ABSTRACT

There has been a significant change in the Indian economy in the last two decades as Indian economy has been transformed into an Emerging Market Economy (EME) after the initiation of economic reforms (LPG- Liberalization, Privatization and Globalization) in 1991. Ever since the introduction of economic reforms after Balance of Payments (BoP) crisis, India has become one of the chosen destinations (2nd Rank after China, FDI Confidence Index, 2012) of the international capital flows. Among emerging market economies, India is next only to China with respect to World GDP whose share in World GDP are 6% and 14% respectively in 2011. India became the 3rd largest economy in the World after USA and China on the basis of GDP (PPP) in 2011. In terms of financial market development, India ranks (21st) much better than EMEs (Source: World Economic Forum- Global Competitiveness Report, 2011-12). Good growth prospects supported by ongoing economic liberalization and stable financial system, strong external liquidity position, high savings- investment ratios and favourable tax regime (India is one of the most favourable tax regime among EMEs) attracted foreign investors in India.

In this context, the increase of substantial capital inflows into India has become an interesting topic of research. This calls for new thinking in Indian macro economy and Indian financial system.

In this study, capital inflows include net foreign direct investment flows, net foreign portfolio investment flows, net external commercial borrowings, net external assistance and net NRIs deposits.

Capital inflows generally benefit the recipient countries. The inflows could alleviate the capital constraint, smooth out consumption and investment spending, and push down the interest rate. This provides a favourable climate for economic growth. Yet, at the same time, massive capital inflows may also lead to excessive money supply changes and consequent pressures on prices and the exchange rate, and deterioration in the current account balance. There may be other associated dangers of foreign investment: currency appreciation, reduced scope for independent macroeconomic policy actions, greater exposure to external shocks, demands for protection in local markets, some loss of control of foreign-owned domestic industry, disruption of national capital markets, asset inflation, increased volatility in financial and exchange markets, high sterilization costs, etc. (World Bank, 1995).
But the importance or benefits of capital inflows for an underdeveloped and developing country depends upon the absorptive capacity of that economy. Capital inflows may be advantageous when the economy’s absorptive capacity is enough to absorb these inflows, otherwise it will be dangerous for the economy.

The present study is organized into seven chapters. The first chapter is introductory in nature which gives an idea about conceptual framework and issues of capital flows, importance of capital flows, and theories of capital inflows and spells out the scope, objectives of the study, methodology adopted, data sources as well as limitations of the study.

International capital flows are part of capital account (long-term capital account + short-term capital account) of balance of payments. Long-term capital accounts include the amount of capital that has moved into or out of the country for a period of one year or more. It includes foreign direct investment (FDI), foreign portfolio investment (FPI), government loans. Short-term capital account includes bank deposits and other short-term payments and credit arrangements for the period of one or less than one year. International capital flows are recorded in the non-reserve capital account of the balance of payments (BoP). This account includes all international transactions involving assets other than official reserves, such as transactions in money, stocks, government bonds, land, and factories. The Balance of Payments and International Investment Position Manual, Sixth Edition (BPM6), published by International Monetary Fund (2009) defines capital flows as consisting of: (a) direct investment; (b) portfolio investment; (c) other long-term and short-term capital flows; and (d) reserves and liabilities constituting foreign authorities’ reserves. "Direct investment is a category of cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy" while "portfolio investment is defined as cross-border transactions and positions involving debt or equity securities, other than those included in direct investment or reserve assets".

FDI is driven primarily by perception about the economy’s long term prospects. For such investment exit is difficult due to high sunk costs. Therefore FDI has more stability or low volatility. The volatility of FPI is generally higher than that of FDI. That volatility of capital flows is highly undesirable has been amply demonstrated by the Mexican crisis of 1994, East Asia of 1997-98, Russia in 1998
and Brazil in 1999. Non-FDI flows are typically subject to herd behaviour and display strong volatility. A rising share of such flows at the cost of FDI significantly increases the chance of currency crisis and financial turmoil.

Foreign capital has significant role for every economy, regardless of its level of development. For the developed countries it is necessary to support sustainable development. For the developing countries, it is used to increase accumulation and rate of investments to create conditions for more intensive economic growth. The purpose of the flow of capital to underdeveloped countries is to accelerate their economic development up to a point where a satisfactory growth rate can be achieved on a self sustaining basis. Capital flows contribute in filling the resource gap in countries where domestic savings are inadequate to finance investment. Foreign investment gives the facility of imports of capital goods, raw materials and technical knowledge for the growth of an economy.

