An Analysis of Non-Debt Creating Inflows and Debt Creating Inflows into India After New Economic Policy

Dr. P. Jaya Prapakaran
Assistant Professor, PG and Research Department of Economics,
M.D.T.Hindu College, Trinelveli. India.

P. Satheeshkumar
Ph.D Research Scholar, Centre for Research in Economics,
Arul Anandar College, Karumathur, Madurai, India.

Abstract
This paper examines the trend and relationship between non-debt creating inflows and debt creating inflows into India after new economic policy. This study explains the non-debt creating inflows and debt creating inflows, especially non-debt creating inflow is very high inflows compare to debt-creating inflows of Indian Economy. Because, of the Foreign Direct Investment key role in the non-debt creating inflows. It is important for the government to move forward by adequately preparing the economy for capital inflows. Not doing anything is not an option, and such an approach risks the government being blamed for spoiling the India story. Undertaking more economic reforms is not easy but has to be done the government can either manage the process or competitive forces will bring it upon us in a asymmetrical manner. So, non-debt creating inflows and debt creating inflows enormously increased after adopted New Economic Policy into our economy.
Key Words : Non-Debt Creating Inflows, Debt Creating Inflows, Foreign Direct Investment, Foreign Portfolio Investment, Foreign Institutional Investment, Dicky-Fuller, Augmented Dicky-Fuller, Phillips-Perron and Bombay Stock Exchange.

Introduction

Liberalization and globalization have simulated the development of closer financial and trade relations between developed countries and developing countries. Technical process in transport and communications has caused economic apace to shrink dramatically. Countries now face much more intense and immediate competition than ever before. This leads to a significant restructuring of their comparative advantages and activities. The nature of competition itself is changing. The customer interaction has become more important than traditional forms of competition based on lower costs. Most developing countries have moved to market oriented and private sector led economies. There is widespread reduction and removal of trade barriers, deregulation of internal markets, privatization and liberalization of technology and investment flows at the national level.

India introduced liberalization policy and relaxed the FDI regulatory framework on a selective basis since 1991. Such a positive and 'open-door' policy of India towards foreign investment and technology transfer is in contrast to the earlier ambivalent and restrictive

approach. Leaving aside the exploitative type of foreign capital of pre-independence days, the need for it was clearly recognized at the beginning of India's industrialization process. The Industrial Policy Resolution of 1948 recognized that participation of foreign funds and enterprise would help to attract foreign capital in sufficient amount to supplement domestic savings for a more rapid economic development and also to secure scientific, technical and industrial skills. In practice, however, the policy was hemmed in with conditions and constrains and filled to attract any significant amount of foreign private investment. Due to the inward looking approach and protective walls erected around the domestic industry, the Indian industry became uncompetitive, manufacturing sub-standard quality products at high cost with obsolete technologies. In addition to the lack of choice available to the domestic consumers, exports competitiveness also suffered.

India did attempt some liberalization measures in 1985, but the attempts were half hearted and the liberalization was sidelined till the crisis of 1991. There was perceptible improvement in FDI inflows, though with quite erratic growth trends, in the decade of the eighties. Non-debt creating inflows constituted just 5.7 per cent of the capital inflows. Most of the FDI was concentrated in the manufacturing sector. The import substitution policy of the government, which resulted in sheltered markets with high cost, induced firms, domestic s well as foreign, to optimize profits in the domestic market instead of taking the risk of venturing into markets abroad.

Non-Debt Creating Inflows

There are two major parts of Non-Debt creating inflows, Foreign Direct Investment (FDI) and Foreign Portfolio Investment (FPI). The FDI is some components namely, I. Equity including (a) Government approvals (Secretariat for Industrial Assistance (SIA) or the Foreign Investment Promotion Board (FIPB), (b) Reserve Bank of India (RBI) automatic approvals, (c) Non-Resident Indian (NRI) investments, (d) Acquisition of shares, (e) Equity capital of unincorporated bodies , II. Reinvested Earnings, III. Other Capital. The another investment are FPI, namely, (a) Global Depositary Receipts (GDR) or American Depositary Receipts (ADR), (b) Foreign Institutional Investors (FII's) and (c) Offshore funds and others. The above components are very effect investment inflows to India. The FDI has an immediate impact on the goods market while FPI has an influence on the asset market. FDI is preferred primarily for the reason that it goes directly to increase the capital formation of the recipient country. Moreover outflows in the form of profits are pro-cyclical as profits are usually made when the whole economy is progressing well.

