Financial Liberalisation in India :
Issues, Options and Development Implications

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Dedicated to the memory of my Father
Late Sailaja Kanta Mukherjee

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CERTIFICATE

I am very glad to certify that the thesis entitled "Financial Liberalisation in India : Issues, Options and Development implications", has been prepared by Mr. Salil Kumar Mukherjee, Sr. Lecturer, St. Joseph's College, Darjeeling under my supervision. It embodies the results of his investigation and is an original piece of research work not submitted to any other University / Institution for Ph.D or any other degree.

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Financial Liberalisation in India : Issues, Options and Development Implications

ABSTRACT

Our experiment with financial liberalisation delivered a baggage of mixed outcome – while some are encouraging, others are essentially damaging for the growth of the economy. It inspired us to review critically, whether the precept of market oriented financial system can solve the basic problem of our economy or we are simply guided by some text book model, dogma that has little relevance in practice. The model suggests that chain of causation runs from savings to investment to growth, but our study shows that the emphasis is misplaced. Instead it is demand deficiency which is the main bottleneckness of the growth of our economy – issue which escaped attention of liberal camp.

Thus, there is a need to review dispassionately the issue of "intervention and no-intervention" in the context of typical problem of our economy. We feel, government spending can help to increase income, consumption and demand to ensure faster growth of private corporate sector. Our study shows private initiatives may be supplemented by state intervention to achieve rapid economic growth. Finally, the study is an attempt to develop our own financial system capable to satisfy our own problem.

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I am deeply indebted to my research guide Dr. Malay Kanti Roy, Department of Commerce, University of North Bengal, Darjeeling, who discussed about this "new precept" for the first time in our final year M.Com. Class in 1993. Initially the discussion appeared to us quite difficult and we were not confident about it's future implication in our economy. It inspired me to study rigorously on the particular topic which I believe has a wide ranging implication in a socio-political-economic development of our country.

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Salil Kr. Mukherjee

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Preface

There was growing dissatisfaction among less developed economies with the way in which regulation of financial markets was working. It was often associated with interest rate cartels, bureaucratic procedures and sometimes, even with corrupt practices. Financial markets were seen as being financially repressed and economic development was thought to be being stifled rather than promoted. Dissatisfied with the control regime, our policy maker finally decided to free the financial market from the clutches of the government so that it can function freely without any sort of intervention. We describe it as non-interventionist approach of financial development, which may be treated as a product of thought provoking seminal work of McKinnon and Shaw. In 1973, McKinnon and Shaw separately highlighted the problems associated with excessive intervention. Their diagnosis was that the mass of controls on the financial system were "repressing" it and causing it to malfunction. The solution they proposed to this "financial repression" was financial liberalisation : the removal of government controls. India, since its financial crisis in 1991, has slowly traveled down the path of economic liberalisation and structural adjustment. Now it is the time to take stock about what the policy of liberalisation promised and what it delivered ?

In the present study attempt has been made to investigate how the different measures of liberalisation helps 'to activate different segments of our financial system? What are the major symptoms we are visualizing in the financial market after the liberalisation ? This study has also attempted to identify the possible measures to be initiated to cancel out the harmful effect of financial liberalisation in India. The whole work is divided into six interrelated chapters; First Chapter will focus on the motivation, issues and objectives of financial liberalisation in consonance with our hypothesis that financial liberalisation leads to economic growth. Second Chapter mainly deals with the theory of liberalisation and the steps taken by our government to develop a market oriented financial system. Implication of the regime shift on money market activities are the subject matter of third chapter. Fourth chapter deals with the pattern of movement of interest rate in our country along with testing the hypothesis that increase in real interest rate helps to mobilize more saving thereby investment. Relevance of financial liberalisation theory in an economy characterized by excess liquidity has been thoroughly analysed in the fifth chapter. Sixth chapter attempts to measure state of development of Indian financial system vis-à-vis other developed and developing countries in absolute as well as in relative terms. Finally we summed up our discussion in seventh chapter.

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CHAPTER – I

Introduction

1.1 Prelude

Objective of rapid economic development can be achieved in any economy only if there is a stable, vibrant, innovative and efficient financial system capable to support ever changing needs of the society. Less developed economy reckoned this fact only in early 1980's.[1] Why development of financial sector is an essential ingredient for growth of the economy? The issue has been extensively researched by Schumpeter (1911), Goldsmith (1969), McKinnon (1973), Shaw (1973), King and Levine (1993), Demirguc-Kunt and Levine (1999) etc , who finally concluded that an efficient financial system can only mobilize and allocate resources to most desirable and productive form of investment that contribute in capital formation and growth. Theorists further emphasized as real income and wealth increases, size and complexity of the financial superstructure also grows. Thus the financial systems of most rapidly growing economies are usually deeper because savings rate of those countries are higher than slower growing economies.

There is a debate, among economists, between mobilization and allocation of savings, which one is most important for less developed economy.

Some commentators believed that differences in living standards among countries primarily reflect the efficiency with which resources have been and are being used. Prime among the factors influencing income levels and growth rates is how productively saving has been used, even more than how much was saved. This is reflected in the fact that over the last quarter century the average growth rates of developing countries have been more highly correlated with the productivity of investment than with the rate of investment. Higher income countries have succeeded in allocating their savings to more productive investments than have lower income countries. This has many reasons but paramount among them are the methods by which the allocations of savings were determined (See World Development Report 1989).

An attempt is made in the next section to critically review, what the state of Indian financial system was in the era of centralized planning. Very specifically the next section will deal with the following issues: What was the structure of Indian financial system during control regime? What was the problem with the government controlled financial system? What factors

[1] During 1970's, favourable terms of trade and cheap foreign funding enabled developing countries to finance investment expenditure despite the small size of their financial system.

motivated our policy makers to deregulate this system? All these issues are very important and have a direct bearing on the subject matter of the present study that deals with the topic financial liberalisation and its development implications.

1.2 Financial Liberalisation: motivation, issues and objectives

After independence, for more than four decades, we developed a financial system that was truly "repressed" and all the "vices" of such a structure were prominent. During those years government controlled the financial system to regulate the supply of money and credit in a centrally planned economy. Government often balances the budget deficit by money creation. This excessive rate of money creation generally spurt the rate of inflation. Several tools were used by the government to control the monetary aggregate. The major instruments of control were — regulation of interest rates (with various rates on deposits and lending being fixed by the government or central bank), quantitative credit allocation, high reserve requirement, concessional interest rates for specified sectors coupled with subsidization etc. Government directed credit allocation rob the freedom of bank managers over the use of funds, relieve them from accountability, force them to invest in low yielding government securities, indulge in allocation of resources other than for economic reasons, promote corruption that seize creative and innovative ideas of bank managers that result in misallocation of resources and retard growth of the economy. Most probably, among many LDCs, Indian Financial System was the worst victim of excessive government interference (See Table 1.2.1).

Table 1.2.1 : Compulsory Credit Allocation: Experiences of Select LDCs.

Country	Year of advances	Percent of financial system advances
Pakistan	1986	70
Yugoslavia	1986	58
Brazil	1987	70
Turkey	1983	53
India	1988	90

Source: Compiled from World Development Report 1989.

The inevitable consequences were an increasing degree of inefficiency in the whole system leading to erosion of profitability of the banking sector. Much discussed Narasimham Committee Report well documented the pathetic condition of Indian Banking business of that time. Thanks to "no competition" and blessing of the government, banks simply manage to

survive with enormous non performing assets[2]. While an efficient financial system can contribute in the growth of the economy by improving productivity of investment, an immature structure conversely can arrest economic growth.

Slowly and gradually, dismal economic growth and macro-economic crisis started engulfing Indian economy – intolerable inflation, unsustainable fiscal and current account deficit, sharp down grading of India's credit rating, unbearable domestic and foreign loans, cut-off of foreign lending were some dreadful features of an economy that was virtually on the verge of collapse(See Table 1.2.2).

Table 1.2.2: Major Macro-economic Indicators: Experiences of Early 1990's.
(1990-91 to 1991-1992)

Change in the Indicators	1990-91	1991-92
GDP (annual % change)	5.4	0.8
Inflation (% p.a. W.P.I.)	10.3	13.3
Broad Money (annual % increase)	15.1	19.3
GDI (% GDP)	27.1	23.6
GDS (% GDP)	23.7	23.1
Real GFCF (% GDP)	21.3	20.3
Of which Public	8.6	8.7
Private	12.7	11.6
Current Account Deficit (% GDP)	3.2	0.4

Source: Joshi and Little 1997.

Immediate drastic action that included a large devaluation deflationary fiscal measures and financial assistance from official donors and lenders were essential to prevent default.[3]

And finally, the bold stroke of disgruntled policy makers was the decision to let loose the economy from state control – popularly known as economic liberalisation. Theme song of the new regime is 'competitive efficiency' that will help India to meet two strategic objectives; eradication of poverty and playing rightful – role in the world by becoming a source of growth and stability for the global economy (Kelkar 2001).

India started its reform programme with twin objectives namely a stabilization programme in the short run and a structural adjustment programme in the medium term. Successes of these two agenda widely depend on financial and fiscal sector reform. Financial sector was correctly ignored from the initial reform process (see Wyplosz, 2001). Following text book model

[2] No Overall figures of NPAs are available in the first half of the 1990's. However, in 1993-95, the public sector banks NPAs rates averaged 22.5% of loans and they accounted for over 80 percent of the system in that period (RBI, 1998).

it swiftly moved at the top of the agenda because deficiencies and weakness of this sector were adversely affecting the change process. A high power committee was set up in August 1991 under the Chairmanship of M. Narasimham, a leading economist and former governor of RBI to suggest the basic framework of financial liberalisation which is an incredibly complex process.

1.3 Scope of the Study

Votaries of the market economy promised that this regime shift would help for better mobilization and allocation of resources that will ensure stability and growth of the economy. Policy makers of our country declared in no uncertain term that the process of liberalisation is "irresistible and irrecoverable".

Critics of the market economy are hesitant to buy the story that "financial liberalisation leads to growth" and forcefully argue that the theory is yet to be tested (Burkett and Dutt, 1991). Problems of asymmetric information, inadequate regulation and supervision, destructive competition, poor law and order situation of many LDCs, may lead to collapse of financial system in the post reform periods (Kaminsky and Reinhart, 1999, Mehrez and Kaufmann, 2000). Critics further argue, even developed economy with all its honest effort for several decade failed to insulate their financial system from the above shortcoming – these countries are still not free from crisis (Wyplosz, 2001). Finally, one of the earlier signatories of market economy, Joseph Stiglitz (2001) now consider financial liberalisation as incredibly intolerable and warned LDCs to accept it at their peril.

The experience of different countries with similar reform programmes has shown a spectrum of results — which ranged from moderately successful to disastrous (see world development report 1989). While in some countries reforms helped in strengthening the financial system, some other has to face the set back.

In the view of these conflicting evidences of several liberalised economies, it is imperative that we critically study the possible impact of financial liberalisation in the development process of our economy.

Thus we hypothesize —

Financial deregulation is essential for better mobilization and allocation of resources thereby growth and development of our economy.

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[3] After 17.38% devaluation of rupee in July 1991, the rupee was pegged again to the US dollars until March 1993 when it was devalued further by 19.2%.

During the process of our study an attempt will be made to answer the following research questions: -

1. What steps have been taken to liberalize Indian financial system? Is it sufficient? What problems our policy makers are facing while liberalizing the financial system?

2. What are the major symptoms we are visualizing in the financial market of our country after liberalisation? Whether experiences of financial liberalisation so far ventured in our country are encouraging or not? More specifically, what is the impact of reform process on savings, investment and growth?

3. On the basis of experiences, is it possible to predict where this regime may lead us? Can we make any blanket statement that government intervention is always undesirable?

The issues are important and its critical analysis will help us to adjudge the possible implications of the regime shift on our economy. In our thesis, we intentionally ignored stock market, one of the most important constituent of any financial system. Theorists often argue capital market which is free from "moral hazard" can allocate resources more efficiently than bank (Cho 1986). However there are enough counter evidences that show consecutive market break around the globe led to enormous sufferings of the economy in terms of plugging currencies, soaring interest rate, mass unemployment, restrained consumption and investment – which pure theory does not endorse. Reason for ignoring stock market from the present study is to make the discussions manageable without undermining its importance in the development of corporate sector.

1.4 Plan of the Thesis

Apart from the current one, the whole work is divided into six interrelated chapters :

1. Second chapter mainly deals with the theory of liberalisation and the steps taken by our government to develop a market oriented financial system.

2. Implications of the regime shift on money market activities are the subject matter of third chapter.

3. Fourth chapter mainly deals with the pattern of movement of interest rate in our country along with testing the hypothesis that increase in real interest rate helps to mobilize more saving thereby investment.

4. Relevance of financial liberalisation theory in an economy characterized by excess liquidity has been thoroughly analysed in the fifth chapter.

5. Sixth chapter attempts to measure state of development of Indian financial system vis-à-vis other developed and developing countries in absolute as well as in relative terms.

6. Finally we summed up our discussions in seventh chapter.

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Chapter – II

Financial Liberalisation Hypothesis : Theory and Practice

2.1 Introduction

Debate is on and there is no indication that the dust will settle soon on the issue – what policy particularly LDCs should pursue to mobilize more savings available for investment. Until the early 1970s, broadly two sets of theories, namely classical-Neo-classical monetary theories of growth and Keynesian counter arguments dominated the scenario. McKinnon Shaw (1973) came up with a critique of both classical-Neo-Classical theories as well as Keynesian alternative. McKinnon Shaw theory may be treated as a new precept in the arena of finance and development that considered some unique dimensions otherwise ignored by Neo-classical theorists. The precept swept swiftly in many LDCs including India. Thus the present chapter mainly deals with what exactly financial liberalisation theory suggests? Is there any single text book model for regime shift? What steps we have already taken to develop a market oriented financial system? What are the measures yet to be initiated to complete the transformation process? All these discussions will be accompanied by a critical survey of research studies on the issues.

2.2 McKinnon and Shaw Model: a bird eye view

Until mid seventies many developing economics preferred to follow the strategy of low interest rates to encourage more investment and higher economic growth (Shaw 1973). The Keynesian approach of development was exceedingly popular in less developed economy, thus the real interest rates of many countries were zero, even negative in many occasions.

McKinnon and Shaw in an well organized and immaculate fashion challenged this conventional wisdom. They showed the financial liberalisation is a necessary condition for economic growth in countries where there is financial repression and in particular where real interest rates are negative or kept below their free market equilibrium level, through various regulations by the monetary authority (McKinnon 1973).

Interest Rates Savings and Investment: Impact of Financial Liberalisation

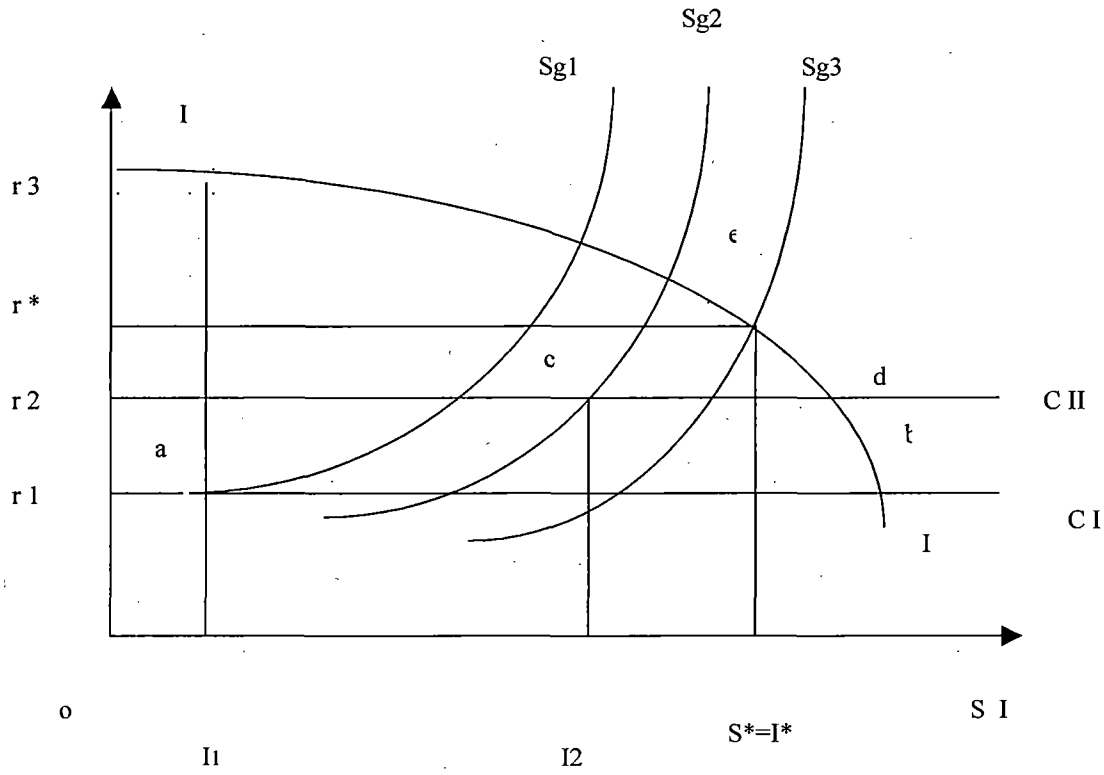

Fig. 2.2.1

Effect of such restriction reproduced here in a diagram popularized by Maxwell Fry (1982) – where an upward saving function depending on the growth of the economy and the real interest rates, intersect with a downward slopping investment function to determine equilibrium interest rate that balances savings and investment.

So we can write savings (s) is a function of the real interest rate (r) and also the rate of growth of national income (g). Where Sr > 0; Sg > 0 i.e., positively related with g and r. By assumption g1 < g2 < g3. Investment (I) is negatively related to real interest rate (r) i.e., Ir < 0.

C I represent ceiling imposed only on deposit interest rates, then only I_1, savings is attainable at a real deposit r1. Now actual investment is limited to I_1, and investor would face an interest rate r_3, which clear the market. The margin (r3-r1) which banks make on lending activities would be spent for non-price competition. [e.g. branch expansion, advertising etc.]

In a financially repressed economics, governments usually try to regulate both loan rates as well as deposit rate to encourage investment through reducing the cost of borrowing. In this case, the investment demand ab will remain unsatisfied, as because only I_1, savings is available for investment, as a result credit rationing is a common feature. Moreover, as loan rate ceiling

discourage risk taking, a large proportion of potential high yielding investments are rations out because of their higher risk intake. (Fry, 1982)

Now, assume that government engaged in partial liberalisation and raises the interest rates to ceiling-CII. Now with the increase in interest rate, average efficiency of investment increases and consequently rate of economic growth also increases which shift the saving function rightward (g2). As an impact of financial liberalisation (partial), new interest rate, r_2 encourages savings to I_2, unsatisfied demand for investment also reduced to cd and entrepreneurs are now able to undertake investment project with higher expected rate of return. Now if government fully liberalize its control on interest rates, then an equilibrium will be attained at e, where savings equals to investment with the equilibrium interest rate r*.

Thus McKinnon-Shaw hypothesis suggest that liberalisation of interest rate encourages higher savings and increases the quantity as well as quality of investment through removal of credit rationing, so as to finance the potentially high expected return project.

McKinnon's complementarily hypothesis based on two assumptions: (i) all investments are self financed and (ii) investment expenditures are lumpier than consumption expenditures.

Whereas Shaw's financial deepening hypothesis assert that saving and investment may occur through the accumulation of non-money assets. According to Shaw's view, increase role of financial intermediaries due to interest rate liberalisation reduce the cost of intermediation through economies of scale, increase the operational efficiency, reduce the risk through diversification and so on. These two approaches emphasize different aspects of the process of accumulation of financial assets and liabilities.

At the bottom, McKinnon and Shaw separately highlighted the problems associated with excessive intervention. Their diagnosis was that the mass of controls on the financial system were 'repressing' it and causing it to malfunction. The solution they proposed to this – "financial repression" was financial liberalisation; the removal of government controls and the main targets for liberalisation were interest rate ceilings, which were identified as the primary causes of repression.

The process of transforming a financial system with interventionist bias to an unregulated system is very complex and the issues like speed, sequencing of change needs careful consideration. There is no text book model that best suits for all countries irrespective of their initial economic condition, level of development of institutional structure, political environment in which this fundamental changes taking place. Experiences of former socialist countries and transitional economies of Asia and Latin America attest our views (See Rana 1995).

2.3 Reform Process in Transitional Economies

Two approaches have been proposed and implemented. The first one aims at a gradual process of liberalisation, starting with domestic financial markets and moving cautiously on to external integration. The premise is that financial markets can only be built up gradually and that they must have achieved enough resilience to meet the risks associated with the next step before it is taken, which is matter of decades, not of months or years. This is as the approach followed by China, many Eastern European countries, a number of transitional economies of Asia and most importantly in post-war Europe where capital account liberalisation was not completed until the end of the 1980's (Wyplosz 2001). The second approach aims at a rapid, erga omnes, liberalisation. The premise is that financial repression serves powerful private and political interests apt as thwarting serious reforms and that only a 'kick in the anthill' will unleash liberalisation. This approach, which has been added to the "Washington consensus", has been applied in a number of transition countries. Many Latin American countries and some former socialist economies followed this strategy (see Table 2.3.1). Viewed from the macroeconomic stability, both approaches have occasionally been followed by deep currency crisis – it approves that the path of reform is inherently dangerous (Wyplosz, 2001). Presumably, these irritating experiences led some economists to argue "the order of liberalisation does not matter in general"[1] (Kaminsky and Schumekler 2003). However, go-slow approach most probably minimizes the loss due to crisis which by now is treated as an ingredient of market economy. The IMF survey (Nov 25, 1996) estimates the resolution cost of financial system failures in developing and transition countries since 1980 as being in order of US$ 250 billion. India preferred to follow "stop and go" approach. Presumably, compulsion of coalition government, various push and pull, along with the feeling that regulatory intervention is essential during the transition period induced our policy makers to follow the policy of "gradualism" ignoring "big bang" approach. Moreover, strictly from economic point of view "one step at a time" approach (McKinnon 1991) helps a comparatively safe trip in the bumpy road to free markets – thus it is a welcome strategy.

[1] for a more comprehensive and meaningful definition of financial liberalisation see Kaminsky and Schumkler (2003). Authors argue, the whole process consists of three steps 1) deregulation of foreign sector capital account 2) the domestic financial sector and 3) the stock market.

Table 2.3.1: Scope and Speed of Financial Restructuring in Select LDCs

Country	Year/ period	Domestic financial reforming	
		Scope	Speed
Argentina	1977 1977-81	(a) complete (b) comprehensive	Short period
Chile	1975 1973-81	(a) complete (b) comprehensive	Short period
Uruguay	1974-79 1974-79	(a) complete (b) comprehensive	Abrupt
Indonesia	1983-85	(a) Limited (b) Limited	3 years
Malaysia	1982 1971-81	(a) Comprehensive (b) Limited	3 years
Korea (c)	1982-88 1982-84	(a) Limited	Gradual
Taiwan (c)	07/1987	(a) Comprehensive (b) Limited	Gradual
Australia	1980-82	(a) Complete (b) Comprehensive	Gradual
New Zealand	1984-85	(a) Complete (b) Comprehensive	3 years
Spain	1974-81	(a) Complete (b) Comprehensive	Gradual
Turkey	1980-84	(a) Complete (b) Comprehensive	Gradual

Notes: (a) Interest rate liberalisation (b) Other domestic deregulation measures (c) present status of financial liberalisation and deregulation.

Source: See Murinde (1996: 133 Abridged)

2.4 Review of Literature

The importance of the growth of the money economy and financial depending for economic development has been stressed in the development literature for a long time (Lewis 1955, Gurley and Shaw 1960, Tun Wai 1972). Just after the publication of the seminal work of McKinnon and Shaw (1973), it quickly drew the attention of researchers interested to study the relationship between finance and development. Some researchers accepting the basic philosophy tried to extend, modify and enrich this theory by their extremely valuable works. While others conducted extensive empirical studies based on country experience to test the hypothesis of the theory of financial liberalisation that there is a positive association between the degree of development of the financial sector, resulting primarily from a freer structure of interest rates and the overall economic performance of developing countries (Jamil Tahir 1997)

The neo-structuralist economists argued that higher bank interest rates lead to higher bank deposits simply due to the transfer of funds away from alternative asset holdings (Taylor 1983), such as the informal credit markets – (Edwards 1988, Van Wijnbergen 1982) or share markets. They also argued that some of these, such as informal credit market, might be more efficient means of financing investment since these are unregulated and do not need to hold reserves (as banks do). Thus according to new-structuralists, raising interest rates on banks would decrease rather than increase, the investment rate in the economy. However, Agrawal (2001), opines as long a part of the additional assets flow to the banking sector from non-financial and / or foreign assets, raising bank interest rates would be desirable.

