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Indian Capital Market - Impact of FII on Indian Stock Market

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Abstract

Objectives: The objective of the paper is study the importance of FII money for Indian stock market. It focuses on the global integration of economies and its effects on the Indian economy and stock market. **Methods/Statistical analysis**: The paper covers the statistical analysis of FII (Foreign Institutional investor) flows and its impact on the index from 2008 to 2013, where the focus is Global financial crisis of 2008 and Euro zone crisis of 2011. The empirical analysis has been done using statistical tools. The impact of the FII flows during the two crises has been analyzed. The researchers have used t-test, correlation, regression analysis to identify the relation between FII and Indian stock market. **Findings:** The coefficient of correlation is 0.41 shows positive correlation and proves that there is significant relationship between the FII flows and the index. The t-test shows the value of 2.34 which means the null hypothesis is rejected and FII is the dominant player in the Indian stock market. Using regression, the forecast shows, what would be index value with a given level of FII flows? If the FII flows are Rs. 1,000 million then the index value comes to 16,864 and if the flows are increased to Rs. 2,000 million then the value of index comes to 17441. This shows that more the FII flows, higher is the value of the index. The intercept value of the index comes to 16,287 which means that if there are no FII flows (which is independent variable) then the value of the Index would be 16,287 (dependent variable. The value of 16,287 shows that how steep can the index fall if the FII are not putting their money. **Applications/Improvements:** The safety net, wherein the investors get the protection, should be made mandatory. There should be an early education of the finance and stock market so that investors understand it better.

Keywords: Euro Zone Crisis, Foreign Institutional Investor, Global Financial Crisis, Indian Economy, Stock Market

1. Introduction

The period from 2008 to 2013 has been very critical for the world economy and for the Indian economy. The year 2008 saw the world facing the Global Financial Crisis and the year 2011 saw the world facing the Eurozone crisis. Both the crisis had a deep impact on the Indian stock markets. The markets tanked in both the crisis whereas the FII were net sellers during both the global crisis event. The Global Financial Crisis saw the world economy going for recession as the USA which is world big daddy went for a slowdown. In the last 10 years, average GDP of the world grew by 2.5 % to 2.8% as compared to Indian economy average of 7.5% to 8 % which shows the potential of the Indian economy. But in the last 3 years the Indian Economy also slowed down and the GDP touched 10 year low of 4.6%.

1.1 Global Financial Crisis of 2008

The year 2008 saw the world going into recession. USA Economy had the sub prime crisis and as the result it went for a recession which took the world economy into a recession. US economy is $ 16 trillion which is the largest in the world and it contributes 23 % in the world GDP. The reckless lending by the US banks lead to bankruptcy as the banks could not collect the amount. The investment banks in USA filed for bankruptcy which led to large scale unemployment as thousands of people were removed out of jobs. This led to the slowdown in the US economy. This slowdown affected countries like Japan, China, Eurozone

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which have more of export oriented model. The slowdown in the US led to these major economies also going to recession. This triggered a fall in the global stock markets where the Indian stock markets fall like pin of cards. The Indian SENSEX was at 21206 on 10th January 2008 and came down to 7697 on 24th October 2008 as the FII sold shares worth Rs. 52,000 crores from the Indian stock market. This shows the power of FII in our markets.

1.2 Eurozone Crisis of 2011

The Greece economy is still not out of woods and there is threat that they may default on the payment obligation. This would trigger panic sales in the global markets. The Eurozone is one of large trading partners with India. Europe accounts for 20 % of the total Indian exports. In 2011 when the Eurozone problem had started, the FII were net sellers and Indian markets had given 26 % negative return. This shows that whenever there is problem at the international level, the FII are net sellers and this has adversely impacted our stock markets.

