

A Status Report on India's Financial System: A view from the standpoint of intermediation and risk bearing

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The remit that has been given the authors was a discussion of the status of India's financial sector in a comparative context.

In the recent past there has been a substantial increase in the scholarship on India's financial markets and extensive work has been done on structure and change of India's financial system, both at the sectoral and overall level. Indeed the Reserve Bank of India has been the source of a lot of this scholarship and has produced a large number of studies that have sought to analyse the dynamic of institutional change and process of reform in a reflective and nuanced manner (see e.g. RBI 2004). Given the above, rather than re-tread a well trodden ground and have an extensive discussion on structure and change as might behave a paper on the status of a financial system, the authors chose to narrow the remit of the paper to a discussion of the impact of institutional change on financial intermediation. Given that financial intermediation is a key function of a financial system, it was felt that an analysis of the intermediation process would help us better assess the health of India's financial system.

The paper is divided into nine sections: To situate the context for a discussion of financial intermediation, Section I is an analytical introduction to India's financial market structure and change. Section II provides a brief review of what the reform process has meant in terms of financial market efficiency parameters. Section III provides a detailed study of the process intermediation and dis-intermediation that has characterized financial markets over the last couple of decades. In this context it also analyses the propensity of agents in the economy to bear risk. Section IV briefly looks at the supply of bank credit in the new and more competitive environment. Section V looks at how capital markets have evolved in the reform period. In Section VI we return to discuss financial intermediation but this time in terms of trends emerging in surplus and deficit producing sector and what implications this might have for the overall process of financial intermediation. Section VII looks at cross-country evidence on risk bearing, the role of securitisation in the process of risk-bearing and public policy and the role of public policy in the process of securitisation. Section VIII concludes. Finally Section IX makes a few policy recommendations in line with the conclusions.

I. An analytical introduction to the Indian financial system and reform

At the time of independence, India had a reasonably diversified financial system in terms of intermediaries but a somewhat narrow focus on terms of intermediation. The narrowness of the intermediation process is best exemplified by a lack of a long term capital market and the relative neglect of agriculture in particular and rural areas in general (see RBI 2004). It is also worth noting that the financial system as a whole was dominated by a privately owned commercial banking system accounting for a bulk of the financial assets of the system.

As India embarked on a process of industrialization and growth, it was felt that the financial system would best assist the process of growth and development if structural and behavioural lacunae noted above were addressed. It was keeping this in mind that the RBI set up Development Financial Institutions and State Finance Corporations as providers of long term capital. Agriculture's need for credit was to be met by cooperative banks. UTI was set up to canalise resources from retail investors to the capital market. In essence, the understanding that motivated financial market architecture was that the requirement of financial intermediation for accelerated growth and development was best met by specialized financial intermediaries who

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² This report was prepared by consultants for the Asian Development Bank. The views expressed in this report are the views of the authors and do not necessarily reflect the views or policies of the Asian Development Bank (ADB), or its Board of Governors, or the governments they represent. ADB does not guarantee the accuracy of the data included in this paper and accepts no responsibility for any consequence of their use.

performed specialized functions. To ensure that these specializations were adhered to, financial intermediaries developed and promoted by the Reserve Bank of India had significant restrictions on both the asset and liabilities side of their balance sheets.

In the 1950s and 1960s, despite an expansion of the commercial banking system in terms of both reach and mobilization of resources, agriculture still remained under funded and rural areas under banked. Whereas industry's share in credit disbursed almost doubled between 1951 and 1968, from 34 to 67.5%, agriculture got barely 2% of available. Equally important, with a marked preference for large industry and established business houses, other key areas such credit to exports and small scale industries were relatively neglected as well (RBI 2004). In view of the above, it was decided to nationalise the banking sector so that credit allocation could take place in accordance in plan priorities. Nationalisation took place in two phases, with a first round in 1969 followed by another in 1980.

By the mid-seventies it was felt that commercialized banks did not have sufficient expertise in rural banking and hence in 1975 Regional Rural Banks (RRBs) were set up to help bring rural India into the ambit of the financial network. This effort was capped in 1980 with the formation of National Bank for Agriculture and Rural Development (NABARD), which was to function as an apex bank for all cooperative banks in the country, helping control and guide their activities. NABARD was also given the remit of regulating rural credit cooperatives.

Following with the logic of specialization, the 1980s saw other DFIs with specific remits being set up – e.g. the EXIM Bank for export financing, the Small Industries Development Bank of India (SIDBI) for small scale industries and the National Housing Bank (NHB) for housing finance. Long term finance for the private sector came from DFIs and institutional investors or through the capital market. However both price and quantity of capital issues was regulated by the Controller of Capital Issues. Concomitant with nationalization was the restriction of new foreign entrants into financial markets.

At least one indicator of the fact that the strategy paid off in deepening financial intermediation is the near doubling of the M3/GDP ratio from 24.1% in 1970/71 to 48.5 in 1990/91 (see Table 4)³. Over the same period, bank credit to the commercial sector as a proportion of GDP more than doubled from 14.3 to 30.2%. However net bank credit to government (including lending by the Reserve Bank) doubled as well, from 12 to 24.6% (see Table 4). Therefore the deepening of financial intermediation had occurred with an increase in the draft by both the commercial sector and the government on financial resources mobilized. It needs bearing in mind that the draft of the commercial sector on financial resources is understated by the ratio mentioned above, given that, outside the commercial banking sector, there were a large number of specialized financial intermediaries that funnelled resources to the private sector.

At the end of the 1980s then the Indian financial system was characterized segmented financial markets with significant restrictions on both the asset and liability side of the balance sheet of financial intermediaries as well as the price at which financial products could be offered. It is worth bearing in mind that segmentation with price controls was not a uniquely Indian experience with other countries notably France and Japan having, at different points of time, adopted a similar architecture for their financial systems (see for example Zysman (1985) and Suzuki (1987)).

In the Indian context however segmentation meant that competition was muted. In a scenario where price was determined from outside the system and targets were set in terms of quantities, there was no pressure for non-price competition as well. As a result the financial system had relatively high transaction costs and political economy factors meant that asset quality was not a prime concern. Therefore even though the Indian financial system at the end of 1980s had achieved substantial expansion in terms of access, this had come had at the cost of asset quality. In addition, was the fact that the draft of the government on resources of the

³ All numbered tables have been appended at the end of the paper.

financial system had increased significantly. This in itself need necessarily not be a problem but over this period, i.e., the 1980s, the composition of government expenditure was changing as well, with shift towards current rather than capital expenditure. In addition, in the absence of a reasonably liquid market for government securities, an increase in net bank lending to the government meant that the asset side of banks' balance sheets tended to become increasingly illiquid.

The impetus for change came from one expected and one unexpected quarter - first, the importance of prudential capital adequacy ratios was underlined by the announcement of Basel I norms that banks were expected to adhere to; second the macroeconomic crisis of 1990-91. The reform process that followed accelerated the process of liberalization already begun in the 1980s and began a series of measured and deliberate steps to integrate India into the global economy, including the global financial network.

This is not the place to go into an elaborate review of the reforms that were undertaken. These have been extensively discussed elsewhere [see in particular RBI (2003) and (2004). Mohan (2004) has a good overview of the reforms that have been undertaken in the government securities market.]. Briefly however, given the problems facing the financial system and keeping in mind the institutional changes necessary to help India financially integrate into the global economy, financial reform focused on the following: improving the asset quality on bank balance sheets in particular and operational efficiency in general; increasing competition by removing regulatory barriers to entry; increasing product competition by removing restrictions on asset and liability sides of financial intermediaries; allowing financial intermediaries freedom to set their prices; putting in place a market for government securities; and improving the functioning of the call money market.

The government security market was particularly important not only because it was decided the RBI would no longer monetize the fiscal deficit, which would now be financed by directly borrowing from the market, but also monetary policy would be conducted through open market operations and a large liquid bond market would help the RBI sterilise, if necessary, foreign exchange movements. The attempt was to ensure the fact that both the call and term money market had sufficient depth and width to establish a short term and long term yield curve so as to ensure effective transmission of monetary policy.

In effect reforms then stood the earlier quantity driven model on its head. The attempt was de-segment markets and remove asset and liability restriction of the balance sheets of financial intermediaries. Regulatory barriers to entry would be removed and markets would determine prices. Specialisation, if any, would be market driven rather than by policy design and financial intermediaries were free to use economies of scale and scope to achieve efficiency gains and improve market reach.

II. Reform: Some Comparative Indicators

The table below gives a sense of both a comparative picture where India stood vis-à-vis other countries and how far it has moved towards a liberalized financial system. In view of recent announcements, for India column '4' (entry barriers) would probably go from 'PR' to 'LL'. It is worth noting that in 1973 not only were financial markets in developing countries repressed, but parts of the US financial markets were repressed as well. As noted earlier financial markets in France, Germany and Japan were significantly repressed as well. It also gives a sense of the different paths countries have taken in liberalising their financial systems. For example, measuring by the parameter 'Government Regulation of Operations' (column 5), in 2002, Korea is characterized as being 'partially repressed' (PR) and India as 'largely liberalised' (LL), whereas in 'Privatisation' (column 6), India is characterized as PR and Korea as being LL. No doubt these reflect different institutional settings and thereby political economy ramifications, altering not only the sequencing of the reform process but the institutional shape of the emergent market.

Financial Liberalisation in Select Countries: 1973-2002

| Country | Year | Credit Controls | Interest Rates | Entry Barriers | Govt Regulation Of on Operation | Privatisati on |
|----------------|------|-----------------|----------------|------------------|---------------------------------|----------------|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| United States | 1973 | B:L; S&L:R | LL | PR | L | L |
| | 2002 | L | L | LL | L | L |
| United Kingdom | 1973 | LL | B:LL | B:LL | L | L |
| | 2002 | L | L | L | L | L |
| Korea | 1973 | R | R | R | R | R |
| | 2002 | LL | LL | B: PR NBFi:LL | PR | LL |
| Philippines | 1973 | R | R | R | PR | PR |
| | 2002 | PR | LL | LL | PR | LL |
| Thailand | 1973 | R | R | R | - | PR |
| | 2002 | LL | L | LL | - | LL |
| Argentina | 1973 | R | R | R | - | R |
| | 2002 | LL | LL | L | - | PR |
| Brazil | 1973 | R | R | R | - | PR |
| | 2002 | PR | LL | LL | - | PR |
| India | 1973 | R | R | R | R | R |
| | 2002 | LL | LL | PR | LL | PR |

L: Liberalised – A liberalised system is one where the role of the Government has been largely curtailed.

LL: Largely liberalised – Largely liberalised denotes a system governed more by market forces, with Government role in certain important spheres.

R: Repressed – A repressed system is one in which virtually all decisions in the relevant dimension are made by the Government.

PR: Partly repressed – A partly repressed system is one where repression is not complete, but the system is closer to that end of the spectrum.

B: Banks; NBFIs: Non-banking financial institutions; S&L: Saving and Loan Associations

Source : RBI (2003)

It would not be unfair to say that from within the confines of the goals it had set itself, India's financial reforms have been a success. The banking sector is on a far surer footing and adequately capitalized (at least going by Basel norms), its transaction costs have decreased and operational efficiency and profitability have improved. There has been a marked improvement in its asset quality⁴. The market is far more diverse today in terms of products, players and intermediaries. Within a reasonably short span of time a fairly deep and liquid government security market has emerged with a financial architecture that compares favourably with best practice. The technology landscape in terms of payment systems has undergone a revolution, leading to a lowering of transaction costs and improving reliability.

Which is not to say that there are no areas of serious concern, but that, seen from within the confines of the tasks it set itself, the reform process has been stable, predictable and in substantial measure successful. Perhaps the most important aspect of the reform process is that it has neither been accompanied nor followed by financial implosion. What the table above does not say is how many of the countries mentioned underwent financial meltdown. It is a sobering thought that five of eight countries underwent fairly severe financial crises during or after the process of financial liberalization. Whereas serendipity might account for some part of the reason that India is not among them, a well managed and gradual reform process is surely another.

⁴ The share of NPAs, in gross as well as net terms, have declined significantly. The ratio of gross NPAs to gross advances of scheduled commercial banks (SCBs) declined from 15.7 per cent as at end-March 1997 to 10.4 per cent as at end-March 2002. For public sector banks in particular, the ratio of gross NPAs to gross advances declined appreciably, from 23.2 per cent as at end-March 1993 to 11.1 per cent as at end-March 2002. Net NPAs for PSBs declined from 10.7 to 5.8% over that period (see RBI 2003).

Intermediation Cost to Total Assets

| Bank Group | (Per cent) | | | | | |
|----------------------------|------------|---------|---------|-----------|---------|---------|
| | 1996-97 | 1997-98 | 1998-99 | 1999-2000 | 2000-01 | 2001-02 |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Public Sector Banks | 2.88 | 2.66 | 2.66 | 2.53 | 2.72 | 2.29 |
| Old Private Sector Banks | 2.52 | 2.31 | 2.26 | 2.17 | 1.99 | 2.08 |
| New Private Sector Banks | 1.94 | 1.76 | 1.74 | 1.42 | 1.75 | 1.12 |
| Foreign Banks in India | 3.00 | 2.97 | 3.59 | 3.22 | 3.05 | 3.03 |
| Scheduled Commercial Banks | 2.85 | 2.63 | 2.67 | 2.50 | 2.64 | 2.19 |

Source: RBI 2003

Comparative Banking Sector Performance

| Variable India | (Per cent to total assets) | | | | | | | |
|-----------------------------|----------------------------|------|------------------------|------|----------------------------|------|-----------------|------|
| | India | | East Asia ⁴ | | Latin America ⁵ | | G3 ⁶ | |
| | 1992-97 ¹ | 1999 | 1992-97 | 1999 | 1992-97 | 1999 | 1992-97 | 1999 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Spread | 2.9 | 2.8 | 2.6 | 2.2 | 5.2 | 5.4 | 2.0 | 2.0 |
| Other Income | 1.4 | 1.3 | 0.7 | 0.8 | 2.3 | 2.0 | 0.7 | 1.0 |
| Operating Cost | 2.7 | 2.7 | 1.6 | 2.3 | 5.5 | 5.7 | 1.7 | 1.8 |
| Loan Losses ² | 1.6 | 0.9 | 0.6 | 1.8 | 1.2 | 1.7 | 0.2 | 0.3 |
| Pre-tax Profit ³ | 1.6 | 1.5 | 0.8 | -0.7 | 1.4 | 2.4 | 0.7 | 0.8 |

Note : Figures for India pertain to Scheduled Commercial Banks.

1. Simple average over the period.
2. For India, refers to provisions and contingencies.
3. For India, pre-tax profit refers to gross profits.
4. Simple average of Indonesia, Korea, Malaysia, Philippines and Thailand.
5. Simple average of Argentina, Brazil, Chile, Colombia, Mexico and Peru.
6. Simple average of Germany, Japan and US.

Source : Hawkins and Turner (1999), Hawkins and Mihaljek(2001) quoted in RBI 2003

The tables above give a measure of the system improvements that have been achieved and situates these in comparative context. It is worth noting that foreign banks in India have relatively higher intermediation costs and that in India both spreads and profitability are higher, relative to East Asia but lower than in Latin America.

Financial Markets: A snapshot

| Month | Call Money | Gilt | FX | Liquidity Management | | Equity | | | |
|----------------|------------------------------------|---|---|--|------------------------------------|------------------------------------|------------------------------------|-------------------------|-----------------------------|
| | Average Daily Turnover (Rs. crore) | Turnover in Govt. Securities (Rs. crore)+ | Average Daily Inter-bank Turnover (US \$ million) | Net OMO Sales(-) Purchases (+) (Rs. crore) | Avg Daily Repos (LAF)# (Rs. crore) | Avg Daily BSE Turnover (Rs. crore) | Avg Daily NSE Turnover (Rs. crore) | Avg Sensex* (Rs. crore) | Avg CNX Nifty** (Rs. crore) |
| 2003-04 | | | | | | | | | |
| April | 17,338 | 2,26,803 | 5,585 | -7 | 27,372 | 1,041 | 2,449 | 3037 | 965 |
| May | 18,725 | 2,99,933 | 5,960 | -5,569 | 25,223 | 1,072 | 2,604 | 3033 | 963 |
| June | 20,544 | 3,00,504 | 5,837 | -44 | 24,805 | 1,187 | 2,933 | 3387 | 1069 |
| July | 18,698 | 3,04,587 | 5,920 | -57 | 42,690 | 1,434 | 3,429 | 3665 | 1150 |
| August | 19,556 | 4,09,539 | 5,983 | -11,546 | 39,995 | 1,817 | 4,267 | 3978 | 1261 |
| September | 20,584 | 2,65,848 | 6,862 | -5,107 | 31,373 | 2,032 | 4,698 | 4315 | 1369 |
| October | 23,998 | 3,89,968 | 7,672 | -13,986 | 13,569 | 2,288 | 5,026 | 4742 | 1506 |
| November | 15,156 | 1,77,063 | 6,795 | -69 | 21,182 | 2,251 | 4,644 | 4951 | 1580 |
| December | 15,276 | 1,81,991 | 6,207 | -132 | 32,020 | 2,492 | 5,017 | 5425 | 1740 |
| January | 14,189 | 1,81,619 | 7,306 | -5,228 | 38,539 | 3,125 | 6,394 | 5954 | 1906 |

| | | | | | | | | | |
|----------------|--------|----------|--------|------|--------|-------|-------|------|------|
| February | 9,809 | 1,39,130 | 7,171 | -35 | 46,244 | 2,709 | 5,722 | 5827 | 1849 |
| March | 12,422 | 2,22,685 | 8,018 | -69 | 54,915 | 2,308 | 4,767 | 5613 | 1780 |
| 2004-05 | | | | | | | | | |
| April | 12,916 | 3,00,864 | 10,118 | -253 | 75,218 | 2,243 | 5,048 | 5809 | 1848 |
| May | 10,987 | 1,92,264 | 8,521 | -116 | 74,502 | 2,188 | 4,710 | 5205 | 1640 |
| June | 10,972 | 1,75,802 | 7,741 | -60 | 61,981 | 1,681 | 3,859 | 4824 | 1506 |
| July | 8,632 | 1,30,400 | 7,684 | -230 | 57,876 | 1,793 | 4,265 | 4973 | 1568 |

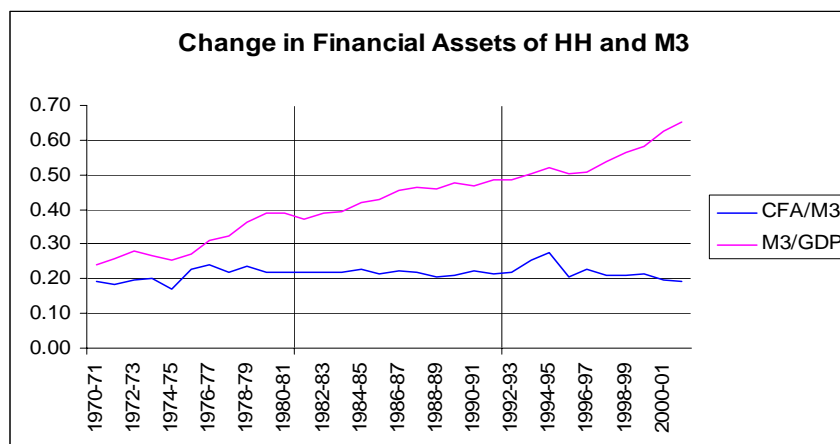
Source: On the basis of Table 5.1 in RBI (2004)a

The table above gives a snapshot of the relative importance of some financial markets. First, notice that the government securities market absolutely dwarfs every other market. Its turnover on average is more than 120 times the BSE turnover and more than 50 times that of the NSE. For a market that was not around until about decade ago, that is a truly remarkable transformation. Second, over time the NSE has clearly grown in importance vis-à-vis the BSE. Its turnover is almost twice that of the BSE. Third, there is large and active call money market. Finally, there is a large foreign exchange market as well with a rising daily turnover – it increased from more than \$5 billion to more than \$7 billion between April 2003 and July 2004.

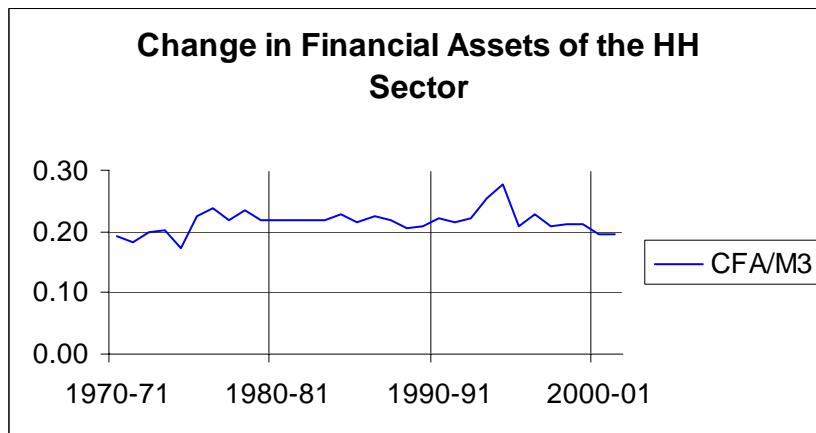
III. Financial Markets: Intermediation, Dis-intermediation and Risk Aversion

All of the above underline the fact that Indian financial markets have seen substantial change in their character, composition and efficiency since the reform process began. We now turn to an analysis how this change has affected financial intermediation.