In a related writings, Deaton (1990,1992), Carroll (1994) and Birdsall et al (1999) have questioned the relevancy of permanent income and Life Cycle model to analyze the savings of poor countries. Deaton particularly developed a model of the precautionary savings behaviour of credit constrained, low income, multi-generational households that unveils some typical features, otherwise ignored by economists that influences savings and dis-savings decisions of less developed economy.

Cho (1986), suggests that full scale liberalisation of the banking sector is not sufficient for efficient capital allocation in the absence of well-functioning equity market. In a world of imperfect information, the existence of equity market will enhance the allocation of capital. This happens because equity finance is free from adverse selection and moral hazard effects, while debt finance in the presence of asymmetric information suffers from this problem. Equity capital can finance risky and productive borrowers, for whom asymmetric information in acute, while banks concentrate their finance on the well established safe borrowers. Stiglitz and Weiss (1981) argue that asymmetric information contributes in credit rationing in a liberalized economy that adversely

affects the course of development of a country. This can happen in two ways; one is 'adverse risk selection effects', where with the rising interest rates a large proportion of riskier borrowers will be attracted and the other is 'incentive effects', under which safer projects/firms will move to a riskier nature because rising interest rates compel the firms to switch, as earlier safe project become less profitable. In this situation, that banks that are following prudent behaviour will practice credit rationing. More recently, stiglitz (1994) and others (Hellman, Murdock and Stiglitz 1997, Stiglitz and Uy 1996) have argued against unbridled financial liberalisation and instead supported 'mild financial repression' on several counts:

i) Stiff competition may not be desirable in financial markets and it may be socially optimum to allow banks to earn extra profits by keeping deposit rates below market clearing rates.

ii) Real interest rates deposit rates beyond Zero (o) may take money away from investors (and give it to savers) which may lower investment. Thus "mild financial repression" with real interest rates close to zero or slightly positive may well be optimal.

Finally in his more recent writing, McKinnon (1993) while accommodating some of stiglitz's asymmetric information and risk arguments have advocated for 'restricted financial liberalisation'.

Another crucial concept that is inherent in the new-classical financial liberalisation literature is that if market is left free, it will automatically balance savings and investment and determine equilibrium interest rates. Equilibrium interest rates represent the true scarcity of capital. McKinnon (1973) suggests interest rate in the curb markets is close to the equilibrium interest rate. Refuting above argument, Roland Clarke (1996) suggests that neither the equilibrium interest rate can be defined nor it is obtainable through the process of competition as the financial system particularly of developing economy offer suffers from instability in the post liberalisation period.

However, final test of liberalisation theory largely depends on the issue – can market oriented financial system mobilize and allocate resources more efficiently thus ensure growth and stability of less developed economy? It is realistic to assume that the growth of the economy followed by financial liberalisation helps to increase income and reduces poverty?

What empirical evidences suggests? Evidences so for available are confusing; whilst financial liberalisation helped improved economic performance in some countries, it also led to financial distress and crisis in many others (Agrawal 2000, Williamson and Mahar 1998, Caprio and Klingebiel 1996,, world Bank 1989, Diaj – Alejandro 1985, Arestis and Camer 2004). We

discuss below important findings of some of the studies, ignoring many others that deserve equal attention of researchers.

Based on the experiences of a number of countries (varying from 14 to 67) Jao (1976), concluded that economic growth is associated with the accumulation of financial assets defined in the widest sense. Fry (1978) conducted a pooled regression analysis of the saving function using annual time series data for seven Asian countries for the period 1962-1972; he found that the real rate of interest had a positive effect on domestic saving and economic growth in those less developed countries (LDCs). Findings support McKinnon and Shaw growth model. Jung (1986) analyzed causality between financial development and economic growth based on 56 countries, comprising both developed and developing nations and used the technique of Granger causality test. Applying both simple and unidirectional concept of causality and two alternative measure of financial development, viz, currency ratio monetization variable; the study concludes that less developed economy has supply than demand following pattern that attest usefulness and importance of financial development in LDCs. Thorton (1990) using two stage least square estimate, tested McKinnon complementarily hypothesis based on annual data for India for the period 1964-1984. The result indicated strong support for the McKinnon hypothesis in both the demand for money and the saving function Experience of Nepal (Thorton an Pondyal 1990) are identical with India. Murinde and Eng (1994) investigated the causal relationship between financial and economic growth in Singapore by applying Granger causality test for the period 1970-1990. Findings of the study strongly support the supply leading hypothesis, but only when narrow money and monitisation variable were used as proxies for financial growth. From the result obtained, researchers concluded that supply leading hypothesis was true in Singapore's case.

How interest rate influences financial savings and total savings? While financial savings is directly related to real interest rates, total savings is invariant to interest rate argues Warman and Thirlwall (1994). Based on the experience of Mexico, authors opine that any favorable effect of financial liberalisation and higher interest rates on economic growth must come through raising the productivity of investment. Bekaert, Harvey and Lundblad (2001) study on emerging equity market liberalisation report that equity market liberalisation lead on an average to a one percent increase in annual real per capital GDP growth over a five year period. In an illuminating analysis, Agrawal (2004) based on experiences of four East Asian countries concluded that real interest rate up to 8 percent helps to augment investment; but any rate beyond that may contribute to crisis. This optimum interest rate seems to be closest to McKinnon's 'restrained financial liberalisation policy' i.e., liberalisation with a moderate upper limit (about 6 to 7 percent) on the real interest rate.

However votaries of free market facing formidable challenges from the mind boggling research works of a number of economists (Van Wijnbergen 1983, Boyoumi 1993, Rodrik 1998) who have proved that the precept of McKinnon – Shaw is based on some simplistic assumptions, thus the policy is failing to keep its promises of growth and stability. Hike in interest rates and its impact on savings, demand, cost of capital, output, profit, budget deficit, banking efficiency has been exclusively scrutinized by these economists and the findings are sufficient to disturb liberalist.

Bhatia and Khatkhate (1975) studied the relationship between financial deepening and economic growth of 11 African countries for the period 1960-1970. They used alternately currency, demand deposits, time and saving deposits and also their total as proportion of GDP as indicators of financial development. They tested the relationship between there alternate measure of financial development and per capital income and the rate of growth of GDP by plotting the dependent and one of the independent variables at a time. They could not derive any positive conclusion, because no systematic pattern finally emerged. Gupta (1987) examined the role of financial intermediation as propounded by the financial structuralists and the role of interest rate as emphasized by the financial 'repressionists' for mobilization of savings. Researcher developed a single equation model of savings behavior which explicitly incorporated both real interest rates and financial intermediation. The empirical exercise was conducted for a sample of 12 Asian countries. He found that support for both structuralists and financial liberalists were quite limited. In a closed economy characterized by excess capacity, Burkett and Dutt (1991) shows that with increase of deposit interest rate, marginal propensity to save increases, at the cost of reduction on in aggregate demand, thus fall in demand adversely affects – output, profit and consequently investment. A rise in interest rate implies higher cost of borrowing, increase cost of production, more inflation, reduction of real wage and fall in effective demand that arrest the growth of the economy. An increase in interest rates may result in loss to the banking business due to interest rates differential when they are engaged in a programme of borrowing short term and lending long term. Higher interest rates also adversely affect the public deficit, so stringent fiscal discipline is an essential element of successful liberalisation programme (World Bank 1989).

Bandiera et al (2000) finds no evidence of positive effect of real interest rates on savings in eight developing countries. In most cases the relationship is negative. Furthermore, the effect of negative and insignificant in some cases; positive and significant in some others (See Appendix-I). Findings of the study of Arestis and Murray (2002) were more specific when they concluded financial liberalisation have produced disappointing results and have failed to meet expectations.

At the bottom, what the above contradictory empirical evidence suggests? What are the reasons of ambiguity of findings in the empirical literature on financial liberalisation and growth?

Most probably as methodology, data set, time period, economic assumptions (See Appendix-II and III), set of countries vary across studies; findings of the researchers also differ. The above findings provide many important aspects for empirical research for a developing country like India. The country has demonstrated a fair degree of growth potential during the planning era and is now in the process of transition. The next section will shed some light on the transition process.

2.5 Transition Process

India following recommendations of scores of committee (See Appendix–IV) initiated measures to reform financial sector with key slogan: 'minimum intervention, more freedom and greater accountability', 'better ogranisation structure', 'more competition – increased efficiency', 'appropriate legal framework – more transparency', etc. We discuss below: what was the condition of India financial system at the pre-liberalisation period? What measures have been taken to liberalize it? What are the steps yet to be taken to develop a market oriented system?

Table 2.5.2: Indian financial sector reform: Present Status

Follow up to the major Recommendations with progress to date and future reform areas

Status before July 1991	Status mid 2003	Areas of future reform
Banking Sector		
1. Reserve and liquidity requirements :- Government pre-empted large portion of bank reserves through cash reserve ratio (CRR) and statutory liquidity ratio (SLR) : CRR of 25% and SLR of 38.5% of deposits.	Government pre-emptions CRR lowered to 4.50% and SLR to 25%	Phase out SLR and reduce CRR to level of international standard.
High monetization of government debt.	Monetization has been reduced?	Phase out monetization with further fiscal consolidation and development of government debt market.
2. Interest rate controls : Bank lending rate fixed according to loan, size and sector specific categories (loan over Rs. 200000 had an interest rate floor.	Interest rate structure simplified. Interest rate floor on loans over Rs. 200000 eliminated.	Eliminate remaining controls.
3. Directed credit : At least 40% of bank credit channeled to the priority sectors at concessional interest rates	Directed credit and interest rate subsidy element reduced	Reduction in the size of the directed credit

Status before July 1991	Status mid 2003	Areas of future reform
4. Strengthening Banking System : Inadequate norms relating income recognition, provisioning, capital adequacy NPA recognition, disclosure, and quality classification and	Regulation on asset classification, income recognition, provisioning and capital adequacy strengthened. Recapitalization of banks actively pursued along with rationalization of their management. Board for financial supervision set up to strengthen the supervision of banks and non-bank financial intermediaries.	Prudential regulation and financial super vision should be further strengthened especially those governing risk exposure. Conflict of interest, moral hazard, transparency and concentration of loans.
5. Deregulation of Entry Barriers and Branching Restrictions : Entries as well as branching of India banks were regulated by RBI through the Banking Regulation fact of 1949 and licensing policy.	Restriction foreign banks and private banks to open branches relax stage by state. Restrictions on opening of new bank branches as will as closing of unviable our relaxed.	To infuse greater competition, more liberal approach needed regarding private and foreign participation subject to fulfilling of basic conditions. Abolish remaining government interventions on asset liability and labour management.
6. Restructuring of Public Sector Banks : **(a) Recapitalization :** Government injected Rs. 40 billion for recapitalization of 19 nationalized banks.	To promote privatization, the balance sheet of there banks were cleaned up gradually government has engaged in additional recapitalization programme by spending in the range of 0.02% to 0.07% of GDP each year during this period.	Balance sheet clean up process should continue so as to enable them to make public issue of equity.
(b) Debt Recovery, writing off Bad debts and Setting up at Asset Reconstruction Companies : There were no special Tribunals to speed up the process of recovery or any asset reconstruction company which could take over portion of bad and doubt feel debts from banks.	Debt recovery tribunals were up in different cities with respect to writing off exercises of bad debt, some public sector banks reduced their capital against losses. Three asset reconstruction companies, viz, Asset reconstruction company (India) Ltd. Asset care Enterprise (ACE) ltd and ASERC (India) Ltd have been registered.	Operation of debt recovery tribunals and asset reconstruction companies are yet to start with full force.
(c) Reduction of Operational Cost and Manpower Planning : Burdened with high operational cost due to high wage bill and other controllable operating expenditure. Appointment of chairman of R.B.I. in bank board.	Voluntary retirement scheme introduced order to cut operational cost in public sectors banks.	Lack of will and systematic visions over this strategy fail to bring desired results special attention needed to make it successful.

Status before July 1991	Status mid 2003	Areas of future reform
(d) Merger and Acquisition : Merger between banks, development financial intuitions were proposed in the committee report to rescue the weak banks.	Steps initiated but progress is slow. From time to time several banks merged with one another to overcome crisis.	Process should not be crises driven rather to prevent future crises.
Money Market **7. Number of Participants.** Only banks and financial institutions were participants in call money market.	Over the years, number of participants increased including several primary dealer (PDs) banks, financial institutions following the recommendation of Narasimham committee.	Free play among the different market players. With minimum possible restrictions.
8. Number of Instruments. Money market mutual (MMMFs) funds did not exist. Commercial deposits (CDs) issued only by commercial banks. Prior permission of RBI required for commercial paper (CPs)	MMMFs in operation, improved terms for issuance of CDs and CPs T-Bills of varying maturities introduced.	Increasing the eligible instruments for repo to cover all dated securities and T-Bills.
9. Government Security Market : **Increasing the depth and liquidity.** Absence of internal debt management policy controlled interest rate on dated securities, no specialized institutional structure.	Active debt management policy in operation, Auction systems introduced. Abolition of system of AD-Hoc T-Bills. Securities Trading corporation of India (STCI) in operation. System of PDS in place.	Retail trading of govt. securities to be introduced, active participation of foreign institutional investors (FII) in the Govt. security and T-Bill market is encouraged with more flexibility.
10. Capital Market Issuing as well as pricing of the securities strictly controlled by controller of capital issues (CCI), Thus hampering development and efficiency of securities market.	Firms are free to issue and price securities. Controller of capital issues abolished. Securities Exchange Board of India (SEBI) set up to protect investors and enhance transparency of capital market. Indian firms in good standing allowed issuing securities abroad. FIIs allowed invest in the domestic capital market. National Stock exchange of India began operation on a screen based trading system. Private sector mutual funds were set up. Over the counter market was set up.	Further measure to liberalize, open and deepen the capital market. In particular, improve payment, settlement and clearing system, as well as legal and regulatory infrastructure.

For major events on development in the financial sector of India see Appendix - V

We sketch out broadly some features of the ongoing reform process of India – largest democracy of the world so that the lessons can benefit other nations that aspire to develop a civil society.

- There is a broad consensus among major political parties that the process of financial liberalisation is 'irreversible'. In absence of this sort of commitment, adequate rules and regulations to control market cannot be framed or enforced properly.
- Government is committed to get simple things done, for instance, those that are not financially or politically demanding done first.
- Reform that may initially adversely affect the interest of the people or powerful lobby directly, to be persuaded slowly.
- Speed of reforms of different areas may vary but that is to be coordinated properly.
- It's a continuous process; feelings of 'they' not 'us' will be benefited out of it, to be minimized.

More than a decade has already been expired after the regime shift. We believe now, it is the appropriate time for stock taking – what we aspired and what we achieved during the days? This is the subject matter of next chapter.

Appendices

Appendix 1. The Effects of Financial Liberalization Components on Savings

Financial liberalization Component	Direct effect	Effect on savings
Interest rate liberalization	Higher deposit interest rates (price-effect)	Substitution and income effects, total effect on saving ambiguous
Reduction of reserve requirements	More resources available for lending (quantity-effect) may also lead to a price-effect.	Net effect depends on other policy instruments (monetary policy: open market operations).
Reduction of directed credit to priority sectors	Reallocation within the business sector (high return projects) and more lending to households.	Ambiguous effect on corporate saving and reduction of household saving.
Bank ownership (more privatization)	May be associated with an increase in lending to households.	Reduction of household saving.
Pro-competition policies	More risk taking in lending and reduction of bank spreads. Wider range of saving opportunities	Ambiguous effect on saving.
Prudential regulation	Offset or moderate risk taking promoted through competition. May also reduce upward pressure on deposit rates.	Ambiguous effect on saving.
Development of securities markets	Wider and more flexible range of saving instruments.	Can increase saving, the effect may take time to be effective.
International financial liberalization	Flows of foreign funds and increase in rates of returns as barriers to capital outflow are removed.	Ambiguous effect on saving because banks can also borrow from abroad to sustain lending to local firms and households.

This table is constructed from Bandiera et al. (2000) **Does Financial reform raise or reduce saving?** (The Review of Economics and Statistics, May 2000, 82(2): 239-263.

Appendix II. Summary of assumptions in Classical, Neoclassical / Monetarist, Keynesian and post Keynesian Economic Theory.

Assumptions	Classical	Neoclassical	Keynes	Post Keynesian (Cambridge)
1. Explanation of unemployment	Wage equals subsistence wage. $K<K_f$	Natural rate of unemployment	Insufficient effective demand	Mismatch between sector producing different types of goods
2. Allocation of resources governed by	Equalisation of profit rates, not by marginal equivalence.	Perfect ness of market	Uncertainly external effects	Imperfect competition uncertainty, increasing return to scale, complementarities
3. Savings	S out of p = 1 S out of w = 1 S out of R = ?	One function optimization overtime	O<mpc<1	Classical assumption
4. Savings investment causation	Savings determine investment	Do	Investment determines savings	Do
5. Real financial linkage	Exogenous money supply, classical dichotomy	Exogenous money supply determines absolute price level, inflation is a monetary phenomenon	Money market determines the rate of interest $M^d = L(r) = MS$	Money supply adapts to demand (Kaldor), inflation is real phenomenon (cost push, sectoral mismatches, distributive struggle)
6. Role of state	State has no prominent function	State has a limited social role (creation of laws and institutions conducive to the operation of market forces)	State has an obligation to secure full employment	State has a role in generating fuller employment and securing balanced growth

Appendix III. Major Studies Considering the Interest Responsiveness of Savings and Other Related Issues: A Summary of Results

Sl	Reference	Sample	Major Findings	Policy Implications
A. The hypothesis of a positive interest responsiveness of savings				
1	Fry (1978)	7 Asian LDCs	A 10% increase of the real rate of interest would raise the ratio of savings to GNP by 1.4-2.1%	Financial conditions (i.e., higher real rate of interest) do matter to over all savings performance.
2	Yusuf and Peters (1984)	Korea	A 10% increase of the real rate of interest on time deposits would raise gross national savings (GNS) by 11.57% and gross domestic savings (GDS) by 5.03%	Financial conditions do matter to aggregate savings performance
3	Leite & Makonnen (1986)	6 African LDCs	The coefficient of real rates of interest is positive but significantly different from zero only in specifications that exclude the variable change in income.	Financial conditions do matter to overall private savings but the direct effect is apparently small.
4	Gupta (1984)	12 Asian LDCs	The hypothesis is rejected in all but four cases (Pakistan, the Philippines, Sri Lanka, and Thailand)	Financial conditions do not seem to matter to aggregate savings performance on a wide spread basis.
5	Gupta (1984)	12 Asian LDCs	All of the coefficients significantly different from zero have the expected signs but, in quantitative terms, interest rates have a significant effect in only four countries (India, Korea, Pakistan and Thailand) For eight LDCs, real and financial savings are substitutes).	Financial conditions do seem to matter to the composition of savings in favour of the financial savings, thus a financial liberalisation policy may contribute to a more accelerated growth.
6	Ocampo et.al. (1985)	Colombia	The effect of the real rate of interest has a very low statistical significance though it is positive.	Financial conditions do not seem to matter to aggregate savings performance.
7	Giovannini (1985)	7 Asian LDCs	The coefficient of the real rate of interest is still positive but quantitatively less significant.	The hypothesis cannot be rejected but influential observations are important.
8	Giovannini (1985)	7 Asian LDCs	The coefficient of the real rates of interest is negative but insignificant.	There does exist evidence not supporting the hypothesis.
9	Giovannini (1985)	18 Asian LDCs	The coefficients of the real rate of interest are significantly different from zero in the estimates with the instrumental variables method only in the cases of Jamaica, Burma, India, Greece, and Turkey.	The hypothesis of a high intertemporal substitutability in consumption saving decisions is rejected.
10	Warman and Thirlwall (1994)	Mexico (1960-90)	Financial saving is found to be positively related to real interest rates but total saving is invariant, while investment is positively related to the supply of credit but the net effect of interest rate on investment is negative.	Favourable effect of financial liberalisation and higher interest rates on economic growth must come through raising the productivity of investment.
11	Ziorklui S.Q. (2001)	Ghana (1980-95)	Finds evidence of positive effect of real interest rate on financial savings.	Real interest rate do matter to overall financial savings.
12	Bandiera et.al. (2000)	8 LDCs	Finds no evidence of positive effect of real interest rate on savings.	Most of cases, there does exists evidences not supporting the liberalisation hypothesis.
13	Agrawal. P (2004)	4 East Asian	Investment rate went up with the real interest rate upto 9 percent.	Higher interest rates leads to higher investment and growth. The optimum level of rate of interest is closest to McKinnon's 'restrained financial liberalisation' policy.
14	Rakshit Mihir (2005)	India	Abundance of saving accompanied by under utilization of resources.	Need for an adequate demand management policy.
15	Marjit Sugata (2005)	India	Policy direction regarding increasing rate of investment and growth.	Need for private public participation to achieve rapid growth.

Sl	Reference	Sample	Major Findings	Policy Implications
B. The complementarity hypothesis				
16	Fry (1978)	10 Asian LDCs	A significantly negative coefficient between money and the savings ratio is found	Money and capital are not complementary assets, thus the hypothesis does not hold.
17	Gupta (1984)	25 Asian and Latin American LDC's	Complementarity hypothesis is rejected for the full sample but not for all of the groups. If total effects are taken, the hypothesis is confirmed for low-inflation LDCs and rejected for middle-inflation LDCs; the hypothesis is accepted whether total or direct effects are taken for high-inflation LDCs only.	There is no wide spread support to the complementarity hypothesis which, in addition, seems to be sensitive to the inflationary environtment.
18	Laumas. P.S. (1990)	India (1954-55 to 1974-75)	Real rate of interest has a positive effect on the rate of capital formation and on the rate of economic growth.	Market determined interest rates are most likely to be positive and hence can provide greater incentives to save and invest, resulting in more efficient allocation of resources.
19	Thorton John (1990)	India (1964-84)	Higher average money balances appears to have been held for domestically financed investment.	The result indicated strong support for the McKinnon hypothesis in the both demand for money and the saving function.
C. The financial deepening hypothesis				
20	Fry (1978)	10 Asian LDCs	A substitutional relationship between money and other financial assets is found.	Money is not the only financial repository of domestic savings, thus Shaw's debt intermediation view does hold.
21	Gupta (1984)	25 Asian and Latin American LDC's	The demand for financial assets in general seems to be highly inelastic with respect to changes in nominal rates of interest; in some cases, the total effect (reduced-form estimates) can lead to quite different quantitative results from those suggested by the direct effect (structural-form estimates). The effects of expected rate of inflation may qualitatively vary depending on whether the direct or the total effect is taken but all elasticities are quite small.	The demand for financial assets is relatively inelastic to variation in real rates of interest, thus financial liberalisation policies can encourage financial deepening to a limited extent.
22	Gelbard and Leite (1999)	38 Sub Saharan African countries (1987, 1997)	Positive relation with important variables with the economic development	Development in the financial sector do helps in deepening in the economy.
23	Lawrence P. and I. Longjam (2003)	38 OECD countries (1960-1999)	Four important indicators of financial development has a bearing on economic development and growth.	Development in the financial sector leads to economic growth.
D. The cost of financial repression				
24	Fry (1978)	7 Asian LDCs	Around half a percentage point in economic growth is foregone for every one percentage point by which the real rate of interest is set below its equilibrium level	Financial liberalisation is a favourable device to enhance economic growth.
25	Gupta (1984)	Dominican Republic, El Salvador, Guatemala, Panama, the Philippines, Sri Lanka, and Venezuela	Time paths traced out by the dynamic historical and the alternative simulations were found to be close to each other.	The direction of the performance of the variables concerned was not significantly affected by financial repression.
26	Giovannini and de Melo (1993)	24 LDCs India (1980-85)	The revenues from financial repression averaged 2.86 percent of GDP per year.	Financial repression has historically played an important role in India's public finances.
27	Kletzer and Kohli (2001)		The revenues fell from an average of 6 per cent of GDP over 1980-1990 to 2.9 percent over 1992-98.	Loss of financial repression as a result of financial liberalization.

