Chapter-I

Background, Issues and Objectives of the Study

1.0. Introduction

International capital flows have increased dramatically since the 1980s. During the 1990s gross capital flows between industrial countries rose by 300 per cent, while trade flows increased by 63 percent. Much of the increase in capital flows is due to trade in equity and debt markets, with the result that the international pattern of asset ownership. The integration of debt and equity markets should have been accompanied by a short period of large capital flows as investors re-allocated their portfolios towards foreign debt and equity. After this adjustment period is over, there seems little reason to suspect that international portfolio flows will be either large or volatile. With this perspective, the prolonged increase in the size and volatility of capital flows, we observe that the adjustment to greater financial integration is taking a very long time, or that integration has little to do with the recent behavior of capital flows. The volume of cross border capital flows has risen substantially in the last decade. Not only there is much greater volume of flows among industrial countries but there has also been a surge in flows between industrial and developing countries. The surge in international capital flows to developing countries is the outcome of both ‘pull’ and ‘push’ factors arising from changes in policies and other aspects of opening up by developing countries. It includes liberalization of capital accounts and domestic stock markets and large scale of privatization programs. From the longer term of perspectives, it includes the rise in the importance of institutional investors in industrial countries (Rogoff, 2003). Another important feature of international capital flows is that the component of these flows differs markedly in terms of volatility. In particular, bank borrowing and portfolio flows are substantially more volatile than foreign direct investment. In spite of a caveat that accurate classification of capital flows is not easy, evidence suggests that the composition of capital flows can have significant influence on a country’s vulnerability of financial crisis.
The recent wave of financial globalization and its aftermath has been marked by a surge in international capital flows among the industrial and developing countries, where the notions of unstable capital flows have been associated with high growth rates in some developing countries. Some countries have experienced periodic collapse in growth rates and financial crisis over the same period. It is true that many developing economies with a high degree of financial integration have also experienced higher growth rate. The Less Developed Countries (LDC’s) are eager to welcome any kind of foreign capital inflows to overcome the debt crisis situation. They are facing the challenges from the foreign capital and the invisible resource. From the supply side, there are also some strong inducing factors, which lured the international investors towards the financial market of the developing countries. The correlation between the movements in developed and developing countries financial market, the deceleration in industrial economies markets and high growth prospects of the less developed market are some of the important reasons, which made them an attractive destination for portfolio diversification.

Capital flows have, particularly become prominent after the advent of globalization that has led to widespread implementation of liberalization programme and financial reforms in various countries across the globe in 1990’s. This resulted in the integration of global financial markets. As a result, capital started flowing freely across national border seeking out the highest return. During 1991 to 1996 there was a spectacular rise in net capital flows from industrial countries to developing countries and transitional economies. This development was associated with increased interest by international asset holders in the emerging market economies to find their way the global of financial markets (Singh, 1998; 2002). The global financial markets can gradually create a virtuous circle in which developing and transitional economies strengthen the market discipline that enhances financial system soundness. At present, however, there are important informational uncertainties in global market as well as major gaps and inefficiencies in financial system of many developing countries.
It is a fact that international capital flows on financial market can be very volatile. However, different countries experienced different degree of volatility of financial market and this may be systematically related to the quality of macro economic policies and domestic financial governance. In this context, high volatility of capital flows has affected the macro economic variables such as exchange rate, interest rate, money stock ($M_3$) and inflation negatively. Even in countries, where a contributive atmosphere is created for the free flow of capital and governments don’t operate with any current account deficit of integration at financial markets. Capital flows have significant potential benefits for economies around the world. Countries with sound macroeconomic policies and well-functioning institutions are their well-equipped the benefits of capital flows and minimize the risks. Countries that permit free capital flows must choose between the stability provided by fixed exchange rates and the flexibility afforded by an independent monetary policy.

Therefore, an understanding of current capital market and the prevailing volatility with regard to the foreign investment and its implications on market economy have been an important arena to be probed, for a comprehensive understanding of the capital market. Thus in the proposed study an attempt has been made to underscore the capital market in the developing countries in the light of recent heavy inflow of foreign direct investment.

International capital flows are the transfer of financial assets, such as cash, stocks, or bonds, across international borders. They have become an increasingly significant part of the world economy over the past decade and an important source of funds to support investment in the United States. In 2002, around $700 billion flowed into the United States. Inflows of international capital help to finance U.S. factories, support U.S. medical research, and fund U.S. companies. At the same time, U.S. investors provided nearly $200 billion in capital to other countries for a wide range of purposes.