Intermediation traditionally has been measured in terms of M3/GDP ratio. As the graph below suggests M3/GDP suggests there has been a steady increase in the ratio right through the three decades for which data has been provided. The increase is at an average rate of around 1% p.a. with a bit of variation in each of the three decades - it increases from just under 26% in 1970/71 to around 39% in 1980/81. In 1990/91 the ratio stands at 47% and in 2000/1 at just over 62% (see Table 4). If anything the data would suggest that there is mild deceleration in the increase of the ratio in the decades of 1980s as compared with that of the 1970s and the reform decade of the 1990s. The significance of this fact will become clear in the subsequent discussion.



It should also be noted change in financial assets of the household sector as a proportion of M3 actually does change but is swamped out in this graph and comes out far more clearly in the graph below.



Again, in the 1970 there is an increase in the ratio of CFA/M3. For most of the 1980s the ratio is stagnant. It spurts to a new peak of about 28% in 2003/4 and then declines to around 19% by the beginning of the millennium. It should be noted that both CFA/M3 and M3/GDP increase in the 1970s whereas in the 1990s they move in opposite directions – with M3/GDP rising and CFA/M3 falling.

This has some bearing on the ensuing discussion. When an important plank of a process of financial reform is the de-segmenting of financial markets and increasing competition by allowing the entry of new intermediaries and new products an important measure of its success is the diversification of the financial portfolio of agents. Given that India has had a bank-centred financial system, one would expect that therefore a relative decline in the importance of bank deposits in the holding pattern.

As Table1 makes clear, bank deposits continue to be the preferred financial instrument in India. As a percentage of GDP it rises from 4.3% in 1980/81 to a little more than 6% in 2001/2. Though there is a lot of variation particularly in the 1990s, the trend is clearly upward.

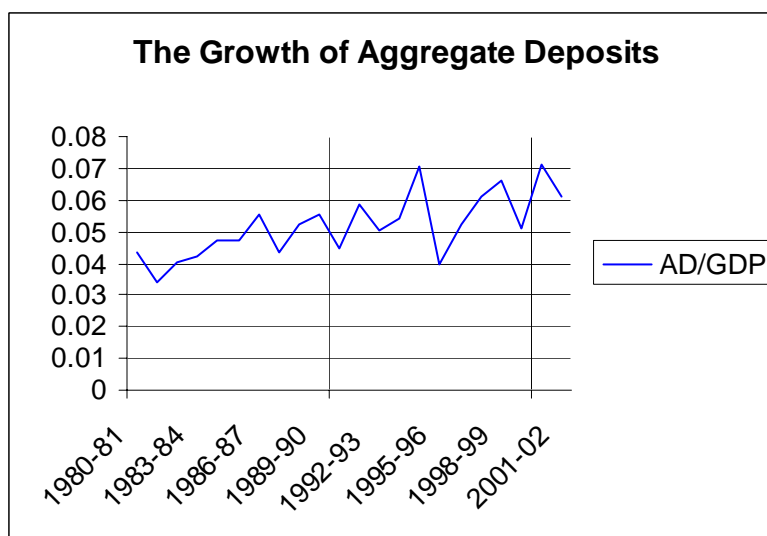
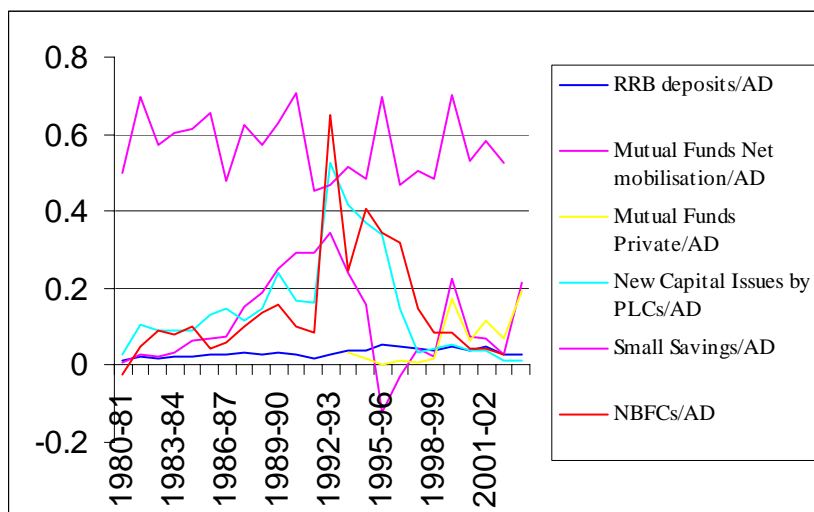


Table1 also suggest that there has been considerable diversification in terms intermediaries and products. It also suggests the continued importance of small savings as a mechanism of financial resource mobilization. The latter half of the 1990s sees the introduction of private mutual funds and their growing importance. Finally the data clearly brings out the waxing

and the waning of NBFCs as vehicle of financial resource mobilization. But despite this diversity, bank deposits constitute the single largest means of mobilizing financial resources. Indeed we would go so far as to say that banks continue to dominate the financial market landscape and this factor has not changed as a result of reforms.

Therefore one way to judge the changing importance of other financial intermediaries and forms of intermediation is to see how they have fared with respect to the bank sector. The next three graphs give us some clues about how they have fared. All graphs are based on data in Table 2. AD in the graphs refers to aggregate deposits of the banking sector. RRBs refers to regional rural banks and NBFCs to non bank financial intermediaries.

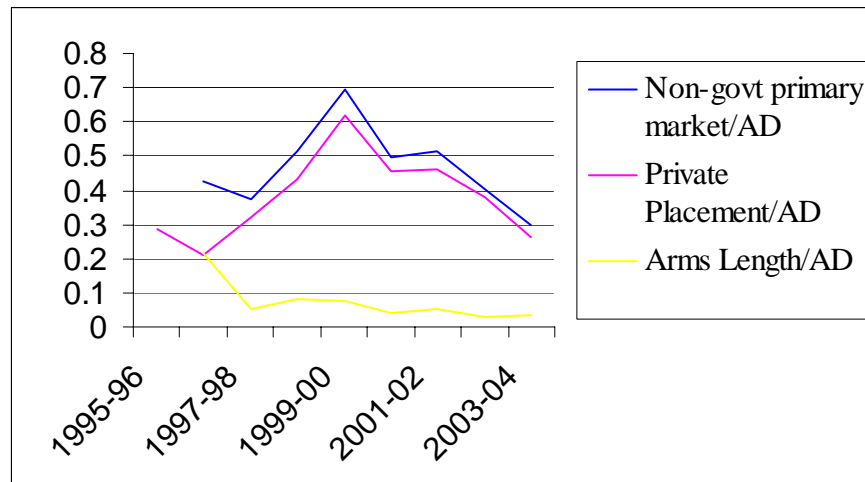


The first thing to note the graph above is the continuing importance of small savings to the economy. Even though ratio of small saving to aggregate deposit has fluctuated a fair bit – between 0.45 and 0.70 (see Table 2) – the graph would suggest that they have in general kept pace with the growth of aggregate deposits. And given that aggregate deposits have grown with respect to GDP, small savings too therefore have grown with respect to GDP. Clearly this bunch of savers march to a different beat and to ignore their motivations and options would be unsound public policy.

Second, the movement of Regional Rural Bank Deposits with respect to Aggregate Deposits is swamped out in the graph given the relatively low proportion that it constitutes. But as Table 2 indicates, 1980-81 RRB deposits were 1.4% of Aggregate Deposits. There is an almost secular increase in this ratio, reaching a peak 5.4% in 1995/96. From there it declines to 2.6% in 2003/4. As we will discuss later, one unintended consequence of financial reform has been the credit squeeze of the rural sector. The behaviour of RRB deposits would seem to underline that fact.

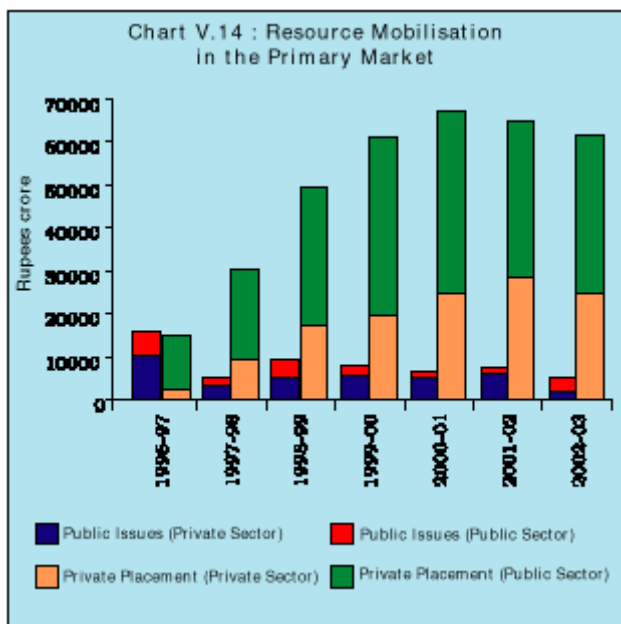
Third, is the sharp increase in the ratio of all other forms of financial resource mobilization vis-à-vis bank deposits between 1980/81 and 1992/93. Mutual fund mobilization as a percentage of bank deposits increases from 0.8 to 34% between 1980/81 and 1992/92. Over the same period, the ratio for new capital issues by PLCs increased from 2.6 to 52.4% and the ratio for NBFCs from -2.2 to 64.8%. From that peak of 1992/3, all of these ratios see a secular decline. In 2003/4 mutual fund mobilization stands at 21% of bank deposits and new capital issues at 1.4%. In 2002/3, NBFC deposit mobilization stand 2.8% of bank deposits. Whereas for both NBFCs and new capital issues the decline is uninterrupted and secular, for mutual fund mobilization, the decline reverses itself in 1998/99 and that is largely due to increased mobilization by private sector mutual funds. **Therefore it would not be unfair to say that the importance of non-bank financial resource mobilization decreased sharply in the 1990s, contrary to what one might expect with the entry of new intermediaries with new financial products.**

There were two segments of non-bank financial resource mobilization that went against this trend of decline – first, non-govt. primary market resource mobilization and the second, government primary market resource mobilization. Non-govt. primary market resource mobilization refers primary market resource mobilization, in terms of both debt and equity, all registered companies both from the public and the private corporate sector.

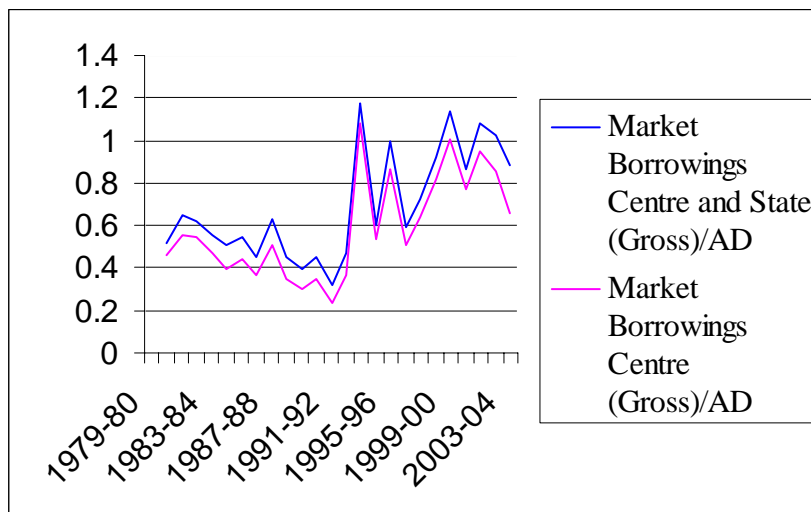


As the graph above suggest this resource mobilization as a percentage of bank deposits rises from around 46% in 1996/97 to 69% in 1999/2000 and then declines to just under 30% by 2003/4. But perhaps what is equally remarkable, is that this trend is entirely explained by what is happening to private placement with respect to aggregate deposits. What we call arms length products actually declines over this period as a percentage of aggregate deposits. The growth of private placement is explained by a host of factors among, them high interests rates in first half of the 1990s, the possibility of customizing products. But perhaps what really drove this market was that it was unregulated. Recently SEBI has tried to introduce some regulation into this market by making it mandatory for banks to list their holding of private placement products on their balance sheets.

Again it is worth pointing out, as this chart taken from the RBI Annual Report 2002-3 makes amply clear, that public sector units have been dominant players in the private placement market.

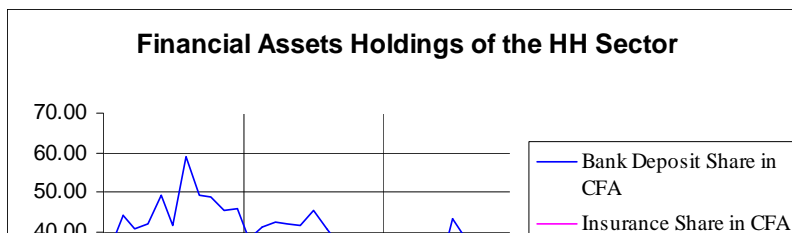


Finally, the most dynamic market has been the primary market for government bonds. As the graph below indicates, this has grown by leaps and bounds over the 1990s. This is what one would expect given that as a part of the financial reform process the government switched to market borrowings to finance its deficit. But nonetheless the scale is quite staggering.



It is worth noting that market borrowings of the centre and the state as a percentage of aggregate deposits actually declines from 64 to 46% between 1981/82 and 1992/93. After that it has remained consistently high, never falling below 60% and in many years rising to more than 100% of aggregate deposits with a high of 117%. We will have occasion to discuss this in greater detail later. In the latter half of the period some part of the dynamism may be explained by the relatively faster growth in borrowing by states as opposed to borrowing by the centre.

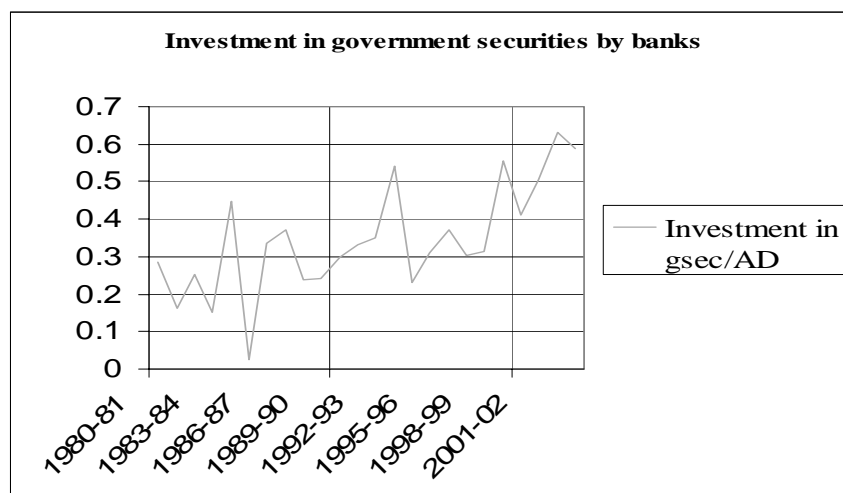
To draw this part of the discussion to a close, it would therefore not be unfair to say that **in 1990s non-bank financial intermediaries and non-bank financial products lost ground to banks and bank products in the 1990s.** The only products to go against this trend was the private placement of bonds which is not an arms-length market and the market for government bonds.



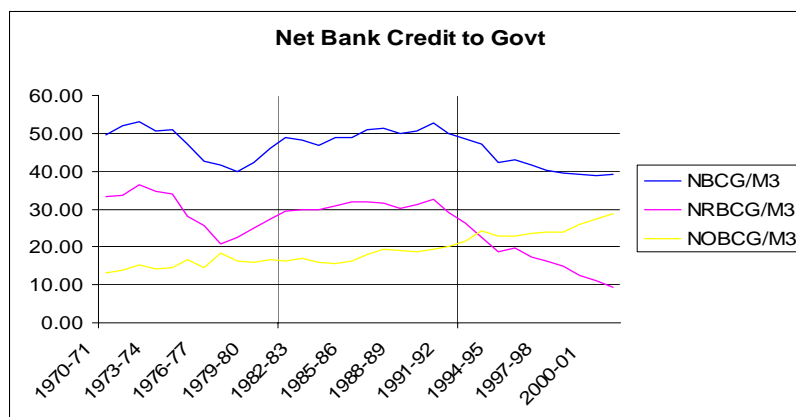
The graph above reiterates the point that bank deposits have gained ground in the 1990s. The share of bank deposits in the change in financial assets (CFA) of households increased from 29 to 37% between 1989/90 and 2001/2 (see Table 3). It is also worth noting that in the pre-reform period starting from a peak of 59% in 1976/77, the share of bank deposits in CFA fell to 29% by 1989/90, keeping in line with our earlier analysis that relative to bank deposits, non-bank financial assets gained substantial ground during the 1980s. It is worth noting as well that there is increase in the share of insurance and pension funds in CFA. Insurance's share rises from 9.5 to 14.2% between 1990/91 to 2001/2. Over the same period the share of pension declines from 18 to 14% and then rises 22% in 2000/1. **Keeping the above in mind, it would not be incorrect to say that in the post-reform period there has been a appreciable increase in risk aversion among households holding financial assets.**

We noted at the outset that net bank credit to the government as a proportion of GDP had doubled over the 1970s and the 1980s and in 1990/91 stood at 24.6% (see Table 4). The burden of this lending was borne largely by the RBI and public sector banks. Among other things given that there was no government bond market in place, holding government debt made bank balance sheets illiquid. It was felt that switching to market borrowing to finance the fiscal deficit would end the government draft of financial resources through fiat and add liquidity to the system. Given that the government became the most important borrower in the system it will be useful for our purposes to explore who holders of government debt are.

As the graph below makes clear the banking sector (net of RBI) is today the largest holder of government debt. As a proportion of aggregate deposits it holds way more than it debt at the beginning of the process of reform.



Investment by scheduled commercial banks in government securities were significantly higher in the 1990s than in the 1980s particularly beginning the later half of the 1990s when consistently more than 50% of aggregate deposits were invested in government securities. Despite the fact that scheduled commercial banks were investing an increasingly greater proportion of their deposits in government securities, net bank credit to government as a proportion of M3 declined. This was possible because even as net other bank credit to government as a proportion of M3 increased, net RBI credit to government declined very sharply, as the subsequent graph will make clear.



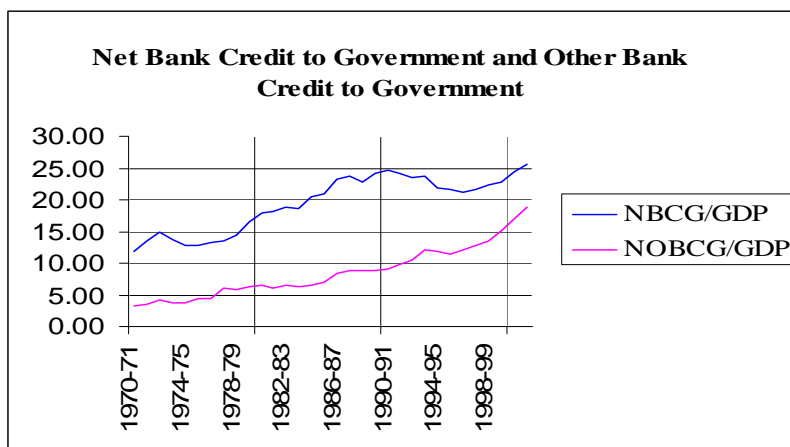
Net Bank credit to the government (NBCG) has always been an important source of financing the fiscal deficit. In 1970/71 it stood at 50% of M3 (see Table 4). During the seventies this rose to 53% before declining to 40% in 1978/79. Thereafter however there was another phase of increase and by 1990/91 it again touched almost 53%. Through the 1990s it declined and in 2001/2 it stood at 39%.

Its two broad components – net reserve bank credit to the government (NRBCG) and net other bank credit to the government (NOBCG) - however have behaved very differently. NOBCG/M3 has increased secularly right through the 1970s, 1980s and the 1990s. It has increased from 13 to 17% from between 1970/71 and 1980/81 to 19% by 1990/91 and finally 29% by 2001/2. Clearly there has been some acceleration in this trend in 1990s.

The movement of NBCG/M3 is then largely explained by the movement of NRBCG/M3. It stood at 33% in 1970/71 from where it declined to 23% in 1977/78, after which there was a secular increase and it reached 33% again by 1990/91. Through the 1990s however there was a sharp decline and by 2001/2, it stood at just under 10%.

