FINANCE INDIA © Indian Institute of Finance Vol. XXXI No. 2, June 2017 Pages – 457 – 474

# Dynamic Relationship between Foreign Institutional Investments and Movements in Indian Stock Market

ASHISH VARUGHESE\* TOMY MATHEW \*\*

#### Abstract

Many of the developing countries, including India, restricted the flow of foreign capital till the early 1990s. Later on the serious current account deficit and other development issues have forced these countries to open their doors for foreign investments. In the present Indian scenario Foreign Institutional Investments (FII) has emerged as a major source of capital for emerging market economies including India. The huge investment by the Foreign Institutional Investors (FIIs) is generally considered as the major reason for the movements in the Indian stock market. This paper analyses the dynamic relation between FII and Indian stock market movements. The present study was conducted by taking the daily data of FII flow and market return for a period of 12 years from 1<sup>st</sup> April 2004 to 31<sup>st</sup> March 2016. The study with the help of VAR approach and Granger Causality Test reveals that investment activities of FIIs have an impact on the movements of the Indian stock market.

#### I. Introduction

FOREIGN INSTITUTIONAL INVESTORS (FIIs) means an entity established outside India to make investment in India. It was in September 1992 India opened its market for Foreign Institutional Investments (FII). In the present Indian scenario FIIs are the most dominant player in the Indian equity market. Foreign Institutional Investments is an added advantage to the economy because it adds the investment base and supplements the domestic savings for improving the investment rate. Moreover it is a non-debt creating source of foreign investment. Hence, the Government of India has extended preferential treatment for FIIs especially in the matter of taxation. For example the Indo-Mauritius Double Taxation Avoidance Convention 2000 (DTAC) exempts Mauritiusbased entities from paying capital gains tax in India. The immediate impact

Submitted September 2014; Accepted June 2017

<sup>\*</sup> Assistant Professor, Bishop Moore College, The Department of Commerce, Mavelikara, Kerela 690101, INDIA

<sup>\*\*</sup> Associate Professor, CMS College, The Department of Commerce, Kottayam, Kerela 686001, INDIA

fluctuations in market return is due to FII flow. Thus the analysis of variance decomposition also reveals that impact of market return on FII flows is much higher than the impact of FII flow on market return.

The question whether the FII flow causes the stock market to rise/fall and whether the market return cause FII were addressed by using Granger (1969) causality test. The results are given in the Table IX

Table IY

Granger Causality Test		
Null Hypotheses	<b>F</b> Statistics	P - Value
ADR does not Granger Cause PSR	45.313	7E-168
PSR does not Granger Cause ADR	6.30340	0.0019

Source: Test Result

The test results presented in Table VIII reveals that based on the p value (0.000) of F statistics the null hypotheses of ADR (Return) does not Granger Cause PSR (FII) and PSR (FII) does not Granger Cause ARD (Return) is rejected at five per cent level of significance. It means there is bidirectional *causality* between FII flows and the stock market return. It means FII flow cause market return and market return also leads to FII flow.

# V. Summary and Conclusion

Indian stock markets have witnessed massive reforms in the past two decades. The arrival of FIIs has led to increase in value of Indian securities which is considered to be undervalued because of low capital availability in the country. Generally the flow of institutional investment is highly correlated with the market returns. This paper examines the dynamic relationship between FII flow and stock returns in Indian securities market. The study is based a period of 12 years from 1st April 2004 to 31st March 2016 using VAR approach and Granger causality test. The analysis based on daily data reveals that FII flows have significant positive impact on the movements in the Indian stock market and market return also has significant positive impact on FII flow. The impulse response function shows that the time profile of the impact of market return on FII flow is more lasting and significant compared to the impact of FII flow on market return. The variance decomposition analysis shows that around 4 per cent of the fluctuations in the market return is explained by FII flow. However, around 24 per cent of the fluctuations in the FII flow is explained by market return. The study supports the existence of positive feedback trading and herding behavior being followed by FIIs in India. The study also found the existence of information revelation hypothesis but there is no evidence that FIIs impose price pressure in the market. The existence of information revelation hypothesis shows that FIIs are having private information and they use it for generating abnormal income from the market. The study also shows the evidence for bidirectional causality between FII flows and market return. Based on VAR model, Impulse response, variance decomposition and

© Indian Institute of Finance

472

Granger causality test the study concludes that the investment activities of FIIs have significant positive impact on stock market movements and market return also has significant positive impact on FII flow. Both FII flows and market movements are mutually reinforce each other but the impact of market return on FII flows is much higher than the impact FII flow on market return.

#### Notes

- 1. Securities Exchange Board of India (Foreign Institutional Investors) Regulations act 1995, P -5
- 2. Report of Expert Group on Encouraging FII flows and Checking the Vulnerability of Capital Markets to Speculative Flows, November, 2005.
- 3. Konnel, Froot, O'Connell, P., and Seasholes, M., 2001. The Portfolio Flows of International Investors. Journal of Financial Economics, Volume 59, p. 151-193
- 4. Matthieu, Stigler, Shah Ajay, and Patnaik Ila (2010), Understanding the ADR Premium under Market Segmentation, NIPFP Working Paper 71, July 2010.

