many developing countries opened up their economies by dismantling capital controls with a view to attracting foreign capital, to strrengthen domestic capital and in the process, to stimulate domestic growth and output.

Rashmi Ranjan Panigrahi (2016),in the paper 'Foreign Institutional Investors: A Study Of Indian Firms & Investors' analysed foreign institutional investors, with reference to Indian firms. The Indian Government openly invites individuals, companies and other institutions to invest directly or indirectly in India after the New Economic Policy of1991 thus they started investing in various financial instruments of money market, capital market, forex market and capital assets of real estates and production activities directly.

Anubha Shrivastav (2013), in the paper 'A Study of Influence of FII Flows on Indian Stock Market', 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. The present paper is an attempt to find out the 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 is any relationship between FII and Indian stock market.

The paper entitled, 'Determinants of FIIs: A Study Of Indian Stock Market', by Amita, (2016), is an attempt to identify the factors affecting the flow of FII funds into India. For identifying the factors affecting the FII inflows into Indian stock market, three dependent variables were considered FIIs Sale (FIIS), Purchases (FIIP) and net investment (FIIN) and 11 independent variables including BSE Return, NSE Return, S & P Return, NSE Risk, BSE Risk, S & P Risk, Exchange Rate, IIP, Inflation, T-bill Yield, and US T-Bill. Multiple regression analysis was applied to achieve the objective of the study, by collecting data for a period of 12 years from the beginning of April 2003 to March end 2015.

The paper entitled, 'Impact of Foreign Institutional Investment in Indian Stock Market', by Rachna Arya (2016), foreign Institutional investors have gained a significant role in Indian stock markets. The dawn of 21st Century has shown the real dynamism of stock market and the various benchmarking of sensitivity index (Sensex), in terms of its highest peaks and sudden falls. It can be said that while return declined reasonably after the entry of FIIs, the volatility has been reduced significantly after their entry. Besides, FIIs investment flows, there may be other reasons as well that may have some degree of influence on market volatility and return.

STATEMENT OF THE PROBLEM:

The foreign portfolio investment creates a positive sentiment in a stock market of a given Country. Apparently it is observed that such cash flows influence the underlying market indicators of the stock market the Underlying market indicators. Often such inflows lead to spiky movements in stock market Indices. Though there are many advantages of foreign portfolio investment, its limitation cannot be ignored. India's foreign portfolio investment period 1993-2006 was comparatively higher than other developing economies. Heavy flow of FPI into India demands systematic investigation to find out whether FPI has contributed to the Indian capital market. High flow of FPI can result in speculation and it could have serious impact on the economic prospects of the country.

NEED OF THE STUDY:

Since the beginning of liberalization, FPI flows into India have steadily grown in importance. Foreign capital flows have come to be acknowledged as one of the important sources of funds for economies, that would like to grow at a rate higher than what their domestic savings can support. This resulted in the integration of global financial markets. As a result, capital started flowing freely across national borders, seeking out the highest rate of return. India is considered a good investment option by world investors in spite of political differences and

lack of infrastructure facility etc. Indian market presents alluring prospects for foreign investors continuously.

OBJECTIVES OF THE STUDY:

- ❖ To find out the impact of FPI on the Indian stock market.
- ❖ To determine the behavior and trend of FPI in the Indian stock market.

HYPOTHESES OF THE RESEARCH:

Null Hypothesis (H01): There is no significant impact of foreign portfolio investment (FPI) on the Indian stock market.
Alternative Hypothesis (H02): There is significant impact of foreign portfolio investment (FPI) on the Indian stock market.

Sample Selection:

In this study, the sample consisted of economic variables and the foreign investments in India. The following criteria were considered in the selection of the sample. The present study is an attempt to examine the impact of foreign portfolio investment, with reference to the stock market performance and economic growth of the country. The monthly data were collected for the period from 01st April, 2008 to 31st March 2018.The focus of this study was on investigating the role and trend of the foreign investor in Indian stock market. The list of variables, selected for the study were as fallow.

Dependent Variables:

- ❖ Foreign portfolio investment
- ❖ Foreign institutional investment
- ❖ ADR/GDR

Independent Variables:

- ❖ Domestic stock market performance
- ❖ Exchange rate
- ❖ Credit worthiness indicators
- ❖ Regional factors
- ❖ Excess of domestic interest rate over foreign interest rate
- ❖ Domestic output growth
- ❖ Foreign output growth

Sources and Collection of the Data:

This research paper was based on secondary data. The data were collected from various data repositories such as RBI, SEBI, moneycontrol.com and several other financial institution sites. The scope of the study was the FPIs investment in the Indian stock market during 2008 to 2018.The data analysis assessed the association between the stock market indicators and FPI investments for the study period. The study was supported by information, collected from internet, books, magazines, journals and Inductive inferences, drawn from the data collected and analysed. To be precise the study evaluated the role of FPI investment in the stock market activity.

Period of Study:

This study rpoposes to analyse the impact of foreign portfolio investment on monthly from 01st April 2008 to 31st March 2018.

Tools Used for the Study

The following tools will be used for the analysis like.

- ❖ Descriptive Statistics- Mean, Standard Deviation, Skewness and Kurtosis.
- ❖ GARCH (1,1) model
- ❖ Unrestricted co-integration
- ❖ Granger causality
- ❖ Vector Error Correction Model

Descriptive Statistics:

The descriptive statisticsis used to analyse the collection of sample data, which include mean, median and mode. The measures of dispersion or variability includes the standard deviation, minimum and maximum value of the variables, kurtosis and skewness.

Mean:

The mean is used as a central tendency of descriptive statistics and it is also known as arithmetic average. The mean value which we get by dividing the total of the value of various given items in a series, by the total number of items

Formula: Mean $\bar{X} = \sum \frac{Xi}{N}$

Where

$\bar{X}$ is the symbol of mean (pronounced as χ bar)
$\sum$ is the symbol of summation
Xi is the value of the items χ, I =1,2,………n
n is the total number of items

Standard Deviation:

Standard deviation is used to measure amount of variation of a set of sample data values. High standard deviation exhibits that the sample data values or points are spill over a wider range of values.

