Chapter- 1

INTRODUCTION

1.0. Introduction

There has been a significant change in the Indian economy in the last two decades. An inflexible and closed economy has transitioned into an open market economy, with financial markets playing a vital role. In this context, the increase of substantial capital inflows to India and the emerging economies in 1990s have become an interesting topic of research. This calls for new thinking in Indian macro economy and Indian financial system. Are traditional policy reflex adequate? Should India protect itself from the dangers of globalization with an array of capital controls? Or should India move forward towards the arrangements of successful emerging markets and ultimately the developed countries? These pertinent questions may be addressed based on a combination of objectives set in this study. Alongside conceptual thinking and international experience, empirical evidence in India is of crucial importance.

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 such as 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).

Therefore, a lot of attention has been paid to designing a coherent macroeconomic policy to cope with the pressures of large, potentially volatile inflows and rapid financial market integration. One important issue is to know the nature of the capital inflows—for example whether they are temporary or permanent inflows,
sustainable or unsustainable inflows—since this would lead to different policy prescriptions.

Before going much detailed about analysis of capital inflows in India after reforms, it would be imperative to start with some basic conceptual framework with theories relating to capital flows so that the complete research designs and procedure for empirical analysis can be done.

1.1. Types of Capital Flows

One of the most significant developments in India in the recent years has been the spectacular surge in international capital flows. It is noteworthy that the expansion of capital flows has been much larger than that of international trade flows. International capital flows have increased tremendously since the 1980s. During the 1990s gross capital flows between industrial countries rose by 300 per cent, while trade flows increased by 63 per cent. These two flows are separate components of balance of payments. Trade flows are included in current account (goods account + services account + unilateral transfers account) while 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. These transactions are simply included in an account under the general term “Errors and Omissions including short-term capital account”. In other words 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.
According to BPM6, “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”. A part from the equity that gives rise to control or influence, direct investment also includes investment in indirectly influenced or controlled enterprises, investment in fellow enterprises, debt, and reverse investment.

Reinvestment of earnings, which arises from a direct investor’s equity in its direct investment enterprise, is recorded as an imputed financial account entry. Reinvestment of earnings is included as part of FDI (credit) in the financial account with a corresponding contra entry in the investment income component of the current account (debit). Reinvestment of earnings may be negative in some cases, e.g., in cases where losses by the direct investment enterprise or dividends payable in a period are larger than net earnings in that period. While positive reinvested earnings are treated as an injection of equity into the direct investment enterprise by the direct investor, negative reinvested earnings are treated as a withdrawal of equity.

Mergers involve an agreement between two or more companies to combine into a single operation.

Acquisitions arise when one company or a group of companies purchases another company or group of companies (though not all the shares may be acquired by the purchaser). Mergers and acquisitions data are not considered as standard components within direct investment, though such data may be of interest because the nature of mergers and acquisitions may differ from other direct investment.

According to BPM6, “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”. The negotiability of securities is meant to facilitate trading, allowing them to be held by different parties during their lives. Negotiability facilitates portfolio diversification and ready withdrawal of investment on the part of investors. Investment fund shares/units (i.e., those issued by investment funds) that are backed by securities and that are not included as part of reserve assets or direct investment are included under portfolio investment. Despite being negotiable instruments, exchange-traded financial derivatives are excluded from portfolio investment as they are represented as a separate category.

Equity securities include all instruments and records which acknowledge claims to the residual values of incorporated enterprises after the claims of all
creditors have been met. Shares, stocks, participation, or similar documents (such as American Depositary Receipts) are examples of equity securities. Preferred stock or shares, which also provide for participation in the distribution of the residual value on dissolution of an incorporated enterprise, are included. Mutual funds and investment trusts are also included.

**Debt securities** cover (i) bonds, debentures, notes, *etc.* and (ii) money market or negotiable debt instruments. Bonds, debentures, notes, *etc.* usually confer unconditional rights on the holder to a fixed money income or contractually determined variable money income. Except for perpetual bonds, bonds and debentures also provide the holder with the unconditional right to a fixed sum as a repayment of principal on a specified date or dates. This includes non-participating preferred stocks or shares, convertible bonds, and bonds with optional maturity dates, which is more than one year after issue. Negotiable certificates of deposit with maturities of more than one year; dual currency bonds; zero coupon and other deep discounted bonds; floating rate bonds; indexed bonds; and asset-backed securities, such as collateralized mortgage obligations and participation certificates are also included in this category. (Mortgages are not classified as bonds but are included under loans.)

Some of the other components of portfolio investment, as discussed in BPM6, are set out below:

**Reinvestment of earnings in investment funds:** This includes undistributed earnings of portfolio investment in investment funds, which are imputed as being payable to the owners and then reinvested in the fund. Reinvestment of earnings may be negative, for example, in cases where a fund has paid dividends out of realized holding gains, or when dividends are paid out of earnings accrued over previous periods.

**Convertible bonds:** On implementation of the option to convert the bond into shares, two entries are made, *viz.*, redemption of the bond and the issue/acquisition of shares.