Appendix IV. Reports of various committee and working parties established by Government of India, to examine different aspect of the financial sector.

Sl. No.	Committee Chairman	Subject Matter	Year
1	Chakraborty	Working monetary system	1985
2	Patel	Stock Exchange Reform	1985
3	Vaghul	Money Market development	1987
4	Husain	The Agricultural Credit System	1987
5	Hussain	Capital Market Development	1989
6	Rangarajan	Bank Computerization	1989
7	Narasimham	The Financial System (Part- I)	1991
8	Dave	Liberalisation of Mutual Fund industry	1991
9	Pherwani	Establishment of New Stock exchange	1991
10	Shah	Capital Adequacy of Financial Institution	1992
11	Nandkarni	Trading in PSU Bonds and units of Mutual Funds	1992
12	Janakuraman	Irregularities in the Security transaction of Banks and Financial institutions	1992
13	Nayak	Financing small scale industries	1992
14	Malhotra	Insurance sector	1994
15	Tarapore	Capital Account liberalisation	1997
16	Narasimham	The Financial system (part – II)	1998
17	Reddy	Working group on money supply	1998
18	Narasimham	Transparency in monetary & Financial policies	2000
19	Reddy	The system of Administered interest rates	2001
20	Ganguly	Flow of credit to small scale sector	2004
21	Vyas	Flow of credit of agriculture and related activities from the banking system.	2004
22	Rakesh Mohan	Administered interest rates and rationalization of saving instruments.	2004

Appendix V. Select Chronology on Development in the Indian Financial Sector

Year	Current
1969	Nationalization of 14 largest commercial banks
1973	Nationalization of General insurance company FERA was promulgated which provide on opportunity to develop India equity market.
1975	Establishment of Regional Rural banks.
1979	Priority sector lending requirement 33 years. (effective date)
1980	Second round of nationalization of commercial banks.
1982	Establishment of NABARD, First credit rating agency.
1985	Priority sector lending requirement raised to 40%
1990	Establishment of SIDBI
1991	Blueprint for first generation reform.
1992	Introduction of prudential norms, statutory power to SEBI to promote cap. Market develop, Incorporation of NSE as the first screen based and transparent trading platform for investors. Introduction of auction system for govt. sureties.
1993	Introduction of depositories.
1994	Board for Financial supervision (BFS) in autonomous body under the aegis of RBI, established; New guidelines for entry of new Pvt. Sector banks announced; wholesale; debt market operation initiated by NSE
1995	New Pvt. Banks commenced operation, entry limitation on foreign banks cased, resulting increased competition.
1996	Establishment of institute for development and Research in Banking Technology Depositories let was passed which allowed for holding of securities in demat.
1996	Shortfalls in the priority sector by the domestic commercial banks to be contributed to Rural Infrastructure development and (RIDF) established with NABARD.
1997	Promulgation of RBI (Amendment) for intensified regulation of deposit-taking NBFCs. Termination of automatic monetization of govt. deficit. Bank rate activated as a signaling rate, SLR reduced to legal minimum.
1997	Priority sector lending eased by allowing free rates on loans except for loan under Rs. 2,00,000
1999	Insurance Regulation and Development Act passed allowing new player to under take insurance business. Detailed guidelines on risk management in bank announced. Standing committee an International Financial Standards and codes set up to evolve sound stands, based on recognized best practices.
1998	Second round reform on the banking sector outlined by the Narasimham Committee.
2000	Guideline issued regarding interest rate swaps and forward rate agreement to enable financial entities to hedge interest rate risk, Liquidity Adjustment facility introduced. FEMA replacing FERA, introduced.
2001	Established of credit information Bureau of Indian Ltd.
2002	Revised guidelines announced for entry of new Pvt. banks Enactment of SARFAESI Act. Establishment of first universal bank in the country. Clearing corporation of India because operational. Consolidated guidelines issued on FDI in banking.
2003	Central listing Authority was constituted.
2003-2004	A scheme of special Electronic Fund Transfer (SEFT) was introduced for the electronic transfer of funds for retail transactions.

Source RBI Feb. 2004

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Chapter – III

Financial Liberalisation : An Overview of Money Market Activities

3.1 Introduction

The Indian Money market is a huge and significant part of the nation's financial system in which thousands of crores of rupees are traded every working day. The Money market, as its very name suggests, that a market where money is bought and sold. The basic characteristic of this market is; it is not a single market but a collection of markets for several different instruments. There is a close interrelationship that links all the distinct instruments. The nature of this market is wholesale---the trades are big, and participants are almost always dealing for some big institutions. The main players involved being government, banks, financial institutions and business firms. Individual plays an insignificant role in this market. There is a very small possibility of defaulting on commitment. The money market is restricted to instruments of the short term nature i.e. limited to time-periods of less than one year. Almost every economic unit is it in a financial institution, a business, a corporation or a governmental body, has a recurring problem of liquidity management, mainly because the timing of the expenditure rarely synchronized with that of the receipts. The most important function of the money market is to bridge this gap. A supplier of funds to the market can be virtually anyone with a temporary access of the funds. The users of the fund in the money market are manifold too. It is used by banks to meet their temporary reserve requirement, by business firms for the purchase and shipment of inventories, by government to bridge the gap between tax receipts and its expenditure.

Although one of the greatest achievements of our financial system over the last forty years is the decline in the relative importance of the money lenders and the increase of the institutional sources of money. The average turnover of the market in India is Rs. 15000 crores daily. While this is about 3 percent of the total money supply in the Indian economy and 6 percent of the total funds that commercial banks have lent out to the system. This figure implies that 1.5 percent of the total annual GDP of India gets traded in just one day. So money market is a very important segment in the financial system and there is a very thin line distinguishing the money market from some of the other integral parts of the financial system.

Thus the section aims to analyze the impact of financial liberalisation on growth and efficiency of money market. We considered call, Treasury bills (T-Bill), Commercial Papers (CPs) and Certificate of Deposits (CDs) market that are the major instruments of money market in

exclusion of others so as to make the analysis manageable. Very specifically, an attempt will be made to analyze the following issues:

i) Does experience of money market support the claim of neo-liberalists that financial liberalisation promotes in 'widening and deepening' of market?

ii) What is the nature of relationship exists between different segments of the market?

iii) What are the development implications of the functioning of the market in the post liberalisation period?

3.2 The Call Money Market

Call money market of our country accounts for nearly two-thirds of the total money market turnover. It is the most visible market where day-to-day surplus funds are traded. In India it is an interbank market and interbank tradings accounts for more than 80 percent of the total transactions. More than 50 percent of funds coming from State Bank of India; other than banks, major players include the discount and finance house of India (DFHI), unit trust of India (UTI), and life insurance corporation of India (LICI) etc. Most banks however, including the foreign banks are lenders. The need to borrow arises, either to meet seasonal stringencies or the statutory liquidity reserve (SLR) or cash reserve ratio (CRR) requirements.

In the post reform period, particularly after 1997-98, a number of policy initiatives added vigour to this market. Aggressive participation of primary dealers supported by refinancing facility of Reserve bank of India (RBI), increased role of corporate sector and mutual funds helped in the stupendous growth of the market. (See Fig. 3.2.1)

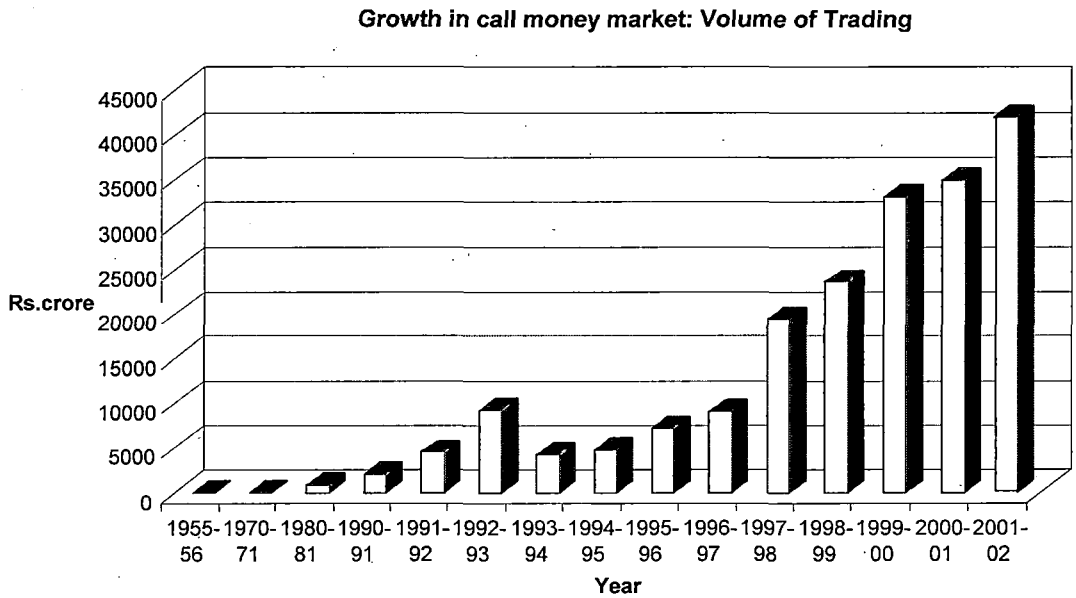

Fig. 3.2.1

Despite of all these developments, it still lacks the virtues of a competitive market. The interest rate of the market is highly volatile because everybody in this market reacts in the same way, whenever, there is need to borrow, the entire market seems to be chasing money. Similarly when one has fund to lend every one seems to lending.

In effect this high rise in interest followed by a fall is often described in the theory of financial economics as mean-reversing phenomenon. Since banks have to meet their reserve requirements at the end of every fortnight, it indulges in heavy borrowing during these days and we witness a big spur in the call money rate. Thus money market interest rate of our country, alike many others developed economies shows a calendar day effect associated with the maintenance period of reserve requirements. The issues that follow: Is there any spill over effect of gradual reduction in reserve requirements on gyration of call money rate of our country? Do the mutual funds and corporate sectors that can lend money in this market were successful to exploit calendar day effect? Banks under constant pressure to show profit after liberalisation, it is alleged, often indulge in arbitrage operation – borrowing from call market and investing in forex market to earn quick money, what is the implication of this operation on call rate? In sum, an in-depth evaluation of the current behaviour of otherwise less discussed call market is essential for an impassionate evaluation of the impact of regime shift on this market.

Movements of CRR and Call Rates (1991-2003)

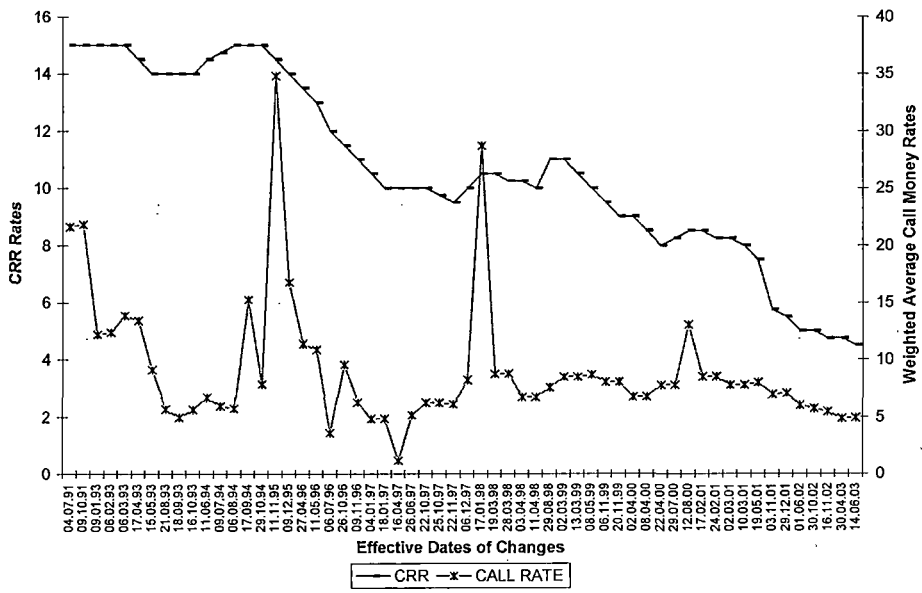

Fig 3.2.2

Fig.3.2.2 shows, effective dates of changes in cash reserve ratio (CRR) and changes in the weighted average call money rates. Gradual reduction of CRR from 15 percent to 4.5 percent during the period 1991 to 2003 is followed by a fall in call rate from nearly 21.15 percent to 5.86 percent. There were few 'spike' movements in the call rate during the year 1994, 1998 and 2001. This was due to arbitrage operation by the banking sector in the foreign exchange market (See Money Market Review, Various issues of E.P.W.).

Figure 3.2.2 depicts a positive co-movement between the Cash Reserve Ratio (CRR) and call rate. We have tried to capture in the regression equation the extent of relationship between these two variables. We have considered only the change in CRR on various effective dates running from 1991-2003 and call rates on that particular date are regressed to measure the extent of relationship between these two. CRR is considered as independent variable because the change in the CRR is generally tuned by government to adjust the credit policy. As part of reserve requirement, changes in CRR can influence the borrowing and lending pattern in the call market – so the call rate.

Call Rates=1.321+0.734 CRR $\quad \overline{R^2}$ =0.16 $\quad$ DW 1.46

T (0.532) (3.294)* $\quad$ F=10.84*

Our regression results also support the claim of positive and significant nexus between the two. Co-efficient value of CRR showing the variability of almost 74 percent with a significant t and F value at 5% level of significance.

A series of conclusion may be drawn from our descriptive analysis and the findings from regression equation.

(a) When banks operation explain nearly 74% percent of movement in call rate and if demand and supply of bank money in the call market show a patterned behaviour centering around reported friday, then the episode may be considered as calendar day effect.

(b) Gradual reduction of CRR offering more stability to call money market – the condition that satisfies the promise of liberalist. Lower the reserve requirement lesser is the volatility of money market. (See Brunner and Lown 1993).

(c) Excepting bank, other participants play a marginal role in the call market.

(d) Lower the required reserve (CRR), lesser will be borrowing of banks from call market that with all probabilities influence both borrowing and lending rate of banks.

3.3 Certificate of Deposits and Commercial Papers

For the purpose of this writing we are intentionally ignoring any detailed discussions on commercial papers (CP) and certificate of deposits (CD) market that is often being treated as the

best solution to meet surpluses and deficit of cash position of corporations – which may be treated as one of the basic functions of any efficient financial system. These markets are free from informational problem as the issuers of these instruments are highly rated institutions. But it lacks the basic quality of a competitive market because buyers and sellers are limited in number. These marketable credit instruments as substitute of bank finance are less popular in Japan and Western Europe but play an important role in United States. Gradual popularity of CPs and CDs in India is an encouraging development for an economy that has promised to develop a competitive money market. While CP is issued by corporation with high credit rating, CD by banks and financial institutions. The market has an intricate relationship with call market and banking business that deserves attention for an understanding how different segments of our financial system gradually becoming more integrated and to explain the reason of shift in demand of these two instruments.

Table 3.3.1: Average Amount Outstanding

(Rs. crores)

Year	CP	CD
1992-93	na	8361
1993-94	2333	8443
1994-95	2755	6261
1995-96	439	14271
1996-97	349	14991
1997-98	2793	9405
1998-99	4585	6506
1999-00	7014	1861
2000-01	6751	1155
2001-02	7927	965
2002-03	8268	1224

Source: Handbook of Statistics on Indian Economy, RBI, 2003.

At the time of excess liquidity, banks can park funds towards CP at interest rates usually higher than call rates, similarly, when banks face tight liquidity condition; it finds CD as an appropriate instrument to raise funds. Conversely, when liquidity condition eased, as it is in the current time, CDs outstanding amongst would decline.

3.4 Government Debt Market

Call and Treasury bill markets are highly integrated, as almost same set of handful of big investors with nearly identical investment behaviour operate in this market. Government Treasury Bills (T-Bills) are virtually one of the most important money market instruments around the world. It is short term money market instruments issued by Reserve Bank of India (RBI) on behalf of the government to meet the challenges of short term liquidity and to bridge the gap of

temporary budget deficit. Financial economists prefer to treat yield on T-bill as risk free rate of return that influences the interest rate structure of an economy. Unlike most other money market instruments, it enjoys the support of an active secondary market and is used by a variety of participants ranging from commercial banks, corporations, mutual funds etc. Introduction of Repurchase Agreement (Repos) added further liquidity in this market.

There are three categories of treasury bills, they are 'on-tap', 'ad-hoc' and 'auctioned'. The on-tap T-bills can be bought from the RBI at any time at an interest yield of 4.663 percent; but with the deregulation of interest rates, they have lost much of their relevance. The ad-hoc T-bills are created to replenish the government cash balances with the RBI. They have a maturity period of 91 days, but can be redeemed prior to the final maturity date.

The auctioned T-Bills, first introduced in 1992 April, are the most active of the three categories. In effect they are the only one among three categories which can actually be called an active money market instruments. At present, RBI issues T-Bills of two maturities, 91 days and 364 days. While the 364 days T-Bills were introduced through a fortnightly auction basis in April 1992, the weekly auctions of the 91 days T-Bills were started in January, 1993. Typical auction size for the former ranges from Rs.300crs to Rs.1000crs, whereas for the latter, the range is Rs.100crs to Rs.500crs. In the auction, the RBI receives the bids from various participants and issues the bills subject to some cut off limit.

Table3.4.2: Average Amount of Outstanding in Treasury Bill Market (Rs. Crores)

Year	14 - T Bill	91 -T Bill	182 – T Bill	364 – T Bill
1992-93	-	950	1050	6478
1993-94	-	3043	-	8994
1994-95	-	3052	-	11970
1995-96	-	5513	-	3184
1996-97	-	6433	-	5190
1997-98	2425	3588	-	15567
1998-99	625	4132	-	8242
1999-00	631	2025	1167	13483
2000-01	396	1800	1300	13417
2001-02	50	4842	433	18244
2002-03	-	6617	-	23282

Source: Handbook of Statistics on Indian Economy, RBI, 2003.

Apart from T-Bill, dependence of government on long term dated securities has also increased tremendously to meet the challenge of stupendous budget deficit.[1] Infact, there is a buoyancy of the fixed income securities market in India despite almost a secular decline in its yield rate.

Table3.4.3: Range of Yield and Turnover of Government Securities

Year	Range of Yield by Maturity (percent)			Turnover in Government Securities Market (Rs. billion)		
	Under 5 yrs	5-10 yrs.	Over 10 yrs	Outstanding	Repos	Total
1995-96	13.25 – 13.73	13.25-14.00	-	176	928	1272
1996-97	13.40 – 13.72	13.55-13.85	-	599	254	1229
1997-98	10.85-12.14	11.15-13.05	-	1185	208	1857
1998-99	11.40-11.68	11.10-12.25	12.25-12.60	1431	381	2272
1999-00	-	10.73-11.99	10.77-12.45	4053	757	5393
2000-01	9.47-10.95	9.88-11.69	10.47-11.70	5091	1091	6981
2001-02	-	6.98-9.81	7.18-11.00	11385	3359	14744
2002-03	-	6.65-8.14	6.84-8.62	13781	5635	19416
2003-04	4.69	4.62-5.73	5.18-6.35	16852	9547	26399

Source: Reserve Bank of India, October 2004

Fiscal Deficit, Yield and Issues on Macroeconomic Management

Market related interest rate of government bond is good in the sense that it reminds government – borrowing is now costlier, use it efficiently, discipline fiscal policy or face the music. But what is important in our economy – mounting budget deficit, nearly unbearable government borrowing that too at a high cost contributing in greater budget deficit and economy is now truly vulnerable. (Ahluwalia 2002, Acharya 2001, 2002) World Bank on various occasions has expressed concern over excessive accumulation of debt even when it is domestic debt and called for urgent measure to tackle these problems. However, experience of other developing countries (See Fig. 3.4.3) that relies on free economy is no exception, debt and interest on debt growing at a faster rate than does the real economy, and if it continues to grow unchecked it may undeniably adversely affect long run growth path of poor countries. (See Pinto and Zahir 2004) Thus following many other scholars we believe prudent management of public finance is prerequisite for the success of financial liberalisation (McKinnon 1989, World Bank 1989).

[1] Reduction in custom, excise and other duties along with award of fifth pay commission or simply "cost of liberalisation" contributed immensely in the rise in budget deficit.

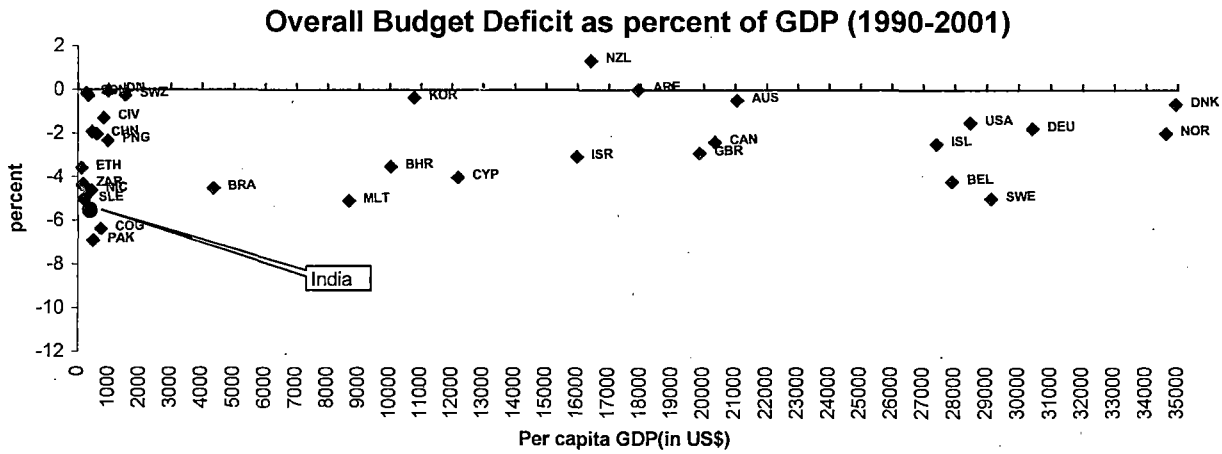

Fig. 3.4.3

Control of fiscal deficit is possible either by suppressing interest rate or by increasing tax, or by the efficient use of borrowed funds so that real growth rate of GDP remains equal to or more than the cost of government borrowing. What happens if cost of government borrowing is higher than economic growth rate? Under this unfortunate circumstance a continuing unpaid deficit implies that the debt must grow to become an infinite multiple of GDP.

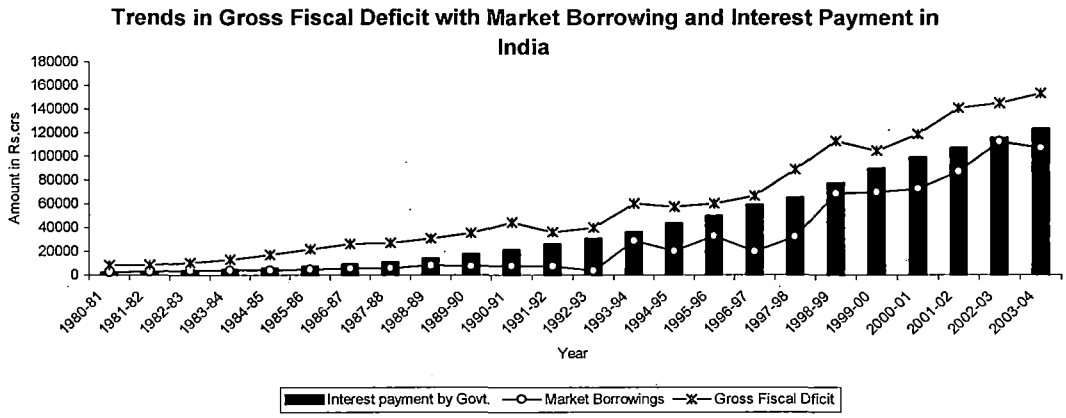

Fig 3.4.4

Even a cursory glance of the yield on government security would reveal some typical feature that apparently does not satisfy the basic foundation of financial economics. In an efficient market framework, information about any determinants of interest rate should be quickly incorporated into observed rates. Thus when information about the size of the deficit released, a relatively quick impact on the interest rate can be anticipated. This is simply because that an increase in current or future deficit leads to an increase in yields on government security in

anticipation of higher level of deficit financing. In a rational expectation theory, an announcement of higher future deficits will lead to a current increase in interest rates in anticipation of future financing (Reinhart and Sack 2000). The government can accumulate ever growing debt through perpetual deficit financing has a mathematical parallel in the proposition that prices can rise continually in a self fulfilling speculative bubble.

