Finance for Industrial Growth*

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It is indeed a privilege and an honour for me to deliver the Mohan Kumaramangalam Memorial Lecture here at the Administrative Staff College of India. Mohan Kumaramangalam was one of the most distinguished public servants of his generation. His untimely and unfortunate death in a plane crash in 1973 deprived India of a worthy son. A leftist in his student days in England, Mohan Kumaramangalam was a leading light of Mrs. Gandhi's cabinet. His enduring contribution was to create the concept of a holding company of allied public sector units, with a degree of autonomy from the red tape of direct government control. It is entirely appropriate that the Steel Authority of India, which was his brainchild as minister for steel, has instituted this lecture in his memory. Whereas it is primarily my current interest that prompted me to choose the theme of today's lecture, "Finance for Industrial Growth", I would imagine that this theme would have been close to his heart.

It is, of course, risky to talk on this subject in front of Mr. Narasimham, Chairman of the Administrative Staff College of India, who has been a former Governor of the Reserve Bank and also author of the most influential reports on the financial sector. So my talk today is really about marrying the interest of today's Chairman and Mr. Kumaramangalam after whom the lecture is named. The theme of today's lecture is to examine the adequacy of finance for growth in the Indian context with a special focus on industry.

I. Introduction

Finance is a crucial ingredient for economic growth. In this lecture, I propose to examine the adequacy of the availability of finance for fuelling growth in the late 1990s, a period during which Indian economic growth has tended to slow down, particularly in the industrial sector. Although I am concerned with overall economic growth, my focus in this lecture is on the financing of industrial growth.

The way we think about the modes of financing industrial development has been changing over the years (Levine, 1997). The initial literature focused on the need to develop extensive financial systems that could tap savings and then channelise the funds so generated to a wide spectrum of industrial activities. It has been realised gradually that the mode of provision of industrial finance is as important for fostering industrial growth as is the quantum of funds. Cross-country experience suggests that economies that have mature financial systems for allocating funds efficiently among competing uses tend to grow faster. Well-functioning banks,

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financial institutions and other financial intermediaries such as venture capital funds promote technological innovation and industrial growth by providing risk capital and funds to those entrepreneurs who have the highest probability of developing new products, production processes and competitive production facilities. The Indian financial sector reforms of the 1990s, largely guided by the two excellent reports authored by Mr. Narasimham (1992, 1998), have been designed to adapt the Indian financial system to the new realities of an open competitive economy in a globalising world.

The key objective of India's economic reforms initiated in the early 1990s was to accelerate growth. The reform process of the 1990s did help to accelerate overall economic growth over that of the 1980s, but only marginally (RBI, 2003). Real gross domestic product (GDP) grew at 5.9 per cent during the reform period (1992-93 to 2002-03), higher than that of 5.6 per cent in the pre-reform period (1981-82 to 1990-91) (Table 1). Growth in both industry and agriculture has been slow after the initial burst in the 1990s, although growth in the tertiary sector has accelerated somewhat (Acharya, 2002).

Table 1 : Sectoral Growth in the 1980s and 1990s

Sector	1981-82 to 1990-91	1992-93 to 2002-03	1994-97	1997-2002
1	2	3	4	5
Agriculture and Allied Activity	3.5	3.3	4.6	1.9
Industry	7.9	6.3	10.8	4.0
Manufacturing	7.6	6.7	12.2	3.8
Services	6.4	7.5	7.9	8.0
GDP	**5.6**	**5.9**	**7.5**	**5.5**

Source: Central Statistical Organisation

In this background, I propose to examine if financing is now forming a constraint in the growth process. To do this, I will first review the alternative approaches to financing patterns as they exist in different countries and as they have evolved. I will then trace our own history and briefly review reforms in the financial sector in India. I will, thereafter, examine the performance of banks and financial institutions in recent periods. It is in this context that I propose to look into how the major contours of the financing pattern of Indian industries have changed over time. What are the key stylised facts of the financing of Indian industries? What has been the nature and dimension of changes that have occurred in the financing pattern in the recent period? Has Indian industry been credit-starved? Have the financial intermediaries done their task? I will finally put forward some ideas for discussion for further improvement of the financing system.

The rest of the lecture is formally structured as follows. As a perspective, Section II takes a look into the framework of corporate financing in India. Sections III and IV delve into the pre-1990s and post-reform model of industrial finance in India. Section V is essentially futuristic in nature and discusses the options of long-term finance in India. Concluding observations are presented in Section VI.

II. Framework for Corporate Financing

To set the stage, let me start with the basic framework of corporate financing. Corporate entities raise capital from either a) internal sources, essentially retained profits, or b) external sources. External funds are accessed from sources outside the firm through the issue of equity capital and debt instruments. Equity capital can be raised from the firm's promoters or the capital market that taps institutional investors, mutual funds and retail investors. Debt can be raised through floatation of corporate bonds or borrowing from banks and non-bank financial intermediaries. An important aspect of the growth process that has been widely discussed in recent times is the type of the financial system that is most conductive to growth. Seen from this standpoint, most of the systems of industrial finance in developed countries can be grouped into two clear systems. At one end is the Anglo-American model of market-based finance where financial markets play an important role and the role of the banking industry is much less emphasised. At the other extreme is the Continental/Japanese model of bank-based finance, in which savings flow to their productive uses predominantly through financial intermediaries such as banks and other financial institutions, and the capital market is less important for the raising of funds.

Most of the industrial financing systems have evolved endogenously from their own particular circumstances of economic history - and have their own success story to tell or otherwise. The market-based system is relatively impersonal because the sources of funds could actually be atomistic household savers, directly or indirectly through mutual funds, pension funds or insurance funds. The bank-based systems are more relationship-based, because the lenders are few and large. At the risk of broad generalisation, bank-based systems tend to be stronger in countries where governments have taken a direct role in industrial development, such as Germany, in the 19th century, and Japan, East Asia, South-East Asia, China and India, in the 20th century.

The basic point of partition between the two systems is that in the one case, corporate entities interact with the intermediary, say a 'bank', whereas in the other, they directly approach the "public" for finance. This distinction between a 'bank-based' and a 'market-based' system is not a water-tight compartment; on the contrary, it has become blurred in recent years with the institutionalisation of the sources of finance all over the world. The blurring of the distinction has emanated from the gradual spread of universal banking, spanning the entire range of financial services across commercial banking, insurance and securities (investment as well as underwriting). This has been fortified by the emergence of institutional investors, in the capital market, including mutual funds, which, for example, have an asset base of as much as 70 per cent of GDP in the US.

There are also historical reasons for this emerging convergence. A number of countries, including the USA segregated banking and securities trading in their financial licensing laws as it was believed that direct commercial bank involvement in corporate securities would involve significant conflicts of interest. It was only recently that the US

Financial Services Modernisation Act of 1999 repealed the Glass-Steagall Act of 1933, which had prohibited commercial banks from underwriting, holding or dealing in corporate securities, whether directly or through securities affiliates. A number of emerging market economies, such as Argentina (1991), Chile (1997-98), Indonesia (1995) and Malaysia (1991) have also recently liberalised restrictions governing banks' exposures to the capital markets.

Beyond the partition based on risk characteristics, it will be recognised that the need for diversification of the financial structure is also driven by the demand for funds of different tenors. Banks, for example, are a natural source of working capital because their resource base essentially emanates from the economy's transaction processes, and the funds available with them are of a short-term nature. Bond markets are relatively more flexible because they can mediate both the short-term corporate funds as well as long-term household saving. However, in the absence of developed capital markets, there arises a need for specialised financial institutions - the so-called development financial institutions - which provide project finance.