However, massive capital in-flows may also lead to excessive money supply changes and consequent pressures on prices and the exchange rate, and deterioration in the current account balance. There may be other associated dangers of foreign investment: currency appreciation, reduced scope for independent macroeconomic policy actions, greater exposure to external shocks, demands for protection in local markets, some loss of control of foreign-owned domestic industry, disruption of national capital markets, asset inflation, increased volatility in financial and exchange markets, high sterilization costs, etc. (World Bank, 1995).

Theories of capital inflow can be broadly classified in two categories: (1) theories of Foreign Direct Investment (FDI) and (2) theories of Foreign Portfolio Investment (FPI).

Theories of FDI state that the basis for investment lies in the transaction cost of transferring technical and other knowledge, and market imperfections and explain why MNCs indulge in FDI; why they choose a specific country in preference to another to locate their foreign business activity; and why they choose a particular entry mode. These theories have also tried to explain why some countries are more successful than others in obtaining FDI. There are various theories of FDI in which Differential Rates of Return, Kojima theory, Hymer-Kindlerberger Theory, Industrial Organisation Theory, Internalization theory, Location Theory, Dunning’s Electric Theory, Product Cycle Theory, Catching Up Product Cycle Theory, Oligopolistic
Reaction Theory, Internal Financing Theory, and Currency Area Theory are important. Theories of FPI may be divided into two categories- (1) Traditional theory of FPI is based on return and risk parameters. Generally, investors have following concepts while formulating the portfolio: - (a) low or reasonable returns can be achieved when risk is low; (b) high returns can be achieved when risk is high. (2) Modern theory is based on Principle of Risk, Principle of Diversification, Principle of Portfolio Effect, Principle of Dominance, Principle of Market Risk, Principle of Beta, Principle of Trade off between Risk and Return and Principle of Avoidance.

The literature on capital flows categorizes the factors influencing cross-country capital flows into the three groups. The first one mainly includes the institutional factors, e.g. the extent of capital account liberalization, adoption of global standards, transparency and consistency of the government policy, establishment and/or enforcement of law related to property rights protection, exchange rate regime and the like (Alfaro et al (2005)). The second group is called push factors which refer to the external determinants such as interest rates, economic growth and all economic activities and regulations related to the cross-border transactions in financial assets between countries. The pull factors, on the other hand, refer to the domestic determinants in a particular country such as domestic interest rates, the growth rate, inflation macroeconomic stability, current account and capital account balances, stock market development and trade volume.

The study broadly examines the trends, determinants of capital inflows in India and nature/volatility of these capital inflows and causes of the volatility. Especially the objectives are:

1. To analyze the trends, magnitude and composition (time profile) of capital inflows into India since 1991 (after initiation of economic reforms),
2. To assess the volatility of different components of Capital inflows in India
3. To identify the determinants of capital inflows into India,
4. To examine the impact of capital inflows on economic growth,
5. To examine the inter-relationships between capital inflows and some important macroeconomic variables or to analyze the effect of capital inflows on important macroeconomic variables as a consequence of economic reforms in India.
In order to support these objectives, following hypotheses were developed and tested during the course of this work:

i. **Null Hypothesis, H₀**: There is no direct relationship between capital inflows and economic growth; and  
   **Alternate Hypothesis, H₁**: There is direct relationship between capital inflows and economic growth.

ii. **Null Hypothesis, H₀**: Economic reforms have not increased capital inflows in India;  
    **Alternate Hypothesis, H₁**: Economic reforms have increased capital inflows in India.

iii. **Null Hypothesis, H₀**: The components of capital inflows are not volatile;  
    **Alternate Hypothesis, H₁**: The components of capital inflows are volatile.

The **second chapter** reviews some of the existing theoretical and empirical studies related to capital flows. Studies relating to capital inflows and its determinants, inter-relationship between capital inflows and economic growth, capital inflows and its impact on macroeconomic variables, capital inflows and volatility, capital inflows and exchange rates, capital inflows and savings- investments, etc. have been reviewed. These studies reveal that there is neither theoretical nor empirical consensus on determinants of capital inflows, no any definite pattern or consistent relationship between capital inflows and macroeconomic variables. Similarly, no conclusive generalization can be made about the casual relationship between capital inflows and economic growth.

