



FINANCIAL DEVELOPMENT AND ECONOMIC GROWTH IN INDIA

3.1 The evolution of the Indian financial system from somewhat of a constricted and an undersized one to a more open, deregulated and market oriented one and its interface with the growth process are the major areas of analysis in this Chapter. The process of financial development in independent India hinged effectively on the development of commercial banking, with the impetus given to industrialisation based on the initiatives provided in the five year plans. Financing of emerging trade and industrial activities during the 'fifties, and the 'sixties reflected the dominance of banking as the critical source. The number of banks and branches had gone up, notwithstanding the consolidation of small banks, and the support given to co-operative credit movement¹. Functionally, banks catered to the needs of the organised industrial and trading sectors. The primary sector consisting of 'agriculture, forestry and fishing' which formed more than 50 per cent of GDP during this period had to depend largely on own financing and on sources outside the commercial banks. It is against this backdrop that the process of financial development was given impetus with the adoption of the policy of social control over banks in 1967, reinforced in 1969 by the nationalisation of 14 major scheduled commercial banks. Since then, the banking system has formed the core of the Indian financial system. Driven largely by the public sector initiative and policy activism, commercial banks have a dominant share in total financial assets and are the main source of financing for the private corporate sector. They also channel a sizeable share of household savings

¹ The co-operative credit is catered by a banking system that comprises Primary (Urban) Co-operative Banks (PCBs/UCBs), including the salary earners' societies, for the urban areas and a three-tier structure in the rural areas that includes State Co-operative Banks at the apex level, District Central Co-operative Banks (DCCBs) at the intermediate level and Primary Agricultural Credit Societies (PACS) at the grass-root level. At the long-end, State Co-operative Agriculture and Rural Development Banks (SCARDBs) operate at the apex level, while Primary Co-operative Agriculture and Rural Development Banks (PCARDBs) operate at the base level.

to the public sector. Besides, in recent years, they have been performing most of the payment system functions. With increased diversification in recent years, banks in both public and private sectors have been providing a wide range of financial services.

3.2 In the three decades following the first wave of bank nationalisation (the second wave consisted of six commercial banks in 1980), the number of scheduled commercial banks has quadrupled and the number of bank branches has increased eight-fold. Aggregate deposits of scheduled commercial banks have increased at a compound annual average growth rate of 17.8 per cent during this period (1969 to 1999), while bank credit expanded at a rate of 16.3 per cent per annum. Banks' investments in government and other approved securities recorded a growth of 18.8 per cent per annum. The increased role of bank intermediation is also reflected in its payment system activities. The total cheque clearances have gone up by 2175 times during this period, spurred by a qualitative shift from a manual to an electronic cheque clearing system.

3.3 The financial system outside the banks has also exhibited considerable dynamism. The system today is varied, with a well-diversified structure of financial institutions, financial companies and mutual funds. Financial institutions comprise all-India Financial Institutions (AIFIs), State-level Institutions (SFCs and SIDCs) and other institutions (ECGC and DICGC).² AIFIs include all-India Development Banks (IFCI, ICICI, IDBI, SIDBI and IIBI), specialised institutions (EXIM Bank, IVCF, ICICI Venture, TFCI and IDFC), investment institutions (UTI, LIC and GIC and its subsidiaries) and refinance institutions (NABARD and NHB). The setting up of some specialised financial institutions and refinance institutions during last three decades and the onset of reforms from about the early 'nineties, provided depth to the financial intermediation

² Presently 18 State Financial Corporations (SFCs) and 26 State Industrial Development Corporations (SIDCs) exist.

outside the banking sector. These developments, coupled with increased financial market liberalisation, have enhanced competition. A number of the existing financial institutions have diversified into several new activities, such as, investment banking and infrastructure financing, providing guarantees for domestic and offshore lending for infrastructure projects. Apart from the financial institutions, rapid expansion of Non-Banking Financial Companies (NBFCs) took place in the 'eighties and provided avenues for depositors to hold assets and for borrowers to enhance the scale of funding of their activities. Various types of NBFCs have provided varied services that include equipment leasing, hire purchase, loans, investments, mutual benefit and chit fund activities. More recently, NBFC activity has picked up in the area of housing finance. Financial development is also reflected in the growing importance of mutual funds. In the 'nineties, they have enabled sizable mobilisation of financial surpluses of the households for investment in capital markets. Capital markets themselves have become an important source of financing corporate investments, especially after firms were permitted to charge share premium in a flexible manner.

3.4 Sanctions as well as disbursements of all-financial institutions, including the SFCs and the SIDCs has expanded at a rate of 24.1 per cent per annum and 23.8 per cent per annum, respectively, during 1970-71 to 1999-2000. In addition, there has been a spurt in the activities of NBFCs and mutual funds over the last two decades. Deposits of NBFCs recorded an impressive growth of about 35 per cent per annum from the mid-'eighties to the middle of the 'nineties. In the 'sixties and 'seventies, the Unit Trust of India (UTI) was the only mutual fund. By 1999-2000 as many as 34 mutual funds were operating of which 7 mutual funds were set up by the public sector banks and financial institutions. Their total resource mobilisation in 1999-2000 was nearly Rs. 22,000 crore, with 78 per cent of this having been mobilised by the private sector mutual funds.

3.5 The financial development in the banking and non-bank financial sector has supported saving and investment in the economy and contributed to growth in real activity. By pooling risks, reaping economies of scale and scope, and by providing maturity transformation, financial

intermediation supports economic activity of the non-financial sectors. Its influence on growth, however, needs to be examined from different viewpoints that are of potential relevance in the Indian context. Before analysing the linkage between financial development and growth, it would be necessary to know as to how financial development is measured.

Indicators of Financial Development in India

3.6 There are a number of indicators for measuring financial development of an economy. Most of them relate to the asset/liability aggregates of different financial institutions. For the purpose of easy understanding and comparability, all the asset/liability aggregates are presented as ratios to GDP at current market prices.

Broad Based Indicators of Financial Development

3.7 One of the basic indicators of financial development of an economy is the contribution of finance-related activities in real GDP, *i.e.*, the contribution of banking and insurance in GDP. The share of real GDP originating from finance related activities experienced a steady increase from 2.2 per cent during the first half of the 'seventies to 4.7 per cent during 1993-94 to 1998-99 (Table 3.1). Within the services sector, the share of finance worked out to little over 11 per cent during the 'nineties.

Table 3.1: Share of Real GDP originating in Banking and Insurance

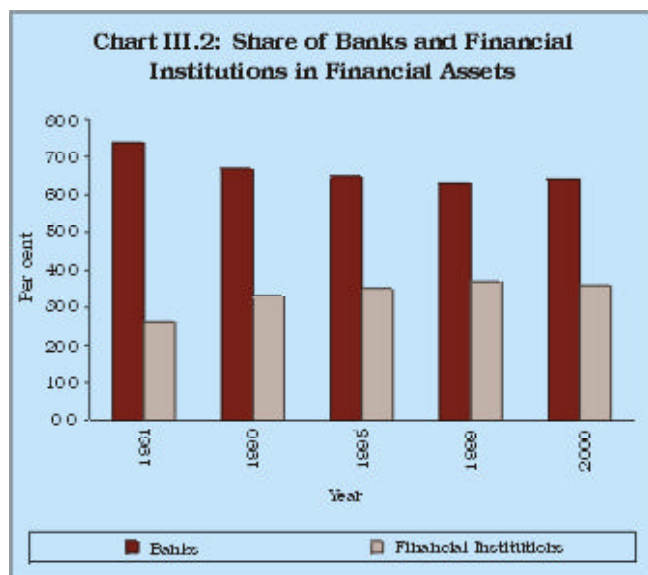
(Per cent)

Period	Share of Banking and Insurance in GDP	Share of Banking and Insurance in Services Sector
1	2	3
1970-71 to 1974-75	2.2	5.7
1975-76 to 1979-80	2.7	6.8
1980-81 to 1984-85	3.1	7.5
1985-86 to 1992-93	4.9	11.2
1993-94 to 1998-99	4.7	11.8

Note : While the shares from 1970-71 through 1993-94 are calculated from respective GDP (or its constituents) with 1980-81 base, the same from 1994-95 through 1998-99 are from the data with 1993-94 base.

Source: *National Accounts Statistics*, Central Statistical Organisation, various issues.

3.8 It may be noted that the growth of GDP originating in finance was generally higher than that of GDP ever since the mid 'seventies (Chart III.1).³ The higher growth rate of GDP from finance in comparison to total GDP, to some extent, arose from the low base of GDP from finance.