In India, booming fiscal deficit, rising market borrowing (See Fig. 3.4.4) but dramatic fall in yield of government bond (See Fig. 3.4.5) is an interesting feature for study of any serious researchers of development economics. Even if rate of inflation is considered then too this level of interest rate is unexplainable by any theoretical framework.

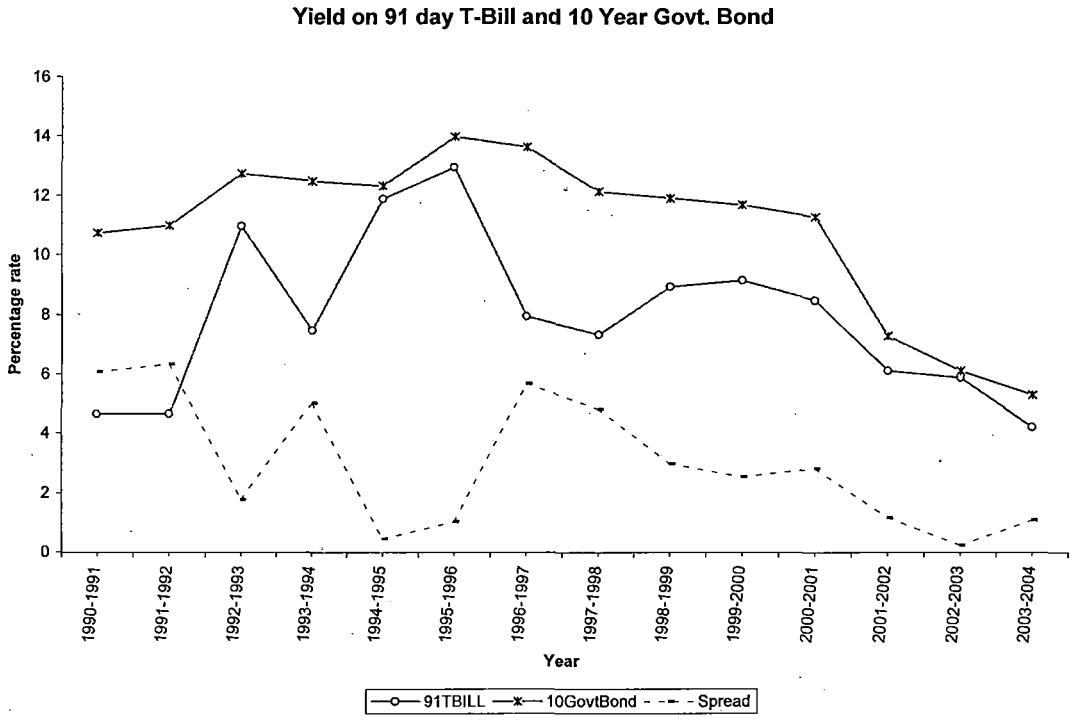

Fig 3.4.5

One plausible explanation of this trend is the failure of rational expectation theory in a market primarily dominated by few big players who are either government owned or controlled entities. Thus banks who own nearly 85 percent of government bond suffering from the problem of excess liquidity (Marjit 2005), with no options available for diversification of portfolio, compelled to invest in government bond irrespective of interest rate otherwise funds will remain idle. At this stage, however, we are ignoring the impact of the present trend on bank efficiency, though it is undeniably an important issue for the development of a well functioning financial system.

Another interesting characteristic of government securities (See graph 3.4.5) is nearly indistinguishable return between long and short term bond. Theory of finance recommends investors require compensation for the risk of longer maturity periods and the present trend suggests that little premium being available for long waiting period.

Table 3.4.4: Weighted Average Yield and Maturity of Outstanding Stock (Maturity in Years and Yield in Percent)

Year	Weighted Average Yield	Weighted Average Maturity	Weighted Average Maturity of Outstanding Stock
1995-96	13.75	5.7	NA
1996-97	13.69	5.5	NA
1997-98	12.01	6.6	6.5
1998-99	11.86	7.7	6.3
1999-00	11.77	12.6	7.1
2000-01	10.95	10.6	7.5
2001-02	9.44	14.26	8.2
2002-03	7.34	13.83	8.86
2003-04	5.74	14.94	9.78

Source: Reserve Bank of India, October 2004.
NA: Not available

At the bottom, this anomaly in interest rate allowing our government to borrow at a lower weighted average cost, particularly when long term borrowing dominant over short term.

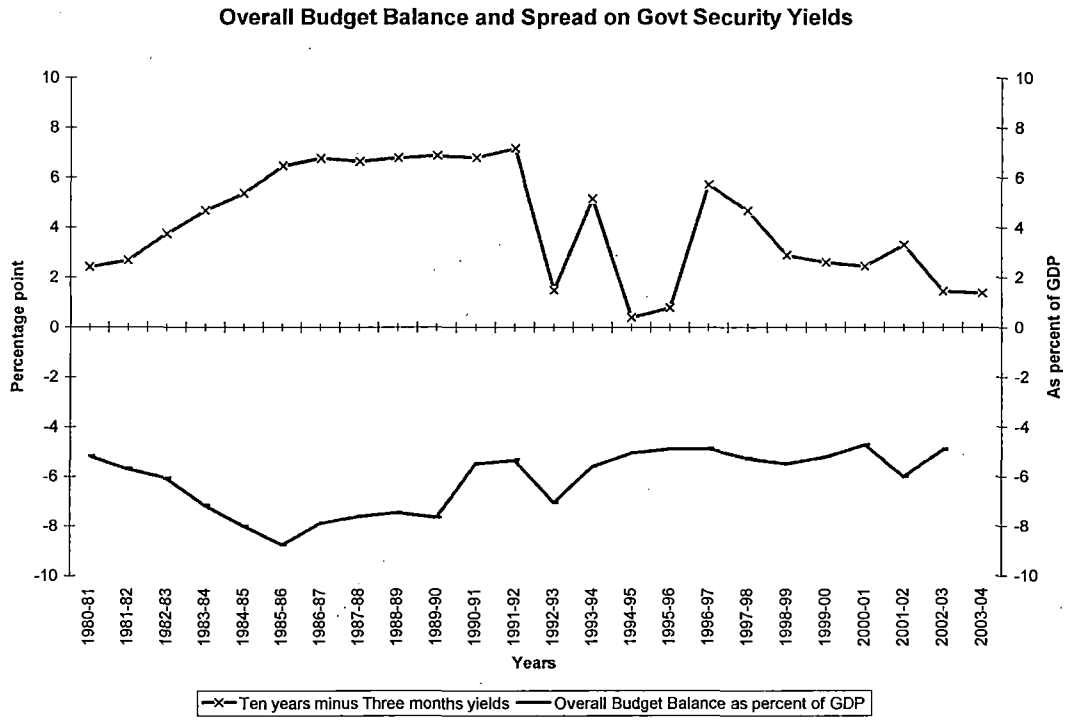

Fig 3.4.6

Fig. 3.4.6. shows in controlled regime (1980-91) with deterioration of fiscal balance, as usual, yield curve also steepened reasonably – the trend that satisfies theoretical framework explaining relationship between these two variables. Experiences of developed economy such as U.K. and Germany are in consonance with the trend of regulated regime of our country. (See Fig 3.4.7)

General government Budget Balances and Interest Spreads on Government Debt, 1980-2000[a]

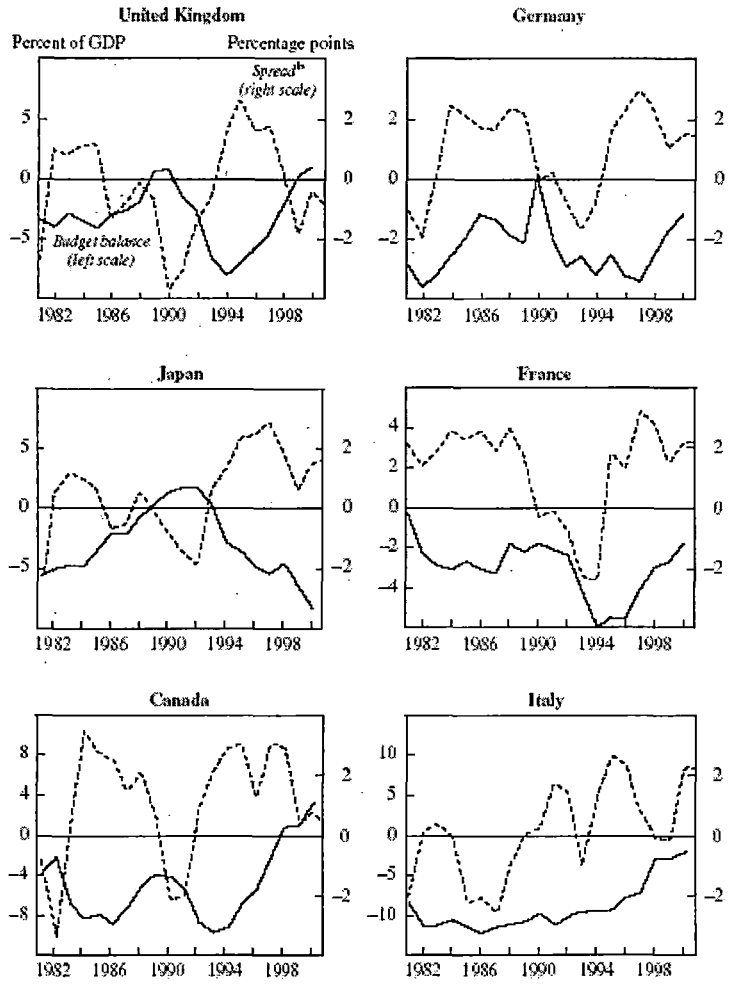

Fig. 3.4.7

Source: Vincent Reinhart and Brian Sack ;(2000) "The Economic Consequences of Disappearing Government Debt." Brookings Papers on Economic Activity, 2:2000.

a. Though the second quarter. Budget data for 2000 are projections.

b. Ten-years yield minus the three-month yields.

Interestingly, yield curve defying the argument "higher the deficit, more is the cost of government borrowings" depicts opposite trend in the post reform period (1991-92 to 2003-04) that is close to the experiences of Italy and France (See Fig. 3.4.7). From these contradictory evidences, we suggest there is no such straight forward relation between deficit and yield on

government securities. Several studies suggest that change in inflation expectation, risk premium, global interest rate, pattern of capital inflows also influence the yield curve. To go beyond this thought provoking theoretical discussions, we prefer to offer some facts to explain this post reform typical phenomenon. From mid 1990s maturity period of debt issued by government has more than doubled from 6.6 years to 14.9 years and spread measured in terms of differences between short term government bond (T-bill) and dated securities nearly vanished. This anomalies in interest rate inspiring government to issue low cost dated securities virtually without paying any premium for long maturity (R.B.I. 2001). The practice facilitating government to borrow at cheaper rate after regime shift.

Indian experience shows (See Table 3.4.5) that a significant part of the pressure of the primary deficit is absorbed by the excess growth over interest rates. However, this rate of absorption varies over time and current experiences are quite discouraging.

Table3.4.5: Decomposition of Debt Accumulation Relative to GDP

Year	Cumulative changes in			Relative impact of cumulative primary deficit	
	Debt-GDP Ratio (b)	Primary deficit – GDP ratio (PD)	Growth and interest rate Differential (g – r)	Increase in Debt – GDP ratio Δ (PD)	Absorption by Growth – Interest differential Δ (g – r)
1970-71 to 1979-80	0.07	26.18	26.12	0.25	99.75
1990-91 to 2002-03	14.67	39.09	24.42	37.53	62.47
1996-97 to 2002-03	19.55	19.77	0.22	101.14	- 1.13
1951-52 to 2002-03	46.21	168.94	122.73	27.82	72.18

Source: Rangarajan and Srivastava (2005).

During the 1970's, as high as 99.75 percent of the impact of the cumulative primary deficit was absorbed by the growth-interest differential leading to a negligible increase in the debt-GDP ratio. But in post reform period (1990 onward) only 62 percent of the cumulative primary deficit was absorbed by growth-interest differentials. Thus the extent of absorption of interest cost after regime shift is lower than controlled regime (99.75 percent) and the long range average (72 percent) running through 1951-52 to 2002-03.Condition deteriorated dramatically due to negative growth interest differential in 2001, 2002 and 2003, which is reflected by a negligible portion of absorption during the period 1996-97 to 2002-03[2] (Rangarajan and Srivastava, 2005).

[2] Growth-interest rate differential and its impact on Debt GDP ratio is also clear from the table no. 3.4.5

At the bottom, in the post reform period, government borrowing to meet budget deficit increased tremendously and both short and long term bond market were active enough to support the trend. But the story behind this debt market buoyancy may frustrate market economists. With limited demand for private investment (Marjit 2005), banks victim of excess liquidity are investing massively in low yielding government securities in excess of reserve requirements. Thus the theory of crowding out of private investment appears irrelevant in the present context.

For public policy it is important to address the following two issues : can government spending help economy to overcome prolong demand deficiency and depress private investment ? (See Rakshit 2004). Can we sustain with this excessive debt burden ? It is difficult to provide any categorical answer of the questions. It will partly depend on – how government dis-savings will act as a catalyst to boost demand, raise household disposable income and savings so that long range growth of GDP will be sufficient to meet cost of borrowings.

Conclusion

Undeniably financial liberalisation contributed in widening and deepening of Indian money market. The market is now much active, more integrated than it was in the repressed regime that satisfies the claim of liberalist. While some developments are obviously encouraging, there are some areas that deserve attention. Some of our observations are:

(a) Denomination constraint does not allow retail investors to participate in the market. Most money market instruments are beyond the rich of retail investors in both primary and secondary market. Market is mostly dominated by banks or other government controlled institutions thus it lacks the flavor of competitive market.

(b) There is a general trend of declining interest rate both in call and government bond market. Call rate from late 1990's gradually stabilized due to massive reduction of CRR. The stabilization of call rates may also be attributed to better fund management of banking and corporate sector.

(c) Functioning of CP and CD market has a close relation with call money market and liquidity condition of banking system. Decline in outstanding CD market turnover partially reflects the excess liquidity of the banking system.

(d) While government borrowing is increasing to support growing budget deficit, aggregate cost of borrowing by government shows a declining trend. However, productive use of borrowed funds is an important issue for better macro-economic management that is at the core of financial liberalisation theory.

Appendix I. Country List

Country Code	Country Name
ARG	Argentina
AUS	Australia
BEL	Belgium
BGD	Bangladesh
BHR	Bahrain
BRA	Brazil
CAN	Canada
CHE	Switzerland
CHL	Chile
CHN	China
CIV	Cote d'Ivoire
COG	Congo.Rep.
CYP	Cyprus
DEU	Germany
DNK	Denmark
ETH	Ethiopia
FIN	Finland
GBR	United Kingdom
GRC	Greece
IDN	Indonesia
IND	India
ISL	Iceland
ISR	Israel
ITA	Italy
KOR	Korea, Rep.
LKA	Sri Lanka
MLT	Malta
NIC	Nicaragua
NLD	Netherlands
NOR	Norway
NPL	Nepal
NZL	New Zealand
PAK	Pakistan
PNG	Papua New Guinea
SWE	Sweden
SWZ	Swaziland
THA	Thailand
USA	United States
ZAR	Congo, Dem. Rep.

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Chapter – IV

Interest Rate, Savings and Investment Paradigms, Puzzles and Policies

4.1 Introduction

Financial liberalisation theorists argued that raising interest rates (to market clearing level) increases the amount people are willing to hold as financial assets by decreasing the holding of non-financial assets such as cash, gold, commodities etc. Thereby, the domestic financial system is able to extend more loans to the investors and hence the equilibrium rate of investment increases. Thus the concept known as theory of financial liberalisation opposes Keynesian approach of development. (See McKinnon, 1973; Shaw, 1973; Agrawal, 2004)

Present chapter attempts to study relevance of financial liberalisation theory for a credit constrained, low income economy like India. More specifically we will deal with the following issues: What is the pattern of interest rate movement in our country in the post liberalisation period? How much movement of interest rate is integrated with global interest rate? Does interest rate alone can motivate people to save? If not, what are the other factors that influence savings behaviour of people but ignored by liberalist? Does the concept that savings will be automatically converted into investment is defensible in Indian situation? All these issues are important because it will help us to develop "our own" financial system capable to satisfy "our own" problem.

4.2 A Study of Pattern of Movement of Interest Rates

Movement of interest rate structure of our country both in the pre and post liberalisation period reveals some interesting features, while some attest the claim of liberalisation theory, others disapprove it.

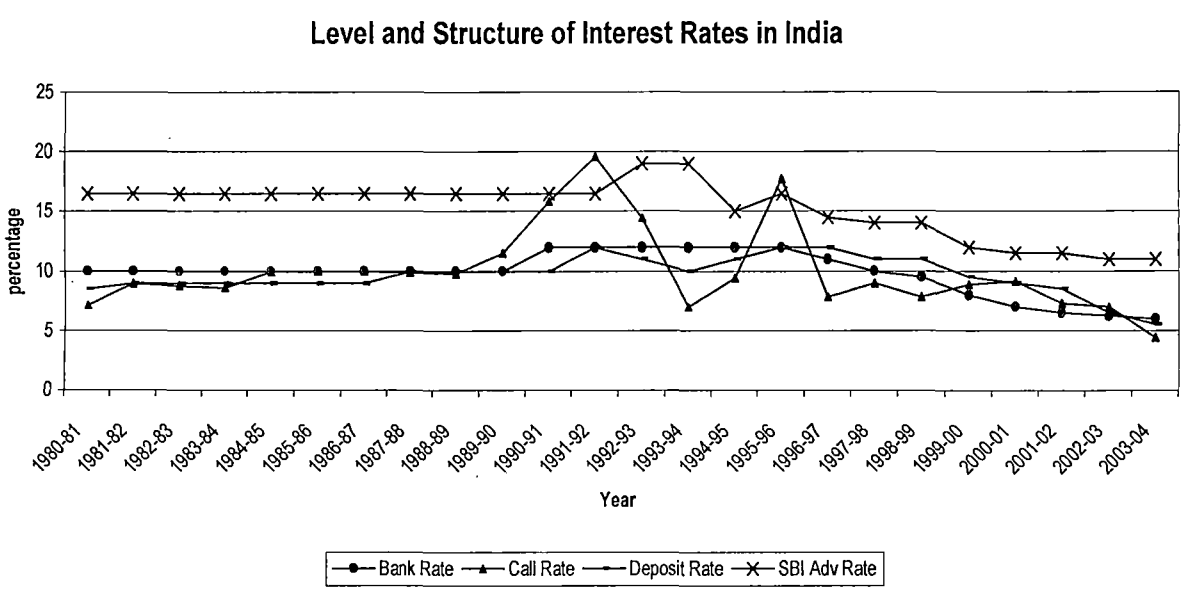

Fig 4.2.1

A close scrutiny of Fig. 4.2.1 clearly reveals that there are clearly three phases in the movement of interest rate; (1) In the control regime (1980-90) all the interest rates were in effect stagnant. (2) A period of awakening (1991-97) while liberalised interest rate particularly call rate started moving vociferously. Ignoring dictum of theorists (McKinnon, 1991; Kapur, 1976), first stabilize then liberalize, our policy makers decided to initiate the process of financial liberalisation amidst chaotic macroeconomic condition – inflation was sky rocketing, forex reserve reached its nadir, growth in industrial production was virtually nil. However, upward movement of interest rate right after liberalisation is common to all less developed economy (Clarke 1996) that results in fluctuation of investment and income too. (3) Just when initial exuberance was over, all interest rates show a downward trend (1998-2002). Most probably decline in the rate of inflation both wholesale price index and consumer price index has a positive impact on inflationary expectations that resulted fall in the interest rate.

If anything called "equilibrium interest rate" (Clarke, 1996) exists, does the present trend anywhere close to this rate? Credit like all other goods, has supply and demand. The price of credit – the interest rate at which a loan is granted – must therefore be high enough for some individuals to postponed their consumption and low enough for individuals who take out loans to be willing to repay, given their current consumption needs or investment opportunity. An idealized market ensures that deposit interest rates high enough to ensure that voluntary savings becomes increasingly significant in financing the loan portfolio. In new-classical framework markets are self equilibrating; interest rate balances savings and investment at a rate that is often

described as equilibrium interest rate. What are the experiences of India is the subject matter of our discussion that follows.

Fig 4.2.2 shows that real deposit rate over one year maturity was declining and most of the period it was zero or negative. The average real deposit rate for the period 1990-91 to 1995-96 was - 0.3 per cent where as the average rate from 1996-97 to 2001-02 it was 1.9 per cent. High deposit rates lead to higher savings; it diverts funds from non productive to productive assets, once savings is forthcoming investment is assumed to increase automatically (McKinnon, 1973, Shaw, 1973).

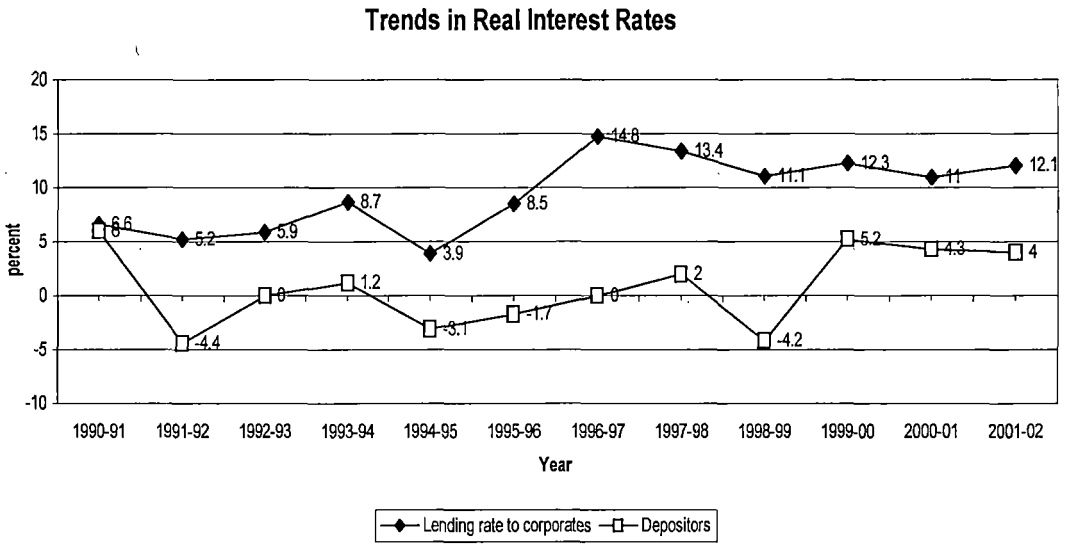

Fig 4.2.2

If all these claims of neo-classical theorists are correct then the current trend of real deposit rate is surely discouraging while risk free government securities of short maturity offers nearly 2.5 per interest in real terms the current interest on deposit is ridiculously inadequate to compensate investors for immediate postponement of consumption and inflationary expectation. Agrawal (2004) as a rule of thumb suggested that real interest rate up to 6 per cent though not absolutely safe but may be acceptable. But post liberalisation interest rate (on deposit) was no where close to 6 per cent.

We are not attempting to undermine the need for imposing ceiling on deposit rate, policy which is currently followed by the government. In absence of which, banks with little capital would bid up deposit rates to attract depositors as a way to fund loans to risky borrowers at the expense of worthier, safer ventures. Such practices would eventually lead to bankruptcy and a

collapse of the banking system. Admitting all these relevant arguments, still we believe interest on deposit even after liberalisation is repressed.

However, Warman and Thirlwall (1994) argued in another context, a fall in deposit rate will simply induce people to invest in substitute financial assets, so long effect of this switching process offset one another; the effect on total savings will be negligible.

Some authors (Clarke, 1996) argued that there is a strong case for maintaining slightly positive real deposit rates and sufficient regulation of the banking system to ensure portfolio diversity and lending rates consistent with those deposit rates and a normal rate of profit for banking sector.

Curiously, lending rate belying the hopes of liberalisation theorists gradually increased instead of declining so as to equate supply and demand for loanable fund. Average spread between real lending and deposit rate was 6.8 percent (1990-91 to 1995-96) that further increased to 10.6 percent during 1996-97 to 2001-02. This high spread is not in consonance with claims of neo-liberalist that regime shift leads to reduction of cost of funds. (Fry, 1978).