# References

Ananthanarayanan, Sandhya., Chandrasekhar Krishnamurti and, Nilanjan Sen, (2004), "Foreign Institutional Investors and Security Returns: Evidence from Indian Stock Exchanges" *International Journal of Foreign Money Supply Management*, Vol. 28, pp. 1- 31

Bansal, Anand and J.S. Pasricha, (2009), "Foreign Institutional Investor's Impact on Stock Prices in India" *Journal of Academic Research In Economics* Volume 1 Number 2, pp. 181-190

Batra, Amita, (2003), "The Dynamics of Foreign Portfolio Inflows and Equity Returns in India", *Indian Council for Research on International Economic Relations* Working Paper No. 109, September 2003.

Badrinath, S.G and S. Wahal, (2002), "Momentum Trading by Institutions", *The Journal of Finance*, Vol. LVII, No 6, December 2002, pp. 2449-2478.

Bhattacharya, Basabi and Mukherjee Jaydeep, "An analysis of stock market efficiency in the light of capital inflows and exchange rate movements; The Indian context" *I C R A Bulletin Money and Finance* 

Chakrabarti, Rajesh, "FII Flows to India: Nature and Causes" *ICRA Bulletin Money and Finance*, Vol. 2, No. 7, December 2001, pp. 61-81

Chakraborty, Tanupa, (2007), "Foreign Institutional Investment Flows and Indian Stock Market Returns - A Cause and Effect Relationship Study", *Indian Accounting Review*, 11, No. 1, June 2007, pp. 35-48.

Dickey, D A and W. A.Fuller, "Likelihood Ratio Statistics for Autoregressive Time Series with a Unit Root," *Econometrica*, Vol. 49, pp. 1057-1072.

Edelen, Roger M and B. Warner Jerold, (2000), "Aggregate price effects of institutional trading: a study of mutual fund flow and market returns", *Journal of Financial Economics*, Vol. 59, pp 195-220

### © Indian Institute of Finance

Froot, K., P. O'Connell and M. Seasholes, (2001), "The Portfolio Flows of International Investors". *Journal of Financial Economics*, Vol. 59, p. 151-193

Granger, CWJ, (1969), "Investigating Causal Relations by Econometric Models and Cross Spectral Methods, *Econometrica*, Vol. 37, pp. 424-438.

Granger, CWJ, (1998), "Some Recent Developments in the Concept of Causality," *Journal of Econometrics*, Vol. 39, pp. 199-211.

Griffin, M J, H. Harris and S. Topalogl, (2003), "The Dynamics of Institutional and Individual Trading" *The Journal of Finance*, Vol LVIII, No 6

Gujarati, DN, (1995), "Basic Econometrics", (4e) McGraw-Hill Book Co.

Gupta, Ambuj, (2011), "Does the stock market rise or fall due to FIIs in India?" *Researchers World Journal of Arts, Science & Commerce*, Vol. 2, Issue 2, pp. 99-107

Hamilton, J, (1994), "Time Series Analysis", Princeton University Press

Kumar, S S, (2002), "Role of Institutional Investors in Indian Stock Market" Indian Journal of Economics, Vol. 82, No. 327, pp. 76 – 80

Mishra P. K., K.B. Das and. B.B. Pradhan (2010), "Foreign Institutional Investments and Real EconomicGrowth in India: A Causality Test", *International Research Journal of Finance and Economics*, Vol. 41, pp. 212-219

Mukherjee Paramita, Suchismita Bose and Dipankor Coondoo, (2002),"Foreign Institutional Investment in the Indian Equity Market- An analysis of Daily flows during Jan 1999-May 2002" Money & Finance, ICRA Bulletin, September 2002, pp. 21-51.

Mukherjee, Paramita, Suchismita Bose and Dipankor Coondoo Mukherjee., (2002); "Foreign Institutional Investment in the Indian Equity Market", *Money and Finance*, Vol. 3, pp. 21-51.

Phillips, P C and P. Perron, (1998), "Testing for a Unit Root in Time Series Regression" *Biometrika*, Vol. 75, pp. 335-346.

Sankar, Anand, (2011), "QE-II and FII inflows into India – Is there a Connection?", RBI WPS 19/2011, *Department of Economic and Policy Research*, October 2011

Stigler, Matthieu, Ajay Shah, and Ila Patnaik, (2010), "Understanding the ADR Premium under Market Segmentation, NIPFP" Working Paper 71, July 2010.

SEBI, (1995), "Foreign Institutional Investors Regulations Act 1995", Securities Exchange Board of India, pp. 5

Srikanth, Maram and Braj Kishore, (2012), "Net FII Flows Into India: A Cause And Effect Study" *ASCI Journal Of Management*, Vol. 2, Issue 41, March 2012, pp. 107–120

Suresh, Babu M and Prabheesh K.P., (2008), "Causal relationships between Foreign Institutional Investments and stock returns in India", ≠ International Journal for Trade and Global Markets, 1, No. 3, pp. 259-265

Warther, Vincent A., (1995) "Aggregate Mutual Fund Flow and Security Return", *Journal of Financial Economics*, Vol. 39, pp. 209-235

© Indian Institute of Finance