**Share and debt buybacks:** Transactions which involve buying of its own shares by a corporation are classified as a reduction in the equity liability, rather than as an acquisition of an asset. Similarly, an issuer’s purchase of its debt security is treated as redemption of the debt.

**Bonus shares:** Shares are sometimes restructured by corporations who offer their shareholders a number of new *shares* for each share previously held, which can
be termed as stock splits or the issue of bonus shares. In contrast to the issue of new shares in return for additional funds, the issue of bonus shares does not involve provision of new resources and no transaction is recorded.

1.1.1. Differences between FDI and FPI

The main differences between FDI and FPI may be given as below:

1. FDI tends to be undertaken by multinational organisations while FPI comes from more diverse sources such as small company's pension fund or through mutual funds held by individuals; investment via equity instruments (stocks) or debt (bonds) of a foreign enterprise.

2. FDI involves the transfer of non-financial assets e.g. technology and intellectual capital, in addition to financial assets while FPI involves only the investment of financial assets.

3. FDI involved in management and ownership control and almost permanent in nature while in FPI, there is no active involvement in management. FPI instruments that are more easily traded, so less permanent and do not represent a controlling stake in an enterprise.

4. FDI is a long-term investment and so less volatile in nature while FPI is short-term investment and so more volatile.

5. FDI is more difficult to sell off or pull out while FPI is fairly easy to sell securities and pull out because they are liquid.

1.1.2. Nature of Capital Inflows

There is significant difference between different types of inflows in respect of benefits and costs. 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. In terms of volatility, the flows are usually ranked as follows (from least to most volatile) - Long term bank lending, FDI, FPI and short term bank loans (maturity period of less than one year).

A study in respect of 12 major developing economies and countries in transition confirmed that the volatility of FPI was generally higher than that of FDI. (UNCTAD, 1998)
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.

1.2. Importance of Capital Inflows

The importance 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 advantages and disadvantages of capital inflows may be discussed as follow:

1.2.1. Advantages of Capital Inflows

The importance of capital flows for an economy especially for underdeveloped and developing countries is well recognized and well documented (World Development Report, 1985; Report of the Research Department of the International Monetary Fund, 1991; Final Report of the Working Party on the Measurement of International Capital Flows, International Monetary Fund, 1992; World Bank, 1995). Capital flows are generally welcomed in most countries as they assist in the proper allocation of global resources and thereby increase the availability of capital and thus higher investment and growth. They are instrumental in the transfer of technology and management skills. Some of the other advantages of foreign investment are: risk sharing with the rest of the world, greater external market discipline on macroeconomic policy, broader access to export markets through foreign partners, training and broader exposure of national staff, greater liquidity to meet domestic financing needs, broadening and deepening of national capital markets, and improvement of financial sector skills (World Bank, 1995).

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 in the form of private investment, foreign investment; foreign aid and private bank lending are the principle ways by which resources can come from rich to poor countries. The transmission of technology, ideas and knowledge are other special types of resource transfer.

Countries in early stages of development assumed to have a primary need for technical assistance and institution building and only limited need for capital assistance chiefly for infrastructure projects. As the need for capital assistance increases, the need for technical assistance shifts from general to more specific skills. The gradual increase in domestic savings and a growing capacity to attract private and other conventional foreign capital on non-concessional term will progressively reduce the need for foreign aid. The assumption that need for foreign capital is temporary and limited is underlined several recipients in Latin America elsewhere and expected attain rapid development in ten to fifteen years but it is recognized that in Asia and Africa, the need for capital flows will remain for a much longer time.

Capital flows contribute in filling the resource gap in countries where domestic savings are inadequate to finance investment. Capital inflows allow the recipient country to invest and consume more than it produces when the marginal productivity of capital within its borders is higher than in the capital-rich regions of the world. Capital inflows facilitate the attainment of the millennium development goals (MDGs) and the objective of national economic, empowerment and development strategy (NEEDs). Added to this, capital inflows are necessary for macroeconomic stability as capital inflows affect a wide range of macroeconomic variables such as exchange rates, interest rates, foreign exchange reserves, domestic monetary conditions as well as saving and investments. Some commonly observed effects of the capital inflows that have been documented in the studies (Calvo et al., 1994; Calvo and Reinhart, 2000; Hutchison, 2002; Schneider and Tornell, 2004; Ito, 2006; Jitter, 2003; Kaminsky, 2003 amongst others) include real exchange rate appreciation, stock market and real estate boom, reserve accumulation, monetary expansion as well as effect on production and consumption.

FDI is seen as a means to supplement domestic investment for achieving a higher level of economic growth and development. FDI offer benefits to domestic industry as well as to the consumer by providing opportunities for technological up
gradation, access to global managerial skills and practices, optimal utilization of human and natural resources, making industry internationally competitive, opening up exports market, providing backward and forward linkages and access to international quality goods and services.

Economic growth is a function of capital formation. In the developing countries, the per capita income and savings rate being very low, domestic capital formation is inadequate to give a “big push” to the economy to take it to the “take off” stage. Hence the domestic resources may be supplemented with foreign capital to achieve the critical minimum investment to break the vicious circle of “low income-low saving-low investment-low income.”