Formula: $\sigma = \sqrt{\frac{\sum(X-\mu)^2}{N}}$

Where,

σ is Population of standard deviation
X is Observation
Σ is Summation of x
μ is Population mean
N is Total number of elements in the population

Skewness:

In descriptive statistics, skewness is used to measure the sign of asymmetry or otherwise called as absolute measure. If the value of skewness is zero, it represents un-skewed distribution or symmetric distribution.

Formula: $S = \frac{\bar{u}^3}{(\bar{u}^2)^{\frac{3}{2}}}$

Where,

u^3 is the unique symmetric unbiased estimator of the third cumulant.
u^2 is the symmetric unbiased estimator of the second cumulant.

Kurtosis:

The Kurtosis measures the degree of distribution. A sign of flattening or "peakedness" of a distribution, means whether data are heavy tailed or light tailed relative to the normal distribution. If the value of kurtosis is 3 then the distribution is normal bell shaped curve.

Formula: $S = \frac{\bar{u}^4}{(\bar{u}^2)^2}$

Where,

μi denotes the i_{th} central moment and particular, μ2 is the variance.

Garch (1,1) Model:

The Generalized Auto Regression Conditional Heteroscedasticity (GARCH) Model estimates the volatility in a set of data and it is specially used to identify the volatility of financial markets. The significance of coefficient in the model indicates the tendency of the shock to persevere.

Formula: $\sigma_t^2 = \omega + \alpha1\epsilon_{t-1}^2 + \cdots + \sigma_q\epsilon_{t-q}^2 + \beta1\sigma_{t-1}^2 + \sigma_p\sigma_{t-p}^2$

Where,

α is the constant,
β is the beta value

p is the order of the GARCH terms σ^2

q is the order of the ARCH terms ϵ^2

ε_t is the error term value, returns residual

Wald Test:

The Bound Test Approach is measured by Wald Test. F- statistic value is compute long run equilibrium relationship between the selected sample variables. If upper bound critical values are assumed that Xt are integrated of order I (1),

The Null hypotheses are as follows:

$$Ho: \beta1= \beta2= \beta3= \beta4= \beta5= \beta6= \beta7 \neq 0$$

Granger Causality:

The Granger Causality is a statistical technique to test the causal relationship between variables.

Formula: $y_t = \alpha_0 + \alpha_1 y_{t-1} + \ldots + \alpha_l y_{t-1} + \beta_1 x_{t-1} + \ldots + \beta_l x_{t-1} + \varepsilon_t$

Formula: $x_t = \alpha_0 + \alpha_1 x_{t-1} + \ldots + \alpha_l x_{t-1} + \beta_1 y_{t-1} + \ldots + \beta_l y_{t-1} + \varepsilon_t$

Where,

α is the constant,

β is represents the beta value

y_t is the y variable, t time and $x_{t\ is\ X}$ variables, t time

ε_t is the error term value

Vector Error Correction Model (VECM):

In statistics, there can be many co-integrating relationships. All variables are treated as independent variables and tests relating to the long-run parameters are possible. The resulting model is known as a Vector Error Correction model (VECM). Thus VECMs directly estimate the speed at which a dependent variable returns to equilibrium after a change in other variables.

LIMITATIONS OF THE STUDY:

This paper concentrates on Indian Stock market and foreign portfolio investment over a decade of 1st APRIL 2008 to 31st MARCH 2018. There are number of factors which influence the stock market movements. FPI, being a very vivid and major factor, influences other factors also. This period under consideration may not be all inclusive as it contains most volatile monetary and fiscal situation all over the world. While carrying on this study, the Research faced the following limitations.

1. The study was based on secondary data, and all the limitations of secondary data will be applicable to the study.
2. This focused only on government policy and foreign portfolio investment challenges in Indian stock market.
3. The study covered only a period of ten years, April 2008 to March 2018.
4. All limitations associated with various tools which were widely used as techniques to analyse and interpret data, are applicable to this study also

Table 1: Results of Descriptive Statistic of Foreign Portfolio Investment in Indian Stock Market During a Study Period of 1st April 2008-31st March 2018

Descriptive Statistics	ADR	CRT	DIR	DOPG	BSE Sensex	EXR	EXRV	FII	FOPG	MSCI
Mean	-0.0001	0.0056	0.0005	0.0051	0.0074	-0.0022	-0.0012	-6.0622	0.0009	0.0020
Maximum	0.1453	0.2325	0.4825	0.1494	0.2826	0.0358	0.0177	34.4238	0.0483	0.1666

Descriptive Statistics	ADR	CRT	DIR	DOPG	BSE Sensex	EXR	EXRV	FII	FOPG	MSCI
Minimum	-0.2240	-0.2509	-0.3111	-0.1426	-0.2389	-0.0549	-0.0278	-668.0000	-0.0387	-0.2750
Std. Dev.	0.0550	0.0905	0.0800	0.0563	0.0627	0.0169	0.0085	61.3975	0.0135	0.0647
Skewness	-0.5017	0.0351	1.4908	-0.1350	0.1207	-0.6852	-0.7145	-10.6609	0.1163	-0.5015
Kurtosis	4.8327	2.8728	16.7459	3.4470	7.2496	3.7659	3.8178	115.4663	4.0720	5.5622
Jarque-Bera	21.6474	0.1046	980.9596	1.3522	89.8332	12.2194	13.4412	64970.4800	5.9665	37.5399
Probability	0.0000	0.9490	0.0000	0.5086	0.0000	0.0022	0.0012	0.0000	0.0506	0.0000

Source: www.bloomberg data.com

Note: Analysis is computed in Eview-7.