1.3 Current Scenario of World Economy and Indian Economy

The Indian stock markets have been witnessing some kind of turbulence since the Macro Economic data coming from the world markets are having mixed bag. The USA economy is on coming on track with Fed announcement that they would have a "wait and watch" approach for the interest rates to rise. The USA has registered GDP growth of 5 % which is at 11 years high. The USA has been able to create more than 2 lac jobs every month for the last six months. The borrowing of the Fed is at 7 year low. This has gone well, as markets globally reacted positively. The news from other major economies has not been so kind with Japan which is facing recession though they increased their stimulus from 60 trillion yen to 80 trillion yen. Japan is facing recession since their demand and consumption has going less since the average age of Japanese's is 50 years and thus problem of "AGING" population. China heading for slow down as its GDP growth projection has come down and its Industrial Production has come down to 4.2 % which is at 27 month low. This crates fear that the world largest consumer of commodities is slowing down.

1.4 MAT on FII

The FII has been on selling spree in the month of April and May 2015 due to the controversial MAT (Minimum Alternate Tax) which is likely to be imposed at the rate of 20 % on the FIIs. The income tax department has sent demand to 68 FII resulting into tax demand of Rs. 602 crores. But there are around 3,000 FPI (Foreign Portfolio Investors), which includes FII, where the tax demand can go up to Rs. 40,000 crores. This has created nervousness among the FII and they are continuously selling the stocks from the Indian stock market. In month of May 2015, FII sold stocks worth Rs. 6500 crores in the first 10 days, this resulted into the index falling like the pin of cards. The markets tanked by more than 700 points, on one single trading session, the key issues raised by the FII is that why the government is going on the retrospective tax issues and asking them to pay tax. The argument of the government that MAT will not be applicable on those countries where the DTAA (Double Taxation Avoidance Treaty) has been signed which includes Singapore and Mauritius. But these two countries account for only 30 % of the total FII flows coming into the country. The USA, UK and Luxemburg account for 50 % of the total FII amount which comes into the Indian stock market. The stability of the Tax laws in India is the main aspect which is creating ripples about the investments in Indian economy.

1.5 US Interest Rates

The US Economy has steadily coming out of woods since the unemployment rate has come down to 5.5 % which was at all time high of 9.8%. The Fed is closely watching the economy to see that whether they are now in position to increase the interest rates. The rise in the interest rates sends shivers to the emerging markets since when the Fed increase interest rates, there could be flow of capital from emerging countries back to USA. This could see fall in the emerging stock markets. The USA has kept interest rates at 0.25% and we may see rise in interest rates in 2015 end.

1.6 World Scenario

The world economy is witnessing lot of problems since many major economies are facing slowdown issues. China's GDP has come to 7 % which is 24 years' low as their previous low was at 7.6% in 1990. The Peoples Bank of China has reduced their Reserve Ratio Requirement to 18.5 % which means that they have induced more liquidity into the system. Eurozone is still facing problems as Greece is not out of woods with repayment problems at large. Greece default could trigger world economy going back to slowdown. Japan which is worlds another large economy is also facing slowdown as they have increased stimulus from 60 trillion yen to 80 trillion yen.

1.7 Economic Integration

The Chinese economy in a move to encourage their exports devalued their currency by 2 % which send global shock waves. The world markets lost $ 12 trillion in market capitalization in which 41 % fall was contributed by China, 21% by USA and 3.7% by India. The Indian stock markets lost more than 2500 points in less than one month. The trade data released by the Indian government also showed that Trade deficit narrowed but exports are at 5 years' lows. The global slowdown in the markets have been affected by the Chinese slowdown as China is the biggest producer and consumer of Steel, Aluminum and Copper which are the main commodities used in the industrial activities.

The Table 1 clearly shows that the how the world markets are integrated and without being the part of the problem also, we have to face the heat. This shows that the Indian stock market also are adversely affected by the global movement but when it comes to the Indian economy the fact it is more resilient to foreign shocks.

