CHAPTER 7

SUMMARY, CONCLUSIONS AND POLICY IMPLICATIONS

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7.1 Summary and conclusions

All economies aim at high levels of growth and development. Developing countries, in particular, pursue ambitious programs of industrialization to achieve high rate of growth which is necessary to address their basic economic problems. Ambitious programs of industrialization require massive investment. Often, such massive investments involve huge foreign exchange expenditure to finance imports of capital goods and technology. In brief, ambitious industrialization programs require huge foreign exchange outgo.

Unfortunately, for most developing economies, foreign exchange is a scarce resource since they run trade deficits. Trade deficit is a chronic problem for most developing countries since their foreign trade orientation is tilted towards exports of low priced primary products and imports of expensive capital goods and technology. Therefore, mobilizing necessary foreign exchange for financing current account deficits is a major challenge faced by most developing economies.

During the decolonization era following the Second World War, developing economies relied on running down of foreign exchange reserves and Official Development Assistance (ODA) to finance their current account deficits. With depletion of foreign exchange reserves and phasing out of ODA by the developed
countries, developing economies had to look for alternatives to finance their current account deficits. One alternative was external borrowing; but this option had the risk of accumulation of foreign debt with its undesirable consequences. Another alternative was FDI. Though non-debt creating, this was not acceptable in the post Second World War socio-political environment dominated by anti-capitalist, anti-MNC thinking. This thinking changed with the collapse of communism in the Soviet Union and the abandonment of communism in countries like China, Vietnam etc. This, along with the remarkable success of the Asian Tigers, created an economic environment in developing countries favourable to market friendly economic policies. China started on the path of economic reforms following the ascendancy to power of the pragmatic leader Deng Xiao Peng on the death of Mao Zedong. India adopted liberalization following the Balance of Payments crisis of 1991.

As part of the economic reforms initiated in India from 1991, sweeping reforms were introduced in the capital market. A very important policy initiative was the permission given to Foreign Institutional Investors for Foreign Portfolio Investment.

FPI started as a trickle in 1992 and later gathered momentum to become a flood after 2003. FPI shot up from $1634 million in 1993-94 to $10248 in 2004-05. These huge capital flows produced profound effects on the economy, some of which are:
- Increase in foreign exchange reserves
- Reduction in interest rates
- Sharp appreciation in stock prices
- Increase in private investment via reduction in the cost of capital
- Non-debt financing of CADs
- Increase in the investment rate in the economy via higher CAD financing
- Improvement in knowledge flows and corporate governance

Simultaneously, it threw up new macro economic challenges such as managing exchange rate stability, interest rate stability and price stability - the so-called impossible trinity. It also threw up the challenge of managing the ‘hot money flows’. The present study is a critical enquiry into the nature, causes and impact of FII in the Indian capital market.

The main objectives of the study are:

i. To examine the determinants of foreign portfolio investment by FIIs.

ii. To examine the nature of relationship between FII and stock price movements; particularly, to examine the issue ‘whether higher stock prices are the consequence or the cause of FPI’.

iii. To study the impact of FPI on:
   a. Balance of payments
   b. Interest rates
c. Cost of capital

d. Corporate governance, knowledge flows and market efficiency

iv. To study the issue of vulnerability of emerging economies to ‘hot money’ inflows, in the context of vulnerability experiences of other countries.

The study is based on the following hypotheses:

i. Foreign portfolio investment by FIIs has caused a boom in the Indian stock market as reflected in the BSE SENSEX and NSE NIFTY.

ii. FII has had favourable impact on India’s Balance of Payments, interest rates, cost of capital, corporate governance and market efficiency.

iii. Unregulated and unbridled capital flows will lead to volatility in markets and will expose the economy to external shocks.

The study is based entirely on secondary data. Data on FII in India since the entry of FIIs in 1992 up to 2006 were obtained from the publications of the RBI, the NSE and the SEBI. Data on the stock price movements were obtained from the RBI, the BSE and the NSE. Other data on trends and patterns of resource mobilization in Indian capital market were obtained from ‘Securities Market: A Review’, an NSE publication. Data regarding Balance of Payments, interest rates, foreign exchange reserves etc were obtained from RBI’s ‘A Handbook of Statistics on Indian Economy’, and ‘Report on Currency and Finance’.

An econometric framework was developed to examine the impact of FII on stock indices such as BSE SENSEX and NSE NIFTY. The method of Ordinary
Least Squares (OLS) was used to estimate the equations for stock index functions. To test the impact of FII on BSE SENSEX a Multiple Regression Model was developed. To check the structural breaks in equations, the Chow Break Point Test (Chow Test) was used.