Note: CRT (CREDITWORTHINESS), DIR (DOMESTIC INTEREST RATE), DOPG (DOMESTIC OUTPUT GROWTH), BSE Sensex (DOMESTIC STOCK MARKET), EXR (EXCHANGE RATE), EXRV (EXCHANGE RATE VOLATILITY), MSCI (REGIONAL FACTOR), FOPG (FOREIGN OUTPUT GROWTH), FII (FOREIGN INSTITUTIONAL INVESTMENT)

Analysis of Descriptive Statistic Foreign Portfolio Investment During a Study Period of 1st April 2008-31st March 2018

The Table-1 exhibits that the mean returns value of ADR was -0.0001, EXR at -0.0022, EXRV at -0.0012, and FII at -6.0622 recorded negative value whereas CRT at 0.0056, DIR at 0.0005, DOPG at 0.0051, BSE Sensex at 0.0074, FOPG at 0.0009 and MSCI at 0.0020 were positively recorded, during the study period. The standard deviation reveals the risk value of the selected variables and the values of ADR at 0.0550 , CRT at 0.0905 , DIR at 0.0800, DOPG at 0.0563, BSE Sensex at 0.0627, EXR at 0.0169 , EXRV at 0.0085 , FII at 61.3975 , FOPG at 0.0135, MSCI at 0.0647 were higher than the mean returns values of all selected variables.

The skewness value indicates the distribution to be symmetric or skewed. The skewness value of CRT at 0.0351, DIR at 1.4908, BSE Sensex at 0.1207, FOPG at 0.1163 indicated that they were positively skewed or skewed right. It was an asymmetrical distribution, with a long tail to the right (higher values) and positively skewed. While the ARD at -0.5017, DOPG at-0.1350 , EXR at -0.6852, EXRV at -0.7145, FII at-10.6609, MSCI at -0.5015 were negatively skewed. The asymmetrical distribution with a long tail to the left (lower values),indicate that they were negative skewed. The peak was towards the right and the left tail was longer.

The kurtosis value reveals the statistical measure to describe the distribution. The kurtosis value of ARD at 4.8327, DIR at 16.7459, DOPG at 3.4470, BSE Sensex at 7.2496, EXR at 3.7659, EXRV at 3.8178, FII at 115.4663, FOPG at 4.0720 and MSCI at 5.5622 were higher than kurtosis value of three, and it indicated that

these variables were distributed as leptokurtic (peaked distribution), whereas only CRT only secured less than three and it indicated the distribution to be platykurtic (flat distribution).

The probability of Jarque Bera values of all selected variables recorded less than the significant value at 0.05 (5 percent) and 0.10 (10 percent) and only CRT at 0.1046 and DOPG at 1.3522, recorded higher than significant value. Thus, this analysis revealed that the selected variables were normally distributed during the study period. Hence, the null hypothesis "There is no normality of selected macroeconomic variables" was rejected and accepted the alternative hypothesis. The further analysis of the study would end more validity and reliability.

All mean values are lower than the standard deviations values and it indicated that the returns values were lower than the risk values. In other words, the selected variables were associated with high risk. On the basis of the results of the study, investors are performance of selected financial variables and it would assist to make better investment and strategy.

Table 2: Results of Unit Root Test of Foreign Portfolio Investment in indian stock market During a Study Period of 1st April 2008-31st March 2018

Unit Root Test

ADR, CRT, DIR, DOPG, BSE Sensex, EXR, EXRV, FII, FOPG, MSCI

Variables	ADF Test (t-statistics)	1% Level	5% Level	10% Level	Prob.
ADR	-9.4713	-3.48655	-2.88607	-2.57993	0.0001
CRT	-12.963	-3.48655	-2.88607	-2.57993	0.0001
DIR	-10.1935	-3.48655	-2.88607	-2.57993	0.0001
DOPG	-4.35977	-3.49252	-2.88867	-2.58131	0.0001
BSE Sensex	-9.43854	-3.48655	-2.88607	-2.57993	0.0001
EXR	-9.24395	-3.48655	-2.88607	-2.57993	0.0001
EXRV	-9.23987	-3.48655	-2.88607	-2.57993	0.0001
FII	-10.8791	-3.48655	-2.88607	-2.57993	0.0001
FOPG	-9.74962	-3.48705	-2.88629	-2.58005	0.0001
MSCI	-8.43603	-3.48655	-2.88607	-2.57993	0.0001

Source: www.bloomberg data.com

Analysis is computed in Eview-7.

Note: CRT (CREDITWORTHINESS), DIR (DOMESTIC INTEREST RATE), DOPG (DOMESTIC OUTPUT GROWTH), BSE Sensex (DOMESTIC STOCK MARKET), EXR (EXCHANGE RATE), EXRV (EXCHANGE RATE VOLATILITY), MSCI (REGIONAL FACTOR), FOPG (FOREIGN OUTPUT GROWTH), FII (FOREIGN INSTITUTIONAL INVESTMENT)

Analysis of Unit Root Test of Foreign Portfolio Investment in Indian stock market During a Study Period of 1st April 2008-31st March 2018.

According to the table-2, ADF test values of ADR at -9.4713 , CRT at -12.963 , DIR at -10.1935 , DOPG at -4.35977 , BSE Sensex at -9.43854 , EXR at -9.24395 , EXRV at -9.23987 , FII at -10.8791 , FOPG at -9.74962 , MSCI at -8.43603 were less than one percent, five percent and 10 percent values. The probability values of selected variables were less than five percent (0.05) significant value. Thus, the results evidenced that all the selected variables were stationary at level difference. Hence, the null hypothesis "There is no stationary of selected macroeconomic variables" was rejected and the alternative hypothesis was accepted. Hence further study would be more reliable and valid.

Table 3: Results of unrestricted cointegration rank test of Foreign Portfolio Investment in Indian stock market during a study period of 1st April 2008-31st March 2018.