Debt-Creating Inflows

The other important component of Debt-Creating inflows into India. The principle components namely, (a) External Assistance (b) External Commercial Borrowings (ECB), (c) Short-term credits, (d) NRI Deposits, (e) Rupee Debt Services and other capital inflows.

During mid eighties the concessional aid from varied sources to India also almost stagnated and India was on a reverse track. It was in this context that India was forced to borrow from private foreign sources, i.e. from the international credit market. Such loans as an External Commercial Borrowings (ECB's). ECB's include commercial bank loans, buyer's credit and supplier's credit securitized instruments such as bond, Floating Rate Notes (FRN's), etc., credit from official export credit agencies such as CDU(UK), EXIM-J, US-EXIM, etc. and borrowings from the private sector window of multilateral financial institutions such as International Finance Corporation (Washington), Asian Development Bank, etc. Various deposit schemes have been designed from time to time to suit the requirements of Non-Resident Indians (NRI's). These deposit schemes can be put into two broad categories. 1. Deposits denominated in Indian rupees and 2. Foreign currency denominated deposits.

Objectives of the Study

- To analyse trend and growth rate of Non-Debt Creating Inflows and Debt Creating Inflows into India.
- To analyse the relationship between Non-Debt Creating Inflows and Debt Creating Inflows into India.
- To analyse the relationship between FDI Inflows and FPI Inflows in India.
- To study the causal relationship between net FII and BSE in India.

Methodology

The whole analysis is based on time series data. The necessary data have been collected and compiled from the already published sources. The secondary data on capital inflows in India is major sources collected from RBI Bulletins, SIA news letter, economic survey, GOI and annual reports. The other sources include books, journals, magazines and news papers.

Period of the Study

The period of the study taken up for the analysis was a period of 23 years, from the year 1990-91 to that of the year 2012-13. Main reason for selected these period for the New Economic Policy adopted into our economy. Then, India faced lot of problems, Economic slowdown, financial crisis, balance of payment crisis, Asian economic crisis. So I have been selected these periods.

Tools of Analysis

All the data are taken in million dollars. Linear Model, the Student't' tests and Granger Causality test had been used in this study. In the present study both simple and advance statistical and econometric tools has been applied. Analysis has been done by using SPSS version 19, Eviews 7 and MS-Excel.

Hypothesis

- H_0: There is no relationship between Non-Debt Creating Inflows and Debt Creating Inflows in India.
- H_0: There is no relationship between FDI Inflows and FPI Inflows in India.

Table – 1: Relationship Between NDCI and DCI (US $ Million)

Year	NDCI %	Growth Rate	DCI %	Growth Rate	TNCF
1990-91	1.4	-	83.8	-	7056
1991-92	3.4	29.1	77.5	-48.7	3910
1992-93	14.4	320.3	39.8	-49.1	3876
1993-94	46.6	642.9	21.3	22.9	8895
1994-95	60.4	23.7	66.5	198.1	8502
1995-96	119.6	-4.7	57.7	-58.2	4089
1996-97	51.1	25.3	61.8	214.4	12006
1997-98	54.7	-12.1	52.4	-30.3	9844
1998-99	28.4	-55.4	54.4	-11.1	8435
1999-00	49.6	115.7	23.1	-47.2	10444
2000-01	67.7	31.0	65.2	170.1	10018
2001-02	95.3	20.1	12.3	-83.8	8551
2002-03	55.4	-26.2	-12.2	-225.0	10840
2003-04	93.8	161.0	-5.9	-24.6	16730
2004-05	54.8	-2.1	35.2	-1089.3	28022
2005-06	84.2	39.6	40.9	5.8	25470
2006-07	65.9	39.0	64.1	177.7	45203
2007-08	35.2	25.9	38.2	40.5	106585
2008-09	378.8	-25.3	157.3	-71.4	7396
2009-10	135.8	150.2	31.3	39.0	51634
2010-11	104.0	-5.4	50.2	97.8	63740
2011-12	94.4	-3.5	44.4	-5.9	67755
2012-13	69.4	-2.9	51.8	53.8	89300

Source: Computed by the Author's from RBI Bulletin.