The important conclusions from the study are the following:

1. FPI is determined by a complex set of factors. The important determinants are:
   i. the advantages of portfolio diversification
   ii. FPI policy of host countries
   iii. stock returns in dollar terms
   iv. GDP growth rate and corporate profitability in host countries
   v. financial market infrastructure in host countries
   vi. exchange rate
   vii. political stability, and
   viii. the level of credit rating

2. FPI has many beneficial effects such as:
   i. non-debt financing of current account deficits
   ii. supplementing domestic savings and investment
   iii. lowering interest rate
   iv. contributing to higher GDP growth
   v. facilitating knowledge flows
   vi. benefiting investors through higher stock prices
vii. improving corporate governance, and

viii. enhancing market efficiency

India derived these benefits from FPI in India

3. The study found that FPI is fraught with perils and problems such as:

i. volatility caused by ‘hot money’ flows

ii. vulnerability of BoP to sudden capital flows

iii. threat of foreign takeover of domestic business firms

iv. the problem of managing the ‘impossible trinity’

The study found that even though the threats from some of these problems are real and probable, they had not yet manifested in India as real problems. India’s cautious and calibrated liberalization of capital flows has so far warded off these threats.

4. Regarding the impact of FPI on stock price movements, the study revealed the following conclusions:

i. Results of multiple regression analysis showed that movements in dependent variables SENX and NIFTY are significantly explained by all explanatory variables except T BILL and INFLA (on SENX) and M3, T BILL and INFLA (on NIFTY). The Co-efficient of FII is found to be statistically significant at 1 percent level. However, the magnitude of FII impact on the SENX is low at 0.065 and in the case of NIFTY at 0.071.

The impact of M3 and CAD on SENX is also statistically significant.
ii. The biggest impact on SENX is by lagged index, that is, SENX \( t-1 \). The coefficient is 0.96. Similarly the biggest impact on NIFTY is by lagged index, i.e., NIFTY \( t-1 \) with a coefficient of 0.93. This means the movements in stock indices SENX and NIFTY are largely determined by their own past movements. This finding is a complete vindication of the Theory of Technical Analysis.

iii. Sub-sample analysis was done for different periods since the Chow Test revealed structural breaks in the model. Sample analyses were done for the periods 1993:01-1999:07, 1999:08-2004:10 and 2004:11-2006:12. The results indicate that the impact of the independent variable on the dependent variables SENX and NIFTY differed during the three different time periods. For instance: the coefficients of FII (SENX) were 0.65, 0.11 and 0.09 respectively during the first, second and third time periods. Similarly the coefficients of FII (NIFTY) were 0.71, 0.12 and 0.07 during the first, second and third time periods. Importantly, FII coefficient is the lowest in the third period which witnessed the biggest bull run in the market. The obvious conclusion is that the indices are not driven by FII.

iv. It is important to note that the coefficient of IIP varied drastically across time periods. The coefficient of IIP (SENX) was 0.006 during the first period, 0.253 during the second period and 0.59 during the third period. Similar variations were observed for the coefficients of IIP (NIFTY) across the three
time periods. This variation in the impact of IIP on stock indices can be explained by the fact that the sharp increase in stock indices (SENX rising from 2950 in May 2003 to around 14000 by December 2006) and the spurt in the growth rate of industrial production (manufacturing sector growth rate rising to above 9 percent during 2003-06 from less than 7 percent during the earlier two periods) coincided during the third period. In other words, the IIP had a bigger impact on the indices during the third period that saw the indices spurting by almost 5 times. It is significant to note that this was the period of high growth in the economy.

v. A very important finding of the analysis is that while the co-efficients of FII are statistically significant, their values are not large. The biggest impact on stock indices is their own past performances. This means that investors form their opinion and expectations of stock price movements from their past experiences. These past trends and experiences, to a large extent, influence their trading decisions in the market and consequently determine stock price movements. The co-efficient of SENX t-1 is 0.96 and the co-efficient of NIFTY t-1 is 0.93. The small difference in the values of the two co-efficients of SENX t-1 and NIFTY t-1 can be explained by the fact that the SENX is composed of 30 stocks, while the NIFTY is composed of 50 stocks and is therefore slightly less volatile.
vi. For both SENX and NIFTY, the actual indices and the predicted indices (the indices constructed with the equation) move in tandem, particularly in the sub-samples. This proves the predictability of the model.

vii. Durbin-Watson statistic shows that there is no auto-correlation in the model. The high value of R Squared (0.93 in SENX) and (0.96 in NIFTY) show that 93 percent variations in SENX and 96 percent variations in NIFTY are explained by the independent variables in the model. The F Statistic indicates that the model is fit with the data.