The story therefore is not so much in the decline of net bank credit to government because as we shall see in a moment using another yardstick it has not declined at all. The underlying story is one of swapping of government debt between the Reserve Bank and the rest of the banking system. **In the 1970s the bulk of government debt was held by the Reserve Bank and today the bulk of it is held by rest of the banking system with the Reserve Bank having divested itself off the most of its holding of government paper.** And this has been achieved through institution of a large and liquid government securities market.

As we noted earlier, there is no clear cut evidence of the draft of the government on the banking system going down. Whereas it has declined as a proportion of M3 it has increased as a proportion of GDP as the graph below illustrates.



As a proportion of GDP, NBCG has increased almost secularly from 12 to 26% between 1970/71 to 2001/2 (see Table 4), barring two relatively brief phases – first, when declined from 15 to less than 13% between 1972/73 and 1975/76 and second, a slightly longer phase when it declined from nearly 25 to 21% between 1990/91 and 1996/97. **Therefore it would clearly be an overstatement to say that the draft of the government on the banking sector has decreased.** The reason NBCG/M3 and NBCG/GDP move in opposite directions in the latter half of the 1990s is that M3/GDP has grown relatively faster in this phase than in the early 1990s and overall M3/GDP has grown faster in the 1990s than in 1980s.

The increased voluntary holding of government bonds is at least in part explained by the implementation of Capital Reserve Adequacy Ratios suggested by Basel I norms. But that can hardly explain the sustained and accelerated holding of government bonds. One possible explanation that Khanna (1999) has suggested is that banks simply did not have the skills to assess risk for medium and long-term lending because risk assessment was normally done by DFIs and financial sector reforms cut the link between DFIs and banks. Faced with a completely new environment with the focus on quality of assets and without adequate skills to assess quality, banks chose the easy option of investing in government securities. Or it could be as Banerjee, Cole and Duflo (2003) suggest, the incentive structure facing loan officers does not facilitate aggressive lending to the commercial sector. Or it could well be a combination of the two.

Whatever be the underlying reason, it would probably be fair to say that the accelerated lending to the government is an indicator of risk aversion on the part of banks.

Therefore, drawing together some of the discussion that has happened, **in the 1990s, both households (as suppliers of financial resources) and banks (as providers of credit), turned significantly risk averse.**

IV. Supply of Bank Credit

As we have seen, a substantial and increasing part of bank resources is today going towards investment in government securities⁵. Before moving on to other issues, it might be worth while to focus on the nature of credit supply from banking system. This part of the paper is based on EPW Research Foundations analysis of the Basic Statistical Returns for Scheduled Commercial Banks in India which is perhaps on of the most comprehensive and sophisticated databases of its kind in the world. The analysis is available in EPWRF (2004) and it does not make encouraging reading.

After the five year branch expansion period 1990-95, the opening of rural banks was left to the commercial judgement of banks. Banks chose the easy option of stopping any rural expansion and concentrated on urban and metropolitan banking. This was given added impetus by the entry of new private banks and foreign banks. Therefore while rural **branches stagnated (or even declined) in number, urban and metropolitan banks increased** from 17,744 in March 1996 to 19, 597 in September 2003 – an increase of 265 branches per annum. The rural C-D ratio which was about 65% in the mid-eighties and around 60% in the early 1990s, declined to 39% by March 2001 before recovering somewhat to 42.6% in September 2003 (see Table 1 in EPWRF 2004). For semi-urban branches, where the C-D ratio had remained in the high forties until the early 1990s, it dropped to 35% in September 2003. For urban branches it declined from 56% in March 1990 to 43% in March 2003. **Only in metropolitan India did C-D ratios increase – from 70 to 83% between March 1990 in March 2003.**

Not only has there been a switch of credit towards metropolitan areas, there has been increasing regional concentration as well. The C-D ratio for the central region has fallen from 42 to 33.5% between March 1994 and 2002. Over the same period C-D ratio for the eastern region has fallen from 44.1 to 40.2% and for the NE region from 38.9 to 26.9%. **For western region however it has increased dramatically from 53.2 to 80.8%.** For the north it has stayed stagnant at 57% and for south it has declined marginally from 67 to 65%.

Finally, even though government statistics would suggest that the banking system has met priority sector lending targets, deeper scrutiny reveals that unfortunately agriculture, small-scale industry and the informal sector have been seen severe declines. The share of agriculture in total bank credit stood at 15.9% in March 1990. By March 1996 this had declined to 11.3 and then further to 9.8% by March 2002. Over the same period small-scale industries began at 12.4% and then declined to 10.1 before falling precipitously to 4.9% by March 2002. Over this period, the services sector has seen its share increase from about 41 to 49%. Medium and large scale industry has seen its share remain unchanged at around 38-39%.

⁵

| | 1996/97 | 1997/8 | 1998/9 | 1999-2000 | 2000/1 | 2001/2 | 2002/3 | 2003/4 |
|--------------------|---------|--------|--------|-----------|--------|--------|--------|--------|
| G.Sec/ Bank Credit | 1.09 | 0.61 | 0.81 | 0.82 | 0.82 | 0.91 | 0.80 | 1.18 |

Source: From Annual Reports of the RBI, relevant years

Therefore to conclude, **credit flows have had a serious metropolitan bias to the detriment of rural, semi-urban and urban areas. Credit has been regionally concentrated with a fairly significant bias against under-developed regions. And finally, agriculture and small-scale industry have suffered from a diversion of credit away from these sectors.**

V. Capital Markets

Turning our attention to capital markets, these have seen very rapid growth and as we have already noted at the outset these are dominated by government securities. One yardstick of how dominant the government bond market is the following; - in 1990/91 of all securities issued, corporate securities accounted for 55.2% and government securities 44.8%. In 2002/3, corporate securities share had declined to 27.8% and government securities' increased to 72.2%. Within corporate securities as well there has been marked movement towards private placement (see Tables 5 and 6).

As the table below indicates, there has been significant growth in the number of listed stocks and trading volumes in the secondary capital and derivatives markets. The number of listed companies has increased by more than 50% since 1990-91. The Market Capitalization Ratio improved during the first half of the nineties but then generally declined over the years. **The Turnover Ratio, however, has shown marked improvement over the years signaling a more liquid and speculative stock market.** The derivatives market has attained considerable volume in a short period since the trading commenced in 2000-01.

Capital Market Indicators

| Year | Secondary Capital Market | | | | | Turnover of Govt. Securities | Turnover of Derivatives market |
|-------|--------------------------|-----------------------|---------------------------------|----------|--------------------|------------------------------|--------------------------------|
| | No. of Listed Companies | Market Capitalization | Market Capitalization Ratio (%) | Turnover | Turnover Ratio (%) | | |
| 90-91 | 6,229 | 1,102 | 20.6 | NA | - | NA | NA |
| 91-92 | 6,480 | 3,541 | 57.4 | NA | - | NA | NA |
| 92-93 | 6,925 | 2,287 | 32.4 | NA | - | NA | NA |
| 93-94 | 7,811 | 4,000 | 45.6 | 2,037 | 50.9 | NA | NA |
| 94-95 | 9,077 | 4,733 | 45.6 | 1,629 | 34.4 | 562 | NA |
| 95-96 | 9,100 | 5,722 | 47.0 | 2,273 | 39.7 | 1,371 | NA |
| 96-97 | 9,890 | 4,883 | 34.6 | 6,461 | 132.3 | 1,682 | NA |
| 97-98 | 9,833 | 5,898 | 37.7 | 9,086 | 154.1 | 2,892 | NA |
| 98-99 | 9,877 | 5,740 | 34.1 | 10,233 | 178.3 | 3,225 | NA |
| 99-00 | 9,871 | 11,926 | 84.7 | 20,670 | 173.3 | 8,338 | NA |
| 00-01 | 9,954 | 7,668 | 54.5 | 28,809 | 374.7 | 11,122 | 40 |
| 01-02 | 9,644 | 7,492 | 36.4 | 8,958 | 119.6 | 25,014 | 1,038 |
| 02-03 | 9,413 | 6,319 | 28.5 | 9,689 | 153.3 | 29,885 | 4,423 |

Source: Indian Securities Market – A Review, (2001), volume IV

Note: Market Capitalization Ratio = (Market Capitalization / GDP)*100

Turnover Ratio = (Turnover / Market Capitalization)*100

Improvements in regulatory framework, market micro-structure and competitive environment have reduced transaction costs (see table below) and improved operational efficiency (see table below). Particularly noteworthy are the enactment of Depositories Act, 1996 allowing for a reduction of settlement risk and the establishment of National Securities Clearing Corporation of India Ltd. (NSCCL) leading to a wiping out of counter party risk.

Reduction of Transaction Costs

| Transaction Cost | 1994 | 1999 | Global Best |
|--------------------|---------|------|-------------|
| Trading (%) | | | |
| Fees | 2.50 | 0.25 | 0.25 |
| Impact Cost | 0.75 | 0.25 | 0.20 |
| Clearing | | | |
| Counter Party Risk | Present | Nil | Nil |
| Settlement (%) | | | |
| Paper work | 0.75 | 0.10 | 0.00 |

| | | | |
|--------------|--------|------|------|
| Bad Delivery | 0.50 | 0.00 | 0.00 |
| Stamp Duty | 0.25 | 0.00 | 0.00 |
| Total (%) | > 4.75 | 0.60 | 0.45 |

Source: Indian Securities Market – A Review, (2001), volume IV

Improvement in Operational Efficiency

| | | | |
|------------------|-------|-------|-------|
| Benchmark | 1994 | 1999 | 2000 |
| Settlement | 8.30 | 41.90 | 59.64 |
| Safekeeping | 71.80 | 78.10 | 81.86 |
| Operational Risk | 28.00 | 43.60 | 51.44 |

Source: S & P Emerging Stock Markets Fact Book, (2001).

Note: Scores out of 100

Despite these improvements, one of the major issues facing the Indian stock market today is that stocks of smaller companies, i.e., with relatively lower levels of capitalisation, listed on the exchange are hardly traded and when they are it is at sub-par prices. The table below shows market capitalization and average daily turnover of different categories of companies in BSE. Out of total of 5874 companies listed on BSE as in April, 2004, 200 companies are in A-category, 751 in B1-category, 1475 companies in Z-category and the remaining 3448 companies in B2 and T-categories. **It is a great matter of concern that the vast majority of the listed companies are value destroyers for their creditors and minority shareholders.** As the table makes clear there is hardly any activity B2, T and Z category stocks.

Market Capitalization and Average Daily Turnover in BSE (April 2004)

| Category of Companies | Market Capitalization | Average Daily Turnover |
|-----------------------|-----------------------|------------------------|
| A | 10,850,700 | 18,904 |
| B1 | 1,320,800 | 3,415 |
| B2 | 184,990 | 86 |
| T | 8,210 | 9 |
| Z | 18,870 | 9 |
| Total | 12,553,470 | 22,423 |

Source: www.bse.com

Note: Figures in Rs. million

The following four tables substantiate the claim that the substantial majority of the companies listed on the BSE are value destroyers. Data for the four tables has been taken from the CMIE database.

NON-DIVIDEND PAYING NON-GOVERNMENT COMPANIES (BSE-31/3/04)

| Category | Total No. | NDPNG cos. | % |
|----------|-----------|------------|------|
| A | 199 | 10 | 5.0 |
| B1 | 676 | 239 | 35.4 |
| B2 | 2276 | 2002 | 88.0 |
| T | 452 | 430 | 95.1 |
| Z | 959 | 912 | 95.1 |
| Total | 4562 | 3593 | 78.8 |

Note: NDPNG – Non-dividend paying

Only 5% of 'T' and 'Z' firms paid dividends as 31 March 2004. In 'B2' the category with the largest number of listed companies, only 12% paid dividend. More than 60% of 'B1' firms do not pay dividend. It is only in category 'A' that nearly all firms pay dividends.

PRICE PERFORMANCE OF THE STOCKS OF NDPNG COMPANIES (31/3/04)

| Category | NDPNG cos. | No. of Cos. with MP<FV | % |
|----------|------------|------------------------|------|
| A | 10 | 1 | 10.0 |
| B1 | 219 | 52 | 23.7 |
| B2 | 473 | 356 | 75.3 |
| T | 323 | 253 | 78.3 |
| Z | 87 | 66 | 75.9 |
| Total | 1112 | 728 | 65.5 |

Note: MP – Market Price; FV – Face Value

Stocks of more than three-quarters of the firms listed in categories 'B2', 'T' and 'Z' trade at less than face value. Even in 'B1' more than a fifth trade at less than face value. On 31st March 2003 more than 80% of B2, T and Z traded at less than face value and in the B1 category more than 50% traded at less than face value. Whereas trading at less than face value at one point of time does not really give adequate information on which to base a judgement, what is undeniably true is that the bulk of firms in the last three categories consistently and over long periods of time have traded at less than face value. **Equally important, a total of 3593 companies did not pay dividends as of 31st March 2004. Of these, only 1112 were traded.** Therefore the bulk (more than 65%) of these companies is not traded. Similarly as on 31st March 2004 financial data was available only for 1631 firms of this sample, i.e. more than 50% of the firms do not report financial data.

PERFORMANCE OF NON-DIVIDEND PAYING COs. AS ON 31-03-04

| Category | No. | PAT | Net worth | Borrowings |
|----------|------|-------|-----------|------------|
| A | 10 | 352 | 9754 | 14252 |
| B1 | 207 | -1667 | 25424 | 43359 |
| B2 | 832 | -1921 | 3909 | 32088 |
| T | 321 | -1273 | 4803 | 19752 |
| Z | 261 | -615 | -5749 | 9525 |
| Total | 1631 | -5124 | 38141 | 118,976 |

Note: PAT – Profit after Tax; Net Worth and Borrowings expressed in Rs. Crore.

EQUITY CAPITAL OF NON-DIVIDEND PAYING COs. AS ON 31-03-04

| Category | No. | Promoter Equity | Non-Promoter Equity |
|----------|------|-----------------|---------------------|
| A | 10 | 1571 | 1719 |
| B1 | 207 | 4896 | 5118 |
| B2 | 832 | 4158 | 4058 |
| T | 321 | 2298 | 2287 |
| Z | 261 | 983 | 770 |
| Total | 1631 | 13906 | 13952 |

Note: Promoter and Non-promoter equity capital in Rs. Crore.

Both of these tables drive home the point that non-dividend paying companies are significantly leveraged and have considerable non-promoter equity. Based on the above then it would not be unfair to claim that a substantial majority of the firms listed on the BSE are value destroyers for their creditors and minority stockholders.

India opened her stock markets to FII investments in 1992 and since then has seen substantial FII inflows. We have already noted earlier in this paper that private mutual funds were among the most dynamic players in market in the latter half of 1990s. The entry of private mutual funds taken together with FIIs means that institutional investors have become major players in the Indian stock market, as is made clear by the following table.

Net Investments by Institutional Investors

(Rupees crore)

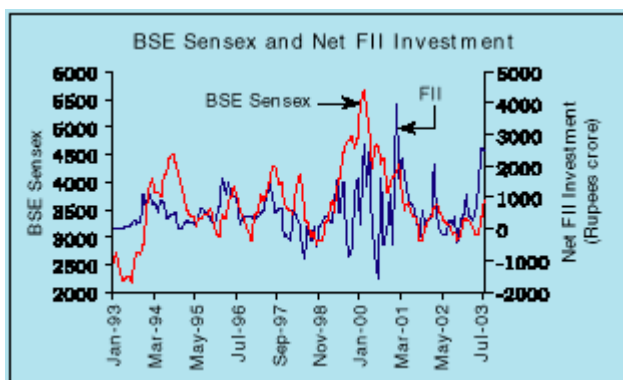
| Year | FIIs | | Mutual Funds | |
|--------------|---------------|------------|---------------|---------------|
| | Equity | Debt | Equity | Debt |
| 1 | 2 | 3 | 4 | 5 |
| 2000-01 | 10,124 | -46 | -2,767 | 5,023 |
| 2001-02 | 8,067 | 685 | -3,796 | 10,959 |
| 2002-03 | 2,528 | 162 | -2,067 | 12,604 |
| Total | 20,719 | 801 | -8,630 | 28,586 |

Source : SEBI quoted RBI Annual Report 2002/3

The table also suggests some difference in focus between FIIs and mutual funds. FIIs have traditionally focused on equity and that trend continues into this decade as well. But the data also suggests at least in the recent past mutual funds have moved out of equity (in fact they have been net sellers) and focused almost exclusively on debt markets. Whether this is conjunctural (average yield on government bonds trended downwards over this period and therefore the possibility of capital gain in bond investment) or strategic (in the presence of significant risk aversion among household which we have discussed at length earlier, retail investors might

prefer to invest in debt rather than equity) is another matter. It should however be noted in this context that bank investment in government securities significantly understates the draft of the government on financial resources of the system.

According to the RBI (see RBI 2003), there significant correlation between FII inflows and stock market performance particularly since the latter half of the 1990s. The graph below, taken from RBI Annual Report 2002/3 would seem suggest such a correlation. The same report however goes on to say that analysis of data for the period October 1999-January 2002 would seem to suggest a bi-directional causality between FIIs' equity investments and changes in the BSE Sensex, i.e., FII portfolio decisions influence and, in turn, are influenced by the market performance.



Source: RBI Annual Report 2002/3

To close this discussion on capital markets we briefly discuss the secondary market for debt and the market for derivatives.

Secondary Market Turnover of Debt Securities

| Year | Government Securities | | | Non Government Securities | | | | Total |
|-------|-----------------------|-----------|------------|---------------------------|--------------------|----------------|---------|------------|
| | WDM Segment of NSE | SGL | Total | CM segment of NSE | WDM Segment of NSE | Trading in BSE | Total | |
| 01-02 | 9,276,041 | 6,462,886 | 15,738,927 | 588 | 195,871 | 830 | 197,289 | 15,936,216 |
| 02-03 | 10,328,264 | 9,229,048 | 19,557,312 | 683 | 358,755 | 949 | 360,388 | 19,917,700 |

Source: On the basis of data from the BSE and RBI

Note: WDM refers to the Wholesale Debt Market; SGL refers to Subsidiary General Ledger accounts. SGL accounts are a facility offered by the RBI to gilt funds as a part of its liquidity support to participants in the government debt market. SGL trades therefore can be taken as an index of short trades to cover liquidity mismatches.

As the above table indicates, **the secondary market for debt is completely dominated by the secondary market for government debt.** The turnover in the corporate debt market is barely 1-2% of that in the government securities market. One of the problems with the corporate debt market is that it is completely dominated by the private placement market. For example, in 2002-03, there have been only 3 public issues aggregating Rs 48.9 billion, whereas the private placement market saw 485 issues aggregating Rs 484.2 billion. In addition, the market has begun polarizing towards higher rated issues. In the first half of fiscal 2003, AAA issuers accounted for 68 percent and AA+ 11 percent of the issues while AA and below accounted for 21 percent. Most of the issuances have been with a tenor of 3-5 years. Therefore it is not really a market for long term resource mobilization. With so little issuance of corporate debt it is hardly surprising that the secondary market for corporate debt is moribund (see also Mohan 2004 in this regard).

A small corporate debt market and it being dominated by highly rated issues creates two sets of problems. First, with DFIs moving out of long term finance and without a viable and dynamic market for long term corporate debt, the only other route open for long term funds is the equity market. As we have already seen equities have not been the preferred route to resource mobilisation by firms. Perhaps equally important the equity market is seriously flawed in that it is unable to check the destruction of investor value. In addition to the extent that banks choose to take the route of universal banking and supply long term funds, they are faced with an adverse

selection problem because the better borrowers would prefer to access the corporate debt market where they can leverage their superior rating. It also leaves firms looking for long term funds with very few avenues to raise such resources.

We turn next to a look at the products and players that dominate the secondary market for government debt.

Distribution of WDM Trades by Product and Participants

| Year | Product-wise Distribution | | | | Participant-wise Distribution | | | | |
|-------|---------------------------|---------|-----------------|--------|-------------------------------|---------------------|-----------------|--------------|---------------|
| | G-Secs | T-Bills | PSU/Inst. Bonds | Others | Trading Members | FIs/MFs/ Corporates | Primary Dealers | Indian Banks | Foreign Banks |
| 94-95 | 44.6 | 38.8 | 12.2 | 4.4 | 57.8 | 6.4 | 0.0 | 14.2 | 21.6 |
| 95-96 | 65.1 | 19.1 | 9.7 | 6.1 | 23.5 | 7.6 | 1.2 | 30.1 | 37.6 |
| 96-97 | 64.7 | 25.9 | 6.6 | 2.8 | 23.0 | 3.8 | 6.1 | 30.0 | 37.1 |
| 97-98 | 76.1 | 17.0 | 3.6 | 3.3 | 19.8 | 4.3 | 12.1 | 41.2 | 22.6 |
| 98-99 | 80.2 | 10.1 | 4.8 | 4.9 | 15.5 | 4.9 | 14.6 | 42.1 | 22.9 |
| 99-00 | 93.0 | 3.6 | 1.6 | 1.8 | 18.6 | 4.2 | 19.4 | 42.7 | 15.1 |
| 00-01 | 91.2 | 5.4 | 1.8 | 1.6 | 23.3 | 4.2 | 22.1 | 33.5 | 16.9 |
| 01-02 | 95.2 | 2.7 | 1.2 | 0.9 | 23.5 | 4.2 | 22.5 | 36.6 | 13.2 |
| 02-03 | 93.6 | 3.0 | 1.9 | 1.5 | 24.8 | 3.8 | 22.0 | 38.8 | 10.6 |

Note: Figures are percentages

The product-wise distribution tells us how over relatively short period of time government debt has completely swamped the market. From accounting for about 45% of the market in 1994/95, it now accounts for more than 90% of the market. Not unsurprisingly, given that Primary Dealers and Banks are the major holders of government debt, these two have become the major players in the market, edging out most others to the role of bit players barring trading members of stock exchanges who continue to account for more than a fifth of all trades.