The process of corporate financing is changing all over the world. There has been, for example, a sharp jump in market-based financing during the 1990s driven by a combination of financial liberalisation and high growth. Private bond markets grew especially rapidly, jumping 500 per cent between 1980-85 and 1992-97 by one estimate, [see Domowitz, Glen, and Madhavan (2000) for details] outstripping bank credit offtake. Equity markets, especially in the G-4 markets and the East Asian tigers, also grew explosively - although much slower than that of the bond market. Corporate bond markets remain underdeveloped in most emerging markets since they are more difficult to develop than equity markets.

III. The Pre-Reform Model of Industrial Finance in India

How did India fare in the domain of industrial finance? The Indian economy, like most of the former colonial economies, adopted a path of planned development after Independence. This was, in a sense, dictated by the compulsions of contemporary political economy. While there was a wide consensus that economic growth could only spring from large-scale industrialisation, in consonance with the contemporary big-push theories of economic development, it was thought that firms lacked the resources to finance such rapid growth. The strong preference for self-reliant growth in view of the mercantilist roots of colonialism, reinforced by faith in the nation - building capacity of the polity shaped by the successful freedom movement - led to a state-led development strategy during the 1950s. This preference was also reinforced by the perceived success of the State led Russian model, that was so visible in the immediate post-World War II period.

The industrial financing strategy adopted in the 1950s centred around the Government as the primary entrepreneur in the economy. The state-led development initiatives had two distinct avenues, *viz.,* a) direct investment from the government budget (such as in case of irrigation projects, construction of dams, and railways), b) public enterprises (such as the steel plants - "the temples of modern India") often funded by budgetary provisions, and government guaranteed bonds. This was reinforced by the channeling of public saving by an elaborate banking network to the "socially productive" uses by an elaborate mechanism of directed credit programmes and concessional interest rates for "priority sectors".

As a result, the role of the financial system was restricted to the channelling of resources from the savers to the users in line with the "socially productive" pattern of resource allocation, charted by the planning process. The emphasis, thus, lay in building a financial system with a widespread network, not only in terms of the geographical spread and socio-economic reach but also in the functional sense, in terms of specialised forms of finance, through developmental finance institutions. The resultant financing strategy for industrialisation, as it then emerged, rested on four building blocks:

- Banks would provide short-term working capital, with appropriate allocations for the priority sector.
- Development Finance Institutions (DFIs) would provide medium- to longer-term funds for the corporate sector.
- Since banks had a readymade access to cheap resources by way of banking transactions, the Government sought to provide a cushion to DFIs by offering guarantees on bonds issued by them along with special access to concessional funds from the Reserve Bank.
- Corporate entities could supplement these forms of funding by resource mobilisation from the capital market, but this also needed government approval within the constraints of the credit allocation process.

A natural corollary of the planning process was then the conscious adoption of a model of the bank-based mode of financing as against a model of market-based financing, which was adopted in some emerging countries. Although the capital markets in India were among the oldest in Asia, the role of equity as a mode of financing was not considered as important because of the limited attraction that risk capital was perceived to have for projects with a long gestation lag.

There can be little doubt that the basic objective of developing an extensive financial network was, by and large, fulfilled by the early 1990s, especially following the spread of the branch bank network following the bank nationalisations of 1969 and 1980 (Table 2).

The corporate financing strategy, as it evolved, was, however, inextricably linked to the fiscal position, because of the assumption that public investment would eventually generate surpluses for the social good. As fiscal deficits began to enlarge, the entire financial system began to be geared to

Table 2 : Progress of Commercial Banking in India

Indicator	June 1969	June 1980	March 1990	March 2000	March 2002
1. Number of Scheduled Commercial Banks *of which:*	73	148	270	297	293
Regional Rural Banks	—	73	196	196	196
Other Scheduled Commercial Banks	—	75	74	101	97
2. Number of Bank Offices	8,262	32,419	59,752	67,868	68,195
3. Per Capita Deposits (Rs.)	88	494	2,098	8,542	11,008
4. Per Capita Credit (Rs.)	68	327	1,275	4,555	5,927
5. Population per Bank Branch (thousand)	64	21	14	15	15

Source : Statistical Tables Relating to Banks in India, RBI.

funding the Government's budgetary needs. Banks' statutory liquidity ratio, originally a prudential requirement for solvency, was steadily raised to provide a captive market for public debt. Although interest rates were initially kept artificially low, even at the cost of financial repression, to contain the interest cost of public debt, the return on government securities was steadily raised to enhance their attractiveness to the market. As it got increasingly difficult to get voluntary subscriptions even at higher rates of return, the Government resorted to a large-scale monetisation of the fiscal deficit by the end-1980s. Concomitantly, the Reserve Bank had to raise reserve requirements in order to contain the inflationary impact of deficit financing. By the early 1990s, statutory pre-emptions of banks amounted to over 60 per cent of deposit mobilisation. This process was accentuated by the Government ownership of banks (Table 3).

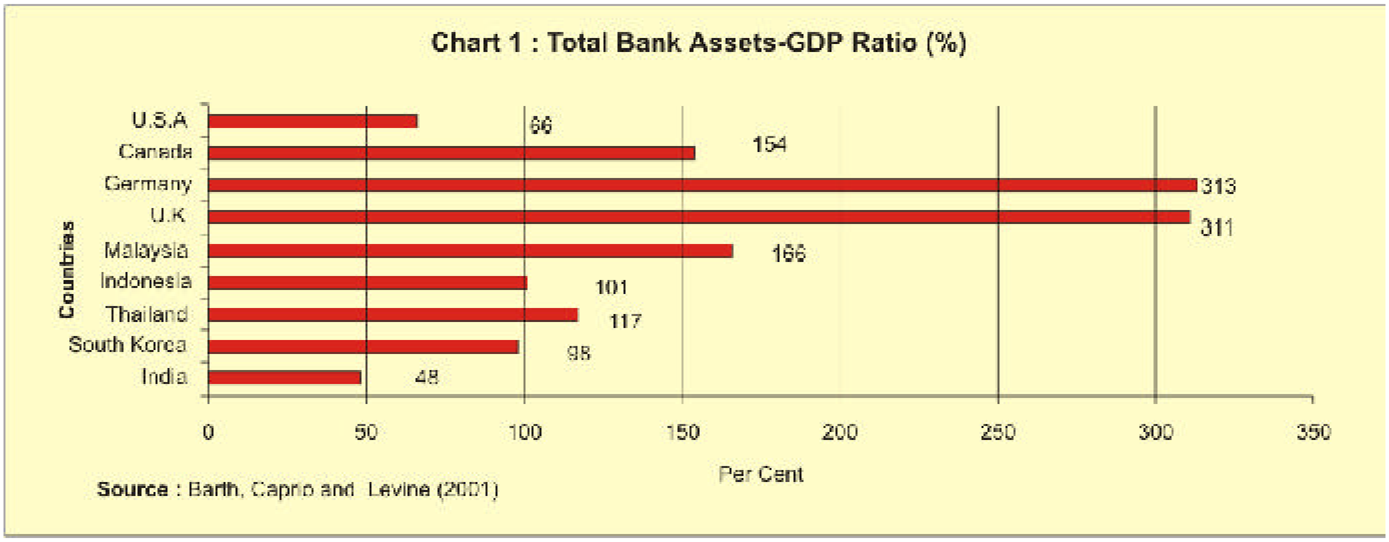
Table 3 : Ownership Pattern of Banks (in 2001)