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Probability
None * (ADR)	0.488106	356.6857	239.2354	0.0001
At most 1 *(CRT)	0.415901	280.3471	197.3709	0.0001
At most 2 *(DIR)	0.35592	219.051	159.5297	0.0001
At most 3 *(DOPG)	0.279362	168.8987	125.6154	0.0001

At most 4 *(BSE sensex)	0.265315	131.5503	95.75366	0.0001
At most 5 *(EXR)	0.24098	96.40259	69.81889	0.0001
At most 6 *(EXRV)	0.17794	64.96972	47.85613	0.0006
At most 7 *(FII)	0.159835	42.6324	29.79707	0.001
At most 8 *(FOPG)	0.103716	22.77848	15.49471	0.0034
At most 9 *(MSCI)	0.086355	10.29567	3.841466	0.0013

Trace test indicates 10 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigen value)				
Hypothesized		**Max-Eigen**	**0.05**	
No. of CE(s)	**Eigenvalue**	**Statistic**	**Critical Value**	**Prob.****
None * (ADR)	0.488106	76.33866	64.50472	0.0026
At most 1 *(CRT)	0.415901	61.29606	58.43354	0.0254
At most 2*(DIR)	0.35592	50.15228	52.36261	0.0828
At most 3(DOPG)	0.279362	37.34846	46.23142	0.3215
At most 4(BSE sensex)	0.265315	35.14771	40.07757	0.162
At most 5*(EXR)	0.24098	31.43287	33.87687	0.0952
At most 6(EXRV)	0.17794	22.33732	27.58434	0.2036
At most 7*(FII)	0.159835	19.85391	21.13162	0.0747
At most 8*(FOPG)	0.103716	12.48281	14.2646	0.0938
At most 9 *(MSCI)	0.086355	10.29567	3.841466	0.0013

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Source: www.bloomberg data.com

Analysis is computed in Eview-7.

Analysis of unrestricted co-integration rank test of Foreign Portfolio investment in indian stock market during a study period of 1st April 2008-31st March 2018.

The Table-3 explains that the co-integration results. Trace values of ADR at 356.6857 , CRT at 280.3471 , DIR at 219.051 , DOPG at 168.8987 , BSE sensex at 131.5503 , EXR at 96.40259 , EXRV at 64.96972 , FII at 42.6324 , FOPG at 22.77848 , MSCI at 10.29567, were higher than critical values respectively. The Max-eigen values of ADR at 76.33866 and CRT at 61.29606 were higher than critical values respectively. Trace statistic values and Max-Eigen values of all selected variables were higher than critical values and thus the existence of co-integration in the long run relationship, was established. In further, The probability values of ADR at 0.0001, CRT at 0.0001, DIR at 0.0001, DOPG at 0.0001, BSE sensex at 0.0001, EXR at 0.0001, EXRV at 0.0006, FII at 0.001, FOPG at 0.0034, MSCI at 0.0013 were less than 0.05 (5 percent) and 0.10 (10 percent) significant level. Thus this results evidenced that the coefficients of all the selected ten macroeconomic variables were significantly co-integrated, in the long run during the study period. This result suggested that long term investors have to consider the selected variables while evolving an investment strategy and it would reduce the unsystematic risk. This analysis would help investors to create a better portfolio towards long term investment.

Table 4: Results of PAIR WISE GRANGER CAUSALITY tests of Foreign Portfolio investment in indian stock market during a study period of 1st April 2008-31st March 2018.

Pairwise Granger Causality Tests		
NULL HYPOTHESIS:	**F-STATISTIC**	**PROBABILITY**
CREDITWORTHINESS does not Granger Cause ADR	0.62312	0.5381
ADR does not Granger Cause CREDITWORTHINESS	3.35707	0.0384*
REGIONAL_FACTOR does not Granger Cause ADR	4.95976	0.0086*
ADR does not Granger Cause REGIONAL_FACTOR	2.06363	0.1318
DOMESTIC_OUTPUT_GROWTH does not Granger Cause CREDITWORTHINESS	3.71224	0.0275*

Pairwise Granger Causality Tests		
NULL HYPOTHESIS:	**F-STATISTIC**	**PROBABILITY**
CREDITWORTHINESS does not Granger Cause DOMESTIC_OUTPUT_GROWTH	3.67867	0.0284*
EXCHANGE_RATE does not Granger Cause DOMESTIC_INTEREST_RATE_A	0.01228	0.9878
DOMESTIC_INTEREST_RATE_A does not Granger Cause EXCHANGE_RATE	4.36709	0.0149*
EXCHANGE_RATE_VOLATILITY does not Granger Cause DOMESTIC_INTEREST_RATE_A	0.01133	0.9887
DOMESTIC_INTEREST_RATE_A does not Granger Cause EXCHANGE_RATE_VOLATILITY	4.39623	0.0145*
FOREIGN_OUTPUT_GROWTH does not Granger Cause DOMESTIC_INTEREST_RATE_A	3.0387	0.0519*
DOMESTIC_INTEREST_RATE_A does not Granger Cause FOREIGN_OUTPUT_GROWTH	4.50298	0.0132*
DOMESTIC_STOCK_MARKET_PE does not Granger Cause DOMESTIC_OUTPUT_GROWTH	2.64432	0.0755*
DOMESTIC_OUTPUT_GROWTH does not Granger Cause DOMESTIC_STOCK_MARKET_PE	2.25423	0.1097
FOREIGN_INSTITUTIONAL_IN does not Granger Cause DOMESTIC_OUTPUT_GROWTH	3.30528	0.0403*
DOMESTIC_OUTPUT_GROWTH does not Granger Cause FOREIGN_INSTITUTIONAL_IN	1.9035	0.1538
EXCHANGE_RATE does not Granger Cause DOMESTIC_STOCK_MARKET_PE	0.50671	0.6038
DOMESTIC_STOCK_MARKET_PE does not Granger Cause EXCHANGE_RATE	5.5162	0.0052*
EXCHANGE_RATE_VOLATILITY does not Granger Cause DOMESTIC_STOCK_MARKET_PE	0.51659	0.598
DOMESTIC_STOCK_MARKET_PE does not Granger Cause EXCHANGE_RATE_VOLATILITY	5.48236	0.0054*
REGIONAL_FACTOR does not Granger Cause DOMESTIC_STOCK_MARKET_PE	5.8855	0.0037*
DOMESTIC_STOCK_MARKET_PE does not Granger Cause REGIONAL_FACTOR	2.38967	0.0963*
FOREIGN_INSTITUTIONAL_IN does not Granger Cause EXCHANGE_RATE	3.07274	0.0502*
EXCHANGE_RATE does not Granger Cause FOREIGN_INSTITUTIONAL_IN	2.13201	0.1234
REGIONAL_FACTOR does not Granger Cause EXCHANGE_RATE	3.23085	0.0432*
EXCHANGE_RATE does not Granger Cause REGIONAL_FACTOR	0.56183	0.5718
FOREIGN_INSTITUTIONAL_IN does not Granger Cause EXCHANGE_RATE_VOLATILITY	3.03471	0.0521*
EXCHANGE_RATE_VOLATILITY does not Granger Cause FOREIGN_INSTITUTIONAL_IN	2.13	0.1236
REGIONAL_FACTOR does not Granger Cause EXCHANGE_RATE_VOLATILITY	3.20973	0.0441*
EXCHANGE_RATE_VOLATILITY does not Granger Cause REGIONAL_FACTOR	0.56518	0.5699

Source: www.bloomberg data.com

Analysis is computed in Eview-7.