3.9 The extent and process of evolution of financial development can be gauged from the flow of funds accounts of the Indian economy, which provides information on instrument-wise and sector-wise financial flows. The data in this regard are available up to 1995-96. The financial system intermediates part of a country's total investment through financial institutions, while firms, households and the government finance a part of the investment directly through their own savings. Financial intermediaries perform the important task of moving financial resources from the units in surpluses to those which are in deficit and need finance from other units for their investments. Financial development is, therefore, to some extent reflected in the inter-sectoral movements of funds. The flow of funds accounts for the Indian economy provide information on the following six sectors of the economy: households, corporates, government, banks, other financial institutions (OFIs) and the rest of the world (ROW). Of the six sectors of the economy, household is the only sector which is in consistent surplus, while

³ While the growth rate from 1970-71 through 1993-94 are calculated from respective GDP (or its constituents) with 1980-81 base, the same from 1994-95 through 1998-99 are compiled from the data with 1993-94 base.

government and corporates are the deficit sectors. The deficit sectors meet their requirements mainly from the households and occasionally, and to a smaller extent from the ROW. Funds can flow from surplus to deficit sectors either directly or through banks and OFIs as intermediaries. Thus, total sources of funds or the total issues can be segregated into two distinct parts, viz., primary issues (*i.e.*, those funds which directly flow from surplus to deficit sectors) and secondary issues (*i.e.*, those funds which flow through the financial intermediaries, viz., banks and OFIs). Total issues which amounted to Rs. 5,877 crore in 1970-71 rose to Rs. 4,34,308 crore in 1995-96 (Table 3.2). A more interesting feature emerges from the sectoral distribution of the total claims. While the share of primary issues had registered a steady decline from 60.3 per cent in 1970-71 to 57.6 per cent in 1990-91, *per contra* there had been an increase in the share of secondary issues. This is indicative of the process of intermediation in the economy. This trend continued during the 'nineties as well, with the exception of 1995-96. Almost the whole of the primary issues was in the form of domestic primary issues in most years under review.

3.10 The financial deepening and widening of India as well as the role of financial development in national income and capital formation may be also seen from the various financial development ratios that can be derived from the flow-of-funds data (Table 3.3). Most of the four commonly tracked ratios exhibited upward trend during the 'seventies and the 'eighties. In the 'nineties, however, there were moderate fluctuations in some of the ratios.

3.11 The finance ratio, as the ratio of total financial claims to national income, is an indicator of the rate of financial development in relation to economic growth. This ratio exhibited generally a steady increase over the period under consideration and reached 0.5 during 1993-94 to 1995-96.⁴ The financial inter-relations ratio (*i.e.*, the ratio between total issues to net domestic capital formation) reflects the relation between the financial structure and real asset structure. Though the ratio exhibited year-to-year fluctuation, it has averaged around 2.4 since 1990-91. The new issue ratio (*i.e.*, the ratio of primary issues to net domestic capital formation), on the other hand, which was at a high of 1.618

⁴ 1995-96 is the latest year for which flow of funds data are available.

REPORT ON CURRENCY AND FINANCE

in 1991-92 declined to 1.161 in 1994-95, before increasing to 1.328 in 1995-96 (Table 3.3). This ratio is indicative of the extent of dependence of

the non-financial sector on its own funds in financing the capital formation. A downward movement in the ratio (as seen during 1992-93

Table 3.2: Primary and Secondary Issues

(Rs. crore)

Year	Secondary Issues	Primary Issues	<i>of which:</i> Domestic Primary Issues	<i>of which:</i> Issues of the Rest of the World	Total Issues
1	2	3 = 4+5	4	5	6
1970-71	2,336 (39.7)	3,541 (60.3)	3,479 (59.2)	62 (1.1)	5,877 (100.0)
1975-76	6,733 (42.8)	8,999 (57.2)	8,125 (51.6)	874 (5.6)	15,732 (100.0)
1980-81	14,731 (40.7)	21,452 (59.3)	21,408 (59.2)	44 (0.1)	36,183 (100.0)
1985-86	30,558 (42.1)	42,006 (57.9)	43,698 (60.2)	-1,692 (-2.3)	72,564 (100.0)
1990-91	71,016 (42.4)	96,508 (57.6)	1,03,558 (61.8)	-7,050 (-4.2)	1,67,524 (100.0)
1991-92	1,06,386 (44.6)	1,31,916 (55.4)	1,24,664 (52.3)	7,252 (3.0)	2,38,302 (100.0)
1992-93	95,790 (45.7)	1,13,990 (54.3)	1,17,511 (56.0)	-3,521 (-1.7)	2,09,780 (100.0)
1993-94	1,42,897 (47.3)	1,59,200 (52.7)	1,40,079 (46.4)	19,121 (6.3)	3,02,097 (100.0)
1994-95	1,89,996 (47.7)	2,08,182 (52.3)	2,06,761 (51.9)	1,421 (0.4)	3,98,178 (100.0)
1995-96	1,79,116 (41.2)	2,55,192 (58.8)	2,63,153 (60.6)	-7,961 (-1.8)	4,34,308 (100.0)

Note : Figures in brackets represent percentage shares to total claims.

Source : *Flow of Funds Accounts of the Indian Economy*, Reserve Bank of India, 2000.

Table 3.3: Flow of Funds Based Indicators of Financial Development in India

Period / Year	Finance Ratio	Financial Inter-relations Ratio	New Issue Ratio	Intermediation Ratio
1	2	3	4	5
1970-71 to 1974-75	0.168	1.379	0.788	0.770
1975-76 to 1979-80	0.274	1.818	1.042	0.743
1980-81 to 1984-85	0.344	2.421	1.429	0.690
1985-86 to 1989-90	0.400	2.402	1.401	0.721
1990-91	0.401	1.745	1.005	0.736
1991-92	0.497	2.922	1.618	0.806
1992-93	0.384	2.183	1.186	0.840
1993-94	0.473	2.825	1.489	0.898
1994-95	0.524	2.433	1.161	0.913
1995-96	0.493	2.260	1.328	0.702

Note : 1. Finance Ratio = Ratio of Total Issues to National Income.

2. Financial Inter-relations Ratio = Ratio of Total Issues to Net Domestic Capital Formation.

3. New Issue Ratio = Ratio of Primary Issues to Net Domestic Capital Formation.

4. Intermediation Ratio = Ratio of Secondary Issues (*i.e.*, issues by banks and other financial institutions) to Primary Issues.

5. National Income refers to Net National Product at factor cost at current prices (1980-81 series).

Source : *Flow of Funds Accounts of the Indian Economy*, Reserve Bank of India, 2000.

to 1995-96) would reflect the continued role of financial intermediation in capital formation. The importance of financial intermediation by banks and other financial institutions in financing activities is also reflected in the intermediation ratio (the ratio between the financial instruments issued by the financial institutions and the financial instruments issued by non-financial units). The intermediation ratio touched a high of 0.913 in 1994-95, but declined to 0.702 in the following year.

Liquidity and Credit-based Indicators of Financial Development

3.12 In addition to the broad based indicators of financial development, various monetary aggregates in relation to GDP are regarded as important proxies for measuring the extent of financial development. This is particularly relevant from the well-acclaimed view that examines the role of intermediation played by banks in economic development. This is primarily reflected in the aggregate deposit / GDP ratio and M_3 /GDP ratio. In particular, M_3 /GDP ratio surpassed the 50 per cent mark during the 'nineties (Table 3.4). As far as credit components are concerned (*i.e.*, both to the Government and to the commercial sector), there had been some tapering off during the 'nineties. However, substantial pressures on liquidity (and through it on the exchange markets) emanated from the surges in capital flows in the second half of the 'nineties that got reflected in accretion to net foreign exchange assets (NFAs) of the banking sector. NFA as a

proportion of M_3 had moved up on an average from 9.0 per cent in the first half of the 'nineties to 16.4 per cent in the second half of the 'nineties.

Banking-based Indicators of Financial Development

3.13 The banking system in India consists of commercial banks and co-operative banks, but it is the former which is dominant in terms of deposits, advances and investments. Commercial banks include foreign banks operating in India in addition to Indian banks in the public sector and the private sector, including Regional Rural Banks. Since 1969, the commercial banks, after nationalisation of 14 banks, have made rapid strides in all the spheres of banking operations, be it the mobilisation of deposits, deployment of credit or geographical coverage, and have accounted for most of the growth in the banking system (Table 3.5). Illustratively, while the number of scheduled commercial banks has gone up moderately, the number of bank offices in India expanded nearly eight-fold from 8,262 in June 1969 to 67,339 in March 2000, as a result of which the population per bank office improved from 64,000 to 15,000 over the same period. Both per capita deposit and per capita credit have witnessed manifold growth. While per capita deposit expanded from a mere Rs.88 in 1969 to Rs.8,247 in 1999-2000, per capita credit, over the same period, expanded from Rs.68 to Rs.4,705; the increase in both these indicators was more pronounced since the latter half of the 'eighties.

Table 3.4: Liquidity and Credit-based Indicators of Financial Development

(as per cent of GDP at current market prices)

Period	Aggregate Deposits	M_3	Bank Credit to Government	Bank Credit to Commercial Sector
1	2	3	4	5
1970-71 to 1974-75	16.4	25.9	13.3	15.6
1975-76 to 1979-80	24.1	33.0	14.0	21.8
1980-81 to 1984-85	30.0	39.1	18.7	26.9
1985-86 to 1989-90	36.1	45.4	22.9	30.3
1990-91 to 1994-95	39.6	49.3	23.6	29.0
1995-96 to 1999-2000	43.8	53.8	21.9	28.6

Source: Reserve Bank of India.