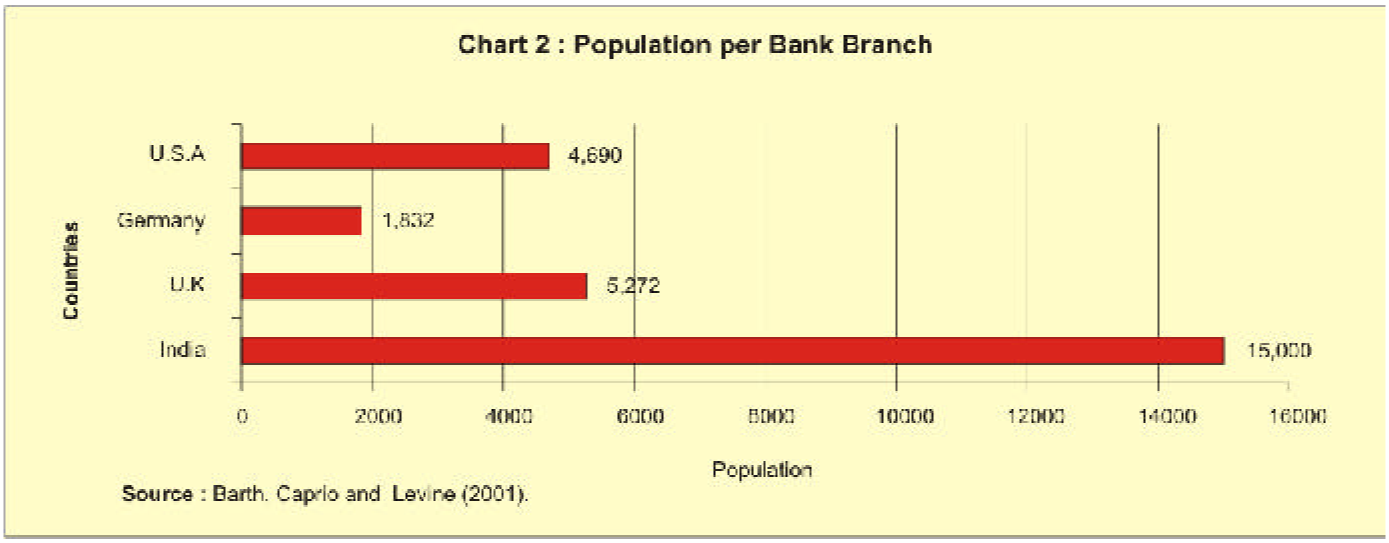
Country	Per cent of Total Bank Assets Government Owned
India	80
South Korea	30
Thailand	31
Indonesia	44
Malaysia	0
U.K	0
Germany	42
Canada	0
U.S.A	0

Source : Levine (2001).

Thus, the difficulty was that the Indian financial system, though extensive, was limited in its ability to allocate resources efficiently. A number of structural bottlenecks emerged in the process. First, a combination of an administered interest rate regime and directed credit controls prevented proper pricing of resources. Second, most financial intermediaries remained confined to markets relating to their area of operation because of balance sheet restrictions, leading to market segmentation. Finally, there was the problem of missing markets, especially at the shorter end, with caps even on the inter-bank rate. Hence, although the Indian banking system has grown tremendously, it has a long way to go. Even relative to other developing countries, the ratio of bank assets/GDP for India continues to be low (Chart 1).

The role of banks as financial intermediaries can, therefore, be expected to grow significantly in the years to come. Surprisingly, the population serviced by a bank branch is also much higher in the Indian case than in many other countries (Chart 2).





It is against this backdrop that financial sector reforms were initiated in the early 1990s. There was clearly the need to reduce the role of Government in the allocation of resources in the economy. As this process would unfold, a competitive environment was sought to be created in the financial sector to enhance the allocative efficiency of financial markets as a whole. Such financial sector reforms would then accelerate the overall economic growth process.

At the heart of financial reforms lay the need to contain the propensity of the Government to preempt resources from financial institutions through fiat. The 1990s saw three fundamental changes in the relationship between the fisc and the financial system. First, the Government securities market was transformed to a market-determined price discovery process by switching over to an auction mechanism for sale. This enabled the rest of the segments of the financial markets to price off this market. Second, the reduction in the statutory liquidity requirements to the minimum of 25 per cent of demand and time liabilities freed resources of the banking system for credit. However, public sector banks presently continue to hold about 40 per cent SLR bonds voluntarily. Third, the phasing out of the process of automatic monetisation of the fiscal deficit, rendered a sense of autonomy to the Reserve Bank and enabled it to gradually cut reserve requirements to the current level of 4.5 per cent.

The traditional model of industrial financing thus began to crumble by the mid-1990s. The dismantling of the administered structure of interest rates allowed the emergence of market-based interest rates so that resources could be allocated by market signals. Besides, the gradual withdrawal of restrictions on both the assets and liabilities of the banks and non-bank financial institutions enabled them to optimise their portfolios across instruments of varying risk and tenor according to their commercial judgment, consistent with the process of price discovery. Further, concessions, such as availability of government guarantees and central bank funding for financial institutions, were gradually phased out in the process of market integration. By the late 1990s, therefore, the Indian financial system was enabled to develop in such a way as to compete in the increasingly open economy.

IV. Sources of Finance for Indian Industries during the 1990s

It is now instructive to review the financing patterns for industry during the 1990s. The general impression that has gained ground is that bank finance for industry has gone down. A closer look at the major sources of industrial finance as a proportion of GDP (Table 4) brings out clearly the following stylised facts. First, banks have kept up their credit to industry. Not only has there been an increase in the proportion of conventional credit to GDP, in addition there has also been resource flow in the form of investments in non-SLR instruments - such as commercial paper, corporate bonds and equity. Second, financing from FIs to industry has clearly fallen[1]. The decline has been sharper in recent years because of the conversion of ICICI into a bank as well as the problems besetting Industrial Finance Corporation of India. The key change that took place in the late 1990s is the virtual collapse of the capital market as a source of industrial finance. Correspondingly, as might be expected, the demand for debt from the DFIs also fell, which was compensated to a certain extent, by the participation of banks in subscribing to bond issues and other debt instruments of corporate entities through the private placement route. The exuberance of investment activity in the mid-1990s also led to the creation of over capacity in industry, including some uncompetitive capacity that led to erosion of profits which, in

1 In order to obtain DFIs' support to the industrial sector, estimates of sanctions and disbursements of DFIs, being in gross terms (i.e., without taking account of the repayments), may have been misleading. Instead, we have taken the investments and loans and advances of the major DFIs. In particular, in order to arrive at an estimate of DFIs' support to industrial finance, we have added the following items, *viz*., investments & credit to industrial concerns by IDBI, equity investments, debentures & loans and advances of IFCI; investments in bonds & equity and Rupee and foreign currency loans of ICICI, credit by IIBI (since investments are negligible); loans & advances and investments (including government securities in absence of break-up) of SFCs; and loans & advances to industrial concerns and commercial investments of SIDBI.

turn, perhaps explains the poor performance of the stock market during this latter period. With the recovery of corporate profits in 2002-03 and its continuation in 2003-04, the stock market has recorded high growth since May 2003. With the prevailing low interest rates, and a recovery of the stock market, we can now expect some increase in industrial investment demand.

Overall also, non-food credit has increased as a proportion of GDP in the past few decades reflecting both the demand for credit *per se* as well as an acceleration in the process of monetisation with the spread of branch banking. This ratio continued to increase during the post-reform period as well though it had fallen somewhat in the early 1990s, even though the process of monetisation is now more or less complete (Chart 3). This, in turn, suggests that there has been no credit constraint as far as industry is concerned during the late 1990s.