The **third chapter** gives a time profile (trend and prospects) of cross-border capital flows to developing and emerging economies. In this chapter, attempts are made to examine the determinants, macroeconomic impact and volatility of capital inflows in the region in a very brief manner so that an overall idea may be developed about the inflows of capital into EMEs and other regions. When we analyze the growth pattern, we found that net capital inflows in EMEs registered 39 per cent average annual growth rate and 9.8 per cent compound annual growth rate during the period from 1980 to 2012(P). Net private financial flows into EMEs shows an average annual growth rate of 46.3 per cent while official flows as oppose to private financial flows registered an average annual growth rate of approx 137 per cent during the same period. Coefficient of Variance (CV) shows the nature of different types of
capital inflows in EMEs. A high CV shows more volatile nature as compare to others. In this sense, net official flows into EMEs are more volatile as compare to other component of capital inflows in EMEs. When we compare the volatility between net foreign direct investment flows and net private portfolio flows, we found that net private portfolio flows is more volatile in nature.

The overall net capital inflows in developing Asia registered a compound annual growth rate of 10.7 per cent during the period from 1980 to 2012 while net foreign direct investment grow by 25 per cent in the same time period. Other private financial flows are the most volatile in nature among other components of capital inflows in this region. Interestingly, net foreign direct investment is more volatile as compare to net private portfolio investment in developing Asia.

The time profile of capital inflows into some major economies of Emerging Asia during the period from 1996 to 2013 (P) shows that China’s position to attract capital inflows is better than that of other emerging economies of India, Indonesia, Korea, Malaysia, Philippines and Thailand.

The different components of capital inflows to Latin America and the Caribbean region show boom-bust pattern. Net capital inflows registered 4.5 per cent compound annual growth rate while net private financial flows into this region shows a compound annual growth rate of 4.2 per cent in the period from 1980 to 2012 (P). Net foreign direct investment flow shows highest average annual growth rate of 409.9 per cent in the same period. Surprisingly, we found that net foreign direct investment is more volatile in nature among the other components of capital inflows in the LAC region.

The fourth chapter deals with capital inflows in India since 1991. In this chapter, attempts are made to analyze the historical evolution of capital inflows, trends, magnitude, compositions and some discussion on determinants of capital inflows and the assessment of volatility of different types of capital flows in India after the post reforms period.

India’s approach towards capital flow can be divided into three main phases viz: first phase (1947- 1980) was started at the time of Independence and extended up to early 1980 wherein India's dependence on external flows was mainly restricted to multilateral and bilateral concessional finance; second phase (1980-1990) began in early 1980s mainly on account of widened current account deficit due to the traditional
way of external financing, thus India added recourse to external commercial loans including short term borrowings and deposits from NRIs; the measures in second phase led to increased short term debt in total external debt and thus caused a balance of payments crisis in 1991 and the third phase (1991 onwards) embarked initiation of reforms process and thus led to market determined exchange rates regime, removal of trade restrictions, move towards current account convertibility and gradual opening up of capital account.

The broad approach to reform in the external sector was based on the recommendations made in the Report of the High Level Committee on Balance of Payments, 1991 (chaired by Dr. C Rangarajan). The objectives of reform in the external sector were conditioned by the need to correct the deficiencies that had led to payment imbalances in 1991. Recognizing that an inappropriate exchange rate regime, unsustainable current account deficit and a rise in short-term debt in relation to official reserves were amongst the key contributing factors to the crisis, a series of reform measures were put in place. They included a swift transition to a market-determined exchange rate regime, dismantling of trade restrictions, a move towards current account convertibility and a gradual opening-up of the capital account. While liberalizing private capital inflows, the Committee recommended, inter alia: a compositional shift away from debt to non-debt-creating flows; strict regulation of external commercial borrowings, especially short-term debt; discouragement of the volatile element of flows from NRIs; and a gradual liberalization of outflows.