Analysis of PAIRWISE GRANGER CAUSALITY test of Foreign Portfolio investment in indian stock market during a study period of 1st April 2008-31st March 2018.

The table-4 reveals that probability values of domestic output growth and creditworthiness at 0.0275, creditworthiness and domestic output growth at 0.0284 reported bilateral causal relationship, at less than five percent significant level. In other words changes of domestic output growth caused changes on creditworthiness and vice versa. There was causal bidirectional relationship between domestic interest rate and foreign output growth at 0.0132 and foreign output growth and domestic interest rate at 0.0519, which was less than 5 percent and 10 percent significant level. In other words, changes of domestic interest rate caused changes on foreign output growth and vice versa during the study period.

There was bilateral causal relationship between regional factor and domestic stock market at 0.0963 which was less than 5 percent and 10 percent significant level. In other words, shock in regional factor caused the domestic stock market and vice versa. Unidirectional causal relationship was observed from ADR to creditworthiness at 0.0384, which was less than five percent significant level and it indicated that changes of ADR affected the creditworthiness whereas creditworthiness changes did not affect the ADR. The regional factor did cause unilateral relationship with ADR at 0.0086 which was less than five percent significant level, but changes in ADR did not cause the regional factor during the study period. The unidirectional cause from domestic interest rate to exchange rate at 0.0149 and exchange rate volatility at 0.0145 which were less than five percent significant level nidicated that only domestic interest rate caused on exchange rate significantly.

The domestic stock market did cause unidirectional relation with domestic output growth at 0.0755, exchange rate at 0.0052, and exchange rate volatility at 0.0054 which were less than five percent significant level. The shocks of domestic stock market did cause significant changes in domestic output growth, exchange rate, and exchange rate volatility. There was unidirectional causal relation from foreign institutional investment to domestic output growth at 0.0403, exchange rate at 0.0502 and exchange rate volatility at 0.0521 which were less than five percent and 10 percent significant levels. The changes of foreign institutional investment did cause shock on domestic output growth, exchange rate and exchange rate volatility during the study period.

The regional factor recorded unidirectional causal relation with exchange rate at 0.0432 and exchange rate volatility, at 0.0441, which were less than five percent significant level. It proved that changes in regional factor did significantly cause the exchange rate and exchange rate volatility. Hence, the null hypothesis "There is no causal relationship between selected macro economical variables" was partially rejected. The results of granger causality suggested that the changes of domestic output grrowth, exchange rate, exchange rate volatility, foreign output growth, ADR and domestic stock market did significantly cause other variables returns to consider Hence investors are advised to the movement of these variables, which would help to predict the flow of FII in the capital market.

GARCH Model:

Table 5: Results of of foreign institutional investment under the GARCH model of Foreign Portfolio investment in indian stock market during a study period of 1st April 2008-31st March 2018

Variable	Variance Equation			
	Coefficient	Std. Error	z-Statistic	Prob.
C	-10.3608	3.112464	-3.32881	0.0009
RESID(-1) (α)	-0.01092	0.000305	-35.8039	0.0001*
GARCH(-1) (β)	1.05553	0.010156	103.9304	0.0001*
(α) +(β)	1.04460			

  Source: www.bloomberg data.com
  Dependent Variable: Foreign Institutional Investment
  Analysis is computed in Eview-7.

Analysis of foreign institutional investment under the GARCH model of Foreign Portfolio investment in indian stock market during a study period of 1st April 2008-31st March 2018

The table-5 shows that the (α) ARCH value was -0.01092 and (β) GARCH value was 1.05553 and the total value was 1.044 and also the probability values of ARCH and GARCH were less than the one percent significant level. It evidenced that foreign institutional investment was significant and highly volatile by the changes in selected macroeconomic variables. Therefore, the investors have to consider the volatility shock of selected financial variables, which would significantly shock the FII investment movement. The foreign institutional investment was significant and highly volatile by change in selected macroeconomic variables.

Therefore, the investors have to consider the volatility shock of selected financial variables, which would significantly influence FII investment movement.

GARCH Model:

Table 6: Results of GARCH model of Foreign Portfolio investment in Indian stock market using ADR during a study period of 1st April 2008-31st March 2018.

	Variance Equation			
Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	0.000279	0.000172	1.61721	0.1058
RESID(-1) (α)	0.360429	0.239927	1.502243	0.133
GARCH(-1) (β)	0.092449	0.405569	0.227948	0.8197
(α) +(β)	0.452878			

Source: www.bloomberg data.com
Dependent Variable: ADR
Analysis is computed in Eview-7.

Analysis of GARCH model of Foreign Portfolio investment in indian stock market using ADR during a study period of 1st April 2008-31st March 2018

According to table-6, (α) ARCH value was 0.360429 and (β) GARCH value was 0.092449 and the total value was 0.452878 and the probability values of ARCH and GARCH were higher than the five percent significant level. It evidenced that ADR was insignificant and moderately volatile due to changes in selected macroeconomic variables. Hence the null hypothesis, 'There is no significant volatility of selected financial variables on ADR' was rejected. Therefore, investors need not bother about the volatility shock of selected financial variables because they would not significantly shock the ADR investment during the study period.

Table 7: Results of vector error correction estimates of Foreign Portfolio investment in indian stock market during a study period of 1st April 2008-31st March 2018.