Table 4 : Major Sources of Industrial Finance

(as percentage of GDP at current market prices)

Year	Banks		DFIs	Capital Market	Total
	Credit	Non-SLR Investments			
1970s	1.8		0.3	0.1	2.2
1980s	2.7		0.7	0.6	4.0
1990s	2.6		1.0	1.2	4.8
1992-93 to 1996-97	2.9		1.0	1.9	5.8
1997-98 to 2001-02	2.7	0.7*	0.6	0.2	4.2

* Non-substantial prior to mid-1990s.

1. Banks' support includes conventional credit in the form of loans and advances and bills rediscounted.
2. Capital market support to the industrial sector has been taken to be new capital issues by non-Government public limited companies (i.e., ordinary shares, preference shares & debentures) and their ordinary shares.

Source : Handbook of Statistics on the Indian Economy 2002-03, RBI.

Thus there is reasonable evidence, at least in the aggregative sense, to suggest that Indian industry has not been starved of bank credit in recent years. A related question is the adequacy of finance is across all sectors. Were there any specific sectors that did not get adequate finance? The picture is really no different when we look at the sectoral numbers (Table 5)[2].

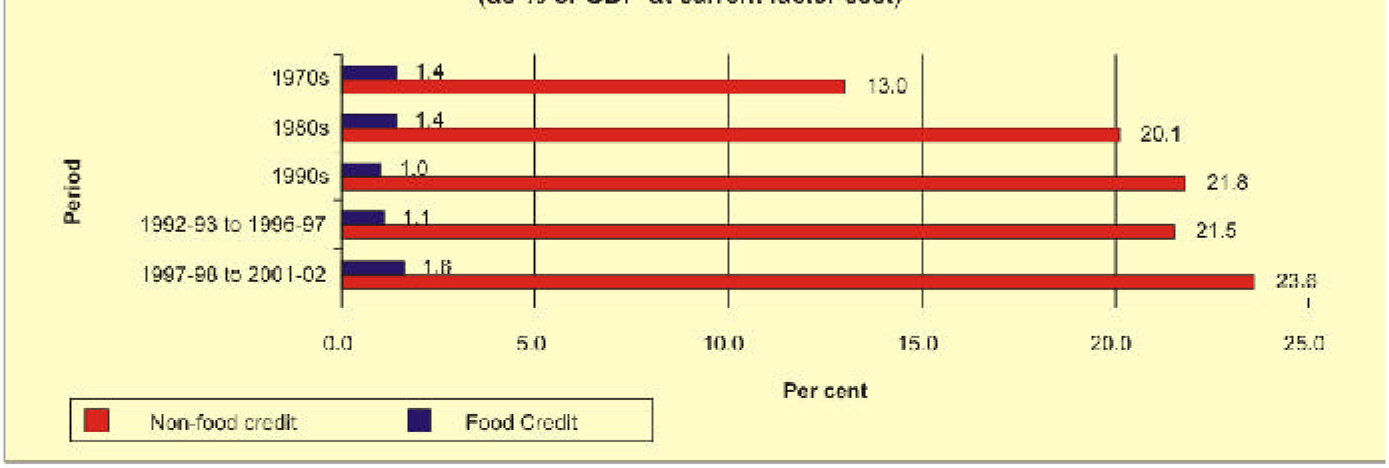


Chart 3 : Food and Non-Food Credit
(as % of GDP at current factor cost)

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[2] **The demand for credit, when seen as an essential input to the production process, has to be linked to the value added. While for aggregate non-food gross bank credit, GDP at current prices would be the appropriate normalisation factor, for credit going to agriculture and industrial sectors, as well as, to the SSI sector, we have tried to capture their appropriate contribution in value added. For credit going to the agricultural and industrial sectors, we have taken GDP (at current factor cost) originating in 'agriculture and allied activities' and 'manufacturing'. As far as 'GDP originating in the SSI sector' is concerned, there is no readymade estimate – therefore, we have taken the GDP originating in unregistered manufacturing and added to it the contribution of the SSI sector in organised manufacturing as revealed from the Annual Survey of Industries [Mohan (2001)].**

Table 5 : Sectoral Distribution of Non-food Gross Bank Credit

(as per cent of relevant GDP)

Year	Agricultural Credit/ Agricultural GDP	Industrial Credit/ Manu-facturing GDP	SSI Credit/ SSI GDP	Non-Food Gross Bank Credit/GDP
1	2	3	4	5
1980s	10.0	65.6	38.9	19.9
1990s	9.2	68.4	43.8	20.6
1992-93 to 1996-97	8.9	65.9	42.4	20.1
1997-98 to 2001-02	10.0	71.9	45.3	21.6

Source: (1) Handbook of Statistics on Indian Economy 2002-03, RBI, for sectoral deployment of credit data.
(2) National Accounts Statistics, CSO for manufacturing and agricultural GDP.
(3) Author's calculations for SSI-GDP.

The correct way to evaluate adequacy of the trend in sectoral credit is to look at it as a proportion of sectoral value added. Insofar as the sectoral credit trends are concerned, the above data indicate that the fall in the agricultural credit- agricultural GDP ratio during the 1990s has been arrested in recent years. In fact, as a ratio to manufacturing GDP, credit to the industrial sector has experienced a steady upward trend. Interestingly, contrary to popular impression in terms of the ratio to its GDP, credit to the SSI sector has exhibited a steady increase.

It might still be argued that reduction in the SLR stipulations from about 38.5 per cent to 25 per cent should have spurred a larger quantum of bank credit than what has been achieved. At the same time, while the reduction in statutory pre-emptions does enhance credit availability, the actual supply is contingent on credit demand and banks' own allocations across the Government, the commercial sector and increasingly, the rest of the world. With the increase in fiscal deficit of the Government in the late 1990s, at a macro level, we could not expect an overall reduction in banks' subscription to SLR bonds. However, if there had been buoyant private sector credit demand we would have observed hardening of real interest rates, rather than the softening that has been observed in the last 2-3 years.

The more serious issues in the flow of resources to industry in the late 1990s thus centre around the problem of the gradual shrinkage of development financial institutions, as a sector, on the one hand and the lacklustre performance in the functioning of the capital market, on the other hand. There is also the issue of corporate profitability which might have affected the latter phenomenon.

Comparison of Banks and FIs

The process of financial sector reform has changed the operating environment in which the financial institutions, banks and non-bank intermediaries operate. Until the early 1990s, the role of the financial system in India was primarily restricted to the function of channeling resources from the surplus to deficit sectors. Reforms in the financial sector created a deregulated environment and enabled relatively free play of market forces. It also altered the organisational structure, ownership pattern and domain of operations of institutions and infused greater competition. In order to appreciate the consequential impact on the resource flow, it is useful to study the impact of financial sector reforms on each segment of financial intermediaries.

In the case of banks, there have been, in particular, three clear elements of change. First, banks now have greater operational flexibility and functional autonomy in terms of pricing and resource allocation. Second, the strengthening of prudential norms has resulted in the clean-up of balance sheets of banks, and reinforced financial stability. Third, the banking sector is facing increased pressure of competition, from both within the banking system, with the emergence of new banks and from other intermediaries and to some extent, from the capital market.