Foreign investment gives the facility of imports of capital goods, raw materials and technical knowledge for the growth of an economy. If investment is made in export-oriented industries, it promotes exports of host countries and facilitates imports to a large extent. If it is in cost reducing industries, customers get cheaper products which results in a general increase in the real incomes of the people. The investment, if used, for structural development leads to the development and growth of all other kinds of industries. Besides giving a general boost up to the industrial development increased FDI leaves favourable impact on the balance of payment position of a country.

Foreign direct investment (FDI) plays a multi-dimensional role in the overall development of the host economies. It may generate benefits through bringing in non-debt-creating foreign capital resources, technological upgrading, and skill enhancement, new employment, spill-over and allocative efficiency effects. While FDI is expected to create positive outcomes, it may also generate negative effects on the host economy. The costs to the host economy can arise from the market power of large firms and their associated ability to generate high profits. Much of the existing empirical evidence suggests that the positive effects offset negatives, thus providing net economic benefits for the host economies.

1.3.2. Disadvantages of Capital Inflows

However, 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 such as 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).

The role of foreign capital in development is not a topic that commands complete consensus among economists. The major points of contention (disadvantages of capital inflows) may be summarised as:–

(a) Exchange Appreciation

In theory, capital inflows will raise the level of domestic expenditure in economy, raising the demand for non-tradable goods that results in an appreciation of the real exchange rate. The price adjustment process then leads to a reallocation of resources from tradable to non-tradable goods. The rise in aggregate expenditure also increases the demand for tradable, leading to rise in imports and widening of the trade deficit. Inflow leads to currency appreciation, which hurts the tradable and hampers the programme of integration with the world economy.

(b) FER Accumulation

The most important policy objective of the RBI in the reform era has been the maintenance of viability in the BoP. The primary concern was to avert the possibility of a payments crisis. This was sought to be achieved through (a) keeping the current account deficit CAD at a low level (b) maintaining the composition of capital inflow in favour of non-debt flows like FDI and FPI, (c) accumulating substantial stock of FER on the presumption that inadequate reserves may trigger off a currency crisis, as was the case in many such episodes. The economy’s shock absorption capacity has improved dramatically in recent years, judged by the volume of reserves in relation to imports, short-term debt and non-debt liabilities.

How much FER should a country hold at any point in time to counter speculative attack on its currency? There is no unique answer, but one criterion is the import cover of reserves (= number of month’s imports that the FER stock can buy). Another indicator is the amount of debt in relation to FER. The Guidotti-Greenspan rule suggests that reserves should at least equal the amount of foreign capital that may contractually leave within a year. Lenders and investors would then presumably be less inclined to withdraw funds as a pre-emptive measure during periods of turmoil.
(c) **Current Account Deficit**

Capital inflows may lead to a widening of the CAD, and this may push foreign indebtedness to unsustainable levels. Consequences will be particularly adverse when the flows are linked to a consumption boom in the economy. In this case the investment – saving (I – S) gap widens through a fall in saving (S). The interest payment for debt services rises, adding to the CAD. As there is no addition to the capital stock, the ability to make future repayments is compromised. As net foreign debt crosses a critical value (unknown ex ante), the risk premium of the country may increase and access to international capital markets in future may get restricted. Although *Williamson’s rule of thumb* suggests a safety limit of 40 per cent for the debt-GDP ratio, Mexico’s crisis started when it was only 8 per cent. The adverse impact on CAD may be countered through fiscal consolidation (reduction in budget deficit). But a reduction in government spending may have its own adverse impact on output and employment in a situation of demand deficiency. Furthermore, expenditures and taxes should be set to reflect long-term goals, rather than as means to counter volatile fluctuations in global capital flows. Prudent fiscal policy is by itself not enough to avert crisis, as demonstrated by the experience of East Asia. However, with public deficit under control, the financial system can handle inflows better.

(d) **Effect on Money Stock**

When the central bank intervenes in the foreign exchange market to manage the exchange rate, capital inflow causes the monetary base to expand. The resulting rise in money supply may cause inflationary pressures to develop and real exchange will appreciate. To counter this central banks often undertake *sterilization* operation in the form of (i) open market operations (sale of domestic bonds in the case of inflow), (ii) increase in the cash reserve requirement (CRR) of commercial banks. But each of these methods has its costs.

When the central bank resorts to sale of government securities to reduce domestic liquidity, it is effectively giving bonds to the public in exchange for foreign reserves. Since the interest on the domestic debt issued is typically higher than the yield on FER (= the yield on short term US Treasury bills in which FER is usually held) this involves a cost, known as *quasi fiscal cost* of sterilization. Also open market sale of domestic bonds keeps the domestic rate of interest from falling. Since the interest differential is prevented from narrowing, capital inflow is prolonged. If, instead of OMO, sterilization is done through an increase in CRR, the cost is
transferred to commercial banks, for which reserve requirement is a burdensome tax on intermediation. The lending rate may be pushed up, causing a contraction in aggregate demand. If the central bank allows the exchange rate to appreciate in response to capital inflow, money supply stays unchanged. This lowers the potential for inflation. The appreciation itself is deflationary. The heavy capital inflows of the 1990s have been accompanied by slightly higher levels of inflation in Asia, while inflation has fallen in Latin America due to sharp real appreciation of currencies.