Trend of the Non-Debt Creating Inflows and Debt Creating Inflows into India

Table 1 reveals that the actual inflows of the non-debt creating inflows had maintained a fluctuating and unsteady trend during the period from 1990-91 to 2012-13. They rose from the level of 1.4 per cent share in 1990-91 to the level of 69.4 per cent share in total capital flows in the year 2012-13. The component of capital flows has undergone a complete change from official debt flows to non debt flows as a result of thrust of policy reform after the balance of payment crisis in 1990s that encouraged non-debt creating flows instead of short term debt flows. Besides, DCI had maintained a fluctuating and unsteady trend during the period study period. They decreased from the level of 83.8 per cent share in 1990-91 to the level of 51.8 per cent in total capital flows in the year 2012-

13. The official flows got replaced by private equity and external commercial borrowings (ECBs). Non-debt flows, particularly private foreign investments witnessed a significant rise. The component of capital inflow has changed significantly over the years.

TABLE - 2: Linear Trend Model

Model	Variables	a	b	SE.b	T	F	R^2	Adj.R^2
Linear	NDCI	-15781.8	3001.5	379.9	7.9*	62.4	0.75	0.74
Model	DCI	-6045.2	1487.6	304.9	4.9*	23.8	0.53	0.51

* one per cent level of significant.

Table 2 results of the linear trend analysis exhibited that the non-debt creating inflows and debt creating inflows into India after new economic policy. The regression co-efficient in the linear models were significant at one per cent level of non-debt creating inflows and debt creating inflows. The value of adjusted R^2 of NDCI and DCI were 0.74 and 0.51 in the simple linear regression model and they co-efficient values were 3001.5 Us Million and 1487 Us Million and also conformed F values significant.

Hypothesis Decision

$$t = \frac{r}{\sqrt{1-r^2}} \times \sqrt{(n-2)}$$

t = 11.62

Degrees of freedom = 21. t 0.05 = 2.83.

The computed 't' value was found to be greater than the critical 't' value, and hence the null hypothesis was rejected and the Student 't' test therefore seemed to support that there is relationship between non-debt creating inflows and debt creating inflows into India over the period 1990-91 to 2012-13.

Both FDI and FPI are generally complementary in nature. To test the relationship between FDI and FPI the following 't' test is carried out.

Table 3 shows the relationship between FDI and FPI. FDI showed a considerable enormously rose from 1.3 per cent share in 1990-91 to 52.4 per cent share in 1995-96 due to the World Trade Organization (WTO) General Agreement on Trade in Services (GATS) which included both wholesale and retail trade in services came into effect. Then again in the year 1997-98 FDI has raised 36.1 per cent to the previous year. The main reason FDI in cash and carry (wholesale) allowed up to 100 per cent and the government approval route. FDI decreased from the level of 29.1 per cent share in 1998-99 to 20.6 per cent share in 1999-2000 due to the several restrictions imposed on India by the USA on account of the nuclear test carried out by India at Pokhran, the slowdown of the India economy. At the same time FDI increased from the level of 40.2 per cent share in 2000-01 to 46.4 per cent share in 2002-03 and declined to 25.8 per cent share in 2003-04, further it shows the

increasing trend, in the year 2006-07 FDI has increased to 50.4 per cent share. The main reason for higher level of investment from Mauritius was that the fact that India entered in to a double taxation avoidance agreement (DTAA) with Mauritius were protected from taxation in India. Again in the year 2011-12 FDI has raised to 68.7 per cent share because of the 100 per cent FDI in single-brand retail permitted with government approval, 51 per cent FDI in multi-brand retail with few conditions. Again, declined to 38.4 per cent share of total capital flows in the year 2012-13. Main reason for Indian currency values fluctuating day to day and India parliament election coming next year, so FDI inflows reduced.