There is very little doubt that the banking sector has recorded improvements in profitability, efficiency (in terms of intermediation costs) and asset quality in the 1990s. Within the commercial banking system, public sector banks however, continue to have higher interest rate spreads but at the same time earn lower rates of return, reflecting higher operating costs. Private sector banks, on the other hand, appear to have lower spreads as well as lower operating expenses comparable to the banking system in G3 countries (Table 6). At the same time, asset quality is weaker so that loan loss provisions continue to be higher. This suggests that, whereas there is greater scope for enhancing the asset quality of banks in general, public sector banks, in particular, need to reduce operating costs further. Although higher administrative expenses are often explained away by the large branch network, it should be borne in mind that banks in the G-3 countries actually have a lower ratio of population per branch ratio (see Chart 2).

Table 6 : Banking Sector Performance

(Per cent of assets)

Variable	India (1999)		G-3 (1999) countries
	Public Sector Banks	New Private Sector Banks	
1	2	3	4
Spread	2.8	2.0	2.0
Other income	1.2	1.5	1.0
Operating cost	2.7	1.7	1.8
Loan Losses	1.0	0.8	0.3
Net Profits	0.4	1.0	0.8#

Refers to pre-tax profits.

Source : Report on Currency and Finance, 2001-02, Report on Trend and Progress of Banking in India, 1999-2000, RBI.

Financial Institutions

The operating environment of DFIs underwent a radical change in the 1990s. DFIs are facing new challenges both on the asset and liability sides. Concessional sources of funds have dried up and financial institutions are raising resources including short-term funds at market related rates. On the asset side, the distinction between banks and DFIs is getting blurred as both are offering long and short-term financing. Further, both banks and DFIs together face competition from market based modes of financing.

The difficulties faced by the DFIs in the late 1990s are reflected in a gradual shrinkage of their balance sheets. Lending by the DFIs has fallen continuously over the last 5-7 years. This has led to a growing body of opinion that DFIs are intrinsically uncompetitive, especially because of a legacy of high-cost long-term liabilities and poor asset quality. A closer look at the balance sheets suggests a mixed bag.

The most striking feature is that the profitability of DFIs as a group remains, by

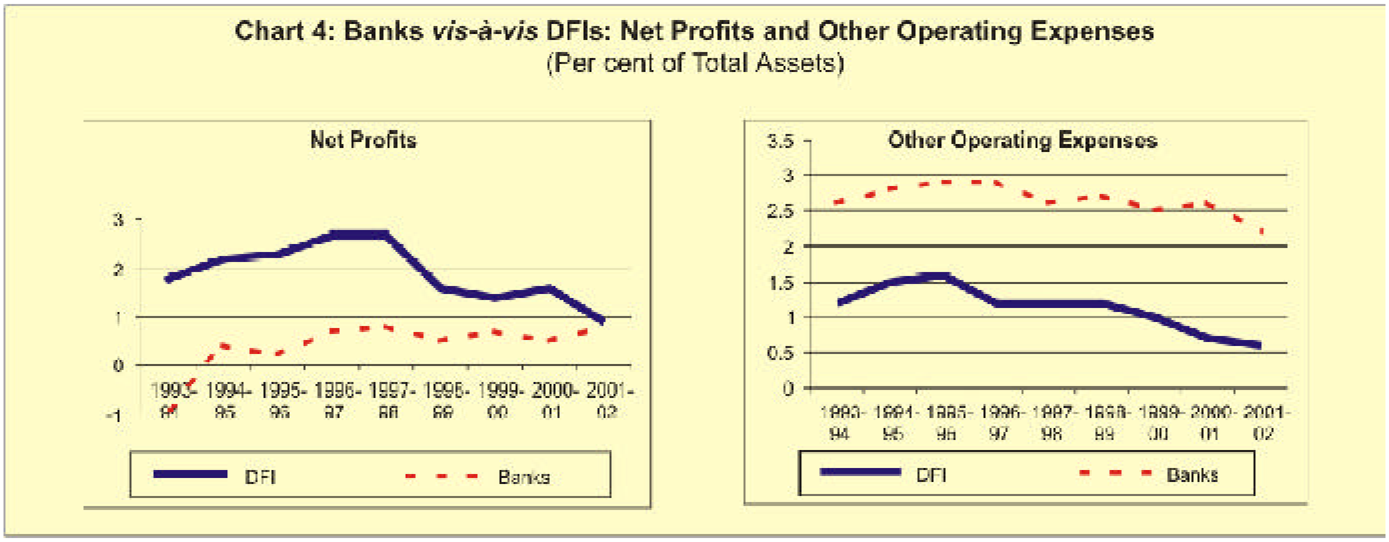


Chart 4: Banks *vis-à-vis* DFIs: Net Profits and Other Operating Expenses
(Per cent of Total Assets)

and large, comparable to that of banks (Chart 4). This is essentially because operating costs of DFIs are lower than that of banks, because these financial institutions do not have a wide branch network.

This advantage of low operating costs is, however, largely neutralised by the fact that their interest costs are higher than banks (Chart 5). While it is true that interest costs are likely to be always higher because DFIs raise longer-term funds, the shorter tenor of the banks liabilities allows them a far greater degree of manoeuverability enabling them to cut interest expenses faster in a scenario of declining interest rates. Another issue is that while interest income for DFIs is typically higher than that of banks because of the longer tenor of commitments, the spread between the two has been narrowing in recent years with the drying up of the demand for project finance as well as the emergence of alternate sources of longer-term funding. Together with the rigidity in interest expenses, this has been squeezing the profitability of DFIs. An interesting fact is

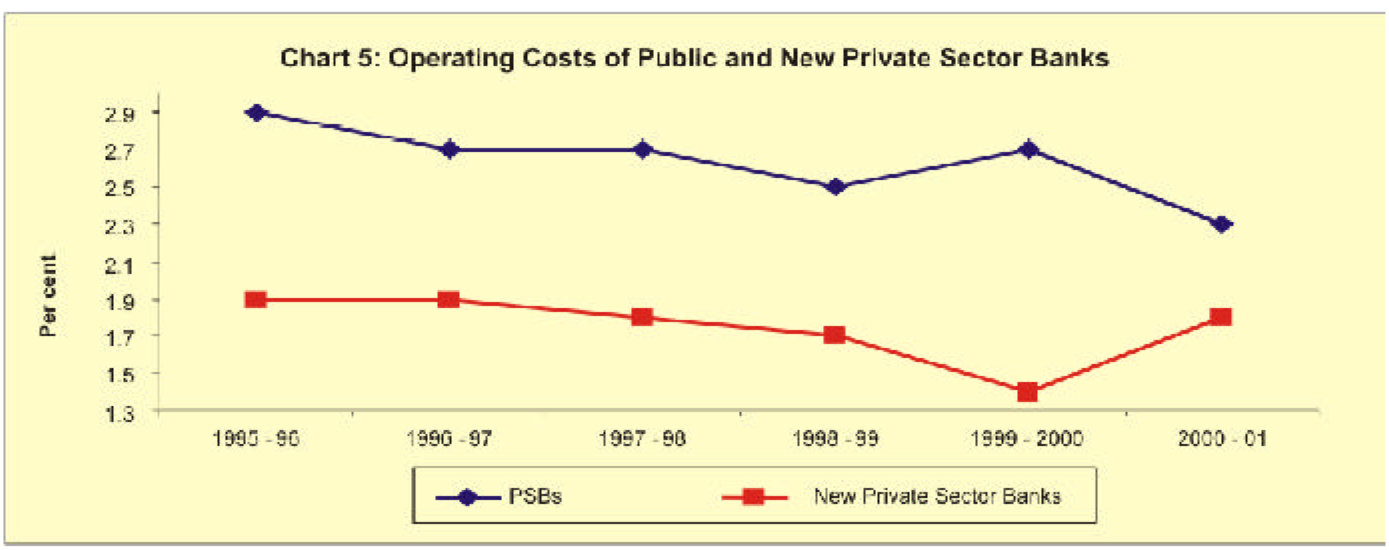


Chart 5: Operating Costs of Public and New Private Sector Banks

that the operating expenses of new private sector banks are comparable to that of the DFIs. This suggests that financial institutions are likely, sooner than later, to face a challenge from new private sector banks whose interest costs are much lower (Chart 6).