(e) Financial Crisis

Increased openness to international capital flows has been associated with an increasing frequency of financial crises (Kaminsky and Reinhart, 1999; Bordo and Eichengreen, 1999). Their study established, for 5 industrial and 15 major emerging economies over the period 1980-1999, a 10 to 15 per cent annual probability of a BoP crisis. One third of these crises are “twin” banking and currency crises. Pure currency crises have declined as countries have moved towards more flexible exchange rate systems, but banking crises have loomed larger with the dismantling of capital controls and regulations.

The Asian experience has shown that when large funds are intermediated through weak and weakly supervised banks, there is the distinct possibility that those funds will find their way into risky ventures that promise high returns or into speculative financing of real estate. The implicit or explicit government guarantee to suppliers of finance aggravates the moral hazard problem.

Although short term borrowing by corporations involves significant risk, such risks are considered to be more serious in the case of banks. Unlike a commercial bank the typical corporation tends to be small and its foreign currency liability tends to be hedged by export receipts or other real assets. However, the Asian crisis has shown that the consequences of un-hedged foreign currency borrowing by large business houses may be very adverse.

Following McKinnon and Pill (1996) some channels may be identified through which large capital inflows may worsen the risk structure of the banking system of a liberalized economy:

(i) Credit risk- risk of default by the borrower increases as bank lending rises in the wake of a sudden rise in the availability of loanable funds.

(ii) Settlement risk- it arises if the payments system is incapable of handling the magnitude of cross-border settlements.
(iii) Foreign exchange exposure increases dramatically since the inflows are foreign
currency denominated, while the banks have experience only in domestic
lending in local currency.

(iv) Liquidity risk arises if the inflows are large relative to domestic capital markets.
If the banks invest in real estate, prices may be driven up causing inflation in
asset and stock prices. FPI in Asia and Latin America caused sharp increases in
stock and real estate prices, creating a situation in which speculation and herd
behaviour flourished. Lack of investment in tradables damages the economy’s
capacity to earn foreign exchange and thus renders future debt servicing and non
debt outflows more difficult to manage.

(v) Market risk arises when after a crash in asset prices the market value of a bank’s
assets takes a plunge before it can be liquidated or offset in some way.

(vi) Supervisory risk arises because large inflow of foreign funds causes the task
facing the regulators to magnify both in magnitude and complexity. Foreign
banks often act as a source of contagious transmission of crisis. In response to
crisis in one country, multinational banks might attempt to liquidate positions in
other regional economies either to enhance liquidity or reduce portfolio risks.
Managing such banks is one of the trickiest problems facing the domestic
supervisory authorities.

For preventing financial instability, regulations that limit the exposure of
banks to the volatility of equity and real estate markets, as well as ensuring risk based
capital adequacy are in order; but the flip side is that these policies may promote
disintermediation, which refers to new institutions that develop to bypass these
restrictions. Moreover, greater control on banks may amount to a reversal of the trend
of financial liberalization currently in progress in LDCs. The impact of capital inflow
on the banking sector of the Indian economy has been studied by Kohli (2003).

(f) Private Sector Over borrowing

Borrowers from the LDCs (emerging economies) face a highly imperfect
international capital market due to informational gaps and perception of country risk.
An increase in external liability adversely affects an economy’s credit rating. The
implication is that borrowing from abroad by an economic agent has an element of
negative externality—it raises the cost to other borrowers in the economy. The
marginal social cost of external finance is higher than marginal private cost. This calls
for control on inflows.
1.3. Theories of Capital Inflows

Theories of capital inflows 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.

1.3.1. Foreign Direct Investment (FDI)

There are various theories of FDI which can be briefly discussed here-

1. **Differential Rates of Return**: This theory states that the differential rate of return between the home country and the host country is the crucial factor for FDI to take place. Capital flows from country of low rates of return to a country with high rates of return. The rationale for this theory is that firms considering FDI behave in such a way as to equate the marginal return on and the marginal cost of capital. The hypothesis obviously assumes risk neutrality, making the rate of return the only variable upon which the investment decision depends. Risk neutrality in this case implies that the investor considers domestic and FDI to be perfect substitutes or in general that direct investment in any country, including the home country is a perfect substitutes for direct investment in any other country. (Moosa, A. 2002). However, the fact that this theory could not be supported by empirically (Agarwal, 1980 and Weintraub, 1967). They have failed to find a significant relationship between inter-country differences in the rates of return and FDI flows. Some have rejected the differential rates of returns, and stressed the adequacy of the return as a pre condition for the movement of capital (Bandera and White, 1968). This theory, however does not explain the simultaneous occurrence of inflows and outflows in a country.