Such a wide spread, further implies that loan market is not efficient in the standard economic sense of pareto-efficiency. It refers to a situation where both borrower and lender must be at least equally well off with the trade that would inspire them to participate in the market voluntarily (Besley, 1994). It is a radical proposition. Applicability of the essence of pareto-optimum distribution in financial market is neither possible nor desirable. Both Clarke (1996) and Agrawal (2004) maintained that banks to be allowed to enjoy some 'normal profit' so that it can even sustain in a competitive environment. Though concept of 'normal profit' suggested by authors is not clear but roughly 8 per cent spread by any definition can not be treated as 'normal'. 'Repressed deposit rate' and specifically nearly "unchained lending rate" has some major policy implications. Can this present trend be described in the framework of 'spill over' effect of 'nasty' earlier regime that produced 'no yielding high bad loans' : high cost of bank borrowing of earlier period with rising inflation that increased average cost of bank borrowing. All these arguments have some merit and it may be reasonably assumed that with the passage of time, some of these adverse effects will gradually vanish. But it is equally true, scope of earning monopoly profit (See Appendix-I) still exists even in the present 'competitive' economy[1] and our banks are not that much efficient as it is often acclaimed. Still it requires some protection in any form to show profit. (See Appendix-II)

[1] Share of five largest banks in terms of deposits and assets are 41 and 44 percent respectively, which is very high in comparison with developed economy like U.K. and USA. However, in some developed and developing economy such as France, Japan, Brazil and Chile concentration ratio is much higher than India.

There are enormous implications of high spread (between borrowing and lending rates). It is contributing in high firms cost, given mark up pricing, this leads to a rise in prices. The rise in prices reduce real wages, aggregate demand and hence capacity utilization. Since demand for industry loan declines, banks channel the fund for consumption and speculative investment which increases the risk of bank portfolio. (See Report on Trend and Progress of Indian Banking 2003-04)

Integration of various segments of financial market is reflected in the movement of the term structure of the interest rate, forward premia and behaviour of asset prices. Financial market integration gets momentum when funds can move freely from one market to another wiping out arbitrage opportunities. The basic line of argument is, interest rate of important money market instruments should move together with a reference rate. Correlation is a simple technique that may be used to measure the nature of relationship that exists among different interest rates (Cole *et. al.* 1995).

Table 4.2.1: Cross Correlation among Interest Rates (1993-2004)

	CMR	TB91	TB364	CDS	CPS	DRT	LRT	FR3
CMR	1.00							
TB91	0.85	1.00						
TB364	0.69	0.94	1.00					
CDS	0.64	0.78	0.79	1.00				
CPS	0.74	0.89	0.89	0.95	1.00			
DRT	0.63	0.82	0.90	0.92	0.94	1.00		
LRT	0.73	0.82	0.87	0.84	0.90	0.91	1.00	
FRP3	0.61	0.74	0.68	0.85	0.86	0.75	0.72	1.00

DRT = Deposit rates, LRT = Lending rates, FR3 = 3 month forward premier, CMR = Call money rate, TB = Treasury Bill, CP = Commercial Paper, CD = Certificate of Deposit.

Table 4.2.1 is self explanatory. It clearly reveals, Indian money market, as assumed by theorists is now more integrated. Yield on T-bill (91 and 364 day) and that of other interest rates are significantly correlated. Bank deposit rate as expected is highly correlated with CP and CD rate. This is welcome development, in the sense that interest rate structure of Indian money market is gradually integrating which is an indication of market maturity

In an open economy, it may be reasonably assumed that domestic interest rate would be influenced by both country specific and world related factors. But the relative importance of this

two may vary depending on country related situation (Jamil Tahir 1997). Trend of global interest rates of last decades reveal some fascinating features that are worthy for further studies. The average inflation rate declined significantly in several countries during the second half of the decade. The average money market rate and the government securities yield also dropped in real terms in most countries. But prime lending rate of the countries behaved differently which is a unique feature of global money market. (See Rakesh Mohan 2004) An excellent theoretical framework developed by Gibson and Tsakalotos (1994) offers some insight explaining the mechanism contributing in convergence of world equilibrium interest rate. To what extent Indian money market has integrated with the rest of the world? Has the pace of integration quickened since the beginning of economic reforms in the early 1990's?

Table 4.2.2: Real and Exchange Rate Adjusted Interest Rates (percent per annum)

Year	RDR	RLR	Exchange rate adjusted		Spread
			RDR	RLR	
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(5-4)*
1980-81	- 7.0	- 1.5	12.6	19.3	6.7
1981-82	0.6	6.6	- 3.0	2.7	5.7
1982-83	5.8	11.1	3.0	8.1	5.1
1983-84	3.2	8.3	3.8	8.9	5.1
1984-85	4.3	9.4	- 3.5	1.3	4.8
1985-86	6.3	11.6	7.9	13.2	5.3
1986-87	4.9	10.1	6.3	11.5	5.2
1987-88	1.7	7.7	8.4	14.8	6.4
1988-89	2.4	8.4	- 1.5	4.3	5.8
1989-90	2.4	8.4	- 4.3	1.3	5.6
1990-91	0.7	5.7	3.0	8.1	5.1
1991-92	- 0.6	2.4	- 17.2	- 14.6	- 2.6
1992-93	0.9	8.1	- 11.4	- 5.0	- 6.4
1993-94	1.5	9.8	7.5	16.3	8.8
1994-95	- 1.3	2.2	10.9	14.9	4.0
1995-96	4.5	7.8	6.1	9.4	3.3
1996-97	7.8	9.5	6.2	7.9	1.7
1997-98	7.0	9.2	6.7	8.9	2.2
1998-99	4.8	6.7	- 1.9	- 0.2	- 1.7
1999-00	6.8	8.5	7.0	8.7	1.7
2000-01	2.4	4.1	4.5	5.8	1.3
2001-02	4.9	7.6	4.1	6.8	2.7

Source: Report on currency and finance, RBI, 2002.
[RDR = Real Deposit Rate, RLR = Real Lending Rate, adjusted with international benchmark rates LIBOR (London interbank offer rate) – 1 year]

Real interest rate adjusted with international benchmark rates (LIBOR 1 year) of our country also to an extent support the hypothesis of gradual integration. Decline in the spread, after regime shift posits greater integration (See Table 4.2.2) of our market with the rest of the world.

Gradual integration of interest rates among the nation will finally help to achieve "global equilibrium interest rate" as acclaimed by globalists but vigorously challenged by others.

4.3 Interest, Savings and Investment Dilemma

Econometric analysis dealing with interest rate-savings dilemma often yielded conflicting results thus instead of solving problem contributed in further confusion among researchers and policy makers. (Agrawal 2004, 2000, World bank 1989, Diaz – Alejandro 1985). Permanent income model, Life Cycle theory, Multigenerational model and numerous other theories developed by economists to study the savings behaviour of people. All these models primarily emphasize on the issue: why do poor household in low income countries save? How the savings motives differ between people of poor and rich nations? (See Birdsall *et. al.,* 1999). Deaton (1990, 1992) developed a model of the precautionary savings behaviour of credit constraints, low income, and multi-generation households. In consonance with the model of Deaton, Birdsall *et.al* emphasized that growth with equity can results in higher savings rate and faster growth.

All these studies are important and deserve serious attention of researchers in the area; while some of saving motives have a direct relation with the interest rate in case of others the relationship is remote. But the findings of these studies will help us to assess the role of interest rates on savings so as to test the hypothesis of liberalisation theory.

Before proceeding further it becomes imperative to make some distinction between financial saving and total saving – the difference as it appears escaped attention of researchers. Often the two are treated as synonymous, but this is clearly wrong. Financial saving is only one type of saving, and as interest rates are raised, there may simply be a substitution between financial assets and other assets leaving total saving unchanged. Also it is well known that any price change has income effects as well as substitution effects, and if the one offsets the other the effect on total saving will be negligible (Warman and Thirlwall 1994). The argument of Warman and Thirlwall though otherwise appealing but it demands some scrutiny in the perspective of economic growth. Where savings in financial assets stimulate growth, physical assets do not.

Table 4.3.3: Growth Rates of Household Income, Savings and Growth Rate of Banking Deposits.

Period	Household sector (at current price)		SCBs
	Savings in financial asset (%)	Savings in physical asset (%)	Deposits (%)
1991-92	20.06	- 23.90	17.10
1992-93	5.00	20.98	13.90
1993-94	31.00	- 3.36	15.50
1994-95	21.53	19.15	16.30
1995-96	- 14.20	28.80	12.70
1996-97	25.37	- 20.55	17.50
1997-98	3.50	24.71	19.80
1998-99	18.74	16.93	19.70
1999-00	11.33	26.27	16.30
2000-01	6.50	15.75	17.70
2001-02	15.12	8.92	14.30
2002-03	0.04*	13.15	12.40
2003-04	NA	NA	17.50

**Revised estimate*
NA Not Available
Source: Calculated from Handbook of Statistics, RBI.

Our simple descriptive analysis of Table 4.3.3 grossly shows:

(i) After regime shift there is a decline in growth of savings of the household sector in the financial assets.

(ii) It appears that growth of financial savings and savings in physical assets are inversely related.

(iii) Though growth of bank deposits fluctuated during the time period still it constitutes a formidable part of savings in financial assets.

Decline in the growth of savings in financial assets does not satisfy the basic objective of the theory of liberalisation. Precautionary motive inspire people to save in physical assets which are mostly non-productive in nature. Theorists presume that an efficient financial system will continually divert funds from non-productive to productive assets and the post-reform trend so far does not satisfy this claim.

Interestingly, substitution effect has little relevance for bank deposits. Despite negligible real interest rate particularly from the second half of 1990's still bank deposit enjoys maximum confidence of household sectors. In a developing economy, characterized by high inequality of income, insignificant social security, where poor are credit constrained, people at large with small savings capacity overweight risk involved in investment about which Birdsall *et.al.* (1999), theorized. Bank deposit, which these people perceive as less risky appears to them as automatic

choice along with provident fund, pension fund and insurance that would help to immune them from income shocks and unforeseen contingencies.

Flow of household sector's saving to bank hover around 44 to 45 percent, whereas, flows in shares and debentures were 11.9% in 1994-95 that dramatically reached to 1.6% in 2002-03 (See Table 4.3.4). "Switching off" syndrome is much more prominent in shares and debentures. In and outflow of funds from capital market is highly influenced by movement of index – behavioural finance theorists love to describe this sort of behaviour in the framework of 'greed fear phenomenon' (See Olsen, 1996). Every time loss of popularity in shares and debenture was a source of additional gain of provident and pension fund, small saving (claims against government) insurance fund etc.[2]

Table 4.3.4: Household Saving Choices
(As percentage of financial asset)

Percentage distribution over	2002-03	2001-02	1994-95
Deposits	41.5	44.3	45.5
Shares and Debentures	1.6	2.7	11.9
Small Savings (claims on government)	18.6	11.6	9.0
Contractual Saving	29.8	33.5	22.5
B.S.E. Sensex (% change over past year)	- 38	- 22	37.13

Source: R.B.I., Annual Report various years

At the bottom, the question still remains unanswered, why there is a fall in household sectors savings even in a 'free' interest rate regime? Does it imply, though interest rate matter but it cannot solely explain savings behaviour of people? Next section primarily devotes to address all these queries.

4.4 Determinants of Financial Savings by Household Sector

Household sector savings is clearly the mainstay of the saving in India. Currently it accounts for as much as four fifth of the aggregate GDS and a fifth of the GDP. Household savings comprises of saving in the form of financial assets (that is calculated net of accretion to their liabilities) and in the form of physical assets that may take the form of construction, machinery equipment and changes in stocks.

[2] In 2003-04 and till date index moved vertically and again there is an euphoria among investors for shares and debentures. Logically it can be assumed again that there is a shift in the preference of household sector.

The following exercise is a crude first hand approximation of the relationship between interest rate and saving. A full-blown econometric study does require the satisfaction of a few time series properties. Nevertheless, it helps to look at the simple regression. We propose to estimate statistically, the significance of interest rate on household sector savings – to test the hypothesis of McKinnon and Shaw that assumes: growth in the financially repressed economy is constrained by saving; investment opportunities are abound. In a sense, it is a dispassionate attempt to study, how our financial system is functioning after we embodied this theoretical proposition in our policy prescription.

A number of scholars (see Giovannini 1983, 1985 Gupta 1987) used cross section and time series data to study the factors that influence national saving rate, ignoring importance of financial savings. The present study relies on household sectors saving in financial assets as it is the most important sources of fund for the growth of investment. We assume that saving is determined by the rate of return on financial assets. Ideally, a weighted average of the time deposit with different maturity period to be considered (See Laumas 1990). We prefer a rate of interest on time deposit of 12 months simply because information about weighted average not readily available. To derive real rate of interest rate, the current rate of inflation (CPI) is deducted from the nominal interest rate. It has been almost taken as axiomatic that a high positive real interest rate provides incentive to save more by making present consumption more costly than future consumption. However, whether or not savings respond to changes in the rate of interest depends on the relative strength of income and substitution effect. If between the two, the income effect is stronger, an upward movement in interest rates would tend to lower the saving rate rather than raise it. This means that it is necessary to determine empirically whether the substitution effect or the income effect dominates in order to know whether the interest rate would necessarily have a positive impact on the volume of saving.

We considered the yield on Treasury bill as a proxy of base rate that influences all the short term interest rate but not as alternative financial assets that are available for investment of household sectors.

The inflation rate largely influences the demand for money of individuals. Theoretically, it is conveniently assumed that there is an inverse relationship between inflation and household saving. Higher levels of inflation induce economic agent to increase the demand for money in order to maintain their standard of living. Such inflationary environment discourages savings. However the issue is much more complicated than it appears. Thus it drew attention of a large number of researchers. All these studies centre around whether current or expected rate, trend or volatility of inflation influences the saving rate (Laumas 1990). We prefer to ignore above debate, as we considered ex-post real interest rate.

The exchange rate is another determinant of the level of national saving. Theories of open economies suggest that favourable exchange rates lead to capital outflows and thus, a reduction in national savings in a country. In other words, the higher the price of the local currency in relation to the foreign currency, the more economic agent saves and invests locally (Ziorklui 2001).

It is assumed that income has a more decisive influence then the level of interest rate on saving. With the increase in income, the propensity of savers to hold more financial assets increases. However, following Birdsall *et al* (1999), it may be argued that not level of per capita income but income boom of poor with proper distribution only can help to further saving, investment and growth of the economy. Central theme of the advocacies of this theory is not per capita income but distribution of income is more important that influences saving function. Due to non availability of time series data relating to distribution of income, we ignored this variable though importance of this parameter can hardly be ignored for proper analysis of savings function.

With this discussion, we attempt to study: what is the impact of interest rate on financial saving of household sector? Does it support the monetarist view? If not, what other factors contributing in the puzzle? Whether Keynesian approach is more appropriate for a typical less developing economy like us, if yes, whether the monetary adjustment process pursued during the liberalized regime can deliver what it promised?

Thus the regression model is :

$$HHSSFA = \alpha + \beta_1 RDR + \beta_2 TBR - \beta_3 XR - \beta_4 P + \beta_5 GNPTA + \beta_6 D$$

Where HHSSFA = Household sector savings in financial assets.

α	=	Constant term
RDR	=	Real deposit rate
TBR	=	Treasury Bill rate
XR	=	Exchange rate
P	=	Price (inflation rate measured in terms of changes in CPI)
GNPTA	=	Growth in per capita income
D	=	Period dummy, before reform D = O, after reform D = 1

(All the rates are measured in real term)

The study tested a number of hypothesis and research questions that have been raised in the previous sections. Household sector saving in financial assets may be defined as total savings of household sector off physical assets. We use per capita growth of GNP to measure the level of

national income. Inflation rate has been defined or the rate of change in the level of consumer price index over the study period. The deposit rate is the rate offered to resident customers for demand, time or saving deposit of 12 months. The exchange rate is the unit of national currency per dollar. All the data for this study is from 1980 to 2002. Table below shows the regression results of the savings function, the F – statistics reveal the model's good fit at the 5 per cent level of significance.

Table 4.4.5: Regression (OLS) result, period (1980-2002)

Dependent variable HHSSFA

Equation no.	Constant	RDR	TRB	P	XR	GNPTA	Period Dummy	R^2	$\overline{R}^2$	DW	F
1	- 27.64 (1.98)	+ 0.088 (0.99)	+ 0.052 (1.19)	+ 0.15 (2.47)	- 0.038 (1.25)	+ 8.121 (2.150)*	-	78	72	1.63	11.89
2	- 51.97 (2.21)	- 0.258 (0.39)	+ 0.059 (1.36)	+ 0.01 (0.15)	- 0.11 (1.70)	+ 15.05 (2.29)*	+ 0.98 (1.27)	81	73	1.65	10.57
3	- 44.69 (3.16)*		+ 0.051 (1.37)	+ 0.06 (1.33)	- 0.09 (2.45)*	+ 12.96 (3.40)*	+ 0.78 (1.59)	81	75	1.68	13.36
4	- 33.10 (2.61)*		+ 0.076 (2.14)*	+ 0.10 (2.74)*	- 0.05 (1.81)	+ 9.72 (2.89)*		77	72	1.48	14.74
5	- 44.62 (3.20)*				- 0.09 (2.73)*	+ 13.05 (3.49)*	+ 1.08 (2.96)	78	74	1.90	21.61
6	- 8.54 (1.66)					+3.32 (2.48)*	+ 0.28 (1.12)	69	66	1.37	21.30
7	- 13.38 (4.75)*					+ 4.59 (6.39)*		67	65	1.27	40.95

Note: The number shown without parentheses are regression co-efficient, while the numbers in parenthesis are t *statistics. Asterisks suggest the co-efficient are statistically significant at the 5 per cent level of significance.*

Values of R^2, though not very high at all the occasions, but it reasonably explains a moderate percentage of variations in savings in financial assets by household sectors. The regression results based on the co-efficient with several alternative independent variables show poor estimates for the entire period of the study. In equation (1), all the exogenous variables exhibit the correct signs as predicted by theory except inflation rate. In equation (2) and (3), we impose period dummy and drop the deposit rate in equation (3) due to its wrong sign, but even then there is no improvement in the result. While, equation (4) and (5), exhibit greater improvement by parsimony, where estimates are poor but statistically significant at the 5% level of significance. In equation (6) and (7), we report the statistically significant variables of financial savings of household sectors.

Policy implications of these results show that there is no such direct relationship between financial savings by household sector and real interest rate. If something is there, negative or positive, it is very insignificant. In most of the equation inflation rate shows a positive with

insignificant co-efficient value. It may happen if someone more concern to maintain a buffer against further decrease in income in future due to inflationary pressure. So far exchange rate, in most cases result exhibit the correct sign but with a poor value of co-efficient and in a few cases it is statistically significant. Same is the case for period dummy. We introduced the period dummy to explain the impact of reform measures in the financial savings by the household sector. Interestingly, equation (5) shows statistically significant positive impact of reform after 1991 that is reform measures contributed positively towards household sectors savings in financial assets. While in all the cases, we find that an increase in economic growth contribute meaningfully to increase in financial saving. All the equation shows the high value of per capita income co-efficient with statistically significant at 5% level of significance. So far the overall explanation of result is concerned it generally follows the Keynesian approach of development. It is not only a unique case in India, but in most of developing countries characteristics reveal the similar nature of responsiveness of savings (De Melo and Tybout 1985-86, Gongalez Arrieta 1988, Nissanke 1990).

Conclusion

1. After liberalisation, initially family of interest rates moved chaotically, and then it gradually stabilizes after 1998. All interest rates started declining along with the rate of inflation. This fall in rates started before the global interest rates began to decline. However, there is sign of gradual integration of our interest rate with global rates. Still the real interest of our country is comparatively higher than the global rate.
2. High spread between borrowing and lending rates suggest, we failed to achieve the targets of free market economy in terms of "competitiveness", "efficiency", "cost of capital" etc.
3. Interest responsiveness of saving, especially in financial assets are ambiguous. If the similar relationship exists with the investment then the prescription of reformists may not help the process of development or growth through the interest rate mechanism to equilibrate savings and investment.

So with the reform measures, individual countries policies are to be tuned in such a way, which can reduce the inequality of income, increase the purchasing power of the people, and increase the demand of the product leading to fuller capacity utilization, employment as well as reduction in cost of production. This ultimately led to a less developing country towards growth, reducing the mismatch of saving and investment.

Appendix – I. Share of Five Largest Banks

(Per cent to total)

Countries	Deposits	Assets
Brazil	63	54
Chile	62	61
France	70	60
Germany	21	20
India	**41**	**44**
Japan	46	46
Malaysia	57	56
Mexico	80	80
Philippines	46	43
United Kingdom	24	23
United States	29	30

Source: World Bank Database on Regulation and supervision 2003

Appendix – II Important Parameters for Indian Banking Sector

(Percent)

Bank Group	1996-97	2001-02	2002-03
Operating Expenses/Total Assets			
Scheduled Commercial Banks	2.9	2.2	2.2
Public Sector Banks	2.9	2.3	2.3
Old Private Sector Banks	2.5	2.1	2.0
New Private Sector Banks	1.9	1.1	2.0
Foreign Banks	3.0	3.0	2.8
Spread / Total Assets			
Scheduled Commercial Banks	3.2	2.6	2.8
Public Sector Banks	3.2	2.7	2.9
Old Private Sector Banks	2.9	2.4	2.5
New Private Sector Banks	2.9	1.2	1.7
Foreign Banks	4.1	3.2	3.4
Net Profit / Total Assets			
Scheduled Commercial Banks	0.7	0.8	1.0
Public Sector Banks	0.6	0.7	1.0
Old Private Sector Banks	0.9	1.1	1.2
New Private Sector Banks	1.7	0.4	0.9
Foreign Banks	1.2	1.3	1.6

Note: Spread = Interest Income – Interest Expenditure

Source: Reserve Bank of India, various issues

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Chapter – V

Financial Sector Development and Growth : Issues and Options

5.1 Introduction

It appears all variants of reform ideologies are obsessed with the concept of equilibrium interest rate.[1] The rate they believe reflects true scarcity of capital. Incantation of neo-liberalists "rely on market determined equilibrium interest rate" for efficient mobilization and allocation of resources shaped policy decisions of many less developed countries (LDCs). The countries now consider repressed financial system failed to keep its promises – thus its an excess baggage, a dogma that can only be accepted at the cost of slower growth of economy. In sum, what can be recognized is that from early 1970's the demise of Keynesian approach (low interest rates on bank loans and deposits promote investment and growth: Keynes 1936, Jorgenson 1967) was accompanied by a rise in the growth theory what has been termed as financial Liberalisation approach.

Advocacies of this new ideology (McKinnon 1973 and Shaw 1973) along with a large body of researchers (Fry 1978, 1982, Jung 1986, Thorton 1990, King and Levine 1993, Calderon and Liu 2003) dedicated themselves to prove efficiency of free market to maximize economic welfare. Briefly, theory proposes – raising interest rates to market clearing level increases willingness of people to save, thus more loans available to investors, hence equilibrium rate of investment increases. Thus neo-classical theorists dumped many of the conventional wisdom of Keynesian philosophy as obsolete, awfully inadequate to explain the intricate relationship between finance and development.

But the concepts of 'equilibrium interest rate', 'competitive financial system', 'less intervention more efficiency' and examination of other components of transmission mechanism suggested by McKinnon and Shaw delivered contradictory evidences. Both pro and anti liberalisation theorists can usually find enough support to prove their cases. Some of these formidable criticisms finally inspired McKinnon(1989) to revisit the concept and they finally settled for a more pragmatic approach of restrained financial Liberalisation.

All these criticisms, however, do not imply that financial repression does not matter, of course, it does. But we emphasize that there is the need to refurbish and reformulate the neo-

[1] The concept of equilibrium interest rate is ill defined; grossly it may be treated as rate of interest that equilibrates savings and investment in the financial system.

classical approach to accommodate the criticisms made against it, so as to develop a more correct, sensible and enlighten policy capable to support much needed change process of LDCs.