2. Review of Literature

"The cost of 'Coupling': The global crisis and the Indian Economy"[1], where it was stated that during 2003-04 to 2006–07, the FII inflows rose significantly and Indian stock market saw a surge where the Indian corporate sector tripled in the value which was majorly driven by private placement. As soon as the FII exit, the reverse tendency in the collapse of stock market triggered. The Indian government responded to this positively and RBI aimed at reducing the interest rate and thereby increasing access to credit to the corporates. They also stated the role of the government in stabilizing the economy and stressed upon the fact that if the big firms are tightly regulated and permitted to discount risk in the pursuit of profit, the government will have to eventually nationalize them.

Table 1. Fall in world markets

Country	YTD Fall%	% contribution fall in world markets
World	–6.25	–
USA	–7.32	21.00
China	1.15	41
Japan	2.44	11.85
Hong Kong	–9.80	14.00
UK	–5.08	2.12
France	2.6666	0.43
Germany	–2.85	0.18
Canada	–20.28	1.82
India	–7.57	3.70

Source:- The Economic Times dated 27/8/2015

Another report titled, "Global financial crisis and key risks: Impact on India and Asia"[2], stated that the Indian market was not that much affected by the global economic crisis of 2008 and gave reasons for the resilience exhibited by the Indian economy. It was also given that the FII witnesses a decrease in the net flow in the period of April – September, 2008. The decrease in the FII inflow was to the tune of US $ 9.1 billion. Though the FII inflows decreased, during this period, but India as a country remained spared from the crisis. He also emphasized on the role of RBI in effective management of domestic liquidity and monetary conditions which were consistent with monetary policy instance. He also stated that the financial stability in India is achieved through perseverance of prudential polices and which act as a shield for the financial market, among others.

Another research paper titled, "Global Financial crisis, its impact on India and the policy response"[3] has highlighted the inability of India's to secure itself from the global adverse financial developments. The central bank's intervention was an important step which helped the country to ease out the liquidity measures. It was perceived that the economy like India would be not impacted by the global financial crisis and it was true to some extent, as soon as the crisis started as it opened some opportunities, but later when the crisis was wide spread, India was no exception to this. He suggested that in order to achieve a growth rate of 9%, several measures are required to be taken up such as revival of economic reforms, efforts to raise domestic savings, large investment and special focus to agriculture and rural development, among others. According to him, the stronger growth should attract more foreign savings and will help the economy. There should be concentrated and conscious efforts to increase the domestic savings, which could be one of the factors for reducing the impact of the FII on the India.

A good track record is no guarantee for future performance. Investors should look for quantitative measures to evaluate which investment is good for them.[4]

It has been observed that many companies are not disclosing the details about the corporate social reasonability and corporate governance[5]. The disclosure helps to bring about the transparency in the minds of the stakeholder and in turn the perception is positive, which help the company to create a positive and sustainable image of it.

3. Research Design

Type of Research: Conclusive research has been used in the problem.

3.1 Sample Size

Sample size 144 observations have been taken for the purpose of analysis. The two variables taken for study are monthly FII flows into the stock market and the month end closing SENSEX data has been taken.

3.2 Period of Study

The period of study is from year 2008 to 2013. The rationale for the selected period is that 2008 to 2013 as these five years have been very crucial for the world as world saw Global Financial Crisis and the Eurozone crisis. The Sensex was at 21,206 on 10th January 2008 and came to 7,697 on 24th October 2008 as FII had done selling of Rs. 52,000 crore of shares which proves their influence on Indian stock markets.

3.3 Objectives

- To study the relationship between FII flows and Index
- To study the impact of crises on the market
- To suggest measure to increase the depth of Indian stock market

3.4 Statistical Analysis

Ho:- There is no significant relationship between FII flows and the Index.

H1:- There is significant relationship between FII flows and the Index.