2. **Kojima theory**: The Kojima theory developed in the period of 1960-70, argues that Japanese type FDI would upgrade the industrial structures of both Japan and the host country, or play the role of initiator or tutor in the industrialization of less
developed countries. Lots of Japanese small and medium firms in the host countries were expected to provide production and technological linkages with local firms. Thus, the theory shows the triple effect- investment, trade and industrial restructuring with mutual benefit. This triple effect may be seen in the textile industry typically, but not so much in the automobiles and electrical appliances industries, which contributed to upgrade local industry ‘to some extent’ but much lesser in the exports of these manufactures.

3. **Hymer-Kindlerberger Theory**: - This theory was developed by Prof. Hymer and Prof. Kindleberger in 1969. According to this theory, the foreign owned firm would make an investment in the host country only if it possesses some compensating advantage, which allows it to compete on equal terms with indigenous firms. This is however, not a sufficient condition of FDI since the firm has the option of licensing the advantage (technology) to an indigenous producer or exporting the product to host country. Clearly there are three conditions which have to satisfied for FDI flows to arise- (i) the advantage is internally transferable (it can be exploited by a subsidiary of the parent firm, without any additional cost to the parent firm or the subsidiaries already exploiting it. (ii) it is more profitable for the foreign firm to exploit the advantage itself than to license it to an indigenous producer (because of imperfections in the market for knowledge, and heavy to heavy firm to firm transfer costs of the advantage), (iii) exporting the product to the host country is not possible or unprofitable due to tariff or transport cost barriers.

4. **Industrial Organisation Theory**: - The industrial organisation theory states that in spite of the disadvantages in language, culture, the legal system and other inter country differences, the MNCs posses numerous advantages which is attributed to their brand name, patent protection, superior technology, marketing and managerial skills, cheaper sources of financing, preferential access to markets and economies of scale enabling them to invest in a foreign country (Hymer, 1976). However the comparative advantages have to be firm specific, they must be transferable to foreign subsidiaries and should be large enough to overcome disadvantages, FDI may also occur because it is difficult to sell or lease these intangible assets. Intangible assets that cannot be sold such as through the MNCs managerial and organisational capabilities, the experience and the spirit of its executives, its standing in financial markets, and its contracts with various official and other firms (Lal and Streeten,
This theory, simply explains why firms invest in foreign countries, but it does not explain why firms prefer to a particular country (Kindleberger, 1969).

5. **Internalization theory**: - This theory of FDI states that FDI facilitated through the efforts by firms to replace market transactions with internal transactions. The problem associated with the market transactions is linked to market imperfections and failure of markets to provide intermediate goods, including human capital, knowledge, marketing and management expertise. The advantages of internalization lie in the avoidance of time lags, bargaining and buyer uncertainty. Indeed, the main motive for internalization is the presence of externalities in the goods and factor markets. It is difficult to design and enforce contractual arrangements that prevent someone who has purchased or leased a technology from passing it to others without the knowledge of the original producer. FDI is expected to be continued till the benefits (e.g. Avoidance of time lags and buyer uncertainty, minimization of the impact of Govt. Intervention through transfer pricing etc.), accrued from further internalization. If markets in intermediate products are imperfect, firms have an incentive to bypass them by creating internal markets, such that the activities linked by the markets are brought under common ownership and control (Bucklay and Casson, 1976). The internalization of markets across national boundaries leads to FDI, and this process continues until the marginal benefits and marginal costs are equal (Moosa, A. 2002).

6. **Location Theory**: - The basic idea behind this theory is that FDI is being attracted by location advantage, which is due to the immobility of some of the factors of production, such as labour and natural resources. This immobility leads to location related differences in the cost of factors of production. The location specific factors may result in low cost of capital etc. That the level of low wages in the host country relative to high wages in the home country is an important determinant of FDI. Likewise, the availability of skilled labour with low wages and the availability of the capital at low cost may facilitate FDI. However, the empirical studies on the location specific peculiarity of FDI have a mixed result.

7. **Dunning’s Electic Theory**: - Dunning developed this theory by integrating three theories- (i) the industrial organisation theory, (ii) the internalization theory, and (iii) the location theory. According to this theory, three conditions must be fulfilled for FDI to take place. First, a firm would undertake FDI if it has ownership advantage (i.e. right to particular technology, monopoly power and size, access to new materials,
and access to cheap finance); that it must have comparative advantage over other firms arising from the ownership of some intangible assets. Second, it must be more beneficial for the firm to use these advantages rather than to lease them. These are the internalization advantages that refer to the choice between accomplishing expansion within the firm and selling the rights to the means of expansion to other firms. Third, it must be more profitable to use these advantages in combination with at least some factor inputs located abroad (Moosa, A, 2002). Moreover, this theory suggests that all firms of FDI can be explained by reference to its conditions. It acknowledges that advantages arising from ownership, internalization and location may change with time, and accepts that if country specific characteristics are important determinants of FDI, it may be invalid to generalize it.