In India in the beginning of the liberalization regime in 1990-91, the share of FPI to total foreign investment was only 0.1 per cent but it increased to a level of 40.1 per cent in 1993-94 but, it declined to 18.5 per cent in the year 1997-98 and touched a negative share of -0.7 per cent in the year1998-99. The negative share coincided with the outflow of FPI from the East Asian Financial Crisis. Thus, although the volume of FPI increased enormously, its trend exhibited instability.

Table - 3: Relationship between FDI and FPI (US $ Million)

Year	FDI %	Growth Rate	FPI %	Growth Rate	TFI
1990-91	1.3	-	0.1	-	103
1991-92	3.2	32.9	0.1	-33.3	133
1992-93	8.1	144.1	6.2	6000	559
1993-94	6.5	86.0	40.1	1361.8	4153
1994-95	15.4	124.2	44.9	7.2	5138
1995-96	52.4	63.1	67.2	-28.1	4892
1996-97	23.4	31.5	27.5	20.5	6133
1997-98	36.1	26.1	18.5	-44.8	5385
1998-99	29.1	-30.7	-0.7	-103.3	2401
1999-00	20.6	-12.4	28.9	-5060.6	5181
2000-01	40.2	86.9	27.5	-8.7	6789
2001-02	71.6	52.1	23.6	-26.7	8151
2002-03	46.4	-17.8	9.0	-51.5	6014
2003-04	25.8	-14.1	68.0	1062.1	15699
2004-05	21.5	40.0	33.2	-18.1	15366
2005-06	35.1	48.1	49.0	34.1	21453
2006-07	50.4	154.7	15.4	-43.9	29829
2007-08	32.6	52.6	2.5	-61.1	37556
2008-09	39.3	20.2	-187.3	-609.1	28018
2009-10	73.1	-9.8	62.7	-333.6	70121
2010-11	54.6	-7.6	49.3	-2.7	66318
2011-12	68.7	33.5	25.6	-44.6	63963
2012-13	38.4	-26.3	31.1	59.5	62061

Source: Computed by the Author's from RBI Bulletin.

FPI showed a considerable enormously rose from nine per cent share in 2002-03 to 68 per cent shares in 2003-04 due to the higher growth rate in Indian GDP, robust corporate performance and an investment-friendly environment. But, it declined to 2.5 per cent in the year 2007-08 and touched a negative share of net outflow -187.3 per cent in the year 2008-09 mainly due to the heightened risk aversion of foreign investors, emanating from the global financial meltdown. Further it shows the decreasing trend; 49.3 per cent in the year 2010-11 FPI has lesser to 25.6 per cent in the year 2011-12 due to the European of the global financial crisis. Further it shows the increasing trend, in the year 2012-13 FPI has increased to 31.5 per cent share.

Hypothesis Decision

$$t = \frac{r}{\sqrt{1-r^2}} \times \sqrt{(n-2)}$$

t = 4.09

Degrees of freedom = 21. t 0.05 = 2.83.

The computed 't' value was found to be greater than the critical 't' value, and hence the null hypothesis was rejected and the Student 't' test therefore seemed to support that there is relationship between FDI and FPI into India over the period 1990-91 to 2012-13.

Granger Causality Test

The estimation methodology employed in this study is the co-integration and error correction modeling technique. The entire estimation procedure consists of three steps: first, unit root test; second, co-integration test; third, the error correction model estimation.

Unit Root Test

The table 4 explains that the values of different unit root test i.e. DF, ADF and PP and their p – values support the results of the time serious table. At first difference, all the unit root tests show that the FII and BSE are stationary in all the cases at one per cent level of significances. So it was found that the FII and BSE are stationary at their first difference.