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1.1. Importance of the Foreign Capital Flows

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 investments, foreign investments; foreign aid and private bank lending are the principal 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.

When discussing about the constraints of economic growth, one should referred to the saving gap and foreign exchange gap of the country. A net capital inflow contributes to the filling of the both the gaps. The capital flow of countries increases due to the amount of resources available for capital formation above what can be provided by domestic savings. It also raises the recipient economy’s capacity to import goods: capital flow provides foreign exchange and eases the problem of making international payments.

Countries in early stages of development are assumed to have a primary need for technical assistance and institution building and only limited need for capital assistance chiefly for infrastructure project. 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-concessionally terms 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 else where 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 has both beneficial as well as some adverse impacts on the country’s growth and development of an economy. Appropriate policies have to be undertaken to minimize the adverse effect of capital flow on domestic savings, inflation etc.
Earlier studies in the area of foreign capital flows are mostly multi-country studies of Evans and Viktoria (2005), Dooley, M (2000), Dodd, R (2004), Brenan, M and Henry (1997), Henry, P.B (2003), Kichikawa, M (1999), Higgins and Klitgaard (2004), Alfro (2004), Arvai, Z (2005), Edward, S (2000), Eichengreen, B (2000), Lensik et.al (1999) and Bosworth and Collin (1999). The country specific studies tried to measure the impact of capital flows on macro economic variables such as saving, interest rate, money supply etc. such as Shah and Patnaik (2004), Rangarajan, C (2000), Rakhshit (1994), Prasad, et al (2003), Kohli (2001, 2003). In this context, the present study bridging the gap with respect to the relationship between capital flows and other variables like saving, investment, growth, inflation, exchange rate in Indian context. An attempt is also made to study the role of capital flows in the economic development of India, in the light of the experience some developed countries. Before going to the objective and methodology of the study, the present study needs to discuss about the cross border capital flows, financial globalization, financial integration and liberalization and how it relates to the capital flows and the economic growth of the country.

1.2. Cross-Border Capital Flows: The Analytics

The decade of the 1980s and 1990s witnessed an accelerated movement towards liberalization of capital controls, both as developed and developing economies. Liberalized capital accounts and the consequent freedom of cross border mobility for capital have been argued to be beneficial on several counts (Eichengreen et. al 1998, Stiglitz, 2000).

Firstly, freedom of capital movement permits optimal use of the world’s capital resources by allowing capital to move to countries where real rates of return on capital is highest or where, without sacrificing returns, it can reduce overall portfolio risk with respect to investment elsewhere, raising the risk adjusted return to capital. Secondly, countries always experience domestic and external shocks from time to time, creating imbalances in the current account. Capital movements therefore will be necessary to finance the current account imbalance and equilibrate the balance of payments – to avoid deflation or
the need to impose trade restrictions. Cross border capital flows, on the assumption that it is counter cyclical in nature can perform a ‘consumption and investment smoothing’ role for economies (Cooper, 1999).

However, from the perspective of developing economies, the most persuasive argument in favour of allowing freer cross-border capital flows is the benefit that developing economies can derive by accessing international market. It is argued that low level of capital per worker in these economies have held output down. Cross border capital flows and consequent increase in net foreign financial resource transfer – analogous to running current account deficit can augment domestic saving and help developing economies achieve higher rates of investment, capital accumulation and growth. Open capital accounts, it is argued, also provide the needed spur for countries to create an economic environment attractive to business and investment, thus, acting as a check on wrong government policies. More generally, the case for open capital accounts is often made by way of an analogy to free trade in goods and services and the optimality of liberal trade regimes in a neo-classical framework (Stiglitz, 2000).

