CAPITAL MARKET REFORMS AND CORPORATE INVESTMENT BEHAVIOUR IN INDIA

By

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DECLARATION

I, Rajeev, G do hereby declare that this written account entitled "Capital Market Reforms and Corporate Investment Behaviour in India" is a bonafide record of research work done by me under the guidance of Dr. A.C. Kuttykrishnan Nambiar, Professor in Economics, University of Calicut.

I also declare that the thesis has not been submitted by me fully or partly for the award of any degree, diploma, title or recognition before.

Place: Thrissur

Date: 11-06-2007

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CERTIFICATE

Certified that this written account on **"Capital Market Reforms and Corporate Investment Behaviour in India"** is a bonafide record of research work done by Sri. Rajeev, G under my supervision. This thesis has not been submitted earlier for any other degree or diploma.

Place: Thrissur
Date: 11-06-2007

Dr. A.C. Kuttykrishnan Nambiar

Dedicated to my father

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Contents

LIST OF TABLES

Table No.	Title	Page No

Chapter-5

Chapter-6 (1) Investment

LIST OF FIGURES

Figure No.	Title	Page No.

Chapter- 6(2) Financing

Abbreviations

BSEOD- Bombay Stock Exchange Official Directory
CA - Current Assets
CCI - Controller of Capital Issues
CCP - Cumulative Convertible Preference Shares
CD - Certificates of Deposits
CP - Commercial Papers
Deb - Debenture
DSU - Deficit Spending Units
FCCBs- Foreign Currency Convertible Bonds
FIIs - Foreign Institutional Investors
FIR - Financial Interrelation Ratio
FIs - Financial Institutions
FR - Finance Ratio
GDRs - Global Depository Receipts
GFA - Gross Fixed Assets
IPOs - Initial Public Offerings
IR - Intermediation Ratio
LTL - Long-term Loans
NBFI - Non-Banking Financial Intermediaries
NCD - Non-Convertible Debentures
NFA - Net Fixed Assets
NGNF- Non-Government Non-Financial Public Ltd Cos
NIM - New Issue Market
NIR - New Issue Ratio
NSE - National Stock Exchange
OA - Other Assets
OCTEI- Over-the-Counter Exchange of India
P&M - Plant and Machinery
QIBs - Qualified Institutional Buyers
SC - Share Capital
SEBI - Securities and Exchange Board of India
SPR - Share Premium Reserves
SSU - Surplus Spending Units
TEF - Total External Finance
TIF - Total Internal Finance
TLF - Total Long-term Finance
TNA - Total Net Assets

CHAPTER – 1

INTRODUCTION

- The Research Problem
- Objectives
- Hypothesis
- Methodology
- Review of Literature
- Conceptual Framework
- Scheme of the study

Chapter – 1

Introduction

Finance is the life blood of modern economy. Financial institutions, instruments and markets act as the circulatory system to diffuse finance into the entire body of the economy, making possible the coherent synergy among the many units of activity. The literature on finance since the early 19th century focused its interrelationship with economics. It was observed that, "an immature financial system is in itself an obstacle to economic progress" (Gurley and Shaw[1], 1968). Economists like Joseph Schumpeter[2] (1934), Raymond W. Goldsmith[3] (1958), John G. Gurley and Edward S. Shaw[4] (1967), James Tobin[5] (1971), Ronald I. McKinnon[6] (1973), George Rosen[7] (1976) and James C. Van Horne[8] (1978) have stressed the importance of financial development on economic growth.

The efficacy of the financial system determines an efficient dispersion of saving among investment opportunities and thereby the rate of growth of output in an economy. In the course of economic development, countries experienced more rapid growth in financial assets than national product. In the US, it was only about one-half of the national wealth in 1880s, increased to 4.5 in 1967. In Japan, the ratio of financial assets to real wealth rose from 10 percent in 1885 to over 150 percent in the later half of 1960s. In Soviet Union, the ratio moved up from 10 percent in 1928 to 35 percent during the same period. In still more developed countries during the second half of 1960s, it was 80-100 percent in France and W.Germany, over 200 percent in Switzerland and 215 percent in the UK[9].

In India, the development of financial system can be described in three different phases - (i) phase of transition: 1950 – 60, (ii) phase of expansion and diversification: 1970-1985, and (iii) phase of liberalization since 1980. Financial strengthening, geographical expansion, financial efficiency and product diversification have taken place in the first two phases. As a result public banks accounted for about 88% of all bank

branches and provided 85% of all bank credits[10]. A particularly important aspect of Indian financial market policies during this period was the use of credit controls in the form of pre-emption of bank resources, directed credit and administered interest rates. The Cash Reserve Ratio (CRR) in the 1960s and 70s was around 5% grew up to its legal upper limit of 15% in 1991. The Statutory Liquidity Ratio (SLR) rose from 25% in 1970 to 38.5% in 1991, just below the upper limit of 40%. Of the remaining resources, there were directed credit like priority sector lending, export credit, food credit, and other informal and formal pre-emptions. According to some estimates, "close to 75% of the total loan capacity of the Indian banking industry was in some way or another under control of the government"[11]. As a result Indian corporate sector was confronted with the problems of access to external finance and higher costs of finance which with deleterious impact on investment.

Financial liberalization began in India by lifting the ceiling on lending rates in 1988 that gained momentum since 1991. A number of reform proposals relating to financial sector, stock exchanges, mutual funds, public sector and foreign investments were announced in the Union Budget for 1991-92. A committee under the chairmanship of Shri. M. Narasimham was appointed in August 1991 to look into all aspects of the financial system. Parliament passed the Securities and Exchange Board of India Bill (SEBI) on April 4, 1992. Reputed foreign investors (FIIs) were allowed to invest in Indian capital market in 1992-93. Investment norms for NRIs liberalized, Indian companies were permitted to access international capital markets through Euro equity issues. Over-the-Counter Exchange of India (OTCEI) and the National Stock Exchange of India (NSE) commenced operations with nation-wide stock trading and electronic display, clearing and settlement facilities. All mutual funds including private were allowed to apply for firm allotment in public issues. These are some of the important reform measures. As a result of these, external finance has become an attractive source of finance to the Indian business community.

The empirical evidence on financial sector reform and its impacts on resource allocation in India are somewhat mixed and inconclusive in nature – Athey and Laumas[12] (1994), Huisman and Hermes[13] (1997), Ansari[14], Joseph, Nitsure and Sabnavis (2002)[15], Athukorala and Sen[16] (2002), Seema Saggar[17] (2005). In this background we make an attempt to analyse the impacts of capital market reforms on the investment behaviour of the private corporate sector.

The Research Problem

The private corporate sector has been playing an important role in the industrial development of India since independence. At the same time the financial sector which acts as facilitator for growth was overregulated. Credit control and administrative interest rate were the two most important regulations which had its impact on the availability of finance at a reasonable rate. So also capital market was overregulated. Before the eighties, the most important component of gross resource mobilization by the Indian private corporate sector was corporate savings. Its reliance on external sources was limited. It was observed that internal savings constituted 64.2 percent on the average in gross resources mobilized by the corporate sector in India during the period 1962-63 to 1975-76[18].

It is in this background that the Government of India adopted radical change in financial sector policies as part of the Structural Adjustment Programme and economic reforms. This was to enable the financial system to act as an essential conduit for optimum allocation of resources. This can have much impact upon the corporate investment and financing pattern in the post liberalization period. In this context a study on the corporate investment and financing pattern assumes significance.

Objectives

The specific objectives of the study are;

1. to examine the nature of capital market reforms in India
2. to examine the structure and growth of capital market
3. to examine the corporate investment and financing pattern at the aggregate level with the RBI data
4. to analyse the investment behaviour at the firm level and
5. to analyse the financing pattern at the firm level.

Hypothesis

Since 1991, the Government of India liberalized the capital market as part of extensive liberalization programmes. This was to stimulate economic growth as the measures can augment savings and investment. Such policies on the one hand will lead to more efficiency and profitability of the corporate sector and on the other it will lead to more investment as cost of external capital is expected to decline and become more accessible. In this context, we have formulated the hypothesis that the capital market reforms in India since the early 1990s have not;

(i) increased efficiency and profitability of the corporate sector,

(ii) led to the decline in cost and availability of capital,

(iii) promoted investment in the corporate sector.

Methodology

Our study focused to quantify the changes in the pattern of investment and financing of the private corporate sector in the light of capital market reforms since 1991. First, an analysis of RBI data in respect of large Non-Government Non-Financial (NGNF) public limited companies (each with paid-up capital of Rs. 1 Crore and above) for varied sets of samples (ranging from 500 to 997) over the period 1983 to 2003 was done. RBI data was obtained from the combined balance sheet data of the companies

published in the RBI Bulletin various issues from 1984 to 2004. This was followed by the analysis of a uniform set of 150 companies for the period 1983 to 2003.

Sample size & Data source: - We have selected 150 Non-Government Non-Financial (NGNF) Public Limited Companies incorporated before 1980. These companies were selected from a total of 1605 such companies in a random basis from the Prowess data base. The catalog of these companies was synchronized with a current list to avoid the changes in its name, merger and acquisitions. The balance sheet and profit and loss account data was obtained from Bombay Stock Exchange Official Directory (BSCOD). The BSEOD data for the period 1983-1999 for most of the companies and the annual accounts of companies published thereafter have been brought together to obtain the data base of the same set of 150 NGNF Public Limited Companies for the period 1983-2003. In addition to the above sources, data of the Department of Company Affairs, CSO, NSE, MOSPI website and SEBI were used.

Analysis: - The RBI data was analysed in an aggregate level. The analysis of sample data has been designed at three stages. At first, an aggregate level analysis of all the 150 companies has been done. Secondly, its group (industry-wise and size-wise) characteristics were observed. Thirdly, the firm level analysis was applied. The Industry-wise classification is based on the company classification of BSE. This is to avoid changes in the allocation of companies among different industry groups as the principal commodity changes over the period 1983-2003. The RBI pattern was pursued for the size-wise grouping. The temporal dimensions of the study include overall (1983-2003), pre-reform (1983-1991) and post-reform (1992-2003) periods.

Tools of Analysis: - For the purpose apart from working out the compound growth rate a number of financial ratios and financial management ratios were worked out.

Correlation and Stepwise Multiple regression methods were also used. The regression method was adopted for examining the determinants of investment.

Review of Literature

Theoretical Literature

The connection between savings and finance is of a round-about nature. The essay on 'Finance' by Robinson (1952)[1] explains how the supply of saving is related to the supply of finance and investment. It points out that the distribution of saving in the long run has a cumulative influence upon the supply of finance, and so, indirectly upon the rate of investment. The factors influencing the supply of finance have been classified into two: the state of expectations and the legal – institutional arrangements and the habit of lenders. But on the question as to whether entrepreneurship or finance first, the study answers that "where enterprise leads finance follows". Thus capital accumulation takes place when the level of prospective profits and the degree of confidence are high.

Gurley and Shaw[2] (1955) in the article 'Financial Aspects of Economic Development', points out that, "development involves finance as well as goods". Development implies as cause or effect, change in market prices of financial claims and in other terms of trading in loanable funds. The study reviews briefly the financial manifestations of income generation, spending and saving, investment and the accumulation of wealth. In their view, "Economic Development is retarded if only self-finance and direct finance are accessible, if financial intermediaries do not evolve".

Gurley and Shaw (1960)[3] on 'Rudimentary Finance' underlined the role and importance of financial assets in economic growth. The efficacy of the financial system determines an efficient dispersion of saving among investment opportunities and thereby the rate of growth of output in an economy. The basic task of the financial system is to stimulate saving and to allocate it to efficient uses. According to the authors, "an immature financial system is in itself an obstacle to economic progress". The financial

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[1] Joan Robinson, 'Finance', given in L.C. Gupta (ed), 'Readings in Industrial Finance', (1976), The Macmillan Company of India Ltd, Delhi

[2] John G. Gurley and E.S. Shaw, 'Financial Aspects of Economic Development', The American Economic Review, Vol.XLV, September 1955, No.4.

[3] John G. Gurley and Edward S. Shaw, 'Rudimentary Finance', given in L.C. Gupta (ed), op cit.

system of the rudimentary economy makes no attempt to stimulate private saving either by offering different kinds of financial assets or by allowing an explicit rate of interest on financial assets. As a result the propensity to save and the rate of growth in capital will be relatively low in such economies.

Goldsmith (1965)[4] described the two basic functions of the capital market in an economy: first the allocation of a period's current saving among users and uses, second, facilitates the transfer of existing assets among individual economic units, sectors and countries. In his words, "financial institutions are those whose assets are predominantly financial and whose liabilities are in general liquid assets by the creditors, while ultimate economic units are those their net worth can not under present legal arrangements become the property of another economic unit". This essay on the 'Scope and Function of the Capital Market in the American Economy' provides a good conceptual and theoretical base on capital market.

Hall and Jorgenson[5] (1967) have studied the relationship between tax policy and investment expenditures using the neoclassical theory of optimal capital accumulation in 'Tax Policy and Investment Behavior'. The cost to the business firm employing fixed assets depends on the rate of return, the price of investment goods and the tax treatment of business income. The study observed that tax policy is highly effective in changing the level and timing of investment expenditures in the U.S economy. In addition, the tax policy has had important effects on the composition of investment. The liberalization of depreciation rules in 1954, investment tax credit and depreciation guidelines of 1962 caused substantial effects on investment. Using econometric model, for manufacturing and non-farm non-manufacturing equipment and structures for the periods 1931-41 and 1950-63 investment functions were constructed in this study.

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[4] R.W. Goldsmith (1965), 'Scope and Function of the Capital Market in the American Economy', given in L.C. Gupta (ed), op cit.

[5] Robert E. Hall and Dale W. Jorgenson, 'Tax Policy and Investment Behavior', American Economic Review, Vol. 57, June 1967, pp. 391-414.

Gurley and Shaw[6] (1967), in their 'Financial Structure and Economic Development', analysed the relationship between economic development, growth in financial assets and national product. Countries that are poor in income percapita have very low ratios of financial to real wealth. In the second half of 1960's the ratio was 10-15 percent in Afghanistan and Ethiopia, 30-60 percent in Argentina, Brazil, Mexico, Korea, India etc. and 80-100 percent in France, Israel, W.Germany while in Japan it was 150 percent, Soviet Union 35 percent, Switzerland over 200 percent and UK 215 percent. Thus, financial growth in excess of real growth is a common phenomenon around the world. They further points out that "self-finance via inflation shrinks the real stock of financial assets, real flow of funds through financial markets, and real size of financial institutions. Inflation taxes the financial process".

Jorgenson and Siebert[7](1968), compares alternative theories of investment behavior in their study on 'A Comparison of Alternative Theories of Investment Behavior', to explain the investment activity of corporations. This study concentrate on time series data for a representative sample of firms selected from the 'Fortune' Directory of the 500 largest U.S. industrial corporations for 1962 and tested each of the alternative theories of the demand for capital. The principal conclusion of the study is that the neoclassical theory of investment behavior is superior to theories based on capacity utilization or profit expectations and that these theories are superior to a theory based on internal funds available for investment.

The questions as to; how financial structure changes as economies grow? Does finance exert a causal influence on economic growth? Does the mixture of market intermediaries functioning in an economy influence economic development? In a study

[6] John G. Gurley and E.S. Shaw (1967), 'Financial Structure and Economic Development', Economic Development and Cultural Change, Vol 15(3), pp. 257-68.

[7] Dale W Jorgenson and Calvin D. Siebert, 'A Comparison of Alternative Theories of Investment Behavior', The American Economic Review, Vol.58(4), September 1968.

by Raymond W. Goldsmith[8] (1969) on 'Financial Structure and Development' observed that, banks become larger relative to national output as countries develop. Non bank financial intermediaries and stock markets grow relative to banks as countries expand economically. On causal relationship, he observed a positive correlation between financial development and the level of economic activity in thirty-five countries prior to 1964. The operations of a mixture of market intermediaries and economic development in Germany and U.K, produced illuminating insights on the relationship between financial structure and economic growth.

In the study, 'Investment and Growth', Scott[9](1976) gives a broad definition to investment including expenditure on new machinery and vehicles, buildings, and construction, increases in stocks of goods, research and development, and substantial fractions of expenditure on marketing, planning and the education, health of people. Investment, by this definition will cover all activities associated with growth. In this context he has given more attention to "how to describe and analyze a process of change'. The fundamental idea of investment and capital he put forward was as an agent of change. Moreover, he argues that so long as investment is decreasing in the long-run, re-allocation is occurring. It is not a once-and-for-all source of increase in output, but a continuing process and indeed, the principal source of growth in many countries.

William Diamond[10] (1976) in this essay 'The Process of Investment' brings out that the availability of finance is closely linked to a host of factors, all of which together determine the rate of productive investment. The recommendation of the Indian Committee on Finance about the 'economic climate' for investment has been mentioned in this. That is, private investment will come forth only if the expectation of compensation for the risks undertaken is reasonable. Investment are coloured not only by

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[8] Goldsmith, Raymond. W, (1969), 'Financial Structure and Development', New Haven, CT: Yale University Press.

[9] M.FG. Scott, 'Investment and Growth', Oxford Economic Papers, New Series, Vol.28, 1976, pp.317-363

[10] William Diamond, 'The Process of Investment' given in L.C. Gupta (ed), 'Readings in Industrial Finance', (1976), The Macmillan Company of India Ltd, Delhi.

the economic factors of demand and costs but by various political, social and psychological elements that make up the environment one has to function. It stresses the need for legal codes and practices and safeguards that inspires confidence of institutions and individuals.

Improvements in the financial intermediation process are a pre-condition of economic growth. Vicente Galbis'[11](1977) study on 'Financial Intermediation and Economic Growth in Less-Developed Countries: A Theoretical approach', shows that high (equilibrium) real interest rates are growth promoting. A two sector model (one is the backward, and the other is modern) provides efficiency aspects in the allocative mechanisms of savings and investment when the technological conditions in the two sectors are different. Similarly, savings, investment and financial intermediation are also explained in the model. The study concludes that, improvements in the process of financial intermediation which are brought about by higher real interest rates yields dramatic acceleration in the overall rate of economic growth.

How financial infrastructure affects both the economy's financial architecture and the process of real capital formation? Bossone, Mahajan, and Zahir[12](2003) investigates this in their work on 'Financial Infrastructure, Group Interests and Capital Accumulation: Theory, Evidence and Policy'. It shows that a more developed financial infrastructure promotes the growth of financial markets, reduces the role of traditional banking activities, enables investors to make more investment decisions, and leads to more knowledge-intensive capital accumulation. The model presented in this study suggests that the development of financial infrastructure plays a key role in promoting economic development.

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[11] Vicente Galbis, 'Financial Intermediation and Economic Growth in Less-Developed Countries: A Theoritical approach', Journal of Development Studies, Vol. 13(2), 1977, pp.58-72.

[12] Biagio Bossone, Sandeep Mahajan and Farah Zahir, 'Financial Infrastructure, Group Interests and Capital Accumulation: Theory, Evidence and Policy', IMF Working Paper, January 2003.

General Literature

The study of George Rosen[13](1958) on 'Capital Markets and the Industrialization of Underdeveloped Economies', focuses upon the flow of finance in UDCs. The major problem is to increase the level of savings and to channel those savings into investments. It observed that in the early period, the indigenous industrial sector would be largely self-financed; the investment would be very risky; and the appeal of this type of investment to most investors would be slight. It concludes by explaining the role of the government in this economy. "In a development period the government, by its expenditures and by its supply of social overhead, makes industrial investment more profitable and competitive with agriculture. It can decrease the speculative portion of the rate of return in agriculture and thus divert investment to industry".

Patrick[14] (1966) explains the instances of "demand following" and "supply leading" phenomena in the work 'Financial Development and Economic Growth in Underdeveloped Countries'. In the demand following phenomenon, the creation of modern financial institutions, instruments, and services are in response to the demand for these services. In "supply-leading" phenomenon the creation of these factors are in advance of the demand for them. The transfer of resources from traditional sectors to modern sectors and to promote an entrepreneurial response is the two functions of this. The latter provides an opportunity to induce real growth by financial means thus likely to play a more significant role at the beginning of the growth process than later.

Rungta[15] (1970) on the 'Trends in Corporate Financing in India, 1851-1900', describes how Joint Stock Companies between 1850 and 1870 changed their ideas about the capital structure, with regard to; the nominal value of ordinary shares, methods of

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[13] George Rosen, 'Capital Markets and the Industrilization of Underdeveloped Economies', The Indian Economic Journal, Vol. VI(1), July 1958.
[14] Hugh, T. Patrick, 'Financial Development and Economic Growth in Underdeveloped Countries', Journal of Economic Development and Cultural Change 14, January 1966, pp.174-89.
[15] Radhe Shyam Rungta, 'Trends in Corporate Financing in India, 1851-1900', Given in L.C.Gupta (ed)

raising loan capital and its relationship with the equity capital. The paper reveals that the shares of usual denominations during the 1850's was of Rs. 5000, and Rs. 2500 which are taken up by wealthy merchants, rulers of Indian states and landlords. But as the demand for capital grow and the social composition of the investors change, the face value came down. In the 1870's and 80's shares of the value of Rs. 1000, Rs.500, Rs.250 and Rs.100 were issued. In the 1890's shares of one rupee were also issued by gold mining companies. The essay also describes how the policies towards depreciation, dividends are reserves were evolved.

Takeuchi (1970)[16] describes the unique character of the banking system in financing private industrial investment in Japan. The study on 'The Role of Banks in Japan's Economic Growth', mentioned the factors responsible for the rapid economic growth led by capital investment in the 1960's. During this period the method by which Japanese enterprises raise funds has two features. One was that the low dependence on internal finance and other, the borrowing from banks has a relatively large share in the volume of funds raised from outside sources. The study also explains the reasons why the capital market remains underdeveloped in Japan.

How industrial investment is financed in five developed economies – in France, Japan, W.Germany, the UK and USA? The study of Carrington and Edwards (1979)[17] on 'Financing Industrial Investment', throws light into this aspect. In France during the period 1970-73, the non-financial corporate and quasi-corporate enterprises raised much more in the financial markets. In Japan during 1960-65, the industry had most of the funds from borrowing. In W.Germany, it receive the higher part of loans and advances from financial intermediaries and insurance institutions. In U.K, during 1970-74, the Medium and long-term loans was the largest source of potentially productive investment

[16] Ichiro Takeuchi, 'The Role of Banks in Japan's Economic Growth', given in L.C. Gupta (ed)...
[17] John C. Carrington, and George T. Edwards, 'Financing Industrial Investment', The Macmillan Press Ltd, London, 1979.

capital for enterprises. In USA, the funds for non-farm, non-financial corporate business for the period 1963-73 was from external sources.

Panda and Sahu[18] (1985) in their study on 'Corporate Sector and Institutional Finance in India' analysed the reasons for the business failures in Indian Corporate sector. They analyzed the sectors, the industry group, and its paid-up capital where majority of failures occurred. It concludes that the failure was greater in processing and manufacturing sector than in others. Moreover, failures were more in the case of smaller companies falling in the size group with below Rs.1 lakh of paid-up capital. While correlating the company liquidation with some of the national economic indicators, it found that there was high degree of negative correlation between GNP and company liquidation. Reasons for the collapse of these business firms centre mainly on tighter liquidity position, working capital, high rate of interest and management deficiencies.

In 'Financial Development and Economic Growth; International Evidence', (1986) Woo S. Jung[19] investigates the relationship between financial development and economic growth as mentioned by Patrick[20]. It inspects the causality and temporal behavior of 56 countries. It observed that LDCs have a supply-leading causality patterns than a demand following; thus emphasized the importance of financial development in LDCs. On temporal causality patterns, there seemed to be a mixed result. Considering currency ratio as a measure of financial development, LDCs are characterized by the causal direction from financial to economic development, and DCs in the reverse direction. The two alternative proxies of financial development employed in this study are; currency ratio and monetization variable- the ratio of M2 to nominal GNP.

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[18] J. Panda and P.K. Sahu, 'Corporate Sector and Institutional Finance in India', B.R.Publishing Corporatin Delhi, 1985.

[19] Woo S. Jung, (University of Kansas), 'Financial Development and Economic Growth; International Evidence', Economic Development and Cultural Change, Jan 1986, Vol 34(2)

[20] Hugh, T. Patrick , op. cit

In the study, 'Contribution of Financial Market in Economic Growth: An Indian Experience', Kapil Dev Sharma[21] describes three phases in the development of Indian financial system; (i) phase of transition: 1950 – 60, (ii) phase of expansion and diversification: 1970-1985, and (iii) phase of liberalization since 1985. The first marked the strengthening of the banking system. Geographical expansion and functional diversification has taken place in the second phase. In the third phase a process of consolidation began. In the context of the experience of the developed as well as developing countries in recent years, he argues that there should be a sound macro economic policy to maintain financial stability in India.

Information and incentive problems affect investment in the Japanese capital market, according to Hoshi, Kashyap and Scharftein[22](1991) in their study on 'Corporate Structure, Liquidity, and Investment: Evidence from Japanese Groups'. They provide evidence by grouping Japanese firms into two sets; the first set has close financial ties with large Japanese banks and the other set of firms has weaker link to a main bank. The study observed that investment is more sensitive to liquidity for the second set of firms. Using regression equations, measures of liquidity, Tobin's q and lagged production as regressors, it observed that liquidity continues to be more important for independent firms. The investment regression results showed that the closer a firm moves to the group banks, the more easily a firm can attract funds to finance investment projects.

The study on 'Financial Intermediaries and Industrial Development' by Saghir Ahmad Ansari[23] stressed the role of specialized financial institutions in meeting the term requirements of the industrial sector of the Indian Economy. It looks into the working and operations of mainly three institutions – IDBI, ICICI, and SFCs for meeting the term

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[21] Kapil Dev Sharma, 'Contribution of Financial Market in Economic Growth: An Indian Experience', in Subhash Garg, (ed), in 'Emerging Issues in Financial Sector', Arihant Publishing House, Jaipur.

[22] Takeo Hoshi, Anil Kashyap, David Scharfstein, 'Corporate Structure, Liquidity, and Investment: Evidence from Japanese Groups', The Quarterly Journal of Economics, 1991.

[23] Saghir Ahmad Ansari, 'Financial Intermediaries and Industrial Development', APH Publishing Corporation, New Delhi

requirements of the industrial sector. It used secondary data predominantly the publications of RBI, IDBI and ICICI. The main tool used in the study was trend analysis for the period 1970-90. The study observed the dominance of All India Financial Institutions over State level financial institutions in industrial financing.

The study of Roubini and Sala-i-Martin[24] (1992) on 'Financial repression and economic growth' addresses the questions like; what is the role of financial development in the process of economic growth? Is financial repression harmful to growth? The study showed that, various measures of financial repression affect growth negatively and inflation rates and growth are negatively related. The econometric evidence for 98 countries during the 1969-85 period pointed out that high degree of financial repression will witness higher rates of inflation, thus leads to negative real interest rates, high required reserve ratios and choice of a high inflation tax. The empirical evidence of the study is consistent with the theoretical model which can be summarized as, "controlling for other determinants of growth, a high degree of financial underdevelopment and/or financial repression will lead to lower economic growth".

James E. Hodder and Adrian E. Tachoegl[25](1993) in their study on 'Corporate Finance in Japan', focuses the issue of why Japanese financing and investment practices appear different from the US firms. While comparing Japan and US manufacturing corporations during the period 1980-90, it observed that, as the government relaxed restrictions during 1980's on offshore funding, bond floatation, and commercial paper issuance, Japanese firms progressively shifted toward market funding sources from short-term debt and trade payables. The study concluded with the observation that much of corporate finance in Japan revolved around the main bank relationship.

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[24] N. Roubini, and X. Sala-i-Martin, 'Financial repression and economic growth', Journal of Development Economics 39 (1992), pp.5-30, North Holland.

[25] James E.Hodder and Adrian E. Tschoegl, 'Corporate Finance in Japan', given in Shinji Takagi (ed), 'Japanese Capital Markets: New Developments in Regulations and Institutions', Blackwell, USA, 1993.

Marco Pagano[26] (1993) in an overview on 'Financial markets and growth; An overview', covered the theoretical and empirical observations in the early 1970's like; how financial development affects growth? , and, what determines financial development? He concludes that financial intermediation can affect growth by acting on the saving rate, on the fraction of saving channeled to investment or on the social marginal productivity of investment.

Peter Howells and Keith Bain[27](1994) have given a recital on the ways in which financial system influence the real economy. To them, financial intermediation affects the composition and the level of aggregate demand and the resource allocation. It can have implications for the balance of production in an economy and upon the rate of growth of the economy if more resources are devoted to investment than would otherwise have been the case. The book 'Financial Markets and Institutions' gives a theoretical base on the relationship between financial development and economic growth. On capital market, it explains the characteristics of bonds, equities, its responses with the market rate of interest variations. It helps us to understand the behaviour of share prices and ratio indications.

Jagdish Bhagwati[28](1994) on 'India In Transition', has observed the peculiarities on India's foreign trade and its relationship with investment. They are; India's 'export pessimism', less industrialization, and industrial controls. Dr. Manmohan Singh has mentioned in his D. Phil thesis at Oxford under Ian Little in 1961 that India's export pessimism was unjustifiable. It has also reduced India's success with industrialization. Other countries with a smaller industrial base were not only exporting more manufactures than India but they were also catching up with India in the absolute size of their manufacturing sector. To put it simply, "India missed the bus on industrialization during

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[26] Marco Pagano, 'Financial markets and growth; An overview', European Economic Review 37 (1993), 613-622, North Holland.
[27] Peter Howells and Keith Bain, 'Financial Markets and Institutions' (Second Edition), Longman, Newyork 1994.
[28] Jagdish Bhagwati, 'India In Transition', Oxford University Press, Delhi 1994.

its quarter-century of weak economic performance". Moreover, the deadly combination of industrial licensing and controls at home effectively cut off the rigors of competition from all sources and made the creation of a 'rentier', as against an entrepreneurial economy more likely.