The Report of the Committee on Capital Account Convertibility (Chairman: S. S. Tarapore, 1997) provided the initial framework for the liberalization of capital account transactions in India. The Committee recommended a phased implementation of capital account convertibility, to be completed by the year 1999-2000. Drawing on international experience, the Committee suggested a number of preconditions needed to be met for the capital account liberalization programme to succeed: fiscal consolidation, lower inflation and a stronger financial system were seen as crucial signposts. It is interesting to note that the Committee did not recommend unlimited opening-up of the capital account, but preferred a phased liberalization of controls on outflows and inflows over a three-year period. Even at the end of the three year period, the capital account was not to be fully open and some flows, especially debt flows, would continue to be managed.
The issue of capital account liberalization was re-examined by the Committee on Fuller Capital Account Convertibility (under the Chairmanship of Shri S. S. Tarapore in 2006) which made several recommendations on the development of financial markets in addition to addressing issues related to interaction of monetary policy and exchange rate management, regulation/supervision of banks and the timing and sequencing of capital account liberalization measures. The Committee recommended that at the end of the five-year period ending in 2010-11, there should be a comprehensive review to chalk out the future course of action.

The capital flows in India may be divided into two major segments; one is non-debt creating flows which includes Foreign Direct Investment (FDI) and Foreign Portfolio Investment (FPI) and the second one is debt-creating flows which include External Assistance (EA), External Commercial Borrowings (ECBs) and NRI Deposits. FDI comes through MNCs, subsidiary of MNCs and joint venture as equity and reinvested earnings, (equity is the main source of FDI) and FPI comes through FIIs, Euro Issues, ADRs, GDRs, PNs, etc. FIIs are the main source of FPI.

Among the components, since the 1990s, the broad approach towards permitting foreign direct investment has been through a dual route, i.e. automatic and discretionary, with the ambit of the automatic route being progressively enlarged to almost all the sectors, coupled with higher sectoral caps stipulated for such investments. Portfolio investments are restricted to institutional investors. The approach to external commercial borrowings has been one of prudence, with self-imposed ceilings on approvals and a careful monitoring of the cost of raising funds as well as their end use. In respect of NRI deposits, some modulation of inflows is exercised through specification of interest rate ceilings and maturity requirements. In respect of capital outflows, the approach has been to facilitate direct overseas investment through joint ventures and wholly owned subsidiaries, and through the provision of financial support to exports, especially project exports from India. Ceilings on such outflows have been substantially liberalized over time. The limits on remittances by domestic individuals have also been eased. With the progressive opening-up since the early 1990s, the capital account in India today can be considered as the most liberalized it has ever been since the late 1950s.

Ever since the introduction of economic reforms after BoP crisis, India has become one of the chosen destination (2\textsuperscript{nd} Rank after China in 2012) of the
international capital flows. During the first ten years between 1990-91 and 1999-2000, India had mobilized US$ 34 billion in foreign investment and during the last ten years between 2000-01 and 2010-11 it has mobilized around US$ 320 billion during the same period.

India has improved its rank from 3\textsuperscript{rd} in 2010 to 2\textsuperscript{nd} in 2012 in FDI Confidence Index, 2012 and become the second most FDI attractive destination in the World after China (\textbf{Sources: ATKearney FDI Confidence Index, 2012}). India’s FDI inflows as World percentage have increased from 0.11 per cent in 1990 to 3.0 per cent in 2009 and 1.98 per cent in 2010. Inflows under FDI were particularly high during the last two years, though a large part of it was offset by significant outflows (India’s FDI outflow as percentage of World’s FDI outflows increased from 0.04 per cent in 2000 to 1.36 per cent in 2009 and 1.11 per cent in 2010) on account of overseas investment by Indian corporate (Source: UNCTADStat).

FDI registered an average annual growth rate (AAGR) of 51.7 per cent and compound annual growth rate (CAGR) of 41 per cent during the period from 1990-91 to 1999-2000 and 35.6 and 19.5 per cent respectively during 2000-01 to 2010-11. The overall an average annual growth rate in FDI recorded a 42.8 per cent and compound annual growth rate of 33.3 per cent during the analysis period, i.e., from 1990-91 to 2010-11.

A significant feature of FDI flows to India is that it concentrates in the services sector while in other East Asian Economies FDI flows dominate in manufacturing sector. This shows the service led growth of the economy and comparative advantage in international trade in services.

The highest FDI inflows into India come from Mauritius, Singapore, United Kingdom, Japan, the United States, the Netherlands, Cyprus Germany, France and United Arab of Emirates. India receives US$ 146.2 billion which is 84.3 per cent of total FDI inflows since April 2000 to May, 2012.