Vector Error Correction Estimates
Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1									
ADR(-1)	1									
CREDITWORTHINESS(-1)	-1.43857									
Std. Errors	-0.33885									
t- statistics	[-4.24543]									
DOMESTIC_INTEREST_RATE_A(-1)	0.41335									
Std. Errors	-0.36188									
t- statistics	[1.14224]									
DOMESTIC_OUTPUT_GROWTH(-1)	1.251112									
Std. Errors	-0.96816									
t- statistics	[1.29226]									
DOMESTIC_STOCK_MARKET_PE(-1)	3.953341									
Std. Errors	-0.83098									
t- statistics	[4.75747]									
EXCHANGE_RATE(-1)	133.0162									
Std. Errors	-277.959									
t- statistics	[0.47855]									
EXCHANGE_RATE_VOLATILITY(-1)	-247.992									
Std. Errors	-552.851									
t- statistics	[-0.44857]									
FOREIGN_INSTITUTIONAL_IN(-1)	-0.00195									
Std. Errors	-0.00051									
t- statistics	[-3.81012]									
FOREIGN_OUTPUT_GROWTH(-1)	4.454121									
Std. Errors	-2.71352									
t- statistics	[1.64145]									

Cointegrating Eq:	CointEq1									
REGIONAL_FACTOR(-1)	-5.81632									
Std. Errors	-0.71995									
t- statistics	[-8.07873]									
C	-0.02974									

Error Correction:	D(ADR)	D(CREDIT WORTHINESS)	D(DOMESTIC_ INTEREST_RATE_A)	D(DOMESTIC_ OUTPUT_GROWTH)	D(DOMESTIC_ STOCK_MARKET_PE)	D(EXCHANGE_ RATE)	D(EXCHANGE_ RATE_VOLATILITY)	D(FOREIGN_ INSTITUTIONAL_IN)	D(FOREIGN_ OUTPUT_GROWTH)	D(REGIONAL_ FACTOR)
CointEq1	**-0.04549**	0.280832	-0.01698	0.00153	-0.1038	-0.04152	-0.02081	202.0911	-0.00435	-0.03507
Std. Errors	-0.03573	-0.05419	-0.05388	-0.03101	-0.04024	-0.00958	-0.00481	-41.4694	-0.00873	-0.04184
t- statistics	[-1.27323]	[5.18275]	[-0.31517]	[-0.04937]	[-2.57976]	[-4.33500]	[-4.33081]	[4.87325]	[-0.49814]	[-0.83813]
D(ADR(-1))	-0.90052	-0.71107	-0.00025	0.416862	-0.22933	0.034183	0.017457	-205.636	0.02353	-0.24765
Std. Errors	-0.21292	-0.32294	-0.32109	-0.18483	-0.2398	-0.05708	-0.02864	-247.148	-0.052	-0.24938
t- statistics	[-4.22933]	[-2.20189]	[-0.00077]	[2.25544]	[-0.95635]	[0.59888]	[0.60952]	[-0.83204]	[0.45251]	[-0.99309]
D(ADR(-2))	-0.42215	-0.09811	-0.36771	0.184382	-0.07916	0.061086	0.030888	-216.211	0.028194	-0.05054
Std. Errors	-0.2114	-0.32062	-0.31879	-0.1835	-0.23808	-0.05667	-0.02844	-245.378	-0.05163	-0.24759
t- statistics	[-1.99694]	[-0.30598]	[-1.15345]	[1.00480]	[-0.33248]	[1.07794]	[1.08627]	[-0.88113]	[0.54610]	[-0.20414]
D(CREDITWORTHINESS(-1))	-0.10094	-0.44919	0.025534	0.137272	-0.12865	-0.02251	-0.01129	196.4475	-0.00306	-0.01314
Std. Errors	-0.06484	-0.09834	-0.09778	-0.05628	-0.07303	-0.01738	-0.00872	-75.2639	-0.01584	-0.07594
t- statistics	[-1.55671]	[-4.56755]	[0.26113]	[2.43887]	[-1.76163]	[-1.29521]	[-1.29491]	[2.61011]	[-0.19322]	[-0.17300]
D(CREDITWORTHINESS(-2))	-0.00823	-0.2106	-0.00414	0.075646	-0.09086	0.014319	0.00718	54.24299	0.019943	0.009856
Std. Errors	-0.05499	-0.0834	-0.08292	-0.04773	-0.06193	-0.01474	-0.0074	-63.8244	-0.01343	-0.0644
t- statistics	[-0.14972]	[-2.52532]	[-0.04994]	[1.58487]	[-1.46722]	[0.97146]	[0.97083]	[0.84988]	[1.48514]	[0.15304]
D(DOMESTIC_INTEREST_RATE_A(-1))	0.00456	-0.03436	-0.58127	-0.05274	-0.052	-0.05697	-0.02866	16.59064	0.01789	-0.00643
Std. Errors	-0.06565	-0.09957	-0.099	-0.05698	-0.07393	-0.0176	-0.00883	-76.1995	-0.01603	-0.07689
t- statistics	[0.06946]	[-0.34508]	[-5.87159]	[-0.92543]	[-0.70332]	[-3.23747]	[-3.24535]	[0.21773]	[1.11586]	[-0.08367]
D(DOMESTIC_INTEREST_RATE_A(-2))	0.134012	-0.14731	-0.25092	-0.04023	0.070155	-0.03315	-0.01668	57.79233	0.027434	0.119655
Std. Errors	-0.06211	-0.0942	-0.09366	-0.05391	-0.06995	-0.01665	-0.00835	-72.0904	-0.01517	-0.07274
t- statistics	[2.15777]	[-1.56388]	[-2.67912]	[-0.74618]	[1.00297]	[-1.99104]	[-1.99618]	[0.80166]	[1.80870]	[1.64496]
D(DOMESTIC_OUTPUT_GROWTH(-1))	0.099874	-0.0322	0.123048	-1.06384	-0.06615	0.080822	0.040576	-345.196	-0.01645	0.072212
Std. Errors	-0.09708	-0.14724	-0.1464	-0.08427	-0.10933	-0.02602	-0.01306	-112.683	-0.02371	-0.1137
t- statistics	[1.02880]	[-0.21870]	[0.84052]	[-12.6244]	[-0.60503]	[3.10568]	[3.10734]	[-3.06342]	[-0.69363]	[0.63512]
D(DOMESTIC_OUTPUT_GROWTH(-2))	0.097971	-0.08824	0.150848	-0.66792	-0.0821	0.062528	0.031476	-120.07	0.00115	0.010704
Std. Errors	-0.09188	-0.13935	-0.13856	-0.07976	-0.10348	-0.02463	-0.01236	-106.649	-0.02244	-0.10761
t- statistics	[1.06630]	[-0.63323]	[1.08871]	[-8.37458]	[-0.79337]	[2.53867]	[2.54685]	[-1.12584]	[0.05127]	[0.09947]
D(DOMESTIC_STOCK_MARKET_PE(-1))	0.141562	-1.1351	0.378768	-0.13845	-0.2955	0.127658	0.063931	-223.149	0.047288	0.029056
Std. Errors	-0.1512	-0.22932	-0.22801	-0.13125	-0.17029	-0.04053	-0.02034	-175.502	-0.03693	-0.17708
t- statistics	[0.93627]	[-4.94986]	[1.66120]	[-1.05488]	[-1.73534]	[3.14959]	[3.14344]	[-1.27149]	[1.28065]	[0.16408]
D(DOMESTIC_STOCK_MARKET_PE(-2))	-0.1465	-0.71156	0.353749	0.173495	-0.39768	0.007833	0.00371	-125.266	0.017117	-0.28276
Std. Errors	-0.13276	-0.20135	-0.2002	-0.11524	-0.14952	-0.03559	-0.01786	-154.098	-0.03242	-0.15549
t- statistics	[-1.10350]	[-3.53393]	[1.76697]	[1.50551]	[-2.65977]	[0.22010]	[0.20778]	[-0.81290]	[0.52795]	[-1.81852]
D(EXCHANGE_RATE(-1))	127.9549	-86.0391	177.6796	-57.6685	56.42158	-1.68311	-0.49043	-26675.4	2.392787	111.8101
Std. Errors	-54.7698	-83.0687	-82.5939	-47.5427	-61.6843	-14.6822	-7.36719	-63573.9	-13.3758	-64.1469
t- statistics	[2.33623]	[-1.03576]	[2.15125]	[-1.21298]	[0.91468]	[-0.11464]	[-0.06657]	[-0.41960]	[0.17889]	[1.74303]
D(EXCHANGE_RATE(-2))	143.9009	-193.967	107.3725	-29.3856	123.4679	7.045955	3.59128	17600.18	-18.1666	135.7615
Std. Errors	-52.2813	-79.2944	-78.8412	-45.3826	-58.8816	-14.0151	-7.03246	-60685.4	-12.7681	-61.2323
t- statistics	[2.75243]	[-2.44617]	[1.36188]	[-0.64751]	[2.09688]	[0.50274]	[0.51067]	[0.29002]	[-1.42281]	[2.21715]
D(EXCHANGE_RATE_VOLATILITY(-1))	-253.941	170.5781	-354.492	114.4675	-110.647	2.721142	0.658539	50393.81	-4.48807	-221.558
Std. Errors	-109.05	-165.396	-164.45	-94.6608	-122.818	-29.2334	-14.6686	-126580	-26.6322	-127.721
t- statistics	[-2.32866]	[1.03133]	[-2.15562]	[1.20924]	[-0.90090]	[0.09308]	[0.04489]	[0.39812]	[-0.16852]	[-1.73471]