We turn next to brief discussion on derivatives market given their exponential growth and their likely importance in future evolution of the market.

The derivatives trading in India is making huge strides. The volume of futures in NSE grew by 766% and the combined volume of futures and options was up by 615% in 2002/3 against the volumes in 2001/2. The total turnover increased from Rs. 1,019 billion in 2001/2 to Rs. 4398 billion in 2002/3. Average daily turnover increased from Rs. 4 to 17.5 billion over the same period. Quite an achievement given that the market that started operations only in 2000. In the global terms the NSE ranks 23rd. in futures trading and 30th in combined futures and options trading. It is also noteworthy that the turnover of derivative contracts very often surpasses the cash market volume in the underlying assets.

The market however is concentrated in futures with options trade being a very small proportion of overall volume. Most of the trade is retail with institutional participation being small. This may in part be because FIs are allowed to hedge only a fraction of their exposure and as a result most do not participate. It would seem as if growth in this market is inhibited by regulatory reluctance.

In sum then, the preceding discussion on capital markets would lead us to conclude the following: first, **there has been significant increase in the liquidity as well as operational and transaction efficiency of the capital market**; second, the corporate securities market is dominated by private placement of debt and equity; third, institutional investors have become dominant players in the market with, it would seem, a high degree of correlation between FII investment and stock market movement; fourth, the derivative market has seen very rapid growth though it lacks width in term of products traded and has very little institutional participation; fifth, the secondary debt market is completely dominated by government securities and the corporate debt market is very small; sixth, **the bulk of the firms that raise equity on the stock market are value destroyers; and finally, with the demise of DFIs (barring a few specialized ones)**

and a small corporate bond market dominated by highly rated issuers might on the one hand constrain firms with good projects and on the other leave banks facing an adverse selection problem.

We close this discussion on capital markets with look at a sector that has potential of influencing how the market functions (in terms of liquidity and depth) by being a player both in the primary and the secondary market for securities – insurance.

Even though the insurance sector has grown over time as the table below would indicate, it remains relatively small even in comparison with other developing countries.

Table: Insurance Funds as Percentage of Financial Saving of the Household Sector (Gross)

| | 93-94 | 94-95 | 95-96 | 96-97 | 97-98 | 98-99 | 99-00 | 00-01 @ | 01-02 * |
|-----------------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Total Insurance Funds | 8.7 (1.1) | 7.8 (1.1) | 11.2 (1.2) | 10.2 (1.2) | 11.3 (1.3) | 11.3 (1.3) | 12.0 (1.5) | 13.5 (1.6) | 14.4 (1.9) |

@ Provisional * Quick estimates

Note: Figures in brackets are percentage to GDP at current market prices

Source: IRDA Annual report 2002-03

Table: Insurance Penetration – International Comparison

| Country | Premium as % of GDP – 1999 | | | Premium as % of GDP – 2000 | | | Premium as % of GDP – 2001 | | |
|---------|----------------------------|----------|-------|----------------------------|----------|-------|----------------------------|----------|-------|
| | Life | Non-Life | Total | Life | Non-Life | Total | Life | Non-Life | Total |
| India | 1.39 | 0.54 | 1.93 | 1.77 | 0.55 | 2.32 | 2.15 | 0.56 | 2.71 |
| U.S.A. | 4.23 | 4.32 | 8.55 | 4.48 | 4.28 | 8.76 | 4.40 | 4.57 | 8.97 |
| U.K. | 10.30 | 3.05 | 13.35 | 12.71 | 3.07 | 15.78 | 10.73 | 3.45 | 14.18 |
| Brazil | 0.35 | 1.66 | 2.01 | 0.36 | 1.75 | 2.11 | 0.36 | 1.78 | 2.14 |
| Chile | 2.65 | 1.13 | 3.78 | 2.92 | 1.15 | 4.07 | 2.93 | 1.30 | 4.23 |
| China | 1.02 | 0.61 | 1.63 | 1.12 | 0.67 | 1.79 | 1.34 | 0.86 | 2.20 |

Source: IRDA Annual report 2002-03

Both life and non-life segments are dominated by public sector even though there has been some loss in market share with the liberalisation of the insurance sector in 2000 and the consequent entry of private players and foreign players (in joint ventures with Indian partners). With the opening up of the insurance sector in 2000 an independent regulator, IRDA, was also set up to monitor the sector. The table below gives us a snap shot of the market composition in terms of public and private firms in various insurance market segments. It is worth noting that private entry has been greatest in the life insurance segment even though as we will see in a moment this is a segment that they have found the most difficult, at least in terms of profitability.

Table: Market Composition of Insurance Business

| No. of Registered Companies (October 2003) | Type of Business | Public Sector | Private Sector | Total |
|--|---|---------------|----------------|-------|
| | Life Insurance | 1 | 12 | 13 |
| | General Insurance | 6 | 8 | 14 |
| | Reinsurance | 1 | 0 | 1 |
| | Total | 8 | 20 | 28 |
| Equity Restriction | Foreign promoter can hold up to 26% of equity | | | |
| Registration Restriction | Composite registration not available | | | |

Source: IRDA Annual report 2002-03

Life Insurance

LIC holds 98% of the market share (2002-03) with the twelve new players capturing about 2%. The industry witnessed a growth of 11.27% in 2002-03 against 43.54% in the previous year. The decline is primarily due the withdrawal of certain high yield guaranteed return plans by LIC. The private players accounted for about 2% of the total premium underwritten against less than 1% in the previous year, reflecting their ability to create new markets. Despite some success in creating new markets and taking on the public sector behemoth LIC, none of the private sector firms had by 2002/3 turned in any profits. The table below shows the performance of the life insurance companies during the years 2001-02 and 2002-03.

Table: Performance of Life Insurance Companies

(figures in Rupees millions)

| Insurance Company | Premium earned | Income from Investments | Profit after Tax |
|----------------------------|----------------|-------------------------|------------------|
| LIC 01-02 | 498219.1 | 238494.9 | 8217.9 |
| LIC 02-03 | 546284.9 | 259807.8 | 4969.7 |
| ICICI PRU 01-02 | 1163.7 | 28.7 | (1050.9) |
| ICICI PRU 02-03 | 4176.2 | 248.9 | (1471.8) |
| HDFC STD 01-02 | 334.6 | 11.2 | (251.1) |
| HDFC STD 02-03 | 1488.2 | 57.4 | (482.0) |
| Birla Sun 01-02 | 282.6 | 8.0 | (361.0) |
| Birla Sun 02-03 | 1439.2 | 30.3 | (609.6) |
| Other Private Sector 01-02 | 944.4 | 10.4 | (615.1) |
| Other Private Sector 02-03 | 3992.5 | 139.7 | (1299.9) |

Source: IRDA Annual report 2002-03

General Insurance

For private firms, the picture in general insurance as far market share and firm performance go is somewhat better. The share of public sector insurers has declined to the level of 90.6% of the gross business underwritten in 2002-03 as against 96.24% in 2001-02. Even though the public sector still retains the overwhelming bulk of the market, unlike LIC in life all public sector firms are not financially sound and the market itself should see some consolidation. The two more profitable lines of business in the non-life insurance category are fire and engineering classes. These two segments contribute 19.43% and 4.5% respectively of the gross direct premium income underwritten in India for the public sector insurers while the corresponding figures for the private insurers are 32.63% and 7.0% respectively. The motor and health segments are not so profitable lines of business in the industry due to the high claims ratio. These two segments contribute 41.0% and 7.5% respectively of the business underwritten for the public sector insurers while the corresponding figures for the private insurers are 27.0% and 5.5% respectively. Three private insurers (Bajaj Allianz, Reliance and IFFCO-Tokio have earned net profits in 2002-03. The table below shows the performance of the non-life insurance companies during the years 2001-02 and 2002-03.

Table : Performance of Non-Life Insurance Companies

(figures in Rupees millions)

| Insurance Company | Premium Earned | Income from Investments | Profit after Tax |
|--|----------------|-------------------------|------------------|
| New India 01-02 | 28588.7 | 3496.7 | 1420.0 |
| New India 02-03 | 32971.5 | 3421.5 | 2558.1 |
| United 01-02 | 19728.0 | 1477.1 | 1533.9 |
| United 02-03 | 21093.8 | 1633.8 | 1709.9 |
| Oriental 01-02 | 18027.2 | 1011.9 | (2544.4) |
| Oriental 02-03 | 18557.7 | 786.8 | 639.9 |
| National 01-02 | 18169.8 | 1198.1 | (904.5) |
| National 02-03 | 19659.6 | 1151.8 | 1349.1 |
| Total Public Sector (4 Cos) 01-02 | 84693.7 | 7183.8 | (494.9) |
| Total Public Sector (4 Cos) 02-03 | 92282.6 | 6993.9 | 6257.0 |
| Bajaj Allianz 01-02 | 98.2 | 126.0 | (96.2) |

| | | | | |
|-----------------------------|--------------|---------------|--------------|----------------|
| | 02-03 | 1541.0 | 93.2 | 96.3 |
| TATA AIG | 01-02 | 126.7 | 121.9 | (275.8) |
| | 02-03 | 828.8 | 89.7 | (129.1) |
| Royal Sundaram | 01-02 | 130.8 | 86.7 | (245.3) |
| | 02-03 | 764.9 | 117.7 | (49.9) |
| Other Private Sector | 01-02 | 63.6 | 289.3 | (0.4) |
| | 02-03 | 775.7 | 499.4 | 145.7 |
| Total Private Sector | 01-02 | 419.3 | 623.9 | (617.7) |
| | 02-03 | 3910.4 | 800.0 | 63.0 |

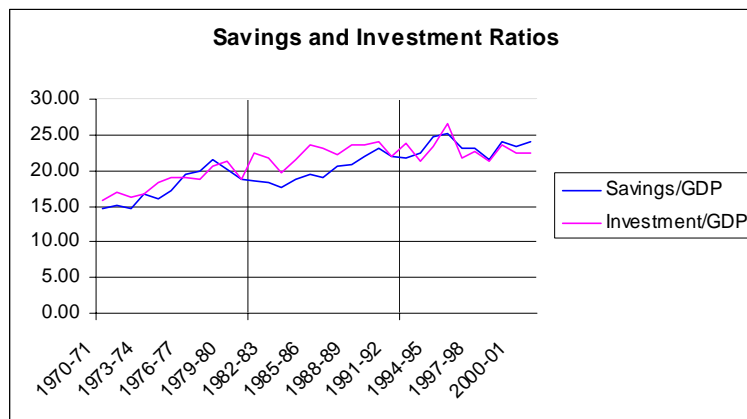
Source: IRDA Annual report 2002-03

As the table with data on international comparison showed, India is still relatively under-insured. As the market and along with it firms grow, they will diversify their portfolios seeking to match their liability structures and maximise returns. In doing that they have the potential of playing an important role in provide both liquidity and depth to the capital market.

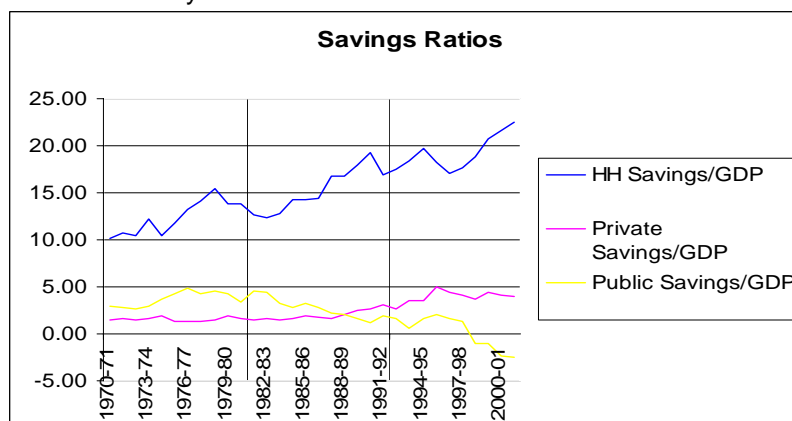
VI. Financial Surplus and Deficits: Another look at the process of intermediation

Having looked at the process of intermediation and dis-intermediation in some detail we now turn to the nature of this intermediation process – where are surplus financial resources generated and where are the used.

The ensuing discussion will take place on the basis of data presented in Tables 7 and 8



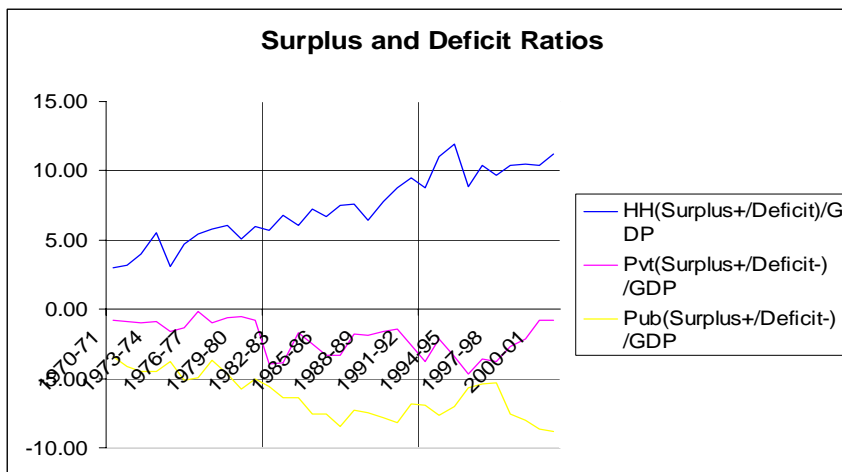
The graph above charts the movement of India's savings and investment ratio with respect to GDP. It is worthwhile noting that both ratios increased through the 1970s and 1980s but faced relative stagnation in the 1990s and thereafter. The savings ratio grew from 15 to 19% between 1970/71 and 1980/81 and continued its upward movement through the 1980s and stood at 23% in 1990/91. Since then it has fluctuated between 22-25% with no clear trend. Likewise the investment increased from 16 to 19% between 1970/71 and 1980/81. It continued to grow for most of the 1980s and stood at around 24% in 1990/91. It then accelerated to nearly 27% in 1995-96 and has decline from that peak to about 22.5% by 2001/2. Any discussion of financial market performance has to keep this relative stagnation since the 1990s. It should also be kept in mind that despite this relative stagnation, the trend rate of growth of between 5-6% obtained during the 1980s has continued through the 1990s. We will here not enter into the debate of whether the 1990s saw any acceleration of that trend.



Sectoral savings ratios over this period, depicted in the graph above have shown markedly diverse trends. Household savings have been the most dynamic growing secularly right from 1970/71 till date. In 1970/71 household savings ratio stood at around 10%. By 1980/81 this had climbed to 14% and by 1990/91 it stood at 19%. After a mild decline in the early 1990s, it resumed its upward climb and in 2001/2 stood at 22.5%. **As a result of this secular increase and the behaviour of other sectoral savings ratios, the share of household savings in total savings has increased from 70% to a phenomenal 94% by the end of our period.**

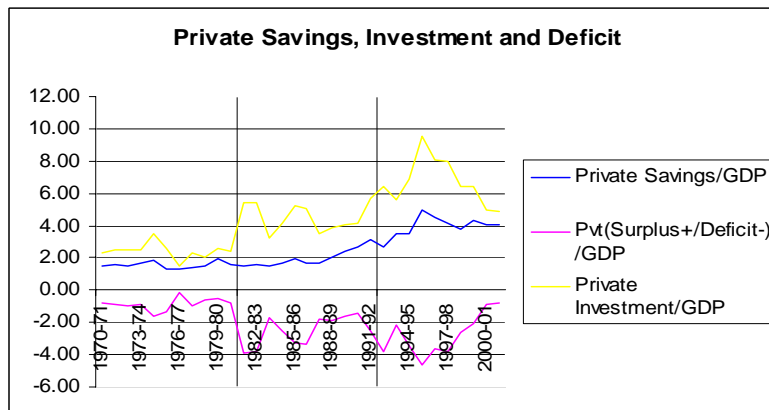
In sharp contrast is the performance of public savings. In 1970/71 the public savings ratio stood at 3%. It increased to 4.6% in 1978/79 and since then has seen a secular decline. Indeed by 1998/99 it had entered negative territory and by 2001/2 the public sector was dis-saving to the tune of 2.5% of GDP.

The private savings ratio stood at 1.5% in 1970/71. From then until 1987/88 when it stood at 1.7% it showed no clear trend, fluctuating between 1.3 to 2%. Since then however it has seen a marked acceleration, growing to 4.4% in 1999/2000 before declining slightly to 4.1%.



Given investment ratios we get a picture of surplus and deficit sectors in the economy. The household sector has consistently generated a surplus, which in itself is not surprising. The surplus has risen 3 to 6% of GDP between 1970/71 and 1980/81. In 1990/91 it stood at 8.7% and increased further to 11.2% by 2001/2.

However it is the trends in the two deficit sectors that are of interest. The private sector deficit stood at 0.8% in 1970/71. It widened secularly to 3.3% up to 1985/86, and then with the upturn in private sector savings behaviour the deficit began to narrow and by 1990/91 stood at 1.5%. On the back of accelerated private sector investment in the early 1990s it widened again to peak at 4.7% in 1995/96 and then declined precipitately to reach 0.8% in 2001/02.



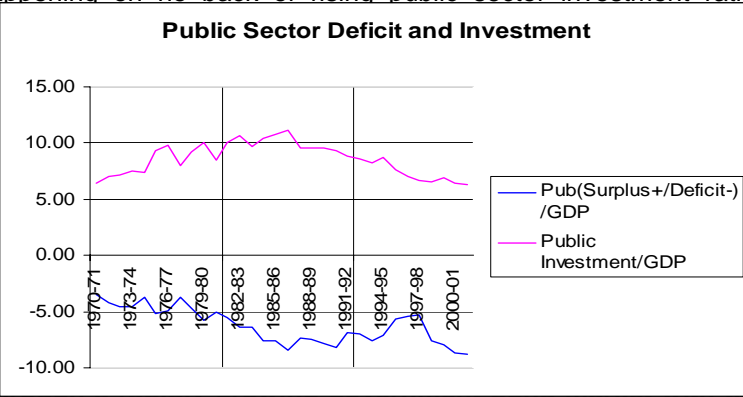
Therefore the draft of the private sector on household savings has reduced considerably. It might be argued that the decline in the draft on household sector surplus is the result of the sharp decline in the private sector investment ratio, when it declined from a peak 9.6% in 1995/96 to just under 5% in 2001/2. Whereas the sharp decline certainly contributed to a decline in the deficit, as we have already pointed out the private sector savings ratio has been secularly rising since 1987/88 and the decline of the last few years has been very marginal. **If this upward trend were to continue and there are reasons to believe why this might be so, even when private sector investment rises again the deficit of the private sector might not increase markedly.**

The story of the public sector deficit is almost the exact reverse of that of the private sector. In 1970/71 the public sector deficit stood at 3.5% of GDP. With some fluctuation around the trend, it continued to secularly rise reaching a peak of 8.43% in 1986/87. It began to narrow from this peak and by 1997/98 had reached 5.3%. Since then it has widened again to achieve a new peak of 8.8%.

As we analyse these trends it is useful to remember that the increase in the deficit up to 1986/87 was happening on the back of rising public sector investment ratios. Public sector investment ratio

seen a secular increase in the savings ratio had that took place a squeeze on public 1995/96 is the term that the public unlikely that it is deficit of the ce are bound by di

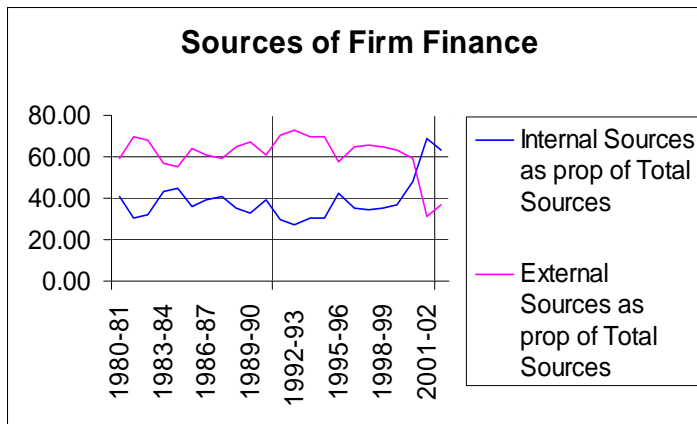
In the c financing gover intermediated th no longer having to bear the burden of holding illiquid government debt. And the desire to hold government debt is underwritten by increasing risk aversion in the economy. This can hardly be a happy state of affairs despite all the new found sophistication of India's financial markets.