The regional distribution of FDI Inflows reveals an uneven distribution in India. Maharashtra, Delhi, Karnataka, Tamil Nadu and Gujarat are the highest recipient of FDI Inflows while Bihar, Jharkhand, North East States, Orissa, UP, Uttarakhand, Rajasthan, Goa are the least recipient of FDI in India.
Net FPI registered a compound annual growth rate of 17.65 per cent over the years. Growth rate over the previous year shows fluctuating trends of net FPI. India has witnessed a dominance of portfolio flows over FDI flows during various period of time, which is in contrast to developing and emerging market economies in most part of the world, where FDI constituted the main source of equity flows.

One of the most important features of the capital flows into India since 1991 is the change in its composition from debt to non-debt creating flows. External commercial borrowings (ECBs), which had been the major source of foreign capital inflows during the 1980s, became less important during the 1990s. Indeed, the change in the size and composition of capital flows has played a significant role in the growing strength of the external sector of the Indian economy. In the 1990s and 2000s, the predominant forms of foreign investment have been foreign direct investment and foreign portfolio investment.

In India, FPI with highest CV (212.5) is the most volatile in nature as compare to other components of capital inflows in India. EA (210.9), ECBs (191.7), FDI (131), NRI Deposits (126) and TCI (CV with 118) are respectively the less volatile in nature.

On the basis of time series analysis for the nature of components of capital inflows in India, we found that FDI, TCI and NRIs deposits exhibit significant positive autocorrelations whereas FPI and ECBs exhibit no significant autocorrelations. Thus, the findings are that in India in 1990s FPI and ECBs were volatile whereas FDI and NRIs deposits were not, and the combined effect of these components has produced less volatility in the aggregate in net capital inflows as compare to other components of capital inflows into India.

The fifth chapter brings out a detailed discussion about the research designs, econometric modelling, tools of time series and methodology used in this study. This study makes use of variety of econometric models (time series econometric models) to carry out the empirical analysis. In order to examine the determinants of capital inflows into India, we have used Fully Modified Ordinary Least Squares (FMOLS) method. To assess the volatility of different component of capital inflows, the traditional method- Coefficient of Variation and time series method- Autocorrelation coefficients (Correlogram) methods have been used. To examine the relationship between capital inflows and economic growth, the Pair-wise Cointegration and Pair-wise Granger Causality test have been employed. To examine the effects of capital
inflows on macroeconomic variables of Indian economy Vector Autoregressive (VAR) model have been used. In particular, generalized Impulse Response Function and Variance Decomposition models are used to examine the short-term dynamics and casual relationship between capital inflows and macroeconomic variables.

The sixth chapter examines empirically the determinants of capital inflows (separately FDI, FPI and TCI) by using Fully Modified Ordinary Least Squares Method (FMOLS), impact of capital inflows on economic growth by pair wise cointegration and Granger causality test and inter-relationship between capital inflows and some macroeconomic variables in India after the post liberalization period through Vector Autoregressive Model (VAR), Impulse Response Function (IRF) and Variance Decomposition method.

The correlation matrix reveals that FDI is positively related with GDP, IIP, WPI and Openness of the economy while it is negatively related to LIBOR, USINF, USTB and interest rate differential (IRD). In the same way, FPI is positively related to MCAP, PER, TBSE, IIP, GDP, EXR, and WPI while it is negatively related to USTB, IRD, LABOR, USINF, and CMR. Total capital inflows are positively associated with GDP, IIP, MCAP, WPI, OPN, PER, TBSE and EXR while negatively related with USTB, CMR and IRD.