We propose to review the policy of "less intervention and more development" for an economy that is plagued by demand crisis, less than fuller capacity utilization and excess liquidity – ills that are conspicuously prevalent in Indian economy. We refrain from making any detailed analysis of the reasons – interventionists or changed policy environment contributed in the present state of unwarranted economic development. But, would prefer to focus on the theme, if financial system matters for development – does continuation of present policy of financial Liberalisation can help us to treat effectively the ills of Indian economy, if not, are we the victim of 'doctor is the disease' syndrome ? Is it realistic to assume that private initiative coupled with some enlightened state intervention can help to meet more effective the problem of excess liquidity of our country? Is there any scope for public authorities to influence or suspend the operation of market forces to deal efficiently the problems of Macro-economic management? The issue that is now continuously being explored by Rakshit (2005), Marjit (2005) and others.

5.2 Supply and Demand for Funds under Full Capacity Utilisation

Ignoring peripheral aspects of the theory of financial Liberalisation we summarize some essential features of McKinnon – Shaw hypothesis below:

On savings – investment and efficiency:

Shaw (1973) opines that indiscriminate 'distortions of financial prices including interest rates and foreign exchange rates' in the control regime 'has stopped or gravely retarded the development of LDCs'. Thus much discussed alternative development strategy suggested by McKinnon and Shaw asks developing economy to go beyond the policy of 'intervention' and to rely on market to decide interest on savings and investment. Very succinctly, theory of financial liberalisation suggests, market determined higher interest rates – increases incentives to save, invest and raises the average efficiency of investment', hence economic welfare. Theorists also promise market-centric approach with all possibilities usher efficiency and stability of financial system by encouraging competition, risk reduction by diversification etc.

On elasticity of demand :

Second major assumption of neo-classical approach most relevant for present thesis is – growth in financially repressed economy is constrained by savings, investment opportunity is abound (McKinnon 1973, Shaw 1973). This is how liberalist perceive major impediment of LDCs economic development. Thus the theorists obvious conclusion is rise in real interest rate would help to accumulate more savings and demand of money for investment would absorb all the funds

without any scope of credit rationing. The policy suggestion essentially implies 'demand deficiency' does not matter; growth of economy is sub-optimal due to non availability of investible resources.

On compulsory credit allocation:

Third assumption, a direct off shoot of second is, when investment opportunity is plentiful, 'wasteful and inefficient' compulsory credit allocation retard the growth of more 'efficient and rewarding' private investment. Hence compulsory credit allocation has a social cost. It arrests the growth of private sector by shifting resources from risky production input with higher expected return to safe and less risky investment that would affect adversely long term growth of the economy (See Obstfeld, 1994), virtually, economy suffers doubly: misallocation of resource and compulsory reserve induced higher cost of borrowing and increased production cost. In a sense loanable fund theory deflates Keynesian paradigm as detrimental to investment and growth.

Besides efficiency loss, government taxation as neo-structuralist argue, contribute in the development of informal credit market that is free from reserve requirement to satisfy ever increasing money demand (McKinnon, 1973). Presumably, underlying assumption of the theory is – control regime encourages to enjoy monopoly power by imposing numerous restrictions (licensing, import etc.) and allow firms to enjoy high profit regardless of cost. In the competitive economic environment, firms to minimize cost and to meet growing domestic and foreign demand will try to use its capacity to its fullest extent; hence demand for money will increase (Azeez, 1999, Bhagawati and Srinivasan 1975). Reserve requirement, that re-rout the fund from private to government sector will to an extent deprive the economy from enjoying the benefit of this transition process.

For long, all of these assumptions are under close scrutiny of serious researchers, but for the present writing we would prefer to re-examine the relevancy of these assumptions in the framework of the present crisis of Indian economy.

Growth in the financially repressed economy is constrained by saving: investment opportunities abound. Whole concept is elaborated in the diagram shown below.

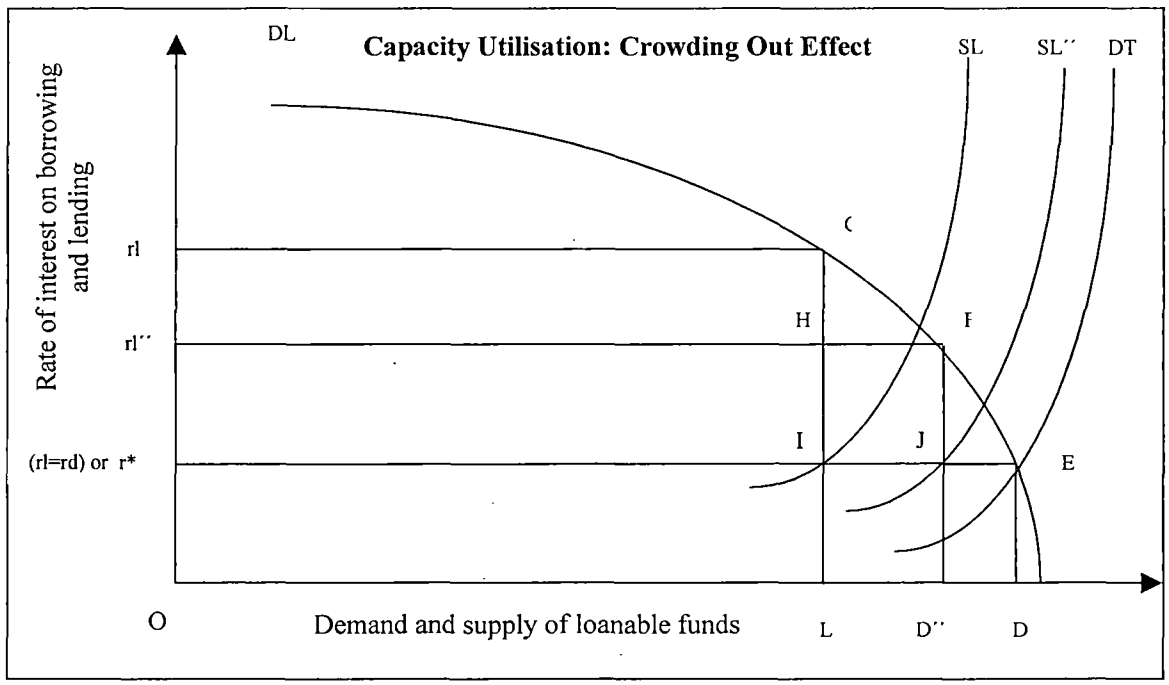

Fig 5.2.1

The diagram shows, how the reduction of SLR and CRR affect the supply of loanable funds to corporate sector, movement of real lending rate and in sum, the concept of much discussed crowding in and crowding out paradigm.

In the above figure downward sloping (DL) curve is demand for loanable fund which is inversely related with real lending rate (rl). While upward sloping demand for time deposit curve (DT) positively related with real deposit rate. In the vertical axis we measure real deposit rate (rd) and real lending rates (rl). Horizontal axis shows the supply and demand for loanable funds with constraints of reserve requirement. We define reserve, as compulsory deposit with central bank along with all sorts of government directed low or negligible interest bearing investment that taxed financial system and which has social cost. At point E, demand for loanable fund equalizes supply, where rd equals to rl and total amount of fund demanded and supplied is OD. It's the situation of 'pareto-efficiency, where interest rate r* is such determine that it is not possible to someone better off without making someone worse off [See Besley 1994]. Equilibrium point is E. Whether this 'ideal' situation is achievable or even desirable to aspire is the subject of an unending debate (McKinnon 1993, Stiglitz 1994, Agrawal 2004) which is beyond the purview of our present study. We are precisely interested to reflect how government taxation large rations out a proportion of potentially high yielding investments (Fry 1982).

Now in the above diagram, supply of loanable fund (SL) is determined after setting aside reserve requirement K, i.e., SL = (1-K) DT. After making provision of LD amount of fund, OL amount of fund is available for corporate sector investment, while demand for fund is OD. As a result some otherwise good investment project would be rationed out and real lending rate will reach to rl as demand for fund exceeds available supply. This is what much discussed "crowding out" effect is. Now a cut in K would result a shift of SL curve right word to SL'', and LD'' amount of extra fund would be available to the market and real lending rate will drop to rl''. In the presence of effective demand for investment LD'' amount of extra fund (which were crowded out earlier) will be available for high yielding, technologically advance risky project.

The theory influences policy decision of many countries and by now reduction of reserve requirement is a global trend and India is also no exception. In some highly developed economy it is zero even (e.g., U.K., Canada, Sweden, Australia, Newzeland etc.).

Table 5.2.1: Reduction of Cash Reserve Ratio and Statutory Liquidity Ratio

Year	CRR %	SLR %	Total
1	*2*	*3*	*(2+3)*
1990-1991	15.00	38.50	53.50
1994-1995	14.00	33.75	47.75
1998-1999	9.00	25.00	34.00
1999-2000	8.50	25.00	33.50
2000-2001	5.50	25.00	30.50
2001-2002	5.00	25.00	30.00
2002-2003	4.50	25.00	29.50
2003-2004	4.50	25.00	29.50

Source: Reserve Bank of India, various issues.

In this extreme situation, central bank follows a somewhat different but questionable monetary policy to control 'inflation – stabilization' objective without creating undue allocative 'distortions' across sector of the economy (Woodford 2003). Under the given situation, profitability as a measure of efficiency and riskiness of bank portfolio may be shown as follows :

$$R_{BP} = \frac{W_1 \overline{R}_P}{\sigma_{RP}} + W_2 \overline{R}_f \ldots\ldots\ldots\ldots (i)$$

Where $\overline{R}_P > \overline{R}_f$ and $\sigma_{RP} > 0$, $\sigma_{Rf} \Rightarrow 0$

Where R_{BP} = Return on bank portfolio, W_1 and W_2 are weight of bank portfolio invested in private sector and government sector respectively. $\overline{R}_p$ = average return for investment in private sector, $\overline{R}_f$ = average return for investment in risk free government securities.

Thus by definition every reduction in reserve requirement would maximize "efficiency" of banking sector measured in terms of profit along with its risks – where $\sigma_{RP} > \sigma_{Rf}$. Undeniably it's a crude measure of risk that ignores covariance of return (interest, non traditional and non-interest income) among the assets of a diversified bank portfolio even more robust studies of Stiroh (2002), Smith and Wood (2002) attest our analysis that diversification of bank portfolio contributes in profitability at the expense of higher risk.

Economists are often accused of not agreeing with others and the debate on various assumptions of neoclassical approach further support the views. But recent studies (Rakshit 2005, Marjit 2005) based on Indian experiences; provoke us to assume that this paradigm failed to keep its promises to meet the demand crisis that the country is facing nearly for a decade. Thus we believe that the assumption of self regulated financial system that the "markets clear so that full employment of resources is attained" (Rangarajan and Srivastava 2005) deserves serious scrutiny based on our past experiences and conceptions about future before ruling out totally Keynesian view "investment or consumption, financed by government borrowing would cause output to expand through a multiplier process" (See Rangarajan and Srivastava 2005). While developing an alternative strategy that centre on growth, the case of stability, equity along with the problem of output gap to be considered with equal importance.

5.3 Excess Capacity: Irrelevance of Crowding out Theory

Is there any relevance of the theory of capital rationing for an economy that is victim of recessionary condition thereby excess capacity since mid 1990s ? In fact, there was an investment boom in Indian industries in mid 1990's, while investment boom raised production capacities substantially, but Uchikawa (2001, 2002), Goldar and Kumari (2003), argue that demand did not rise which led to capacity underutilization. Under the given situation, is it reasonable to assume that reserve or any form of government taxation has a social cost as acclaimed by liberalist? What form of government intervention can rescue banks from the problem of excess liquidity due to inadequate demand of investible resources by private sector, yet help to maintain macro economic

stability? How a public-private partnership can help our economy to successfully dodge 'demand crisis' to achieve the target of full employment?[2]

While discussing above questions, we will attempt to prove that the core policy prescriptions of the votaries of liberalisation theorists — savings as the ultimate determinant of growth is incredibly inadequate to capture the complexities of the current problem of our country. Ignoring peripheral issues, we spell out some macroeconomic features (from mid 90's to 2003) of our country to further our discussions — (a) fall in average GDP from 7.5 to 4.7 percent (b) Decline in overall and public sector investment rates by 2.2 and 1.9 percentage points respectively (c) Fall in current account deficit (excess of domestic investment over domestic savings from 1.4 to – 0.2 percentage points).

Typical Savings – Investment Behaviour of Indian Economy

Responsiveness of savings to interest rate changes in LDCs is an extensively researched topic and at the end empirical evidences fail to suggest any concrete results in favour of this paradigm Deatons (1990, 1992) model of precautionary saving behaviour of credit constrained, low income, multigenerational households virtually deflates the dogma of orthodoxy that "higher the real interest more the savings". Along with it, our own analysis (see earlier chapter) also suggests that not interest but level of income influences savings and rise in income is only feasible by proper employment of unutilized resources. Thus we posit, savings function i.e., 'demand for time deposit' is nearly inelastic to change in interest rate. If the present policy of 'rely on real interest rate' continues savings target of 2010 may not be achievable.

Problems mentioned not escaped attention of policy makers that is evident from repeated assertions that there is a need to bring "potential output closer to full employment level, saving rate of household sector to be achieved 10% by 2010", 'manage public finance to ensure 'stability', debt reduction along with equitable growth' (See Report of Twelfth Finance Commission). But the policy prescriptions largely rely on 'restructuring of interest rate and institutional development bereft of any solid, sensible suggestions on demand management. Thus the suggestion is based on a week theoretical and empirical foundation that assumes causation of growth runs from savings, investment and growth. Presumption that surely defies the reality of an

[2] RBI study along with twelfth finance commission report refers to the prevalence of excess capacity in India since mid 90's. Lack of effective demand and its policy implications have been studied in details in the report of the commission. For a Brilliant review of the said report see M. Rakshit (2005).

economy where excess liquidity and suboptimal utilization of capacity is the main impediment of growth[3]

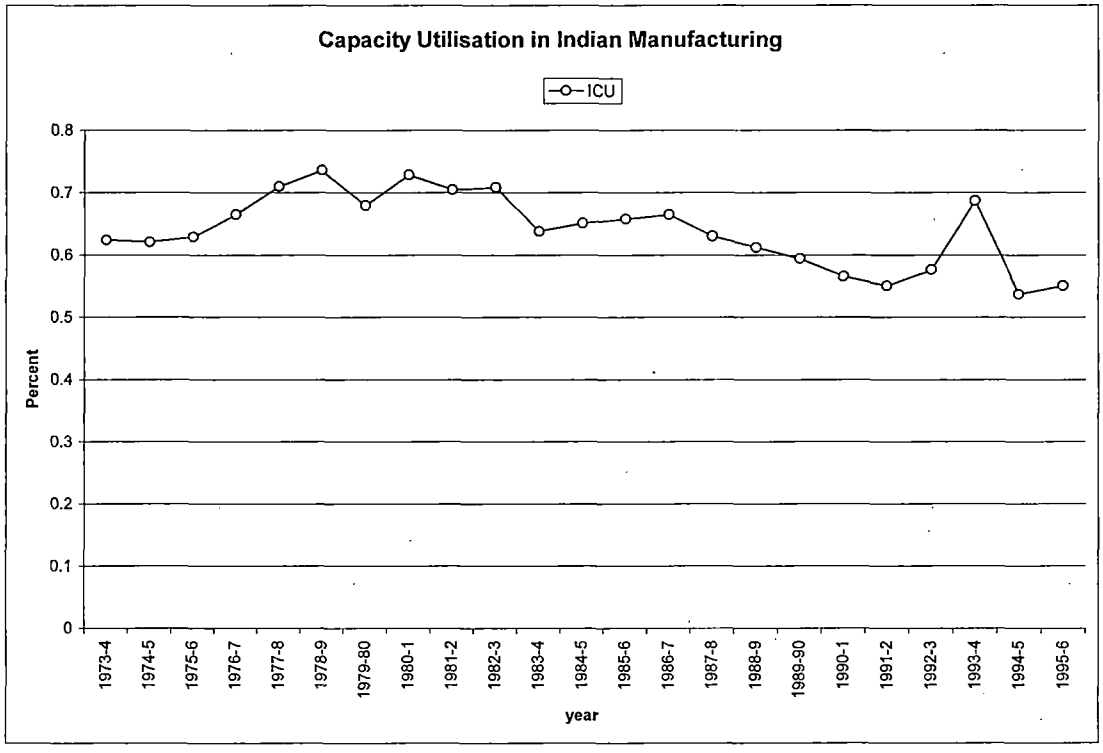

Fig 5.3.2

Widely held orthodox view further suggests – faster the financial assets accumulation lesser the intermediation cost, more efficiency gain due to competition, decrease' in wasteful credit programme will usher in more funds available for private investment at cheaper cost, finally economy will follow a faster growth path. Implicit assumption is, opening up of the economy will contribute in demand bonanza (Azeez, 1999) and increased supply of fund will be immediately absorbed to ensure improved capacity utilization and full employment.

When supply of funds are abound, gap between potential and actual capacity utilization gradually contributing skepticism among economists (Rakshit 2004, 2005, Marjit 2005, Bagchi et.al. 2002), who now believe that the money-supply led growth strategy is indefensible either in theory or in practice.

Thus we propose to calibrate a model of investment function for an economy where the demand for investible resources is less sensitive to lending rate but more responsive to investment

[3] Within this general framework, sector wise variation of capacity utilization and demand for money may of course vary. This theory perfectly describes Indian scenario – where slow down in investment is followed by encouraging growth of IT sector

opportunity.[4] It essentially implies any discussion on investment behaviour that solely rely on interest rate ignoring other macro economic variables such as income, consumption pattern, distribution of income is inherently incomplete. Hence, reformists find it difficult to explain why potential investments do not permit to absorb all savings of the economy.

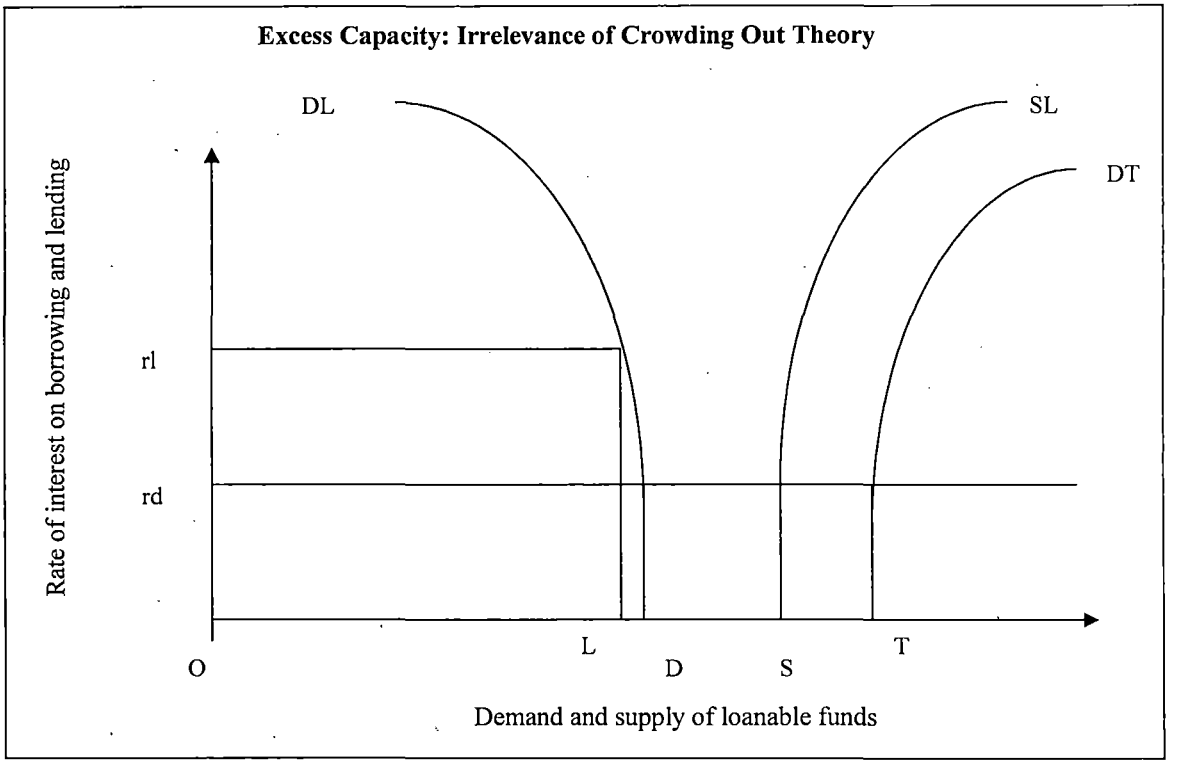

Fig 5.3.3

Thus both savings and investment behaviour in our model deviates widely from the basic assumption of neo-classical theory. At rD level of interest deposit available with the bank is OT level. After setting aside ST amount of fund for reserve, OS amount of funds released for market demand. Assuming money demand is nearly in elastic even at rD level of lending rate (a case of pareto optimal efficiency) demand for loanable fund is OD. It is a case where supply and demand for funds are not self equilibrating as it has been assumed by theorists. Virtually DS amount of fund remains a begging as there is no mechanism through which additional money balances could be used for extending loans to prospective private investors (Rakshit 1994).

The situation is much more complicated than it appears if one takes into cognizance state of competitiveness of Indian banking system.

[4] IDBI sponsored project at the centre for studies in social science shows that interest rate does not explain investment, cash flow does.

Table: 5.3.2: Concentration Indicators, 1993-2000

M-Bank Concentration Ratio	1993	1996	2000
1 bank CR (SBI)	24.7	22.2	24.2
5 bank CR	50.2	47.4	48.1
10 bank CR	65.4	65.5	65.0
Herfindahal index			
All	11.2	7.2	7.0
FB	14.1	11.9	12.2
PV	11.3	5.8	5.2
PSB	15.1	9.8	10.1

Source: Sayuri Shirai,P. Rajasekaran (KEIO SFC journal Vol. 1 No. 1 2002)

Competition the core of neo-classical theory is essentially limited in many LDCs-including India, despite opening up of banking sector for private investment (George R.G.Clarke 2005). Concentration indicators unveils, even after regime shift, there is insignificant change in competitiveness in banking sector in India[5]. Liberalist view competition as a virtue that leads to 'constructive destruction', while critics (See Agrawal 2004) ascribe excessive competition as a vice that causes destruction of civil society which many LDCs faced in recent time. Ignoring the debate, we prefer to note that Indian experiences like many other developing economies challenge the basic tenet of liberalisation theory.

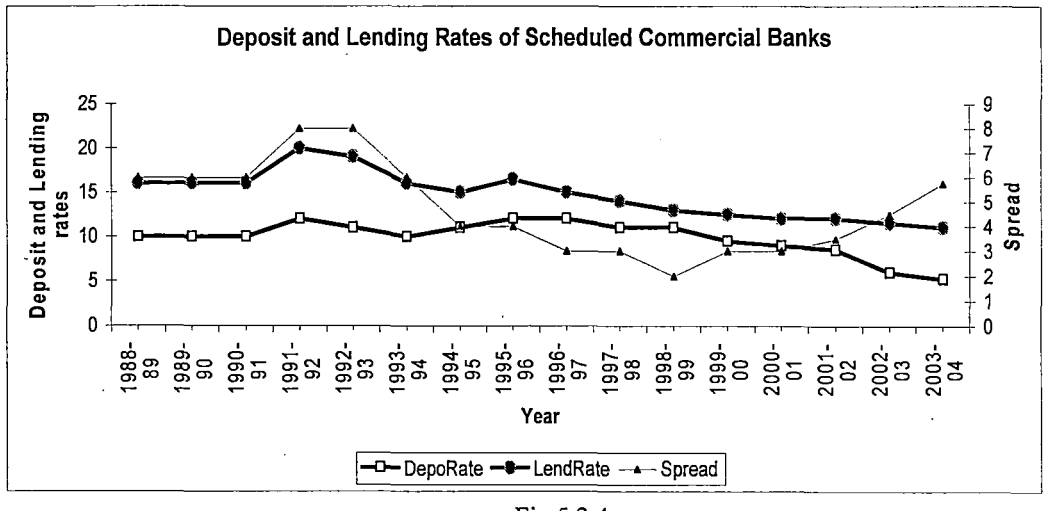

Fig 5.3.4

[5] Bank merger is now constantly enjoying the blessing of our policy makers, who like many other mainstream economists believe that it is desirable on the ground of economies of scale and scope. Though many researchers expressed their reservation about this allege benefit but univocally opined that such measures would surely contribute in market concentration (See Bagchi and Banerjee 2005, Dymski Gary 1999).