4. Analysis and Discussion

4.1 Impact of Global Turmoil

4.1.1 Global Financial Crisis

The Global Financial crisis which hit the world in the year 2008 saw the Indian stock market correcting more than 52 % and the Index coming down from 21206 to 7697 in span of 8 months. But the interesting fact is that Indian Economy in terms of GDP grew 6.3 % while the world economy just grew at 1 to 2 %. FII had sold shares worth Rs. 52000 crores during the year 2008 which made the Indian stock market fall like pin of cards.

4.1.2 Eurozone Crisis

During the Eurozone crisis the Indian stock market gave negative return of 24.65 % which was the worst return in the Asian region. The Indian Economy however still grew at 7.1 % as compared to 2% global average. FII were net sellers for the whole year and this made the Indian markets go down.

4.1.3 China Crisis

During the recent crisis, Indian markets crashed by 5.94% in one single day that was 1694 points. But the macro economic data shows that Indian GDP has been growing at 7 % which is very promising in the current global turmoil.

During the entire 3 major crisis, the Indian markets have tumbled like pin of cards due to FII selling which shows that FII have complete control on our markets. The FII are holding $ 328 billion of Indian shares which is 51 % of the free market capitalization. The Indian economy has grown during the crisis which is due to the inherent domestic consumption theme which makes our economy less reliant on the global events.

The Indian economy has 3 unique selling propositions which are as under:-

A. **Demographic Dividend:-** 70% of the working population is less than 35 years of age which means that there is huge demographic dividend advantage to the economy. There is huge disposable income which leads to a consumption driven economy. The average age of Indian is 25 years while that of Chinese is 37 years, American 38 years, European Union 47 years and Japan 50 years.

B. **Domestic Consumption Theme:-** Out of the total production, India consumes 80 % of the production in India itself and only 20 % is exported and thus we are not an export oriented economy. Indian is not an export oriented economy and thus its dependency is not there on the world and other countries. Though we need to have strong exports to fund imports of gold and oil. Last year India has achieved exports worth $ 312 billion as against target of $ 325 billion.

C. **High Saving Rates:** - India's saving rate is 31 % while the global average is 24 %. Saving results into capital formation which has provided shield during the weak economic times. Saving returns into capital formation which results into investment and then ultimately capital formation.

Thus Indian economy is poised with unique growth features and has huge potential to grow. The resilient feature in the economy was evident from the fact that world economy grew at 1 to 2 % GDP during Global Financial crisis while Indian Economy was able to make growth of 6.3 % GDP growth.

5. Results

5.1 Correlation

The coefficient of correlation comes to 0.41, Table 3, which is close to partial positive correlation. This shows that there is significant relationship between the FII flows and the index. The Index is dependent variable while the FII flows are independent.

5.2 T-test

The T-test result, Table 3, has given the result of 2.34 which is greater than 5 % level of confidence which is 1.96 which means that the Null hypothesis is rejected and the alternative hypothesis is accepted. The FII has always been dominant player in the Indian stock market.

5.3 Forecast Value

The forecast shows in Table 3, what would be index value with a given level of FII flows. If the FII flows are Rs. 1,000 million then the index value comes to 16,864 and if the flows are increased to Rs. 2,000 million then the value of index comes to 17441. This shows that more the FII flows, higher is the value of the index.

5.4 Intercept

The intercept value of the index comes to 16,287 which means that if there are no FII flows (which is independent variable) then the value of the Index would be 16,287 (dependent variable). The current value of the Sensex is at 27,000 and it has touched all time high of 30,000 levels. The value of 16,287 shows that how steep can the index fall if the FII are not putting their money. This again reconfirms the fact that FII are the major player in the stock market.

6. Critical Analysis

The following are the points of critical analysis with regards to the topic.