Cointegrating Eq:	CointEq1									
D(EXCHANGE_RATE_VOLATILITY(-2))	-287.248	385.3914	-214.866	58.16809	-246.369	-14.1919	-7.23168	-36339.2	36.43312	-271.13
Std. Errors	-104.211	-158.055	-157.151	-90.4595	-117.367	-27.9359	-14.0176	-120962	-25.4502	-122.052
t- statistics	[-2.75641]	[2.43834]	[-1.36725]	[0.64303]	[-2.09914]	[-0.50802]	[-0.51590]	[-0.30042]	[1.43155]	[-2.22142]
D(FOREIGN_INSTITUTIONAL_IN(-1))	-5.83E-05	0.000319	-4.22E-05	-4.47E-05	-0.00015	-0.00013	-6.51E-05	-0.36028	4.05E-05	-9.92E-05
Std. Errors	-9.40E-05	-0.00014	-0.00014	-8.20E-05	-0.00011	-2.50E-05	-1.30E-05	-0.1095	-2.30E-05	-0.00011
t- statistics	[-0.61806]	[2.22738]	[-0.29664]	[-0.54524]	[-1.40795]	[-5.14605]	[-5.12696]	[-3.29008]	[1.75724]	[-0.89771]
D(FOREIGN_INSTITUTIONAL_IN(-2))	-2.70E-05	0.000239	6.54E-06	-0.00019	-2.89E-05	-8.24E-05	-4.13E-05	-0.11033	2.19E-05	-9.72E-06
Std. Errors	-9.10E-05	-0.00014	-0.00014	-7.90E-05	-0.0001	-2.40E-05	-1.20E-05	-0.10571	-2.20E-05	-0.00011
t- statistics	[-0.29696]	[1.73241]	[0.04761]	[-2.34986]	[-0.28185]	[-3.37525]	[-3.37074]	[-1.04373]	[0.98489]	[-0.09111]
D(FOREIGN_OUTPUT_GROWTH(-1))	0.433245	-1.24974	-0.90838	-0.32041	0.594599	0.013245	0.006224	-754.269	-0.84107	0.471206
Std. Errors	-0.34746	-0.52699	-0.52398	-0.30161	-0.39133	-0.09315	-0.04674	-403.318	-0.08486	-0.40695
t- statistics	[1.24688]	[-2.37145]	[-1.73361]	[-1.06230]	[1.51943]	[0.14219]	[0.13317]	[-1.87016]	[-9.91156]	[1.15789]
D(FOREIGN_OUTPUT_GROWTH(-2))	0.148009	-0.12718	-0.37941	-0.27752	0.401675	-0.04671	-0.02424	-501.623	-0.58476	0.388083
Std. Errors	-0.33536	-0.50864	-0.50573	-0.29111	-0.3777	-0.0899	-0.04511	-389.27	-0.0819	-0.39278
t- statistics	[0.44134]	[-0.25004]	[-0.75023]	[-0.95332]	[1.06348]	[-0.51956]	[-0.53724]	[-1.28863]	[-7.13974]	[0.98805]
D(REGIONAL_FACTOR(-1))	0.128651	1.723491	-0.58761	-0.34327	-0.14244	-0.17759	-0.08922	775.0247	-0.04843	-0.40548
Std. Errors	-0.25747	-0.3905	-0.38826	-0.22349	-0.28997	-0.06902	-0.03463	-298.854	-0.06288	-0.30155
t- statistics	[0.49968]	[4.41359]	[-1.51343]	[-1.53594]	[-0.49123]	[-2.57300]	[-2.57623]	[2.59332]	[-0.77023]	[-1.34468]
D(REGIONAL_FACTOR(-2))	0.094214	0.991416	-0.02948	-0.40667	0.05223	-0.12443	-0.06237	762.2343	-0.05684	-0.15329
Std. Errors	-0.22774	-0.34541	-0.34344	-0.19769	-0.25649	-0.06105	-0.03063	-264.351	-0.05562	-0.26673
t- statistics	[0.41369]	[2.87023]	[-0.08583]	[-2.05710]	[0.20363]	[-2.03809]	[-2.03596]	[2.88342]	[-1.02196]	[-0.57469]
C	0.000792	0.000928	-0.00222	8.22E-05	0.000104	-0.00014	-7.14E-05	-0.01171	0.000148	0.00106
Std. Errors	-0.00537	-0.00815	-0.0081	-0.00467	-0.00605	-0.00144	-0.00072	-6.23833	-0.00131	-0.00629
t- statistics	[0.14731]	[0.11387]	[-0.27350]	[0.01761]	[0.01717]	[-0.09917]	[-0.09882]	[-0.00188]	[0.11288]	[0.16835]