Since then it has that public sector wing of he deficit n the continued ctor deficit from likely in the near ough it is equally erm, the overall given that these

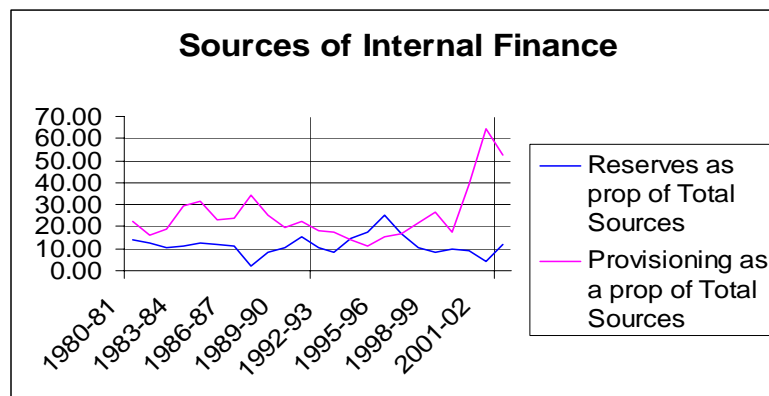
sector is largely d this has been e Reserve Bank

To round off this discussion it would be useful to consider how the private corporate sector finances its investments and expenditures. The following graphs have been drawn using data Reserve Bank's sample of 900 odd companies from the registered corporate sector firms.



Through the 1980s the private corporate sector financed itself largely through external resources which constituted a stable 60% of the total resources mobilized. **However through the 1990s there has been a clear upward trend in the internal resources utilized with internal resources constituting 63.5% of total resources by 2002/3. It is worth pointing out that, in case this trend persists, then financing patterns will be in line with patterns in most developed economies.** Between the period 1970-1989, internal finance accounted for 91% of gross financing of non-financial firms in the US, 97% in the UK, 69% in Japan, 61% in France and 81% in Germany (see Bertero (1994) and Corbett and Jenkinson (1996)). It is also worth while noting that the recourse to equity markets as a source finance was very low. In fact through this period, firms in both the USA and the UK bought back equity. France where use of equity has been highest financed only 6% of its gross financing through equity.

The increasing recourse to internal resources by our sample firms would seem to tie into the acceleration in the private sector savings ratio that has been noticed since 1987/88. It is on the basis of this that we had argued earlier that the trend of rising private sector savings is likely to continue.



In India our sample data would seem to suggest that it is provisioning (depreciation) rather than reserves that have been the main source of internal financing. In fact, if any thing reserves seem to be declining in importance as a source of internal finance. These are of course very tentative conclusions based just on RBI's sample of firms. But as we noted they seem to tie in with other macro indicators.

VII. A cross-country comparison of risk-bearing

As we have noted earlier financial reform and liberalisation is truly global phenomena and has affected. How has this affected other economies and are their risk bearing propensities different, given that our discussion seem to suggest that attitudes to wards toward risk have some bearing on market outcomes.

The first thing to note is that despite this onslaught fro non-bank financial intermediaries as a result of the liberalisation process, the banking industry has survived and grown (as a proportion of GDP) (see e.g., Scholtens and van Wensveen (1999) and Allen and Santomero (2001)). However what is equally clear is that relatively banks have lost ground to non-bank financial intermediaries. As Allen and Santomero (2001) discuss in some detail, not only have banks lost ground to non –financial intermediaries, in the USA banks themselves are very different from what they were not so long ago. Today they are not the main source of consumer finance neither are they the repository of liquid savings in the financial system. Banks also have successfully restructured their businesses to become less dependent upon income from traditional financial intermediation. And it is not just about the USA. As Schmidt, Hackenthal and Tyrel (1999) point out, banks losing ground to non-financial intermediaries is true in France, Germany and the UK, with the fall in the share of householders claims on banks as a proportion of their total financial assets being the sharpest in France.

However we would caution against drawing quick inferences from these trends though any analysis of the road ahead must take these trends into account. One of the reasons for caution is that, despite the liberalisation of financial markets and the above trends, the role of banks in economies seems to be very different across economies and this might be linked to the propensity of agents to bear risk. And this certainly is very different across economies. The figure below taken from Allen and Santomero (2001) shows us the distribution by of total assets held by households in US, UK, Germany, France and Japan. What is truly remarkable is how diverse risk-bearing propensity is across countries. In the US only 19% is held in cash and cash equivalents (which would include bank deposits) and 31% in fixed income assets such as bonds, loans and mortgages. But the bulk is held in risky assets as such as equity and real estate. At 24%, in the UK there is a slightly higher percentage held in cash and cash equivalents but also the proportion of risky assets held is higher at 52%. Clearly the propensity to bear risk in both US and UK is substantially high.

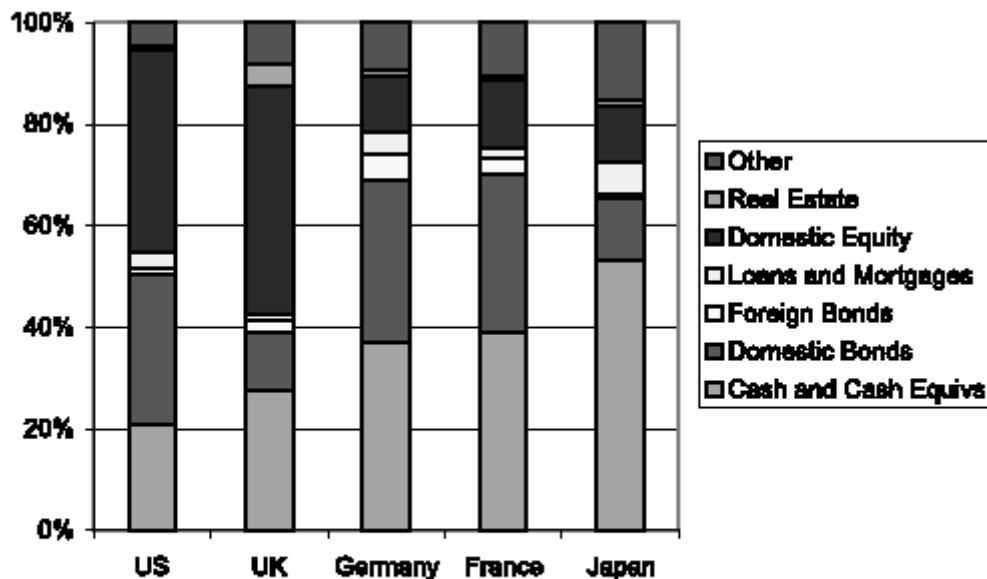


Fig. 15. Portfolio allocation of total financial assets ultimately owned by the household sector (% of total) (Source: Miles, 1996, Table 5, p. 22).

Compare this with Japan where 52% is held in cash and cash equivalents, 19% in fixed income assets and only 13% in risky assets. In France, 38% is held in cash and cash equivalents and 33% in fixed income assets. In Germany the relevant proportions are 36 and 40. At 16%, holding of risky assets are at levels comparable to Japan. Clearly then Japanese, French and German households are more risk averse than US or UK households. As Allen and Santomero (2001) point out when the above data is used in combination with household financial assets as a proportion of GDP in respective countries, it turns out that, relative to the other three countries, household in US and UK are not only more risk-loving but also hold more financial assets.

The above gives us a comparative notion about the asset-holding pattern of surplus agents in a few developed market economies. What do we know about way deficit agents choose to finance themselves? Using data from Bertero (1994) and Corbett and Jenkinson (1996) we had noted that internal finance is the most important avenue of raising resources for firms. To recap, in the US, between 1970-89, 91% of firm financing was internally generated. This ratio was 97% for the UK, 69% for Japan, 61% for France and 81% for Germany. Bank finance contributed 17% in the US, 20% in the UK, 31% in Japan, 41% in France and 11% in Germany. At 17%, bond finance is not an insignificant route for raising financial resources by firms. In the rest it is not with it accounting for 3.5% in the UK and 5% in Japan. In the other two it barely registers on the radar screen. Equity is not a preferred route in any of these countries. In fact over this period firms in

US and the UK bought back equity from the market. In Japan it accounted for 4% of firm financing and in France for 6%. And of course the other deficit agent, the government, raises money through the bond market.

The presence of financial intermediaries has been explained in the literature by transaction costs and asymmetric information related capital market imperfections (see e.g., Bhattacharya and Thakor (1993)). Allen and Gale (1997) would like to suggest that intermediaries are present also because of the need to manage and transform risk. And that the differences across financial systems arises because the nature of this transformation is linked to propensity to bear risk. Therefore financial intermediaries largely undertake what they call cross-sectional risk sharing in the US and the UK. Whereas in France, Japan and Germany they largely undertake inter-generational risk sharing. Whether we choose to agree with Allen and Gale (1997) or not, what there is no gainsaying is that the risk bearing propensities of surplus agents and methods of financing of deficit agents will have an important bearing on both the characteristics and evolution of a financial system.

Finally as Mayer and Sussman (2001) point out, new research has meant that we have moved away from the verities of a world divided into market- and bank-centred financial systems. The world is a lot more complex than that to afford us the pleasures of such neat distinctions. As we have already seen the role of the banking system Japan is central but they also have a very large and well capitalised equity market. Bank finance is important in Japan but is relatively unimportant in Germany. Banks are involved in corporate restructurings in Japan but not in Germany. Clearly then there are institutional specificities at work which we still do not understand very well, but a good place to start might be the relationship between institutions and risk-bearing.

Changes in financial structure: across space and over time

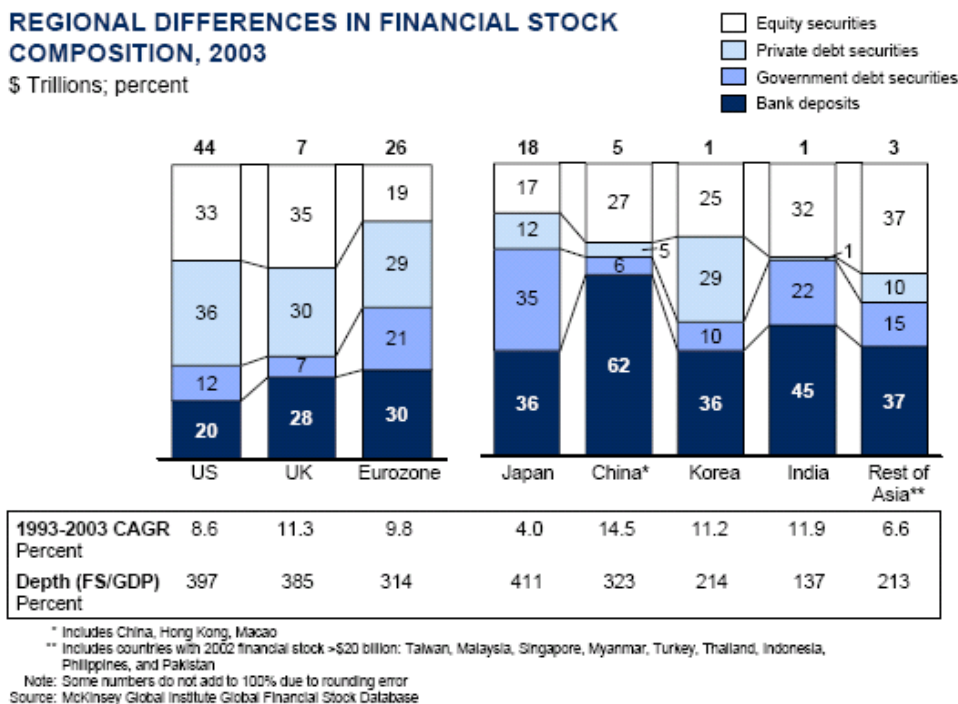
To better understand some of these relationships and to see how financial structures might have changed over time discussion that follows uses data⁶ from a recently released report by the McKinsey Global Institute (2005), '\$118 Trillion and Counting: Taking Stock of the World's Capital Markets'. The Report defines financial stock (FS) as a summation of equity, private debt securities, government debt securities and bank deposits. Clearly other than money (cash), any other financial asset that is held in the economy would involve either directly or indirectly holding one or the other of these assets.

⁶ We would like to emphasise that we have used the data (or calculations based on the data) made available in McKinsey (2005). Our interpretation of the data and analysis of financial market structure is different in both nuance and emphasis from the position taken by the McKinsey report. At a very broad level of generalisation, the McKinsey report would argue that financial deepening led by private sector intermediation (either through debt or equity) is beneficial for the economy whereas government debt led financial deepening is less preferable (see for example p13 of the report). Our position on private versus government debt driven intermediation is much more agnostic, arguing that these reflect underlying differences in risk-bearing propensities of agents within national economies and that these impact financial structure and the way it responds to change which ought then to be taken into account in designing public policy interventions.

Exhibit 5

REGIONAL DIFFERENCES IN FINANCIAL STOCK COMPOSITION, 2003

\$ Trillions; percent



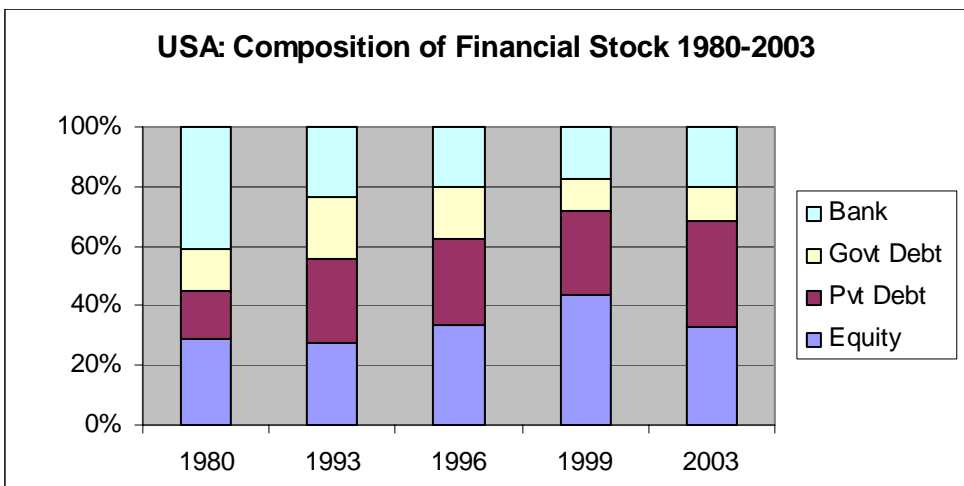
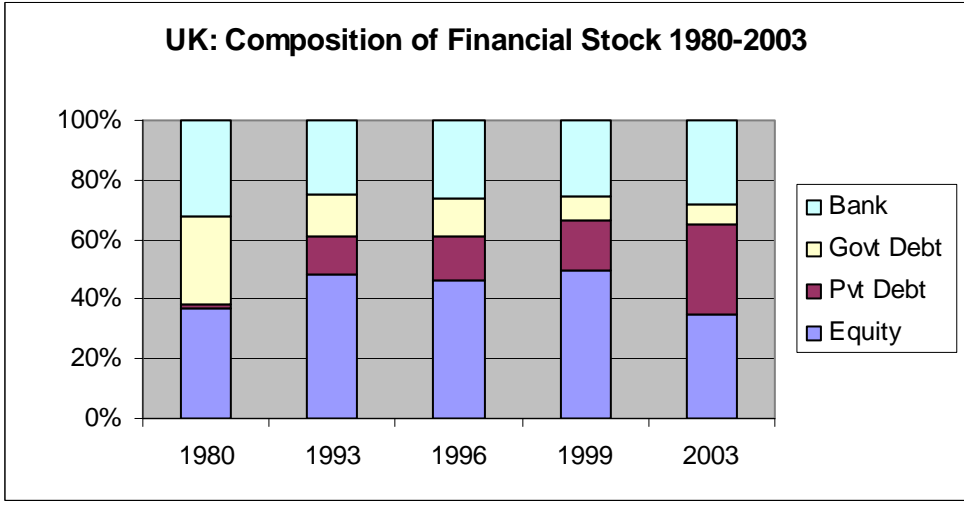
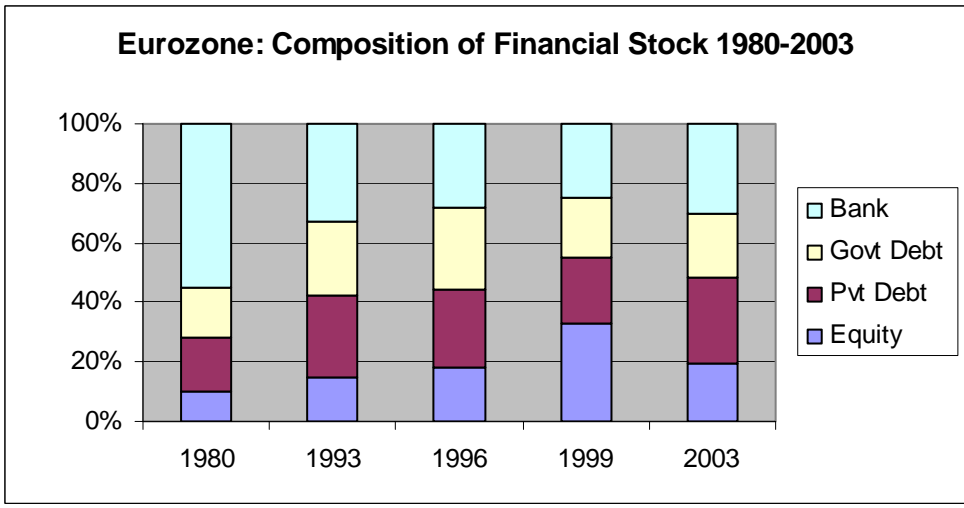
Source: McKinsey Global Institute (2005), p132

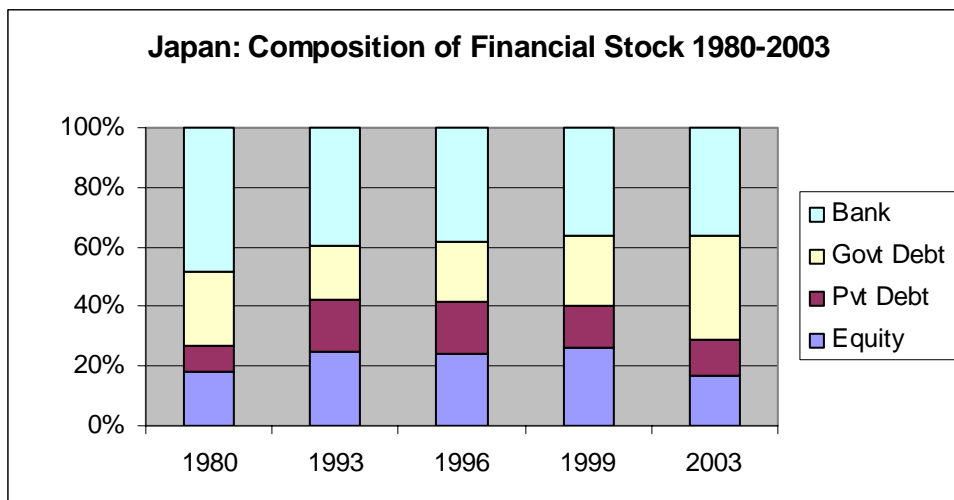
The graphic above reiterates the point made earlier that economies have fairly diverse financial systems. Equities account for a third or more of the FS in USA and the UK whereas they account for less than a fifth in the Eurozone and Japan. On the other hand, bank deposits account for only a fifth of the FS in the USA whereas in Japan they account for more than a third, with the Eurozone somewhere in between. Perhaps the starkest difference is in the share of government debt securities in FS – whereas in the UK they account for less than a tenth of the total FS and in the US a little more, in Eurozone economies they account for more than a fifth and in Japan more than a third of the FS⁷.

Even among the developing countries of Asia there are significant differences in structure⁸. Accounting for almost two-thirds of total FS, the role of bank deposits in the financial sector is way more important in China as compared with Korea and India where they account for 36 and 45% of FS respectively. On the other hand government debt securities account for more than a fifth of India's FS where as they play a relatively marginal role in China and Korea. Finally in Korea private debt securities, accounting for a little less than 30% of FS, play a much more important role in the financial system than in both China and India where their role is negligible. These differences reflect at least in part differences in attitudes toward risk bearing and must be kept in mind as we discuss public policy and financial sector development.