In 'Investment Finance in Economic Development', Studart[29] (1995) analyzed the role of savings and financial markets in economic growth by using a stock-flow model of finance-investment-saving circuit (FIS) from a Keynesian perspective. The FIS circuit as an analytical tool developed a systematic view of the role of banks, saving and financial markets in the process of growth. It concludes that finance is independent of previous saving, does not guarantee that growth can be sustainable from a financial perspective. Even in highly developed economies, growth is normally accompanied by increasing financial vulnerability of firms, banks and other financial institutions. Hence, saving and financial markets may play a fundamental role in a financially stable process of development.

How important are financial markets to the construction of a European economic system? What financial intermediaries do? How the economic growth process works? Robert G King and Ross Levine[30] (1995) in their work 'Financial Intermediaries and Economic Development', observed that financial sector reform promote economic growth by improving the efficient allocation of resources. Countries with efficient financial intermediation sectors systematically outperformed other countries during the post World War II period. The study over 1960 – 89 for 114 countries revealed that; countries that grow faster have larger financial systems, have a predominant role of deposit money banks and a higher share of lending to the private sector than to the public sector. They predicted a rapid growth during 1970-89 in those countries which had larger

[29] Rogerio Studart, 'Investment Finance in Economic Development', Routledge, New York, 1995
[30] Robert G. King & Ross Levine, 'Financial Intermediaries and Economic Development', edited by Collin Mayer and Xavier Vives, Cambridge University Press, USA, 1995

financial systems in 1960-9 and had a higher share of lending to the private. The study used partial correlation and regression methods for analysis.

According to J.C. Berthelemy and A. Varoudakis[31] (1996), "financial sector reform has became inevitable to overcome external debt crisis and for efficient allocation of resources". In their study on 'Models of Financial Development and Growth: A Survey of recent literature', it tests the size, structure and efficiency of the financial system, in 80-90 countries during the period 1960-89. The results demonstrate that those countries initially had a relatively well established financial system later on experienced a relatively higher growth in percapita GDP and higher investment/GDP ratio. While analyzing the consequences of financial repression, it observed that financial disintermediation which in turn reduces the size of the financial system; affect the efficiency of resource allocation to investment.

Demetriades and Luintel[32](1996) examined the effects of various types of banking sector controls on the process of financial deepening in India. In 'Financial Development, Economic Growth, and Banking Sector Controls: Evidence from India', they described the development of Indian Financial System. This study constructed several indices, following the method of principal components and used Unrestricted Error Correction Method (UECM). Tests were applied to see the causality between financial development and economic growth. It used the data base of RBI, CD Rom on International Financial Statistics published by the IMF (1993) and concludes that financial policies affect growth only through their effects on financial deepening.

The monograph of Cho[33](1996) investigates the impact of financial factors on corporate investment in Korea, using firm-level company accounts data for a balanced panel of 420 firms over the period 1983-1991. Financial liberalization has introduced in

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[31] Jean Claude Berthelemy and Aristomene Varoudakis (1996), 'Models of Financial Development and Growth: A Survey of recent literature', (eds) Niels Hermes and Robert Lensink, Routledge, New York.
[32] Panicos O. Demetriades and Kul B. Luintel, 'Financial Development, Economic Growth, and Banking Sector Controls: Evidence from India', The Economic Journal (1996) March, 106, pp. 359-74.
[33] Yong-Doo Cho, 'Finance Factors and Corporate Investment', Avebury, UK, 1996.

Korea in 1980s. The study on 'Finance Factors and Corporate Investment', focuses whether the investment spending of firms affiliated to 'Chaebol' industrial groups is different from the investment of non-group affiliated firms by financial constraints. The study observed that group firms tend to use more long-term external finance and less internal finance than non-group firms. On the background of financial deregulation, the non-group firms and smaller firms tended to increase their long-term finance and new equity finance more sharply than group-larger firms- in the later period. The findings, however, do not establish any relationship between financial factors and the investment spending of Korean corporations.

Joshi and Little[34] (1996) distinguish the external and internal causes which led to the poor performance of Indian financial sector in general and the banking sector in particular since the second half of 1980. External causes are the regulatory environment in which the banks functioned. The internal factors are the short comings of internal organization. Pre-emption of bank resources, directed credit, administered interest rate, low port folio quality, lax regulation and supervision, low internal and organizational efficiency, lack of competition and political interference are some of them. The result of the above factors was ill suited to the task of allocating credit efficiently. It suggests the need to liberalize fully the capital account to optimize savings and investment and to achieve risk diversification. They also stress the need for cost-effective method of credit to achieve efficacy.

Joshi and Little (1997)[35] describe the financial sector reform process and stress the imperative role of financial liberalization in their study on 'India's Economic Reforms 1991-2001'. They justified the interest rate deregulation, debt recovery and removal of concessional credit. The capital market regulations must be aimed to improve

[34] Vijay Joshi and I.M.D. Little, 'India's Economic Reforms 1991-2001', Oxford University Press, Delhi, 1996.
[35] Vijay Joshi and I.M.D. Little, 'India's Economic Reforms 1991-2001', Oxford University Press, Delhi, 1997.

the trade and settlement system, eliminate corruption and build investor confidence. In this study, they have analysed the financial crisis 1991, fiscal adjustment since 1991, banking and capital market reforms. Though India has made a good start with financial sector reform, it has to go a long way to create an efficient financial sector suitable for a sophisticated modern economy.

The study of R K. Dash and J. Panda[36](1998) on 'IDBI- Review of a Decade of Operations', has made an attempt to evaluate the performance of development banks in general and the IDBI in particular with special reference to eastern India. It seeks to make an inter-institutional comparison of the operations of the Development Banks under different classifications of project finance. It covered a period of ten years from 1982 -83 to 1991-92. The study used both primary and secondary data. The secondary data sources were primarily the Annual Reports and Operational Statistics of IDBI, Report on Development Banking published by IDBI, Economic Survey and Hand Book of Statistics of the Government of India and Report on Currency and Finance of RBI. The study observed that the existing institutional framework require an effective mechanism to coordinate and integrate the diverse institutions in the system.

In 'India's Economic Reforms; An Appraisal', M.S. Ahluwalia[37](1999) provides an appraisal of the performance of economic reforms in the crisis management period (1991-2 to 1993-4) and post stabilization period (1994-5 to 1997-8). According to him, "an encouraging aspect of India's experience is the bahaviour of investment in the post reform period". In India, the decline in public sector investment as a percentage of GDP in the post reform period was offset by an increase in private investment, unlike Latin American countries. The acceleration in the GDP growth in India even though investment rate was only marginally suggests that productivity growth was higher. He therefore,

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[36] Ranjan K. Dash and J. Panda, 'IDBI – Review of a Decade of Operations', Mohit Publications, NewDelhi, 1998

[37] M.S. Ahluwalia, 'India's Economic Reforms; An Appraisal' given in J.D. Sachs, A. Varshney, and N. Bajpai (ed), ' India in the Era of Economic Reforms', Oxford University Press, New Delhi, 1999, pp. 26-80.

addresses the issue of a high level fiscal deficit of the central and state governments. Unless this deficit is reduced, the economy will not be able to maintain low real interest rates which are inevitable to boost private investment.

In a study on 'Institutional Change in India's Capital Markets', Shah[38](1999) described the radical reforms executed in the capital market of India after reforms. He observed that the establishment of four new institutions – SEBI, NSE, NSCC, and NSDL – considerably improved market efficiency and sharply lowered transactions costs. It compared the market efficiency of stock returns in the pre and post-reform periods. In 1993-94, and 1994-95, firms reduced their leverage through primary market issues of equity, debt-equity ratio of the corporate sector as a whole dropped from 2.04 in 1991-92 to 1.3 in 1994-95, and the 'forecast accuracy' of the market's P/E has improved considerably. This reflects the institutional development on the capital market. The study analysed market efficiency and transaction cost during the 1991-98 period, however, it has not compared the financing of the corporate sector through various sources.

R.K. Jain[39] emphasizes the need to make a strong banking system since it accounts for over 80% of the funds flowing through the financial system. It should be productive and efficient in the context of capital account convertibility because capital account convertibility results in large inflows and outflows which have implications on exchange rate management and domestic liquidity. He reviews the first phase financial sector reforms which bring in more transparency in the balance sheets of banks, introduction of capital adequacy norms, income recognition and asset classification norms, provisioning on vitiated loan assets, marking securities portfolio to market etc. In the second phase, competitive efficiency, emphasis on customer services, organizational

[38] Ajay Shah, 'Institutional Change in India's Capital Markets', Economic and Political Weekly, January 16-23, 1999

[39] Rajendra Kumar Jain, 'Banking Sector Reforms: Issues and Implications' given in Subhash Garg, (ed), in 'Emerging Issues in Financial Sector', Arihant Publishing House, Jaipur.

restructuring, technological up gradation, housekeeping and reconciliation of inter branch accounts.

In 'Financial Liberalization and Economic Development in China' Agarwal[40] attempted to explain the role of financial liberalization in economic development in China. The financial development in China started during the 1980's and globalization commenced since 1990's with the inflow of FDI. About the impact of reforms on economic development, data indicates that "a growth rate of GDP of around 10% with macro economic stability has been sustained for about two decades". Financial liberalization promoted competitiveness, efficiency and flexibility of the financial sector. The study observed that the allocative inefficiencies, growth of non-performing loans and the erosion of the capital base of the banking sector have been controlled with financial reform policy.

Agarwal[41] in 'Financial Integration and Capital Market in Developing Countries: A Study of Growth, Volatility, and Efficiency in the Indian Capital Market', studied the impact of financial integration on Indian capital market. Big financial investors of the developed countries seeking higher returns find developing economies quite attractive destinations. The benefits of these processes are large for developing countries. The study observed that in spite of the benefits of financial integration the Indian stock market is still poorly integrated with the developed international capital markets. Its investor base is very small and turnover ratio is the lowest. The number of scrips traded on a regular basis in the stock markets is very small. He concludes that "the stock market efficiency has not improved significantly after the initiation of reforms". Since the ratio of daily trading volume to total debt outstanding is less, there is problem of illiquidity.

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[40] R.N. Agarwal, 'Financial Liberalization and Economic Development in China', Development Planning Centre, Institute of Economic Growth, Delhi

[41] R.N. Agarwal, 'Financial Integration and Capital Market in Developing Countries: A Study of Growth, Volatility, and Efficiency in the Indian Capital Market', Institute of Economic Growth, Delhi.

Abdur R. Chowdury[42] (2001) in 'The Impact of Financial Reform on Private Savings in Bangladesh' analysed the behavior of the determinants of private savings in Bangladesh, in the context of financial sector reforms. Prior to the late 1980's, Bangladesh has also been characterized by financial repression. However, Bangladesh has become one of the first countries in South Asia to embrace reform in the late 1980s. It has adopted a gradual approach to financial sector reform including the dismantling of a number of directed credit schemes, eased interest rate controls, strengthening the capital base of the banks, identification of non-performing assets, classification of assets provision for bad debts and prudential norms have been introduced. The results based on co integration tests and error correction models showed that financial reform had an adverse effect on savings. The underlying cause of this particular response was a consumption boom caused by financial reform and an increase in asset prices.

In the study 'Financing the New Economy: Financial Institutions and Corporate Governance', Mayer (2001)[43] describes how do high tech firms finance themselves and what roles do stock markets play in their development? He cites the findings of Carlin and Mayer (2001)[44] in 27 industries of 14 OECD countries over the period 1970 to 1995. It explained the stages of financing of high technology industries in the pre-IPO stage in the US and UK. In US and UK, the 'start-up' initial external capital largely comes from business angles (wealthy private investors) and venture capital funds. In the post-IPO stage the study cited the financing of Goergen (1998)[45] that the average age of a firm coming to the German stock market has been 50 years, in UK it is around 12 years and in US around 6 years. Families hold majority stakes in nearly 50% of German firms where as UK families control only in 11% of firms. The study concludes that risk taking by

[42] Abdur R Chowdhury, 'The Impact of Financial Reform on Private Savings in Bangladesh', Discussion Paper No. 2001/78, United Nations University, September 2001. (WIDER)
[43] Colin Mayer, 'Financing the New Economy: Financial Institutions and Corporate Governance', Discussion Paper No.2001/4, World Institute for Development Economic Research (WIDER), 2001.
[44] Carlin W and C. Mayer (2001), 'Finance, Investment and Growth', Said Business School, University of Oxford, Mimeo.
[45] Goergen M (1998), 'Corporate Governance and Financial Performance', Cheltenham: Edward Elgar.

institutional investors in Europe is affected by "the emphasis placed by regulation on, in particular minority, investor protection".

Aziz and Duenwald's[46] (2002) study on 'Growth-Financial Intermediation Nexus in China', during the post 1978 reform period addresses the questions mainly, what are the main characteristics of China's system of financial intermediation? Do differing degrees of financial system development across China's provinces help explain differences in growth performance? What are the policy implications of China's financial sector reform program? The results point out that (1) Those provinces with above average GDP growth had bank loan-to-GDP ratios that were significantly lower than below average growth provinces. (2) Provinces with above average levels of financial intermediation experienced lower growth than provinces with below average levels of financial intermediation. Moreover, it observed that instead of financial development (total bank lending), non-bank sources of finance has played a significant role in financing China's growth.

Petya Koeva[47](2003) provides certain new empirical evidence on the impact of financial liberalization on the performance of Indian commercial banks. On 'The Performance of Indian Banks during Financial Liberalization', the study particularly focused the questions relating to; cost of intermediation, profitability and its determinants. Using the balance sheet, data for all Indian commercial banks for the period 1991/92 to 2000/01, it observed that, the cost of financial intermediation and profitability has declined in recent years. The entry of new and foreign banks has resulted in the decline of bank intermediation costs, profitability and industry concentration. In this work, both cross-sectional and time series properties of the data are examined in a panel regression framework, a variety of models and estimation methods.

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[46] Jahangir Aziz and Christoph Duenwald, 'Growth-Financial Intermediation Nexus in China', IMF Working Paper, November 2002

[47] Petya Koeva, 'The Performance of Indian Banks during Financial Liberalization', IMF Working Paper, July, 2003.

Jun Nagayasu's[48](2003) study on 'The Efficiency of the Japanese Equity Market', using the ARFIMA – FIGARCH model analysed the efficiency of the Japanese equity market by examining the statistical properties of the return and volatility of the Nikkei 225. By incorporating recent sample data (from 1/1/1990 to 8/8/2002) and using Auto Regressive Functionally Integrated Moving Average (ARFIMA) and Fractionally Integrated General Autoregressive Conditional Heteroschedasticity (FIGARCH) model, the study observed that the equity market remains inefficient despite recent implementation of financial market reforms. This paper points to a number of possible factors behind the absence of improvements in market efficiency despite the recent reduction in legal restriction in the Japanese equity market.

A study on 'An Empirical Reassessment of the Relationship Between Finance and Growth', re-examines the relationship between financial development and economic growth by Giovanni Favara[49](2003). It observed that financial development does not have a first-order effect on economic growth. The dataset refers to an unbalanced panel of 85 countries during the period 1960-1998. The control variables include the level of real percapita GDP (Y0), the average years of attainment in secondary and higher education (SEC), the ratio of export plus import over GDP (OPEN), black market premium on foreign exchange transactions (BMP), the ratio of government consumption to GDP (GOV), and the level of inflation rate (INF) and, the ratio of gross domestic investment to GDP (INV). The data source includes the International Financial Statistics of IMF, Penn World Table 6.1, Barro and Lee[50] (2000), and Easterly and Sewadeh[51] (2002).

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[48] Jun Nagayasu, 'The Efficiency of the Japanese Equity Market', IMF working Paper, July 2003

[49] Giovanni Favara, 'An Empirical Reassessment of the Relationship Between Finance and Growth', IMF Working Paper, June 2003.

[50] Barro R.J and J.W.Lee (2000), 'International Data on Educational attainment: Updates and Implications', working Paper No.42 (Cambridge, Massachusetts: Center for International Development at Harvard University), Web at, http:// www2.cid.harvard.edu/ciddata.

[51] Easterly W and M. Sewadeh (2002), 'Global Development Network Growth Database', Web at, http://www.worldbank.org/research/growth/GDNdata.htm

How do the institutional framework and macro economic environment influence financing choices? In the work 'International Evidence on Aggregate Corporate Financing Decisions', Domowitz, Glen, and Madhavan[52](2004) examined the pattern of primary market financing using panel data on thirty countries from 1980-1997. It observed high correlation between macro economic stability and the development of bond market. The institutional framework also plays a crucial role in financing decisions. The key institutional factors include liquidity in the stock market, concentration in the banking system and the relative sizes of the banking and stock market. The overall results of the study suggest that the more stable the macro economy and the more mature its financial institutions, the more significant the role of bond markets. More stable economic environments are associated with higher levels of domestic financial markets.

Specific Literature

K.Krishnamurthy and D.U. Sastry[53] (1975) have observed that the private corporate sector has continued to play an important role in the industrial development of the country. In the study 'Investment and Financing in the Corporate Sector in India', they specifically mentioned about the institutional framework of the industrial sector during the planning period. The analysis of trends in the private corporate sector during the decade 1961-71 revealed that accelerator, financial variables and inventory investment are crucial determinants of fixed investment in the Indian private corporate sector. The study used ordinary least square (OLS), and correlation methods.

If all firms have equal access to capital markets, its responses to changes in the cost of capital differ only because of its investment demand. On the other hand, if internal funds have a cost advantage over external finance, then firms' investment and financing

[52] Ian Domowitz, Jack Glen, and Ananth Madhavan, 'International Evidence on Aggregate Corporate Financing Decisions', given in Asli Demirguc Kunt and Ross Levine, 'Financial Structure and Economic Growth', The Pearson Education, Delhi, 2004.

[53] K.Krishnamurthy and D.U.Sastry, 'Investment and Financing in the Corporate Sector in India', Institute of Economic Growth, Delhi,1975.

decisions are interdependent. Fazzari, Hubbard and Petersen[54](1988) on 'Financing Constraints and Corporate Investment', tests the hypothesis that if the cost advantage of external finance is small, retention practices should reveal little about investment. If the cost advantage is significant, their investment should be driven by fluctuations in cash flow when they have no low-cost source of investment finance. Based on Tobin's q-model, for the period 1969 to 1984 it observed that the group of firms facing binding financial constraints (class-1) retained 94% of their income. Firms in another group (class-3 – which paid out more than 40% as dividend), spend a much lower proportion of their cash flow on investment. This result supports the idea that constrained firms borrow up to their debt capacity, support the fact that financial factors affect investment. It has used annual Value Line data base updated in April 1986.

Whether private investment is more efficient and productive than public investment? Khan and Reinhart[55](1990) in their study on 'Private Investment and Economic Growth in Developing Countries', formulated a simple growth model that separates the effects of both. It is estimated for a cross section sample of 24 countries during the period 1970-79. The study observed that private investment and public investment appear to have different effects on the long-run rate of economic growth. By looking at only the direct effects of private and public investment it found that at best public investment has no statistically significant effect on growth. But public investment has positive indirect effects on growth. By providing the necessary infrastructure, public sector investment has strong influence on the rate and productivity of private capital formation. Considering only the direct effects of private and public investment, the study concludes that government should aim at creating conditions which make private

[54] Steven M. Fazzari, R. Glenn Hubbard and Bruce C. Petersen, 'Financing Constraints and Corporate Investment', Brookings Papers on Economic Activity, 1988.
[55] Mohsin S Khan and Carmen M Reinhart, 'Private Investment and Economic Growth in Developing Countries', World Development, Vol.18 (1), pp.19-27, Jan. 1990

investment attractive. The data source includes IMF, International Financial Statistics and national sources. The study used regression methodology for analysis.

The study on 'Monetization, Financial Liberalisation, and Economic Development', by Prem .S. Laumas[56] (1990), examined the role of financial liberalization in India during the period 1954-55 to 1974-75. It addresses the issues like (1) Is money complementary with physical capital in the context of the demand for money function? (2) Is money complementary with physical capital in the context of an investment function? The empirical estimates points towards the complementarities between money and capital in estimating the demand for money function and investment function. The major policy conclusions of the study were (1) "since the rate of interest has a positive effect on the rate of capital formation and on the rate of economic growth, it is imperative that the monetary authority in India let the real interest rates find their equilibrium level in a free market enviournment". (2) Since the real rate of return on capital has a positive influence on domestic savings and investment, the monetary and fiscal authorities should ensure high and stable real rates of return on business investment.

It has been argued that the fragmented capital markets in less-developed countries retard the efficient allocation of resources. The study on 'Internal funds and corporate investment in India', by Athey and Laumas[57] (1994), using firm-level data examined the importance of the accelerator, internal funds and depreciation for investment by manufacturing firms in India. For a sample of 464 manufacturing firms listed on recognized stock exchanges during the period 1978-1986, the study analysed the balance sheets and profit and loss statements, which published in the Stock Exchange Official Directory. The results of the study indicate that internal funds and depreciation have

[56] Prem. S. Laumas, 'Monetization, Financial Liberalisation, and Economic Development', Economic Development and Cultural Change 38, 1990, pp. 377-390

[57] Michael J. Athey and Prem.S. Laumas, 'Internal funds and corporate investment in India', Journal of Development Economics, Vol.45, 1994, pp. 287-303

significant explanatory power in a sales accelerator model of investment and that there exists heterogeneity among firms in the link between internal funds and investment.

Absence of a proper estimate of net fixed capital stock has drastically reduced the usefulness of various economic studies. Raychaudhuri (1996)[58] in the article 'Measurement of Capital Stock in Indian Industries', has made an attempt to find out a suitable estimate of the net fixed capital stock for the Indian industries at the disaggregated level. The author has tried to highlight various methodologies used in the estimation of capital stock in different studies. She described the Perpetual Inventory Accumulation method (PIAM), Pinell-Siles' (1979)[59] estimate of net investment, Ahluwalia's (1985[60], 1991) estimates of gross capital stock and, the methodology of Dadi and Hashim (1973)[61]. The study gives a clear-cut methodology to estimate capital stock based on ASI data alone and others based on ASI and NAS statistics.

Patnaik and Chandrasekhar (1996)[62] in the article, 'Investment, Export and Growth', observed that "it is really the investment ratio which plays the crucial role in determining growth rate" rather than the much raised 'hullabaloo' on 'efficiency of resource use'. It used cross-section data of World Bank for 25 major underdeveloped countries and estimated real GDP growth-rates for each of them by fitting semi-log trends for the period 1968-88. For investment ratio it has taken the simple average of the ratio of gross investment to GDP for each of these 25 countries for the entire period. Using regression and testing the 'net investment' and the 'net domestic product', the study observed that the investment ratio which plays a crucial role in determining the growth

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[58] Bibekananda Raychaudhuri, 'Measurement of Capital Stock in Indian Industries', Economic and Political Weekely, May 25, 1996.
[59] Pinell-Siles A. (1979), 'Determinants of Private Industrial Investment in India', Working Paper, NO.333, The World Bank.
[60] Ahluwalia I.J. (1985), 'Industrial Growth in India', Oxford University Press and (1991), 'Productivity and Growth in Indian Manufacturing', Oxford University Press.
[61] Dadi M.M and B.R. Hashim (1973), 'Capital Output Relations in Indian Manufacturing 1946-64', M.S. University of Baroda, Baroda.
[62] Prabhat Patnaik and C.P. Chandrasekhar, 'Investment Export and Growth', Economic and Political Weekly, No.1, January 6, 1996.

rate. The efficiency of resource use does not appear to be a particularly significant factor determining relative growth performance.

The study of Huisman and Hermes[63] (1997) on 'Financial Liberalization in India and Impact on Business Investment', tests whether the liberalization process led to a reduction of financial market imperfections. They have analysed 100 Indian Companies using RBI and IDSS (Investment Decision Support System) data for the period 1984-1994. Two sub-samples – small versus large and young versus old – have created. The study found that the internal funds are an important source of finance for Indian business for their investment plans. This supports the hypothesis that both small and young firms have more difficulties in attracting external finance. The study concludes with the observation that financial liberalization in India has not really led to a reduction of financial market imperfections, at least not for the period until 1994. The study has not analysed the performance of a uniform set of companies during this period.

The study of Raghuram G. Rajan and Luigi Zingales[64](1998) examined the rationale between industrial sectors, external finance, developed financial markets during the period 1980-90. In their study 'Financial Dependence and Growth', they have compared the growth of the industries such as Drugs and Pharmaceuticals-which require more external finance- and Tobacco-which require little external finance- in various countries. It observed that in Malaysia- the most financially developed, Drugs and Pharmaceuticals grew at a 4% higher annual real rate than Tobacco. In Korea, which was moderately financially developed, Drugs grew at a 3% higher rate than Tobacco. In Chile- lowest financial development - Drugs grew at a 2.5% lower rate than Tobacco. Thus, financial development seems to affect relative growth rate of industries. The data source includes; (1) Industrial Statistics Yearbook by the UN Statistical Division (1993),

[63] Janine Huisman and Niels Hermes, 'Financial Liberalization in India and Impact on Business Investment', International Journal of Development Banking, Vol 15(2), July 1997.
[64] Raghuram G. Rajan, and Luigi Zingales, 'Financial Dependence and Growth', The American Economic Review, June 1998, pp.559-86

(2) Emerging Stock Market Fact book of International Finance Corporation (IFC), (3) International Financial Statistics of IMF and (4) National Bureau of Economic Research (NBER) - Barro - Lee files – website. The study concludes that, the existence of a well developed financial market in countries represent a source of comparative advantage for that country in industries that are more dependent on external finance.

Does the stock market play a positive role in the process of growth of the Indian Economy? In the study 'Stock Market Development and Economic Growth', Makoto Nagaishi[65](1999) focuses more specifically to the domestic savings mobilization, foreign portfolio inflows, and bank credit to the commercial sector. The measures of stock market development from 1981 to 1995 includes; market capitalization divided by GDP (MC/GDP), total value traded divided by GDP (VT/GDP), turnover ratio (TOR), new capital issues of non government public limited companies divided by GDP, liquid liabilities divided by GDP (LL/GDP), quasi-liquid liabilities (M3-M1) divided by GDP (QLL/GDP), total deposit with banks divided by GDP (TDB/GDP), and bank credit to the commercial sector divided by GDP (BCCS/GDP). Using panel data, the study observed that; the functional relationship between stock market development and economic growth is dubious in the Indian context.

What is the significance of the private corporate sector in the Indian economy? Has the corporate sector in India grown? N. Shanta[66] in her study on 'Growth and Significance of the Private Corporate Sector; Emerging Trends', (1999) observed that the share of private corporate enterprises in net value added in the economy increased from 10.2% in 1982-83 to 18.6% in 1995-96. In total manufacturing its share increased from 38% in 1982-83 to 52% in 1992-93 and in organized manufacturing its share increased from 66% in 1982-83 to 86% in 1992-93 in terms of contribution to net value added. In

[65] Makoto Nagaishi, 'Stock Market Development and Economic Growth', Economic and Political Weekly, July 17, 1999.
[66] N. Shanta, 'Growth and Significance of the Private Corporate Sector; Emerging Trends', EPW, July 31, 1999, pp. M86-91.

terms of absolute growth, it used three indices – gross output, net value added and net fixed capital. These variables have been deflated to arrive at real growth; observed that, the private corporate sector experienced a declining phase from 1980-81 to 1988-89 and a rising phase from 1989-90 to 1993-94. The author has used RBI Bulletin, CSO-NAS, CSO-factor income (new series), ASI and Annual Reports on the Working and Administration of the Companies Act 1956 data base.

How financial sector matters for the process of economic development? R. N. Agarwal[67] (2000) in 'Capital Market Development, Corporate Financing Pattern and Economic Growth in India', studied the relationship between, financial institutions, stock market development and financing behavior of the corporate sector, and the link between stock market development and economic growth in India since 1980's. By using correlation matrix, it observed that there is high positive correlation between the development of banking sector and capital market. To estimate its contribution on economic growth, the study used a regression analysis. An analysis of monthly and annual data confirmed that with the development of both the segments the index of industrial production or the index of GDP has boosted in the Indian economy. The data source include Emerging Stock Market Factbook (IFC 1997), Indian Securities Market; A Review (NSE, 1999), BSE Official Directory, Report on Currency and Finance (GoI, 1998-99). The study however has not analyzed the trend in the capital market and its impacts on investment.

Sayuri Shirai[68] (2002) observed the changes in corporate financing patterns in India during the reform period. In the study 'Have India's Financial Market Reforms Changed Firms' Corporate Financing Patterns?' she analyzed how the 'low quality firms' and 'high quality firms', differ in their financing pattern. It observed that, (1) Indian firms

[67] R.N.Agarwal, 'Capital Market Development, Corporate Financing Pattern and Economic Growth in India', Institute of Economic Growth, Discussion Paper 20/2000, Delhi.
[68] Sayuri Shirai, 'Have India's Financial Market Reforms Changed Firms' Corporate Financing Patterns?', ADB Institute Research Paper-38, June 2002.

generally depend heavily on external sources than internal sources. Among external sources loans from banks and FIs have been more important means of finance. Equity finance is equally important but more volatile than loans. (2) Low quality firms tend to borrow more heavily from banks and FIs than high quality firms. Further, (3) Large firms are not only major new equity issuers but also those that hold greater share capital than others. It used regression technique for analysis. It was based on Prowess database for the period 1990-2001 used two types of data- the Flows of funds data and liabilities of the balance sheet of firms. The study has not analysed pre and post-reform changes.