Table 3.5: Progress of Commercial Banking in India

Indicators/Year	June 1969	June 1975	June 1980	June 1985	March 1990	March 1995	March 2000
1	2	3	4	5	6	7	8
Number of Scheduled Commercial Banks (including RRBs)	73	74	148	264	270	281	297
Of which: RRBs	-	-	73	183	196	196	196
: Other Scheduled Commercial Banks	-	-	75	81	74	85	100
Number of Bank Offices	8,262	18,730	32,419	51,385	59,752	62,367	67,339
Population per Office (Thousands)	64	32	21	15	14	15	15
Number of Public Sector Bank Offices	6,669	15,064	25,828	35,629	41,874	44,764	45,957
Per Capita Deposits (Rs.)	88	208	494	1,026	2,098	4,242	8,247
Per Capita Credit (Rs.)	68	148	327	678	1,275	2,320	4,705

Source: Reserve Bank of India.

Financial Indicators relating to Non-Banking Financial Sector

Development Financial Institutions

3.14 Development financial institutions (DFIs) were established in India to resolve a typical market inadequacy problem, viz., the shortage of long-term resources and the perceived risk aversion of savers and creditors to part with funds for long gestation projects. In view of the inadequate provision of long-term finance through banks and/or markets, many of these institutions were set up by the Government. The endorsement of planned industrialisation at the national level provided the critical inducement for establishment of DFIs at both the all-India and state levels. Besides DFIs at the national and state levels, there are also investment institutions and specialised financial institutions.⁵ These institutions provided financial assistance in the form of term loans, underwriting/direct subscription to shares/debentures and guarantees. There has been a secular increase in the disbursements of financial institutions (Table 3.6). As a percentage of GDP, disbursements by financial institutions rose from as low as 0.5 per cent in the first-half of the 'seventies to 1.4 per cent in the first-half of the 'eighties. The ratio increased further to 2.9 per

⁵ All-India Development Banks comprise IDBI, ICICI, IFCI, IIBI and SIDBI; Specialised institutions comprise RCTC, TDICI and TFCI, investment institutions comprise UTI, LIC and GIC and its subsidiaries and State-level institutions comprise SFCs and SIDCs.

cent in the first-half of the 'nineties and stood at 3.3 per cent in the second-half of the 'nineties.

Mutual Funds

3.15 Mutual funds provide households an option for portfolio diversification and relative risk-aversion through collection of funds from the households and make investments in the stock and debt markets. Resources mobilised by mutual funds (UTI was the only mutual fund until 1987-88) grew at a steady rate until 1992-93; since then they showed some variations. Resources mobilised by mutual funds which was just 0.04 per cent of GDP (at current market prices) during the period 1970-71 to 1974-75 increased to 1.59 per cent during 1990-91 to 1992-93. Total resources mobilised as proportion of GDP declined to 1.12 per cent by 1994-95 but nevertheless remained positive. During the period from 1995-96 to 1996-97, there was a net outflow of funds from mutual funds, especially UTI, as a result of which the ratio turned negative. From 1997-98 onwards, the ratio again turned positive and stood at 1.13 per cent during 1999-2000 (Table 3.7).⁶

⁶ Following a decline in the net asset values of US-64, a High Level Committee (Chairman: Shri Deepak Parekh) was constituted by the Government in 1998 to review the objectives and the working of the scheme. Most of its recommendations have been implemented, while a few others are being implemented.

Table 3.6: Trends and Composition of Disbursements of Financial Institutions

(Per cent)

Period	Total Disbursements as percentage of GDP	Shares of disbursements as percentage of total disbursements				
		All-India Development Banks	Specialised Institutions	Investment Institutions	State Level Institutions	Total
1	2	3	4	5	6	7
1970-71 to 1974-75	0.5	66.0	0.0	8.5	25.5	100.0
1975-76 to 1979-80	0.8	71.5	0.0	7.8	20.7	100.0
1980-81 to 1984-85	1.4	68.8	0.0	10.2	21.0	100.0
1985-86 to 1989-90	1.9	66.1	0.1	15.0	18.9	100.0
1990-91 to 1994-95	2.9	64.9	0.5	23.6	11.0	100.0
1995-96 to 1999-2000	3.3	75.1	0.4	16.8	7.6	100.0

Source: Reserve Bank of India.

Table 3.7: Trend and Composition of Resources Mobilised by Mutual Funds

(as percentage of GDP at current market prices)

Period / Year	Public		Private	Total
	Total	Of which: UTI		
1	2	3	4	5
1970-71 to 1974-75	0.04	0.04		0.04
1975-76 to 1979-80	0.06	0.06		0.06
1980-81 to 1984-85	0.13	0.13		0.13
1985-86 to 1989-90	0.75	0.67		0.75
1990-91 to 1992-93	1.59	1.20		1.59
1993-94	1.13	1.08	0.18	1.31
1994-95	0.99	0.85	0.13	1.12
1995-96	-0.50	-0.53	0.01	-0.49
1996-97	-0.21	-0.22	0.06	-0.15
1997-98	0.22	0.19	0.05	0.27
1998-99	0.06	0.01	0.14	0.20
1999-2000	0.25	0.23	0.88	1.13

Source: UTI and other Mutual Funds

Non-Banking Financial Companies

3.16 Non-banking financial companies (NBFCs) have emerged as an important part of the Indian financial system. These companies have grown rapidly in the second-half of the 'eighties and the first-half of the 'nineties. The regulated deposits of NBFCs increased from an average of 0.12 per cent of GDP during the period from 1970-71 to 1974-75 to 0.30 per cent during the period from 1985-86 to 1989-90 (Table 3.8).⁷ They witnessed

⁷ Regulated deposits are subject to certain ceilings and other restrictions.

a steady growth thereafter to 0.45 per cent of GDP during 1990-91 to 1992-93. During the period 1993-94 to 1996-97, they experienced a sharp rise from 2.02 per cent of GDP to 3.90 per cent. In recent years, however, deposits with NBFCs have witnessed a decline.⁸

Table 3.8: Deposits with Non-Banking Financial Companies

(Per cent)

Period	As % of Bank Deposits	As % of GDP
1	2	3
1970-71 to 1974-75	0.71	0.12
1975-76 to 1979-80	0.68	0.16
1980-81 to 1984-85	0.46	0.14
1985-86 to 1989-90	0.81	0.30
1990-91 to 1992-93	1.18	0.45
1993-94	5.02	2.02
1994-95	6.01	2.52
1995-96	8.11	3.28
1996-97	9.47	3.90
1997-98	3.70	1.57
1998-99	2.65	1.16
1999-2000	1.88	0.87

Note : 1. Deposits of NBFCs, for the period 1970-71 through 1996-97, refer to regulated deposits only.
2. Data for 1999- 2000 are provisional and relate to NBFCs with public deposits of Rs.50 crore and above.

Source: Reserve Bank of India.

⁸ There are problems of comparability of data on deposits with NBFCs. In 1993-94, there has been a change in the ambit of deposits with NBFCs (due to an expansion in the exempted deposits). Thereafter, in 1997-98 there had been an overhaul in the regulatory framework for NBFCs; consequently the coverage of deposit changed as well.

3.17 The trend in the growth in total deposits with NBFCs as a percentage of aggregate deposits exhibited more or less similar trend, rising from a low of 0.71 per cent of bank deposits during the period from 1970-75 to 1.18 per cent during 1990-93. During the period from 1993-94 to 1996-97, deposits with NBFCs experienced a sharper rise from 5.02 per cent of commercial bank deposits to 9.47 per cent. Recent years have, however, witnessed relatively lower ratios. This could be attributed partly to the setting up of a strong regulatory and supervisory framework and partly to changes in the definition of deposits as indicated at footnote 8.

Channels of Interaction between Finance and Growth

3.18 Financial development and growth has been a crucial subject of public policy for long. As early as in the 19th century, a number of economists stressed the importance of financial development for the growth of an economy.⁹ The banking system was recognised to have important ramifications for the level and growth rate of national income *via* the identification and funding of productive investments. This, in turn, was expected to induce a more efficient allocation of capital and foster growth. A contrary view also prevailed at the same time suggesting that economic growth would create demand for financial services. This meant that financial development would follow growth more or less automatically. In other words, financial development could be considered as a by-product of economic development.

3.19 The issue of sources of finance gains importance in this context. The preferred modes of finance get to a substantial extent determined by the level of financial development, institutional practices, legal structures and other country-specific features. For instance, in the absence of a well-developed stock market, the traditional treatment about the availability of choice between banks and stock markets as providers of liquidity at the short-end and the long-end would be of limited relevance for countries. In certain other cases, the stock-markets might not be efficiently functioning and could create a wedge between the preferred financing hierarchy of the firms and the one that could support accelerated growth of

corporate investment and output. If the markets are competitive, complete and well functioning, financing choices would be rendered irrelevant by the sheer efficiency of the markets. However, in practice, the instances of financial markets having developed and matured to such an efficient state are few and far between. As such, given the market imperfections, financial development becomes a crucial determinant of the growth, with links being provided through the processes of saving and investment as also the choices that economic units exercise between the alternate sources of financing investment.