The empirical results show that growth rate (IIP), market size (GDP), LIBOR, total external debt are important factors in attracting foreign direct investment flows while Mumbai stock exchange SENSEX, exports, gross fiscal deficit, growth rate (IIP), market capitalization of the Mumbai stock exchange (MCAP), openness of the economy, average price-earnings ratio (PER), turnover of the BSE (TBSE), total external debt (TXD) and US Treasury Bills (USTB), US inflation (USINF), London Inter Bank Offer Rate (LIBOR), foreign exchange reserves (FOREX) are important factors in attracting foreign portfolio investment flows into India during the post-reform period. When we estimate the determinants of foreign capital inflows (TCI) in India, we found that that Mumbai stock exchange SENSEX, exports, gross fiscal deficit, growth rate (IIP), US inflation, market capitalization of the Mumbai stock exchange, openness of the economy, average price-earnings ratio, turnover of the BSE, total external debt and US Treasury Bills are important variables to attract capital inflows in India after the post reform period.
The results of the pair-wise Granger Causality tests show that economic growth (IIP) Granger causes FDI and FPI. This has relevance for the economic policy after liberalization in India. It implies that the past information on economic growth improves the predictability of FDI. The above findings, however, challenge this objective. We further observe that there is a bi-directional causal relationship among these variables: growth rate (IIP) and FPI, IIP and FDI, GDP and FPI, IIP and GDP. But interestingly, FDI has a unidirectional causal relationship with GDP. It explains that the sound economic growth of the country attracts additional capital inflows. It means that the high inflows of capital have no positive impact on economic growth. This result suggests that, in the post reform period, instability in the trend behaviour of IIP can be explained partly by the instability in the trend behaviour of the inflows of private foreign capital with some lagged effect.

The results of VAR model with lags 3 show that lagged values of some of the variables have a significant effect on capital inflows (TCI). Lagged values of EXR, IIP, FOREX, and M3 affect TCI and TCI affects them. Some of the variables such as CMR, IMP, EXP and WPI are not affecting TCI. It shows that capital inflows have dynamic relationship with exchange rates, economic growth, foreign exchange reserves and money supply in India during the study period. On the other hand, capital inflows have no effect on interest rate, import, export and inflation during the study period. It also shows that increase in capital inflows leads to the appreciation of exchange rate, increase in economic growth. It also helps to raise the foreign exchange reserve and money supply in India which help to boost the economic growth of the country. Result indicates that capital inflows into India have no impact on import, export, interest rates and inflation rates.

Findings from impulse response analysis reflect that the impact of inflows of foreign capital on macroeconomic variables during liberalization is significant in some variables like IIP, M3, EXR and FOREX.

It is found that all the macroeconomic variables have a dynamic relationship with capital inflows. In some cases the relationship does not exist among few variables, for some period, but later the dynamic relationship exists. Overall, we can conclude that variance decomposition method shows a dynamic relationship among all variable throughout the period.
The last chapter includes summary, conclusions, suggestions and some policy implications and suggest some future research. On the basis of the objectives of this study, followings are the major policy implications and suggestions:

Based on the analysis in the study, the key policy issues of concern to India are of allowing the exchange rate to change, sterilization, the soundness and capacity of the financial system to intermediate large volumes of capital inflows as well as the relative costs of particular policies.

The composition of capital inflows makes a significant difference, both in terms of impact and smooth management. Portfolio inflows are more volatile than direct investment flows and because of their short-term nature, more difficult to intermediate smoothly. They can cause uneven expansion and contraction in domestic liquidity and thus have a greater impact on stock markets and expansion in money supply and domestic credit. Since sudden, large shifts in foreign portfolio demand for a country’s liabilities can be very destabilizing, foreign portfolio inflows need to be skilfully intermediated. There are two channels through which inflows of FPI can be intermediated – the stock market or the banking system. Preliminary evidence for India on the relationship between portfolio flows and some stock market indicators suggests that market prices are not unaffected by capital inflows. This exposes the potential vulnerability of the economy to sudden withdrawals of foreign investors from the financial market, which will affect liquidity and contribute to market volatility. The state of development of India’s financial markets, which are relatively underdeveloped, is likely to be a severe constraint on intermediating heavy volumes of volatility. An increase in the volume of capital inflows, therefore, might necessitate excessive intermediation through the domestic banking sectors. If intermediated through the banking system, FPI flows have a greater impact on domestic monetary expansion. Sudden, uneven increase in intermediated funds will lead to an irregular expansion in the volume of domestic financial assets and liabilities. Unless sterilised, the volume of bank lending is bound to rise and could lead to unscrupulous lending, which if it finances consumption or real estate, can trigger a consumption boom, financial instability as seen during the crises periods. In such a scenario, a sound banking system is an essential pre-requisite.

On the other hand, foreign direct investment inflows are long-term in nature and for that reason, less volatile. FDI is the investment in plant, equipments,
infrastructure developments, etc, so FDI flow is less susceptible to sudden withdrawals out of the country and therefore, leads to productive uses of capital and consequent economic growth. Therefore, the policy implication is that FDI should be promoted.