Joseph, Nitsure and Sabnavis (2002)[69] have made an attempt to examine the evolution of corporate financing pattern in India by identifying the type of financial structure that is supportive for long-term growth. The study, 'Financing of Indian Firms; Meeting the Needs and Challenges of the Twenty-first Century', observed the changing pattern of corporate finance in India for the period from 1972 to 1996. While analyzing the impact of liberalization on the sources of finance, the study mainly observed that the choice of external funds widened and the flow of direct and portfolio inflows from abroad increased. The relative share of bank loans in project cost somewhat increased, while that of debentures and bonds sharply declined after liberalization. In the analysis of corporate balance sheets, the study found that there has been a secular decline in the share of internal sources of funds during the last twenty-five years. The size-wise analysis stressed the dependence of small firms more on internal funds, the rising share of reserves and surplus with firm size, a highest proportion of share premium and debentures for large-sized firms and a high share of long-term borrowings for large firms. It has used CSO, RBI, CMIE, ICICI data base for analysis. It concluded with the observation that the liberalization of financial markets has increased domestic saving rate in the economy find higher rate of investment by the private corporate sector. Like the findings of Samuel

[69] Mathew Joseph, Rupa R. Nitsure, Madan Sabnavis, 'Financing of Indian Firms; Meeting the Needs and Challenges of the Twenty-first Century', Given in James A. Hanson, and Sanjay Kathuria (ed), 'India A Financial Sector for the Twenty-first Century', Oxford, Newdelhi, 2002.

(1996)[70], Nagaraj (1996)[71] and Singh (1995, 1997)[72], this study also observed a declining share of internal finance in corporate investment over the last twenty-five years. The study has not analysed pre and post reform changes of the same set of companies.

Ahluwalia (2002)[73] gives an overview of the two contradictory forces in his study on 'Reforming India's Financial Sector: An Overview'. One is the thrust towards liberalization and the second in favour of stronger regulation. The study broadly approach the financial reforms adopted in India by evaluating the problems experienced by the Southern Core countries of Latin America which adopted excessively enthusiastic financial liberalization in the late 1970s. It concludes by saying that financial sector reforms by themselves cannot guarantee good economic performance that depends upon a number of other factors, including a favourable macro economic environment and the pursuit of much needed economic reforms in other parts of the real economy.

Mujumdar (2002)[74] in his work on 'Financial Sector Reforms and India's Economic Development', underline the need for looking at the capital market policies initiated as part of structural adjustment programmes in a macro economic perspective. While explaining the policies to develop the capital market in a developing economy, it says that no single type of financial system is suitable everywhere and at all times. For most developing countries, bank based finance appears to be more appropriate. The relevant experience of Japan and the Republic of Korea and Germany have been analysed by the author to establish the fact that bank credit can successfully allocate resources and

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[70] Samuel Cherian (1996), 'The Stock Market as a Source of Finance: A Comparison of US and Indian Firms', World Bank Policy Research Working Paper, Washington, D.C.

[71] Nagaraj R (1996), 'India's Capital Market Growth: Trends, Explanations and Evidence', Economic and Political Weekly, Special Number (September).

[72] Singh, Ajit, (1995), 'Corporate Financial Patterns in Industrializing Economies: A Comparative International Study', Technical Paper 2, Washington D.C, International Finance Corporation, World Bank.
----- (1997), 'Financial Liberalization, Stock Markets and Economic Development', The Economic Journal, Vol. 107 (May) pp. 771-82.

[73] M.S. Ahluwalia, 'Reforming India's Financial Sector: An Overview', Given in James A. Hanson and Sanjay Kathuria (ed) op.cit

[74] N.A. Majumdar, 'Financial Sector Reforms and India's Economic Development', Academic Foundation, New Delhi, Vol.11, 2002

can operate with very high leverage. The study concludes that the disproportionate importance currently being given to capital market in India appears to be misplaced.

In the study "Saving, Investment and Growth in India", Athukorala and Sen[75] (2002) analyses the determinants of private investment in India particularly business fixed investment and residential investment. While the variables like expected sales, interest rate or the relative price of new capital goods are the important determinants of business fixed investment, household's wealth, interest rates, the average level of rents and the expected capital gains are more important in residential investment. The regression results on the determinants of private corporate and household investment brings out the fact that, the rate of change in the real rental cost of capital, income, public investment, and post-reform dummy have significant effect on corporate investment. Further, it observed that the 1991 reforms do not seem to have a perceptible effect on non-residential business investment. The study, however, didn't attempt to look into the growth of private corporate investment in India in the reform period.

Demirguc-Kunt and Levine[76](2004) examined the relationship between financial structure and economic development for a cross-section of up to 150 countries. In their work on 'Bank –Based and Market Based Financial Systems: Cross-Country Comparisons', they have analyzed; how the size, activity, and efficiency of financial systems differ across different income percapita groups, what are the different patterns of financial structure as countries become richer and, what are the legal, regulatory and policy determinants of financial structure. The study observed that, financial development tends to be greater at higher income levels. The financial structure across different income groups showed that, in higher income countries financial systems tend to be more market based. On legal and regulatory context, it observed that countries with Common

[75] Prema Chandra Athukoral and Kunal Sen, "Saving, Investment and Growth in India", Oxford University Press, New Delhi, 2002

[76] Asli Demirguc-Kunt and Ross Levine, 'Bank –Based and Market Based Financial Systems: Cross-Country Comparisons', given in 'Financial Structure and Economic Growth', Pearson Education, Delhi, 2004.

Law tradition, strong protection for shareholder rights, good accounting standards, low levels of corruption, and no explicit deposit insurance tend to be more market based. The study used correlations and simple regression methods for analysis.

Rene Stulz[77](2004) in the study 'Does Financial Structure Matter for Economic Growth? A Corporate Finance Perspective', examined how the organization of financial activities affects the efficiency of valuable investment opportunities. He pointed out that "with a poor financial structure, the cost of capital is too high so that it is difficult for entrepreneurs to create firms and for these firms to invest efficiently". The globalization of financial markets makes it possible for established firms to bypass the local financial structure. But in the case of new firms they are affected adversely by globalization because of the greater instability of financial intermediaries. The study concludes by saying that "with financial liberalization, local financial intermediaries can fund themselves abroad and can diversify their risks abroad so that they become more insulated from local shocks".

The study on the 'Financing and Investment Patterns of Indian Firms' over the period 1971-72 to 1999-2000 by Seema Saggar[78](2005) at an aggregate and disaggregate level of major industry groups observed that the financing pattern of Indian firms is found to be debt based. On the investment side, investments in financial assets increased. The industry wise analysis of investment pattern revealed no undue changes in other investments than fixed asset formation since 1991. The financing pattern of several industries has undergone sharp changes during the period 1991-92 to 1995-96. On the association between financing and investment for Indian firms, it observed that there is a positive association between long-term debt and long-term investments. The study used RBI data base for a total of 4834 non-financial, non-government companies since 1971-

[77] Rene Stulz, 'Does Financial Structure Matter for Economic Growth? A Corporate Finance Perspective', given in 'Financial Structure and Economic Growth', Pearson Education, Delhi, 2004.
[78] Seema Saggar, 'Financing and Investment Patterns of Indian Firms', Economic and Political Weekly, January 15, 2005, pp. 231-239.

72. It has analyzed the balance sheet of 2096 companies of which 218 were common for the last 30 years. It used consolidated balance sheet data of a group of companies which vary over the period. The study has used consolidated balance sheet data and do not give a firm level analysis.

Conceptual Framework

Balance Sheet: - The balance sheet is a statement which reports the values of properties owned by the enterprise and the claims of creditors and owners against these properties. It reveals the firm's financial position on a particular date. The right hand side of the balance sheet contains the assets of the company and left hand side represents claims against these funds.

Assets: - The certainty that economic benefits will flow to the enterprise beyond the current accounting period and has a value is recognized as an asset. It may be tangible objects or intangible rights owned by an enterprise and carrying future economic benefits. The assets depict how the money has been utilized by the enterprise.

Current Assets: - Current assets are reasonably expected to be realized in cash or sold or consumed during the normal operating cycle of the business. (The operating cycle is the period which is taken to complete the sequence of events right from purchase of materials or goods for cash to the realization of sales in cash and normally it is of one year)

Fixed Assets: - Fixed assets are assets of a relatively permanent nature used in the operations of business and not 'intended for sale'.

Investments: - The investments of a firm in shares, debentures and bonds of other firms or government bodies for profit or control.

Miscellaneous Assets: - They represent deferred expenditures which represent pre-payments for services and benefits for period longer than the accounting period. They include – (i) preliminary expenses, (ii) discount or underwriting commission on issue of shares and debentures, (iii) advertising expenditure, (iv) debit balance of profit and loss account.

Intangible Fixed Assets: - They have no physical existence. The intangible assets confer certain exclusive rights and facilities so that one firm is in a position to earn more profits in comparison to other firm. These assets include – (i) goodwill, (ii) patent and trade mark, (iii) copyright, (iv) license and franchise. (Goodwill represents the excessive earning power of a firm, patents confer exclusive rights to use an invention, trade marks represent exclusive right to use certain names, symbols, labels, designs. Copyright relates to production and sale of literary, musical or artistic works, franchise or license represents contracts giving exclusive rights to perform certain functions or to sell certain services or products).

Liabilities: - Liabilities may be defined as the claims of outsiders against the firm. It indicates the amount made available for purpose of business and its source.

Current Liabilities/Short-term liabilities: - Current Liabilities are all short-term obligations generally due and payable within a year. They include; (i) trade creditors, (ii) bills payable, (iii) dividend and tax payable, (iv) bank overdraft, (v) outstanding expenses and deferred income.

Long-term Liabilities: - This represents borrowing of a firm payable after more than one year. It includes; (i) debentures/bonds, (ii) mortgages, loans, (iii) long-term loans from banks or financial institutions.

Net Worth (Owner's Equity/Shareholder's Funds/Net Capital Employed): - It is the excess of the firms' assets over its liabilities, current as well as long-term. It consists of two elements; (i) share capital and (ii) share holder's reserves.

Share Capital: - Share capital is the sum that belongs to the shareholders. The share holder's money is refundable only on the winding up of the company. The company owe it to the shareholders and is shown as liability in the balance sheet.

Paid-up Share Capital: - It is the initial amount of funds contributed by shareholders. It includes both equity share capital and preference share capital. If shareholders pay more than the par value of shares, the excess amount is known as share premium.

Reserves and Surplus: - It represents retained earnings. It means that part of the profits belonging to the shareholders which is not paid out to them as dividend, but ploughed back in the business. It includes; (i) revenue reserves, (ii) capital reserves and surplus. Revenue reserves are – general reserves, development rebate reserves, investment allowance reserves, debenture redemption reserves. Capital reserves are – revaluation of fixed assets, profits prior to incorporation, share premium reserves, profits arising out of forfeited shares etc.

Provisions: - Certain liabilities are known to exist at the time of balance sheet but exact amount thereof are not ascertainable. The commitments are to be adequately provided for. It includes gratuity, pension, dividend and tax provisions.

Inventory: - It includes raw material, goods in process, and finished goods etc. It is valued at cost or market value, whichever is lower.

Receivables: - The accounts receivables/ sundry debtors and advances given are usually shown at the amount due from the third parties, customers etc. The provision for doubtful debt is usually made on estimate basis in the event of debts becoming doubtful.

Trade Credit: - Trade credit is extended by the seller to the buyer. It includes bills of exchange etc. It is made available to companies who have sufficient financial reputation and goodwill. It facilitates the purchase of supplies without immediate payment. It does not involve the payment of interest, but the company has to forgo cash discount.

Relationship between Assets, Liabilities and Net Worth: - Assets: Assets are resources of the firm which are acquired from the funds provided by outsiders and owners of the firm.

That is; Assets = Liabilities + Net Worth, or, Liabilities = Assets – Net Worth, or, Net Worth = Assets – Liabilities.

Profit and Loss Account: - It is the scoreboard of the firm's performance during a period of time. The earning capacity of a firm is reflected by profit and loss account or income statement. The revenues of an accounting period are matched with the expenses

incurred in earning the revenues and the difference between revenues and expenses is treated as profit or loss.

Gross Profit: - The gross profit is arrived at after reducing cost of sale from sales. The cost of sale includes raw materials, labour and other factory expenses.

Net Profit: - The net profit is arrived at after charging selling and administrative expenses. The selling and administrative expenses include office expenses, staff salary, telephone, telegram, selling expenses, car expenses, interest, building maintenance etc.

Solvency of the Company: - A company is solvent if its assets are greater than its outside liabilities. The outside liabilities do not include the shareholders funds ie, share capital plus reserves. ie, if percentage of shareholders funds is high the solvency of the company is good.

Mutual Funds: - Mutual funds are associations or trusts of public members who wish to make financial investments in financial assets for the mutual benefit of its members. The funds collected from the members are invested in a diversified portfolio of financial assets with a view to reduce risks and to maximize income/capital appreciation to its members on a pro-rata basis.

Proprietorship Securities: - Proprietorship securities represent shares of capital of a public limited company. They are (i) ordinary shares, (ii) preference shares.

Ordinary Shares/ Equities: - The holders have the right to participate in the annual profits of the company and do not confer any special rights or privileges. They comprise the largest category of corporate securities traded on the stock exchanges. They represent the residual ownership of a company.

Preference Shares: - Carry certain preferential rights in priority to ordinary shares in the payment of dividend and return of capital in the event of liquidation of the company.

Creditorship Securities: - It includes bonds and debentures.

Debentures: - A debenture is an acknowledgement of indebtedness given under the seal of the company containing a contract for the repayment of the principal sum at a specified

date or after a specified period's notice and for the payment of interest at a fixed rate percent until the principal sum is repaid.

Bonds: - Bonds are form of debentures. They constitute a part of an agreement between the company and the bondholder. The instrument containing the rights on the bondholder and obligations of the debtor company is called bond denture. Bonds may be secured, unsecured, redeemable, and irredeemable. Bonds are issued for a period of 10 years or more carrying a fixed rate of interest.

Capital Structure of a Company: - Capital structure is the permanent financing of the company representing long-term sources of capital ie, owner's fund and long-term debt but excludes short term credit.

Financial Structure: - It refers to the way the company's assets are financed. It represents all the long-term and short-term sources of capital.

Assets Structure: - Assets structure refers to total assets and their components. It includes all types of assets of the company i.e., fixed assets and current assets.

Scheme of the study

In the introductory chapter besides introduction, the role of capital market, the rationale of the study, the objectives and methodology and review of literature are outlined. The structure and dimensions of the growth of Indian financial system and specifically the capital market reforms and the developments of the capital market, forms the themes of the second and third chapter. The corporate investment and financing pattern based on RBI data of NGNF public limited companies over the period 1982-83 to 2002-03 have been discussed in the fourth and fifth chapters. In the sixth (1 – 3 chapters), the results of the analysis of investment and financing pattern of 150 companies during the period 1983-2003 are discussed. The summary of the findings and conclusion are given in the seventh chapter.

[1] John G Gurley & Edward S Shaw, 'Money in a theory of Finance', Motilal Banarsidass, Delhi, 1968

[2] Schumpeter, J.A., orig.(1912), 'The Theory of Economic Development', Trans. 1934 (Harvard U.P., Cambridge, MA)

[3] Raymond W. Goldsmith, 'Financial Intermediaries in the American Economy since 1900', Princeton, N.J, 1958

[4] Gurley, J.G. and E.S. Shaw, 'Financial Structure and Economic Development', Economic Development and Cultural Change, Vol.15, No.3, 1967

[5] James Tobin, 'A General Equalibrium Approach to Monetary Theory', in his Essays in Economics; Macroeconomics, Vol.1, Chicago 1971, pp. 322-28

[6] Mc Kinnon, R.I., 'Money and Capital in Economic Development', The Brookings Institution, Washington D.C, 1973.

_____, 'Money and Finance in Economic Growth and Development', (ed), Marcel Dekker, Inc., New York, 1976

[7] George Rosen, 'Factors in the Development of Capital Market', given in L.C. Gupta, (ed), 'Readings in Industrial Finance', The Mc Millan Co. of India Ltd., 1976

[8] James C. Van Horne, 'Financial Market Rates and Flows', Prentice Hall, Inc, New Jersey, 1978

[9] John G Gurley & Edward S Shaw, 1968

[10] Janine Huisman, Niels Hermes, 'Financial Liberalisation in India and the Impact of Business Investment', Internal Journal of Development Banking, Vol 15, No.2 July 1997, pp 3-14.

[11] Janine Huisman, Niels Hermes opp cit

[12] Michael J. Athey and Prem.S. Laumas, 'Internal funds and corporate investment in India', Journal of Development Economics, Vol.45, 1994, pp. 287-303

[13] Janine Huisman and Niels Hermes, 'Financial Liberalization in India and Impact on Business Investment', International Journal of Development Banking, Vol 15(2), July 1997

[14] Saghir Ahmad Ansari, 'Financial Intermediaries and Industrial Development', APH Publishing Corporation, New Delhi

[15] Mathew Joseph, Rupa R. Nitsure, Madan Sabnavis, 'Financing of Indian Firms; Meeting the Needs and Challenges of the Twenty-first Century', Given in James A. Hanson, and Sanjay Kathuria (ed), 'India A Financial Sector for the Twenty-first Century', Oxford, Newdelhi, 2002

[16] Prema Chandra Athukoral and Kunal Sen, "Saving, Investment and Growth in India", Oxford University Press, New Delhi, 2002

[17] Seema Saggar, 'Financing and Investment Patterns of Indian Firms', Economic and Political Weekly, January 15, 2005, pp. 231-239

[18] Lall, V.D, Srinivasa Madhur and K.K.Atri (1982), 'Resource Mobilisation in the Private Corporate Sector in India', National Institute of Public Finance and Policy, New Delhi.

CHAPTER – 2

INDIAN FINANCIAL SYSTEM

- Financial Intermediaries in India
- The classification of financial instruments
- Structure of Indian financial market
- The role of Capital Market
- The Development of Stock Market in India
- Indian Financial System: An Overview
- Recent Developments in the Indian Financial System

Chapter – 2

Indian Financial System

Finance

There are different views on finance; the procurement view, custodian function view and decision making view. Finance means "the provision of money at the time it is wanted", according to F.W. Paish[1]. This definition of finance function highlights the *procurement view*. Finance function is a broader one. It includes the financing decision, investment decision, and dividend decisions. Thus, "the term finance may be defined as the management of the flow of money through an organization, whether it will be a corporation, school, bank or governmental agency" John J. Hampton[2] (1976). This definition of finance emphasizes the *custodian function of money*. Another broader approach to the function of finance is concerned with the financial decision-making. In this view, finance function is related to procurement of funds as well as their effective utilization[3]. In the words of Howard and Upton, "Finance may be defined as that administrative area or set of administrative function in an organization which relate with arrangement of cash and credit so that the organization may have the means to carryout its objectives as satisfactorily as possible". Thus the function of finance is financial decision making by harmonizing individual motives and enterprising goals.

Monetary assets, Financial assets and Tangible assets

The concept 'financial asset' can be distinguished from monetary and tangible assets. The two important properties of monetary assets that distinguish them from all other financial and non-financial assets are the *exchange convenience* and *capital certainty*[4]. Monetary assets are the most marketable and the most *reversible* of all asset

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[1] F.W.Paish, Business Finance, PP.3 given in B.L.Acharya, 'Financial Analysis', Mohit publications New Delhi, 2001, pp. 182-185.

[2] Hampton J.J., 'Financial Decision Making – Concept, Problems and Cases', Reston Publishing Co., Inc. (Reston, Virginia), Ed. 1976, pp.217.

[3] Hunt Williams and Donaldson, 'Basic Business Finance', pp.3

[4] Basil J. Moore, 'An Introduction to the Theory of Finance; Asset holder behaviour under uncertainty', Amerind Pub. Co., New Delhi, 1971 pp 158

forms, reversibility being defined as the difference between buying and selling price (realizable value) at an instant of time. This transfer cost advantage is termed as the *exchange convenience* yield of monetary assets. The capital certainty of an asset refers to the predictability with which its expected market value at future dates is anticipated.

The dealers in financial assets are deficit-spending business units, households, and government. It includes currency and deposits, investment in securities, loans and advances, small savings, life fund, provident fund and trade-debt-credit. The important characteristics of financial assets are that they are *generalized claims* against current production. They are usually fixed in nominal money units, but may be tied to some future contingency, or represent pro rata shares in the returns of enterprises. Financial assets are held primarily as an attractive income-earning store of purchasing power. Financial assets are supplementary, being much less dependent on the presence of other cooperative factors in order to yield their services. Financial assets can be created or destroyed virtually instantaneously by the act of borrowing or repayment. Lastly, financial assets are less liquid than monetary assets.

Tangible assets are material things, which are highly *specific* in form and use. Its yields are in kind, can be sold in order to convert into another form of wealth or income. Tangible assets are usually held for *physical services* like houses, machines, and consumer durable goods. Tangible assets are highly *complementary*, and characterized by important externalities in use. It can be made to yield their services in saleable form only with the cooperation of other productive factors. They can be increased only slowly, by net real investment and, are less liquid than financial assets.

The role of finance function in economics is that its interrelationship with economic development. In the words of Gurley and Shaw[5] "an immature financial system is in itself an obstacle to economic progress". A number of economists have studied the importance of financial development for the growth of the economy in the early 19th

[5] John G Gurley & Edward S Shaw, 'Money in a theory of Finance', Motilal Banarsidass, Delhi, 1968

century; prominent among them were Walter Bagehot and Joseph Schumpeter. Raymond. W. Goldsmith[6], James Tobin[7], Ronald I. McKinnon[8], John G. Gurley and Edward S. Shaw[9], James C. Van Horne[10], and George Rosen[11] have stressed the role of financial development in economic growth. The empirical evidence in India suggests that financial development and economic growth reinforced each other[12].

By financial development we mean the development of the financial system. The main components of the financial system are financial institutions, instruments and markets. The literal meaning of financial system is "a set of interrelated institutions which collect savings and distribute them to borrowers, making possible the separation of the ownership of wealth from the control of physical capital"[13]. The financial system performs this function by coordinating surplus spending units (SSUs) and deficit spending units (DSUs). It transfer financial resources in the best possible way in an

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[6] Raymond W. Goldsmith, 'Financial Intermediaries in the American Economy since 1900', Princeton, N.J, 1958.

_____, 'Financial Structure and Development', Yale, 1969.

_____, 'The Financial Development of Mexico', Paris, 1966.

_____, 'The Financial Development of India, 1860-1977', Oxford University Press, New-Delhi, 1988.

[7] James Tobin, 'A General Equalibrium Approach to Monetary Theory', in his Essays in Economics; Macroeconomics, Vol.1, Chicago 1971, pp. 322-28.

_____, and W.C. Brainard, 'Asset Market and the Cost of Capital', given in Bela Balassa and Richard Nelson (ed), 'Economic Progress, Private Values and Public Policy', Essays in honour of William Fellner, Amsterdam, 1977, pp. 235-62.

_____, 'The Monetary Interpretation of History', American Economic Review, June 1965, No.55.

[8] Mc Kinnon, R.I., 'Money and Capital in Economic Development', The Brookings Institution, Washington D.C, 1973.

_____, 'Money and Finance in Economic Growth and Development', (ed), Marcel Dekker, Inc., New York, 1976.

[9] Gurley, J.G. and E.S. Shaw, 'Financial Structure and Economic Development', Economic Development and Cultural Change, Vol.15, No.3, 1967

Shaw, E.S., 'Financial Deepening in Economic Development', Oxford University Press, New York, 1973

John, G. Gurley, 'Financial Aspects of Economic Development', American Economic Review, Sept. 1955, No.45

John, G. Gurley, 'Financial Intermediaries and the Savings Investment Process', The Journal of Finance, May 1956, No.9.

[10] James C. Van Horne, 'Financial Market Rates and Flows', Prentice Hall, Inc, New Jersey, 1978.

[11] George Rosen, 'Factors in the Development of Capital Market', given in L.C. Gupta, (ed), 'Readings in Industrial Finance', The Mc Millan Co. of India Ltd., 1976.

[12] Report on Currency and Finance 1999-2000, Reserve Bank of India, pp. II-2

[13] Drake, P.J, (1980), 'Money Finance and Development', Oxford Robertson, given in dictionary of Economics, Donald Rutherford, Routledge, London

economy where the savers and investors are not the same. This 'Layering effect'[14] is considered as an index of financial intermediation. The more efficient the transfer is, the larger the flow, allocation of resources and economic development[15].

Indian Financial System

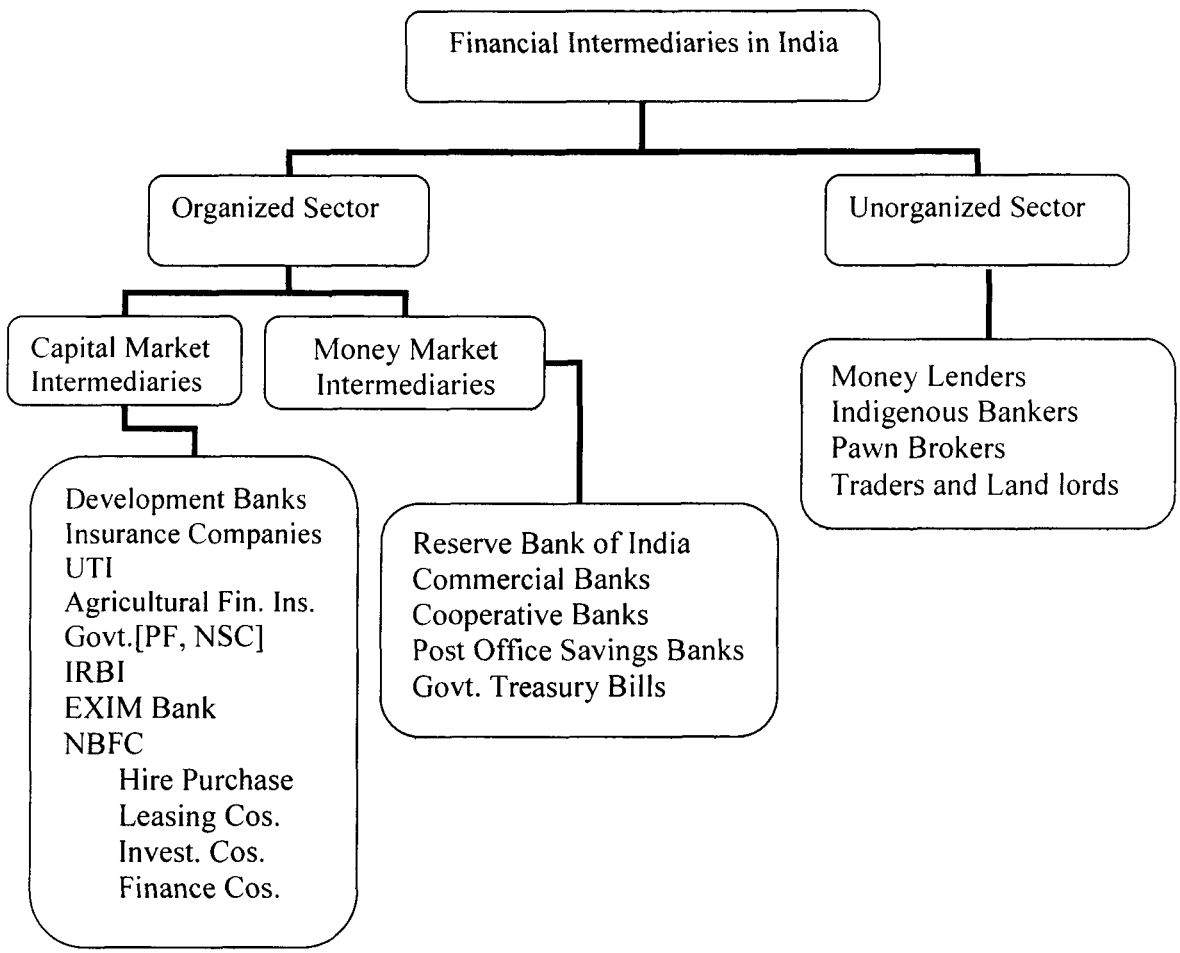
The financial system is a set of institutional arrangements through which financial surpluses in the real economy are mobilized from surplus units and transferred to deficit spenders. The institutional arrangements include all conditions and mechanisms governing the production, distribution, exchange and holding of financial assets or instruments of all kinds and the organization as well as the manner of operation of financial markets and institutions of all descriptions. Specifically, financial institutions, financial assets, financial markets and financial services are the main constituents of any financial system.