⁷ Even if we partially discount some of increase in the relative importance of government debt due to the somewhat unusual circumstances of the Japanese economy in the 1990s where it has effectively remained mired in recession for most of the decade (the compound annual growth rate of the nominal GDP between 1993-2003 was -0.1% [McKinsey Global Institute (2005), p 41]) and the government has tried to keep demand afloat by running fiscal deficits. Therefore the increase in the FS/GDP ratio from 273 to 411 over that period [McKinsey Global Institute (2005), p 136] has to be treated with some caution.

⁸ It is worth noting that the compound annual growth rate (CAGR) of FS in China (14.5%), India (11.9%) and Korea (11.2%) was significantly higher than not only of the global average (8.4%) but also of the USA (8.5%) and Europe (9.9%).





The four graphs⁹ (all based on data from McKinsey (2005)) above track the changes in the composition of FS alongside a process of financial deepening¹⁰. If earlier we noted the diversity in financial structure, changes in the composition of FS, however, suggest some pattern as well. As the discussion on differences in structure had noted, the relative importance of bank deposits in FS has varied across economies. However what is noteworthy is that, over time, across all economies the relative importance of bank deposits has declined. The decline in the importance of bank deposits alongside a process of financial deepening has seen a concomitant increase in the relative importance of both debt and equity.

There have been differences as well in these patterns of change. The most marked differences have been in the changing composition of debt securities over time and it would appear that it is this difference that gives financial systems the different look and feel they have across economies. In the USA and the UK growth of private debt securities has dominated the debt market whereas in the rest of Eurozone and Japan government debt securities that have tended to dominate the debt market. The above point is substantiated by data, shown in the graphic below, on relative contribution of private debt, government debt and securitization to the evolution of debt markets in developed market economies. Again it might be useful to tie in these changes to the discussion earlier on the risk bearing propensity of different economies.

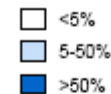
⁹ Please see Table 10 in the data appendix for supporting data.

¹⁰ Over the period 1980-2003, for Japan the ratio FS/GDP increases from 200 to 411, in the UK from 103 to 385, in Europe from 84 to 306 and in the USA from 179 to 397.

Exhibit 7

REGIONAL DIFFERENCES IN GROWTH COMPONENTS OF DEBT SECURITIES FINANCIAL STOCK, 1980–2003

Percent contribution to growth



| | US | UK | France | Germany | Italy | Japan |
|---------------------------|----|----|--------|---------|-------|-------|
| Increased government debt | 22 | 14 | 61 | 35 | 59 | 75 |
| Increased private debt | 42 | 82 | 39 | 29 | 39 | 24 |
| Securitization | 36 | 4 | <1 | 36* | 2 | 1 |
| CAGR | 12 | 13 | 14 | 12 | 14 | 12 |

*Almost all of German securitization is due to Pfandbriefe, i.e., mortgage backed bonds issued by mortgage banks

Source: McKinsey Global Institute (2005), p102

First, it is important to note that the CAGR (compound annual growth rate) of the debt market registered in all economies represented in the graphic is higher than the CAGR of the overall Global FS. Global FS over 1980-2003 grew at a CAGR of just under 10%. FS in the USA over this period grew at 9.5%, in the UK at 10.6% and in the Eurozone at 10.7% approximately. Global Debt Stock over this period grew at about 11.3%.

Second, in UK and USA growth has been powered by private debt markets and the relative contribution of government debt to the growth of the debt market has been marginal. Private debt securities accounted around four-fifths of the growth of debt markets. However in a major difference between the USA and the UK, securitization plays practically no role in the evolution of the debt market in the latter whereas it plays an important role in the former. Securitisation accounts for nearly 50% of the private debt market.

On the other hand government debt plays a significant role in the growth of the debt market in France, Germany, Italy and Japan – accounting for more than a third of debt market growth in Germany at the lowest to three-quarters of the debt market in Japan at the highest. Of these four Germany is the outlier in the sense that 60% of growth in the debt market was accounted for by private debt securities, of which nearly than 60% came through the process of securitisation.

Securitisation and changes in financial structure

Securitisation therefore has been an important component of the growth of debt securities in two economies with reasonably different financial markets – one in which private debt securities have been the prime motor of growth (USA) and the other in which government securities have had a significant role in the evolution of debt markets (Germany). Again another instance of how fraught it is to generalise about financial market structures and how careful one has to be.

The securitised debt market in the USA however is both larger and more diversified. The total stock of securitised debt outstanding in 2003 in the USA was \$7 trillion. Of this \$5.3 trillion was accounted for mortgage backed securities (MBS) and the remaining \$1.7 trillion by asset

backed securities (ABS). Perhaps what is equally remarkable is that in the first half of 2004, for the first time issue of securitised private debt outstripped that of non-securitised private debt (see McKinsey (2005))¹¹. Given that fixed-interest mortgage loans have a uniformity of flows that lends itself to securitisation, one of the reasons why securitisation has taken off in the USA are well developed mortgage markets. In June 2004, total outstanding mortgages stood at \$9.9 trillion (amounting to 85% of the US GDP) of which as we have already noted \$5.3 trillion was securitised (see McKinsey (2005)).

To put the enormous size of the US debt market in perspective, over the period 1980-2003, the UK debt market grew by \$2.4 trillion of which \$2.1 trillion was accounted for by private debt securities and of this only \$0.1 was securitised (see McKinsey (2005), p110). The German debt market grew by \$3.1 trillion of which government debt securities accounted for \$1.1 trillion and the rest by private debt securities. Of the \$2 trillion private debt securities, approximately \$1.1 trillion was securitised almost entirely through what are called Pfandbriefe or mortgage backed bonds (see McKinsey (2005), p116). Whereas Pfandbriefe are securitised debt in the sense that these allow the originator of the mortgage to sell the mortgage loan for cash and provides long-term finance for the housing market, they do not allow complete liquidity because the debt is retained on banks' balance sheets (see RICS (2004)). This holds back the growth of the mortgage market in as much as it constrains the growth of a secondary market in MBS.

It is interesting to note that even the UK which has a very well developed mortgage market and a very active private security market however lags behind the USA in securitisation. Perhaps one of the reasons for this might have to do with the nature of the mortgage contract. The UK's mortgage market is dominated by variable rate contracts as opposed to for example the German and the US markets that are largely long term fixed rate contracts (see Miles (2004))¹². In fact in the USA, low interest rate 30 year fixed rate contracts are the norm in the mortgage market (see RICS (2004)). Fixed rate contracts of course yield more predictable cash flows and better standardisation – both important for the process of securitisation.

But what really differentiates the variable interest rate non-securitised UK mortgage market and the long term fixed rate securitised German mortgage market from the long term fixed rate securitised US mortgage market is the presence of a large and liquid secondary market in mortgage backed securities (MBS) in the last mentioned economy. And this large secondary market in MBS is explained at least in part due to architecture that is peculiar to the US financial system and is public policy driven.

At the heart of the securitised mortgage market are two private but government sponsored agencies - Federal National Mortgage Association and the Federal Home Loan Mortgage Corporation, better known, respectively, as Fannie Mae and Freddie Mac¹³. Both these agencies buy mortgage loans from the originator of mortgages (and thereby provide them with liquidity with which to issue to fresh mortgages) and sell MBS to investors in the secondary market, and thereby generating new funds with which to buy mortgage loans from originator of mortgages. In effect they intermediate¹⁴ between the issuers of mortgages and investors who are looking for equity-like returns without the risk inherent in equities and this intermediation helps both widen the market for mortgage loans and make it more liquid. Mortgage issuers therefore do not have to be depository institutions and constrained by having to match assets and deposit liabilities and the credit risk itself is underwritten in a much larger pool of investors in the secondary market.

¹¹ Between 1980-2003, the total debt market in the USA increased by \$19.3 trillion. Of this government debt securities accounted for \$4.3 trillion and private debt securities for \$15 trillion of which \$7 trillion was securitised (see McKinsey (2005), p81).

¹² In fact McLaughlin and Fenton (2000) would say that "the UK industry has encouraged and perpetuated" variable rate contracts. Miles (2004) suggests that consumer choice might have little to do with the dominance of variable rate contracts and that therefore this has to be the preferred industry standard.

¹³ Both of these organisations were set up immediately after the depression to catalyse the growth of the mortgage market through establishing a secondary market in mortgage securities but remained largely in financial backwaters. They came into their own after Savings and Loan Associations collapse in the late 1970s which until then had been the backbone of mortgage financing. The government used Freddie Mac and Fannie Mae to clean S&L balance sheets through the secondary market, after which there has been no looking back. (see McLaughlin and Fenton (2000)).

¹⁴ However both have begun holding an increasing proportion of the mortgages that they buy on their balance sheets rather than selling it in the secondary mortgage market (SMM). In 2003 their combined holding more than \$1.5 trillion, more than three times then 1997 level (see Economist (2005) Feb 18th).

As government sponsored enterprises both these agencies are charged with the public policy objectives of stabilising the secondary mortgage market and improving access to and ensuring the reliability of the flow of mortgage credit. Towards this end both of these agencies have privileges not afforded other private players in the secondary market. They get a \$2.5 billion credit line from the US Treasury, tax exemptions and favourable capital treatment (see McLaughlin and Fenton (2000)). As a result of these privileges both of these private agencies are treated as quasi-government agencies and are able to borrow at preferential rates. The ability to borrow at preferential rates is supposed to be passed on to buyers of mortgages in terms of lower mortgage rates and thereby improve access and at the same time deepen the mortgage market. The flip side of being government sponsored agencies with definite public policy mandates is that they are constrained in terms of their balance sheets – they cannot originate mortgages and there are restrictions about the markets they can enter (as in mortgages they can buy).

The ability to borrow at preferential rates means that not only does the presence of Freddie Mac and Fannie Mae improve access to the mortgage market¹⁵ they perform one other, from the market point of view, very crucial function – partially absorb the risk of loss from prepayment. If mortgage contracts are long term and fixed rate and there exists a fairly liquid secondary market then the holder of MBS would tend to lose because of prepayment of the mortgage through refinancing of the mortgage loan when interest rates decline. Therefore investors would expect a prepayment premium¹⁶ which would push up the price at which mortgages can be refinanced leading to adverse market size and access implications down the chain. Freddie Mac and Fannie Mae by hedging in the derivatives market are better able to cope with and absorb some of the risk associated with prepayment (and given their size and standardization of loan contracts economies of scale would lower hedging costs). This makes mortgage owners more willing to hold long term fixed rate mortgages (because refinancing is a viable option) and investors more willing to hold MBS because the costs and risks of prepayment are lowered.

Freddie Mac and Fannie Mae then have been pivotal to the growth not only of the US mortgage market but also to the securitisation of the private debt market. The two have grown apace. And their status as government sponsored enterprises with privileged standing in capital markets has been critical in their playing this catalytic role in the growth of securitisation process¹⁷. Not only has their presence allowed for an exceptional growth of the mortgage market and a deepening of the securitisation process, but market growth in turn has led to the growth of firms specialising in specific stages of a mortgage transaction – origination, funding and servicing - leading to further efficiency gains for the market as whole. For example, loan servicing is outsourced to specialists and no longer the concern of lenders, for whom this in any case may not be a competency. Similarly credit risk is now shared out in a much wider secondary market. In addition to delivering benefits in terms of reduced cost, a mortgage market populated by specialist firms has also meant a market that is far more transparent with a high degree of market discipline imposed on participating firms. Finally as the market has grown, use of standardisation (again made possible by long term fixed rate contracts) and technology has allowed firms to reap the benefits of economies of scale (McLaughlin and Fenton (2000)).

In terms of public policy the dark side to this story is that the very success of Freddie Mac and Fannie Mae has created financial behemoths that might be 'too big to fail' in terms of their presence both in financial markets and the mortgage market. Alan Greenspan, Chairman of the Federal Reserve Board of the USA, in testimony to the US Congress in February 2005 said that by allowing unhindered growth of these two entities, "We are placing the total financial system of the future at a substantial risk." (see Economist (2005) Feb 18th). Equally damning, given that

¹⁵ Though of late there have been doubts cast on this matter. This will be discussed in somewhat greater detail shortly.

¹⁶ The Pfandbriefe, or MBS in Germany, for example carry very high prepayment penalties so as to make them attractive to MBS investors. This prepayment penalty then makes it more expensive for home buyers to use fixed rate mortgages and holds back the growth of long term fixed rate mortgage market in Germany (see RICS (2004)). It is not that there are no prepayment costs in the US (otherwise any decline in interest rates would see substantial refinancing which markets would find difficult to insure or hedge against) but just that they are lower than in Germany because it gets shared out among buyers of mortgages, Fannie Mae/Freddie Mac and investors in MBS.

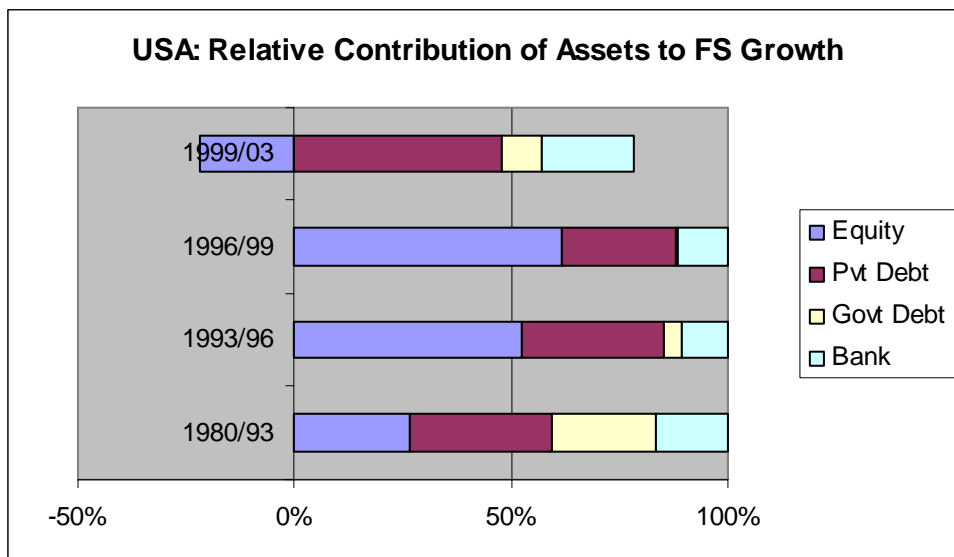
¹⁷ Indeed, the European Mortgage Finance Agency (EMFA), conceived as a European counterpart of Fannie Mae, has asked the EU to consider a proposal of setting up an EU wide mortgage market with EMFA having Fannie Mae like capital market privileges (see RICS (2004)).

these are government sponsored agencies with the very specific policy remit of improving access to the mortgage market, is the fact that both lag behind mortgage banks in financing first-time home buyers, particularly those from ethnic minority backgrounds (see Economist (2005) Jan. 6th). McLaughlin and Fenton (2000) were prescient in suggesting that “agencies’ public policy remits are ultimately inconsistent with their private company aims of maximising profits”¹⁸.

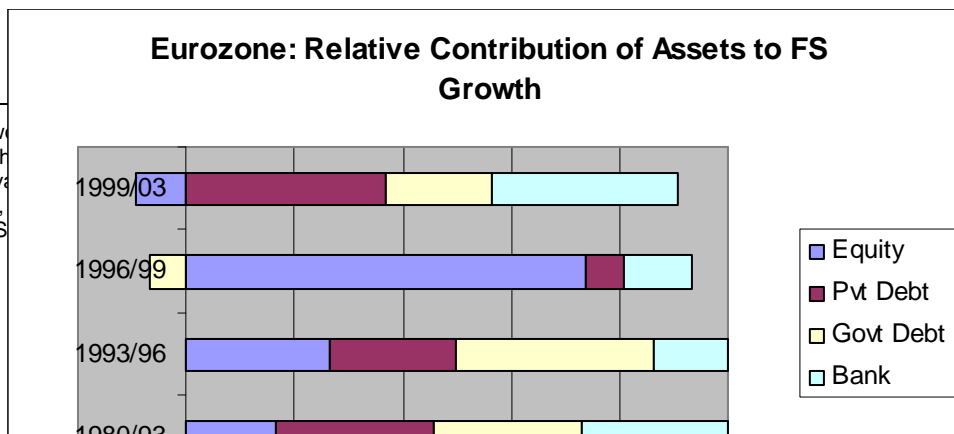
To bring this discussion to a close, securitisation has been an important driver of the growth of private debt market in the USA the bulk of which is accounted for by MBS. Securitisation has not only allowed a widening and deepening of the MBS market, and therefore helped growth of the primary mortgage market, but also allowed specialisation along the mortgage delivery chain and thereby improved efficiency of the mortgage market. Crucial to the development and functioning of the MBS market is the growth of two government sponsored enterprises, Freddie Mac and Fannie Mae with the specific public policy mandate nurturing the secondary market in MBS. Therefore the growth of securitisation market in the USA is not the result of the natural evolution of market forces but result of deliberate policy intent and design. It must be emphasised that we are **not** arguing that without the presence of Fannie Mae and Freddie Mac securitisation would not have occurred in US financial markets. We **are** arguing however that the nature and structure of the securitisation market in the USA in terms of depth, breadth and sophistication would be very different without the presence of Freddie Mac and Fannie Mae.

A return to cross country comparison of financial structure and risk-preferences

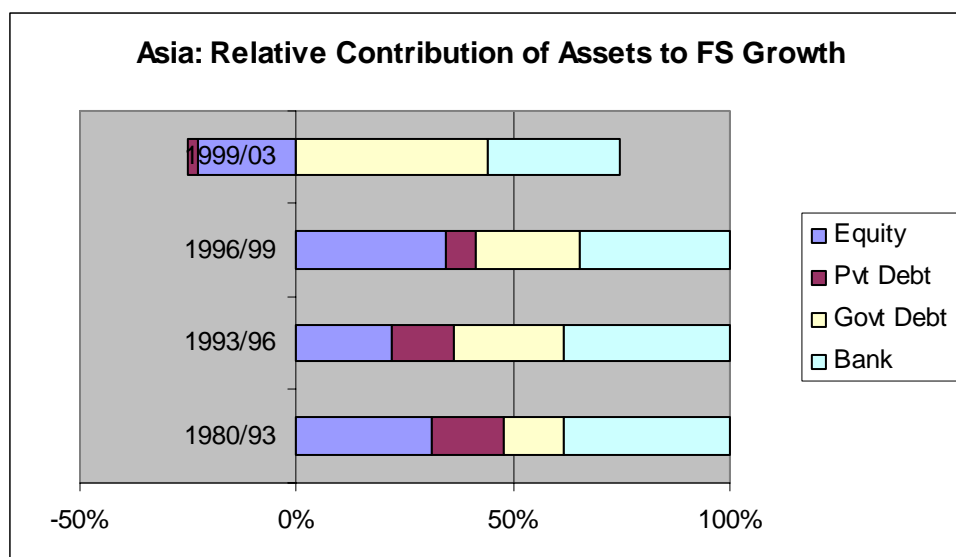
Finally we close this section comparing financial structures with a discussion on relative risk preferences.



¹⁸ It is with Oversight for derivative Second, (2004) S



Enterprise ng practices s executed. Economist



In terms of the ascending order of riskiness of assets the four asset categories mentioned above would be ranked as follows: bank deposits, government debt, private debt and finally equity. The three charts above tell us not only the relative contribution to FS growth in the three major regions of the world economy, but relative movements in risk preferences can also be inferred from these graphs.

For example, when we compare the composition of FS in 2003 between USA and the Eurozone, equities account for 33% of FS in the former as opposed to 19% in the latter. Private debt securities account for 36% of FS in the USA as against 29% in the Eurozone. Government debt accounts for 12 and 21% of FS in the USA and the Eurozone respectively. And finally, bank deposits 20 and 30% of FS in the USA and the Eurozone respectively. It would therefore not be incorrect to characterise the US as being more risk loving than the Eurozone.

Be that as it may, the relative contribution of equities to FS growth increased in all three periods between 1980-99 (i.e., 1980-93, 1993-96, 1996-99). Indeed, between 1996 and 1999 the growth in FS was almost completely dominated by growth in equities, with it being particularly marked in the Eurozone which saw a net decline in the holding of government debt over this period. Therefore it would not be incorrect to say that between 1980 and 1999 there was an increasing appetite for risk on both sides of the Atlantic and this was particularly marked in the period 1996-99. In Asia however the pattern was somewhat different. First, in none of the three sub-periods does the relative contribution of equities dominate growth in FS. Second, the relative contribution declines between sub-periods 1980-93 and 1993-96. However, the relative

contribution of equities increases in the next sub-period, 1996-99. There is therefore a waxing and a waning in the appetite for risk in Asia.

It is worth noting also that there is a decline in the relative contribution of bank deposits to the growth of FS in all three regions across all three sub-periods from 1980-99 (though the magnitude of the decline is smallest in Asia). In private equity however Europe and Asia share a declining trend in relative contribution whereas its contribution in the USA's FS growth remains roughly similar across the sub-periods.