5. Regarding the impact of FII on BoP, interest rate, cost of capital and corporate governance, the study found positive impact in all respects.

i. Increase in foreign exchange reserves due to FII helped in effectively managing the BoP, particularly in the nineties, following the BoP crisis of 1991.

ii. The decline in interest rates following the reforms was partly due to the increase in money supply. Increase in FPI contributed substantially to the growth in money supply. It can, therefore, be safely assumed that FPI played a positive role in the downward movement of interest rates.

iii. Along with reduction in interest rates, higher stock prices also enabled companies to reduce the cost of capital via higher premiums charged on follow on offers.
iv. The impact of FPI on corporate governance, knowledge flows and market efficiency has been very positive.

6. The study of vulnerability of emerging economies like India to hot money flows in the context of similar episodes of vulnerability in other countries showed the following results:

i. Instances of vulnerability in India do not indicate any decisive role of FIIs in causing volatility, except during the Pokharan explosion. But even here, the FII reaction was part of a rational market panic created by the sanctions against India.

ii. During crises such as the South East Asian crisis of 1997-98, the Tech meltdown and the market crash of 2000, the crash of 2004 following unexpected election results and the crash of June 2006, FIIs did not play any negative role in causing or aggravating the crisis. In fact, their role during all these periods of volatility was positive, i.e. they attempted to stabilize the markets through positive net investment.

7.2 Policy implications

It is evident from the conclusions mentioned above that India’s experience with FPI is benign and desirable. Beneficial effects such as increase in foreign exchange reserves, reduction in interest rates, appreciation in stock prices, increase in private investment via reduction in the cost of capital, non-debt financing of
CADs, increase in the investment rate in the economy via higher CAD financing, improvement in knowledge flows and corporate governance etc., are, without doubt, eminently desirable.

On the flip side, FPI is hot money. Sudden and huge capital outflows can create BoP problem and currency fluctuations with undesirable consequences such as hyper inflation. In brief, FPI is like fire; it can be a good friend and a dangerous enemy. Therefore capital flows through the FPI route have to be carefully and properly managed.

Short term capital flows caused major currency crisis in South Asia during 1997-98 adversely impacting countries like South Korea, Thailand, Indonesia and Malaysia. India was not affected by the contagion thanks to her calibrated policy pertaining to capital flows, particularly India’s decision not to go for the convertibility of the Rupee on capital account. Since huge capital flows in these times of financial globalization can be a potential destabilizing factor, India should go slow on convertibility reform and defer capital account convertibility to a time when the economic conditions are far more stable and favourable.

The study shows that even though FPI influences stock prices, it is not a major determinant; the biggest determinant is the lagged index. Therefore, there is no merit in the argument that the FIIs are driving the index up or down and therefore FPI has to be regulated in the interest of market stability. The study found that during periods of market crashes (except during the crash following the
Pokharan explosion) FPI had been a stabilizing and not a destabilizing influence. Therefore, no policy change is required to control FII in the interest of market stability.

However, it may be desirable to regulate FPI to control the quantum of capital flows into the country. In the present context, the major issue pertaining to capital flows is the issue of the so called ‘impossible trinity’, i.e. maintaining price stability, interest rate stability and exchange rate stability, which are, in practice, mutually contradictory. Huge capital inflows, of which, FII is a major part, have led to sharp appreciation in the Rupee. The exchange rate which was Rs.49.08 to the Dollar in May 2003 has appreciated to Rs. 39.90 to the Dollar by December 2007. This currency appreciation which is a recent phenomenon has started hurting India’s exports. Adverse impact of Rupee appreciation (10% in calendar 2007) on low margin exports like textiles and leather can be very large. High margin exports like IT/ITES can sustain growth with reduced profitability; but low margin exports like textiles, leather etc operating under conditions of severe international competition are already facing a major crisis. Since these industries are highly labour intensive, the crisis can lead to massive job losses. Therefore sharp rupee appreciation has to be managed by regulating capital flows such as FPI.

This can be done by regulatory measures like-

- Allowing only registered FIIs to operate in the market
- Strict implementation of KYC norms for all FIIs
• Controlling, if necessary, banning derivative instruments such as P Notes which account for a major part of FII in India

• Reducing the cap of FII in individual companies

• Reducing the ceiling on FII in debt instruments (currently the ceiling is $2.6 billion in Government securities and $1 billion in corporate bonds)

• Reconsideration of the Tax Avoidance Treaty with Mauritius (FIIs registered in Mauritius do not pay S.T. capital gains tax)

Such measures can be considered by the Government if Rupee appreciation goes beyond acceptable levels. In brief, capital inflows through the FPI route, if properly regulated, will have benign effects on the economy.