3.20 It is important to note in this connection the several functions that a financial system is expected to perform. First, in the presence of informational asymmetries, financial markets could still develop in order to facilitate trading and hedging of risks. Risk mitigation and economising on information acquisition and processing reduce uncertainty and enable resources to flow towards most profitable projects. Such a situation would raise the efficiency of investments and the rate of growth. Secondly, by acting as an efficient conduit for allocating resources, the financial system enables an improvement in technical progress. Technological innovations take place when entrepreneurs exploit the best chances of successfully imitating technologies in their production processes and introducing new products. Over time, as skills develop, and as the economy experiments with adaptations of the existing technologies, and creates a base for research and development of new technologies, growth rates are likely to move upward. This is particularly valid in financial systems that are more effective at pooling the savings of individuals and permitting continuous upgradation of technologies for promoting growth on a sustained basis. Finally, to the extent that financial development leads to the creation of financial infrastructure and enables better and more efficient provision of goods and services, costs of transactions would be lower, with positive spillover on economic growth.

3.21 These possibilities may not be in evidence in many developing economies where distortions in the financial systems impact the growth process adversely and result in dead-weight loss. In a number of developing economies, interest rate ceilings, high reserve ratios and directed credit

⁹ Prominent among them were Walter Bagehot and Joseph Schumpeter.

programmes are generally noticed. Such requirements though necessitated by the initial conditions, limit the degrees of freedom for the conduct of monetary and financial policies.

3.22 The recent growth literature, building on 'learning by doing' processes, assigns a special role to finance. Finance is seen as a crucial factor

of production like knowledge and the influence of institutional arrangements in regard to finance on growth rates has often been forcefully emphasised. These models offer important insights on the impact of financial development on economic growth which are of relevance to the Indian context (Box III.1).

Box III.1

Endogenous Growth and Financial Development

The linkage between finance and economic development has been resurrected over the past decade by the endogenous growth theory. The new growth models trace the steady-state growth rate (g) in terms of three crucial parameters, viz., the level of technology, as captured by social marginal productivity of capital (A), the proportion of savings channelled to investment (f) and the saving rate (s). Ignoring depreciation, the new theories seek to establish that $g = A f s$. Financial development could influence economic growth by increasing the productivity of capital, or lowering of intermediation costs (via an increase in f), or by enhancing the saving rate.

An efficient financial system allocates funds to projects with the highest marginal product of capital and thereby fosters economic growth. However, this process is costly. First, in order to find the most profitable project, financial systems need to monitor or screen alternative projects. Even if high-return projects are identified, they could carry high risks, discouraging individuals from investing in these projects. In such situations, financial systems play a role in risk-sharing and inducing individual investors to invest in high-return, albeit riskier, projects. Specifically, the role of financial institutions is to collect and analyse information so as to channel investible funds to investment activities that yield the highest returns [Greenwood and Jovanovic (1990)]. In the analytical framework of Greenwood and Jovanovic, capital may be invested in a safe, low-yield technology or a risky, high-yield one. In contrast to individual investors, financial intermediaries with their large portfolios can acquire better information on the aggregate productivity shock and choose the technology that is most appropriate for realisation of the shock in the current period. The financial intermediaries would help channelise savings into such areas and help realise higher productivity of capital and higher growth.

This phenomenon could be seen from a different angle. Individuals face uncertainty about their future liquidity needs and therefore need to either invest in a safe, low-productive liquid asset, or in a risky, high-return illiquid asset. In such a set-up, financial intermediaries allow individuals to reduce risks associated with their liquidity needs and channel savings into activities with high productivity [Bencivenga and Smith (1991)].

Alternately, consumers' liquidity risk can be shared via security markets [Levine (1991)]. Individual investors can sell shares in the stock market when they face liquidity problems. These markets also enable the individual investors to diversify their rate-of-return risks by devising appropriate portfolios. This two-fold insurance function promotes willingness to invest in less liquid, more productive projects and also helps to avoid unnecessary terminations. Portfolio diversification via stock markets expected to have a growth enhancing effect, by way of encouraging specialisation of production by firms.

There could also be the feedback relationships among

banking specialisation, costs of monitoring and growth [Harrison *et al.* (1999)]. Growth increases banks' activity and profits, and promotes entry of more banks. The entry shortens the average distance between banks and borrowers, facilitates regional specialisation and lowers in the process the cost of financial intermediation, which, in turn, boosts investment, and thereby growth.

There are a number of possible routes through which financial development could affect saving rates. These involve idiosyncratic risks, rate-of-return risks, interest rates and liquidity constraints. First, a reduction in endowment and liquidity risks by insurance and finance markets might lower the level of precautionary saving by households, and therefore the growth rate. If country-specific endowment risks are shared via the international capital markets, saving rate and economic growth would be lower than would otherwise be the case. Thus, a reduction in these two kinds of risks as a result of financial development can have different effects on growth. Secondly, financial development, for example, by reducing 'financial repression' could lead to increase in the interest rates paid to households, but the effect of such an interest rate hike on saving might not be necessarily favourable due to the presence of well-known income and substitution effects. Empirically, however, financial repression is generally found to be growth retarding [Roubini and Sala-i-Martin (1992)]. Thirdly, easing liquidity constraints on households by liberalising consumer credit and mortgage markets may lower the saving rate, since younger generations in their overlapping generations model would dissave much more in the absence of liquidity constraints [Jappelli and Pagano (1994)]. Thus, in the endogenous growth theory, the overall effect on saving rate is not unequivocally clear and financial development could well reduce saving via the effect on the growth rate.

References

1. Bencivenga, V.R. and B.D. Smith, (1991), "Financial Intermediation and Endogenous Growth", *Review of Economic Studies*, 58, pp. 195-209.
2. Greenwood, J. and B. Jovanovic, (1990), "Financial Development, Growth and the Distribution of Income", *Journal of Political Economy*, 98, pp.1076-1107.
3. Harrison, P., O. Sussman and J. Zeira, (1999), "Finance and Growth: Theory and New Evidence", *Finance and Economics Discussion Series*, Staff Paper No.35, Federal Reserve Board, Washington D.C.
4. Jappelli, T. and M. Pagano, (1994), "Saving, Growth and Liquidity Constraints", *Quarterly Journal of Economics*, 109, pp. 83-109.
5. Levine, R., (1991), "Stock Markets, Growth and Tax Policy", *Journal of Finance*, 46, pp. 1445-1465.
6. Roubini, N. and X. Sala-i-Martin, (1992), "Financial Repression and Economic Growth", *Journal of Development Economics*, 39, pp. 5-30.

Financial Development and Savings in India

3.23 One of the basic channels of influence of financial development on growth is the saving rate. The primary mode through which this occurs is financial savings and in particular, intermediated financial savings. In fact, a distinction should be made between the determinants of the capacity to save and the willingness to save.¹⁰ While the capacity to save is dependent on the level and growth of per capita income, the willingness to save is influenced by a number of financial variables, such as, rate of interest and financial deepening. However, the effect of interest rate on saving in developing economies is not clear, partly because of the presence of either administered interest rates or some rigidities in the working of interest rate mechanism. After all, a change in interest rate could cause a variation in the portfolio composition of the household sector's saving without perceptible impact on the total quantum of saving. Financial deepening, on the other hand, is capable of increasing the total quantum of saving. The Indian saving experience during the period 1970-71 to 1998-99 was marked by a simultaneous secular increase in the rate of Gross Domestic Saving (GDS, as a percentage of GDP at current market prices) and the rise in the rate of financial saving of the household sector and private corporate sector (Table 3.9). During the 'nineties, household financial saving has emerged as the single most important contributor to GDS. The performance of the corporate sector improved during the 'nineties, while the public sector experienced a notable downturn in its saving performance. Given the fairly high public sector deficits in relation to GDP during the 'nineties, the public sector had to make a draft on household saving in general and household financial saving in particular. The implications of this development for growth and macroeconomic balance are important, both from the point of view of closing the potential output gap and promoting financial stability.

3.24 The criticality of financial saving is better appreciated from the structural composition of the GDS. Since the early 'nineties, there has been a downward drift in the share of physical saving,

¹⁰ This distinction is due to Hussein, Khalid A. and A. P. Thirlwall (1999), "Explaining Differences in the Domestic Savings Ratio Across Countries: A Panel Data Study", *Journal of Development Studies*, February, Vol. 36, pp. 31-52.

which had been partly compensated by the household sector financial saving. Within household sector financial saving, contrary to experiences of disintermediation in a number of developed economies, bank deposits turned out to be the most popular abode of saving. The share of net bank deposits (*i.e.*, net of liabilities) increased from 9.8 per cent during 1985-86 to 1992-93 to 16.3 per cent during 1993-94 to 1998-99 (Table 3.10). This apart, contractual savings like those in Life Insurance Funds, and Provident and Pension Funds emerged as important financial assets in the household sector's portfolio. Contractual saving can raise the potential saving of the economy. In particular, it has the potential of activating the capital market and performing the role of social security (Box III.2).

3.25 While there is some evidence that financial development has led to improvement in the saving rate of the Indian economy, the question nevertheless remains as to how much of the increase in saving has got translated into higher growth. The answer to the question is rather mixed. There is some evidence of a unidirectional causality from growth to finance.¹¹ However, using more recent data it is found that there is a distinct feedback effect from saving to growth as well.¹² In other words, while higher growth may lead to higher saving, there is also a possibility of saving-induced growth in the Indian economy. Hence, the channel of impact from finance to saving and therefrom to growth could be the link behind the relationship between financial development and economic growth in India.