Source: www.bloomberg data.com
Analysis is computed in Eview-7.

Analysis of vector error correction estimates of Foreign Portfolio Investment in Indian stock market during the study period of 1st April 2008-31st March 2018
The Table-7 displays that the coefficient of ADR, at 0.04549, CRT, at 0.280832, DIR, at 0.01698, DOPG, at 0.00153, BSE sensex, at 0.1038, EXR, at 0.04152, EXRV, at 0.02081, FII, at 202.0911, FOPG, at 0.00435, and MSCI, at 0.03507 were negatively recorded whereas creditworthiness and FII were positively coefficient under the vector error correction model. The results clearly indicated that there was existence of short run relationship, and all the selected variables recorded dynamic short run relationship whereas creditworthiness and FII were positively exhibited, during the study period.

SUMMARY OF THE FINDINGS:

❖ The ADR was insignificant and moderately/due to changes in selected macroeconomic variables.
❖ The coefficients of all selected variables were negatively recorded whereas creditworthiness and FII were positively coefficient under the vector error correction model.
❖ Coefficient value was negative but at insignificant level. The speed of adjustment towards long run was insignificant. The correction of past would correct the present at insignificant level during the study.
❖ All the selected variables were short run associated with ADR during the study period.
❖ Coefficient value was positive at significant level. The speed of adjustment towards long run did not exist. The correction of past would not be able to correct the present at significant level during the study
All the selected variables were short run associated with FII during the study period.

SUGGESTIONS OF THE STUDY:

❖ The important recommendations are to the prospective investors of this study.
❖ All mean values were lower than the standard deviation values and it indicated that the returns values were lower than the risk values. In other words, the selected variables were associated with high risk. These

results revealed that the investors need to study the performance of selected financial variables and it would help them to make better investment and strategy.

❖ The coefficients of all the selected ten macroeconomic variables were significantly cointegrated in the long run during the study period.

❖ Hence all prospective investors are advised to consider these select variables while making an investment strategy and reduce the unsystematic risk. This analysis would help investors to create a better portfolio for a long term investment.

CONCLUSION:

The Foreign Portfolio Investments are very much needed for India. These investors are necessary for the continuous development of India. The Indian economy recorded a better performance and led to economic growth due to the FIIs. Though there are threats from the Foreign Portfolio Investments, investors should positively view their entry into India. India has developed a strong and professionally competent technical, marketing and business manpower in livestock production and Information Technology. This is an added advantage over many developing countries of Asia and Africa. Availability of competent and comparatively low-cost manpower in India is a great asset, which attracts foreign investors.

ACKNOWLEDGEMENT:

REFERENCES:

Amita.(2016). Determinants of FIIs: A Study of Indian Stock Market. *International Journal of Commerce, Business and Management (IJCBM)*, ISSN: 2319–2828 Vol. 5 (6), 161-173.

Anubha, Shrivastav. (2013). A Study of Influence of FII Flows on Indian Stock Market. *ACCMAN Journal of Management*, Vol 5(1).

Maram Srikanth and Braj Kishore (2012). Net FII Flows into India: A Cause and Effect Study. *ASCI Journal of Management*, Vol. 41 (2), pp. 107-12.

Olusegun Omisakin. (2009). Foreign Direct Investment, Trade Openness and Growth in Nigeria. *Journal of Economic Theory*, 3 (2), pp. 13-18.

Oteng A.E. Fosu and Frimpong J. Magnus. (2006). Bounds Testing Approach to Cointegration: An Examination of Foreign Direct Investment Trade and Growth Relationships. *American Journal of Applied Sciences*. Volume 3 (11), pp. 2079-2085.

Parthapratim Pal. (2006). Foreign Portfolio Investment, Stock Market and Economic Development: A Case Study of India. *Annual conference on Development and change Mission: Promoting Development in Globalized World, Sao Paulo, Brazil*.

Rachna Arya.(2016). Impact of Foreign Institutional Investment in Indian Stock Market. *BRDU International Journal of Multidisciplinary Research*. Vol. 1 (XII), 34-39.

Rashmi Ranjan Panigrahi.(2016).Foreign Institutional Investors: A Study of Indian Firms & Investors. *National Seminar on ―Emerging Trends in Management & Information Technology (ETM&IT-2016)*, ISBN. 978-93-81692-07-2.