But, whether developing economies can actually realize these benefits is a hotly debated issue. Firstly, it has been argued that global financial flows actually cause greater macro economic instability. Even when fluctuating capital flows do not precipitate instability, given the pro-cyclical nature pf capital flow, it exacerbates shocks to economies that might originate elsewhere (Rodrik & Stiglitz 2000). The analogy of open capital accounts to free trade regimes, moreover, is problematic. Given the difference between financial markets and that of goods and services (problems of information asymmetry being acute in financial markets) optimality of liberal capital account regimes do not obtain even in the neo-classical frame of analysis. Coming to the argument on resource transfer through capital flows, it is argued that the international financial architecture of our modern times places severe limits on the extent of net foreign financial resource transfer that developing economies can realize over a long period. Moreover, capital flows being volatile and prone to reversal, even in the short run, host economies try, as a policy
option, to resist domestic absorption of foreign financial inflows and sterilize\(^1\) it (Eichengreen, 2000). Foreign financial inflows, then, actually displace domestic investment rather than play a complementary role.

Cross-border capital flows are, however, much more than just financial flows and depending on its type, have other effects on the host economy. Capital inflows can take the form of official flows, which are concessional government credit – either as development aid or bilateral trade credit through official channels, or private capital flows – which again can take the shape of foreign direct investment by multinational corporations or foreign firms, foreign portfolio investments by institutional investors in the securities (bonds or stock) market of the host economy, or inflows through banking channels in the form of bank credit or bank deposits. Each of these different categories of capital inflow, apart from having the general macro economics effects discussed above, also has other effects on the host economy. However, given the purview of our analysis in this study, we limit the discussion to private capital flows (foreign direct investment and portfolio investment alone).

Foreign portfolio investment by Foreign Institutional Investor’s (FIIs) in equity and bond markets of developing economies serve to integrate the domestic capital market with international market. This integration helps the host economy, it is argued, in two ways. Investments by FIIs in secondary equity markets provide buoyancy to equity prices which can reduce the cost of fresh issue of equity for the corporate sector. Participation of FIIs also helps in improving the operating efficiency of these markets to international levels. This along with buoyant security prices, attract other domestic agents (household and other financial institutions) into investing in the stock market, leading to an enhancement of the depth and breadth of domestic financial markets (Levine, 1996, 1997, Obstfeld, 1998). However, critics argue that FII inflows, given their short term nature are destabilizing for developing economies (Stiglitz, 2000). Firstly, inflows on portfolio

\(^1\) sterilization is broadly defined as operations by the central bank that either affect offsetting decline (or increase) in domestic assets of the central bank in response to an increase (decline) in its net foreign assets or influence the money/credit multiplier so as to moderate the monetary impact of changes in ‘high powered’ money due to changes in foreign exchange reserves.
account are the most volatile component of foreign capital flows and it causes wide fluctuations in asset (equity or bond) prices. Large inflows of FII investment can lead to a boom in secondary prices that can become unsustainable upon reversal of the inflow (Aitken, 1998). The volatile nature of FII inflow also exacerbates problems of macroeconomic management that we discussed above.

Foreign direct investment, however, has been a more pervasive phenomenon in developing economies than portfolio flows. Through the history of capitalism, the relation between foreign capital and domestic enterprises in developing economies has been fraught with contradiction and controversies. Opinion, therefore, has remained divided on the role of foreign capital in the industrialization of developing economies. While some argue that MNCs can play a positive role, others argue that unbridled entry and operation of MNCs in developing Economies would lead perpetuation of industrial backwardness and continuation of relation of ‘dependence’ with the more developed economies.

Foreign direct investment can have a positive effect on the host developing economy, mainly, through two channels. Foreign direct investment by multinational corporations, who are the repositories of advanced technological capabilities, can help developing economies gain access to technical know-how—which can become a positive externality for other domestic firms and raise the growth potential of the economy through technological diffusion (Bird & Raian 2000). The other major advantage that host economies can derive is through the positive contribution of multinational corporations in improving export performance of the economy. One way in which enhanced export performance can materialize, is through the diffusion channel – whereby, technological backwardness contributes to export competitiveness of the host economy.

1.3. Financial liberalization and Globalization: The Major Debates

There have been substantive changes in the financial sector in India over the 1990s – partly as result of domestic financial sector reforms and partly due to the effects of cross-border capital inflows. The literature on capital inflows also identifies that under certain
conditions, where central banks intervene to sterilize and resist the absorption of capital inflows, there can be changes in the domestic financial system, including disruption of credit flow through the banking system and increasing disintermediation in the real sector. What that means for the real sector depends on the perspective one adopts on the nature of the relation between the financial sector and real sector.