8. **Product Cycle Theory**: This theory was developed to explain the expansion of US MNCs after world war II and offered a useful explanation for the interaction between the production, exports and FDI during 1950s and 1960s (Vernon, 1966). A subsequent hypothesis clarified that a product goes through a cycle of initiation, exponential growth, slow down and decline that is a sequence that corresponds to the process of introduction, spread, maturation and senescence (Vernon, 1971). This theory suggests that a product has to go through three stages. Firstly, a country undertakes commercial application (innovation) of scientific invention and produces new products. In this stage, the demand for the product is price-inelastic and so the innovating firm can charge a relatively high price. During the course of time, the product is improved and there is a demand from the customers living in the home country. Secondly, in this stage, the product matures and is standardized with mass production. It is now exported by the innovator country to other countries. As the demand continues to grow and competition emerges, the innovator firm resorts to FDI in those countries to meet local demand. In this stage, the innovating country dominates the export market and in the final stage, the product along with production process becomes completely standardized and it is no longer remains the exclusive property of the innovator firm. At this stage, price competition from other producers forces the innovating firm to invest in developing countries, seeking cost advantages; the home country starts to import the product from both domestic and foreign firms. The home country becomes net importer, while foreign countries become net exporters (Agarwal, 1980). There is an evident forceful association between the propensity to invest new products, export performance, FDI, and the ratio of the local
production to export on the one hand, and R & D expenditure of the US industries on the other.

9. **Catching Up Product Cycle Theory**: - This theory basically rests on the import substitution measures which facilitates FDI. Under this model, the product cycle starts with the imports of new superior quality product. The domestic product becomes viable and is assisted by importing technological know-how and by FDI. The expansion of production then leads to the economies of scale; increases in productivity; improvement in quality and reduction in costs. As the cost of production is reduced and becomes of international standard, foreign markets are developed, the scale of production is extended and costs are reduced further.

10. **Oligopolistic Reaction Theory**: - This theory stats that the race for maintaining market share among the oligopolistic firms facilitates FDI. This theory argues that a move by one firm to establish production facilities abroad may be interpreted by rivals to imply a threat to status quo, thus inducing counter moves. The first move may be prompted by Government action or by something else, but as Lal and Streeten argue, the subsequent pattern cannot be interpreted in terms of the profit maximisation behaviour of an individual firm independently or the action of the rival firms. The firms under monopolistic or oligopolistic industries at home are better placed and have the necessary incentives to commit resources to R & D. There are three kinds of oligopolies (innovative, mature and senescent) and the different pressures they generate for firms concerned (Vernon, 1974). The oligopolistic reaction increases with the level of concentration, and decrease with the diversification of product and such firm try to counter any advantages that their rivals may obtain from its FDI by their own FDI and try to maintain their competitive position. The increased industrial concentration causes reaction among oligopolies in the field of FDI and the profitability of FDI is positively correlated with entry concentration and inversely correlated with the product diversity (Knierbock, 1973). However, this theory doesn’t explain the initial investment that starts the competition for FDI and how it overcomes the existence of other methods catering to foreign markets.

11. **Internal Financing Theory**: - This theory is based on the gamblers ‘learning’ hypothesis of Barlow and Wender who postulate that MNCs commit a modest amount of their resources to their initial direct investment, while subsequent expansion are financed by investing profits obtained from operations in the host country. An
expansion of the FDI is made by the retained earnings of subsidiaries and there is a positive relationship between the internal cash flows and investment outlays. The situation of internal financing is better as compared to external financing not only because of lower cost but also due to the free movement of funds and the availability of information about the capital markets.

Hartman provides a tax-based explanation as to why MNCs like internal financing. He states that because repatriated earnings are taxed in the home country so MNCs finance FDI out of foreign earnings to the greatest possible extent. That is a firm required foreign return is set at the point at which desired FDI just exhausted foreign earnings. However, the internally generated funds are allocated among the parent subsidiaries by the top management in such a way as to maximise profits from the point of view of the whole concern (Severn, 1972). In a study it was found that the most important sources of funds required for expansion are undistributed profits and depreciation allowance (Brash, 1966; Safarian, 1969; Kwack, 1972 and Hoelscher, 1975).

12. **Currency Area Theory**: This theory has been put forward and is an attempt to explain the relative strength of various currencies to effect FDI flows (Aliber, 1971). This theory states that a country with a strong currency tends to invest abroad and less likely that foreign firms will invest in that country. The countries with weak currencies tend to be the host countries or recipients of FDI, whereas the country with strong currencies tends to be a source of FDI. This theory is based on the capital market relationships; exchange rate risks; and market preference for holding assets in selected currencies. He argues that MNCs in a hard currency area is able, based on reputation to borrow at lower rates in a soft currency country from local firms of and so is more efficient in hedging foreign exchange risk. The FDI flows are related with overevaluation and undervaluation of a currency where former causing outflow and the later is associated with inflow of FDI. Froot and Stein argue that a weak currency may be associated with FDI inflows resulting from informational imperfections in the capital market, and that these imperfections make the cost of external financing higher than the cost of internal financing. In spite of the overvaluation and undervaluation of a currency the exchange rate also affect FDI flows, especially when FDI can be viewed as an alternative to exports. Thus, if the domestic currency appreciates against foreign currencies, MNCs based in the home country would find it difficult to export, as domestic goods become less competitive. If the appreciation of the domestic
currency persists, the MNCs may find it useful to move abroad, resulting in an increase in FDI. In this case, FDI can be viewed as a measure taken to hedge economic exposure to foreign exchange risks. Moreover, the real exchange rate is determined by the nominal exchange rate and relative inflation, the latter is a factor that influences FDI flows. The depreciation is an incentive for FDI, whereas the appreciation of the currency is a restrictive factor in the FDI flows.