The study shows that capital inflows are associated with real appreciation in India. This is an area where conflicting policy choices are bound to arise. On the one hand, the policy option of stabilizing the real exchange rate to keep it constant can be a source of potential conflict between external and internal objectives and it may not always be possible to reconcile the two. Intervening foreign currency purchases to stabilize the exchange rate and accumulation of foreign exchange reserves has implications for domestic monetary management, which can be seriously impaired by divided short-term monetary responses during a capital surge. Therefore, monetary policy has to be untangled from exchange rate policy to be able to respond effectively to domestic objectives.

The option of a more flexible exchange rate policy, which has the advantages of insulating domestic money supply, domestic credit and the banking system as well as discouraging speculation through increased exchange risk, carries with it the risk of appreciation. An important implication of real appreciation is the loss in external competitiveness, which hurts exports. This, in turn, will lower the profitability of the trading sectors of the economy and disrupt the process of trade liberalization. Second, there are real adjustments costs associated with exchange rate changes, which, if the inflows are temporary in nature, can severely disrupt economic processes within the economy (Calvo & Reinhart, 2000).

The major policy issue here is how much the exchange rate should be allowed to fluctuate or adjust, vis-a-vis the trade-off between the real economic costs of exchange rate fluctuations and inflation. In other words, if the external sector has to be protected, how does one reconcile a stable exchange rate and simultaneously control domestic money supply with capital mobility. This is the familiar macroeconomic policy trilemma (Obstfeld and Taylor, 2001) where the conflict facing policy-makers is the choice between a fixed exchange rate, capital mobility and an active monetary policy, when only two of the three objectives can be chosen. One may also mention here that the policy option of protecting exports through
subsidies, as a safeguard against adverse exchange rate movements, is now constrained by the current environment of globalization and trade agreements.

This study highlights the pressures of capital surge on domestic monetary management. It also shows the additional constraint of fiscal-leed monetary policy expansion in India, which raises aggregate demand and aggravates the inflationary impact of capital inflows. These pressures complicate macroeconomic management as the only variable that can be varied in this scenario to control inflation, or adhere to a monetary target, is domestic private sector credit. A popularly suggested macroeconomic policy response during a capital surge to counter their inflationary impact and lower aggregate demand is to exercise fiscal restraint. This option, however, has rarely been exercised or observed (Edwards, 2000), the reason being that fiscal policy is usually set according to medium/long-term projections and it is difficult to use it effectively for immediate effects. In India’s case, however, there is still a strong argument for fiscal restraint, as fiscal profligacy constrains monetary policy. If monetary management is to be geared towards price stability with an open capital account, it is important that government credit should be curtailed. Private sector credit variations can then be released from the burden of adjustment to keep pace with real GDP growth.

The experience with liberalization of controls on capital inflows in India reveals close similarities with other liberalizing EMEs in Asia and Latin America. An important difference between India and these EMEs is that the magnitude of capital inflows has not been very large in India so as to cause intensive macro and micro management problems. The challenges faced by India, both in terms of impact on important macroeconomic variables as well as macroeconomic management have been far less.

The regional distribution of FDI Inflows reveals an uneven distribution in India. Maharashtra, Delhi, Karnataka, Tamil Nadu and Gujarat are the highest recipient of FDI Inflows while Bihar, Jharkhand, North East States, Orissa, UP, Uttarakhand, Rajasthan, Goa are the least recipient of FDI in India. In this regard, Government of India with consultation with these States (BIMARU States), should make policies to attract FDI inflow so that income inequality/disparity, labour migrations, etc. may be reduced and the fruits of inclusive growth may be achieved. For this, government should make policies, keeping in view of its determinants.
Government should develop infrastructure, law and order and create favourable environment to attract foreign investors into these regions.

FDI is long term investment flow components of capital inflows in India. It is less volatile in nature as compare to FPI and other components of capital flows. So, Government should make policies to attract more and more FDI inflows into India. FDI inflow should be promoted in agricultural activities especially food processing industry so that food security may also be fulfilled. In this regard, at least one study may be conducted, i.e., analysis of FDI inflows and their impact on rural activities with special emphasis on employment- generating effects or, analyses of the impact of FDI in various rural activities especially in the sectors of agriculture and food processing, and the assessment of positive and negative impact of employment through FDI enabled production activities may be conducted.

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