Stock Markets and Financial Development in India

3.26 The role of stock markets as a source of economic growth has been widely debated. It is well recognised that stock markets influence economic activity through the creation of liquidity. Liquid financial market was an important

¹¹ As for example, Muhleisen (1997) found that while the causality from saving to growth is consistently rejected, the causality from growth to saving is consistently accepted; see Muhleisen, Martin (1997), "Improving India's Saving Performance", *IMF Working Paper*, No. 97/4.

¹² Ray, Partha and D. Bose (1997), "Growth, Saving and Investment in the Indian Economy: Trend, Composition, and Relationship", *RBI Occasional Papers*, No. 2 & 3, pp. 99-144.

Table 3.9: Trends in Gross Domestic Saving

(as Per cent of GDP at current market prices)

Item	1970-71	1975-76	1980-81	1985-86	1993-94
	to 1974-75	to 1979-80	to 1984-85	to 1992-93	to 1998-99
1	2	3	4	5	6
1. Household sector	12.0	15.2	14.1	17.1	18.6
1.1 Financial Saving	4.0	5.7	6.7	8.4	10.6
1.2 Saving in Physical Assets	8.0	9.5	7.4	8.8	8.0
2. Private Corporate Sector	1.7	1.5	1.6	2.4	4.1
3. Public Sector	3.0	4.5	3.7	2.0	1.2
4. Gross Domestic Saving (1+2+3)	16.6	21.2	19.4	21.5	23.9

Note : Data for the period 1970-71 to 1992-93 are based on 1980-81 series and data for the period 1993-94 to 1998-99 are based on 1993-94 series.

Source: Central Statistical Organisation.

Table 3.10: Composition of Gross Domestic Saving

(Per cent)

Item	1970-71	1975-76	1980-81	1985-86	1993-94
	to 1974-75	to 1979-80	to 1984-85	to 1992-93	to 1998-99
1	2	3	4	5	6
1. Household sector	72.1	71.5	72.6	79.4	77.8
1.1 Financial Saving	23.7	26.9	34.9	38.8	44.5
Currency	5.1	4.7	5.7	5.5	5.3
Net deposits	8.1	10.0	11.3	9.8	16.3
Shares and Debentures	0.8	0.9	2.1	5.8	3.9
Net Claims on Government	-0.6	1.7	4.5	4.9	4.6
Life Insurance Funds	2.9	2.7	3.2	3.9	4.9
Provident and Pension Funds	7.4	6.9	8.0	9.0	9.6
1.2 Saving in Physical Assets	48.4	44.6	37.8	40.6	33.3
2. Private Corporate Sector	10.1	7.3	8.4	10.9	17.1
3. Public Sector	17.9	21.2	19.0	9.7	5.1
4. Gross Domestic Saving (1+2+3)	100.0	100.0	100.0	100.0	100.0

Note : Data for the period 1970-71 to 1992-93 are based on 1980-81 series and data for the period 1993-94 to 1998-99 are based on 1993-94 series.

Source: Central Statistical Organisation.

enabling factor behind most of the early innovations that characterised the early phases of the Industrial Revolution. Recent advances in this area reveal that stock markets remain an important conduit for enhancing development. Many profitable investments necessitate a long-term commitment of capital, but investors might be reluctant to relinquish control of their savings for long periods. Liquid equity markets make investments less risky and more attractive. At the same time, companies enjoy permanent access to capital raised through equity issues. By facilitating longer-term and more profitable investments, liquid markets improve the

allocation of capital and enhance the prospects for long-term economic growth. Furthermore, by making investments relatively less risky, stock market liquidity can also lead to more savings and investments.

3.27 Over the years, the stock market in India has become strong. The number of stock exchanges increased from 8 in 1971 to 9 in 1980 to 21 in 1993 and further to 23 as at end-March 2000. The number of listed companies also moved up over the same period from 1,599 to 2,265 and thereafter to 5,968 in 1990 and 9,871 in March 2000. The market capitalisation at

Box III. 2 Contractual Saving

What distinguishes contractual saving from non-contractual or discretionary saving is the existence of a long term saving contract. As the term suggests, contractual saving involve entering into a 'long term', 'definite' and 'continuous' contract or commitment on the part of the saving household (Joshi, 1972). The regular contributions to pension and provident funds and payment of premiums to insurance funds can be regarded as contractual saving. Contractual saving instruments are intended to mobilise resources from the households towards long term investment. The preferred portfolio of households' non-contractual financial saving comprises a spectrum of financial instruments broadly classified into four categories *viz.*, currency, net bank deposits, claims on government such as investment in government bonds and securities and lastly, claims on private corporate sector in the form of investment in stocks and bonds. It is apposite to point out that non-contractual financial assets differ widely in their degree of liquidity and more importantly, in their terms to maturity.

Contractual saving institutions operate on two principles, namely, Defined Contributions and Defined Benefits. In the case of the former, regular contributions are made by or on behalf of savers and the accrual of final benefits depends upon the total contributions made and the accumulated investment earnings. Provident funds and several policies of life insurance funds function on this basis. As against this, the latter *i.e.*, defined benefits principle, promises a certain level of benefits to the savers and contributions are adjusted as per the investment performance and other factors (Vittas and Skully, 1991). Pension funds function on these lines.

The net effect of a variation in interest rates on household sector saving could be negative or positive depending upon the relative impact of income and substitution effects. The substitution effect is the key to understanding the *form* in which the households would decide to save. In other words, the relative rate of return from alternative financial instruments would decide the household's decision to save in a given instrument. In that case, one would expect that the portion of total saving held in the contractual form would be based on the yield that the various instruments of this component fetch *vis-à-vis* the non-contractual instruments. Empirically, contractual saving have been found to be an imperfect substitute for non-contractual saving. It has been found that households with a certain amount of saving in contractual form have at least as much amount of saving in non-contractual instruments such as net deposits, as households with only saving in non-contractual form. This leads to the conclusion that such contractual saving are made at the cost of household consumption and such saving would lead to a diversion of fresh funds into the capital markets (Cagan, 1965). This hypothesis, however, would need to be tested empirically.

In view of the growing need for infrastructure financing, saving agencies such as insurance companies, pension and provident funds can, however, play a crucial role in accelerating infrastructure investments through the utilisation of long-term contractual saving. While the banking system generally mobilises short term and medium term saving, contractual saving institutions in view of their long-term liabilities can be regarded as natural claimants for financing of infrastructure projects characterised by long gestation periods.

Contractual saving, unlike discretionary or non-contractual saving, are generally considered a stable function of income. Such saving are guided by security motive and rules of employment. Being long-term in nature, the role of contractual saving in generating and strengthening the growth impulse could hardly be underplayed. Contractual saving as percentage to GDP increased from 2.2 per cent in 1980-81 to 2.9 per cent in 1990-91 and further to 4.1 per cent by 1998-99. In the milieu characterised by the continued dominance of consumption-led growth, the growth enhancing effect of contractual saving in view of its long term nature is expected to come out more prominently. This hypothesis is reinforced by a positive correlation between economic growth and the growth in saving, albeit modest, in the 'nineties in the Indian economy.

Cross-country experience suggests that contractual saving for housing (CSH) is expected to play a significant role in augmenting the housing finance especially in the transition economies. It is worth recalling that CSH system was reasonably successful in Europe for construction after World War II. Following the completion of structural adjustment and stabilisation programme, CSH can provide 'additionality', overcome information constraints on financial contracts and impact positively on financial saving rates and thereby the growth in the Indian economy.

Contractual Saving has the potential of boosting the stock market. Recent research had pointed that contractual saving could be treated as exogenous to the development of the stock market (Impavido and Mausalem, 2000). In particular, contractual saving has been found to be promoting stock market development, as measured by the stock market capitalisation and value traded as percentage of GDP.

Table 3.11: Contractual and Non-contractual Saving

Year	As % of GDP		As % of Household Financial Saving	
	Contractual Saving	Non-contractual Saving	Contractual Saving	Non-contractual Saving
1	2	3	4	5
1980-81	2.2	4.1	34.6	65.4
1985-86	2.2	4.8	31.4	68.6
1990-91	2.9	5.8	33.2	66.8
1995-96	3.0	5.9	34.1	65.9
1998-99	4.1	6.8	37.5	62.5

Source: Central Statistical Organisation.

References

1. Cagan, Phillip (1965), *The Effect of Pension Plans on Aggregate Saving*, National Bureau of Economic Research, New York.
2. Impavido, Gregorio and Alberto R. Musalem (2000), "Contractual Saving, Stock and Asset Markets", *Policy Research Working Paper No. 2490*, World Bank.
3. Joshi, Madhusudan (1972), "The Role of Contractual Saving", *Finance and Development*, 9, December.
4. Vittas, Dimitri and Michael Skully, (1991), "Overview of Contractual Saving Institutions", *Policy Research and External Affairs Working Paper No. 605*, World Bank.