Caves (1996) argues that the effect of the exchange rate on FDI runs through two channels. First, changes in exchange rates lead to changes in the investor’s costs and revenues. The net effect of FDI is ambiguous, depending on certain characteristics of the underlying business activity. The second channel is associated with expected short-term exchange rate movements. A depreciation that is expected to be reversed will encourage FDI inflows to obtain capital gains when the domestic currency appreciates. Moreover, the effects of exchange rate variability also depend on the objectives of FDI. If investors aim at serving the local market, then FDI and trade are substitutes, in which case an appreciation of the currency of the host country attracts FDI flows. If however, the objective is to re-export then FDI and trade are complements and the appreciation of the currency of the host country reduces FDI inflows through lower competitiveness.

1.3.2. Foreign Portfolio Investment (FPI)

Portfolio investment is a collection of different financial investments (equity shares, debentures, preference shares, fixed deposit schemes of companies etc) held by an investor at a point of time. A portfolio is always considered superior as compared to the investment in an individual security because different securities held in a portfolio certainly provides a better combination of risk and returns. There is negative correlation between the risk of a portfolio and number of securities held by the investor in a portfolio. So the large number of securities in a portfolio will certainly reduce the overall weighted risk. Portfolio investment provides maximum returns with minimum risk.

Theories of portfolio investment can be classified into two categories:-

1. Traditional portfolio theory, and
2. Modern portfolio theory.
1. **Traditional Portfolio Theory:** - It is portfolio management practice in which only two parameters of investment avenues – (i) return, and (ii) risk are considered. The correlation between securities is not considered. 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 Portfolio Theory:** - Harry Markowitz has given this theory. This theory and the subsequent theories stress upon the relationship between the returns expected represented by mean and the variability of these returns represented by standard deviation/ variance. This theory advocates the existence of an efficient frontier which is nothing but a line representing the entire efficient portfolio plotted on risk return graph. An efficient portfolio is the one, which provides better return for a given level of risk.

   This theory believes that investors possess utility curve with the help of which tracing the efficient frontier can do portfolio selection. This theory is based on the following principles-

   **Principle of Risk:** - Focus of this principle is on the fundamental that selection of securities in the portfolio is to be done by comparing risk and returns of the securities.

   **Principle of Diversification:** - Prominent advocates of this theory opined that risk of a portfolio could be minimized with the help of diversification.

   **Principle of Portfolio Effect:** - This says that one should never put all of his eggs in one basket.

   **Principle of Dominance:** - Modern portfolio theory emphasis on the fundamental principle of dominance portfolio/share. A dominant portfolio is the one, which outperforms others on risk return parameter. A portfolio or security attains such position, if it provides maximum returns for a given level of risk or has minimum risk for a given level of returns as compared to any other portfolio in the market.

   **Principle of Market Risk:** - The market risk plays a pivotal role while selecting the securities for a portfolio. Market risk means the risk of a share on account of its association with market wide factors. These market wide factors influence the performance of almost all the shares in the market.
**Principle of Beta:** - Beta represents sensitivity of a security with respect to the market movements. It indicates the fluctuation in returns of a share for every one percentage change in the market as a whole. Beta is calculated by considering the covariance of the share with the market portfolio. A share with high beta value is considered high risky and vice versa. On the basis of beta value share can be identified as aggressive (having beta value > 1), defensive (beta value < 1) and neutral (beta value = 1).

**Principle of Trade off between Risk and Return:** - Modern portfolio theory believes that investors are rational investors and they make the investment by following the fundamental of higher the risk, higher will be the returns and lower the risk, lower will be the returns. However, there should be trade-off between risk and return. It is a point on security market line where risk and return is in such a position that investor will get maximum benefits.

**Principle of Avoidance:** - This principle states that we can eliminate investment in such securities, which have a high degree of non-systematic risk, because such security is likely to wipe out the returns of rest of the securities in the portfolio. This means non-systematic risk can be avoided completely by not investing in a share having high non-systematic risk component.

**1.4. Determinants of Capital Inflows**

The surge in private foreign capital inflows into India after reforms draws attention towards the factors that affect capital inflows in recent period. The co-movement between private resources flows (total as well as portfolio) to developing countries and to India was part of the global trend and India became a recipient as it opened its financial markets. Portfolio equity flows into India particularly move with the global movements, emphasizing the role of global factors. Though it is inappropriate to interpret trends in interest rate differentials rate of return on Indian assets may played a role in attracting foreign capital after the opening of financial markets. The spread is seen to be narrowing rapidly from 1993, mainly because of a movement towards lower interest rates after deregulation rather than arbitrage.

While the literature on capital flows categorizes the factors influencing cross-country capital flows into the three groups (Kawai and Tagaki (2000)). 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.