A financial system contributes to growth of the real sector by mobilizing saving and then efficiently allocating it across competing investment projects. In the process, it provides insurance to risk averse investors and savers. It thus intermediates saving flow from net savers to net investors in the economy. The financial system also has a role in monitoring the efficient utilization of existing investments—i.e. a role in corporate governance. The neo-liberal perspective on financial liberalization takes a *laissez-faire* financial system to be the desirable goal of public policy.

### 1.3.1. Financial Globalization and Liberalization

In principle, financial globalization and financial integration are closely related but different concepts. The liberalization of and capital flows in financial assets is often called ‘financial globalization’. A 2003 IMF study on the effects of financial globalization on developing countries concludes that “thus while there is no proof in the data that financial globalization has benefited growth, there is evidence that some countries may have experienced greater consumption volatility as result”. Financial globalization is an aggregate concept that refers to rising global linkages though cross border financial flows. Financial integration refers to an individual country’s linkages to international capital markets (Prasad et. al, 2003). An important condition for financial integration is capital account liberalization. There are generally two measures used to assess financial integration among countries. First measures are capital account liberalization and is based on the official restriction on capital flows as reported to the International Monetary Fund (IMF). The other measure is based on financial openness. It is measured as the ratio Gross Domestic Product (GDP) and gross stock of foreign asset and liabilities. Both measures of financial integration are related and indicate two distinct aspects. While the former measures the existence of restriction of capital flows the latter
measures the financial openness in terms of realized capital flows. Financial globalization can lead to capital flight and financial crisis.

The financial liberalization which started in the 1980’s and 1990’s in the developing countries was partly a general move toward giving markets a greater role in the development, partly a reaction to inefficiency arising from repressed financial system and the pressure from globalization involving greater international trade and better communication. This financial liberalization produced some gains but at the same time recurring financial crisis raises serious doubts regarding financial liberalization as a development model.

The philosophy behind liberalization of the financial sector not only in India but also all over the world has been guided by three general factors. One of the important factors that provided thrust was poor economic performance proponents of ‘financial repression’ hypothesis stress liberalization of the financial sector and advocates to reduce if not eliminate a number of direct controls over bank and other financial market participant. The dominant view advocates in favor stronger regulation of the financial sector in the light of financial crises of Mexico, East-Asian countries, Brazil and Russia in recent years.

Adherent of ‘financial repression hypothesis’ argument in favor of financial liberalization is based on efficiency consideration. According to them, direct control on interest rates, high cash reserve requirements fixed by central bank, directed credit dispersal into priority sectors and mandatory investments in Govt securities and all amount to a tax on financial intermediation. This suppressed the level of intermediation and also reduces the allocative efficiency and lower real growth in the economy. These arguments against Government’s intervention played an important role in promoting financial liberalization in Latin America in the late 1970’s and early 1980’s.

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2 Financial repression hypothesis refers to direct controls on interest rates: high reserve requirement, compulsory credit allocation that distorts allocation and discourages savings. Mackinnon and Shaw pointed out that financial repression has adverse consequence for the quality and quantity of capital accumulation.
1.3.2. Financial Globalization and Macroeconomic Fluctuation

Financial globalization in recent year was associated with many financial crises – crisis in Mexico, South- East countries, Russia, Argentina etc. However; proponents of financial globalization assert that in principle financial integration helps countries to reduce macroeconomic fluctuation. The supporters of financial integration maintained that it provide opportunities for reducing volatility by diversifying risk; it is more beneficial to developing as these countries are intrinsically subject to higher volatility because of being less diversified than developed countries in term of their production structures.

Financial integration gives access to capital that can help capital deficient countries to diversify their production base. Diversification could lead to specialization of production based on comparative advantage thereby making economies vulnerable to shock limited to specific industries.

Though effect of financial integration on output is ambiguous, it certainly reduces consumption volatility by financial integration regarded as important determinant of economic welfare. Access to international financial markets helps to diversify macroeconomic risks and thereby smoothes consumption. This is explained by by Obstfeld and Rogoff (1998). According to them, since volatility in output is not perfectly correlated across the countries, trade in financial assets can be used to delink national consumption level from the country specific components of fluctuations in output.