BSE as a percentage of GDP at current market prices also improved considerably from around 28 per cent in the early 'nineties to over 45 per cent at the end of the 'nineties, after witnessing a fall in certain intervening years (Table 3.12). In 1998, India ranked twenty-first in the world in terms of market capitalisation, nineteenth in terms of total value traded and second in terms of number of listed domestic companies.¹³ Though the Indian stock market was founded more than a century ago, it remained quite dormant from independence in 1947 up to the early 'eighties, with a capitalisation ratio (market capitalisation to GDP) of only 4 per cent. However, the patterns of demand for capital have undergone significant changes during the last two decades and improved stock market activity. It may be recalled that till the 'nineties, institutional term-lending acted as the primary source of industrial finance in India. Financial institutions raised money through Government-guaranteed bonds at low rates of interest, which, in turn, lent funds at concessional rates of interest. This system provided corporates a cushion to absorb the relatively high risk of implementing new projects. This, in turn, discouraged the corporates to raise risk capital from equity markets. On this account, the debt market segment, which is sensitive to 'economic information' also remained underdeveloped and illiquid. With the onset of the reforms process in the 'nineties, institutions had to raise resources at market related rates. At the same time, the market has witnessed the introduction of several new customised bonds at maturities tailored to suit investor needs and with market-driven coupons. Along with this development, a number of measures were initiated to reform the stock markets, which helped to improve the overall activity in the stock market significantly. The turnover ratio increased from a low of 6.7 per cent at the beginning of the 'nineties, to reach 35.1 per cent in 1999-2000, excepting certain years of relative inactivity.

3.28 Over the years, the Indian capital market has experienced a significant structural transformation in that it now compares well with those in developed markets. This was deemed necessary because of the gradual opening of the economy and the need to promote transparency in alternative sources of financing.

¹³ Emerging Stock Markets Factbook, (1999), International Finance Corporation, Washington DC.

**Table 3.12: Market Capitalisation and
Turnover at BSE**

(as Per cent of GDP at current market prices)

As at end of	Capitalisation	Turnover
1	2	3
December 1970	3.8	0.0
December 1975	2.6	0.0
December 1980	3.8	1.5
December 1985	7.4	2.2
March 1990	13.4	6.0
March 1991	16.0	6.3
March 1992	49.5	11.0
March 1993	28.2	6.1
March 1994	42.8	9.8
March 1995	43.1	6.7
March 1996	44.5	4.2
March 1997	34.1	9.1
March 1998	37.0	13.7
March 1999	30.9	17.7
March 2000	46.8	35.1

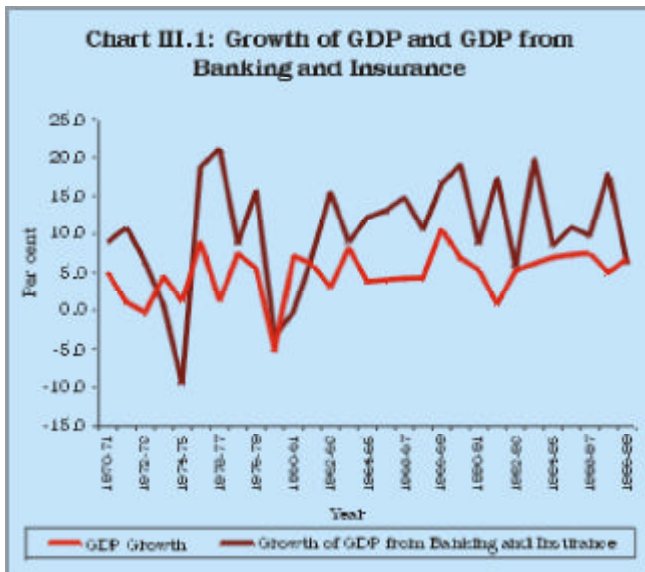
Source : Bombay Stock Exchange.

The regulatory and supervisory structure has been overhauled with most of the powers for regulating the capital market having been vested with the Securities and Exchange Board of India (SEBI).

Bank-based versus Market-based Finance in India

3.29 Banks have traditionally been the dominant entities of financial intermediation in India. This is reflected in the predominance in the share of banks in the aggregate financial assets of banks and financial institutions, taken together. The relative share of banks, which stood at nearly three-fourths in the early 'eighties, came down gradually over a period of time, and has hovered around the two-thirds mark since the 'nineties (Chart III.2). While this meant that financial institutions have gained in terms of shares in financial assets, it also implies that there is considerable potential for market financing to grow.

3.30 Given the predominance of bank-based finance in India, questions arise about the advantages and disadvantages of bank-based financial systems *vis-à-vis* (stock) market-based financial systems. The banking system avoids some of the information-deficiencies associated with the securities markets. Put differently, banks perform screening and monitoring



functions on behalf of investors, which, left to themselves, can be undertaken only at a high cost. As a consequence, resource allocation and credit availability are considered to be superior under a bank-based as opposed to a market-based financial system. On the contrary, lower transaction costs in the absence of

intermediation, may favour market-based sources of finance.

3.31 Experiences of the two most successful industrialised countries - Germany and Japan - reveal that the dominance of bank-based system has been the most successful financial vehicle for late industrialisation. While the institutional arrangements underlying bank-based systems vary, the basic contours are that banks establish long-term relationships with industrial companies, often reinforced by cross-holdings. For example, in Japan, banks had preferential access to transaction deposits of the firms, while the firms had secured access to loans from the banks, especially in situations of cyclical downturns. This ensured a steady supply of long-term finance to the firm, irrespective of the phase of cyclical fluctuation and built up a synergy between investment and growth. On the other hand, in countries, such as, the US and the UK, financial markets have played an important role in the development of these economies. A cross-country comparison reveals that both bank-based and market-based systems are in vogue (Box III.3).

Box III.3

Bank-based and Market-based Financial Systems

Financial systems differ not only with respect to their degree of sophistication, but also with respect to the type of the system. An important aspect of the growth process that has been widely discussed in recent time is the type of the financial system that is most conducive to growth. At one extreme, there is Germany, where a few large banks play a dominant role and stock market is not very important. At the other extreme is the US, where financial markets play an important role and the banking industry is much less concentrated [Allen and Gale (1995)].

Recent work in this area, using company balance sheet data, have demonstrated that internal sources of finance constituted the major portion of corporate (physical) investment in major OECD countries and that the role of the stock market (net of redemption) was limited in the majority of these countries. This can be traced to the fact that in the early stages of development, adequate incentives exist to bring borrowers' and lenders' interests into line. An efficient banking system may act as an important conduit for channelling scarce resources from the surplus to the deficit sectors. The role of disintermediation in such circumstances is likely to be limited. In the longer term, as markets develop and the financial infrastructure is in place, intermediaries may be less central to the development of firms.

Traditional explanations of differences in financing patterns (such as tax treatment) attracted little empirical support. Recent advances have attempted to endogenously determine

the emergence of bank-based or market-based financial system [e.g., Arnold and Walz (2000)]. In the presence of informational problems, if banks are initially competent monitors of firms, then a bank-based financial system emerges, and banks become more productive due to learning-by-doing and the financial sector continues to be dominated by banks. If, on the other hand, the productivity of the banking sector is initially low, then a market-dominated regime emerges: banks become even more unproductive because there are no learning effects in banking, and market-based sources of finance gain in prominence.

This leads to two important and inter-related questions: (i) how do these marked differences in ownership emerge, and (ii) how are they related to the structure of financial systems? It has been argued that, there are two classes of economies: (a) *banking economies*, which have a small proportion of quoted companies, high concentration of ownership and long-term relations between banks and industry, and (b) *market economies* which have a high proportion of quoted companies, low concentration of ownership and short-term relations between banks and industry. In case of the former, firms have long-standing relationship with banks. This is ascribed to closer involvement of banks in corporate activities, for example, bank representation on corporate boards, bank holdings of corporate equity, etc. In case of the latter, the banking industry is much less important. In

(Contd...)

(...Concl.)

these countries, securities market share centre-stage with banks in terms of channelling society's savings to firms, exerting corporate control and easing risk management.

A major shortcoming with existing comparisons of market-based versus bank-based financial systems is that they focus on a very narrow set of countries with similar levels of GDP per capita, so that the countries have very similar long-run growth rates. In order to statistically test this proposition, Demirgic-Kunt and Levine (1999), using a database of 150 countries, have attempted to illustrate the relationships between financial structure and economic development. The following illustrative list (Table 3.13), classifying countries according to the structure and the level of financial development exemplifies the point.

Thus, a comparison of financial systems across different income groups reveals several clear patterns. First, banks, other financial intermediaries and stock markets become larger, more active and more efficient as countries become richer. Thus, financial sector development tends to be greater at higher income levels. Secondly, an analysis of differences in financial structure across different income groups demonstrates that size measures of financial structure do not follow a clear pattern, as countries become richer.

Table 3.13: Classification of Financial Structure and Level of Development of Select Economies

Extent of Development	Bank-based	Market-based
1	2	3
Developed	Japan, Germany, France, Italy	Singapore, Malaysia, Korea, US, UK
Under-developed	Argentina, Pakistan, Sri Lanka, Bangladesh,	Brazil, Mexico, Philippines, Turkey

Source : Demirgic-Kunt and Levine (1999).