Financial Intermediaries in India

In India, financial intermediaries are classified in different ways. One classification is banking institutions and non-banking institutions, the other classification is capital market intermediaries and money market intermediaries. In the former classification, the banking institutions differ from non-banking institutions in its payment mechanism. The distinction between the two is that the former is the "creator" of credit but the latter is the "purveyors" of credit. In the latter classification, capital market intermediaries deal in long term lending whereas money market institutions supply short term funds. In India about 87% of gross domestic savings originated from the household sector in 2003-04[16]. Of which 53 % is invested in physical assets. Households are generally surplus spenders and corporate sector and government are deficit spenders. Financial assets are the vehicles through which the savings of surplus spenders are

[14] R.N. Agarwal, 'Financial Liberalization in India', B.R. Publishing Corpn., Delhi, 1996.
[15] George G. Kaufman, 'Money and the Financial System', Rand Mc Nally College Pub, Co., Chicago, 1975, pp. 43-68.
[16] RBI, Hand Book of Statistics on the Indian Economy, 2004-05, Table NO.10

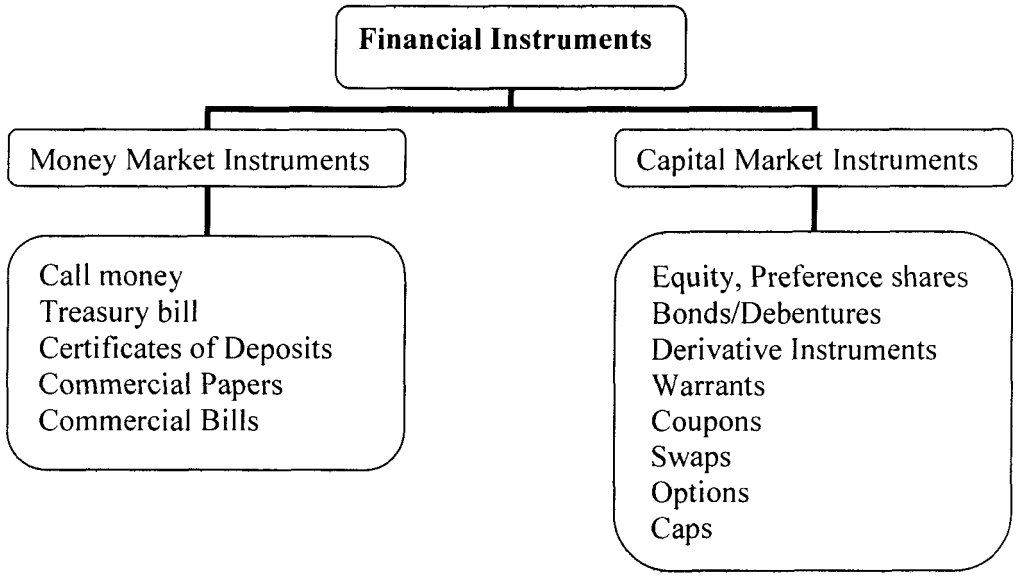
channalised and allocated among deficit spenders. The more varied, well organized, geographically well distributed the financial institutions are, the more developed the financial infrastructure of the economy. Its structure can be shown below:



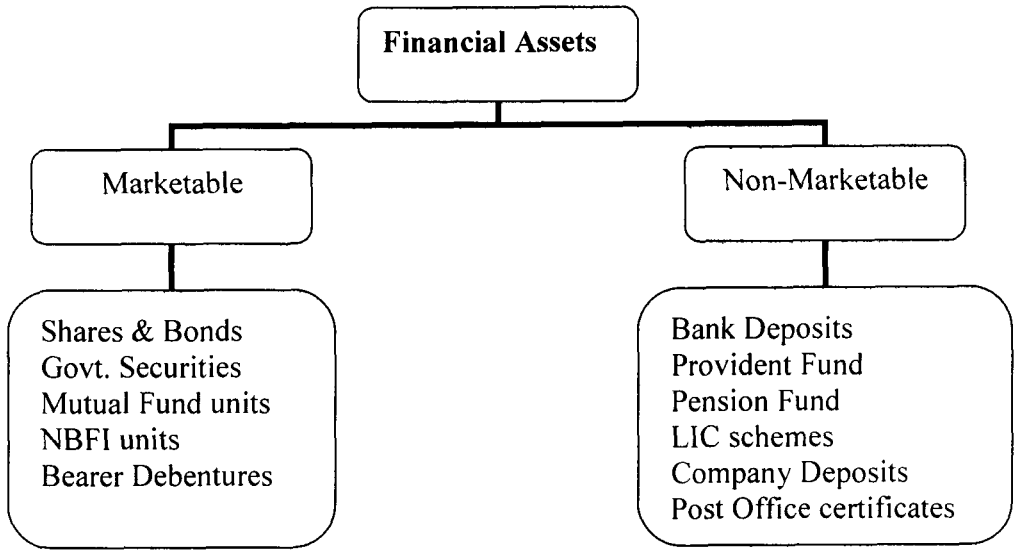
The classification of financial instruments

The basic product of any financial system is the financial instruments/assets. It is used for production, consumption or further creation of assets. Financial assets are classified differently; one popular classification is – money market instruments and capital market instruments. It can also be classified into marketable assets and non-marketable assets. Yet another classification is monetary asset, debt asset and stock asset. As per the first classification, money market instruments include all money, treasury bills, certificates of deposits, commercial papers and commercial bills. These instruments are

floated for a short time period. Capital market instruments are those instruments floated for a long term. It includes equity shares, preference shares, debentures, government bonds, derivative instruments like warrants coupons, options, swaps and caps.



Marketable financial assets are those which can be transferred from one person to another. It includes corporate shares, government securities, bonds, debentures and units of NBFI's. But non-marketable financial assets cannot be transferred easily. It includes bank deposits, provident fund, pension funds, national savings certificates, insurance policies and the like.



In the last classification money, stock and debt asset; all coins and currency notes issued by RBI & Government are cash/money assets. Credits created by commercial banks are also cash assets. Debt assets are issued by institutions for raising their debt capital. It includes the issue of debentures, raising of term loans, working capital advance etc. Stock assets are issued by corporates and institutions for raising their fixed capital. Equity, bonds and debentures are stock assets.

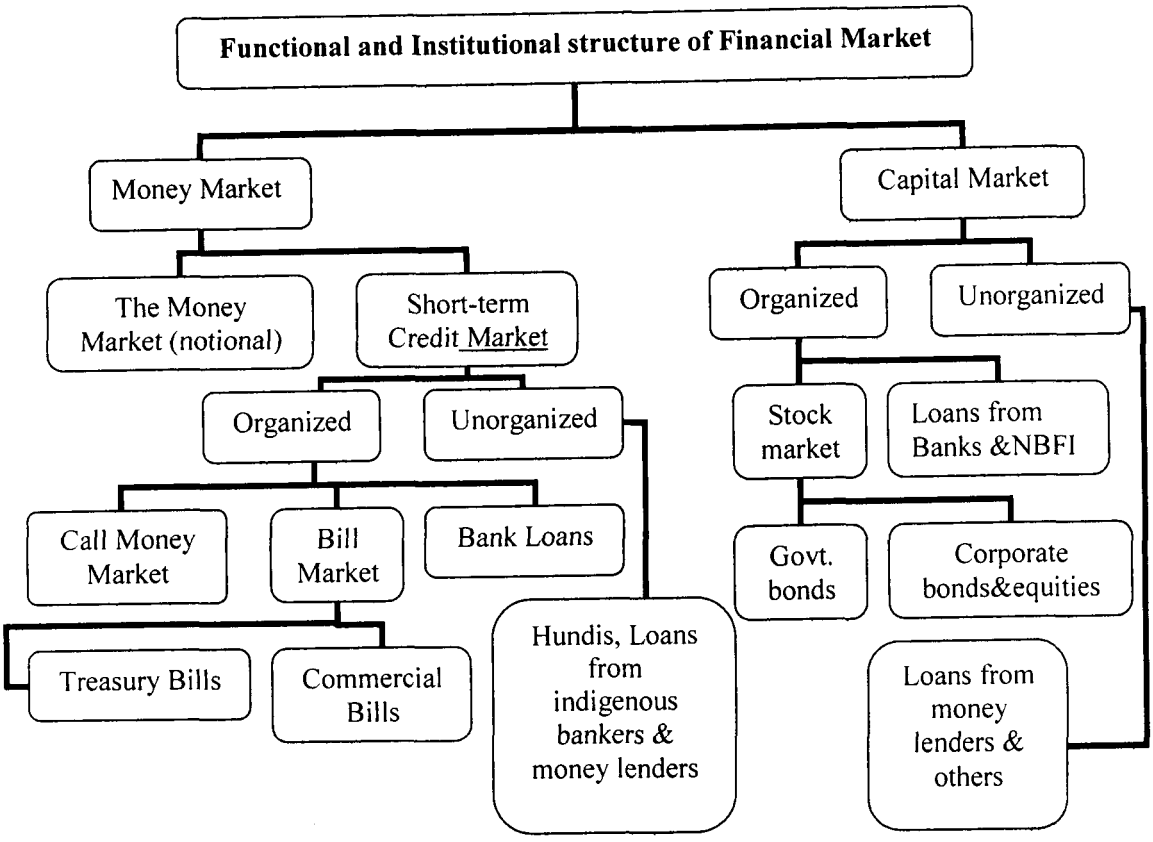
In the Indian financial system the important financial assets are;

Currency
Bank deposits [current, savings and fixed]
Post Office savings deposits
Life Insurance policies
Provident Fund contributions
Bonds & debentures
Bills & hundis
Corporate shares
Units of UTI
Company deposits
Compulsory deposits [NSC etc.]
Deposits with investment companies/ trusts
Nidhis, chit funds
Derivative instruments

Structure of Indian financial market

Financial markets are very much like market for goods and services. They have their own demand, supply, quantities and prices. There is no specific location or place to indicate a financial market. Hence financial markets are pervasive in nature since financial transactions are very pervasive throughout the economic system.

The structure of financial markets can be studied from different angles, namely, functional, institutional, or sectoral. The functional classification is based on long-term credit. Accordingly, markets are called money markets and capital markets. The institutional classification tells us whether the financial institutions are organized or unorganized. The sectoral classification identifies credit arrangements for various sectors of the economy. The functional cum institutional classification is more relevant.



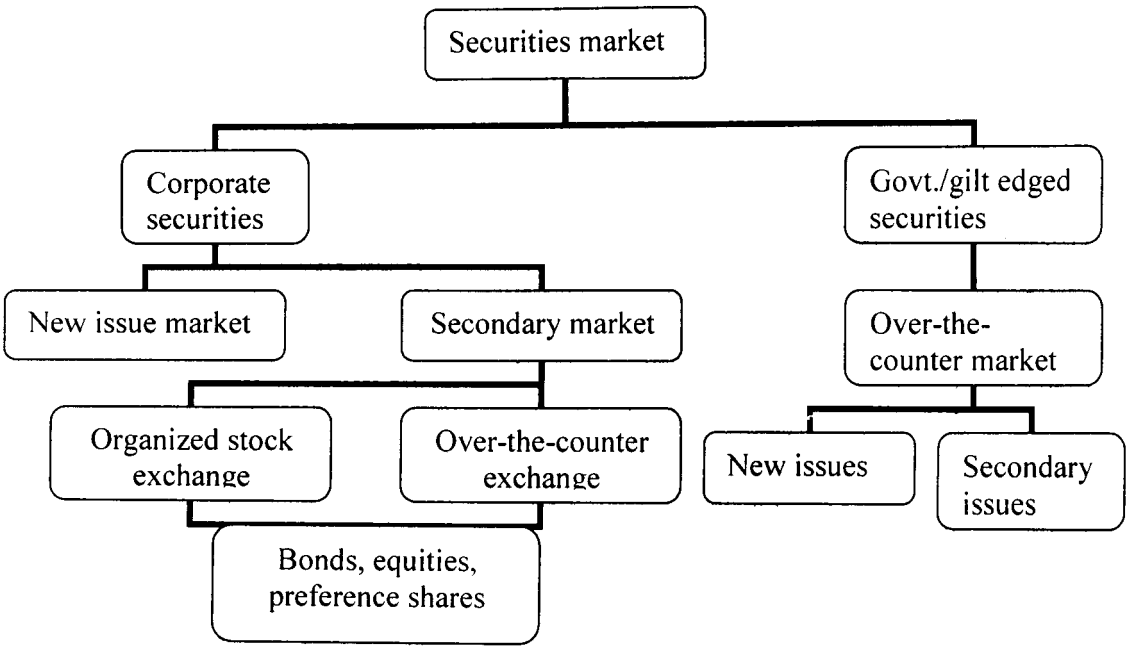
In functional classification, financial markets are broadly divided into money markets and capital markets. The money market deals in short term funds, the latter in medium term and long term funds. The main distinction between the two is based on the differences in the period of maturity of financial assets issued in these markets. Money markets deal in the short term claims with a period of maturity of one year or less, where as capital markets provide long-term claims with a period of maturity of one year and above. However, it is not possible to include a participant in either of the two. Commercial banks and cooperative banks dominate in the organized sector of the money market. It can be subdivided into; call money market, commercial bill market, treasury bill market and short term loan market. The unorganized sector largely made up of indigenous bankers and money lenders.

Capital market like money market is also divisible into two sectors: organized and unorganized. The organized sector consists of stock market, the RBI, Commercial banks,

development banks, NBFIs and the like. The unorganized sector is mainly made up of indigenous bankers and money lenders.

The stock market or securities market deals in long term securities, both private and government. It is the most important component of the capital market. The market deals in long-term funds of all kinds, through open-market securities or negotiated loans. Open-market securities are securities that are bought and sold openly in the market and can change hands any number of times. The negotiated loans have to be negotiated directly between the borrower and the lender.

The structure of the securities market is given below:



The stock market comprises several distinct markets. There are markets for corporate securities and market for government securities [gilt-edged-market]. It provides separate arrangements for the issue of new securities – the market for securities for the first time – and for buying and selling of old securities. The former is known as the 'new issue market' and the latter the 'secondary market'. The New Issue Marker [NIM] arranges new capital for corporate enterprises by attracting new investible resources from

the public and allocates it among alternative projects. The growth of the corporate sector, thus, depends on the efficiency of the securities market to raise resources. The instruments used in this market include equity shares, preference shares, and debentures. The secondary market provides liquidity to the existing securities through a continuous market. Liquidity of securities is important because it encourages prospective investors to invest and attract new finance. This opens a way for investors who do not want to risk their funds by investing in new ventures, but are willing to invest in the securities of existing concerns. At the same time, there are venturesome investors who invest in new issues in the hope of making capital gains later. Thus the NIM and secondary market float resources for investment which plays a crucial role in the development of an economy. The secondary market operates through an organized stock exchange. A stock exchange is an organization for orderly buying and selling of existing [listed] securities. It includes an association of persons or firms to regulate and supervise all transactions, rules, regulations, and standard practices to govern all market transactions. Now they are under the supervision of SEBI, the watch dog of stock exchanges in India.

The gilt-edged market is the market in government securities or securities guaranteed by the government. Government securities include the securities of the Government of India and of the state government. The government guaranteed securities are issued by local authorities like corporations, municipalities, port trusts, autonomous government undertakings like development banks, state electricity boards etc. Government securities have gained importance since 1954-55 for raising funds to finance public sector projects under five year plans. The gilt-edged market comprises the Treasury bill market and the government bond market. Treasury bills are money market instruments, issued to meet temporary needs for funds of the government. In the government bond market, RBI is the sole leader in the borrower side. RBI is responsible for all new issues. There is also a large secondary market as well. It is concentrated in Calcutta, Madras, and Delhi, works through a few brokers, who keep in touch with the

RBI and other prospective buyers and sellers. On the demand side of the gilt-edged market, there are financial institutions. Apart from RBI, the major players are commercial banks, insurance companies, provident funds and trust funds. The monopoly of RBI in India's gilt edged market is a distinct feature against the markets in USA, UK, and Canada, where the central bank is not the sole dealer in government securities.

Financial Services

Financial services are offered by financial institutions in the nature of guiding investors to invest their money according to their willingness by providing technical expertise as well as enabling the corporate enterprise to obtain funds for their operations. To avoid the difficulty and risk involved in corporate investment by the public financial institutions render financial services to them. The various services are Merchant Banking, Mutual Funds, Credit Rating, Port folio Services, Leasing, Hire Purchase Financing, House Finance, Venture Capital, Factoring, Discounting of bills etc.

The distinction between Money and Capital Markets

Money market is a market for short term loanable funds for a period of less than one year where as capital market is a market for long-term funds for more than one year. Money market supplies funds mainly for meeting their working capital requirements and current business operations while capital market provide funds for fixed capital as well as the long-term requirements of the government. The instruments dealt in a money market include bills of exchange, treasury bills, commercial papers, certificates of deposits etc. but in capital market there are shares, debentures, government bonds etc. Money market instrument are issued for denominations of large amount, say a treasury bill of minimum 1 lakh, CD and CP for a minimum 25 lakhs, but capital market instruments carry small amount like the value of each share for Rs. 10/- and debenture Rs. 100/- . The Central Bank and commercial banks are the major players in the money market where as development banks, insurance companies, general investors, brokers merchant bankers, underwriters, FIIs, Registrar to the issue and corporate investors play a dominant role in

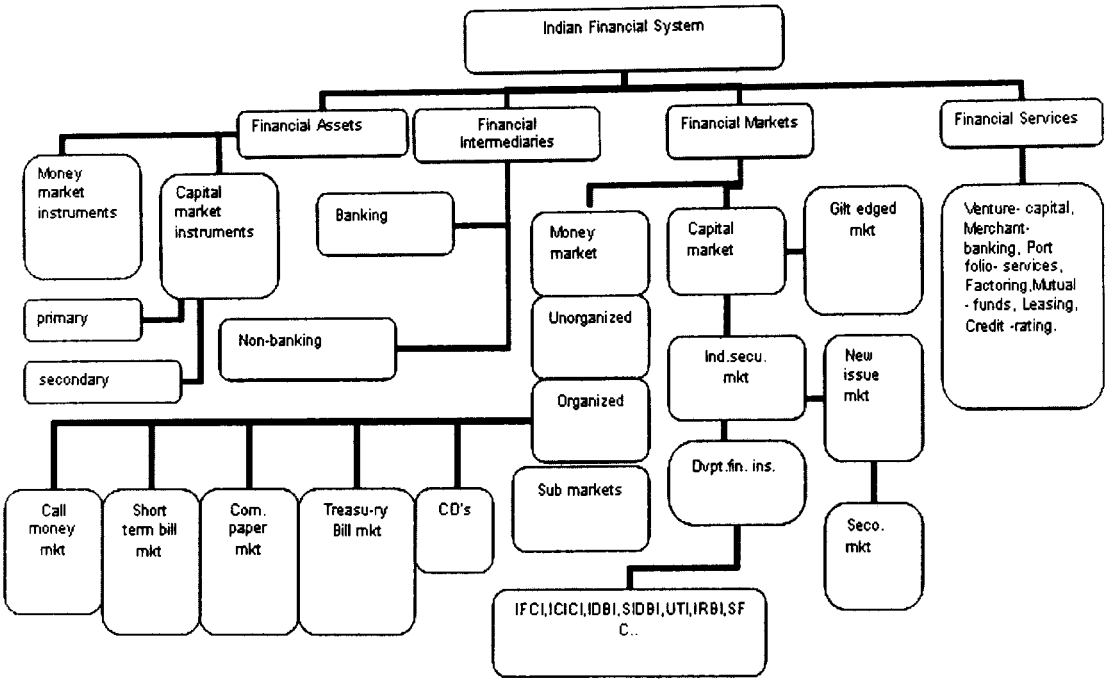
the capital market. Money market instruments does not have secondary markets, capital market instruments usually have secondary markets. In money market, transactions take place mostly over the phone. In capital market it is through stock exchanges. Transactions in the money market can be conducted with out the help of brokers, but it can be done only through brokers. Lastly, the number of instruments dealt in money market are many however, the number of instruments in capital market are very few, generally shares and debentures.

The role of Capital Market

Capital market plays a vital role in mobilizing savings and channeling them into productive investments. By connecting Surplus Spending Units [SSUs] and Deficit Spending Units [DSUs], it helps in diverting resources from wasteful and unproductive channels to productive investments. It provides incentives to savers in the form of interest or dividend for their funds, thus encourages capital formation. It helps the corporate sector to expand, grow and diversify and thereby it facilitates growth of output and income in the economy. The various institutions which operate in the capital market such as banks, development banks and stock market give quantitative and qualitative direction to the flow of funds and bring rational allocation of resources. Capital market provides money for new as well as existing ventures. They are allowed freely to enter into the capital market and raise any amount of funds they wanted. The capital market by linking the borrowers and lenders, reduces time lag and information cost and thereby transaction cost to the corporate sector. The companies can raise funds through (a) offer through prospectus, (b) offer of sale, (c) private placement and (d) rights issue. The major players in the primary market are merchant bankers, collecting bankers, registrars to issue, brokers, underwriters, advertising agencies, printers, solicitors, auditors, sub-brokers, sub-underwriters, mailing agents etc. Similarly, the major players in the secondary market are brokers, jobbers, dealers, badla financiers, and arbitragers.

In short, a well organized capital market is of great importance to an economy because it provides ready and continuous market for securities. It plays an important role in the capital formation and risk bearing amongst the public. It directs the flow of savings into the most productive and profitable channels. A well-organized securities market ensures safety, fair dealings and availability of funds at less transaction cost.

Schematic Presentation of Indian Financial System



Indian Financial System: An Overview[17]

The development of Indian Financial System dates back to the regime of Emperor Sher Shah Sur during 1539-45 AD. Sher Shah Sur issued coins of standard weight in pure gold, silver, and copper. He issued 'Rupiya' later known as 'Rupee' during his reign. Raymond. W. Goldsmith described the development of Indian financial system in three

[17] This part is largely taken from Raymond W. Goldsmith, 'The Financial Development of India, 1860-1977', Oxford University Press, New- Delhi, 1988.

periods beginning from 1860. He classified the period into Victorian India from 1860 to 1913, interwar period from 1914 to 1946 and, post-independence period from 1947 - 1977. The institutional structure of the Indian financial system in the period between Mutiny and World War I (Victorian India) start with the indigenous bankers. They have played a very important role during Mughal dynasty. 'Hundi' was the popular type of financial asset used as a means of short-term financing as well as for the-inter local transfer of funds. With the advent of the British, under the administration of East India Company, the business of the indigenous bankers began to decline. The company reduced its volume of operations by organizing banks of the Western type, which handle much of the Company's financial transactions. The unification of the currency of British India in 1835, introduced the standard of silver rupee, put an end to most of indigenous banking business in India.

The Presidency Banks – The Bank of Bengal (1809), The Bank of Bombay (1840), and The Bank of Madras (1843) proved to be the successful Western type financial institutions in India in the beginning. Before the Presidency Banks there were a number of predecessors in Bengal, starting in 1770 with the Bank of Hindostan –the first joint-stock bank established at Calcutta under European management[18]- and, The Bank of Calcutta (1806). The three Presidency Banks were authorized to issue bank notes within the territory of their presidency. They were the banks of the East India Company and kept cash reserves and handle financial business for the British government of India. They accept deposit from the public and grant short-term credit. Since the Presidency banks by far the largest financial institutions in the territory, each banks resource should be an indicator of the relative financial progress of its territory. The distribution of resources among the three Presidency banks was similar in 1870 and 1913. The Bank of Bengal accounted for about one half of the total and the other two banks for about ¼ th each. The

[18] Saghir A, Ansari, 'Financial Intermediaries and Industrial Development', APH Publication Corporation, NewDelhi

share of Bank of Bengal was considerably above this level in 1880 and the Bank of Bombay in 1890 and 1900. But the share of the Bank of Madras was much smaller in 1880 and 1890.

Another major development in 1850's was the commencement of British banking in India- the Exchange Banks. Four chartered banks were started to function in the decade. They were common for British banks operating abroad. It includes the Chartered Bank of India, Australia and China, the Chartered Bank of Asia (1853), the Chartered Mercantile Bank of India, London, China and Agra and United Services Bank (1857), these banks were concentrated on the financing of the country's imports and exports. Its number increased to 12 at the beginning of the World War-1, most of them were British except four banks which were French, German, Japanese, and Russian.

In 1870 there were two Joint-stock banks. The first purely Indian bank the "Oudh Commercial Bank" was set up in 1881. Its growth accelerated after 1900, under the influence of Swadeshi movement. By 1913 the number of joint stock banks had risen to 41, including 23 class B banks. The Indian joint-stock banks include; Allahabad Bank, Punjab National Bank (1894), Bank of India, Central Bank, Bank of Baroda and the like. The average resources of the 41 joint-stock banks in 1913 was only about Rs.7 million compared to Rs. 160 million for the three Presidency Banks. The largest joint-stock bank- The Allahabad Bank was founded in 1865, alone accounted for about $1/4^{th}$ of the resources of the reporting joint-stock banks in 1913.

The development of thrift institutions in India begins with the savings departments of the three Presidency Banks opened in mid 1840's. It was followed by the District Savings Banks by the Treasury in 1870 and the Post Office Saving System by 1882. In 1860 the deposits of the Presidency Banks was less than Rs. 4 mill. After 10 years it had risen to nearly Rs. 10 mill., with an average deposit of about Rs.300. In 1880, the deposits reached Rs. 22 mill., with 61000 depositors having an average deposit of Rs. 360. A comparison of the six territorial divisions in population with number of offices

and deposits in savings accounts shows large regional differences. Bombay's share was higher than national average in respect of total savings deposits, deposits per account and per office. Bengal was also above the national average in density of offices, accounts, and deposits but less than Bombay. The other regions – Bihar, Orissa and the United Provinces depart sharply from the national average in terms of deposits, number of offices and accounts. Though the number of offices, accounts did not deviate sharply in Madras region from the national average, its deposits was only $2/5^{th}$ of the national average.

Cooperative credit institutions of the European model have been regarded as an important instrument for breaking the stranglehold of local money lenders. Cooperative Credit Societies Act of 1904 and the Cooperative Societies Act of 1912 provided the base for cooperative institutions in India.

Insurance was an early stage of development at the beginning of World War1, and a substantial part of business was done by British Companies. In 1913, the assets of forty-odd Indian Life Insurance Companies were equal to 4% of the resources of all financial institutions, and only 0.3% of national product. The oldest company started its operations in 1818 in Calcutta. In 1870, four years after the passage of the first Insurance Company Act, about a half dozen each of domestic and British life insurance companies were operating in the country. The first successful company was the Oriental Government Securities Life Association in 1874. Moreover, the Post-Office began an insurance fund for its own employees in 1884 and extended it to all government permanent employees in 1898.

In 1860 the Western type financial institutions in India was about a half dozen commercial banks, increased to over a hundred by 1913 including commercial banks savings banks, credit cooperatives and insurance companies. The turn of the 20^{th} century therefore indicate a structural development of the financial system. Its assets during this period increased from $¼^{th}$ of 1% of the country's national product to 10 %.

Thus, we can see the development of the Indian financial system with the emergence of banking system consists of Presidency, Exchange, Indian Joint-stock Banks, the thrift institutions, the Postal Savings System, other savings banks, credit cooperatives and insurance organizations. The modern financial system expanded much more rapidly in the 1880's and particularly from 1901 to 1913. This period also reflect the beginning of a structural change in the direction of a modernization of the country's financial structure.

The development of Western type banking in the 1880's from indigenous bankers and rural money lenders, to the Presidency Banks, the Exchange Banks, Joint-stock banks, thrift institutions, cooperative credit institutions and insurance companies constitute the institutional composition of Indian Financial system in its early stages. A total of about 350 main and branch offices in the 1916 period meant an average density of nearly 9,00,000 people per office, one office for about 70,000 urban inhabitants. About 30% of all Western type banks were located in 10 cities. The three Presidency cities, which accounted for not more than 1% of the population, had about 50 offices in 1916.

Because India lacked a central bank, the three Presidency Banks fulfilled two functions namely; acting as the governments and other banker's bank [possessed $\frac{1}{2}^{th}$ of total deposits from other banks around 1915], suggestions were made to amalgamate them and to develop the merged institutions into a full fledged central bank. But it has not realized because of opposition sometimes by the government, by other banks and by business. The Bill for the merger of the three Presidency Banks into The Imperial Bank of India was introduced in the Indian Legislative Council on March 1920, passed in September 1920 and became effective in January 1921. It was a privately owned joint-stock company. In 1955, the Imperial Bank of India was taken over by the government and renamed as State Bank of India.

Another landmark of the development before independence in the Indian financial system was the formation of the Reserve Bank of India in mid 1930's. Attempts were

made to set up a banking institution with some characteristics of a central bank when Warren Hastings was the Governor of Bengal. As such the "General Bank in Bengal and Bihar" was set up in April 1773, but this bank failed. Then, proposal for the establishment of an exclusive central bank was introduced in the late 19th century. J.M. Keynes produced one such proposal for the Indian Currency Commission before World War 1. In 1926, a central bank was recommended in the report of the Hilton Young Commission and the government proposed the first two bills in 1927 and 1928 for its formation. The third bill was introduced in September 1933 and enacted in March 1934, partly as a result of the experience during the great depression. On April 1, 1935, the bank began operations.