Recent crisis are often viewed as the consequence of the intensification of the financial globalization. The recent truculence of South East Asian countries established the fact that financial globalization is associated with unequal benefits and risks. This also raised the question what factors increase vulnerability to crisis, whether the nature of crisis has changed over the years and whether such crisis is inevitable concomitant of globalization. Calvo (1998) pointed out that crisis that occurred in 1980’s and 1990’s were capital account crisis while earlier ones were current account crisis. Kaminsky and Reinhart (1999) emphasized ‘twin crisis’ referring to balance of payments and banking crisis. Banking crisis precede currency crisis and currency crisis in turn deepens the banking
crisis. Opening of capital markets can intensify such domestic problem and lead to catastrophic consequences.

One point worth to note is that in 1970’s and 1980’s both developed and developing countries faced crisis however during 1990s, this had become exclusively the domain of emerging market economies. The recurring crisis in emerging market economies suggest either that developed countries have been able to protect themselves through improved policies or the fundamental causes of crisis has changed over time. It is because of unprecedented capital flows to these countries during 1990s or is it because of imprudent economic policies of these countries in comparison of advanced countries? In this context it is very important to note that while capital flows from advanced countries to emerging market economies sharply increased, these flows between advanced countries rose even more sharply. Thus, volume capital flows as such can not be blamed for financial crisis in emerging market economies during 1990s (Arestis and Basu 2003).

Is crisis a natural feature of financial globalization? It is very difficult to answer this question; nonetheless one thing is clear that overall macro economic costs of financial crisis are very large. Financial crisis are associated with significant negative output effects (Calvo and Reinhart, 2002). This recession following depreciation arising from crisis has much deeper impact in emerging market economies than advanced economies. Besides this, the social cost exacerbate greatly in the absence of social safety nets with large distributional consequences.

The need for regulation in financial markets is emphasized in the light of experience of Southern countries of Latin America and recent financial of south East Asian countries, Argentina and Russia. Financial liberalization and stronger regulation of financial markets though appear contradictory to certain extent but the apparent contradiction is not difficult to understand. Supporters of greater regulations do not necessarily back all the direct controls in order to achieve greater efficiency in financial intermediation by itself will not accomplish the desired results in financial sector. It may be necessary in many areas to remove direct controls in order to achieve greater efficiency in financial
intermediation but this must be accompanied by stronger regulation aimed at strengthens prudential norms, transparency and supervision. This is broadly the approach to financial reforms adopted in India.

1.4. Objectives of the Study

The study broadly examines the impact of international capital flows on India’s economic growth, specifically the objectives are:

1) To analyze the trends and composition of capital flows into India
2) To examine the effect of private foreign capital inflows on macroeconomic variables such as exchange rate, money supply, export, import, foreign exchange reserve, rate of interest, index of industrial production and wholesale price index as a consequence of economic reforms in India.
3) To examine the effect of volatility of international oil price and international interest rate on private foreign capital inflows in India.
4) The study also examines the impact of volatility of capital flows on exchange rate in India.
5) To examine the impact of international capital flows on India’s economic growth.

1.5. Methodology of the Study

The study makes use of variety of econometric models to carry out the empirical analysis. At the outset, in order to show the effects of private foreign capital inflows on macroeconomic variables namely, wholesale price index, exchange rate, money supply, export, import, foreign exchange reserve, rate of interest, index of industrial production, Vector Autoregressive (VAR) method is employed. In particular, generalized impulse response function and variance decomposition models are used to examine the short-term dynamics and casual relationship between variables. To examine the effect of volatility of international oil price and international interest rate, the study makes use of regression analysis generating volatility series through Generalized Autoregressive Conditional Heteroscedasticity (GARCH 1 1) process and simple variance model generating the volatility series through ten year rolling standard deviation process. Also, to examine impact of volatility of capital flows on exchange rates, regression analysis generating
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volatility series through Generalized Autoregressive Conditional Heteroskedasticity (GARCH 1 1) process and simple variance model generating the volatility series through ten year rolling standard deviation process have been used. Finally to test impact of capital flows on economic growth, Engel-Granger two-step cointegration procedure (1987) and pair-wise Granger causality test (1969) are used. The details of the time series and econometrics techniques used for the study are discussed in the methodology chapter.