Table - 4: Unit Root Test in First Differences

Test	FII		BSE	
Constant	t - statistics	p - value	t - statistics	p - value
DF	-5.499	0.0000	-6.085	0.0000
ADF	-5.564	0.0003	-5.955	0.0001
PP	-11.463	0.0000	-6.050	0.0001
Constant & Linear Trend				
DF	-6.299	0.0000	-6.455	0.0000
ADF	-6.049	0.0007	-6.090	0.0005
PP	16.571	0.0001	-12.208	0.0000

Source: Author's own calculation.

Using critical values by Mackinnon, 1996
Maximum lag length chosen using Schwarz Information Criterion (SIC)
Selection of Bandwidth in case of Phillips-Perron unit root test according to
Newey-West, 1994.

Co-integration Tests

In the next step, the co-integration between the stationary variables has been tested by the Johansen's Trace and Maximum Eigenvalue tests. The results of these tests are show in Table 5.

Table - 5: Results of Johansen's Co-Integration Test

Hypothesized No. of CE(S)	Eigen Value	Trace Statistics	0.05	Prob. **	Maximum Eigen Statistics	0.05	Prob. **
None *	0.724	24.010	15.494	0.002	23.218	14.264	0.001
At Most 1	0.043	0.791	3.841	0.373	0.791	3.841	0.373

Source: Author's own calculation.

The trace test indicates the existence of two co-integrating equations at five per cent level of significance. And, the maximum eigenvalue test makes the confirmation of this result. Thus, the two variables of the study have long-run equilibrium relationship between them. But in the short-run there may be derivations from this equilibrium and it is required to verify whether such disequilibrium converges on the long-run equilibrium or not.

Vector Error Correction Model
Table 6 presents the results of Vector Error Correction Model (VECM).

Table - 6: Estimates for VECM Regression

Independent Variable	ΔFII_t	ΔBSE_t
C	35830.89 [4.188] (8554.94)	1573.19 [2.226] (706.67)
EC_{t-1}	EC^1_{t-1}= -1.054 [-4.145] (0.254)	EC^2_{t-1}= -0.032 [-1.530] (0.021)
ΔFII_{t-1}	-0.447 [-1.375] (0.324)	-0.037 [-1.394] (0.026)
ΔFII_{t-2}	0.727 [2.134] (0.340)	0.037 [1.335] (0.028)
ΔBSE_{t-1}	-6.511 [-1.092] (5.963)	0.241 [0.490] (0.492)
ΔBSE_{t-2}	-29.069 [-3.808] (7.633)	-1.269 [-2.013] (0.630)
R- Squared	0.811	0.414
Adjusted R - Squared	2.744	5.561
F- Statistic	10.365	1.698
S.E. Equation	30379.46	2509.445
Log Likelihood	-207.679	-162.792
Akaike AIC	23.742	18.754
Schwarz SC	24.038	19.051

Source: Author's own calculation.

The Vector Error Correction Term (ETC) (e_{t-1}) convey the long-run causal effects, while the lagged explanatory variables give an indication of the short-run adjustments. The coefficient of ETC contains information about whether the past values of variable affect the current values of the variable under study. A significant coefficient implies that the past equilibrium errors play a role in determining the current outcomes. The significance of ETC implies the presence of causal relations from independent variables to dependent variable, used for the bivariate causal relationship between FII and BSE.

Granger Causality Tests
The results of F-tests are presented in Table 7.

Table - 7: Results of Granger Causality Test

Null Hypothesis	F - Statistic	Probability
ΔFII does not Granger Cause of ΔBSE	3.186	0.076
ΔBSE does not Granger Cause of ΔFII	9.348	0.004

Source: Author's own calculation.

Since the F-statistics of granger causality test is significant at 10 per cent level of significance, FII granger causes BSE. On in other words, any change in FII affects the market movements in Indian economy. Similarly, to find out the direction of causality between BSE and FII, the author applied Granger Causality test. Then, the F-statistics of granger causality test is significant at one per cent level of Significance, BSE granger causes FIIs. On in other words, any change in BSE affects the FIIs in Indian economy. It is also concluded from the above table 7 that there exists bidirectional causality between BSE and FIIs. In other words, any change in market movements (BSE) affects the decision of Foreign Institutional Investment and vice-versa.