In the period 1999-2003 there is a marked decline in the appetite for risk as agents move out of equity into debt instruments and bank deposits. This trend is similar across all three regions. Indeed the aversion to holding equity is so strong that there is actually a net decline in holding equity across all three regions. There is also an increase in the relative contribution of government debt to the growth of FS across all three regions. Even in this overall swing away from risk and towards safety there are differences in the way the three regions coped in line with their different risk bearing propensities.

In keeping with its higher risk-loving profile, in the USA, the relative contribution of private debt to FS growth dominates the contribution of government debt and bank deposits. In the Eurozone, the contribution of government debt and bank deposits dominates the relative contribution of private debt. In Asia, FS growth is completely dominated by the growth of government debt and bank deposits and just as in equity there is a net decline in the holding of private debt.

The analysis set out above would seem to suggest that all economies, irrespective of their risk-bearing propensities, given the right relative prices will exhibit an increasing appetite for risk. But when relative prices change, as they must, and a 'flight to safety' takes place the nature of the 'safe' financial asset demanded will vary depending upon the risk-bearing propensities. Of course in extreme situations, agents might want to move entirely out of financial assets, preferring to hold (depending upon the nature of the relative price movement) either cash or gold (real estate). But under more normal circumstances, the safe asset demanded would vary across economies and this would have some impact on financial structure.

VIII. Conclusion

To conclude, our analysis would indicate that the Indian financial system as a result of the reform process has improved in terms of efficiency and operational parameters. The banking system is less fragile and more profitable. Stock market liquidity has improved and a reasonably deep and liquid government bond market is in place. Monetary policy is conducted through open market operations and both the call and term money markets have improved in terms of products, intermediaries and liquidity. As a result, a short and long term yield curve is in place making it possible for the RBI to use the bank rate as a more effective instrument.

However through the course of the reform process the agents in the economy have turned more risk averse, as a result not only has intermediation widened and deepened, but bank products have gained relative to non-bank financial products. Banks too at the margin have tended to lend to the government rather than to commerce. This is not what one might expect from a process where competition has increased from non-bank sources both in terms of financial intermediaries and products. Improvement in bank profitability seems to have come with a marked shift away from rural lending and agriculture. Indeed most credit flows seem to be concentrated in metropolitan areas and there is evidence of regional concentration as well.

Despite a technologically and operationally a far more sophisticated stock market, most firms that raise money on the stock market are value destroyers. This is analogous to the NPA problem that banks were saddled with a decade ago. And even though there is a vibrant market in government debt, the corporate debt is small and narrow. On the back of improved savings performance from the private sector, its draft on the financial resources of the system has declined. As a result, the surplus generated in the household sector goes to financing government consumption. The increase in risk aversion in the system then brings into line the demand for and supply of high quality government debt. The evidence from other countries suggests the nature of risk bearing propensities might have an important role to play in shaping the contours of a financial system.

IX. Policy Recommendations:

Before getting into policy recommendations related to market micro structure, there are three institutional recommendations that we would like to make. What emerges from our analysis of intermediation patterns are three main areas of concern: credit flows to agriculture and the small and medium sector and the nature of the government bond market.

1. The fact that the mechanism of rural credit delivery needs to be overhauled and more resources allocated to agriculture in particular and the rural economy in general is something that policy makers are urgently seized of. Reddy (2004) sets out a fairly comprehensive agenda for reform along with a roadmap for institutional reform. We would agree with that agenda. In addition we would like to suggest the following: NABARD carries forward its refinancing role through developing a secondary market in agricultural loans in the way that Fannie Mae and Freddie Mac have done for the secondary mortgage market. NABARD's capability to raise money at preferential rates can then be leveraged to lower the cost of credit to agriculture and banks more willing to lend if they can sell that in the secondary market. It should also allow specialised intermediaries to emerge in the way they have developed in the US mortgage market.

2. We would suggest that SIDBI play a similar role in developing a secondary market for SME loans. In addition banks could be encouraged to lend to SME's using 'the going concern approach' as in Europe (see Berry, Grant and Jarvis (2003); Cressey and Olofsson (1997) and Deeg (1998)) rather than the 'gone concern approach' used in India and the UK (see Berry, Grant and Jarvis (2003)).

3. RBI should enter the long bond market (20, 30 year and longer maturity bonds) to raise resources for the government. It should get insurance and pension funds to match assets and liabilities and thereby have a ready market for these bonds. Not only does it allow the RBI to lengthen average maturity of borrowing, lower borrowing costs but provide a good 'safe asset' for investors while allowing intermediaries more flexibility in structuring products.

4. Though there has been significant improvement in the market micro-structure and efficiency, the markets still fall short of International Organization of Securities Commissions (IOSCO) standards. Some of the areas where substantial improvements are needed are greater clarity and improvement of SEBI's authority and powers, SEBI's ability to regulate its members, improved professional standards for licensing brokers and sub-brokers and improvement of risk management in clearance and settlement.

5. The fate of the regional exchanges still hangs in balance. 23 regional exchanges are not required any more with online trading available in all parts of the country. Their conditions are deteriorating day by day. A working group should be formed to advise on restructuring of these regional exchanges. It is unfortunate that on SEBI's advice, in the nineties all of them went online in trading by investing huge sums in computerization and other infrastructures. With the role of regional exchanges uncertain the value of that investment would appear doubtful.

6. Keeping in mind that a large number of companies the Indian stock market continuously destroy value for minority shareholders, public policy should try and address should address this serious corporate governance lacunae. One option is to raise the entry barriers for companies planning to raise money by IPO, given that the institutional structure to govern larger firms is somewhat better than that for small firms. One suggestion could be to increase the minimum net worth required of a company to raise money from the public to say Rs. 100 million from the current requirement of only Rs. 10 million. However raising of entry barriers should take place only in the context of improving the financing of small and medium firms through non-stock market mechanisms.

7. The preference given to small lots in allotment of shares of companies raising money in the primary equity market has resulted in unduly expensive administrative costs to the issuers. This issue should be looked into seriously to strengthen the primary market.

8. Improve investor protection perhaps through something analogous to class action law suits to provide more effective investor protection in the USA. We could try to replicate that model here or to adapt the PIL mechanism to legalize a process in which investors can enforce their rights against companies without the intervention of the regulators at all.

9. Make the private placement market more transparent with improved disclosure norms and better regulated particularly in terms of prudential norms for investors in this market.

10. Introduce measure to improve liquidity in the secondary market. The major players like banks, FIs and insurance companies are *Hold to maturity* investors and they continue to invest in deeper and more liquid G-Sec market. Wider participation is called for from FIIIs, professional fund managers for PFs and private sector insurance companies for improving the liquidity of the market. The introduction of STRIPS (Separate Trading in Registered Interest and Principal of Securities) will make Zero Coupon Bonds (ZCBs) available for trading in most of the maturities and will allow more flexibility in trading strategies.

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Financial Market Resource Mobilisation

| | Aggregate deposits | RRB deposits | Mutual Funds Net mobilisation | Mutual Funds Private | New Capital Issues PLCs | by | Market Borrowings Centre and State (Gross) | Market Borrowings Centre (Gross) | Small Savings | NBFCs | Primary Market Resource Mobilisation | Private Placement | Arms Length |
|---------|--------------------|--------------|-------------------------------|----------------------|-------------------------|----|--|----------------------------------|---------------|---------|--------------------------------------|-------------------|-------------|
| 1979-80 | | | 57.9 | | 180.0 | | | | | | | | |
| 1980-81 | 6229 | 87 | 52.1 | | 163.9 | | 3204 | 2871 | 3119 | -136.9 | | | |
| 1981-82 | 5745 | 120 | 157.4 | | 598.4 | | 3698 | 3191 | 4006 | 269.9 | | | |
| 1982-83 | 7625 | 142 | 166.9 | | 706.0 | | 4722 | 4166 | 4362 | 684.6 | | | |
| 1983-84 | 9238 | 195 | 330.2 | | 837.5 | | 5108 | 4345 | 5558 | 731.1 | | | |
| 1984-85 | 11648 | 284 | 756.2 | | 1056.4 | | 5892 | 4591 | 7123 | 1194.7 | | | |
| 1985-86 | 13160 | 341 | 891.8 | | 1745.3 | | 7178 | 5764 | 8594 | 603.6 | | | |
| 1986-87 | 17320 | 440 | 1261.1 | | 2581.4 | | 7797 | 6351 | 8302 | 982.0 | | | |
| 1987-88 | 15321 | 517 | 2309.7 | | 1787.7 | | 9611 | 7821 | 9591 | 1558.1 | | | |
| 1988-89 | 22105 | 656 | 4174.8 | | 3224.8 | | 10010 | 7725 | 12619 | 2985.2 | | | |
| 1989-90 | 26809 | 888 | 6786.9 | | 6509.9 | | 10599 | 8044 | 16875 | 4158.1 | | | |
| 1990-91 | 25582 | 745 | 7508.4 | | 4312.2 | | 11558 | 8989 | 18016 | 2593.2 | | | |
| 1991-92 | 38217 | 711 | 11252.9 | | 6193.1 | | 12284 | 8919 | 17238 | 3202.3 | | | |
| 1992-93 | 37814 | 1099 | 13021.0 | | 19803.4 | | 17690 | 13885 | 17735 | 24517.9 | | | |
| 1993-94 | 46560 | 1675 | 11243.2 | 1559.5 | 19330.3 | | 54533 | 50388 | 24077 | 11481.0 | | | |
| 1994-95 | 71727 | 2803 | 11274.6 | 1321.8 | 26416.7 | | 43231 | 38108 | 34667 | 29057.7 | | | |
| 1995-96 | 46960 | 2522 | -5832.9 | 133.0 | 15997.6 | | 46783 | 40509 | 32748 | 16177.3 | | 13361 | |
| 1996-97 | 71780 | 3601 | -2036.7 | 863.6 | 10409.5 | | 42688 | 36152 | 33612 | 22697.3 | 30542 | 15066 | 15476 |
| 1997-98 | 92886 | 4006 | 4063.9 | 748.6 | 3138.3 | | 67386 | 59637 | 46935 | 13571.7 | 34755 | 30098 | 4656 |
| 1998-99 | 115540 | 4451 | 2695.4 | 2066.9 | 5013.1 | | 106067 | 93953 | 55820 | 9784.7 | 59044 | 49679 | 9365 |
| 1999-00 | 99320 | 4623 | 22116.8 | 16937.4 | 5153.3 | | 113336 | 99630 | 69695 | 8338.0 | 68963 | 61259 | 7704 |
| 2000-01 | 149273 | 5944 | 11134.7 | 9292.1 | 5818.1 | | 128483 | 115183 | 79311 | 6617.9 | 74199 | 67836 | 6362 |
| 2001-02 | 140742 | 6499 | 10119.7 | 16134.1 | 5692.4 | | 152508 | 133801 | 81753 | 5933.0 | 71988 | 64876 | 7112 |
| 2002-03 | 177493 | 5150 | 4583.0 | 12122.2 | 1877.7 | | 181979 | 151126 | 93254 | 5034.6 | 71815 | 66948 | 4867 |
| 2003-04 | 223563 | 5746 | 47684.0 | 42872.8 | 3209.6 | | 198157 | 147636 | | | 66405 | 59215 | 7190 |

Source: On the basis of data from RBI's Handbook of Statistics available at www.rbi.org.in. Data for the last three columns has been taken from RBI Annual Reports of relevant years.

Note: Primary market resource mobilization refers to both debt and equity by govt and non-govt companies. Arms length refers to market issues of both debt and equity.

Table 2: Financial Market Resource Mobilisation with respect to Aggregate Deposits

| | RRB deposits/AD | Mutual Funds Net mobilisation/AD | Mutual Funds Private/AD | New Capital Issues by PLCs/AD | Market Borrowings Centre and State (Gross)/AD | Market Borrowings Centre (Gross)/AD | Small Savings/AD | NBFCs/AD | Non-govt primary market/AD | Private Placement/AD | Arms Length/AD |
|---------|-----------------|----------------------------------|-------------------------|-------------------------------|---|-------------------------------------|------------------|----------|----------------------------|----------------------|----------------|
| 1980-81 | 0.014 | 0.008 | | 0.026 | 0.514 | 0.461 | 0.501 | -0.022 | | | |
| 1981-82 | 0.021 | 0.027 | | 0.104 | 0.644 | 0.555 | 0.697 | 0.047 | | | |
| 1982-83 | 0.019 | 0.022 | | 0.093 | 0.619 | 0.546 | 0.572 | 0.090 | | | |
| 1983-84 | 0.021 | 0.036 | | 0.091 | 0.553 | 0.470 | 0.602 | 0.079 | | | |
| 1984-85 | 0.024 | 0.065 | | 0.091 | 0.506 | 0.394 | 0.612 | 0.103 | | | |
| 1985-86 | 0.026 | 0.068 | | 0.133 | 0.545 | 0.438 | 0.653 | 0.046 | | | |
| 1986-87 | 0.025 | 0.073 | | 0.149 | 0.450 | 0.367 | 0.479 | 0.057 | | | |
| 1987-88 | 0.034 | 0.151 | | 0.117 | 0.627 | 0.510 | 0.626 | 0.102 | | | |
| 1988-89 | 0.030 | 0.189 | | 0.146 | 0.453 | 0.349 | 0.571 | 0.135 | | | |
| 1989-90 | 0.033 | 0.253 | | 0.243 | 0.395 | 0.300 | 0.629 | 0.155 | | | |
| 1990-91 | 0.029 | 0.294 | | 0.169 | 0.452 | 0.351 | 0.704 | 0.101 | | | |
| 1991-92 | 0.019 | 0.294 | | 0.162 | 0.321 | 0.233 | 0.451 | 0.084 | | | |
| 1992-93 | 0.029 | 0.344 | | 0.524 | 0.468 | 0.367 | 0.469 | 0.648 | | | |
| 1993-94 | 0.036 | 0.241 | 0.033 | 0.415 | 1.171 | 1.082 | 0.517 | 0.247 | | | |
| 1994-95 | 0.039 | 0.157 | 0.018 | 0.368 | 0.603 | 0.531 | 0.483 | 0.405 | | | |
| 1995-96 | 0.054 | -0.124 | 0.003 | 0.341 | 0.996 | 0.863 | 0.697 | 0.344 | | 0.285 | |
| 1996-97 | 0.050 | -0.028 | 0.012 | 0.145 | 0.595 | 0.504 | 0.468 | 0.316 | 0.425 | 0.210 | 0.216 |
| 1997-98 | 0.043 | 0.044 | 0.008 | 0.034 | 0.725 | 0.642 | 0.505 | 0.146 | 0.374 | 0.324 | 0.050 |
| 1998-99 | 0.039 | 0.023 | 0.018 | 0.043 | 0.918 | 0.813 | 0.483 | 0.085 | 0.511 | 0.430 | 0.081 |
| 1999-00 | 0.047 | 0.223 | 0.171 | 0.052 | 1.141 | 1.003 | 0.702 | 0.084 | 0.694 | 0.617 | 0.078 |
| 2000-01 | 0.040 | 0.075 | 0.062 | 0.039 | 0.861 | 0.772 | 0.531 | 0.044 | 0.497 | 0.454 | 0.043 |
| 2001-02 | 0.046 | 0.072 | 0.115 | 0.040 | 1.084 | 0.951 | 0.581 | 0.042 | 0.511 | 0.461 | 0.051 |
| 2002-03 | 0.029 | 0.026 | 0.068 | 0.011 | 1.025 | 0.851 | 0.525 | 0.028 | 0.405 | 0.377 | 0.027 |
| 2003-04 | 0.026 | 0.213 | 0.192 | 0.014 | 0.886 | 0.660 | | | 0.297 | 0.265 | 0.032 |

Source: On the basis of data from Table 1

Table 3: Shares of Financial Assets in the change in the financial portfolio of the Household sector

| Year | Currency Share in CFA | Bank Deposit Share in CFA | Non-Bank Deposit Share in CFA | Insurance Share in CFA | Pension Share in CFA | Government Claims Share in CFA | Shares and Debentures Share in CFA | UTI Share in CFA | Trade Debt Share in CFA |
|---------|-----------------------|---------------------------|-------------------------------|------------------------|----------------------|--------------------------------|------------------------------------|------------------|-------------------------|
| 1970-71 | 16.82 | 35.73 | 3.18 | 9.81 | 23.22 | 4.98 | 3.22 | 0.66 | 2.37 |
| 1971-72 | 17.42 | 44.16 | 4.48 | 10.82 | 20.44 | -0.09 | 0.86 | 0.52 | 1.38 |
| 1972-73 | 21.36 | 40.71 | 3.62 | 10.30 | 17.54 | 2.68 | 0.91 | 0.64 | 2.25 |
| 1973-74 | 21.49 | 42.23 | 1.26 | 9.95 | 16.85 | 2.43 | -0.45 | 0.67 | 5.56 |
| 1974-75 | 0.53 | 49.07 | 2.73 | 10.20 | 23.35 | 2.14 | 1.84 | -0.09 | 10.23 |
| 1975-76 | 6.75 | 41.84 | 2.57 | 8.35 | 24.16 | 17.74 | 0.81 | 0.32 | -2.53 |
| 1976-77 | 17.14 | 58.94 | 1.71 | 7.88 | 17.62 | 0.29 | -0.08 | 0.30 | -3.80 |
| 1977-78 | 9.83 | 49.22 | 3.17 | 8.28 | 18.40 | 4.54 | 2.81 | 0.48 | 3.28 |
| 1978-79 | 15.08 | 48.78 | 2.45 | 7.20 | 16.93 | 2.39 | 2.15 | 0.83 | 4.19 |
| 1979-80 | 13.00 | 45.46 | 4.65 | 7.54 | 17.06 | 5.18 | 2.47 | 0.40 | 4.24 |
| 1980-81 | 13.41 | 45.80 | 3.12 | 7.55 | 17.51 | 5.88 | 3.40 | 0.26 | 3.08 |
| 1981-82 | 7.08 | 38.13 | 6.56 | 7.61 | 18.21 | 13.10 | 3.74 | 0.84 | 4.72 |
| 1982-83 | 12.59 | 41.38 | 5.40 | 7.67 | 17.80 | 7.72 | 4.01 | 0.76 | 2.67 |
| 1983-84 | 14.77 | 42.46 | 5.42 | 7.32 | 16.24 | 10.52 | 2.95 | 1.18 | -0.87 |
| 1984-85 | 12.48 | 41.87 | 4.08 | 6.61 | 15.96 | 13.19 | 3.24 | 2.41 | 0.17 |
| 1985-86 | 8.68 | 41.48 | 5.57 | 6.96 | 16.38 | 13.35 | 5.45 | 2.29 | -0.17 |
| 1986-87 | 9.70 | 45.56 | 4.75 | 6.78 | 15.87 | 9.71 | 5.55 | 2.96 | -0.88 |
| 1987-88 | 13.34 | 40.64 | 3.67 | 7.17 | 18.03 | 10.19 | 2.25 | 3.31 | 1.40 |
| 1988-89 | 10.65 | 36.91 | 3.95 | 8.57 | 18.90 | 13.71 | 2.84 | 3.57 | 0.90 |
| 1989-90 | 15.87 | 29.00 | 3.81 | 9.15 | 19.71 | 14.01 | 5.50 | 4.52 | -1.58 |
| 1990-91 | 10.61 | 31.88 | 2.18 | 9.50 | 18.94 | 13.38 | 8.44 | 5.84 | -0.77 |
| 1991-92 | 11.99 | 26.23 | 3.26 | 10.29 | 18.37 | 7.12 | 9.99 | 13.35 | -0.61 |
| 1992-93 | 8.17 | 36.73 | 7.51 | 8.85 | 18.44 | 4.83 | 10.22 | 6.98 | -1.74 |
| 1993-94 | 12.19 | 33.06 | 10.63 | 8.71 | 16.72 | 6.30 | 9.18 | 4.29 | -1.09 |
| 1994-95 | 10.94 | 38.37 | 7.94 | 7.81 | 14.72 | 9.06 | 9.26 | 2.69 | -0.79 |
| 1995-96 | 13.29 | 32.12 | 10.61 | 11.17 | 17.97 | 7.71 | 7.11 | 0.21 | -0.20 |
| 1996-97 | 8.61 | 32.11 | 16.39 | 10.17 | 19.17 | 7.43 | 4.18 | 2.38 | -0.45 |
| 1997-98 | 7.44 | 43.15 | 3.92 | 11.30 | 18.79 | 12.90 | 2.60 | 0.35 | -0.45 |
| 1998-99 | 10.52 | 38.30 | 3.84 | 11.30 | 22.38 | 13.61 | 2.46 | 0.91 | -3.31 |
| 1999-00 | 8.72 | 34.67 | 3.65 | 11.98 | 22.56 | 12.12 | 6.37 | 0.76 | -0.85 |
| 2000-01 | 6.89 | 36.89 | 4.76 | 13.27 | 21.33 | 15.19 | 2.75 | -0.36 | -0.72 |
| 2001-02 | 9.67 | 37.83 | 2.90 | 14.20 | 17.99 | 17.13 | 3.02 | -0.64 | -2.12 |