6.1 FII Inflow into Indian Stock Market

FII flow data from 2008 to 2013 has been taken and not prior to that period or after 2013 as this time period has been very crucial for the world economy and the Indian economy. The year from 2003 to 2007 there was global liquidity flush. All indices including Sensex, Dow Jones were at all time high in 2007. This analysis from 2003 to 2007 may not give real correlation between FII flows and Sensex but from 2008 to 2013 when in 2008 FII pulled out Rs. 52,000 crores from Indian markets and the Sensex came crashing from 21,206 to 7697 shows their power and in 2011during Eurozone crisis, FII were net sellers for whole year and the Sensex delivery -24.65 % negative return. This time frame is very vital since it shows the impact of FII on our markets. The analysis proves that if FII pull out the money then our markets are nowhere able to withstand. The intercept clearly shows that if the FII flows becomes zero the SENSEX would come to 16000 levels from the present 27000 levels.

6.2 FII flows v/s Mutual Fund Flows

FII have more dominant position as compared to our mutual funds. In the last 3 years FII have poured in around $ 20 billion (Rs. 1, 20,000 crores annually) while the mutual funds investment has been in the range of $ 6 billion (Rs. 35000 crores annually). That's why it makes more relevant sense do to analysis for the FII than for the mutual funds. Indian mutual total AUM is Rs. 12 lakh crore but out of that 80 % is into Debt securities and only 20 % is into equity so it does not make much of sense to analyse the mutual funds inflows and its impact. In the last 6 months in 2015, the mutual funds were able to get Rs. 40,000 crores from the small investors into the various schemes. In the last 2 years, around 7 lakh new SIPs have been added in the mutual funds industry. But this quantum is very less than FII investment into the Indian markets.

6.3 Highlight of Events of 2008 and 2011 and their Impact on Stock Market

Indian markets are completely controlled by the FII and their impact has been seen globally. During 2008 our stock market gave negative return of 52 % and in 2011 they gave negative return of 24 % as FII had pulled out the money. The monthly data is presented in Table 2. This clearly makes it very important to study their impact on the economy rather than impact of scams and elections which are part of every other emerging economy. The two major global events like the 2008 Global Financial Crisis and the 2011 Eurozone crisis which has forced the world economy to rewrite the theories of finance about the impact of debt capital is the vital aspect of analysis.

7. Conclusion

The FII are having significant impact on the Indian stock market. They are actually controlling the movement of the Indian stock market. They had invested $ 16.5 billion[6] in 2014 and the index gave return of 32 %. The monthly data of investment and stock return is given in Table 2. The FII had withdrawn Rs. 52000 crores in 2008 and the sensex had given negative return of 52 % and in 2011 when there was Eurozone crisis the FII gave negative return of 26 %. In June 2013 when the US Fed just indicated that they are going to wind up the bond buying programme for the first time on 20th June 2013, FII sold shares worth Rs. 2100 crore within two hours of this announcement and Indian markets were down by 575 points and rupee depreciated by 1.5 % in one trading session. Mutual funds allow for portfolio diversification and relative risk aversion through collection of funds from the households while FII flows affect the stock market directly. All this real life event shows that how deep is the impact of FII on the Indian stock market.

8. Suggestions

The following suggestions could increase the depth of the Indian capital market

8.1 Safety Net

This is the concept in which the company coming out with IPO has to compensate to the retail invetor if the market prices go below 20 % of the issues price during

Table 2. Net investment and index

MONTH ENDED	NET INV. (Rs m)	MONTH END INDEX
Jan - 2008	−4,368	17,649
Feb - 2008	1,246	17,579
Mar - 2008	152	15,644
Apr - 2008	128	17,287
May - 2008	−1,095	16,416
Jun - 2008	−2,453	13,462
Jul - 2008	44	14,356
Aug - 2008	−820	14,565
Sep - 2008	−1,422	12,860
Oct - 2008	−2,931	9,788
Nov - 2008	−705	9,093
Dec - 2008	293	9,647
Jan - 2009	−868	9,424
Feb - 2009	−418	8,892
Mar - 2009	61	9,709
Apr - 2009	1,475	11,403
May - 2009	4,248	14,625
Jun - 2009	696	14,494
Jul - 2009	2,405	15,670
Aug - 2009	829	15,667
Sep - 2009	4,143	17,127
Oct - 2009	1,788	15,896
Nov - 2009	1,180	16,926
Dec - 2009	2,224	17,465
Jan - 2010	122	16,358
Feb - 2010	465	16,430
Mar - 2010	4,136	17,590
Apr - 2010	2,065	17,559
May - 2010	−1,988	16,945
Jun - 2010	2,096	17,534
Jul - 2010	4,608	18,081
Aug - 2010	2,404	17,971
Sep - 2010	5,600	20,069
Oct - 2010	5,578	20,032
Nov - 2010	4,152	19,521
Dec - 2010	−194	20,509
Jan - 2011	−1,389	18,328
Feb - 2011	−220	18,447
Mar - 2011	1,555	19,445