Findings

- The actual inflows of the non-debt creating inflows had maintained a fluctuating and unsteady trend during the period from 1990-91 to 2012-13. They rose from the level of 1.4 per cent share in 1990-91 to the level of 69.4 per cent share in total capital flows in the year 2012-13.

- The debt creating inflows decreased from the level of 83.8 per cent share in 1990-91 to the level of 51.8 per cent in total capital flows in the year 2012-13.

- The computed 't' value was found to be greater than the critical 't' value, and hence the null hypothesis was rejected and the Student 't' test therefore seemed to support that there is relationship between non-debt creating inflows and debt creating inflows into India over the period 1990-91 to 2012-13.

- FDI showed a considerable enormously rose from 1.3 per cent share in 1990-91 to 52.4 per cent share in the year 1995-96, further; it rose to 38.4 per cent in the year 2012-13.

- The share of FPI to total foreign investment was only 0.1 per cent but it increased to a level of 40.1 per cent in 1993-94 but, it declined to 31.5 per cent in the year 2012-13.

- The calculated value of 't' is greater than the table value. So the null hypothesis that is, there is correlation between FDI and FPI rejected.

- Bidirectional causal relationship between FII and BSE in India.

Conclusion

Foreign capital has a key role to play in the economic development of India. Indian government has been continuously proceeding for economic reforms and is quiet assured to secure legislation to allow more foreign investment in various sectors. The size of net capital inflows to India has increased significantly in the after reform period. Capital inflows, however, are not an unadulterated blessing. Two major, components, non-debt creating inflows and debt creating inflows, especially non-debt creating inflow is very high inflows compare to debt-creating inflows of Indian Economy. But, our economies meet lot of problems, namely, Asian economic crisis, economic slowdown and financial crisis.etc. It is important for the government to move forward by adequately preparing the economy for capital inflows. Not doing anything is not an option, and such an approach risks the government being blamed for spoiling the India story. Undertaking more economic reforms is not easy but has to be done the government can either manage the process or competitive forces will bring it upon us in a asymmetrical manner. So, non-debt creating inflows and debt creating inflows enormously increased after adopted New Economic Policy into our economy.

References

- Tanushree Mazumdar (2005). Capital Flows into India Implications for Its Economic Growth, Economic and Political Weekly, Vol. 32, No.4, May.
- Indrani Chakraborty, (2006). "Capital Inflows during the Post-Liberalization Period", Economic and Political Weekly, Vol. 41, No.2, January.
- Soumyen Sikdar (2006). Foreign Capital Inflow into India: Determinants and Management, INRM Policy Brief No.4.
- Sumanjeet (2009). Foreign Capital Flows into India: Compositions, Regulations, Issues and Policy Options, Asia Research Centre, Working Paper No.155, June.
- Rakesh Mohan and Muneesh Kapur (2010). 'Liberalization and Regulation of Capital Flows: Lessons for Emerging Market Economies', Asian Development Bank Institute, Working Paper No. 186, January.
- Hojatallah Goudarzi, (2011). Empirical Analysis of the Impact of Foreign Institutional Investment on the Indian Stock Market Volatility during World Financial Crisis 2008-09, International Journal of Economics and Finance, Vol. 3, No.3; August.
- Ali Mohammad Dehghan and Ebrahim Alizadeh (2012). Foreign Capital Inflows and its Impact on Domestic Saving In India, Life Science Journal, Vol. 9 No. 4.
- Abhijit Sen Gupta and Rajeswari Sengupta (2013). Management of Capital Flows in India, South Asia Working Paper Series, No. 17, March.
- N. K. Sathya Pal Sharma and Guruprasad .B.G, (2013), Role of Foreign Institutional Investors in Indian Investment Arcade Growth, International Journal of Advancements in Research & Technology, Vol. 2, No. 4, April.