It is thus not entirely obvious, conventional wisdom notwithstanding, that DFIs cannot be competitive. There is no doubt that, with no access to current deposits, their average cost of funds will always be higher than that of banks. But this is compensated by lower operating costs since they typically do not need a large branch network. But as banks continue to cut down their own operating expenses, DFIs will also have to gradually reduce their operating costs further in order to maintain their commercial viability. This underscores the need for DFIs to pay greater attention to their non-performing assets, and to address legacy issues.

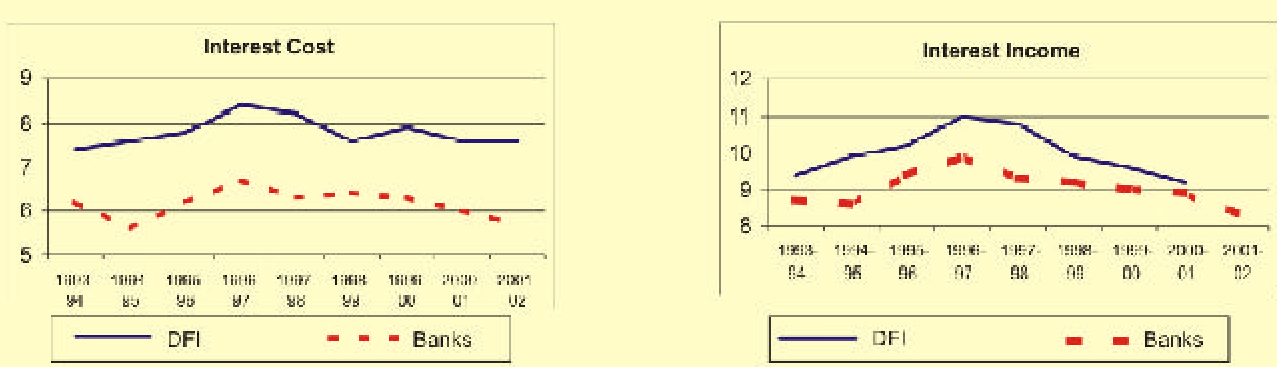
Bank Financing of Long Term Assets

The traditional model of corporate financing was based on a clear-cut partition of roles: banks were to fund working capital requirements while DFIs (and to the extent possible, the capital market) were to cater to longer-term financing needs of the economy. The downscaling of operations of DFIs, together with sluggishness in the capital markets in recent years has created a gap at the longer end of the institutional financing spectrum in the Indian economy. This inevitably brings us to the possible role that banks could play in bridging this gap.

The tenure of funds provided by banks either as loans or investments depends critically on the overall asset-liability position. An inherent difficulty in this regard is that since deposit liabilities of banks often tend to be of relatively shorter maturity, long-term lending could induce the problem of asset-liability mismatches. The maturity structure of commercial bank deposits in 2002 shows that less than one fifth is of a tenor of more than three years, and less than 7.0 per cent for private banks (Table 7).

On the asset side, nearly 40 per cent has already been invested in assets of over three

Chart 6: Banks *vis-à-vis* DFIs: Interest Cost and Income
(Per cent of Total Assets)



Source: Report on Trend and Progress of Banking in India, various issues, RBI.

Table 7 : Maturity Profile of Bank Liabilities

(Percentage share in Total Liabilities)

Maturity Range	SBI	Nationalised Banks	Foreign Banks	Indian Private Banks	Total
1	2	3	4	5	6
Up to one year	19.3	35.5	61.9	56.5	37.8
Over one year to 3 years	59.4	47.5	17.6	36.8	46.1
Over 3 years	21.3	17.0	20.5	6.7	16.1
TOTAL	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source : Statistical Tables relating to Banks in India, RBI.

years maturity, mostly in investment instruments, primarily SLR bonds. Only about 10 per cent is invested in loans and advances (see Table 8).

In view of the large demand by the Central and State Governments for funds for long-dated government paper, there is little flexibility left for extension of longer-term credit by banks to infrastructure, industry, agriculture and other productive sectors. Any larger investment by banks in longer term assets could result in asset-liability mismatches. This analysis of the relative roles of banks and financial institutions in term lending for financing growth suggests that there is a greater need to think about the future of DFIs. The structure of their relative costs suggests that, if the legacy problems of DFIs are addressed they may not be intrinsically uncompetitive in their financing operations. They will have to improve their operating efficiency through the use of technology and other means in order to bring down operating costs further. Their comparative advantage in relevant skills for appraising projects will continue to give them an edge over commercial banks in their operations. They will also need to diversify their operations to take advantage of the new opportunities offered by the opening of the capital market and use of new investment techniques around instruments.

Table 8 : Maturity Profile of Bank Assets

(as percentage share of Total Assets)

Maturity Range	SBI	Nationalised Banks	Foreign Banks	Indian Private Banks	Total
1	2	3	4	5	6
Loans and advances	**44.1**	**53.5**	**58.4**	**52.3**	**51.1**
Up to one year	19.0	21.9	38.3	25.9	23.1
Over one year to 3 years	14.5	17.9	11.9	19.0	16.8
Over 3 years	10.6	13.7	8.1	7.4	11.2
Investments	**55.9**	**46.5**	**41.6**	**47.7**	**48.9**
Up to one Year	9.1	3.9	18.8	14.8	8.5
Over one year to 3 years	11.3	6.0	9.7	10.7	8.6
Over 3 years	35.5	36.6	13.1	22.3	31.7
TOTAL	**100**	**100**	**100**	**100**	**100**

Source : Statistical Tables relating to Banks in India, RBI.

Banks also have some capacity to invest in longer term assets, but this capacity will remain highly limited until the fiscal deficit remains as high as it is and Government demand for investment in long dated bonds remains high, even though they are of course tradable. Some enhancement of their capacity to invest in infrastructure, industry and agriculture in longer gestation projects can be enhanced by allowing a limited recourse to longer term bond issues.

V. Capital Markets

The Indian capital market began to expand in the late 1980s (Table 9). This was abetted by wide-ranging reforms in the capital markets, in terms of reviving the process of price discovery, enhancing transparency and improving trading and settlement practices.

Table 9 : Capital Market Indicators

(Percentage of GDP)

Year	BSE Market Capitalisation	New Equity Issues
1	2	3
1980s	9.2	0.2
1990s	37.0	0.7
1992-93 to 1996-97	37.8	1.1
1997-98 to 2001-02	33.8	0.1
2002-03	23.1	0.01

Source : Handbook of Statistics on Indian Economy 2002-03, RBI.

The reforms in the capital markets during the 1990s in terms of market microstructure and transactions have ensured that the Indian capital market in particular is now comparable to the capital markets in most developed markets. The early 1990s saw a greater willingness of the saver to place funds in capital market instruments, on the supply side as well as an enthusiasm of corporate entities to take recourse to capital market instruments on the demand side. The size of the capital market is now comparable to other developing countries but there is still a long way to go. It is important to note that developed economies with bank-based systems, such as Germany and Japan, also have capital markets with substantial market capitalisation in relation to GDP (Table 10).