However, on industrial finance point of view, the status of pre-independence financial system can be seen in the following words;

> "Thus the principle features of the pre-independence industrial financing organization are closed circle character of industrial entrepreneurship, a semi-organized and narrow industrial securities market devoid of issuing institutions and the virtual absence of participation by intermediary financial institutions in the long-term financing of industry"[19]

After independence, the government realized the absence of an organized and developed capital market for industrial development of the country. A network of financial institutions was set up to meet the long-term industrial financial requirements of the country. The oldest of these institutions was the Industrial Financial Corporation of India (IFCI) in 1948, followed by SFC's under State Financial Corporations Act 1951. In 1954, National Industries Development Corporation Ltd. was set up for assisting growth of Industries. As a result of these, the share of the banking system in the assets of all financial institutions declined and that of development banks increased. The average

[19] L.C. Gupta; given in S.A. Ansari ibid.

annual growth of assets between 1950 and 1977 ranged in major groups of financial institutions are; 10 ½ for the banking system including RBI and Commercial Banks, 12 ½ % for the Post Office savings system, 13 ½ % for the insurance and pension organizations, 16% for the cooperative banks and 18% for development banks. The importance of indigenous financial organizations declined sharply when compared to modern financial institutions. The policy of the government of India was to develop the country as a centrally planned, socialist economy. Thus, after independence the shares of the RBI were acquired by the government, the Imperial Bank of India was taken over by the government and renamed as the SBI in 1955, all life insurance companies were nationalized and merged into LIC of India in 1956, started development banks (1950-60); mostly on public sector, the UTI was set up in 1964, the 14 largest Indian private commercial banks were nationalized in 1969, and all property insurance companies were nationalized by the government in 1974, [the post office saving system was part of the government since its organization] the PF for government employees are in the public sector and those for other employees are regulated by the government, the cooperative banking system were largely brought under public control.

By 1970's there were hardly any modern financial institution left in private hands; only sizable foreign banks operated in a few cities are controlled in their expansion, a limited number of medium-small commercial banks, a few investment-holding companies and one development bank ICICI were controlled by the government.

The Development of Stock Market in India

The origin of stock market goes back to the time when ownership or creditorship securities were introduced and made transferable in the early 18th century. Dealers in securities congregated in open maidan under some tree for its transaction. The securities of The East India Company were mainly traded at the close of the 18th century. Corporate securities of banks, cotton presses and business ventures like Bengal Bonded Warehouse, Docking Company and Steam Tug Company were traded in 1830's. There were only half

dozen brokers during this period and dealings were not regulated by any code of rules, no hours of business were prescribed and no committee supervised the interest of the participants. The modern joint-stock companies were commenced with the enactment of Companies Act in 1850. The development of infrastructure facilities led to the development of internal and external trade. Stock brokers emerged as a numerous community. The brokerage business become attractive and the number of brokers increased to 60 in 1860 from 6 in 1850. Prem Chand Roy Chand was the leader and the legendary broker who could read, write and speak in English, has become the 'Napoleon of Finance' because of his excellent financial strategy.

The American Civil War [1860-61] brought out a substantial increase in demand for Indian cotton, amassed vast opportunities to cotton trades, started numerous companies for every imaginable purpose. This lead to the share mania of 1860-65, share prices registered a steep and steady rise and it was said that –

"man and woman, master and servant, employer and employee, banker and merchant, trader and artisan, rich and poor, of all races and creeds, officials in high position included , were deeply busy from day to day in the art of commuting bits of paper, variously called 'allotments', 'scrips' and 'shares' into gold and silver".

The frenzy that seized the people collapsed when the American Civil War came to an end on 1865, popularly known as the 'Black Friday'. The share mania of 1861-65 helped to make Mumbai the chief centre of the money and capital markets and the financial capital of India.

In between 1868 and 1875 the share brokers organized an informal association. In 1877 they formed the Native Stock and Share Broker's Association. During the share mania the share brokers were a wealthy, privileged and respectable class, lost after its collapse. They had to shift from place to place till in 1874, settled in a place now called the Dalal Street where they could conveniently assemble and transact business in securities, later known as the Bombay Stock Exchange. Followed by this Ahmadabad

Share and Stock brokers association [1894] and Calcutta Stock Exchange Association [June 1908] were formed. In 2005 there are 22 stock exchanges, 9129 brokers (cash segment), 3733 Corporate Brokers (cash segment), and 13684 Sub-brokers. The total resources raised by the corporate sector is Rs 112308 Crores[20] (2004-05), the new capital issues of Non-Government Public Limited Companies is Rs 13079 Crores from 54 issues (2004-05) in the securities market. The average annual index of BSE Sensex is 5740.52 and market capitalization (BSE) is Rs 1698428 Crores in 2004-05. Total shares traded in all the exchanges are 1270535 lakh, share delivered is 392817 lakh and the value of shares delivered is Rs 417502 Crores in 2004-05[21]. Number of listed companies in Bombay Stock Exchange and National Stock Exchange are 5687.

Recent Developments in the Indian Financial System

The process of financial development in independent India hinged effectively on the development of commercial banking, during the five year plan period. Banks have played a dominating role in financing of emerging trade and industrial activities during the 'fifties' and 'sixties'. Since 1969, by the nationalization of 14 major scheduled commercial banks, the banking system has formed the core of the Indian financial system. Driven by the public sector initiative and policy activism, commercial banks have played a dominant role as the main source of financing for the corporate sector, channalising household savings to the public sector, and providing wide range of financial services to both public and private sectors.

After the second wave of nationalization of 6 commercial banks in 1980, the number of scheduled commercial banks has quadrupled and the number of bank branches has increased eight-fold[22]. Aggregate deposits of scheduled commercial banks have increased at a compound annual average growth rate of 17.8% during 1969-1999, while bank credit expanded at a rate of 16.3% per annum. Bank's investment in government

[20] Including Equity issues and debt issues.
[21] SEBI, 'Hand Book of Statistics on the Indian Securities Market 2005', January 2006.
[22] Report on Currency and Finance 1999-2000', RBI, pp. III.1

and other approved securities recorded a growth of 18.8% per annum. The total checque clearance – an indicator of its payment system activities – has gone up by 2175 times during this period (1969-1999).

Apart from banking institutions, the financial system today is varied with a well-diversified 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)[23]. AIFIs comprise all India Development Banks [IFCI, ICICI, IDBI, SIDBI, and IIBI], specialized institutions [EXIM banks, IVCF, ICICI Venture, TFCI and IDFC], investment institutions [UTI, LIC, and GIC] and refinance institutions [NABARD, and NHB]. The setting up of specialized Financial Institutions and refinance institutions and the onset of financial reforms in the 1990's provided depth to the financial intermediation outside the banking sector.

After liberalization, a number of existing financial institutions have diversified their activities such as, investment banking and infrastructure financing providing guarantees for domestic and offshore lending for infrastructure projects. Moreover, various NBFCs have provided varied services that include equipment leasing, hire purchase, loans, investments, mutual benefit chit fund activities, and recently housing finance.

During 1970-71 to 1999-2000, sanctions and disbursements of all financial institutions including SFCs and SIDCs have expanded at a rate of 24.1% per annum and 23.8% per annum respectively. Deposits of NBFCs recorded 35% growth per annum from the mid 1980s to the mid 1990s. Initially the only mutual fund was UTI. By 1999-2000, there are 34 mutual funds of which 7 were set up by the public sector banks and financial institutions. They mobilized Rs. 22000 crore in 1999-2000, of which 78% was mobilized by the private sector mutual funds.

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[23] ECGC – Export Credit Guarantee Corporation
DICGC – Deposit Insurance and Credit Guarantee Corporation.

There are a number of indicators for the measurement of financial development in the Indian economy. They are; (1) Broad Based Indicators of Financial Development, (2) Liquidity and Credit Based Indicators of Financial Development, and (3) Banking Based Indicators of Financial Development. The Broad Based Indicators of Financial Development include Finance Ratio (FR), Financial Interrelation Ratio (FIR), New Issue Ratio (NIR), and, Intermediation Ratio (IR). The FR – 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 a steady increase since 1970-71 to 1991-92 and reached 0.5 during 1993-94 to 1995-96. The FIR – the ratio between total issues to net domestic capital formation – reflects the relation between the financial structure and real asset structure. The ratio exhibited fluctuations and averaged around 2.4 since 1990-91. The NIR – the ratio of primary issues to net domestic capital formation – declined since 1991-92 to 1994-95. The IR – the ratio between the financial instruments issued by financial institutions and the financial instruments issued by non-financial units – increased in 1994-95 and declined thereafter.

In addition to these broad based indicators, liquidity and credit based indicators of financial development are regarded as important proxies for measuring the extent of financial development. The important measures are aggregate deposit/GDP ratio and M_3/GDP ratio. The aggregate deposit/GDP ratio increased steadily from 16.4 % in 1970-71 to 1974-75 periods to 43.8% in 1995-96 to 1999-2000 periods. The M_3/GDP ratio increased from 25.95 to 53.8% during the same period.

The banking based indicators shows that, the number of scheduled commercial banks has gone up moderately, the number of bank offices in India expanded nearly eight-fold from 8262 in June 1969 to 67,339 in March 2000. The percapita availability of bank offices improved from 64,000 to 15,000 and further to 12000. The percapita credit over the period expanded from Rs.68 to Rs.4705. Financial indicators relating to non-banking financial sector shows that as a percentage of GDP, disbursements by financial

institutions including all India Development Banks, Specialized institutions, Investment institutions and State-level institutions rose from as low as 0.5% in the first half of 1970's to 1.4% in the first half of 1980's and 2.9% in the first half of the 1990's, and stood at 3.3% in the second half of 1990's.

Resources mobilized by mutual funds grew at a steady rate until 1992-93. As a percentage of GDP it increased from 0.045 of GDP [at current market prices] during the period 1970-71 to 1974-75 increased to 1.59% during 1990-91 to 1992-93. Total resources mobilized as proportion of GDP declined to 1.12% by 1994-95. The ratio stood at 1.13 % during 1999-2000. The NBFC's have emerged as an important part of the Indian financial system. The regulated deposits of NCFCs increased from an average of 0.12% of GDP during 1970-71 to 1974-75. It rose to 0.45% in 1990-91 to 1992-93 period. It was 3.90 % during 1996-97, declined to 0.87% in 1999-2000.

Over the years, the stock market in India has become strong. The number of stock exchanges increased from 8 in 1971 to 23 at the end of March 2000. The number of listed companies moved up from 1599 to 9871 over the same period. The market capitalization at BSE as a percentage of GDP at current market prices improved from 28% in the early 1990's to 47% in 2000. India ranked 21st in the world in terms of market capitalization, 19th in terms of total value traded and 2nd in terms of number of listed companies.

Over the years, the Indian capital market has experienced a significant structural transformation and now it compares with the developed markets in the world. The regulatory and supervisory structure has been modified and has been vested with the Securities and Exchange Board of India (SEBI). The reforms taken place in the capital market after the liberalization can be studied in detail in the coming chapter.

CHAPTER – 3

THE CAPITAL MARKET REFORMS IN INDIA

- Capital Market Reforms at a Glance 1980 – 2005

Chapter – 3

The Capital Market Reforms in India[1]

Since independence, a number of steps have been taken by the Government of India to ensure the organized growth of capital market. The Capital Issues (control) Act 1948, The Companies Act 1956 and, The Securities Contracts (Regulation) Act 1956 are prominent among them. The Capital Issues (control) act 1948 was initiated to prevent, regulate and control investment by companies to protect the interests of the investors by examining the terms of capital issues, capital reorganization plans including mergers and amalgamations and foreign investment. The Companies Act 1956 envisaged an integrated pattern of relationship between the various components of corporate business. The main object of the Securities Contracts (Regulation) Act 1956 was to have a strong and healthy investment market and ensure investor confidence. The Monopolies and Restrictive Trade Practices Act (MRTP) which came into existence with effect from June 1, 1970 was to prevent concentration of economic power in private hands and to control restrictive trade practices. Moreover, a number of specialized financial and development corporations were established to finance large scale industrial development. Finally, the Reserve Bank of India and the government have been taken steps for the integration of organized and unorganized sectors of the capital market, development of rural credit, financial inclusion and the diversification of the functions of the commercial banks.

In this section we summarize briefly the capital market reforms initiated since 1980s.

Capital Market Reforms at a Glance

1980 – 2005

- In 1981-82, the ceiling on payment of dividend on preference shares and interest on debentures were raised.
- In April 1982, different rates of interest for CDs and NCDs and premium on the face value of debentures were permitted.

[1] This part is largely taken from various volumes of; (1) The Report on Currency and Finance, RBI, (2) Economic Survey, Ministry of Finance, Government of India.

- In 82-83, Non-Resident Indians were allowed to invest with repatriation rights up to 40% of the capital issue.
- The exemption limit of income tax and wealth tax for investments in government securities, UTI, bank deposits and shares of Companies raised.
- 1982, it has been designated as the "Productivity Year".
- In 1984-85, interest on debentures and dividend on shares up to Rs. 1000 has been allowed without deduction of income tax to encourage small investors.
- On May 17, 1984, Patel Committee was appointed to review the smooth working and the expansion of stock exchanges in India.
- On September 15, 1984, Government issued revised guidelines for the issue of debentures by public limited companies
- In 1985-86, two stock option schemes were introduced such as; (1) Employees Stock Option Scheme (ESOs) and (2) the preferential allotment of 5% of any further issue for their employees.
- In 1985-86 Government announced liberalization measures to certain specific industries such as;

  (1) liberal export-import policy for three years,

  (2) exemption of 18 additional categories of industries from Sec. 21 and 22 of MRTP Act for a period of 5 years,

  (3) new textile policy for harmonious growth of all sectors of the textile industry, (4) de-licensing of additional 82 bulk drugs, and,

  (5) broad banning of certain products of the engineering industry into 14 categories for the purpose of licensing, affording flexibility to product-mix.
- In January 1987, companies are allowed to offer issues to financial institutions or on rights basis to existing shareholders based on certain conditions.
- In 1987-88 Government proposed to set up a separate board for the regulation and orderly functioning of stock exchanges and security industry.
- In 1988, the ceiling on inter-corporate investments and loans were raised from 10% to 25% and 10% to 20%.
- In October 1988, foreign investment norms were relaxed to allow foreign equity participation in selective basis subject to a ceiling of Rs. 10 Crores.

- Foreign companies were allowed to apply for the grant of industrial licenses for establishing new undertakings in India.
- In this period, three more financial instruments were introduced;
  (1) India Growth Fund launched by UTI in USA and other countries in August 1988,
  (2) SBI issued 7 year US dollar denominated Non-Repatriable NRI bonds in November 1988, and,
  (3) CCI approved Partly Convertible Debenture has launched in January 1989.
- In June 1989, government granted recognition to 3 new stock exchanges (Total 18) and it permitted multiple memberships of stock exchanges.
- Instead of trading in lots of 100 share of Rs. 10 each, the government revert the policy to trade in lots of 50 shares of Rs. 10 each and 5 shares of Rs. 100 each.
- The listing guidelines were revised w.e.f. February 13, 1989. The minimum capital limit and minimum offer to public for subscription raised.
- SEBI introduced National Equity Index with 1983-84 as the base year and include 100 scrips.
- To ensure participation of small investors, Equity Linked Saving Scheme by UTI, and loans to employees for purchasing shares of their own companies were announced.
- In 1989, SEBI submitted a draft framework for comprehensive legislation dealing with capital market.
- The government approved the creation of Over the Counter Exchange of India (OCTEI) under the Securities Regulation Act, in August 1989.
- In January 1990, the government reduced the minimum period between two bonus issues from 24 months to 12 months.
- In April 1990, the government issued a set of guidelines for share transactions by FIs or debentures more transparent.
- In July 1990, the government released guidelines to public for valuation of shares and fixation of premia.
- The SEBI has been entrusted for the supervision of MFs, transactions or sales of shares by FIs, and takeover of companies through acquisition of shares on the stock exchanges.

- All mutual funds except those established by a statute would require the approval of CCI and SEBI. Existing mutual funds are to get registered with SEBI.
- The accounting and disclosure requirements of mutual funds would be prescribed by SEBI.

Capital Market Reforms in the Post 1990 Period

- During 1990-91, the government set up 4 committees to look into the problems of capital market. They are; (1) Pherwani Committee (Feb 1991), (2) Ajit Dey Committee (Feb 1991), (3) Dave Committee (Feb 1991) and (4) Pherwani Committee (April 1991).
- A committee was appointed in August 1991 under the chairmanship of Shri. M. Narasimham, to examine all aspects of the structures, organization, function and procedures of the financial system.
- OTCEI accorded recognition by the Ministry of Finance as a stock exchange under Securities Contracts (Regulation) Act, 1956.
- A number of reform proposals relating to financial sector, SEBI, stock exchanges, mutual funds, public sector and foreign investments, were announced in the Union Budget for 1991-92.
- A Presidential Ordinance promulgated on January 31, 1992, accorded statutory status as on autonomous body to SEBI- to protect investor's interest in securities, to promote the development of the capital market and to regulate the working of the market including the stock exchanges.
- Parliament passed SEBI Bill on April 4, 1992.
- SEBI has been given substantial powers under the SEBI Act 1992 to regulate the activities of various players in the capital market and give direction to the developments in the capital market.
- Capital Issues (Control) Act, 1947 repealed on May 29, 1992. Office of the Controller of Capital Issues abolished and share pricing decontrolled.
- In 1992-93, reputed foreign investors (FIIs) were allowed to invest in capital market such as pension funds, mutual funds, investment trusts, asset management companies, nominee companies, and incorporated portfolio managers.
- FIIs started investing in India in January 1993.

- Investment norms for NRIs liberalized, so that NRIs and overseas corporate bodies can buy shares and debentures with prior permission of RBI.
- Indian Companies permitted to access international capital markets through Euro-equity shares.
- SEBI's autonomy reinforced and allowed it to issue regulations and file suits without prior approval of the Central Government.
- SEBI issued guidelines for development financial institutions in September 1992.
- Regulations pertaining to stock brokers and sub brokers In October 12, and in November 1992, it has given instructions relating to "insider trading".
- Over-the-Counter Exchange of India (OTCEI) and the National Stock Exchange of India (NSE) with nation wide stock trading and electronic display, clearing and settlement facilities, commenced operations.
- Private mutual funds permitted and several have already been set up. All mutual funds allowed to apply for firm allotment in public issues.
- Companies with good track record permitted to issue Convertible Debentures (CD) or equity to investors abroad (One company entered the international capital market during May 1992)
- In OTCEI, the first public issue was made in July 1992. Trading commenced in September 1992.
- In April 1993, RBI formed Securities Trading Corporation of India (STCI) to promote and develop secondary market in government securities and public sector bonds.
- In April 1993Rangarajan Committee submitted its report on Disinvestment of Shares in Public Sector Enterprises.
- In March 1994, Government of India invited tenders for selling equity shares of 7 Central Public Sector Enterprises (CPSEs).
- UTI brought under the regulatory jurisdiction of SEBI.
- In May 1994, RBI, given complete flexibility to the banks for the investment and underwriting of shares and debentures of corporate bodies.
- SEBI has prescribed improved disclosure standards, introduction of prudential norms and simplification of issue procedures.

- Companies required to disclose all material facts and specific risk factors associated with their projects while making public issues.
- Stock exchanges advised to amend the listing agreement to show the variations between financial projections and projected utilization of funds made in the offer documents and actuals.
- SEBI introduced a code of advertisement for public issues for ensuring fair and truthful disclosures.
- In January 1995, Securities Contracts (Regulation) Act 1956 amended to allow trading of options in securities and to establish additional trading floors.
- In March 1995, the GoI amended SEBI Act, 1992 to give more powers to SEBI.
- In July 1995, an Expert Committee appointed by Shri Y.H. Malegam as the chairman, to review the existing disclosure requirements and issue procedures.
- In September 1995, Depositories Ordinance was promulgated which empowers SEBI to make regulations.
- In October 1995, SEBI issued guidelines for a 'carry forward' trading in a revised form.
- SEBI to vet the draft prospectus within 21 days and mandatory period between the date of approval of the prospectus by the Registrar of Companies and the opening of the issue to be reduced to 14 days.
- SEBI reconstituted governing boards of the stock exchange, introduced capital adequacy norms for brokers and made rules for making the client/broker relationship more transparent, in particular, segregating client and broker accounts.
- In 1996-97, Housing Finance Companies considered to be registered for issue purposes provided they were eligible for refinance from the National Housing Bank.
- Stock Exchanges asked to modify the listing agreement to provide for payment of interest by companies to investors from the 30^{th} day after the closure of a public issue.
- Uniform good-bad delivery norms and procedure for time bound resolution of bad deliveries through Bad Delivery Cells prescribed.
- All exchanges are directed to institute the buy-in or auction procedure being followed by the National Stock Exchange.

- The Stock Exchange, Mumbai and other exchanges with screen based trading systems allowed to expand their trading terminals.
- Several restrictions OTCEI removed, and listing criteria for OTCEI, relaxed.
- In 1997-98, the disclosure standards have been strengthened with corporate entities being required to publish their unaudited financial results on a quarterly basis.
- On November 13, 1997, SEBI allowed institutional investors, stock brokers, stock exchanges etc. to make use of 'warehousing' (execution of firm client order with one contract note) of trades, subject to certain conditions.
- On December 5, 1997, SEBI (Merchant Bankers) Regulations 1992 directed non-banking financial companies (NBFCs) operating as merchant bankers to segregate their Capital market related activities from the NBFC activities.
- On March 6, 1998, SEBI signed a Memorandum of Understanding (MoU) with the United States Securities and Exchange Commission regarding co-operation, consultation, and provision of technical assistance.
- On October 31, 1998, the Companies (Amendment) Ordinance promulgated empowering companies to purchase their own shares or other specified securities (referred to as "buy back").
- In June 1998, as per provisions of the Companies (Amendment) Ordinance, companies are allowed to issue sweat equity shares subject to authorization by a resolution passed by a general meeting
- On July 6, 1998, SEBI prescribed Additional Volatility Measures (AVM) to curb volatility in share price. It includes; (1) The daily price band was reduced from 10% to 8%. (2) Weekly price band of 25% was removed and a graded margin was prescribed.
- From 15, 1998, SEBI introduced compulsory trading of shares in dematerialized form in specified scrips by institutional investors (FIIs, MFs, Banks, and FIs).
- More over SEBI took the following the steps;

  (1) Rolling settlement on T+5 basis introduced in the dematerialized segment and delivery of dematerialized shares permitted in the physical segment.

  (2) The list for compulsory demat trading expanded to 103 and to increase it to 304 by Feb 15, 1999.

(3) From February 15, 1999, delivery of shares in dematerialized form has been made compulsory for all investors in 31 scrips.

- The Central Depository Services (India) (CDL), the second depository in the country has been granted certificate of registration.
- In December 1999, Insurance Regulatory and Development Authority (IRDA) Bill passed by the Parliament, open up the insurance sector to the private providers, allowed foreign equity in domestic insurance companies subject to a maximum of 26% of the total paid up capital.
- In December 1999, the Securities Laws (Amendment) Bill, 1999 proposing expanded definition of securities including derivatives has been passed by the Parliament.
- Rolling settlement was introduced by SEBI for the first time in 1998 by making it optional for demat scrips.
- On January 15, 1998, trading in demat shares commenced on the basis of a T+5 rolling settlement cycle.
- SEBI has selected 10 scrips for rolling settlement on a T+5 basis with effect from January 10, 2000.
- SEBI has proposed internet trading in a limited way under Order Routing System (ORS) through registered stock brokers on behalf of clients for execution of trades on stock exchanges.
- In July 1999, as per the recommendations of Shri. K.B. Chandrasekhar on Venture Capital, the guidelines for overseas Foreign Currency Investment in India dated September 20, 1995 repealed.
- Mutual Funds, banks, insurance companies should be permitted to invest in SEBI-registered Venture Capital Funds.
- During the period 2000-01, SEBI guidelines (Disclosure and Investor Protection) revised in terms of the offering of post issue capital to public, book-building, the promoter's lock-in provision, and time limit for allotment.
- The Companies (Amendment) Act 2000 passed.
- On June 9, 2000, derivatives trading commenced at the NSE based on Sensex and on June 12, it started based on S&P CNX Nifty.

- ❖ It has been decided to setup an Investor Grievance Redressal Cell (IGRC) in the Department of Company Affairs (DCA) which includes RBI, SEBI, and DCA.
- ❖ On March 2001 the Union Finance Minister proposed the following steps;

  (1) Computerization of stock exchanges involving segregation of ownership, management and trading membership from each other.

  (2) Extension of rolling settlement to 200 'A' category stocks in Modified Carry Forward Scheme (MCFS),

  (3) Automated Lending and Borrowing Mechanism (ALBM),

  (4) Borrowing and Lending Securities Scheme (BLESS) by July 2, 2001 and,

  (5)Legislative changes aimed at further strengthening the provisions in the SEBI Act, 1992 to ensure investor protection.
- ❖ With effect from July 2, 2001, SEBI extended rolling settlement to all scrips included in the ALBM/BLESS/ MCFS.
- ❖ From December 31, 2001, all stocks are under rolling settlement in all stock exchanges. This constitutes one of the most far-reaching reforms in the history of India's capital market.
- ❖ The freedom to issue debt security without listing equity has been granted to all companies, subject to a credit rating of issues.
- ❖ SEBI's Disclosure and Investor Protection (DIP) Guidelines 2000 were amended; include Foreign Venture Capital Investors (FVCIs) and SIDCs to participate in public issues through the book building route.
- ❖ In June 2001, RBI issues guidelines to banks related to prudential limits on investments, due diligence, and internal ratings in respect of unrated issues.
- ❖ In the secondary market, all scrips have been brought under the rolling settlement mode, replacing "account period settlement" by "T+5 rolling settlement".
- ❖ In March 2001, the Finance Minister announced to introduce rolling settlement in 200 scrips.
- ❖ On July 2, 2001, SEBI announced a list of 251 scrips for compulsory rolling settlement on all exchanges.
- ❖ On December 31, 2001, rolling settlement was extended to all scrips on all exchanges.

- In December 2001, SEBI announced that from April 1, 2002, the settlement cycle for all securities would be shortened to T+3 basis. With this Indian securities market would be complying with the standard of the Bank for International Settlements and the International Organization of Securities Commissions.
- Restrictions on short sales were withdrawn w.e.f. July2, 2001.
- Stock exchanges were allowed to use the Settlement Guarantee Funds (SGFs) for meeting shortfalls caused by non-fulfillment/partial fulfillment of obligations of members, before declaring them defaulters.
- Government amended Securities Contracts (Regulation) Rules 1957, to standardize listing requirements on stock exchanges.
- On October 1, 2001, the central government notified the establishment of the Investor Education and Protection Fund (IEPF).
- A committee under the chairmanship of Dr. N.L. Mithra submitted its study report on Investor Protection to SEBI and Government.
- In July 2001, trading in stock options and in November 2001, futures trading on individual stocks were commenced.
- In November 2002, SEBI announced modified rules governing the choice of stocks on derivatives trading.
- On 31st January 2002, the list of firms for derivatives trading rose to 41.
- In July 2002, SEBI set up Electronic Data Information Filling and Retrieval (EDIFAR). This mechanism offers electronically disclosures to SEBI, and to individuals across the country over the internet with a near zero delay.
- In 2001, the Clearing Corporation of India (CCIL) established to perform clearing functions for the debt market like the National Securities Clearing Corporation (NSCC) (1996) in the equity market.
- In March 2002, guidelines were issued to enable mutual funds to invest in rated securities in countries with fully convertible currencies. This marks an important milestone, through which mutual funds will be able to trade internationally.
- On 28th October 2002, an ordinance was promulgated which repealed the UTI Act, and created two entities, UTI-1 and UTI-2.

- On 28th October 2002, an ordinance was promulgated which seeks to strengthen SEBI and better empower it.
- On April 1, 2003, government issued a notification rescinding all previous notifications which prohibited futures trading in a large number of commodities. These have set the stage for commodity futures trading in the country.
- Based on the recommendations of the Forward Market Commission (FMC), granted recognition to –

  National Multi Commodity Exchange, Ahmedabad (NMCE),

  Multi Commodity Exchange, Mumbai (MCX),

  National Commodity and Derivative Exchange (NCDEX) Mumbai,

  – as nation-wide multi-commodity exchanges.
- MCX commenced operations in November 2003, NCDEX in December 2003. NCDEX has set up 505 terminals in 138 centers, MCX has set up 763 terminals in 132 centers and NMCE has set up 346 terminals in 90 centers across the country.
- FMC initiated trading in gold and silver futures in 2003-04. Turnover has grown dramatically from 223 kg of gold in October 2003 to 21413 kg of gold in March 2004. Similarly, silver turnover grew from 3.6 metric tones in October 2003 to 395 metric tones in March 2004.
- Demat settlement for commodities; the first commodity electronic dematerialization, transfer and delivery were undertaken for one kilogram of gold on February 24, 2003. This was the first electronic transfer of commodities in the country.
- On the application of sectoral FDI limits upon FII investments, a committee chaired by the Chief Economic Advisor with the representatives from the Department of Economic Affairs and Department of Industrial Policy and Promotion was formed. The committee submitted its report in June 2004.

  Its recommendations include;

  -Simplification of registration and renewal of FII status.

  -FII investment ceilings should be reckoned over and above FDI sectoral caps.

  -A provision for raising FII investment beyond 24% up to the FDI limit in a company should be dispensed with by amending the relevant SEBI – FII regulations.

-In order to provide dispersed investments, the present cap of 10% by an FII in a single company should be retained.

Apart from the above in 4 sectors the composite cap on FDI and FII may be enhanced to; - Telecom – 74%, Defence – 49%, PSU banks – 20%, Insurance – 49%.

The prohibition on FII investment in print media and gambling may continue.

- SMILE Report: - in April 2004, SEBI set up the Securities Market Infrastructure Leveraging Expert (SMILE) committee chaired by Dr. P.J. Nayak.