(*Continued*)

Apr - 2011	1,582	19,136
May - 2011	–1,157	18,503
Jun - 2011	735	18,694
Jul - 2011	1,873	18,197
Aug - 2011	–2,107	16,677
Sep - 2011	–200	16,454
Oct - 2011	451	17,705
Nov - 2011	–859	16,123
Dec - 2011	–11	15,544
Jan - 2012	2,153	17,194
Feb - 2012	5,159	17,584
Mar - 2012	1,757	17,060
Apr - 2012	–55	17,302
May - 2012	–295	15,965
Jun - 2012	22	17,430
Jul - 2012	1,901	17,257
Aug - 2012	1,670	17,430
Sep - 2012	3,836	18,824
Oct - 2012	1,892	18,562
Nov - 2012	1,948	19,305
Dec - 2012	4,446	19,581
Jan - 2013	3,822	19,781
Feb - 2013	4,163	18,919
Mar - 2013	1,913	18,736
Apr - 2013	1,128	19,736
May - 2013	3,336	19,610
Jun - 2013	–1,354	19,396
Jul - 2013	–896	19,317
Aug - 2013	–1,022	18,886
Sep - 2013	2,028	19,517
Oct - 2013	2,640	21,165
Nov - 2013	859	20,898
Dec - 2013	2,479	21,140

6 months after the listing. This will ensure that capital of the retail investor is protected. Currently this provision is not compulsory so companies are not following it. If this provision is made compulsory, then more retail investors would come to the market.

Table 3. Statistical Results

Correlation	0.410343607	0.410343607
t test	2.34225E-55	2.34225E-55
Average	9,005	9,005
Forecast	1000 million	16864.58187
Forecast	2000 million	17441.41099
Intercept		16287.75276

8.2 Making Merchant Bankers Accountable

The merchant bankers who give fancy valuations to the IPO should be held accountable if the price goes below the issue price. This will ensure that valuations are reasonably placed and more retail investors can participate.

8.3 Early Education

The concepts of investing in capital market should be introduced in the syllabus right from schools and collages. This would ensure that investment curlture is developed in young students so when they starting their career they start investing in capital markets. This would deepend the Indian capital markets.

9. References

1. Ghosh J, Chandrasekhar CP. The costs of coupling: the global crisis and the Indian economy. Cambridge Journal of Economics. 2009; 33(4):725–39.
2. Mohan R. Global financial crisis and key risks: impact on India and Asia. RBI Bulletin; 2008. p. 2003–22.
3. Bajpai N. Global financial crisis: its impact on India and the policy response. Mimeograph. 2011 Jul:5.
4. Pal MS, Chandani A. A critical analysis of selected mutual funds in India. Procedia Economics and Finance. 2014; 11:481–94.
5. Mehta M, Chandani A. Where Indian pharma corporates stand- study with reference to corporate governance practices and CSR. Indian Journal of Science and Technology. 2015; 8(S4):76–82. doi: 10.17485/ijst/2015/v8iS4/60359.
6. Are FII making or losing money in India? [Internet]. [Cited 2015 Sep 27]. Available from: https://www.equitymaster.com/india-markets/fiis/index.asp?utm_source=submenu.