Table 10 : Capitalisation of Stock Markets

(Percentage of GDP)

Economy	1990	1999
1	2	3
Japan	98	105
Germany	22	68
UK	86	203
USA	53	182
Indonesia	7	45
Malaysia	110	184
Thailand	28	47
India	*12*	*41*

Source : World Development Indicators, 2001.

While there was a sharp increase in market capitalisation as a percentage of GDP during the 1990s, the share of capital issues to GDP, a measure of resource mobilisation by the capital markets, followed an inverted U curve during the 1990s. The spurt in capital issues beyond 1.0 per cent of GDP during 1993-96 could not be sustained with the onset of the economic slowdown in the latter half of the 1990s. As a result, capital issues, especially equity issues, dwindled to the 1970s' levels (as a proportion of GDP) in the latter half of the 1990s. In fact, public capital issues by non-Government public limited companies declined to 0.2 per cent of GDP during 1998-2002 from 1.9 per cent during 1992-97 and 0.6 per cent during the 1980s. Besides, public equity issues by non-Government public limited companies declined to 0.1 per cent of GDP during 1998-2002 from 1.1 per cent during 1992-97 and 0.7 per cent during the 1980s.

The market for corporate debt is still in the process of development in the Indian economy, as is the case with most developing economies. The private placement market has emerged as an important source of resource mobilisation in the Indian debt market. The first steps in development of the debt market have been taken through development of the government securities market. The issue of government bonds through auction, and their active trading by banks has led to the emergence of a sovereign yield curve. Steps have also been taken, though still in their infancy, to enable active trading of government securities in the stock exchanges. As this market grows and as steps are taken to regulate the private placement market, the corporate bond market will also develop. Creditworthy corporate borrowers will then be able to raise longer term funds for financing their growth.

After the exuberance of the stock market in the mid-1990s and its decline thereafter, a large number of individual investors took flight to safety in bank deposits, safe retirement instruments and insurance. It remains to be seen when and how fast such savers return to the capital market so that it performs its intermediary function efficiently.

VI. Pattern of Industrial Finance among Indian Corporates

Having run through the supply side of the story, let me now turn to the demand side of industrial finance in India. An interesting shift in the pattern of financing of the Indian corporate sector needs to be highlighted in this context (Table 11). During the 1980s to mid-1990s, internal sources as a percentage of total sources of funds ranged between 30-35 per cent, while during recent years it has increased to more than 40 per cent; in fact for 2000-01, the proportion of internal sources touched nearly 60 per cent. Correspondingly, there has been a reduction in the reliance on external financing.

The question, however, remains as to whether this reflects the effect of substitution of internal sources for external sources or the scale effect of an external constraint. In terms of external funding, a number of

Table 11 : Pattern of Sources of Funds for Indian Coporates

(Per cent of total sources of funds)

Item	1985-86 to 1990-91	1991-92 to 2000-01	1992-93 to 1996-97	1997-98 to 2000-01
1	2	3	4	5
1. Internal Sources	34.1	35.7	31.3	43.1
1. External Sources Of Which	65.9	64.3	68.7	56.9
a) Equity capital	7.0	16.1	20.5	12.8
b) Borrowings	36.2	32.0	33.2	28.3
Debentures	*10.3*	*6.2*	*5.2*	*6.1*
From Banks	*12.7*	*10.0*	*10.7*	*9.4*
From FIs	*8.4*	*9.5*	*8.3*	*9.8*
c) Trade dues & other current liabilities	22.5	15.9	14.8	15.3
Total	**100**	**100**	**100**	**100**

Note : Data pertains to Non-government Non-financial Public Ltd. Companies.

Source : Report on Currency & Finance, 1998-99, RBI for data up to 1997-98 and articles on "Finances of Public Limited Companies", RBI Bulletins (various issues) for subsequent years.

interesting trends emerge. The share of equity increased in the 1990s. Besides, there was a shift to equity from debentures, especially during the mid-1990s when the equity issues commanded a large premium in the public issues markets. The share of capital market-based intermediaries has increased somewhat pulling down the debt-equity ratio. The overall share of borrowings, at about one third, remains, by and large, intact. There has been a greater reliance on internal resources during the downturn during the latter half of the 1990s. It is not clear at this stage whether this trend would change with an upturn in the capital market.

It is now appropriate to arrive at broad generalisations from the sources side of financing. First of all, bank credit has increased, but only marginally; the important aspect is that it has not gone down contrary to general belief. Second, banks continue to prefer investing in government securities despite the reduction in SLR requirements. Third, flows from DFIs have reduced, but they may not be uncompetitive intrinsically. While their interest costs are high, they have managed to curtail operating costs. Finally, the contraction in the capital market during the last 5 years has been dramatic. Overall, corporates have depended more on internal sources of financing during the second half of the 1990s.

VII. Supply of Funds

Household financial savings are the main source of funds in the Indian financial system. Private savings performance, at about 25 per cent of GDP, has been reasonably impressive by international standards, perhaps with the exception of some of the East Asian countries. Reflecting the gradual willingness to invest in risk capital since the 1980s, the share of financial scrips amounted to almost 10 per cent of total household saving by the mid-1990s (Table 12). The late 1990s, however, witnessed a reversal of this process, with a flight to the safety of bank deposits and social security. The present indications are that we can expect this continuing shift to life insurance, pension funds etc, although there could be a return to the capital market if it does well for some time. As regards the other sources of saving, the fiscal deficit continues to act as a drag, leading to negative public sector dissavings, which pull down the overall savings of the country.

Table 12 : Composition of Financial Savings Portfolio of Indian Households

(Per cent of Financial Savings)

Item	1970s	1980s	1990s	1992-93 to 1996-97	1997-98 to 2001-02
1	2	3	4	5	6
1. Currency	**18.8**	**16.1**	**11.9**	**12.5**	**10.0**
2. Net Bank Deposits	**32.7**	**22.8**	**27.0**	**25.9**	**31.4**
3. Social Security	**41.0**	**47.8**	**44.2**	**39.4**	**54.2**
a) Life Fund	12.1	10.3	11.8	11.0	14.4
b) PF & Pension Fund	26.3	23.8	21.9	20.5	23.9
c) Net Claims on Govt	2.6	13.7	10.5	7.9	15.9
4. Non-Bank Saving Instruments	**7.4**	**13.3**	**17.0**	**22.3**	**4.4**
a) Net Non-Banking Deposits	1.1	3.7	5.6	9.9	1.9
b) Shares & debentures	2.0	5.3	8.2	9.5	4.0
c) Units of UTI	0.6	3.0	4.4	3.9	0.2
d) Trade Debt	3.7	1.3	-1.2	-1.0	-1.7
5. Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Memo Item:					
Household Financial Saving (as % of GDP at current market prices)	*4.6*	*6.8*	*10.0*	*10.2*	*10.4*

Source : Handbook of Statistics on Indian Economy, 2002-03

Notes :

1. Net Bank Deposits = Bank Deposits - Bank Advances - Loans & Advances from Co-Op Non-Credit Societies
2. Net Non-Banking Deposits = Non-Banking Deposits - Loans & Advances from Other Financial Institutions.
3. Net Claims on Govt = Claims on Govt - Loans & Advances from Govt.
4. Saving in Trade Debt is "Change in Trade Dues in respect of sundry creditors minus changes in loans and advances to sundry debtors", from the Company Finance Studies.