The major recommendations include;

-Ensure primary issuance process on a T+6 basis.

-Provide differential weightage to applications received earlier.

-Receipt of electronic forms with electronic remittances and use of digital signatures.

-To consider encouraging mutual funds to go through either the depositories model or a distributor model.

-SEBI should review the current procedure of giving the NAV to investors before the funds are actually received by the mutual fund.

Formation of SEBI

The most significant development during this period was the emergence of Securities and Exchange Board of India (SEBI). It was set up by government of India on April 12, 1988 on the recommendation of high powered Committee on Stock Exchange reforms headed by G.S. Patel. It was given a statutory status on April 30, 1992 by promulgation of SEBI ordinance which has since become an Act of parliament. SEBI has been given substantial powers under the SEBI Act 1992 to regulate the activities of various players in the capital market and give direction to the developments in the capital market. Some of the important powers of SEBI are;

(1) regulation of securities market,

(11) registration and regulation of stock brokers, merchant banks ,underwriters, portfolio managers, and such other intermediaries who may be associated with the securities market in any manner whatsoever,

111) prohibition of fraudulent and unfair trade practices relating to securities market,

(IV) prohibition of insider trading in securities market,

(V) regulation of substantial acquisition of shares and takeovers of companies,

(VI) promotion of investors' education and training of securities markets,

(VII) promotion and regulation of self regulatory organization and

(VIII) calling information from, conducting inquires and audit of stock exchanges, intermediaries and self regulatory organizations in the securities market.

After the emergence of SEBI on the Indian Capital market, major reforms in the capital market have been carried out. Capital Issues (Control) Act, 1947 repealed on May 29, 1992. Office of the Controller of Capital Issues abolished and share pricing decontrolled. SEBI became the regulatory authority. The companies can approach capital market after clearance by SEBI. Operational guidelines for investments by Foreign Institutional Investors (FIIs) were issued by the Government of India in September 1992. Foreign Institutional Investors (FIIs) allowed access to Indian capital markets on registration with SEBI. Investment norms for NRIs liberalized, so that NRIs and overseas corporate bodies can buy shares and debentures with prior permission of RBI. Indian Companies permitted to access international capital markets through Euro-equity shares. SEBI's autonomy reinforced and allowed it to issue regulations and file suits without prior approval of the Central Government. SEBI issued guidelines for development financial institutions in September 1992. Regulations pertaining to stock brokers and sub brokers In October 12, and in November 1992, it has given instructions relating to "insider trading". Over-the-Counter Exchange of India (OTCEI) and the National Stock Exchange of India (NSE) with nation wide stock trading and electronic display, clearing and settlement facilities, commenced operations.

Banking Sector Reforms

Before 1991, we had an unprofitable, inefficient and financially unsound banking sector. The profitability of Indian banks was extremely low. The average return on assets in the second half of the 1980's was 0.15%, an extremely low figure by world standards. Capital and reserves averaged about 1.5% of assets compared to 4 – 6% in other Asian countries. Not only were they unprofitable but also provided an abysmal quality of service. There are external and internal causes behind this. The external causes pertaining to the regulatory framework such as pre-emption of bank resources, directed credit, administered interest rates, port-folio quality and lax regulation and supervision.

The pre-emption of bank resources by way of CRR and SLR has steeply increased over the period. In 1960's and 70's CRR was around 5% which increased to its legal upper limit of 15% in early 1991. SLR at the same time grew up from 25% to 38.5%. Thus, more than 50% of the resources of banks were taken away from its commercial activities. Further, the tool of directed credit to certain priority sectors at concessional rate of interest enhanced from 33% in the 60's to 40% in 1991. Interest rates were administered by the government. Bank's portfolio quality was poor due to the weak accounting rules, high quantitative targets, political influence and inadequate legal support. Finally, lax regulation and supervision because of vague accounting norms and financial discipline was responsible. The internal factors are low organizational efficiency, lack of competition, and political interference. Organizational inefficiency was due to rampant over manning, bad industrial relations, and inadequate incentives for managerial competence. The public sector banks had no incentive to compete. Lending to large borrowers was subject to consortium arrangements in which banks shared in inflexible proportions. Moreover, bank credit that was subject to political manipulation, reduced the ability to manage portfolio risks.

Certain important banking sector regulations are mentioned below.

A new committee on financial system under the chairmanship of M. Narasimham was appointed in August 1991. In April 1992, RBI issued guidelines for income recognition, asset classification and provisioning and adopted the Basle Accord capital adequacy standards. These norms began to be applied in the accounts of the year ending 31st March 1993. Banks were expected to reach a 4% capital to risk-assets ratio by 31st March 1993 and 8% by 31st March 1996. At the end of March 1995, 13 banks had achieved a capital adequacy ratio of at least 8%, another 11 between 4 and 8%. On pre-emption of bank resources, the government reduced SLR. By March 1995, the incremental SLR was 25% and average SLR was down to 29.5% compared to 38.5% in 1991. In 1991, the CRR was 15% with an incremental 10% on top. By mid 1993, it had reduced to 14% and the increment abolished. It further rose to 15% in 1994. On interest rates, coupon rates on government bonds were increased from 9.5% in 1984/85 to 11.5% in 1989/90. Rates in the call money market were freed in 1989. In April 1992, a 364 day Treasury Bill was replaced the 182 day Bill, sold by auction and was not rediscountable with RBI. In January 1993, a 91 day Treasury Bill sold by auction, was introduced. In April 1992, the commercial bank deposit and loan rates structure has been made much freer and simpler. In 1974, the directed credit to priority sectors was 33%, increased to 40% in 1985; of which the share of agriculture was 18%. By March 1995, credit to agriculture and directed credit as a whole fell to 13% and 33% of bank credit. In January 1993, the RBI announced guidelines for the entry of new banks.

CHAPTER – 4

CORPORATE INVESTMENT PATTERN IN INDIA

- Measurement of Investment in India
- The Growth of Corporate Sector in India
- The Growth of Private Corporate Investment: Evidences
- Conclusion

Chapter – 4

Corporate Investment Pattern in India

Investment may be defined as the sacrifice of current consumption possibilities in the hope of realizing increased consumption possibility in the future. There are different classes of investment like investment in human potential, in intangible assets, in financial assets, in stocks and work in progress, and, in fixed assets. Of the different classes of investment, investment in fixed capital assets are buildings, civil engineering works, and, machinery and vehicles (other than for private use) are considered as investment indispensable for economic growth[1]. Fixed non-residential investment along with such factors as the growth of the labour force and the advancement of technical knowledge has been regarded as an important determinant of a nation's potential rate of economic growth. Such investment raises the amount of productive capital available per person employed, thus augmenting aggregate productive potential. Japan devoted more than 30% of its GNP to gross domestic fixed investment and achieved an average annual rate of increase of 9.3% gross national product during 1950-66. The U.K and the U.S, have used less than 20% of their GNP to gross domestic fixed investment achieved overall growth rate of only 3% and 4% respectively during the same period[2]. Denison's estimate of contribution of fixed investment to growth of total national income in nine Western countries during the period 1950-62 observed that, 'increased input of non-residential structures and equipment' and 'advances of knowledge' are the most important factor inputs[3].

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[1] Philip.J.Lund, 'Investment: The Study of an Economic Aggregate', Oliver & Boyd Edinburgh-Holden Day California, 1971.

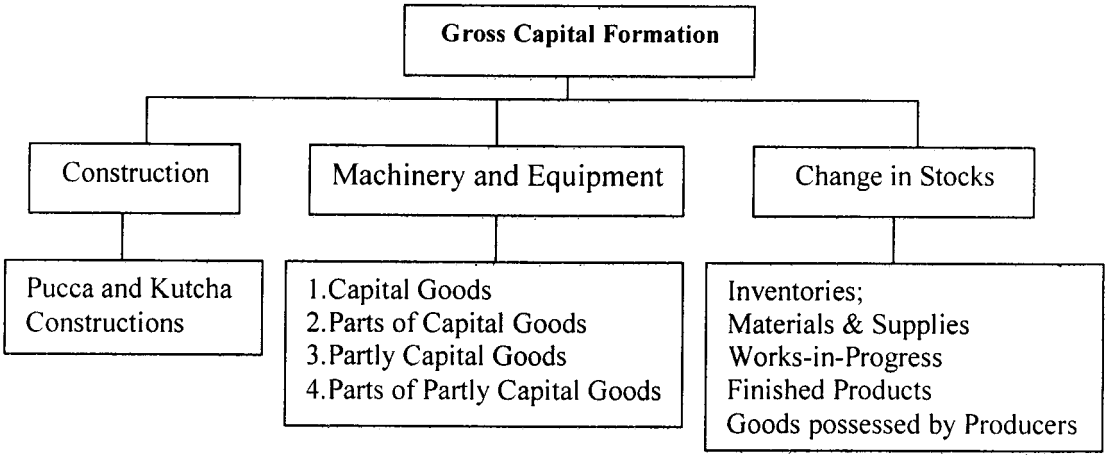
[2] Philip.J.lund

[3] Denison E.F, assisted by Poullier J.P, 1967, 'Why growth rates differ, post war experiences in nine Western Countries', The Brookings Institution, Washington D.C.

Measurement of Investment in India

In India, the measures of investment are Gross Capital Formation (GCF), Net Capital Formation (NCF) and Gross Fixed Capital Formation (GFCF). Gross Capital Formation is gross additions to fixed assets and increases in stocks of commodities during a period of account. It includes, construction, machinery and equipment and change in stocks. Total construction activity comprises pucca and kutcha constructions. The value of pucca construction is based on the estimated availability of the commodities used in construction evaluated at retail prices paid by the builders at construction site. The value of kutcha labour-intensive construction using the estimated expenditure figure is done separately for public, private corporate and household sectors. The second component of GCF including machinery and equipment domestically produced, imported, exported and re-exported are classified into (1) capital goods (2) parts of capital goods (3) partly capital goods and (4) parts of partly capital goods. The total availability of the items under (1) is taken for capital formation. In the case of item (2), 50% of the value is taken as capital formation (other 50% intermediate consumption), the proportions of the other two items to capital formation are based on the RBI and NSSO's decennial All-India Debt and Investment Survey (AIDIS), Special Tabulation by the RBI for National Accounts Division of Central Statistical Organization. The estimates of change-in-stocks are done only by the industry of use based on inventories held by industries. Change in stocks refers to variations in inventories during the accounting period of materials and supplies, works-in-progress, and finished products and goods in the possession of producers[4]. Net Capital Formation (NCF) is estimated by deducting capital consumption from Gross Capital Formation.

[4] NAS-1950-51 to 2002-03, Fifth Edition, EPWRF, Mumbai, December 2004. pp 50.



Gross Fixed Capital Formation (GFCF): Of the three types of assets – construction, machinery and equipment and change in stocks – assets created under construction, and, machinery and equipment constitute GFCF. Estimates of the value of output from construction, machinery and equipment at current prices are adjusted to obtain the values at constant prices. The CSO has not published GDCF, GFCF and change in stock estimates for all the years from 1950-51 onwards at 1980-81 prices. The report of the Raja Chelliah expert group has provided the series along with investment and income deflators[5]. In the CSO's publication relating to the Back Series of the 1993-94 NAS for the period 1950-51 to 1992-93, all components of GDCF have been presented at constant prices too.

1. The Growth of Corporate Sector in India

In this chapter we mainly focus to answer the issues like; (1) what is the pattern of investment of the private corporate sector in India? (2) is there any remarkable change in the private corporate sector in terms of fixed investment in the pre and post reform periods? (3) does the asset structure of the private corporate sector vary over the period?

N.N. Sarkar[6] has observed the growth of corporate sector in India in relation to major periods – the period preceding industrialization (1850-1900), the period

[5] Table of 9 of EPWRF 1998, pp 31.

[6] N.N Sarkar, 'Bank Nationalisation and Corporate Financing in India', Discovery Publishing House, Delhi, 1988

symbolizing the first phase of industrialization (1900-1920), the inter-war period representing the second phase of industrialization and the policy of discriminating protection (1920-1939), and the period of India's 'second revolution' (1940-61). Though the impact of the pressure of industrialization started during 1900-20, the effects of changed industrial policy of the government were reflected during the inter-war period 1920-39. Number of companies and their paid-up capital had grown up during this period. The 20 year period following 1939-40 had been most remarkable from the point of view of the growth of the corporate sector.

Table 4.11 Growth of the Corporate Sector during 1882-1947

[Rs in Crs]

Year	No of Cos.at work	Paid-Up-Capital
1882	505	15.7
1900	1390	34.7
1914	2744	76.6
1920	3665	123.2
1929	6330	279.3
1940	11392	303.7
1946	17343	424.2
1947	21853	478.7

***Source**: Dr. P.K.Nigam, 'The Contemporary Corporate Sector (1), Commerce Weekly, 12.8.61, pp.314, given in N.N Sarkar*

The structure and size of the corporate sector after independence have been shaped by the industrial policy resolutions by the state. The characteristic of the policy was to properly regulate the private sector and allowed to play a moderate role and demarcated the field of operation. As a result there has been a tremendous growth in the public sector investment during the 2nd and 3rd five year plans and also the three annual plans. The growth of private sector lags behind the public sector during these periods.

Table 4.12(a) Growth of Government and Non-Government Cos: 1951- 69

[Rs. in Crs]

Period	Govt.Companies		Non-Govt Companies	
	No	PUC	No	PUC
At the beginning of 1st Plan	36	26.3	28496	749.1
At the end of 1st Plan (1951-52 to 1955-56)	61	66	29813	958.2
At the end of 2nd Plan (1956-57 to 1960-61)	142	547	26007	1271.5
At the end of 3rd Plan (1961-62 to 1965-66)	212	1237.9	26466	1807
At the end of 3 Annual Plans (1966-67 to 1968-69)	259	1714	27702	1921.8

***Source**: Company News and Notes, May 1971. p.12*

Consistent with the state policy of gradual socialization of the means of production and ultimate control of the economy, the public sector units expanded greatly both in number and investment. From 36 at the beginning of the first plan, the number of public sector enterprises rose to 712 by 1977-78. The paid-up capital surged from 26 Crs to Rs. 7315 Crs which was about 3 times the paid-up capital of 47274 private sector companies amounting Rs. 2835 Crs built up over a period of about 130 years of corporate history in this country[7].

The growth of the corporate sector since 1980-81 can be summarized in the following table. The number of companies enhanced from 62714 in 1980-81 to 641512 in 2003-04; increased by 10 times. Paid-up capital at the same time advanced from Rs 16357 Crores to Rs 472069 Crores; improved by 29 times.

[7] N.N. Sarkar, Op.Cit

Table 4.12(b) Growth of Corporate Sector in India 1980-2004 [Rs in Crores]

Year	No	PUC
1980-81	62714	16356.7
1983-84	94264	26500.4
1985-86	107369	30086.4
1987-88	155549	46446.9
1988-89	177238	52286.9
1989-90	198553	59722.1
1990-91	224452	68110.6
1991-92	250361	84642.3
1992-93	275664	94055.2
1993-94	305625	113821.9
1994-95	353292	136018.7
1995-96	409142	164088.4
1996-97	455327	184542.8
1997-98	484520	212708.6
1998-99	511990	263358.3
1999-00	542432	293879.1
2000-01	569099	341229.4
2001-02	589246	405753.2
2002-03	612155	457058.7
2003-04	641512	472068.7

***Source**: Ministry of Company Affairs, given in Statistical Abstract India 2004, CSO, New Delhi*

The land marks augmenting the growth of private corporate sector in the later 1960s are the abolition of the Managing Agency System in 1970, the announcement of New Industrial Policy Statement in 1977 and later in 1980, the nationalization of banks, re-orientation of credit policy, the changes in Industrial Licensing Policy, and the liberalization of the control of capital issues. The increasing roles of term-lending financial institutions have further accelerated the tempo of corporate development. Measures of aggregate capital formation comprising GCF, GFCF and NCF for the public, private corporate and household sectors have been depicted in Table 4.13(a). GCF and GFCF has increased by about five times and NCF around six times during the pre-reform period (1980-91). These variables have shown approximately four and five fold increase respectively in the post-reform period (1992-04). When we consider the periodical aggregates, it increased by around six times in the reform period [Table 4.13(b)]. As a percentage of GDP it has not changed remarkably. The exponential rate of growth of capital formation indicated that it has declined in the post-reform period.

Table 4.13(a) Aggregate Capital Formation: At Current Prices [Rs in Crs]

year	GCF	NCF	GFCF
1980-81 Pre-reform	26868 *18.7*	14580 *10.1*	26618 *18.5*
1981-82	37783 *22.4*	23075 *13.7*	31931 *18.9*
1982-83	40786 *21.7*	23611 *12.5*	38238 *20.3*
1983-84	43196 *19.7*	23631 *10.8*	41369 *18.8*
1984-85	53026 *21.6*	30539 *12.4*	48132 *19.6*
1985-86	65803 *23.7*	39086 *14.1*	57311 *20.6*
1986-87	72203 *23.2*	41814 *13.4*	65539 *21.1*
1987-88	78357 *22.1*	44384 *12.5*	76009 *21.5*
1988-89	99876 *23.7*	60183 *14.3*	91261 *21.6*
1989-90	115035 *23.7*	68475 *14.1*	108879 *22.4*
1990-91	136854 *24.1*	83590 *14.7*	130401 *22.9*
1991-92	143260 *21.9*	78858 *12.1*	143861 *22.0*
1992-93 Post-reform	178019 *23.8*	103507 *13.8*	167973 *22.4*
1993-94	182619 *21.3*	99266 *11.6*	184293 *21.4*
1994-95	236784 *23.4*	138790 *13.7*	222235 *21.9*
1995-96	315179 *26.5*	197253 *16.6*	289409 *24.4*
1996-97	297862 *21.8*	161359 *11.8*	311851 *22.8*
1997-98	343712 *22.6*	191715 *12.6*	330419 *21.7*
1998-99	372209 *21.4*	204143 *11.7*	374335 *21.5*
1999-00	458262 *23.7*	275903 *14.2*	421903 *21.8*
2000-01	472708 *22.6*	274813 *13.2*	459240 *22.0*
2001-02	504012 *22.2*	286333 *12.6*	501381 *22.1*
2002-03	557958 *22.7*	325006 *13.2*	547950 *22.2*
2003-04	635694 *23.0*	382057 *13.8*	627307 *22.7*

Source: *(1) National Accounts Statistics 1950-51 to 2003-04, GoI. (2)Handbook of Statistics on Indian Economy, RBI,2004-05. *Values in italics are as percentage to GDP at market prices*

Table 4.13(b) Capital Formation: Periodical Changes

Period	GCF	NCF	GFCF
Overall	5468065 *22.8*	3171971 *13.2*	5297845 *22.1*
Pre-reform	769787 *22.7*	452968 *13.4*	715688 *21.1*
Post-reform	4698278 *22.8*	2719003 *13.2*	4582157 *22.2*

Table 4.13(c) The Rate of Growth of Capital Formation

Period	GCF	NCF	GFCF
Overall	14.7	14.7	15.1
Pre-reform	16.5	17.2	16.7
Post-reform	12.7	13.1	12.8

The institution-wise GCF, NCF and GFCF can be observed to get the relative role of the public, private corporate and household sectors in capital formation. Aggregate GCF was Rs. 26868 Crore in 1980-81 increased to Rs. 635694 Crore in 2003-04, an increase of about 24 times. However, the changes by type of institutions in Gross Capital Formation over the period indicates that the share of public sector declined from 45% to 24% of total from 1980-81 to 2003-04 whereas the positions of private corporate and household sectors improved from 13% to 20% and 42% to 56% respectively in the same period. In periodical basis, the portion of public sector declined from 43.4% during the pre-reform period to 29.3% in the post-reform period. The fraction of private corporate sector progressed from 18.5% to 26.1% and household sector from 38.1% to 44.6% during the same period.

Table 4.14(a) GCF by Type of Institutions at Current Prices [Rs. in Crore]

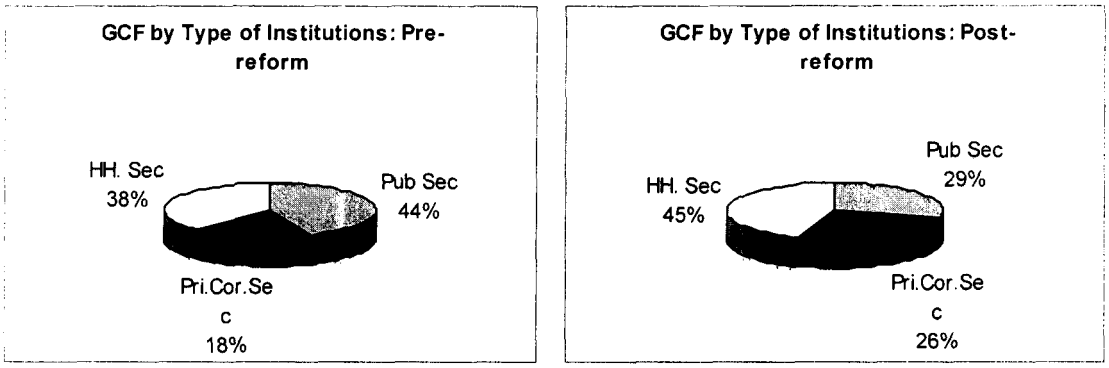
Year	Pub Sec	Pri. Cor. Sec	HH. Sec	Total
1980-81 Pre-reform	12105 *45.1*	3505 *13.0*	11258 *41.9*	26868 *100*
1981-82	16986 *45.0*	9186 *24.3*	11611 *30.7*	37783 *100*
1982-83	20139 *49.4*	10170 *24.9*	10477 *25.7*	40786 *100*
1983-84	21265 *49.2*	7060 *16.3*	14871 *34.4*	43196 *100*
1984-85	25600 *48.3*	10238 *19.3*	17188 *32.4*	53026 *100*
1985-86	29990 *45.6*	14556 *22.1*	21257 *32.3*	65803 *100*
1986-87	34772 *48.2*	15695 *21.7*	21736 *30.1*	72203 *100*
1987-88	33757 *43.1*	12263 *15.7*	32337 *41.3*	78357 *100*
1988-89	40136 *40.2*	16266 *16.3*	43474 *43.5*	99876 *100*
1989-90	46405 *40.3*	19673 *17.1*	48957 *42.6*	115035 *100*
1990-91	53099 *38.8*	23498 *17.2*	60257 *44.0*	136854 *100*
1991-92	57633 *40.2*	36992 *25.8*	48635 *33.9*	143260 *100*
1992-93 Post-reform	63997 *35.9*	48316 *27.1*	65706 *36.9*	178019 *100*
1993-94	70834 *38.8*	48213 *26.4*	63572 *34.8*	182619 *100*
1994-95	88206 *37.3*	69953 *29.5*	78625 *33.2*	236784 *100*
1995-96	90977 *28.9*	113781 *36.1*	110421 *35.0*	315179 *100*
1996-97	96187 *32.3*	110084 *37.0*	91591 *30.7*	297862 *100*
1997-98	100653 *29.3*	121399 *35.3*	121660 *35.4*	343712 *100*
1998-99	114545 *30.8*	111208 *29.9*	146456 *39.3*	372209 *100*
1999-00	134484 *29.3*	125120 *27.3*	198658 *43.4*	458262 *100*
2000-01	131505 *27.8*	105709 *22.4*	235494 *49.8*	472708 *100*
2001-02	140095 *27.8*	104771 *20.8*	259146 *51.4*	504012 *100*
2002-03	131966 *23.7*	105750 *19.0*	320242 *57.4*	557958 *100*
2003-04	154086 *24.2*	124177 *19.5*	357431 *56.2*	635694 *100*

***Source**: NAS, 1950-51 to 2003-04, GoI*

Table 4.14(b) GCF by Type of Institutions (at Current Prices): Periodical Changes

Period	Pub Sec	Pri.Cor.Sec	HH. Sec	Total
Overall	1709422 *31.3*	1367583 *25.0*	2391060 *43.7*	5468065 *100*
Pre-reform	334254 *43.4*	142110 *18.5*	293423 *38.1*	769787 *100*
Post-reform	1375168 *29.3*	1225473 *26.1*	2097637 *44.6*	4698278 *100*

Fig 4.14(b) GCF by Type of Institutions (at Current Prices): Periodical Changes



The aggregate NCF increased from Rs. 14580 Crore in 1980-81 to Rs. 382057 Crore in 2003-04, comes around 26 times. However, in net capital formation also the share of public sector declined from 49% to 16% whereas the part of other two sectors grown to 15% from 12% in the case of private corporate sector and to 70% from 39% in household sector during the same period. In periodical basis, public sector declined from 43% in the pre-reform period to 21.4% after the reforms. Private corporate sector advanced from 20.7% to 26.8% and household sector improved from 36.3% to 51.7% during these periods [Table 4.15(b)].

Table 4.15(a) NCF by Type of Institutions at Current Prices [Rs. In Crore]

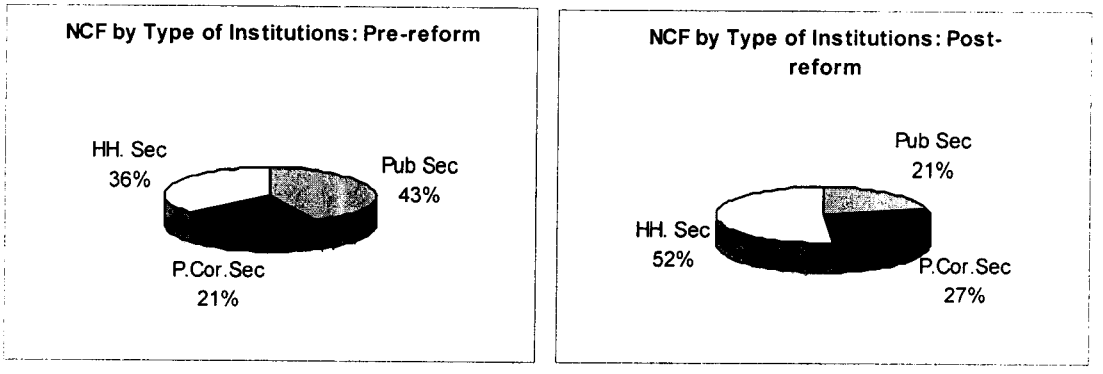
Year	Pub Sec	Pri. Cor. Sec	HH. Sec	Total
1980-81 Pre-reform	7113 *48.8*	1788 *12.3*	5679 *39.0*	14580 *100*
1981-82	11009 *47.7*	7164 *31.0*	4902 *21.2*	23075 *100*
1982-83	13018 *55.1*	7806 *33.1*	2787 *11.8*	23611 *100*
1983-84	13043 *55.2*	4249 *18.0*	6339 *26.8*	23631 *100*
1984-85	15994 *52.4*	7007 *22.9*	7538 *24.7*	30539 *100*
1985-86	18358 *47.0*	10580 *27.1*	10148 *26.0*	39086 *100*
1986-87	21384 *51.1*	11020 *26.4*	9410 *22.5*	41814 *100*
1987-88	18500 *41.7*	7211 *16.2*	18672 *42.1*	44383 *100*
1988-89	22181 *36.9*	10136 *16.8*	27866 *46.3*	60183 *100*
1989-90	25059 *36.6*	12272 *17.9*	31144 *45.5*	68475 *100*
1990-91	28788 *34.4*	14637 *17.5*	40165 *48.1*	83590 *100*
1991-92	28163 *35.7*	25415 *32.2*	25280 *32.1*	78858 *100*
1992-93 Post-reform	30106 *29.1*	33865 *32.7*	39536 *38.2*	103507 *100*
1993-94	33450 *33.7*	31185 *31.4*	34631 *34.9*	99266 *100*
1994-95	44773 *32.3*	49325 *35.5*	44692 *32.2*	138790 *100*
1995-96	41039 *20.8*	87722 *44.5*	68492 *34.7*	197253 *100*
1996-97	39617 *24.6*	77703 *48.2*	44039 *27.3*	161359 *100*
1997-98	38919 *20.3*	83573 *43.6*	69223 *36.1*	191715 *100*
1998-99	47313 *23.2*	67625 *33.1*	89205 *43.7*	204143 *100*
1999-00	62613 *22.7*	76446 *27.7*	136844 *49.6*	275903 *100*
2000-01	55254 *20.1*	50146 *18.2*	169413 *61.6*	274813 *100*
2001-02	57394 *20.0*	46615 *16.3*	182324 *63.7*	286333 *100*
2002-03	44311 *13.6*	42970 *13.2*	237725 *73.1*	325006 *100*
2003-04	59634 *15.6*	56767 *14.9*	265656 *69.5*	382057 *100*

***Source**: NAS, 1950-51 to 2003-04, GoI*

Table 4.15(b) NCF by Type of Institutions: Periodical Changes[Rs. In Crore]

Period	Pub Sec	Pri.Cor.Sec	HH. Sec	Total NCF
Overall	777033 *24.5*	823227 *26.0*	1571710 *49.5*	3171970 *100*
Pre-reform	194447 *42.9*	93870 *20.7*	164650 *36.3*	452967 *100*
Post-reform	582586 *21.4*	729357 *26.8*	1407060 *51.7*	2719003 *100*

Fig 4.15(b) NCF by Type of Institutions (at Current Prices): Periodical Changes



Aggregate GFCF increased from Rs. 26618 Crore in 1980-81 to Rs. 627307 Crore in 2003-04, an increment of about 24 times. The GFCF of the public sector was about 45% of the total in 1980-81 declined to 26% in 2003-04. The same in the private corporate sector increased from 14% to 18% and in the household sector it increased from 41% to 56% at current prices. In a periodical basis, the contribution of public sector to GFCF depleted from 45.5% in the pre-reform period to 29.6% in the post-reform period. On the other hand, the shares of the private corporate and household sectors appreciated from 16% to 25.6% and 38.4% to 44.8% respectively during the same periods [Table 4.16(b)].