References

1. Allen, F and D. Gale, (1995), "A Welfare Comparisons of Intermediaries and Financial Markets in Germany and the US", *European Economic Review*, 39, pp.179-209.
2. Arnold, L and U. Walz, (2000), "Financial Regimes, Capital Structure, and Growth", *European Economic Review*, 16, pp.491-508.
3. Demirgic-Kunt, A and R. Levine, (1999), "Bank-based and Market-based Financial Systems: Cross-Country Comparisons", *World Bank Policy Research Working Paper*, No. 1692.

3.32 A tentative measure of the significance of stock markets relative to the banking system is the ratio of market capitalisation to assets of scheduled commercial banks. During the 'seventies and the 'eighties, this ratio remained significantly low, with a high of 21.3 per cent in 1970 (Table 3.14).

3.33 With the establishment of the SEBI as an autonomous body for regulation and promotion of capital markets (with focus on simplification of issue procedures, enhancement in disclosure standards and greater investor protection), the role of stock markets has gained prominence. As a result, the relative importance of stock markets *vis-à-vis* banks has increased significantly in the 'nineties. The ratio of market capitalisation to assets of scheduled commercial banks which was 28.4 per cent in March 1991 increased sharply to 85.2 per cent in March 1996. It came down to 55.3 per cent in March 1999, only to increase to 79.3 per cent in March 2000.¹⁴

Fiscal Policy and Financial Development

3.34 An important aspect of the process of financial development has been the role of the Government. In many developing economies the

Table 3.14: Assets of Scheduled Commercial Banks and Market Capitalisation at BSE

(as Per cent of GDP at current market prices)

As at end of	Assets of Scheduled Commercial Banks	Market Capitalisation at BSE	Market Capitalisation at BSE as % of Scheduled Commercial Banks' Assets
1	2	3	4
December 1970	17.9	3.8	21.3
December 1975	21.0	2.6	11.0
December 1980	40.0	3.8	9.3
December 1985	46.8	7.4	15.2
March 1991	56.3	16.0	28.4
March 1992	52.9	49.5	93.5
March 1993	51.6	28.2	54.7
March 1994	52.0	42.8	82.3
March 1995	51.6	43.1	83.5
March 1996	52.3	44.5	85.2
March 1997	50.9	34.1	66.9
March 1998	54.4	37.0	67.9
March 1999	56.0	30.9	55.3
March 2000	59.1	46.8	79.3

Note : Assets of scheduled commercial banks includes liquid reserves, loans, investments and other assets.

Source : Reserve Bank of India and Bombay Stock Exchange.

¹⁴ The sharp rise in the ratio to 93.5 during 1991-92 was an aberration.

Governments traditionally played a significant role in fostering financial development. While in some cases this led to an administered interest rate regime, leading to market inefficiencies, Governments in many developing countries had to contend with financial markets that are characterised by significant informational asymmetries, moral hazard and adverse selection problems. For these reasons, a free-market equilibrium might not have the efficiency characteristics which are typically associated with market equilibria in the goods market. More importantly, the nascent accounting frameworks and inadequate legal mechanisms for redressal necessitate a role for the Government to remedy these imperfections.

3.35 The overarching concerns of the Government in fostering financial development have been in evidence as reflected in the regulations and administrative mechanisms that have been evolved in respect of credit and capital markets. Direct intervention was particularly highlighted with the nationalisation of 14 commercial banks in 1969. However, over time, the relationship between fiscal and financial institutions and banks have developed in a way that required prudential regulations and capital strengthening to be set in place. Predominant Government ownership of financial system also involved quasi-fiscal activities that added to the contingent liabilities of the government. However, the coexistence of government and private financial institutions and enhancement in private participation in the existing public sector financial institutions has afforded an opportunity to restructure the financial system, enhance competition, cut costs of intermediation, improve quality of customer services and ultimately support growth in an economy.

3.36 The extent to which fiscal factors could influence the financial system depends upon the existing fiscal position and the policy stance of the Government. Unlike in the 'seventies, the fiscal situation in India in the 'eighties was characterised by significant imbalances contributing to rising fiscal deficit and accumulation of debt. However, much of the debt was incurred on relatively low coupon rate basis. The maturity profile of debt also was somewhat long. The revenue account of the centre turned into deficit beginning 1979-80. The State Governments began to experience revenue gaps since 1987-88. The combined GFD/GDP ratio of the Central and State Governments,

which averaged 9.4 per cent during the five-year period ending 1989-90 and stood at 10.0 per cent in 1990-91, after declining to 6.4 per cent by 1996-97, reverted to 9.9 per cent by 1999-2000.

3.37 The combined debt/GDP ratio of Central and State Governments had touched a high of 61.7 per cent of GDP in 1990-91. Since then, there has been some progress in reducing debt ratios, *albeit*, marked by a regress in 1999-2000 on account of exogenous factors. On the expenditure side, the total expenditure of central and state governments which averaged 27.3 per cent of GDP in the first half of the 'eighties and 30.1 per cent of GDP in the second half of the 'eighties, declined to 25.2 per cent of GDP in the 1996-97 with rationalisation of expenditure. Although this ratio increased to 28.5 per cent of GDP in 1999-2000, there was an overall containment of expenditure in recent years, brought about mainly by cuts in capital expenditures and rise in interest payments (Table 3.15). However, the development of the Government securities market and introduction of innovative Government debt instruments was rendered possible as a matter of deliberate policy action on the part of the Government.

3.38 The saving-investment gap for the public sector had risen to 8.7 per cent of GDP in 1990-91 and reflected a large draft on household savings. Some improvement followed as the public sector savings averaged 1.8 per cent during 1996-97 to 1998-99. The gap was reduced to 5.3 per cent in 1996-97 and was sustained at this rate, mainly on account of reductions, *albeit* moderate, in the rate of capital formation. However, in 1998-99, public sector saving dipped significantly due mainly to large deficit of administrative departments. The continuance of domestic saving-investment gap of such a magnitude contributes to macroeconomic imbalances, places pressure on domestic interest rates and creates uncertainty in pursuing the objectives of financial sector strengthening and stability.

3.39 The growth of the gilt market, with the help of Government intervention, has facilitated financial growth by providing (i) possible benchmark interest rates to the markets, (ii) instruments with a wide array of maturity to the market players to enable them to tailor their asset-liability management, and (iii) tools for monetary management in the form of open market operations in Government securities. The development of the gilt market in the 'nineties has led to increasing integration of various market

Table 3.15: Major Fiscal Policy Indicators

(Per cent)

Period / Year	GFD/ GDP	Debt/ GDP	Exp/GDP	GDS of the Public Sector	GCF of the Public Sector	Saving Investment Gap of the Public Sector
1	2	3	4	5	6	7 = 5- 6
1980-81 to 1984-85	7.2	48.3	27.3	3.7	10.2	-6.5
1985-86 to 1989-90	8.8	59.1	30.1	2.4	10.5	-8.1
1990-91	9.4	61.7	28.8	1.0	9.7	-8.7
1991-92	7.0	60.9	28.5	1.9	9.2	-7.3
1992-93	7.0	60.6	27.2	1.5	8.9	-7.4
1993-94	8.3	62.5	27.1	0.6	8.2	-7.6
1994-95	7.1	60.2	27.0	1.7	8.8	-7.1
1995-96	6.6	58.3	25.7	2.0	7.6	-5.6
1996-97	6.4	56.8	25.2	1.7	7.0	-5.3
1997-98	7.3	58.8	25.9	1.4	6.7	-5.3
1998-99	8.9	58.7	26.3	0.0	6.6	-6.6
1999-2000	9.9	63.6	28.5	-	-	-

Note : 1. GFD = Combined Gross Fiscal Deficit of Central and State Governments.
2. Debt = Combined debt of Central and State Governments.
3. Exp = Combined Expenditure of Central and State Governments.
4. GDS = Gross Domestic Saving.
5. GCF = Gross Capital Formation.
6. A negative saving-investment gap indicates that investment exceeds saving.

Source : Reserve Bank of India and Central Statistical Organisation.

segments with benchmark interest rates increasingly emerging in short term securities, such as, the 91-day Treasury bills. What is interesting is that in the recent period, the call money rate has shown modest co-movement with the 91-day Treasury bill yield.

Finance and Growth in India: Some Evidence

3.40 The relationship between finance and growth, as noted earlier, could have manifold forms *a priori*. Finance may influence growth and growth may drive finance. There could be positive feedback between them, or they could even be independent as well. The available cross-country evidence on the relationship provides interesting empirical patterns (Box III.4).

3.41 While cross-country evidence is useful, an assessment of the relationship in the case of any one country would be relatively difficult, especially when the country in question is undergoing structural transformation. Furthermore, mere correlations between various indicators of finance and economic progress may not be of much use because of the strong time trend inherent in both these sets of indicators. Any contemporaneous correlation between indicators of financial

development and growth of an economy should, therefore, be interpreted with caution. While finance is one of the ingredients of growth, it is not the only one. In fact, in the absence of complementary inputs like the formation of human capital, the knowledge-based technological innovations and macroeconomic stability, growth may not be sustained even with a liberal supply of finance.