VIII. Options for Longer Term Finance

Against the backdrop of the discussion on various aspects of financing patterns, sources of funds, maturity structure of assets and liabilities of banks and DFIs, it is apposite to discuss the options available for financing investment for growth. There are, of course, many sources of project finance available:

banks, insurance companies, DFIs, pension funds, leasing companies, investment management companies and individuals. It is perhaps useful to begin by exploring the options available within the existing institutional framework and then turn to other possible innovations.

Existing Institutional Framework

We have already observed that the maturity structure of the liabilities of banks is essentially short-term in nature. On the asset side, they already hold large volumes of long-term government paper, which is in tradable form. The composition of assets suggests that banks are less averse to taking on interest rate risk than credit risk. Given the portfolio choice, it seems to make sense for banks to keep the maturity of their loans short. It is therefore necessary to change the perception of banks regarding credit risk. An added set of institutional sources of finance is emerging with the increasing magnitude of funds flowing to mutual funds, insurance and pension. The size of the mutual fund industry in the Indian economy is still very small as compared with that of developed countries. Contractual savings are yet another source of project finance. There are two sets of completely opposing views on the investment of such savings. The first, advocates higher return and hence advocate investment in the equity market, while the proponents of safety-first advocate investment in gilt-edged securities. Both sets of arguments are equally strong - and the international experience does not provide a definitive guide one way or the other. At the same time, the increasing requirement of funds going to social securities augurs well as a potential source of productive investment.

A second set of options centre around possible innovations within the existing institutional framework. Banks (and FIs) could play an innovative role in project finance by utilising and improving on their appraisal expertise. This could be achieved through longer-term credit enhancements, take-out financing, special purpose vehicles (SPVs) and guarantees of corporate bonds. A typical long-term project faces the highest risk in initial years and cash flows usually stabilise after 5-7 years. The basic idea is that banks and FIs can take initial risks through medium-term lending and as cash flows become secure, the loans could be securitised, and sold to those institutions that have a longer-term liability structure. Another option is the marketisation of a mix of loans, such as, Jumbo Mortgages. This kind of securitisation of all kinds of assets is especially appealing because it can encompass even loans to relatively small-scale industries. The basic philosophy is for banks and DFIs to take on the initial risks and thereafter package the risks into different baskets to match varying risk appetites in the market.

There is, of course, some long-term bank lending that is already being extended. A new competitor to project finance is emerging in the form of housing loans. Current indications are that housing finance is likely to keep increasing, especially as the default rate is still relatively low. Clearly, banks seem to prefer interest rate risk to credit risk, and as long as the fiscal deficit is high, this option will always be available to them.

What does the future hold for project finance from the DFIs? In the Indian case, ICICI is already a bank, but presumably has the expertise to do project financing. IFCI is in great difficulty. IDBI is in process of restructuring. A number of financial institutions are still in the business of long-term project financing: IDFC for infrastructure and SIDBI for funding small-scale industries. A serious rethinking needs to be done about the future of these DFIs. DFIs as has been observed earlier, are not intrinsically non-competitive. If their legacy problems can be sorted out, it is possible to evolve a future role for them. India is not yet at a stage where it can fund growth exclusively out of market-based approach.

There is very little alternative and it is too early to give up the bank / DFI-based financing for industrial investment at the present juncture because markets are not deep enough to securitise loans. There are other developments that are creating a more enabling environment for a long-term credit culture. There are several ways in which creditors rights are being strengthened, which should go a long way in mitigating the risks of large-scale project financing. These include initiatives such as the setting up of Debt Recovery Tribunals (DRTs), the introduction of Corporate Debt Recovery(CDR) mechanisms and the emergence of asset reconstruction companies following the passage of the SARFAESI Act, 2002. It is hoped that all this would make securitisation of assets easier. Besides, the institution of the Credit Information Bureau as a credit registry is also likely to reduce information asymmetries and cut down on transaction costs such as project appraisal.

Development of the Corporate Debt Market

A necessary condition for the process of asset securitisation is the evolution of a deep and liquid corporate debt market. As I have already mentioned, the corporate debt market has not fully developed in the Indian context, though there is some activity in recent years, especially in the private placement segment.

Several pre-conditions for the evolution of a successful corporate debt market are now in place. These include a well-functioning market for government securities, well developed infrastructure for retail debt, a liquid money market, an efficient clearing and settlement system, a credible credit rating system and a formal regulatory framework. At the same time, the lack of good quality issuers, institutional investors and supporting infrastructure continue to constrain market development. There is also the need to enhance public disclosure, standardise products, put in place effective bankruptcy laws and use technology to reduce transaction costs further.

Market Based Financing

A final set of possibilities hinge around a shift in emphasis towards a market-based approach. Could the capital markets provide the long-term funds to industry by directly tapping the long-term savings potential in the economy? Indian households are typically risk averse and there has been a massive flight to the safety of bank deposits and contractual saving instruments. At the same time, the continuing increase in the saving rate of households suggests that there is no supply constraint in terms of financial resources available.

The challenge is really to harness these savings into risk capital. In a country like India, where a large number of retail investors enter the equity markets directly, there is great potential to develop institutional intermediaries to tap these funds. In contrast, the investor profile in most developed countries is relatively more institutional, with mutual funds and pension funds often accounting for a large proportion of the trade. This effectively means that investors in India bear far more risks than their counterparts in developed economies, who are able to spread their risk profile by say, buying units of a large mutual fund, with the necessary technical expertise of investment management. The emerging pool of institutional investors in the equity markets, therefore, needs to tap the savings potential much more effectively. The Unit Trust of India was able to successfully perform this assignment of transforming household saving into equity financing till excessive returns eroded its very sustainability.

The expansion of the mutual fund industry thus becomes a target candidate for higher resource mobilisation from the capital markets. The size of the mutual fund industry in the Indian economy is still very small as compared with that of developed countries. Besides, mutual funds have been exiting the equity markets mainly because of better opportunities in the debt markets. Further, insurance companies and pension funds could be tapped, with appropriate risk management. Investment funds - a category of non-banking financial companies in the Indian context - also provide an avenue for channeling funds into the stock markets, although the very logic of investment management carries an inherent bias for operations in the secondary market rather than the primary market. Venture capital funds with specialisation in certain regions and certain sectors provide another possibility, although in the Indian case thus far, their portfolio is still not very large and often carries a preference for later-stage projects with a smaller gestation lag rather than projects at the absolute initial stages.

IX. Conclusions

It is now time to take stock of where we stand. While reviewing the trends in industrial finance during the last three decades, certain stylised facts stand out:

- Bank credit to industry and agriculture has increased as a proportion of their respective sectoral GDP - but not as much as it might have compared with the size of the reduction in SLR.
- Given the current maturity profile of their assets and liabilities and the existing fiscal deficit, banks' ability to lend in the medium- and long-term seems to be limited.
- DFIs are not intrinsically uncompetitive but they need to clean up their legacy

of bad debts, emphasise their strengths and enhance their market orientation.

- Adequate savings are available in the economy. The issue is to channel them for investment for growth.

The Indian financial system, thus, needs to look at new ways of doing business, in terms of knowledge-based banking and better management of information. It is necessary to tailor the new institutional funds to long-term investments. Besides, the next stage of industrial financing would depend on an accelerated development of the bond market facilitating the securitisation of corporate lending.

In terms of the broad framework of industrial financing, it is clear that there is sufficient room for a greater role for market financing. At the same time, this does not mean that the Indian economy is ready for a shift to a market-based system of finance. The panacea to the present challenges in industrial financing hinges on the ability to design an appropriate mix of the bank- and the market-based systems of financing.

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