Another apparently ridiculous feature of Indian banking is – low demand for funds with high spread. This rising gap particularly from close of 1990's among others implies limited competition that allows banks to enjoy the freedom to regulate interest rate that necessarily may not be market clearing rates (Scholnick 1996). This spread of course includes essence of 'mild financial repression' suggested by Stiglitz (1994) and finally accommodate by McKinnon in his thesis along with prevailing opportunity of squeezing borrower of the specialized market that the bank serves.

When lending rate is rl, demand for loanable funds further declines to OL level, leaving unutilized funds to the extent of LS. Hence bank investment in government security exceeds than what is required and theory of so called "crowding out" of private investment appears as a fallacy. (Marjit 2004).

Table 5.3.3: Credit Deposit Ratio and Investment Deposit Ratio of Scheduled Commercial Banks

Year	C/D Ratio	I/D Ratio (Investment in Govt. Securities)	Total I/D ratio
1	2	3	4
1990-1991	64.70	26.00	39.00
1994-1995	58.90	30.40	38.50
1998-1999	56.80	31.20	35.60
1999-2000	55.30	34.20	37.90
2000-2001	54.80	35.30	38.90
2001-2002	56.00	35.90	48.89
2002-2003	56.70	39.56	51.17
2003-2004	55.80	43.52	50.92

Sources: Economic Survey. RBI bulletin, various years

With limited scope of productive investment a change in the dynamics of bank portfolio becomes inevitable and this reallocation of fund has a spontaneous impact an economic growth. The analysis will help to realize how banks are responding to some unforeseen development in the post liberalisation period to sustain in this unique environment. Hence, risk-return relationship of bank portfolio may be summarized as follows:

$$TR = \left[\frac{W_1 \overline{R}_P}{\sigma_{RP}} + W_2 \overline{R}_f\right] + \frac{\overline{NII}}{\sigma_{NII}} \quad \ldots\ldots\ldots\ldots (ii)$$

Here, TR i.e., totals return of the bank consisting of two parts. First part is interest income (x) on bank portfolio and second part (y) is non-interest income NII; which is mainly fees and commissions income that results from scale and scope of banking system. In the first part, $\overline{R}_p$ is

the average return from private investment (interest on loan, advances and non SLR investment) $\overline{R}_f$ is average return from government securities which is risk free, W_1 and W_2 are their relative weightage. σ_{RP} And σ_{NII} are average risks of private investment and non interest income, where for all cases $\sigma_{Rf} \Rightarrow 0$.

We assume under full employment, $\sigma_{RP} > 0$, $W_1 > W_2$ $R_P > R_f$, $\sigma_{NII} > 0$; In case of under utilization of capacity $W_2 > W_1$, other things remain same. Strictly from economic point of view, theorists claim that $W_1 > W_2$ is a better option than $W_2 > W_1$, the state of solution that is at the core of free market theory but unattainable by many developing economies due to lack of potential investment opportunities. Thus countries have to settle, what liberalists claim as a 'low order policy'.

So called 'low order policy' however ensuring a stable banking system in our country. Nevertheless, a true measurement of risk of bank portfolio must take into account the nature of variability of interest income and non-interest income. Modern portfolio theory suggests not the standard deviation $(\sigma_x + \sigma_y)$, but the covariance (Cov_{xy}) i.e., r_{xy} is the true measure of risk. In the developed economies this two flows generally remain positively correlated (Stiroh 2002) that implies the risk of bank earning is $(\sigma_R > \sigma_x + \sigma_y)$, where as in India, these too stream of income are mostly negatively correlated that satisfies the essential condition of Markowitz theory.

Table 5.3.4: Variability of Interest Income and Non-Interest Income 1994-2004

Particulars	Interest income asset ratio	Non interest income asset-ratio	Corr. Between Int. non interest
SBI Group	6.18	10.90	- 0.25
Nationlised Banks	5.73	10.87	- 0.80
Private Sector Banks	17.99	23.07	- 0.19
Foreign Banks	7.10	46.01	- 0.63
SCBs	6.10	11.29	- 0.75

Source: Report on Trend and Progress of Banking in India, 2003-04.

Furthermore higher investment in government securities contributing in a stable banking though it may not satisfy the condition of higher profitability. Nevertheless, stability helps to

maintain steady inflation, interest rate, employment all the objectives that policy makers aspire to achieve along with a desire for rapid economic growth in terms of productive investment and targeted GDP.

Table 5.3.5: Select Balance Sheet Indicator of SCBs

Year	Share of interest income as percent of total interest income		Stability : Indian Banking	
	On loan/advances	Interest on investment	CRAR Above 10% (as percent of total no. of banks	Percentage of NPA in total advances
1997	57.3	36.2	64	17.84
1998	52.0	41.0	69	16.02
1999	49.0	42.0	72	15.89
2000	48.0	44.5	83	14.02
2001	45.5	44.0	84	12.02
2002	47.2	45.0	89	11.09
2003	48.7	44.4	95	9.14
2004	N.A.	N.A.	97	7.58

Source: RBI Bulletin various years.
* N.A.: Not available

At the bottom, when demand and supply of funds for private investment are not self equilibrating, it may be viewed as a symptomatic of the failure of new-classical theory. Thus Indian policy makers will have to go beyond the cliché that non-availability of adequate funds is the basic of slow growth of our economy. Instead there is a need to change the focus on effective demand management that will finally lead to higher investment and growth. Before acclaiming that 'reserve is wasteful', it has a 'social cost' merit of government spending to be adjudged in the perspective of its ability to improve capacity utilization.

5.4 Excess Capacity : Government Borrowing and Spending

Reducing capital expenditure is an undesirable proposition as it may depress private investment and reduce aggregate demand. However, we refrain from entering in any detailed discussion on whether expansionary or contractionary fiscal measure can bail out our economy from the current crisis. There is a consensus that any policy on generation of revenue, tax reform, and restructuring of custom duty to lower the supply of government debt to create space for the

private sector (See Pinto and Zahir 2004) is a misdirected policy that may adversely affect public consumption and private disposable income (Rakshit 2005). So where there is an output gap, government should go for large scale infrastructural investment to get rid of demand crisis and to encourage private investment (Rangarajan and Srivastava 2005).

For the purpose of present study it is proposed that cost and benefit of government spending in India to be examined in the context of our central theme that shrinking demand prevents firm from using its potentiality to the full extent. All the insights provided by neo-classical theorists that reserve has a social cost looses its significance if central banks make proper use of reserves so as to counter demand deficiency. The issue is especially important when (G) government debt does not directly crowd out private (I) investment.

Change in government debt to GDP ratio can be divided into two parts : one is primary deficit to GDP ratio another is real interest rate paid on government debt and growth rate of real GDP. The change over time of government debt (Δ GD) may be explained by following equation

$$\Delta GD = PD_t + ffd_t + \frac{(r_t - g_t)}{(1 + g_t)} GD_{t-1} \quad \ldots\ldots\ldots\ldots \text{(iii)}$$

Where ΔGD = Change in government debt to GDP i.e., $(GD_t - GD_{t-1})$

PD_t = Primary deficit to GDP

ffd_t = New flow of debt net off disinvestment (privatization receipt) to GDP.

r = Real interest rate on government debt

g = Real growth rate of GDP

t = Time period

Impact of expansionary fiscal policy on inflation, interest rate, savings, investment along with the issue of sustainability to be scrutinized in the perspective of cost of government borrowing (r) and growth of the economy (g). Thus the intricate relationship between r and g is our primary focus of attention.[6]

In the context of full employment, deficit may lead to crowding out of private investment. Thus in many developed economies it is maintained at level zero under normal condition. (See Rangarajan and Srivastava 2005). But in India, where demand for loanable fund is insufficient to absorb the available savings, can we propose that the present stage of budget deficit and excess government pre-emption is essentially bad as argued by neo-classical theorists ?

[6] For a discussion of similar nature see Goyal, 2004.

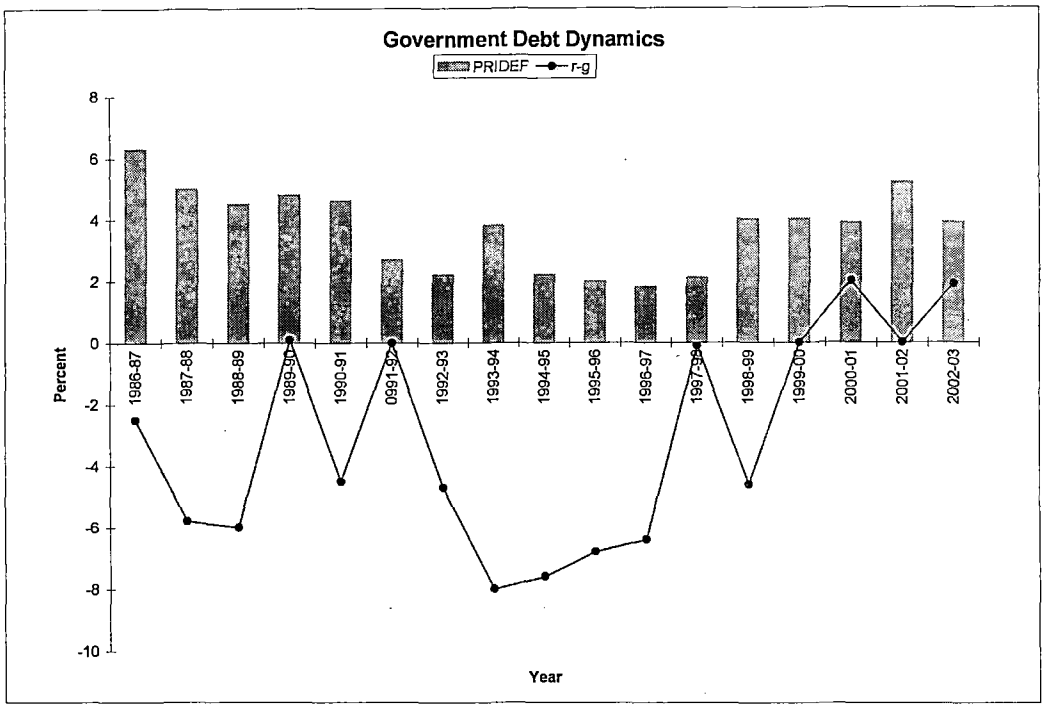

Fig 5.4.5

Implied (r-g) has charted an upward trend after 1994-95 and has been either close to zero or positive since 1999-2000, despite of record low interest rate over the last two decades. This may be attributed to the fall in investment demand in the private corporate sector and rise in volume of debt as liberalisation progressed.

It is of course an unwarranted situation; it cannot or should not be allowed to continue for long. But policy to be developed aiming long term effect and one should not emphasize simply on current experiences as spending is mostly financed by long term debt. It's not any attempt to fain any logic that undermine the importance of increasing marginal productivity of government spending as pointed out by R.B.I. But we affirm that policy of better demand management to be pursued.

Our macro-economic condition is much more stable than many of its counterparts in terms of low inflation, no default, no debt restructuring and high international liquidity (Pinto and Zahir 2004)[7]. In this context, policy decision to be guided by the fact that in the absence of

[7] Financial sector bailout cost has not as far been significant unlike East Asia and some of the transition countries of Central and Eastern Europe. Since 1992-93 relatively small amounts of funds have been spent by our government to assist nationlised banks, Regional rural bank, UTI, IDBI and IFCI.

opportunity of private investment, social marginal productivity of government investment remain higher hence desirable.

We propose, when there is an output gap, the government should go for large scale long term investment programme and when there is an excess demand and inflationary pressure, and government should rely on other contractionary fiscal measure along with monetary squeeze without scaling down its long term investment (Rakshit 2005).

Conclusion

Different national financial systems are made of different institutions and arrangements, with different conceptions of the future and assessment of past experiences and thus operate with different modalities of calculation. This is at the core of our writings; we tried to prescribe some policies most suitable for an economy where not savings but absence of effective demand is seriously arresting the growth of economy. Issue of "repression" and liberalisation of financial system role of the government, fiscal policy all have been analyzed dispassionately simply from the perspective of some typical features of our economy i.e., underutilization of potential capacity, excess liquidity along with a stable macroeconomic condition of our country. All the policy prescriptions that have already been mentioned in the text aim to achieve full employment. Conjoint impact of excess liquidity, problem of demand for private credit, issues related to the intermediation of banking system on development of financial system and its economic implication is the subject matter of our next chapter.

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CHAPTER – VI

Measuring Financial Sector Development

6.1 Introduction

There is growing consensus amongst economists that a sound financial system is quintessential for growth and development of any economy. There has been considerable debate in the literature on whether bank based (German-Japanese model) or market based financial system (Anglo-Saxon model) can help in a better way to achieve the growth objective (see Allen and Gale 2000). Nevertheless it can be safely argued that financial intermediaries and financial markets have a mutually reinforcing role in the overall development of financial system. Well-functioning financial systems helps to mobilize household savings, allocate resources efficiently, diversify risk, induce liquidity, reduce information and transaction cost etc. Experiences of developed countries suggest that their sound financial system contributed immensely in the growth process of those economies.

For policy prescription, we believe, after more than a decade of regime shift, now it is the right time to review dispassionately what we aspired and how much we achieved? Thus the objective of this chapter is to develop a well conceived indicator that will point to both quantitative and qualitative development of Indian financial system alone with its relative status among the fastest growing economy of the world. Present chapter is broadly divided into six sections. In first section, we would like to discuss the theoretical underpinning and empirical evidences suggesting the relationship between finance and development. Problems of measurement of financial development are the subject matter of second section. Third section mainly deals with methodological issues directly related with the construction of index. Extent of development of Indian financial system in absolute terms have been discussed in the forth section. Fifth section deals a comparative analysis of India in relative terms with fast growing economies. We will sum up our discussions in the final section.

6.2 Finance and Development

Research works on finance and development broadly centre around three major issues: (1) Is it realistic to assume that financial system influences the growth process of an economy, if yes (2) What is the nature of relationship between this two? Is it unidirectional, bi directional or there is a reverse causality? (3) How findings of the studies help LDCs with all its typical features to design its own growth strategy. Seminal work of Goldsmith (1969) inspired a number of

researchers to review the interrelationship between finance and development. McKinnon (1973) and Shaw (1973) fleshed out earlier work of Goldsmith to explain the intricate relationship between these two. According to Lynch (1996) the McKinnon and Shaw analysis injected life into the financial development debate and encouraged both theoretical and empirical contributions from young economists, most of whom supported their thesis. Authors like Green Wood and Jovanovic (1990) and King and Levine (1993) developed financial models to explain how financial sector services contribute to economic growth.

However, debate over causal relationship between finance and development is inconclusive. While some studies suggest that causality runs from finance to growth, some argues that there is a bi-directional causality ,while others opine that there is reverse causality[Jung (1986) Demetriades and Hussein (1996), Luintel and Khan (1999), Calderon and Liu (2003) and Favara (2003)].In a related work. (Fritz 1984; Jung 1986; Dee 1986) suggested that the developing countries rather have a supply-leading causality pattern of development than a demand following pattern.

Levine (1997) is absolutely correct when he argues that there are some severe analytical problems while linking financial development to economic performance. Undeniably, some non-financial factors influence functioning of financial system. Changes in technology (Merton 1992), non-financial sector policies like fiscal policies (Bencivenga and Smith 1991), the legal system (La Porta et al 1996), political changes and human resources development, influence financial system thereby growth (Outreville 1999).

True that most studies confirm the existence of a positive nexus between finance and development but counter evidences can hardly be ignored. In an altogether different environment of less developed country Lucas (1990) questioned applicability of the theory "financial development leads to growth" in LDCs. Some studies have gone so far as to challenge the notion of a positive nexus by claiming that banking development in reality may arrest economic growth. Ram (1999), has argued that the result pertaining to the finance-growth nexus are, at best, uncertain and ambiguous. Khan and Senhadji (2003) have similarly demonstrated that certain banking development indicators become statistically insignificant when growth equations are estimated through the use of panels. Interestingly study of Zhang (2003) revealed that there is a significantly – negative connection between banking development and growth. Arestis et al (2001) argued that stock markets and banks are clearly substitutive sources for corporate finance – when a firm issues new equity, its borrowing requirements from the banking system decline. From this view point, it seems that the relationship between bank development and growth may therefore, not be so robust.

In a more recent study, Wachtel (2003) and Driffill (2003) have argued that empirical literature has not yet adequately explained what happens when financial development causes growth. The specific mechanisms that relate financial development to changes in the behaviour of economic agents are still a mystery.

At the end, passion of policy makers for liberalization of financial system for better mobilization and allocation of resources suggest that they have an unshaken believe on the theory "robust financial system leads to rapid growth".

6.3 Measurement Problems

How financial development influences growth? Answer of this query largely depends on robustness of the model used to measure the state of development of financial system. Quantity indicators based on monetary and credit aggregates are the traditional measures of financial development and deepening.[1] These simple measures do not necessarily capture the different structural and institutional details of what is broadly meant by financial development. The financial structure of a country is composed of a variety of markets and financial products, and it is difficult to conceive of a few measures that could adequately capture all relevant aspects of development (Lynch 1996).

The standard quantitative indicators may at times gives a misleading picture of financial development. For instance, although a higher ratio of broad money (M2/GDP) is generally associated with greater financial liquidity and depth, the ratio may decline rather than rise as a financial system develops because people have more alternative to invest in longer term or less liquid financial instruments (Lynch 1996).

From early 90's, there is a relentless effort by economists to develop a more sophisticated, well conceived method to capture all the complexities involved in the measurement problem. Among others, King and Levine (1993, 1999) contribution in this area deserves special attention. A number of researchers subsequently enlarged, revised and enriched the measurement concept of King and Levine. Going beyond the standard quantitative indicators, Gelbard and Leite (1999) used measures of market structure, financial structure, financial products, financial liberalization, institutional environment, financial openness and monetary policy instruments to construct a comprehensive index for thirty eight sub Saharan African countries for 1987 and 1997. Similarly Abiad and Mody (2003) developed an index for a twenty four year period from 1973 to 1996 for thirty five countries.

[1] Goldsmith (1969) used a set of measures, which he called, the financial interrelation ratio' in tracing the close relationship between the financial sector and economic development in a cross country analytical framework over a period of 1860-1963.

They examined six measures of policy liberalization in the area of credit control, interest rate control, entry barriers, regulations and securities markets, financial sector, privatization and restriction on international financial transactions. But the definition of the variables used, its interrelationship and estimation method are not beyond criticism. Considering limitations of earlier studies, we attempt to develop a single valued aggregate index that would be convenient for a simple and comparative study.

6.4 Methodology and Data Source

Measuring financial sector is a complicated procedure since there is no concrete definition as to what financial development is.[2] An index of financial sector development as argued quite rightly by Bandiera et.al. (2000), should attempt to measure both the various aspects of the regulatory and the institution building process. Among numerous indicators that are commonly used to measure financial sector development [Beck, Demirguc-Kunt, Levine (1999), Kelly R.G. Marvotas (2001) P.R. Lawrence I.S. Longjam (2003), Devid Lynch (1996), King and Levine (1993) and Levine (1997)], we will focus on four important ratios. These are ratio of (i) commercial bank assets to total banking sector assets (CBAB) (ii) liquid liabilities of the financial sector to gross domestic product (LLY) (iii) private sector credit to gross domestic product (PVCRD) and (iv) Stock Market Capitalization to G.D.P. (STCAP).

The first measure is commercial bank assets vis-à-vis Central bank assets and is denoted by CBAB. This is the ratio of the assets of commercial banks to the total assets of the banking sector. The importance of the variable lies with the fact that commercial financial intermediaries are virtually responsible for identifying profitable investment, monitoring managers, facilitating risk management and mobilizing savings as compared to the central bank. The ratio indicates how much freedom commercial bank enjoys relative to central bank in allocation of resources.

The second measure of financial development is 'liquid liabilities' denoted as LLY, which is a traditional measure of financial sector development. LLY is defined as currency plus demand and interest bearing liabilities of financial intermediaries and non-bank financial intermediaries as a percentage of GDP. This is the broadest indicator of financial intermediation and a typical measure of financial depth.

The third measure is 'private credit' and is denoted as PVCRD. This is equal to the value of credit by financial intermediaries to the private sector divided by GDP. This measure includes all the credits that are issued to the private sector by all the financial institutions. Thus PVCRD

[2] There is no precise definition in the literature of 'financial development'. But as Fry (1978) notes, the key to financial sector development is the reduction and ultimately unification, of the fragmented financial market.

gives the degree of financial intermediations and measures the financial resources provided to the private sector through loans, purchases of non-equity securities and trade credits etc.

The fourth indicator is the stock market capitalization to GDP ratio, denoted by STCAP, which equals the value of listed shares divided by GDP. This indicator is influenced by market liquidity, growth and risk diversification.

We prefer to adopt the methodology developed by Lawrence and Longjam (L.L.) comparative analysis using four separate indicators and subsequently a single valued index which will reflect the state of financial development of India.

The construction of an index is cumbersome. However, we followed the steps articulated by L.L. We used the representative index computed by LL with the assumption that financial indicators are correlated with per capita income (See Appendix-I). LL has computed the index by taking weights equal to the co-efficient of the simple linear regression with the four variables against per capita income growth for the high income OECD countries'[3]. Thus index for financial sector development : —

$$\mathbf{IFD = 0.124\ CBAB + 0.307\ LLY + 0.348\ PVCRD + 0.22\ STCAP}$$

Though some researcher used principal component analysis (Demirguc Kunt and Levine 1999) or simple average (Gupta 1987) to find the representative index. While principal component analysis gives the vector with maximum variances, it makes sense, if appropriate weights are assigned which is equal to the co-efficient in the simple linear regression of the variables against per capita income growth.

The two important indicators as per the relative weights in the IFD equation are PVCRD and LLY. Average value of these two indicators for the period 1990-2001 were plotted against the per capita real GDP in US dollar (1985 base year) of 33 countries belonging to both developed and developing economy. At least the movements of these two important indicators support the assumption that there is a positive relation between growth and financial development.

[3] For each variable, the regression run against per capita income growth in two ways, (i) mean variable across countries in each year and (ii) mean variable overtime for each OECD country. In the first case, per capita GDP growth is year to year growth rate while for the second one, per capita GDP growth is the co-efficient of time in the linear time-trend regression of semilog GDP 40 annual data point, each data point being the mean across OECD countries has been considered in the first case while 28 data point for 28 OECD countries, each being the mean over time has taken into consideration for the second case.

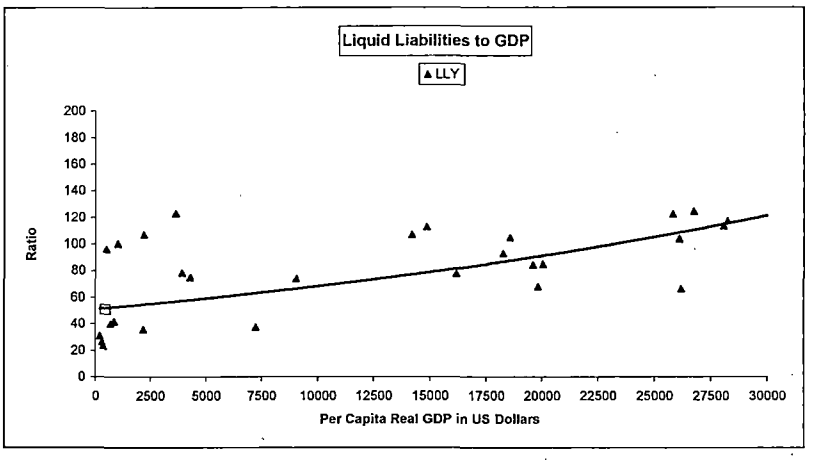

Fig. 6.4.1

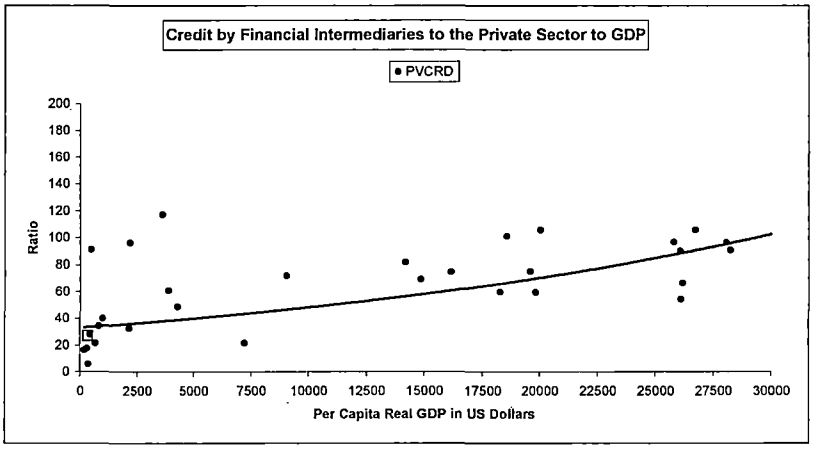

Fig.6.4.2

Countries

ARG
AUS
AUT
BGD
BEL
BRA
CAN
CHL
CHN
COL
DNK
EGY
FIN
FRA
GHA
IND □
IDN
ISR
ITA
JPN
KOR
MYS
NPL
NLD
NZL
PAK
SGP
ESP
LKA
SWE
THA
GBR
USA

However, simply based on the scattered diagram, it would be unwise to draw any conclusion regarding the nature of relationship that exists between this two, Rigorous econometric analysis is essential to suggest any relation and the nature of causation between finance and development. However, at this stage, ignoring the above query, we concentrate on the measurement aspect of the development of financial system of India.