Source: On the basis of data from RBI's Handbook of Statistics

Table 4: Net Bank Credit to Government and its Components

| | NBCG/GDP | NOBCG/GDP | NBCG/M3 | NRBCG/M3 | NOBCG/M3 | M3/GDP |
|---------|----------|-----------|---------|----------|----------|--------|
| 1970-71 | 11.94 | 3.19 | 49.50 | 33.28 | 13.20 | 24.13 |
| 1971-72 | 13.54 | 3.59 | 52.19 | 33.48 | 13.83 | 25.94 |
| 1972-73 | 14.78 | 4.23 | 53.13 | 36.38 | 15.19 | 27.83 |
| 1973-74 | 13.62 | 3.78 | 50.72 | 34.57 | 14.07 | 26.86 |
| 1974-75 | 12.91 | 3.71 | 51.15 | 33.86 | 14.72 | 25.23 |
| 1975-76 | 12.76 | 4.45 | 47.28 | 28.16 | 16.48 | 27.00 |
| 1976-77 | 13.15 | 4.50 | 42.49 | 25.73 | 14.55 | 30.96 |
| 1977-78 | 13.51 | 5.99 | 41.72 | 20.93 | 18.49 | 32.39 |
| 1978-79 | 14.46 | 5.91 | 39.71 | 22.63 | 16.24 | 36.42 |
| 1979-80 | 16.56 | 6.30 | 42.38 | 24.83 | 16.11 | 39.08 |
| 1980-81 | 17.89 | 6.45 | 46.11 | 27.39 | 16.63 | 38.80 |
| 1981-82 | 18.17 | 6.05 | 48.82 | 29.46 | 16.24 | 37.22 |
| 1982-83 | 18.73 | 6.60 | 48.18 | 29.86 | 16.99 | 38.87 |
| 1983-84 | 18.52 | 6.30 | 46.97 | 29.82 | 15.99 | 39.42 |
| 1984-85 | 20.51 | 6.51 | 48.91 | 30.95 | 15.54 | 41.93 |
| 1985-86 | 20.98 | 7.07 | 48.85 | 31.87 | 16.45 | 42.95 |
| 1986-87 | 23.14 | 8.27 | 50.85 | 31.87 | 18.17 | 45.51 |
| 1987-88 | 23.81 | 8.94 | 51.36 | 31.47 | 19.29 | 46.36 |
| 1988-89 | 22.88 | 8.74 | 49.86 | 30.08 | 19.05 | 45.90 |
| 1989-90 | 24.10 | 8.94 | 50.73 | 31.18 | 18.82 | 47.50 |
| 1990-91 | 24.65 | 9.03 | 52.74 | 32.64 | 19.32 | 46.75 |
| 1991-92 | 24.23 | 9.84 | 49.92 | 29.10 | 20.26 | 48.54 |
| 1992-93 | 23.55 | 10.39 | 48.41 | 26.52 | 21.37 | 48.64 |
| 1993-94 | 23.73 | 12.18 | 47.30 | 22.45 | 24.27 | 50.17 |
| 1994-95 | 21.96 | 11.94 | 42.16 | 18.75 | 22.92 | 52.09 |
| 1995-96 | 21.70 | 11.48 | 43.02 | 19.82 | 22.77 | 50.44 |
| 1996-97 | 21.09 | 12.02 | 41.47 | 17.34 | 23.63 | 50.87 |
| 1997-98 | 21.71 | 12.84 | 40.25 | 16.27 | 23.80 | 53.94 |
| 1998-99 | 22.21 | 13.45 | 39.42 | 14.82 | 23.87 | 56.35 |
| 1999-00 | 22.79 | 15.13 | 39.26 | 12.44 | 26.07 | 58.04 |
| 2000-01 | 24.33 | 17.02 | 38.98 | 11.16 | 27.27 | 62.41 |
| 2001-02 | 25.54 | 18.91 | 39.10 | 9.43 | 28.95 | 65.33 |

Source: On the basis of data from RBI's Handbook of Statistics

Table 5: Resource Mobilization in the Primary Market

(Rs. mn.)

| Year | Corporate Securities | | | Government Securities | | | Total Resources Mobilized |
|-------|----------------------|------------------|--------------------|-----------------------|--------------------|----------------------|---------------------------|
| | Domestic Issues | Euro Issues | Total | Central Govt. | State Govts. | Total | |
| 90-91 | 142,190 (55.2%) | - | 142,190 (55.2%) | 89,890 (34.9%) | 25,690 (9.9%) | 115,580 (44.8%) | 257,770 (100%) |
| 91-92 | 163,660 (57.1%) | - | 163,660 (57.1%) | 89,190 (31.1%) | 33,640 (11.8%) | 122,840 (42.9%) | 286,500 (100%) |
| 92-93 | 232,860 (56.5%) | 2,510 (0.7%) | 235,370 (57.1%) | 138,850 (33.7%) | 38,050 (9.2%) | 176,900 (42.9%) | 412,270 (100%) |
| 93-94 | 370,440 (37.4%) | 74,540 (7.5%) | 444,980 (44.9%) | 503,880 (50.9%) | 41,450 (4.2%) | 545,330 (55.1%) | 990,310 (100%) |
| 94-95 | 419,740 (46.0%) | 61,100 (6.7%) | 480,840 (52.7%) | 381,080 (41.7%) | 51,230 (5.6%) | 432,310 (47.3%) | 913,150 (100%) |
| 95-96 | 361,930 (43.4%) | 4,960 (0.6%) | 366,890 (44.0%) | 405,090 (48.5%) | 62,740 (7.5%) | 467,830 (56.0%) | 834,720 (100%) |
| 96-97 | 338,720 (42.5%) | 55,940 (7.0%) | 371,470 (46.5%) | 361,520 (45.3%) | 65,360 (8.2%) | 426,880 (53.5%) | 798,350 (100%) |
| 97-98 | 377,380 (34.5%) | 43,870 (4.0%) | 421,250 (38.5%) | 596,370 (54.5%) | 77,490 (7.0%) | 673,860 (61.5%) | 1,095,110 (100%) |
| 98-99 | 590,440 (35.5%) | 11,480 (0.7%) | 601,920 (36.2%) | 939,530 (56.5%) | 121,140 (7.3%) | 1,060,670 (63.8%) | 1,662,590 (100%) |
| 99-00 | 689,630 (37.1%) | 34,870 (1.9%) | 724,500 (39.0%) | 996,300 (53.6%) | 137,060 (7.4%) | 1,133,360 (61.0%) | 1,857,860 (100%) |
| 00-01 | 741,986 (35.9%) | 41,970 (2.0%) | 783,956 (37.9%) | 1,151,830 (55.7%) | 133,000 (6.4%) | 1,284,830 (62.1%) | 2,068,786 (100%) |
| 01-02 | 720,612 (31.8%) | 23,420 (1.0%) | 744,032 (32.8%) | 1,338,010 (59.0%) | 187,070 (8.2%) | 1,525,880 (67.2%) | 2,269,112 (100%) |
| 02-03 | 666,125 (26.4%) | 34,264 (1.4%) | 700,389 (27.8%) | 1,511,260 (60.0%) | 308,530 (12.2%) | 1,819,790 (72.2%) | 2,520,179 (100%) |

Source: Indian Securities Market – A Review, (2001), volume IV

Table 6: Break-up of Domestic Issues

(Rs. mn.)

| Year | Non-Govt. Public Companies | PSU Bonds | Govt. Companies | Banks & FIs | Private Placement | Total Domestic Issues |
|-------|----------------------------|-------------------|------------------|-------------------|--------------------|-----------------------|
| 90-91 | 43,120 (30.3%) | 56,630 (39.8%) | - | - | 42,440 (29.9%) | 142,190 (100%) |
| 91-92 | 61,930 (37.8%) | 57,100 (34.9%) | - | - | 44,630 (27.3%) | 163,660 (100%) |
| 92-93 | 198,030 (85.1%) | 10,620 (4.6%) | 4,300 (1.8%) | 3,560 (1.5%) | 16,350 (7.0%) | 232,860 (100%) |
| 93-94 | 193,300 (52.2%) | 55,860 (15.1%) | 8,190 (2.2%) | 38,430 (10.4%) | 74,660 (20.1%) | 370,440 (100%) |
| 94-95 | 264,170 (62.9%) | 30,700 (7.3%) | 8,880 (2.1%) | 4,250 (1.1%) | 111,740 (26.6%) | 419,740 (100%) |
| 95-96 | 160,750 (44.4%) | 22,920 (6.3%) | 10,000 (2.8%) | 34,650 (9.6%) | 133,610 (36.9%) | 361,930 (100%) |
| 96-97 | 104,100 (30.7%) | 33,940 (10.0%) | 6,500 (1.9%) | 43,520 (12.9%) | 150,660 (44.5%) | 338,720 (100%) |
| 97-98 | 31,380 (8.4%) | 29,820 (8.0%) | 430 (0.1%) | 14,760 (3.9%) | 300,990 (79.6%) | 377,380 (100%) |
| 98-99 | 50,130 (8.5%) | - | - | 43,520 (7.4%) | 496,790 (84.1%) | 590,440 (100%) |
| 99-00 | 51,530 (7.5%) | - | - | 25,510 (3.7%) | 612,590 (88.8%) | 689,630 (100%) |
| 00-01 | 48,500 (6.6%) | - | - | 14,720 (2.0%) | 678,360 (91.4%) | 741,986 (100%) |
| 01-02 | 56,920 (7.9%) | - | 3,500 (0.5%) | 10,700 (1.5%) | 649,500 (90.1%) | 720,612 (100%) |
| 02-03 | 18,777 (2.8%) | - | - | 29,890 (4.5%) | 617,458 (92.7%) | 666,125 (100%) |

Source: Indian Securities Market – A Review, (2001), volume IV

Table 7: Savings Ratios

| Year | Savings/ GDP | HH Savings/GDP | HH Savings/Savings | HHF/HHP Savings | Private Savings/GDP | Public Savings/GDP |
|---------|-----------------|-------------------|-----------------------|--------------------|------------------------|-----------------------|
| 1970-71 | 14.56 | 10.15 | 0.70 | 0.42 | 1.47 | 2.94 |
| 1971-72 | 15.06 | 10.67 | 0.71 | 0.42 | 1.57 | 2.82 |
| 1972-73 | 14.59 | 10.43 | 0.71 | 0.61 | 1.49 | 2.67 |
| 1973-74 | 16.76 | 12.17 | 0.73 | 0.83 | 1.65 | 2.94 |
| 1974-75 | 15.98 | 10.43 | 0.65 | 0.42 | 1.89 | 3.66 |
| 1975-76 | 17.23 | 11.70 | 0.68 | 0.67 | 1.30 | 4.23 |
| 1976-77 | 19.40 | 13.20 | 0.68 | 0.69 | 1.32 | 4.88 |
| 1977-78 | 19.83 | 14.13 | 0.71 | 0.69 | 1.39 | 4.31 |
| 1978-79 | 21.50 | 15.45 | 0.72 | 0.64 | 1.50 | 4.55 |
| 1979-80 | 20.12 | 13.81 | 0.69 | 0.57 | 1.98 | 4.32 |
| 1980-81 | 18.88 | 13.82 | 0.73 | 0.76 | 1.63 | 3.43 |
| 1981-82 | 18.60 | 12.59 | 0.68 | 0.83 | 1.52 | 4.49 |
| 1982-83 | 18.26 | 12.33 | 0.68 | 1.22 | 1.58 | 4.34 |
| 1983-84 | 17.58 | 12.83 | 0.73 | 0.89 | 1.48 | 3.27 |
| 1984-85 | 18.76 | 14.28 | 0.76 | 1.04 | 1.65 | 2.83 |
| 1985-86 | 19.49 | 14.32 | 0.73 | 0.87 | 1.95 | 3.22 |
| 1986-87 | 18.94 | 14.48 | 0.76 | 1.07 | 1.71 | 2.75 |
| 1987-88 | 20.58 | 16.69 | 0.81 | 0.83 | 1.67 | 2.21 |
| 1988-89 | 20.85 | 16.76 | 0.80 | 0.63 | 2.01 | 2.08 |
| 1989-90 | 22.00 | 17.89 | 0.81 | 0.78 | 2.44 | 1.68 |
| 1990-91 | 23.10 | 19.33 | 0.84 | 0.82 | 2.67 | 1.10 |
| 1991-92 | 22.03 | 16.96 | 0.77 | 1.28 | 3.11 | 1.97 |
| 1992-93 | 21.77 | 17.51 | 0.80 | 0.99 | 2.67 | 1.59 |
| 1993-94 | 22.53 | 18.42 | 0.82 | 1.49 | 3.48 | 0.63 |
| 1994-95 | 24.83 | 19.68 | 0.79 | 1.54 | 3.48 | 1.66 |
| 1995-96 | 25.15 | 18.19 | 0.72 | 0.96 | 4.93 | 2.03 |
| 1996-97 | 23.19 | 17.05 | 0.74 | 1.55 | 4.47 | 1.67 |
| 1997-98 | 23.13 | 17.63 | 0.76 | 1.21 | 4.17 | 1.33 |
| 1998-99 | 21.54 | 18.79 | 0.87 | 1.23 | 3.74 | -0.99 |
| 1999-00 | 24.09 | 20.77 | 0.86 | 1.03 | 4.35 | -1.04 |
| 2000-01 | 23.37 | 21.56 | 0.92 | 0.92 | 4.09 | -2.28 |
| 2001-02 | 23.95 | 22.45 | 0.94 | 0.99 | 4.01 | -2.51 |

Source: Calculated on the basis of data from RBI's Handbook of Statistics

Note: HH refers to the Household sector; HHF refers to Household savings in Financial assets; HHP to Household savings in Physical assets.

Table 8: Surplus/Deficit and Investment Ratios

| Year | HH(Surplus+/ Deficit)/GDP | HH Investment/G DP | Pvt(Surplus+/ Deficit-)/GDP | Private Investment/G DP | Public(Surplus +/ Deficit-) /GDP | Public Investment/G DP |
|---------|------------------------------|--------------------------|--------------------------------|-------------------------------|---|------------------------------|
| 1970-71 | 3.00 | 7.14 | -0.82 | 2.29 | -3.45 | 6.39 |
| 1971-72 | 3.18 | 7.49 | -0.89 | 2.46 | -4.16 | 6.98 |
| 1972-73 | 3.94 | 6.48 | -1.01 | 2.50 | -4.51 | 7.18 |
| 1973-74 | 5.51 | 6.66 | -0.87 | 2.52 | -4.53 | 7.47 |
| 1974-75 | 3.06 | 7.36 | -1.64 | 3.53 | -3.77 | 7.43 |
| 1975-76 | 4.71 | 7.00 | -1.30 | 2.60 | -5.15 | 9.37 |
| 1976-77 | 5.41 | 7.80 | -0.16 | 1.48 | -4.95 | 9.83 |
| 1977-78 | 5.76 | 8.37 | -0.95 | 2.34 | -3.67 | 7.97 |
| 1978-79 | 6.05 | 9.40 | -0.58 | 2.08 | -4.68 | 9.23 |
| 1979-80 | 5.03 | 8.78 | -0.56 | 2.55 | -5.72 | 10.04 |
| 1980-81 | 5.99 | 7.83 | -0.81 | 2.44 | -4.99 | 8.42 |
| 1981-82 | 5.70 | 6.89 | -3.93 | 5.45 | -5.58 | 10.07 |
| 1982-83 | 6.77 | 5.57 | -3.82 | 5.40 | -6.36 | 10.70 |
| 1983-84 | 6.06 | 6.78 | -1.73 | 3.22 | -6.42 | 9.69 |
| 1984-85 | 7.28 | 7.00 | -2.52 | 4.17 | -7.59 | 10.43 |
| 1985-86 | 6.67 | 7.65 | -3.28 | 5.24 | -7.57 | 10.79 |
| 1986-87 | 7.50 | 6.99 | -3.33 | 5.04 | -8.43 | 11.17 |
| 1987-88 | 7.57 | 9.13 | -1.79 | 3.46 | -7.32 | 9.53 |
| 1988-89 | 6.45 | 10.31 | -1.85 | 3.86 | -7.44 | 9.52 |
| 1989-90 | 7.82 | 10.07 | -1.61 | 4.05 | -7.86 | 9.54 |
| 1990-91 | 8.73 | 10.60 | -1.47 | 4.13 | -8.23 | 9.34 |
| 1991-92 | 9.51 | 7.45 | -2.56 | 5.66 | -6.85 | 8.82 |
| 1992-3 | 8.73 | 8.78 | -3.79 | 6.46 | -6.97 | 8.55 |
| 1993-94 | 11.03 | 7.40 | -2.14 | 5.61 | -7.61 | 8.24 |
| 1994-95 | 11.92 | 7.76 | -3.43 | 6.91 | -7.05 | 8.71 |
| 1995-96 | 8.90 | 9.29 | -4.65 | 9.58 | -5.63 | 7.66 |
| 1996-97 | 10.35 | 6.69 | -3.58 | 8.05 | -5.36 | 7.03 |
| 1997-98 | 9.64 | 7.99 | -3.80 | 7.97 | -5.28 | 6.61 |
| 1998-99 | 10.37 | 8.41 | -2.65 | 6.39 | -7.57 | 6.58 |
| 1999-00 | 10.52 | 10.26 | -2.11 | 6.46 | -7.98 | 6.94 |
| 2000-01 | 10.35 | 11.21 | -0.84 | 4.93 | -8.65 | 6.37 |
| 2001-02 | 11.18 | 11.28 | -0.83 | 4.84 | -8.83 | 6.32 |

Source: Calculated on the basis of data from RBI's Handbook of Statistics

Note: HH refers to the Household sector

Table 9: Share of Assets in Financial Stock**USA**

| | Equity | Private Debt | Govt Debt | Bank |
|------|--------|-----------------|-----------|------|
| 1980 | 29 | 16 | 14 | 41 |
| 1993 | 27 | 28 | 21 | 23 |
| 1996 | 33 | 29 | 17 | 20 |
| 1999 | 43 | 28 | 11 | 17 |
| 2003 | 33 | 36 | 12 | 20 |

Eurozone

| | Equity | Private Debt | Govt Debt | Bank |
|------|--------|-----------------|-----------|------|
| 1980 | 10 | 18 | 17 | 55 |
| 1993 | 15 | 27 | 25 | 33 |
| 1996 | 18 | 26 | 28 | 28 |
| 1999 | 33 | 22 | 20 | 25 |
| 2003 | 19 | 29 | 21 | 30 |

UK

| | Equity | Private Debt | Govt Debt | Bank |
|------|--------|-----------------|-----------|------|
| 1980 | 37 | 1 | 30 | 32 |
| 1993 | 49 | 13 | 14 | 25 |
| 1996 | 46 | 15 | 13 | 26 |
| 1999 | 49 | 17 | 8 | 25 |
| 2003 | 35 | 30 | 7 | 28 |

Asia

| | Equity | Private Debt | Govt Debt | Bank |
|------|--------|-----------------|-----------|------|
| 1980 | 21 | 8 | 22 | 49 |
| 1993 | 29 | 15 | 15 | 40 |
| 1996 | 28 | 15 | 17 | 40 |
| 1999 | 30 | 13 | 19 | 39 |
| 2003 | 22 | 11 | 26 | 41 |

Japan

| | Equity | Private Debt | Govt Debt | Bank |
|------|--------|-----------------|-----------|------|
| 1980 | 18 | 9 | 25 | 48 |
| 1993 | 25 | 18 | 18 | 40 |
| 1996 | 24 | 17 | 20 | 38 |
| 1999 | 26 | 14 | 23 | 36 |
| 2003 | 17 | 12 | 35 | 36 |

Source: from McKinsey (2005)

Table 11: Relative Contribution of Assets to FS Growth

| USA | | | | |
|-----------------|--------|----------|-----------|------|
| | Equity | Pvt Debt | Govt Debt | Bank |
| 1980/93 | 26 | 32 | 24 | 17 |
| 1993/96 | 52 | 32 | 4 | 11 |
| 1996/99 | 61 | 26 | 0 | 12 |
| 1999/03 | -45 | 98 | 20 | 43 |
| Eurozone | | | | |
| | Equity | Pvt Debt | Govt Debt | Bank |
| 1980/93 | 16 | 30 | 27 | 27 |
| 1993/96 | 27 | 23 | 37 | 14 |
| 1996/99 | 85 | 8 | -8 | 15 |
| 1999/03 | -11 | 44 | 23 | 41 |
| Asia | | | | |
| | Equity | Pvt Debt | Govt Debt | Bank |
| 1980/93 | 31 | 17 | 13 | 38 |
| 1993/96 | 23 | 15 | 27 | 40 |
| 1996/99 | 36 | 7 | 25 | 36 |
| 1999/03 | -42 | -5 | 82 | 57 |

Note: Figures in percentages. Row totals might not add up to 100 due to rounding off approximations in original data.

Source: Calculated on the basis of data from McKinsey (2005)