**Push Factors:**

Many researchers argue that push factors, especially the ones generating a movement of investment funds from the industrialised countries to the emerging economies, are significant in determining the volume and pattern of capital flows. Among the push factors the fluctuations of US interest rates, business cycles and regulations on the criteria for the overseas investment by institutional investors are considered to be the core. In addition, the stock prices in major industrial countries are a vital push factor in the world characterised by the synchronized equity markets. At the same time, as far as emerging economies are concerned, macroeconomic conditions and the financial market situations are other important elements affecting the movement of capital inflows in the capital-affluent countries.

**Pull Factors:**

As for the factors including the foreign capital investment, fundamentals of the recipient economy such as growth rates, industrial production, unemployment rates, inflation and current account balance are as important as the external factors are. Financial variables that incorporate interest rates, expected rate of change and volatility of exchange rates and the stock prices are also influential elements in determining the structure and quantity of foreign capital. To the extent that the sovereign credit rating is an indicator of the soundness of the entire economy, it should be the key factor affecting the attitude of foreign investors with respect to the domestic economy. Furthermore, the openness of the real sector is an important component of internal factors because the more open the economy is, the more capital to finance transactions is needed. The ratio of the sum of exports and imports relative to the GDP would be a reasonable proxy for the extent of trade openness.
In brief, followings are UNCTAD’s classification of FDI determinants:

i. **Policy variables**: Tax policy, trade policy, privatization policy, macroeconomic policy;

ii. **Business variables**: Investment incentives;

iii. **Market-related economic determinants**: Market size, market growth, market structure;

iv. **Resource-related economic determinants**: Raw materials, labour costs, labour productivity; and

v. **Efficiency-related economic determinants**: Transport and communication costs, etc.

On the basis of the above capital flows, we can easily say that followings are the key determinants or factors that influencing the size and direction of capital flows:-Market size, Economic stability and Growth prospects, Trade openness, Infrastructure facilities, Labour cost and Gross capital formation, Level of skilled labour, Political and economic stability, Extent of urbanization, Return and costs, Government policies, Natural resources, Interest rate differential, Inflation, Exchange rate, Financial market, Liquidity and diversification.

### 1.5. Objectives of the Study

The study broadly examines the trends, determinants of capital inflows in India and nature/volatility of these capital inflows. The main 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.
1.6. **Hypothesis of the Study**

To examine the objectives of the study, the following hypotheses may be set:

(i) **Null Hypothesis, H₀**: There is no direct relationship between capital inflows and economic growth;

   *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.

1.7. **Methodology of the 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 use 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) method 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 detailed methodology is discussed in Chapter- 5.
1.8. Nature and Sources of the Data

Capital inflows include foreign direct investment (FDI), foreign portfolio investment (FPI), external commercial borrowings (ECBs), external assistance (EA), and non-resident deposits (NRIs). In order to examine the determinants of capital inflows into India, the following variables have been used: Domestic interest rate (captured by call money rate), international interest rate (captured by 3 month London Inter Bank Offered Rate- LIBOR), inflation (captured by WPI), differential rate of interest (domestic interest rate- LIBOR), exchange rate, regional market size (captured by GDP in Rs Cr), total external debt, gross fiscal deficit, gross foreign exchange reserves, degree of openness or globalization index (Trade flows+ Financial flows)/GDP), growth rate (IIP), wage cost, level of skilled manpower, availability of infrastructure, extent of urbanization, political and economic stability, BoP Position, return and cost, liquidity and diversification, government policies regarding capital inflows, financial market, natural resources, etc. In these determinants of capital inflows, some are responsible for the volatile nature of different components of capital inflows.

The variables used for examining the effects of capital inflows on some important macroeconomic variables such as domestic interest rate, foreign exchange reserves, IIP, money supply (M₃), inflation, exchange rate, export, import have been identified.

The data for the study have been collected from the secondary sources such as Handbook of Statistics on the Indian Economy, various issues of monthly RBI’s Bulletin, Report on Currency and Finance published by RBI and International Finance Statistics (IFS) which is published by IMF. Other sources have been mentioned in bibliography. The annual and quarterly data have been taken from 1990-2011. There are some limitations of data collection. Some data are qualitative in nature, some are not compiled in India and some data are not available in quarterly series.

1.9. Limitations of the Study

This research has come across many constrains during the course of the study. These constrains include both conceptual as well as statistical or data related problems. Conceptual problems are related to the definitions and measurement of
components of capital inflows in India as it was not up to International best practices. So, it is not so easy to compare the inflows of foreign capital in India with other countries. In this study, net capital inflows (TCI) include net foreign direct investment (FDI), net foreign portfolio investment (FPI), net external commercial borrowings (ECBs), net external assistance (EA) and net NRI’s deposits (NRI). The second problem is that the data compilation of some variables in India is not available in quarterly series. Some data are in monthly series and some are available in quarterly series and these data are also compiled from different time periods. In this study, quarterly data series has been taken from first quarter of 1993 to the fourth quarter of 2011. Some of the monthly data series has been converted into quarterly series taking its simple average value. So, there may be some estimation problems in this empirical study.