The main data sources are World Development Indicators, IMF's International Financial Statistics, Global Development Finance, RBI bulletin, Bombay Stock Exchange Annual Reports besides the paper of Peter Lawrence and I. Longjam (2003)[4].

6.5 Financial Development in India: Empirical Evidences

In the figure 6.5.3, we have shown the performance of Indian financial sector from 1980-2004 and putting the values of the four indicators in the IFD equation we got the index score for India during the period.

Index score with some gyration moved slightly upward in the post reform period beginning from 1991. However, simply study of single value aggregate index is insufficient, thus an immaculate analysis of the movement of individual indicator is essential for policy prescription. Upward trend of CBAB after regime shift indicates increasing autonomy by commercial banks in the allocation of societal resources. STCAP whose coefficient value is minimum in the IFD index grew stupendously in the post reform period, followed by a stagnant private sector credit (PVCRD) and LLY—two variables whose value in the coefficient of IFD is maximum. These trends essentially defies the theory of financial economics that suggest more the private sector activities greater will be the value of market capitalization.

[4] The deflation of the variables where in a ratio are taken care off; since stock variables are measured at the end of a period, the deflation is corrected by the end of the year CPI indices.

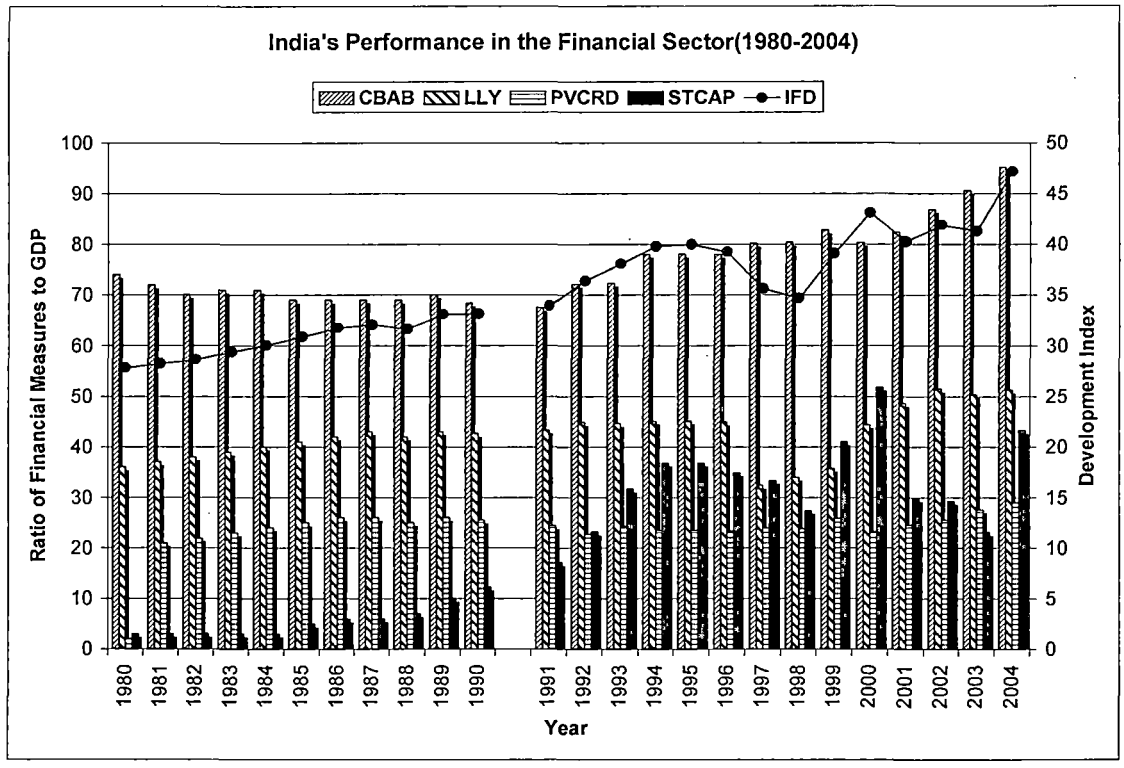

Fig. 6.5.3

To be more specific average value of four indicators with the growth rate of GDP during the pre and post reform period is shown below:

Table 6.5.1 Average Value of Major Indicators and Growth Rate of GDP

Period	CBAB	LLY	PVCRD	STCAP	IFD	GDP growth
Pre Reform 1980-90	70.47	40.27	24.77	5.54	30.58	5.9%
Post Reform 1991-04	80.14	43.92	24.50	32.78	39.21	5.4%

Thus tremendous rise in the low coefficient valued indicator STCAP pushed up the aggregate value of index though many indicators with high coefficient value remain constant in the post reform period which is reflected in the growth rate of the economy. Our study shows average value of three indicators for Malaysia is highest and the country may be treated as best, where as Argentina is the worst performer. A detailed description of the average value of all the indicators is given below:

Table 6.5.2 Average Value of Major Indicators in the Post-Reform Period

Period 1980-2002	CBAB	LLY	PVCRD	STCAP	IFD	GDP Growth
Malaysia	55.16	115.04	117.47	167.83	119.95	6.27%
Argentina	42.94	22.12	21.71	25.80	25.34	0.95%

Note: *STCAP is the period average of 1988 to2002.*

Highest value of three indicators (LLY, PVCRD, and STCAP) and an impressive CBAB of Malaysia suggest more competitiveness, greater liquidity, active stock market and supply of credit to private sector is encouraging and its contribution towards economic development is praiseworthy.

6.6 India and Fast Growing Economies: A Comparative Analysis

How India is performing in comparison with fast growing economy ? We intentionally avoided any such comparative analysis with developed economy, simply because it would be unwise. First ten countries according to average growth rate of per capita GDP (during the period 1992-1999) from East Asia Pacific region, South East Asia, Latin America and Middle East region were selected for a meaningful comparative analysis.[5] India's state of financial development was evaluated in the perspective of targeted countries.

Steps involved in the comparative analysis are : 1) Find smallest and largest values of each indicator during the entire sample period . This means that we select the best and worst performing economies for a relative comparison with respect to these benchmarks. 2)To measure the relative performance of each value ,we applied the following formulae:

$K_{it}^{*} = \frac{K_{it} - Min}{Max - K_{it}}$ Where K_{it} is the absolute performance of the i^{th} country in the year t and for variable *X*, if max and min are the largest and least values in the matrix of all values of countries against each year, then the relative performance of i^{th} country at t^{th} year is given by this formulae.

While selecting maximum and minimum value of each indicator from sample countries, we deliberately considered average value of the indicators (See Fig 6.6.4). Reasons for selecting average value as a measure of performance is, it helps to smoothen out year to year variation of select variables, which are rampant for most of the countries. Secondly, as timing of liberalisation

[5] First ten countries according to average growth rate of per capita GDP are in alphabetical order, Argentina (ARG), Chile (CHL), China (CHN) India (IND), Indonesia (IDN), Israel (ISR), Korea (KOR), Malaysia (MYS), Sri Lanka (SLK) and Thailand (THA).

varies which is supposed to influence development of financial system, any year to year measure of maximum and minimum value as a standard to judge relative performance may be misleading.

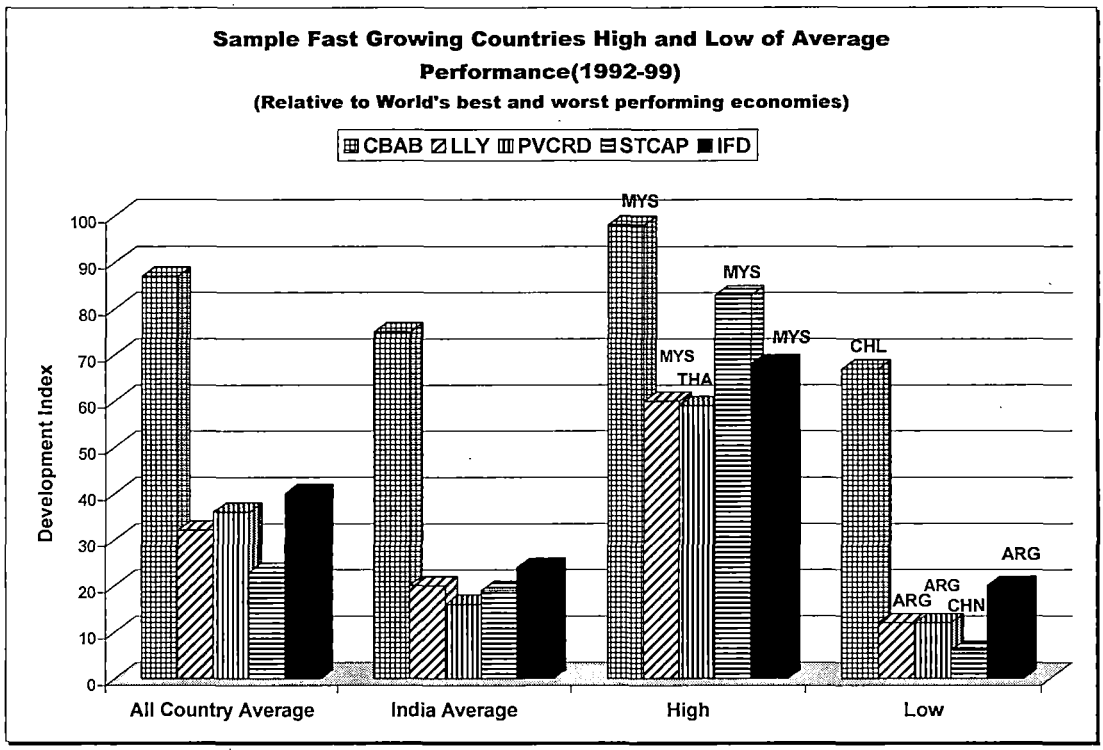

Fig. 6.6.4

We put the each year relative value of India on the scale of 0 – 100, with 0 being the least and 100 being the largest. Applying this technique, relative performance of India is shown in figure 6.6.5.

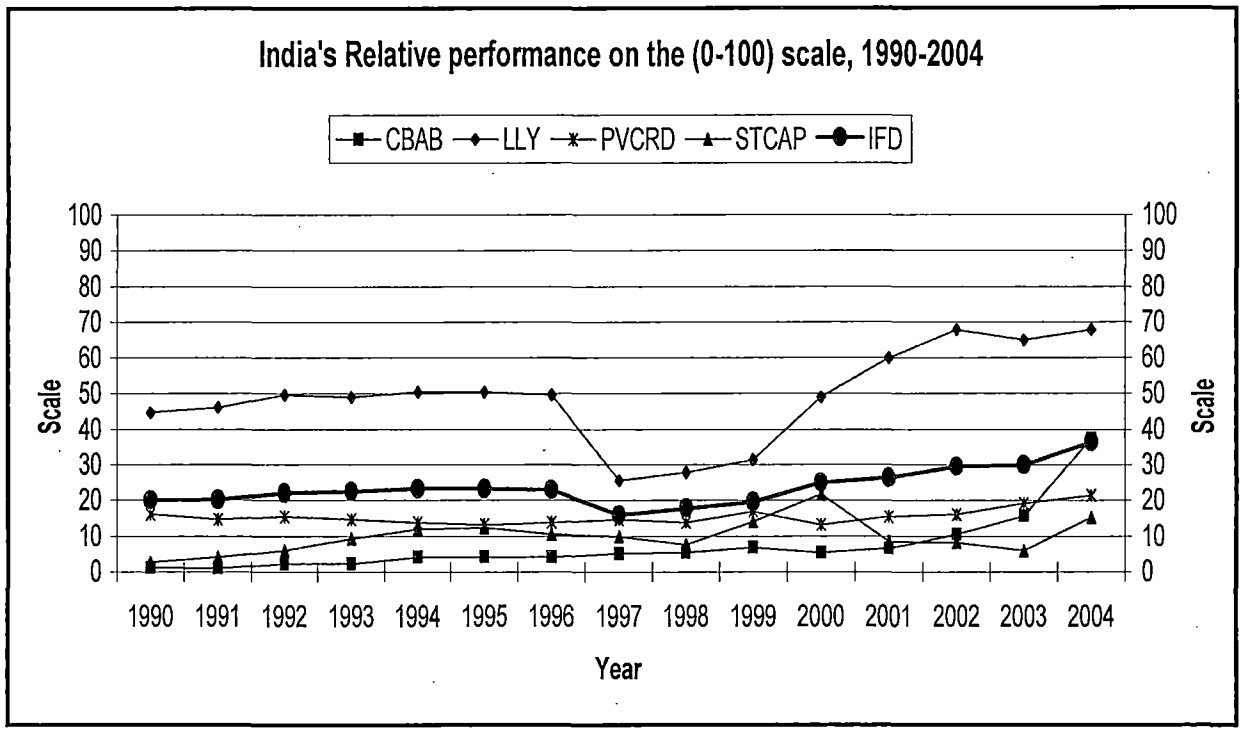

Fig. 6.6.5

Relative performance of Indian financial system in the post reform is also discouraging. IFD value reached 36 in the year 2004 but the period average is 24 only, which is far less than average of fast growing countries IFD, 40. In consonance with the findings of earlier section, CBAB shows a marginal upward movement, STCAP increased impressively, while PVCRD the most important variable remained stagnant, and LLY especially after 1999 raised nearly vertically. All these findings have some serious policy implications as it points to some inherent problems of Indian economy.

Conclusion

Both absolute and relative measure shows stagnating private credit that is detrimental for faster economic growth is a typical feature of Indian economy. Nearly all the South-East Asian countries performance with regard to this indicator is much more impressive than India. Greater autonomy to banks (CBAB), deepening of the financial sector (LLY), failed to accelerate private investment (PVCRD). Slow growth of private sector gradually contributing skepticism among economists (Rakshit, 2004, Marjit, 2005) who now believe that supply led growth strategy is indefensible either in theory or practice.

Appendix – I. OECD countries average and point to point measure. Coefficients of Linear Regression of the Variables against GDP, OECD Countries

Regression across countries (each data point is mean over time)		
Variables	**Coefficients**	**Relative weights**
CBAB	0.00000533	0.1245
LLY	0.00001314	0.3069
PVCRD	0.00001492	0.3485
STCAP	0.00000942	0.2200

Source: P. Lawrence and I.S. Longjam (2003/8) kerp.

Appendix -- II. Country List

Country Code	Country Name
ARG	Argentina
AUS	Australia
AUT	Austria
BGD	Bangladesh
BEL	Belgium
BRA	Brazil
CAN	Canada
CHL	Chile
CHN	China
COL	Colombia
DNK	Denmark
EGY	Egypt, Arab Rep.
FIN	Finland
FRA	France
GHA	Ghana
IND	India
IDN	Indonesia
ISR	Israel
ITA	Italy
JPN	Japan
KOR	Korea, Rep.
MYS	Malaysia
NPL	Nepal
NLD	Netherlands
NZL	New Zealand
PAK	Pakistan
SGP	Singapore
ESP	Spain
LKA	Sri Lanka
SWE	Sweden
THA	Thailand
GBR	United Kingdom
USA	United States

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CHAPTER – VII

Conclusion and Policy Implications

7.1 Conclusions

During the last one and half decades, numerous measures were initiated to liberalise our financial system. Many of these reforms were introduced in response to the need of the moment rather than as a part of a well articulated strategy. Nevertheless, all these policies were designed to develop an efficient financial system capable to support growth process of economy and the measures virtually marginalized the role of planning commission that performed an important function in the earlier regime. However, this transformation process was gradual which we believe suits well in the context of democratic set up of our country. Now there is a broad consensus among major political parties that this process of financial liberalisation is "irreversible". For policy prescription, now it is the time to take stock about what the policy of liberalisation promised and what it delivered.

Policies that rely on market help immensely for the widening and deepening of our financial system that includes banks, stock market, government security market etc. Array of financial instruments, institutions, rules and regulations that were absent in the control regime, now offering immense services to the supplier of funds. Stupendous growth of treasury bill, call money, CDs-CPs market, stabilization of call and treasury bill yield rate, lower cost of government borrowing, banking efficiency in terms of income, reduction of non-performing assets and finally greater integration of Indian financial system with rest of the world are some encouraging features of this new regime. However, all these development to be evaluated in the context of its impact on growth process.

Our study reveals some interesting features that deserve serious attention of policy makers.

1. <u>On Interest Rate, Savings and Investment</u> :

Advocacies of liberalised financial system suggest that a market determined real interest rate helps to mobilize more savings to be used for productive purpose. It is also acclaimed that investment opportunities are abound, thus the higher savings will be immediately absorbed for private sector investment supporting growth of our economy. But our findings shows :

(a) Following theory of liberalisation, most of the interest rates of our country are market determined and the real rate of interest is higher than the repressed regime but belying the hopes of liberalist's interest rate and savings of our country are not correlated.

(b) After regime shift, there is a decline in growth of household sector savings in financial assets. This trend does not satisfy the claim of liberalists. Along with other studies our own analysis also suggests that not interest but level of income and its distribution influence savings. If the present policy of simply relying on real interest rate continues saving target of the household sector at the rate of 10 percent by 2010 may not be achievable.

(c) Due to demand deficiencies, banks are the victim of excess liquidity and the theory that savings will equilibrate investment does not hold good.

(d) It is argued by the supporter of market economy that liberalisation will boost both internal and external demand for goods and services produced with the opening up of the economy and capacity utilisation will be optimum. But our study suggests that due to demand deficiency, capacity utilisation is far less than optimum.

(e) Nearly indistinguishable yield on long and short term government bond is a typical post reform phenomenon of our country. This does not satisfy the claim of financial economists. Thus government depends more on long than short term funds for its borrowing.

2. <u>On Competitiveness, Efficiency and Bank Autonomy</u> :

Key slogan of market oriented financial system is "more freedom", "greater accountability", "more competition", "increased efficiency". All these virtues of an efficient financial system will lead to higher growth of an economy. It is assumed by the neoclassical theorists, compulsory credit allocation has a social cost, it arrest the growth of private sector by shifting resources from risky production input with higher expected return to safe and less risky investment that would affect adversely long term growth and limits the autonomy of bank management over allocation of resources. Our study shows :

(a) High spread between borrowing and lending rates suggests we failed to achieve the targets of free market economy in terms of "competitiveness", "efficiency", "cost of capital" etc. Such a high spread implies, our loan market is not efficient in the standard economic sense. Further, high spread results in rise in cost of capital, high prices that reduce real wage, aggregate demand and hence capacity utilisation.

(b) "Repressed deposit rate" and "unchained lending rate" inspiring banks to supply money for non productive assets bereft of "productive assets".

(c) Even after regime shift concentration indicators further unveil that there is insignificant change in the competitiveness of banking sector in our country.

(d) Gradual reduction of SLR and CRR allowing banks to enjoy greater freedom over the allocation of societal resources. Thanks to limited demand of private corporate sector, ironically banks now enjoy little choice over allocation of resources but have to invest their "idle" fund in low yielding government securities that we described as "low order policy", hence the theory of crowding out of private investment is irrelevant in Indian context.

(e) This low order policy followed by banks even after regime shift contributing stability at the cost of profitability, thus instead of relying on market this trend is empowering government over the allocation of resources.

(f) Possibility of bank failure and its related bailout cost is negligible in India in comparison with many other less developed economies.

3. <u>On Fiscal Deficit</u> :

Rise in the cost of government borrowing in the free market economy, reduction in reserve requirement sends a message "discipline fiscal policy' or face the music. Thus the theorists suggest rising interest payments may compel the government to resort to inflationary finance, damaging macroeconomic credibility and raising real interest rate. Thus success of financial liberalisation largely depends on prudent management of public finance. Our study suggests.

(a) Currently cost of government borrowing is at record low level. Booming fiscal deficit, rising market borrowing but dramatic fall in yield on government bond is an interesting finding of our study.

(b) Mounting budget deficit, nearly unbearable government borrowings and high interest burden contributing in greater budget deficit and economy is now truly vulnerable. Experiences of other developing economy that relies on free market is no exception, debt and interest on debt growing at faster rate than does the real economy.

(c) Control of fiscal deficit is possible either by suppressing interest rate or by increasing tax or by the efficient use of borrowed funds so that real growth rate of GDP remains equal to or more than the cost of government borrowing. Despite record low level of interest rate, growth rate of Indian economy from 1999 onwards is either equal to or less than cost of debt. This can not be allowed to continue for long.

4. <u>On Finance and Development</u> :

Neo-classical theorists forcefully argue that financial sector services contribute to economic growth. Our finding shows :

(a) Index score slightly moved upwards after regime shift.

(b) There is virtually no change in the private sector credit (PVCRD) and financial depth (LLY) in the post liberalisation period though these two variables enjoy highest value of co-efficient in the IFD index.

(c) Indian rate of financial sector growth is far behind than many of the fast growing economies.

7.2. Policy Implications

Our attempt to develop a market oriented financial system delivering some results that are awfully frustrating. Decline in the household sectors saving in financial asset, prolonged demand deficit and comparatively inadequate development of financial system are some typical challenges that Indian economy is confronting after regime shift. These outcome may be attributed to our main focus which is in line with the neo-classical theory that savings as the ultimate determinant of growth and presumes that economy stays close to its full employment growth path. Any intervention by government may derail our economy. Thus our policy prescriptions centre around two broad issue :

First and most important for our country, to what extent private initiatives to be supplemented by state intervention to ensure faster growth of the economy. Second, given the structure of financial system, is there any scope for public authorities to influence or suspend the operation of market forces in order to promote saving, investment and allocative efficiency of our system ?

So the reform measures are to be tuned in such a way which can reduce the inequality of income, increases the purchasing power of the people and increase the demand of the product leading to fuller capacity utilisation, employment as well as reduction in cost of production. In an economy, where the theory of crowding out of private investment appears to be irrelevant, government investment involves the use of unemployed resources whose social cost is zero. Under the condition of full employment public investment does not constitute free lunch, its opportunity cost being the foregone private investment. In our country, an increase in current or capital expenditure by the government can go hand in hand with private consumption or investment.

But government expenditure should be restructured in a way that would help to rise in production, open up new investment opportunities for private sector, increase level of employment and thus aggregate demand. Thus we propose.

When there is an output gap, removal of infrastructural bottlenecks should be accorded top priority, it will open up new employment opportunities and facilitate growth of private sector, hence economic development.

Second, in a demand deficient economy, it is investment which drives savings not the other way round. In such an economy, any measure to save more (cut back of government expenditure, rise in taxes) may end up with a fall of income as well as aggregate savings and investment.

Third, demand management policy should take into account temporal shocks or constraints causing underutilised capacity, say, fall in agricultural income may affect industrial demand hence growth of private sector.

A proper macro economic management thus can ensure faster growth of private sector and can contribute in the development of a more active financial system essentially designed to serve private initiative.

7.3. Limitation of the study

Topic of our study is so vast that we failed to scrutinise all the issues immaculately. Agenda of financial liberalisation includes all the financial macro economic objectives viz., price stability, exchange rate stability, balance of payment equilibrium, efficient debt mobilization for all the sectors of the economy, proper balance of public borrowings, prudent taxation system, liquidity, profitability and efficiency of banking sector etc. It is difficult to analyse all these aspects of reform process in one study. So, to make our study meaningful and manageable, we deliberately ignored some vital areas of financial sector. One of the major limitations of our study is, we ignored stock market which is one of the important ingredients of any financial system. Theorists after argue, stock market, which is free from "moral hazard" can allocate resources more efficiently than bank. So, it's an issue of an in depth study which deserve special attention of any serious researchers.

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