Table 4.16(a) Gross Fixed Capital Formation - Institution-wise: At current prices

[Rs. Crore]

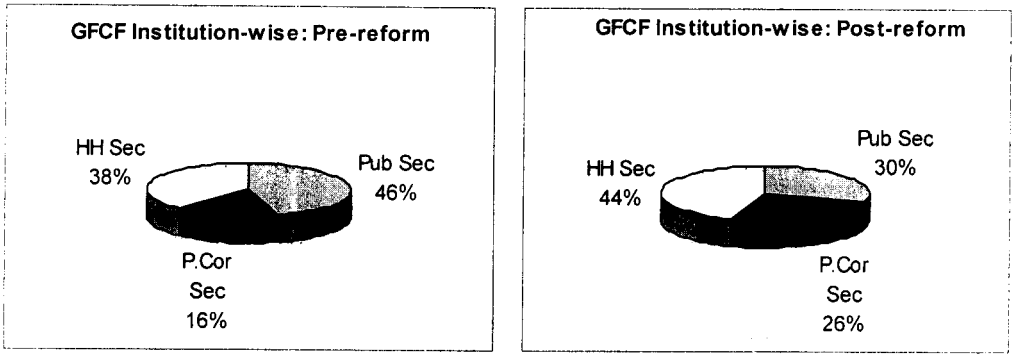
year	Pub Sector	Pri. Cor. Sector	H.H Sector	Total
1980-81 Pre-reform	12031 *45.2*	3598 *13.5*	10989 *41.3*	26618 *100*
1981-82	14984 *46.9*	5896 *18.5*	11051 *34.6*	31931 *100*
1982-83	19012 *52.5*	7479 *20.6*	9747 *26.9*	36238 *100*
1983-84	20928 *50.6*	6836 *16.5*	13605 *32.9*	41369 *100*
1984-85	23921 *49.7*	8318 *17.3*	15893 *33.0*	48132 *100*
1985-86	28074 *49.0*	10194 *17.8*	19043 *33.2*	57311 *100*
1986-87	33884 *51.7*	12383 *18.9*	19272 *29.4*	65539 *100*
1987-88	35269 *46.4*	10461 *13.8*	30279 *39.8*	76009 *100*
1988-89	40637 *44.5*	12534 *13.7*	38090 *41.7*	91261 *100*
1989-90	44701 *41.1*	15834 *14.5*	48344 *44.4*	108879 *100*
1990-91	51124 *39.2*	21322 *16.4*	57955 *44.4*	130401 *100*
1991-92	59833 *41.6*	35391 *24.6*	48637 *33.8*	143861 *100*
1992-93 Post-reform	61351 *36.5*	42251 *25.2*	64371 *38.3*	167973 *100*
1993-94	68853 *37.4*	51388 *27.9*	64052 *34.8*	184293 *100*
1994-95	88856 *40.0*	59332 *26.7*	74047 *33.3*	222235 *100*
1995-96	91595 *31.6*	97062 *33.5*	100752 *34.8*	289409 *100*
1996-97	94306 *30.2*	118330 *37.9*	99215 *31.8*	311851 *100*
1997-98	97079 *29.4*	120752 *36.5*	112588 *34.1*	330419 *100*
1998-99	112304 *30.0*	114336 *30.5*	147695 *39.5*	374335 *100*
1999-00	120389 *28.5*	109057 *25.8*	192457 *45.6*	421903 *100*
2000-01	126048 *27.4*	102465 *22.3*	230727 *50.2*	459240 *100*
2001-02	133481 *26.6*	112671 *22.5*	255229 *50.9*	501381 *100*
2002-03	138521 *25.3*	97832 *17.9*	311597 *56.9*	547950 *100*
2003-04	164747 *26.3*	111620 *17.8*	350940 *55.9*	627307 *100*

***Source**: NAS, 1950-51 to 2003-04, GoI*

Table 4.16(b) Gross Fixed Capital Formation (Institution-wise): Periodical Changes

Period	Pub.Sector	Pri. Cor. Sector	HH.Sector	Total
Overall	1681928 *31.8*	1287342 *24.3*	2326575 *43.9*	5295845 *100*
Pre-reform	324565 *45.5*	114855 *16.1*	274268 *38.4*	713688 *100*
Post-reform	1357363 *29.6*	1172487 *25.6*	2052307 *44.8*	4582157 *100*

Fig 4.16(b) Gross Fixed Capital Formation (Institution-wise): Periodical Changes



The components of GFCF also indicate that the share of public sector has declined in both construction and machinery. It declined from 51% to 35% in construction and 39% to 17% in machinery in 1980-81 and 2003-04. A reverse trend has been observed in private corporate and household sectors. The role of construction and machinery of both sectors increased in the corresponding years at current prices. In periodical basis, the fraction of construction and machinery of the public sector deteriorated from 49.5% to 37.2% and 41.5% to 22.6% respectively. The position of these components enhanced in the private corporate sector from 4.9% to 8.6% in terms of construction and 27.1% to 41.4% in machinery. Similarly, in the household sector, the parts of these components improved from 45.5% to 54.2% in construction and 31.5% to 36% in machinery. These are depicted in Table 4.17(b). In absolute terms, the average growth of the component construction was around six times; public sector increased by around five times and household sector by seven times in the post-reform period compared to the pre-reform period. The remarkable progress was made by the private corporate sector during these periods. It advanced by around eleven times. In machinery also the private corporate sector outperformed public sector and household sectors. It surged by ten times against four times and eight times growth in the public and household sectors [Table 4.17(c)].

Table 4.17(a) The Break-up of GFCF: At current prices [Rs. in Crs]

year	Pub Sector		Pvt Cor Sector		HH Sector		Total	
	Constrn	Machi	Constrn	Machi	Constrn	Machi	Constrn	Machi
1980-81 Pre-reform	7075 *51.3*	4956 *38.6*	538 *3.9*	3060 *23.8*	6174 *44.8*	4815 *37.5*	13787 *100*	12831 *100*
1981-82	8609 *52.0*	6375 *41.5*	929 *5.6*	4967 *32.3*	7029 *42.4*	4022 *26.2*	16567 *100*	15364 *100*
1982-83	10044 *54.3*	8968 *50.5*	1039 *5.6*	6440 *36.3*	7414 *40.1*	2333 *13.2*	18497 *100*	17741 *100*
1983-84	11510 *54.6*	9418 *46.5*	1110 *5.3*	5726 *28.2*	8476 *40.2*	5129 *25.3*	21096 *100*	20273 *100*
1984-85	12827 *52.4*	11094 *46.9*	1301 *5.3*	7017 *29.7*	10363 *42.3*	5530 *23.4*	24491 *100*	23641 *100*
1985-86	15593 *52.7*	12481 *45.0*	1537 *5.2*	8657 *31.2*	12451 *42.1*	6592 *23.8*	29581 *100*	27730 *100*
1986-87	18925 *57.3*	14959 *46.0*	1975 *6.0*	10408 *32.0*	12102 *36.7*	7170 *22.0*	33002 *100*	32537 *100*
1987-88	19670 *52.3*	15599 *40.6*	1703 *4.5*	8758 *22.8*	16245 *43.2*	14034 *36.6*	37618 *100*	38391 *100*
1988-89	22677 *50.7*	17960 *38.6*	2114 *4.7*	10420 *22.4*	19956 *44.6*	18134 *39.0*	44747 *100*	46514 *100*
1989-90	22409 *43.3*	22292 *39.0*	2147 *4.1*	13687 *24.0*	27217 *52.6*	21127 *37.0*	51773 *100*	57106 *100*
1990-91	25978 *41.4*	25146 *37.2*	3122 *5.0*	18200 *26.9*	33622 *53.6*	24333 *36.0*	62722 *100*	67679 *100*
1991-92	30673 *42.2*	29160 *40.9*	4773 *6.6*	30618 *43.0*	37192 *51.2*	11445 *16.1*	72638 *100*	71223 *100*
1992-93 Post-reform	32434 *39.6*	28917 *33.6*	5517 *6.7*	36734 *42.7*	43968 *53.7*	20403 *23.7*	81919 *100*	86054 *100*
1993-94	36580 *41.7*	32273 *33.4*	7356 *8.4*	44032 *45.5*	43689 *49.9*	20363 *21.1*	87625 *100*	96668 *100*
1994-95	45283 *45.1*	43573 *35.8*	7659 *7.6*	51673 *42.4*	47427 *47.3*	26621 *21.8*	100369 *100*	121867 *100*
1995-96	51902 *42.8*	39693 *23.6*	15766 *13.0*	81296 *48.3*	53542 *44.2*	47210 *28.1*	121210 *100*	168199 *100*
1996-97	55037 *41.5*	39269 *21.9*	15911 *12.0*	102419 *57.2*	61829 *46.6*	37386 *20.9*	132777 *100*	179074 *100*
1997-98	54946 *34.9*	42133 *24.4*	18671 *11.9*	102081 *59.0*	83903 *53.3*	28685 *16.6*	157520 *100*	172899 *100*
1998-99	64896 *36.3*	47408 *24.3*	18093 *10.1*	96243 *49.3*	96020 *53.6*	51675 *26.5*	179009 *100*	195326 *100*
1999-00	73495 *36.3*	46894 *21.4*	17267 *8.5*	91790 *41.8*	111807 *55.2*	80650 *36.8*	202569 *100*	219334 *100*
2000-01	79441 *35.6*	46607 *19.8*	17096 *7.7*	85369 *36.2*	126851 *56.8*	103876 *44.0*	223388 *100*	235852 *100*
2001-02	87997 *35.6*	45484 *17.9*	23743 *9.6*	88928 *35.0*	135481 *54.8*	119748 *47.1*	247221 *100*	254160 *100*
2002-03	94375 *34.1*	44146 *16.3*	17830 *6.4*	80002 *29.5*	164821 *59.5*	146776 *54.2*	277026 *100*	270924 *100*
2003-04	113648 *35.1*	51099 *16.8*	19356 *6.0*	92264 *30.4*	190603 *58.9*	160337 *52.8*	323607 *100*	303700 *100*

***Source**: National Accounts Statistics 1950-51 – 2002-03, EPWRF*

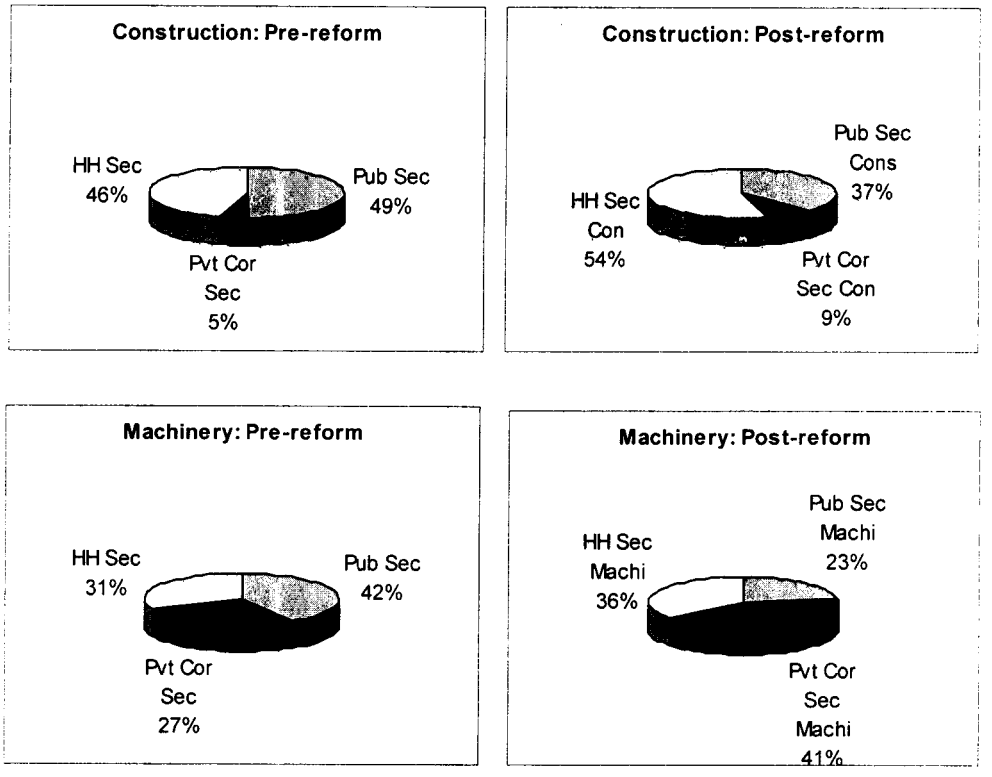
Table 4.17(b) The Break-up of GFCF: Periodical Changes

Period	Pub Sector		Pvt Cor Sector		HH Sector		Total	
	Constrn	Machi	Constrn	Machi	Constrn	Machi	Constrn	Machi
Overall	996024 *38.9*	685904 *25.1*	206553 *8.1*	1080789 *39.5*	1358182 *53.0*	968394 *35.4*	2560759 *100*	2735087 *100*
Pre-reform	175317 *49.5*	149248 *41.5*	17515 *4.9*	97340 *27.1*	161049 *45.5*	113219 *31.5*	353881 *100*	359807 *100*
Post-reform	820707 *37.2*	536656 *22.6*	189038 *8.6*	983449 *41.4*	1197133 *54.2*	855175 *36.0*	2206878 *100*	2375280 *100*

Table 4.17(c) The Break-up of GFCF: Absolute changes in Pre and Post-reform periods

Period	Pub Sector		Pvt Cor Sector		HH Sector		Total	
	Constrn	Machi	Constrn	Machi	Constrn	Machi	Constrn	Machi
Changes	5	4	11	10	7	8	6	7

Fig 4.17(b) The Break-up of GFCF: Periodical Changes



Thus, the pattern of investment of the private corporate sector in the post reform period is apparent from the above observations that, it has registered considerable progress in terms of Gross Capital Formation, Net Capital Formation and Gross Fixed Capital Formation. In construction and, machinery and equipment also its share advanced in the post-reform period.

GFCF and GDP

The variations in the percentage share of GFCF to GDP at current prices can be observed in detail in the following tables. The percentage share of GFCF to GDP of the public, private and household sectors at current prices pointed out that it declined from

8.4% in 1980-81 to 5.8% in 2002-03 in the case of public sector whereas it increased from 2.5% to 4.7% in private sector and 7.6% to 12% in household sector in the corresponding period [Table 4.18(a)]. In a periodical basis, the share of GFCF to GDP of the public sector declined from 9.6% before the reform period to 6.6% after reforms while the portion of private corporate sector improved from 3.4% to 5.7% and household sector grew from 8% to 10% during these periods [Table 4.18(b)].

Table 4.18(a) Percentage Share of GFCF to GDP – Sector-wise
(at current prices)

Year	Pub Sector	Pri.Cor. Sector	HH. Sector	Total
1980-81	8.4	2.5	7.6	18.5
1981-82	8.9	3.5	6.6	19.0
1982-83	10.1	4.0	5.2	19.3
1983-84	9.5	3.1	6.2	18.8
1984-85	9.7	3.4	6.5	19.6
1985-86	10.1	3.7	6.9	20.7
1986-87	10.9	4.0	6.2	21.1
1987-88	10.0	3.0	8.5	21.5
1988-89	9.6	3.0	9.0	21.6
1989-90	9.2	3.3	9.9	22.4
1990-91	9.0	3.7	10.2	22.9
1991-92	9.2	5.4	7.4	22.0
1992-93	8.2	5.6	8.6	22.4
1993-94	8.0	6.0	7.5	21.5
1994-95	8.8	5.9	7.3	22.0
1995-96	7.7	8.2	8.5	24.4
1996-97	6.9	8.6	7.3	22.8
1997-98	6.4	7.9	7.4	21.7
1998-99	6.5	6.6	8.5	21.6
1999-00	6.2	5.6	9.9	21.7
2000-01	6.0	4.9	11.0	21.9
2001-02	5.5	5.0	11.4	21.9
2002-03	5.8	4.7	12.0	22.5

***Source**: National Accounts Statistics of India 1950-51 to 2002-03, Fifth Edition, EPWRF- Mumbai*

Table 4.18(b) Percentage Share of GFCF to GDP: Periodical Changes

Period	Pub Sector	Pri. Cor. Sector	HH.Sector	Total
Overall	7.0	5.4	9.7	22.1
Pre-reform	9.6	3.4	8.1	21.1
Post-reform	6.6	5.7	10.0	22.2

***Source**: Computed from; (1) NAS, 1950-51 to 2002-03, Fifth Edition, EPWRF (2) Handbook of Statistics on Indian Economy, RBI, 2004-05*

Fig 4.18(a) The Relative Share of GFCF to GDP (Sector-wise): Periodical Changes

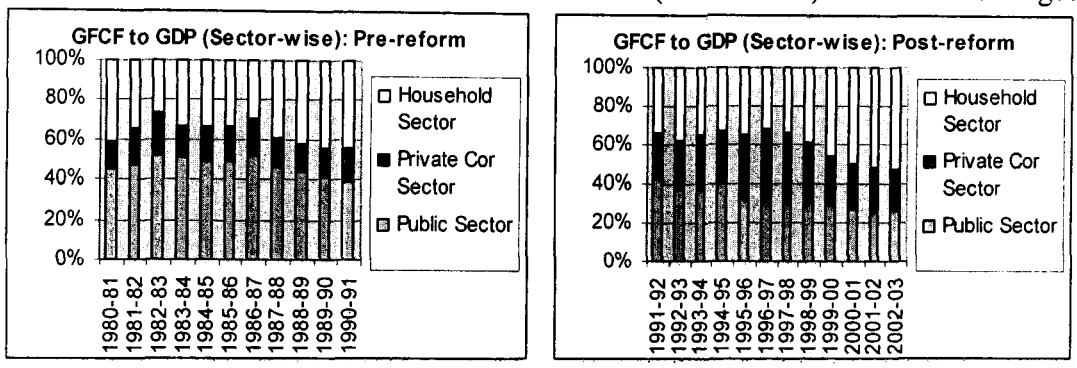
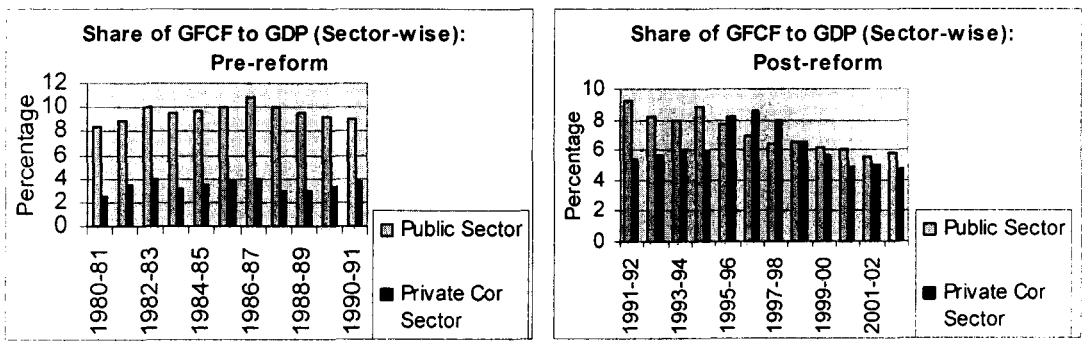


Fig 4.18(b) The Relative Share of GFCF to GDP: Public & Private Corporate Sectors



The percentage share of GFCF to GDP of the public and private corporate sectors changed in the post liberalization period. As we have already mentioned that the investment of the public sector was higher than that of the private corporate sector in the early years of planning. As a result GFCF as a percentage to GDP of the public sector in the pre-reform period was considerably higher than the private corporate sector. In the post-reform period the position of private corporate sector witnessed improvement. During the period 1995-99 the percentage share of GFCF to GDP of the private corporate sector exceeded the public sector whereas, it was less than one third of the share of public sector in 1988-89 [Table 4.18(a) and Fig 4.18(b)].

Capital Formation at 1993-94 prices

At constant prices, investment in terms of GCF, GFCF and NCF have expressed an upward trend since 1980. GCF and GFCF increased by around 24 times, NCF by 26 times in 2003-04 compared to 1980-81. As a percentage of GDP, GCF and GFCF

advanced from 21% in 1980-81 to 25% in 2003-04. NCF improved from 12% to 15% during these periods. In periodical basis, all these variables advanced by about 6 times in the reform period. The exponential rate of growth of these three components in the pre and post reform period shows that the post-reform period registered a higher rate of growth over the pre-reform period.

Table 4.19(a) Capital Formation at 1993-94 prices[Rs in Crs]

Year	GCF	GFCF	NCF
1980-81 Pre-reform	91673 *20.9*	90680 *20.6*	53120 *12.1*
1981-82	112085 *24.0*	97530 *20.9*	71309 *15.3*
1982-83	110918 *22.9*	100163 *20.7*	67615 *14.0*
1983-84	109094 *21.0*	105006 *20.3*	63066 *12.2*
1984-85	121019 *22.4*	110836 *20.5*	71932 *13.3*
1985-86	134197 *23.5*	117584 *20.6*	82324 *14.4*
1986-87	136610 *22.9*	124083 *20.8*	81747 *13.7*
1987-88	139701 *22.4*	135429 *21.7*	81604 *13.1*
1988-89	160214 *23.4*	146431 *21.4*	98579 *14.4*
1989-90	165963 *22.8*	156849 *21.5*	100372 *13.8*
1990-91	179075 *23.2*	170428 *22.1*	109610 *14.2*
1991-92	166866 *21.4*	167530 *21.5*	93095 *12.0*
1992-93 Post-reform	188852 *23.0*	177982 *21.7*	110659 *13.5*
1993-94	182619 *21.3*	184293 *21.4*	99266 *11.6*
1994-95	219245 *23.7*	206056 *22.3*	128787 *13.9*
1995-96	267323 *26.9*	245768 *24.7*	168171 *16.9*
1996-97	238724 *22.4*	249487 *23.4*	131449 *12.3*
1997-98	265331 *23.8*	254802 *22.8*	150471 *13.5*
1998-99	275574 *23.3*	276947 *23.4*	153381 *13.0*
1999-00	328366 *25.9*	302792 *23.9*	199295 *15.7*
2000-01	329198 *25.0*	315239 *24.0*	193098 *14.7*
2001-02	330238 *23.9*	328669 *23.8*	187773 *13.6*
2002-03	361347 *25.1*	354086 *24.6*	212778 *14.8*
2003-04	393723 *25.2*	388295 *24.8*	237249 *15.2*

***Source**: (1) NAS 1950-51 to 2002-03, Fifth Edition, EPWRF- Mumbai. (2)Handbook of Statistics on Indian Economy, RBI, 2004-05. *Figures in italics as a percentage to GDP*

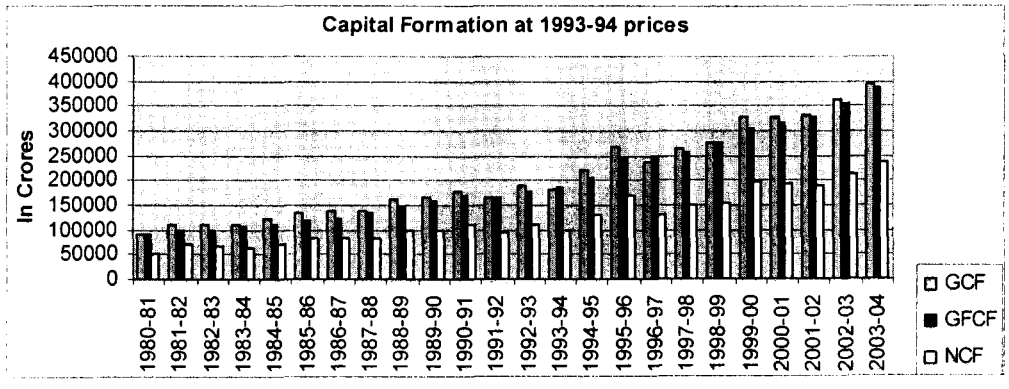
Table 4.19(b) Capital Formation at 1993-94 prices: Periodical Changes

Period	GCF	GFCF	NCF
Overall	5007955	4806965	2946750
	23.7	*22.7*	*13.9*
Pre-reform	1460549	1355019	881278
	22.7	*21.1*	*13.7*
Post-reform	3547406	3451946	2065472
	24.1	*23.5*	*14.0*

Table 4.19(c) The Rate of Growth of Capital Formation

Period	GCF	GFCF	NCF
Overall	6.2	6.6	6.0
Pre-reform	6.2	6.4	6.3
Post-reform	7.1	7.2	7.5

Fig 4.19 Capital Formation at Constant Prices



The sector-wise break-up of Gross Fixed Capital Formation at 1993-94 prices can be depicted in Table 4.20(a) and (b).

Table 4.20(a) The Break-up of GFCF at 1993-94 prices [in Crs]

	Public Sector		Private Cor Sector		Household Sector		Total	
Year	Constr uction	Machi-nery	Constr uction	Machi-nery	Constr uction	Machi-nery	Constr uction	Machi-nery
1993-94	36580	32273	7356	44032	43689	20363	87625	96668
1994-95	41079	40182	7125	48565	44086	25019	92290	113766
1995-96	41723	34223	12902	71817	43398	41705	98023	147745
1996-97	40276	31201	12469	86570	47342	31629	100087	149400
1997-98	37095	32407	14385	85638	61212	24065	112692	142110
1998-99	40576	35437	12393	79605	66194	42742	119163	157784
1999-00	43676	34386	11420	74855	72402	66053	127498	175294
2000-01	45712	32629	11092	66219	79374	80213	136178	179061
2001-02	48684	29864	14669	66471	80081	88900	143434	185235
2002-03	50523	28367	10886	60842	95226	108242	156635	197451
2003-04	57507	31696	11028	69013	102442	116609	170977	217318

***Source**: NAS, EPWRF*

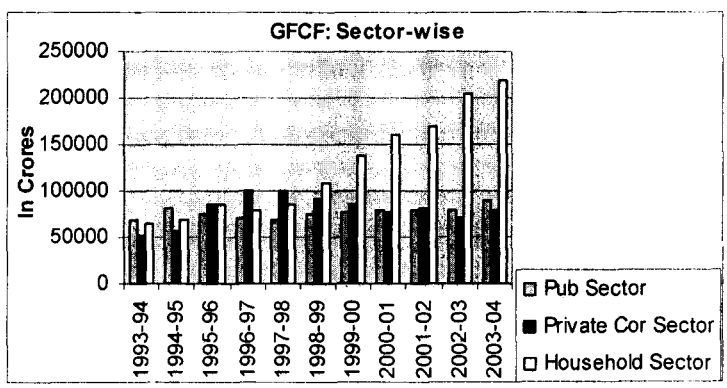
The division of GFCF between public, private corporate and household sectors during the period 1993-2004 showed that the private corporate sector has grown to a crucial level than that of the public sector especially since 1995-96.

Table 4.20(b) Aggregate GFCF: Sector-wise

Year	Pub Sector	Pvt Cor Sector	HH Sector
1993-94	68853	51388	64052
1994-95	81261	55690	69105
1995-96	75946	84719	85103
1996-97	71477	99039	78971
1997-98	69502	100023	85277
1998-99	76013	91998	108936
1999-00	78062	86275	138455
2000-01	78341	77311	159587
2001-02	78548	81140	168981
2002-03	78890	71728	203468
2003-04	89203	80041	219051

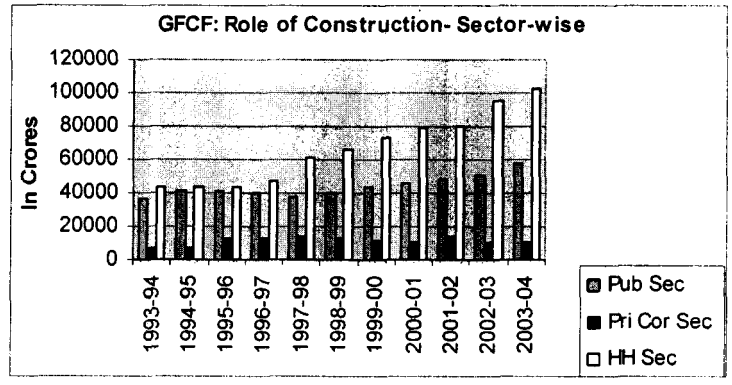
**Computed from Table 4.8*

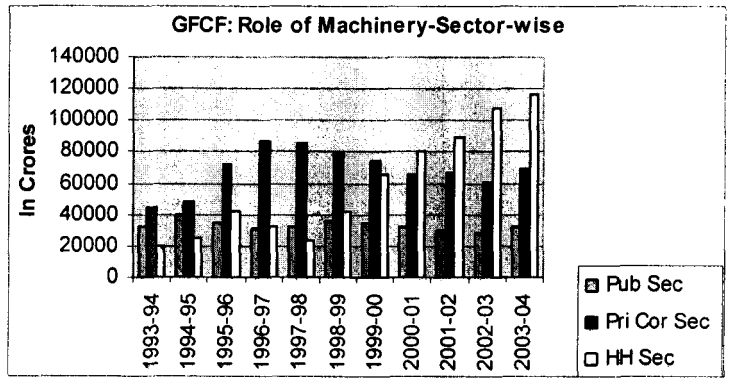
Fig 4.20(b) Aggregate GFCF: Sector-wise



The sector-wise split-up of GFCF in construction and machinery and equipment during the period 1993- 2004 can be seen in the following graph. In construction, the role private corporate sector was not impressive compared to the public and household sectors but in machinery and equipment, its part was worth mentioning. During 1996-97 it was about three times higher than that of the public sector.