3.42 Notwithstanding the above qualifications, it is of interest to look into the relationship between finance and growth in isolation and examine the causality pattern between the relevant indicators. If the economic progress is measured by rate of growth of real GDP and rate of expansion of real broad money is taken as an indicator of financial development, then there is evidence of a two-way causality between them. This is done through a bivariate Vector Auto-Regression (VAR) model with real GDP growth and real M_3 growth (deflated by GDP deflator) over the period 1971-72 through 1999-2000. It has been found that while the F-statistic value for deleting lagged values of real M_3 growth in the real GDP growth equation is significant at 10 per cent, the same for deleting lagged values of GDP growth in the real M_3 growth equation is

Box III.4

Cross-Country Experiences on Finance and Growth

Theoretically various financial policy variables have been postulated as determinants of economic growth. The paradigms in use in this regard can be classified into two broad categories, *viz.*, the financial structuralist and financial repressionist schools. The former comprises those who contend that the quantity of financial variables and its composition affect economic development. Thus, factors like financial deepening (e.g., aggregate financial assets to GDP) and the composition of the aggregate financial variables are posited to be relevant financial factors in economic growth. The financial repressionist school, on the other hand, emphasises price variables as the more relevant financial factors on growth. Accordingly, it contends that financial liberalisation in the form of a 'realistic' real interest rate and real exchange rate constitute a meaningful way of promoting economic growth, while financial repression, especially in the form of below-equilibrium real interest rate and domestic currency over-valuation, retard growth (Fry, 1995).

At the empirical level, a number of tests of the financial structuralist school have been carried out. In one of the early studies, Patrick (1966) worked out a useful reference framework for the study of these causal relationships, proposing a distinction between the 'demand-following approach' and the 'supply-leading approach' to financial development. The former appears as a consequence of the development of the real sector, which implies continual expansion of markets and growing product differentiation, thus requiring more efficient risk diversification and better control of transactions costs. Conversely, 'supply leading' financial development precedes the demand for financial services and can have autonomous impact on growth. Goldsmith (1969) used the ratio of assets of the financial intermediary to GNP as a proxy for financial development under the implicit assumption that the size of the financial system is positively correlated with the quality and provision of financial services. Using data on 35 countries from 1860 to 1963, his results indicated a rough 'parallelism' between economic and financial development.

The financial repressionist proposition too has undergone a number of empirical tests. Among the earliest proponents of this view were McKinnon (1973) and Shaw (1973). While McKinnon advocated the complementarity between money and physical capital in the process of economic growth, Shaw, focused on the debt intermediation process.

However, two interpretative problems remained unresolved. First, did the causal relation run from financial development to growth, or the other way or in both ways? Secondly, conceding that financial development enhances growth, does it occur by affecting the efficiency of investment or the rate of investment?

Using several measures for the level of development of financial intermediaries for a cross section of 77 countries for the period 1960-1989, King and Levine (1993) found, after controlling for other variables associated with economic

growth, statistically and economically significant relationships between the measures of financial development and growth variables. Subsequent work in this area, has attempted to incorporate variables that capture some of the drawbacks associated with the study by incorporating the various financial markets (e.g., stock market, household credit market and the banking sector) having a possible impact on the growth process. Several studies examined the relationship between various alternative indices of development (e.g., the ratio of consumer credit to GDP, market capitalisation to GDP, bank credit to GDP) and growth rates. Most studies found a positive and robust correlation between these indices and future rates of economic growth, capital accumulation and productivity growth. An aspect of the growth process which has received intensive scrutiny has been the cross-country differences in the legal rights of creditors, the efficiency of contract enforcement and the accounting standards explaining the level of financial intermediary development. Not surprisingly, legal and accounting reforms that strengthen creditors rights, contract enforcement and accounting practices have been found to boost financial intermediary development and thereby accelerate economic growth (Levine *et al.*, 2000)

The empirical studies, however do not unambiguously resolve the issue of causality. Financial development may predict growth simply because financial systems develop in anticipation of future economic growth. Furthermore, as pointed out earlier, differences in political systems, legal traditions or institutions may be responsible for driving both financial development and growth rates. Nevertheless, the body of evidence would tend to put forward the viewpoint that differences in financial development can alter economic growth over ample time horizons.

References

1. Fry, Maxwell., (1995), *Money, Interest, and Banking in Economic Development*, Baltimore, Johns Hopkins University Press.
2. Goldsmith, R.W., (1969), *Financial Structure and Development*, New Haven, CT, Yale University Press.
3. King, R.G and R. Levine, (1993), "Finance and Growth: Schumpeter Might be Right", *Quarterly Journal of Economics*, 108, pp.717-737.
4. Levine, R., N. Loayza and T. Beck, (2000), "Financial Intermediation and Growth: Causality and Causes", *Journal of Monetary Economics*, 46, pp.31-77.
5. McKinnon, R.I., (1973), *Money and Capital in Economic Development*, Brookings Institution, Washington D.C.
6. Partick, H.T., (1966), "Financial Development and Economic Growth in Underdeveloped Countries", *Economic Development and Cultural Change*, 14, pp.174-189.
7. Shaw, G.S., (1973), *Financial Deepening in Economic Development*, New York, Oxford University Press.

significant at 5 per cent level (Table 3.16). These results would indicate a two-way causality between finance and growth. Similar results are also obtained between GDP growth and growth of real bank claims (*i.e.*, total of commercial and

co-operative banks' credit to commercial sector and their investment in Government securities deflated by GDP deflator). The F-statistic values for deleting lagged values of growth of real bank claims in the real per capita GDP growth equation

Table 3.16: Relationship between Finance and Growth in India: Granger's F Statistics

Cause	Effect	F-Statistic	Remark
1	2	3	4
GDP growth	Real M ₃ growth	5.83 *	Growth @ Finance
Real M ₃ growth	GDP growth	3.50 **	Finance @ Growth
GDP growth	Real Bank Claims growth	7.61 *	Growth @ Finance
Real Bank Claims growth	GDP growth	2.84 **	Finance @ Growth

Note: 1 All variables have been taken in real terms.
 2 The symbols '**' and '***' indicate significance at 5 per cent and 10 per cent, respectively.
 3 The symbol '@' indicates the direction of causality,

are also significant at 5 per cent and the same for deleting lagged values of GDP growth in the growth of real bank claims equation are significant at 10 per cent level, indicating a bi-directional causality between finance and growth.¹⁵

3.43 These causality results are, however, reduced-form evidence. In the absence of any structural model, the finding that finance and growth have bi-directional relationship between them may have to be interpreted only in terms of predictive content of each of the variables. That is to say, in the Indian case, past values of financial development seem to have good predictive content about future economic growth. Similarly, past values of growth are likely to have information about future financial development. But it must be noted that the evidence of a symbiotic relationship between financial development and growth in India is in line with the experience of a number of developing economies, where finance and growth have been found to have a close association.

3.44 In appreciating the nature of relationship between finance and growth in India, it should be noted that financial development in India has been by and large a state-induced activity. Thus, starting with bank nationalisation to various stipulations on bank lending with emphasis on 'social banking', the very thrust of financial development was consciously to encourage growth *via* availability of adequate credit at reasonable (at times concessional) rates of interest to areas where commercial

considerations may not allow for imminent disbursement of credit. Sharp bank branch expansion strategy turned out to be successful in increasing the scale of lending, since banks could raise necessary deposit resources. Availability of finance encouraged growth, and over time, growth, in turn, facilitated financial development. This virtuous circle between growth and finance seemed to have borne fruit in India, essentially to satisfy the need for diversification of financial assets holdings as the size of holdings has gone up. For this reason, it is important to track the indicators of stock market-based financial development in the primary market as well as the secondary market. As growth rate improves and is sustained, the new capital issue market is expected to gain importance. In this case, therefore *a priori* it could be expected that the direction of causation would run from growth to finance. However, the effect would be felt with long lags, with possible bunching effects corresponding to upswings in the phases of activity. The channels of influence between secondary market activity and growth would be largely guided by the extent of liquidity in the system. Towards this end, using higher frequency data, the causality pattern between stock-market capitalisation and GDP growth for the second half of the 'nineties (April 1995 through March 2000) has been examined. Using deseasonalised data for stock market capitalisation and wholesale price index for manufactured products (1993-94 = 100), an index of stock market capitalisation in real terms has been constructed. Taking the deseasonalised index of industrial production - manufacturing (1993-94 = 100) as a measure of activity variable, a bivariate VAR model was constructed between annualised growth rates of market capitalisation (in real terms) and industrial production for April

¹⁵ Interestingly, when the above causality regressions were run only for the 'seventies and the 'eighties, finance and growth were found to be independent of each other, on the basis of both the financial indicators, *viz.*, real M₃ growth as well as growth of banks' real claims. Despite the small sample size of the tests, this could be indicative of lack of feedback relationship between growth and finance prior to the 'nineties.

1995 though March 2000. It has been found that while the lagged values of industrial growth are insignificant in the equation for growth in market capitalisation (in real terms), the lagged values of growth in market capitalisation are significant in the equation for industrial growth. In other words, there is a unidirectional causality from market-based financial development to industrial growth. While market-based sources of finance have high

predictive power for explaining growth, past growth need not be an indicator of future availability of finance in the capital market. This has important policy implications for the economic relationships that the stock market supports. A case can be made for the provision of adequate liquidity in the context of the growth-inducing macroeconomic and structural management of the economy.