1.6. Nature and Sources of the Data

In order to examine the effects of private foreign capital inflows on macroeconomic variables in India, the following variables are used. These are Call money rate (CMR) as measured as domestic interest rate, Foreign Exchange Reserve (FOREX), Private foreign capital inflows (FINV), classified into FDI and FPI. Index of Industrial Production (IIP) as the proxy of GDP, Money supply (M3), Wholesale Price Index (WPI) as taken for as inflation rate, Exchange rate (EXR) which is rupees (Rs.) against U.S. dollar, Export (EXP) and Import (IMP). The index of industrial production (IIP) has been taken as the proxy of GDP. Though the study is based on monthly time series data, the monthly data of GDP is not available. The choice of IIP as a proxy for economic growth is for two other reasons. First, IIP is significantly correlated with real GDP (0.97 with a significance level of 0.01) as well as with the real output of the services and therefore, is a robust proxy for economic growth. Second, IIP is found to be reliable leading indicator of business cycles in India (Mazumdar, 2005). The variables used to examine the effect of volatility of London Inter Bank Offered Rate (LIBOR) as taken as international interest rate and International Crude oil Price (ICOP) on foreign private capital inflows. The variables used for examining the impact of capital flows on economic growth in India include Foreign Direct investment (FDI), Foreign Portfolio Investment (FPI), Foreign Institutional Investment (FII), Index of Industrial Production (IIP). The variables such as Nominal Effective Exchange Rate (NEER) and Real Effective Exchange rate (REER) are used to find the volatility effect on private foreign capital inflows (FINV).

The data for the study have been collected from the secondary source such as Handbook of Statistics in the Indian Economy, which is a publication of Reserve Bank of India.
(RBI) and *International Financial Statistics (IFS)*, which is a publication of International Monetary Fund (IMF). The monthly data have been taken for the period from April 1995 to July 2006 as the unit of measure in US million Dollars. The availability of the data on all variables required in the study was from 1992 onwards. The period of study is constrained due to the unavailability of data after the liberalization period from 1991. So, the period of the study has been taken from April 1995 to July 2006. The period of the study has taken the period after liberalization. Though, there are FDI flows into India before liberalization, both direct flows (FDI) and portfolio flows (FPI and FII) entered the domestic financial market vastly after 1992.

1.7. Justification of the Study

Given the nature and sweeping changes brought by of the reform programme in Indian economy, it is important to analyze the macroeconomic effects in the post liberalization period in India. Importance of this study can be traced back to different macroeconomic consequences of liberalization of foreign capital inflows into countries. The question arises, how liberalization of capital inflows affects macroeconomic aggregates in an open economy? An economy seeking to attract foreign capital can experience different macroeconomic consequences under different exchange rate regimes.

The nature, volatility and effects of private foreign capital flows are still a debatable issue. There is much study on international capital flows on economic growth in India. But there are very few studies in the context of India, the effects of private foreign capital inflow on macroeconomic variables including economic growth. In this context, our earlier discussion raises the question whether the international capital flows have been successfully increasing the growth of the economy and in particular, whether they have led to more capital inflows. That is what provides the motivation for the present study. The present study tried to make a preliminary attempt to test whether international capital flows has the positive impact on economic growth with the help of macroeconomic variables in the economy. Hence, the financial sector reforms to revive the capital markets helped to attract the capital flows due to comparative returns. The second-generation reforms now need to be tailored to further enhance the capital flow by opening
up the insurance sector, allowing the pension funds to invest in equities, and mutual funds to invest in global financial market. The study tries to address the following questions:

1. What drives capital flows?
2. How large our models will predict flows should be? How volatile?
3. What form should capital flows take? Is there an “optimal composition” of global capital flows?
4. Why gross flows are large and net flows small? Why flows are so volatile?

1.8. Organization of the Thesis

The present study is organized into seven chapters including the present one. The present chapter introduces the study, gives an overview idea of the cross border capital flows, financial globalization and liberalization and spells out the scope and objectives, methodology, data sources and the period of study. The second chapter reviews some of the existing theoretical and empirical studies made on the impact and effects of international capital flows on macroeconomic variables including economic growth.

The third chapter discusses the capital flows to developing countries: recent trends and prospects. The fourth chapter deals with economic reform, capital flows and macroeconomic impact in India, which discusses some theory of capital flows. The fifth chapter brings out a detailed discussion about the tools of time series and methodology used for study.

The sixth chapter describes the different type of model used for the study and brings the empirical results. In this chapter, it also discusses the model used for measuring the volatility of capital flows and a model used for examine the effects of capital flows on macroeconomic variables and economic growth in India. The final or the seventh chapter summarizes the study and concludes and suggests some policy implication.