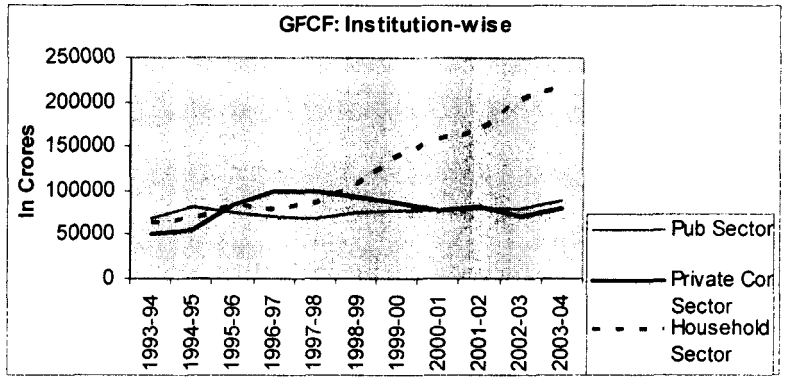
Fig 4.20(a) GFCF: The Role of Construction & Machinery (Sector-wise)





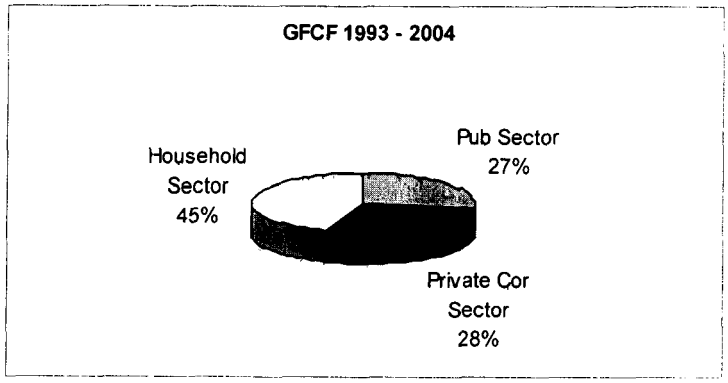
The GFCF by type of institutions during the period 1993-2004 at constant prices exhibited that private corporate sector has experienced a rising phase in the economy in terms of capital formation[8]. It can be depicted below.

Fig 4.20(c) GFCF: The Role of Private Corporate Sector



[8] N.Shanta, 'Growth and Significance of the Private Corporate Sector: Emerging Trends', EPW, July 31, 1999, pp. M86-M91.

Fig 4.20(d) Sector-wise GFCF: 1993 - 2004



It points out that the share of the private corporate sector in GFCF is higher than that of the public sector at constant prices during the period 1993-2004.

2. The Growth of Private Corporate Investment: Evidences

The studies of Reserve Bank of India on the financing and investment pattern of large Non-Government Non-Financial public limited companies (NGNF) (each with paid-up-capital of Rs. 1 Cr and above) for different sets of samples (ranging from 500 to 997) over the period 1982-83 to 2002-03 has been observed in this section. Though the sample size varies and the companies taken up are not homogenous, the combined balance sheet statement gives a broad picture of the pattern of investment of non-government non-financial companies in India. The paid-up capital of the sample groups ranges from 13.6% to 45.7% of all the companies. To analyse the investment pattern of the samples of companies during the period, we have considered the asset side of the combined balance sheet and used selected ratios of capital formation. The growth of asset variables was observed and asset ratios like Current Assets to Total Net Assets, Net Fixed Assets to Total Net Assets and Other Assets to Total Net Assets have been computed to study the investment pattern of the private corporate sector.

The Asset Structure of Selected NGNF Public Limited Companies in India

The asset structure of the private corporate sector during the period 1983 to 2003 demonstrates that the Total Net Assets advanced from Rs 20881 Crs in 1982-83 (500

companies) to Rs 348802 Crs in 2002-03 (997 companies). The sample size doubled while the total net assets cumulated by around 17 times. The Current Assets during these periods grew from Rs 11931 Crs to Rs 141908 Crs; an increase of 12 times. The Net Fixed Assets improved from Rs 8489 Crs in 1983 to Rs 161409 Crs in 2003, an increase of more than 19 times. Other Assets enhanced from Rs 461 Crs to Rs 45485 Crs during the same period. This growth comes to around 99 times. These are depicted in Table 4.21(a). The periodical split-up revealed that the Total Net Assets increased by about seven times and Current Assets, Net Fixed Assets and Other Assets registered 6, 7 and 16 fold increase in the post-reform period compared to the pre-reform period [Table 4.21(b)]. [In Table 4.21(a), Current Assets include Cash and Bank Balances, Loans and Advances and other Debtor Balances, and Inventories. Other Assets consists of Investments and Other Assets].

Table 4.21(a) The Asset Structure of Selected NGNF Pub Ltd Cos in India [Rs in Crs]

Year	No of Cos**	Current Assets (1)	Net Fixed Assets (2)	Other Assets (3)	Total Net Assets (1+2+3)
1982-83 Pre-reform	500 -	11931 *57.1*	8489 *40.7*	461 *2.2*	20881 *100*
1983-84	500 -	12845 *54.5*	10147 *43.1*	567 *2.4*	23560 *100*
1984-85	535 -	14818 *51.7*	13004 *45.3*	853 *3.0*	28676 *100*
1985-86	581 -	18115 *50.3*	16697 *46.4*	1188 *3.3*	35999 *100*
1986-87	581 -	20465 *50.4*	18673 *46.0*	1441 *3.6*	40579 *100*
1987-88	622 (45.7)	20457 *50.0*	18997 *46.4*	1494 *3.6*	40949 *100*
1988-89	622 (45.7)	24542 *51.4*	20978 *43.9*	2218 *4.6*	47738 *100*
1989-90	640 (41.2)	30059 *51.8*	24081 *41.5*	3912 *6.7*	58053 *100*
1990-91	648 (37.9)	35219 *51.5*	28607 *41.9*	4512 *6.6*	68338 *100*
1991-92	648 (43.8)	47615 *49.9*	41918 *43.9*	5897 *6.2*	95430 *100*
1992-93 Post-reform	650 (34.3)	55984 *50.1*	49970 *44.7*	5724 *5.1*	111678 *100*
1993-94	655 (31.2)	57012 *45.1*	58140 *46.0*	11240 *8.9*	126392 *100*
1994-95	680 (31.2)	64503 *45.9*	61704 *43.9*	14382 *10.2*	140589 *100*
1995-96	700 (20.7)	68165 *46.7*	63547 *43.5*	14295 *9.8*	146007 *100*
1996-97	756 (17.8)	84896 *42.8*	90529 *45.6*	23044 *11.6*	198469 *100*
1997-98	807 (21.1)	104288 *40.1*	130044 *50.0*	25835 *9.9*	260167 *100*
1998-99	820 (17.0)	99495 *40.6*	119669 *48.9*	25612 *10.5*	244776 *100*
1999-00	855 (18.7)	111889 *37.9*	148643 *50.4*	34584 *11.7*	295116 *100*
2000-01	964 (15.1)	113540 *39.2*	137044 *47.3*	39031 *13.5*	289615 *100*
2001-02	990 (14.7)	100598 *42.1*	113117 *47.3*	25280 *10.6*	238995 *100*
2002-03	997 (13.6)	141908 *40.7*	161409 *46.3*	45485 *13.0*	348802 *100*

Source: *RBI Bulletin, Combined Balance Sheet of Selected Large Public Limited Companies, various issues from 1984 to 2004. * Values at Current Prices.**PUC as a % of all the Cos are given in parenthesis ***Values in italics as a percentage to Total Net Assets.*

Table 4.21(b) Asset Structure of Selected Cos: Periodical Changes [Rs in Crs]

Period	No of Cos	Current Assets	Net Fixed Assets	Other Assets	Total Net Assets
Overall (1983-2005)	14751	1238345 *43.3*	1335408 *46.7*	287055 *10.0*	2860808 *100*
Pre-reform (1983-1991)	5229	188452 *51.7*	159674 *43.8*	16646 *4.6*	364772 *100*
Post-reform (1992-2003)	9522	1049893 *42.1*	1175734 *47.1*	270409 *10.8*	2496036 *100*

Since the sample size vary over the period 1983-2003, we have computed the average annual rate of growth of assets based on the average values of asset components every year. It indicates that, the rate of growth of Net Fixed Assets increased from 12.9 % in the pre-reform period to 13.5% in the post-reform period. The rate of growth of Current Assets declined from 11.1% to 9.4%, Other Assets from 30.4% to 22.1% and Total Net Assets declined from 12.5 % to 12.1% during these periods. It has been depicted below.

Table 4.22 The Average Annual Rate of Growth of Assets* (Current Prices)

Period	Current Assets	Net Fixed Assets	Other Assets	Total Net Assets
Overall	10.14	13.34	25.46	12.30
Pre-reform	11.14	12.97	30.48	12.52
Post-reform	9.47	13.59	22.11	12.15

**The average annual rate of growth has been computed based on the average values of asset components every year.*

Asset Ratios

The Asset Ratios include;

(1) Current Assets to Total Net Assets (CA/TNA),

(2) Net Fixed Assets to Total Net Assets (NFA/TNA),

(3) Other Assets to Total Net Assets (OA/TNA).

The ratios have been computed based on the average values of assets every year. The ratio of Current Assets to Total Net Assets declined from 57.1% in 1982-83 to 40.7 % in 2002-03. Net Fixed Assets to Total Net Assets grew up from 40.7% to 46.3% and Other Assets to Total Net Assets from 2.2% to 13% during the same periods. In periodical basis, the ratio of CA/TNA depleted from 51.7% in the pre-reform period to 42.4% in the post-reform period whereas NFA/TNA and OA/TNA progressed from 43.8% to 46.9% and 4.4% to 10.5% respectively.

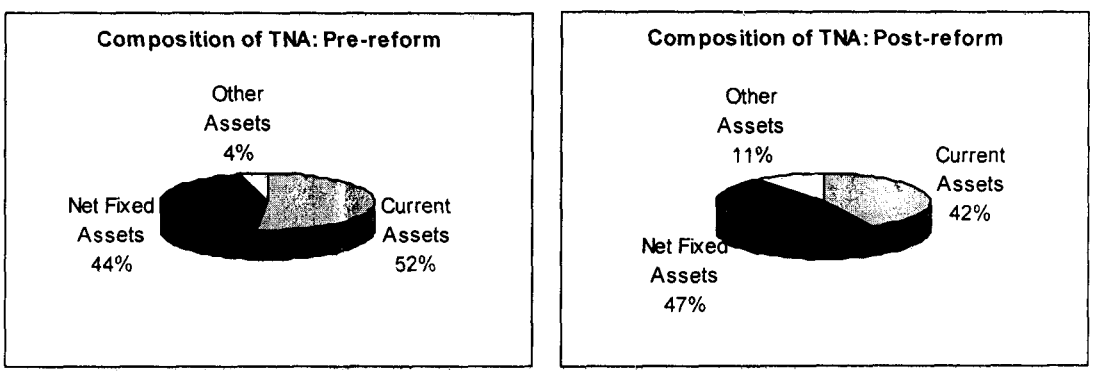
Table 4.23(a) Asset Ratios (At Current Prices)

Year	CA/TNA	NFA/TNA	OA/TNA
1982-83	57.1	40.7	2.2
1983-84	54.5	43.1	2.4
1984-85	51.7	45.3	3.0
1985-86	50.3	46.4	3.3
1986-87	50.4	46.0	3.6
1987-88	50.0	46.4	3.6
1988-89	51.4	43.9	4.6
1989-90	51.8	41.5	6.7
1990-91	51.5	41.9	6.6
1991-92	49.9	43.9	6.2
1992-93	50.1	44.7	5.1
1993-94	45.1	46.0	8.9
1994-95	45.9	43.9	10.2
1995-96	46.7	43.5	9.8
1996-97	42.8	45.6	11.6
1997-98	40.1	50.0	9.9
1998-99	40.6	48.9	10.5
1999-00	37.9	50.4	11.7
2000-01	39.2	47.3	13.5
2001-02	42.1	47.3	10.6
2002-03	40.7	46.3	13.0

Table 4.23(b) Asset Ratios: Periodical Changes (At Current Prices)

Period	CA/TNA	NFA/TNA	OA/TNA
Overall	44.0	46.4	9.5
Pre-reform	51.7	43.8	4.4
Post-reform	42.4	46.9	10.5

Fig 4.23(b) The Composition of Total Net Assets: Periodical Changes



Asset Structure at 1993-94 prices

At 1993-94 prices, the Total Net Assets of 500 companies were Rs 56741 Crs in 1982-83. It was Rs 226495 Crs in 2002-03, the number of companies was 997. The sample size (number of companies) doubled whereas Total Net Assets advanced by around four times. Current Assets of the same sets of companies during these periods indicated that it enhanced by around three times. The Net Fixed Assets and Other Assets augmented by about 4 and 21 times respectively during this period. These are depicted in Table 4.24(a). The periodical changes of these asset components are also highlighted in Table 4.24(b). The Total Net Assets of 5229 companies during the pre-reform period were Rs 654717 Crs which grew up to Rs 1947646 Crs in the post-reform period; the number of companies was 9522. The increment in sample size was 1.8 times while the growth of Total Net Assets was about three times. The progress in Current Assets, Net Fixed Assets and Other Assets during these periods was 2.4, 3.2, and 7.4 times respectively.

Table 4.24(a) Asset Structure of Selected NGNF Pub Ltd Cos at 1993-94 prices

[Rs in Crores]

Year	No of Cos	Current Assets	Net Fixed Assets	Other Assets	Total Net Assets
1982-83 Pre-reform	500	32421 *57.1*	23067 *40.7*	1252 *2.2*	56741 *100*
1983-84	500	32438 *54.5*	25624 *43.1*	1432 *2.4*	59494 *100*
1984-85	535	33831 *51.7*	29690 *45.3*	1948 *3.0*	65470 *100*
1985-86	581	36969 *50.3*	34075 *46.4*	2423 *3.3*	73468 *100*
1986-87	581	38686 *50.4*	35298 *46.0*	2724 *3.6*	76708 *100*
1987-88	622	36465 *50.0*	33863 *46.4*	2664 *3.6*	72993 *100*
1988-89	622	39394 *51.4*	33672 *43.9*	3560 *4.6*	76626 *100*
1989-90	640	43375 *51.8*	34749 *41.5*	5646 *6.7*	83770 *100*
1990-91	648	46098 *51.5*	37444 *41.9*	5906 *6.6*	89448 *100*
1991-92	648	55431 *49.9*	48799 *43.9*	6865 *6.2*	111094 *100*
1992-93 Post-reform	650	59368 *50.1*	52990 *44.7*	6070 *5.1*	118428 *100*
1993-94	655	57012 *45.1*	58140 *46.0*	11240 *8.9*	126392 *100*
1994-95	680	59725 *45.9*	57133 *43.9*	13317 *10.2*	130175 *100*
1995-96	700	57816 *46.7*	53899 *43.5*	12125 *9.8*	123840 *100*
1996-97	756	68026 *42.8*	72539 *45.6*	18465 *11.6*	159030 *100*
1997-98	807	80531 *40.1*	100420 *50.0*	19950 *9.9*	200901 *100*
1998-99	820	73645 *40.6*	88578 *48.9*	18958 *10.5*	181181 *100*
1999-00	855	80150 *37.9*	106478 *50.4*	24774 *11.7*	211401 *100*
2000-01	964	79067 *39.2*	95435 *47.3*	27180 *13.5*	201682 *100*
2001-02	990	66096 *42.1*	74321 *47.3*	16610 *10.6*	157027 *100*
2002-03	997	92148 *40.7*	104811 *46.3*	29536 *13.0*	226495 *100*

Source:*(1) RBI Bulletin, Combined Balance Sheet of Selected Large Public Limited Companies, various issues from 1984 to 2004.(2)NAS, EPWRF Dec 2004, Price Deflators 1993-94=100.* Values have been deflated with price deflator of capital formation –(GDCF unadjusted)*

Table 4.24(b) Asset Structure: Periodical Changes at 1993-94 prices

[Rs in Crores]

Period	No of Cos	Current Assets	Net Fixed Assets	Other Assets	Total Net Assets
Overall	14751	1168694 *44.9*	1201027 *46.2*	232642 *8.9*	2602363 *100*
Pre-reform	5229	339679 *51.9*	287484 *43.9*	27554 *4.2*	654717 *100*
Post-reform	9522	829015 *42.6*	913544 *46.9*	205088 *10.5*	1947646 *100*

Asset Ratios at 1993-94 prices

The asset ratios at constant prices brings out the fact that the relative share of Current Assets in Total Net Assets declined whereas the fraction of Net Fixed Assets and Other Assets advanced over the period 1983-2003. The ratio of Current Assets to Total Net Assets (CA/TNA) was 57% in 1983, declined to around 41% in 2003. Net Fixed Assets to Total Net Assets (NFA/TNA) improved from 41% to 46% and Other Assets to Total Net Assets (OA/TNA) shot-up from 2% to 13% during the same periods. This can be viewed from Table 4.25(a). The periodical break-up demonstrated that the proportion of Current Assets declined from 52% in the pre-reform period to 43% in the post-reform period. The position of Net Fixed Assets augmented from 44% to 47% and Other Assets advanced from 4% to 10% during the same periods [Table 4.25(b) and Fig 4.25].

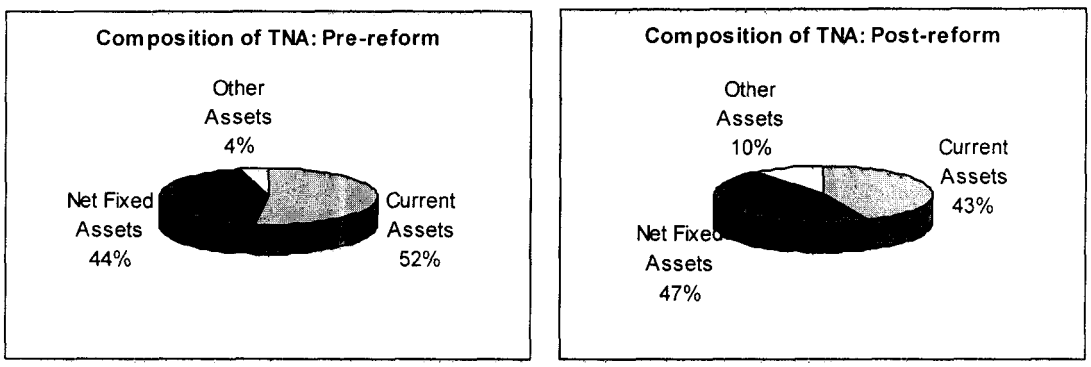
Table 4.25(a) Asset Ratios* at Constant Prices (%)

Year	CA/TNA	NFA/TNA	OA/TNA
1982-83	57.1	40.7	2.2
1983-84	54.5	43.1	2.4
1984-85	51.7	45.3	3.0
1985-86	50.3	46.4	3.3
1986-87	50.4	46.0	3.6
1987-88	50.0	46.4	3.6
1988-89	51.4	43.9	4.6
1989-90	51.8	41.5	6.7
1990-91	51.5	41.9	6.6
1991-92	49.9	43.9	6.2
1992-93	50.1	44.7	5.1
1993-94	45.1	46.0	8.9
1994-95	45.9	43.9	10.2
1995-96	46.7	43.5	9.8
1996-97	42.8	45.6	11.6
1997-98	40.1	50.0	9.9
1998-99	40.6	48.9	10.5
1999-00	37.9	50.4	11.7
2000-01	39.2	47.3	13.5
2001-02	42.1	47.3	10.6
2002-03	40.7	46.3	13.0

Table 4.25(b) Asset Ratios at Constant Prices: Periodical Changes (%)

Period	CA/TNA	NFA/TNA	OA/TNA
Overall	45.8	45.8	8.3
Pre-reform	52.0	43.9	4.0
Post-reform	43.0	46.7	10.2

Fig 4.25 The Composition of Total Net Assets: Periodical Changes



Conclusion

In this chapter we were mainly concerned with the pattern of private corporate investment in India, the trend of the pattern of investment of the private corporate sector in the pre and post-reform periods and the variation of asset structure of private corporate sector over the period. For this purpose we have used the data base of National Accounts Statistics in general and RBI Bulletin various issues in particular.

The overall picture of the pattern of private corporate investment shows that it has increased in its depth and spread. Aggregate GCF, NCF and GFCF increased by about 24, 26 and 24 times from 1980-81 to 2003-04. However, the share of public sector declined from 45% to 24%, 49% to 16% and 45% to 26% respectively at current prices during the same periods whereas the role of private corporate sector improved considerably. The changes of the components of GFCF also indicate that the share of public sector has declined in both construction and machinery. It declined from 51% to 35% in construction and 39% to 17% in machinery for the period 1980-81 and 2003-04. A reverse trend has been observed in private corporate and household sectors. The role of construction and machinery of both sectors increased in the corresponding years at current prices. The percentage share of GCF to GDP at current prices was 18.7 in 1980-81, of which the public sector occupied a dominant share of 8.4 %. Private and household sectors possessed 2.4% and 7.8 % respectively. In 2002-03, the share of GCF to GDP

increased to 22.8% but the contribution by type of institutions showed that the part of public sector declined to 5.7% whereas private sector doubled to 4.8% and household sector increased to 12.3%. The percentage share of GFCF to GDP showed that the private corporate sector has exceeded the public sector during the period 1995-99 against its one third of the share of public sector in 1988-89. The analysis of GFCF at constant prices (1993-94 prices) also indicates that the private corporate sector outperformed public sector. Thus, in GCF, NCF and GFCF, the private corporate sector showed an uptrend since 1980-81. Secondly, to answer the question as to the change in the pattern of private corporate investment in the pre and post-reform periods, we have compared the cumulative values of investment variables in the pre and post-reform periods at current and constant prices. It obviously brings in to light that the pattern of investment of the private corporate sector enhanced in the post-reform period compared to the pre-reform period. The part of public sector in GCF in the pre-reform period was 44%, declined to 29% in the post-reform period. Similarly, NCF and GFCF also depleted from 43% to 21% and 46% to 30% respectively during the same period at current prices. The private corporate sector witnessed a reverse trend during the same period in the case of these variables. Of the two components of GFCF, construction and machinery and equipment, public sector witnessed four fold increases in construction whereas it was about ten times in the private corporate sector during the post-reform period. In machinery and equipment, private corporate sector registered an increase of more than nine times against a three fold increase of the public sector in the reform period. In real terms also (at 1993 price level) the private corporate sector outdoes the public sector with respect to GFCF and its component machinery and equipment for the period 1993-2003. Thirdly, with respect to the asset structure of private corporate sector over the period, we have considered evidences from the studies of RBI on the investment pattern of large non-government non-financial public limited companies (each with paid-up capital of Rs. 1 Crore and above). Since the sample size and set of companies vary over the period, it

gives only a broad picture. We have computed the asset ratios from the combined balance sheet of selected NGNF Public Limited Companies during the period 1983-2003. The analysis of the growth of selected variables and asset ratios like; Current Assets to Total Net Assets (CA/TNA), Net Fixed Assets to Total Net Assets (NFA/TNA), and Other Assets to Total Net Assets (OA/TNA) indicates that the position of current assets depleted whereas net fixed assets and other assets progressed over the period.

CHAPTER – 5

FINANCING OF THE CORPORATE SECTOR IN INDIA

- New Capital Issues by Non-Govt Public Limited Companies
- Financing Non-Government Non-financial Companies
- The Growth of corporate financing in India – Evidences
- Conclusion

Chapter – 5

Financing of the Corporate Sector in India

The major sources of corporate industrial finance include share capital, debt capital, and retained profits. Share capital and debt capital comes under the external sources of finance. The undistributed profits retained by the corporates constitute the internal sources of finance. The external sources of finance can again be classified into:

(1) the internal and external ownership capital and

(2) creditor-ship capital.

Ownership capital takes the form of equity or preference shares – since equity holders are the final and residuary owners of the company. Credit capital consists of long-term loans from financial intermediaries, bonds and debentures. It can be secured and unsecured. It is secured when the credit is obtained by mortgaging the assets of the company. In terms of the methods of issue, the primary capital market also known as the new issue market facilitates mobilization of resources through public issues (by prospectus), right issues (through letters of offer), and private placement. The new issues made by new companies are known as initial issues where as the issues done by the existing companies are further issues. In the primary market initial capital can be raised by issuing only ordinary and preference shares.

Corporate Finance: Some Empirical Evidences;

In a question as to whether the development of capital markets (equity and bond market) or banks (commercial and development banks) influence economic growth, Mayer (1990) [1]in a cross country study for the period 1970-85, indicated that internal funds constituted almost two-thirds on the average of investment financing in developed countries like the US, UK, Japan, Germany, France, Italy, Canada and Finland. The

[1] Mayer,Colin (1990), 'Financial Systems, Corporate Finance and Economic Development', given in R.G Hubbard (ed), 'Asymmetric Information, Corporate Finance and Investment', NBER, Chicago University Press.

relative share of external funding was small in all these countries (below 10%). On the other hand in developing countries, external sources of finance occupy a key role in net fixed capital formation in the 1980s (Singh and Hamid, 1992)[2]. In five out of ten sample countries – Republic of Korea, Thailand, Mexico, Turkey and Malaysia, more than 70% of the growth of corporate net assets during the period 1980-91 was financed from external funds (Singh, 1995)[3].

Even in the external sources of finance, there are differences among developed countries and between developed and developing economies. Among developed countries US companies depend more on debt than equity against Japan, Germany, France, Italy, UK, and Canada (Damodaran, 1997)[4]. Developing countries in terms of external finance expressed that, more than 40% of the growth of net assets in the 1980's had been financed by new capital issues[5].

In India, in the initial years of independence, the capital market played a limited role for meeting the needs of industrial finance. The managing agency system and the London Capital Market supported many foreign companies working in India. Specialized intermediaries to manage the activities like promotion, issue management, underwriting of issues, and registrars for issues, were mostly non-existent up to April 1970. During 1970s, the banks and financial institutions established their merchant banking divisions to take up new issue market activities. After the enactment of Foreign Exchange Regulation Act (FERA), many well managed multinational companies offered their equities over and above 40%, to the public at regulated low prices during the mid and late-seventies. Followed by the good response of such issues, a large number of domestic public limited

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[2] Singh, Ajith and Javed Hamid (1992), 'Corporate Finance Structures in Developing Countries', Technical Paper 1, Washington D.C, International Finance Corporation.

[3] Singh Ajit (1995), 'Corporate Financial Patterns in Industrialised Economies; A Comparative International Study', Technical paper 2, Washington D.C, International Finance Corporation.

[4] Damodaran, A (1997), 'Corporate Finance; Theory and Practice', New York; John Wiley and Sons.

[5] Singh, Ajit (1995).

companies offered new capital issues for public subscription. The new issues market emerged as a major source of funds for the industrial sector.

1. New Capital Issues by Non-Govt Public Limited Companies

The amount raised by way of new capital issues by the Non-Government Public Limited Companies went up from Rs. 285 Crores in the decade 1951-60 to Rs. 728 Crores in 1961-70 and to Rs. 981 Crores in 1971-80. In the 80's, (ie, from 1981-82 to 1990-91) the amount of new capital issues rose to Rs. 23359.6 crore, an increase of 24 times over the previous decade. During the period 1991-92 to 2000-01, it aggregated to a level of Rs. 117273.4 Crores (grew by 5 times). In this decade (1992-2001) about 84% of the issue was done in the first six years. From 2001-02 to 2004-05, it accounted to Rs. 24371.1 Crores. Thus, the decade 90's witnessed an alarming increase in the new capital issues compared to the 70's and 80's.

Table 5.11 New Capital Issues by non-Govt. Public Limited Companies

[Rs. in Crore]

Period	Ordinary Shares	Preference Shares	Debentures	Total
1951-1960	201.6 *(70.7)*	39.5 *(13.8)*	43.9 *(15.4)*	285 *(100)*
1961-1970	461.9 *(63.4)*	77.5 *(10.6)*	188.3 *(25.8)*	727.7 *(100)*
1971-80	730.6 *(74.4)*	53.7 *(5.4)*	197 *(20)*	981.3 *(100)*
1981-82 – 1990-91	7857.6 *(33.6)*	39.9 *(0.1)*	15462.1 *(66.1)*	23359.6 *(100)*
1991-92 – 2000-01	66306.9 *(56.5)*	564.9 *(0.4)*	50401.6 *(42.9)*	117273.4 *(100)*
2001-02 – 2004-05^{p}	15243.3 *(62.5)*	0	9127.8 *(37.4)*	24371.1 *(100)*

Source *RBI, Handbook of Statistics on the Indian Economy, 2004-05*

*Notes: *Values in parenthesis are the percentage share of the total. Preference shares include cumulative convertible shares. Debentures include bonds issued by certain financial institutions and partly convertible debentures. *New Capital Issues include both initial and further issues.*

The period 1980's marked an enormous increase of debentures, while preference shares remained dormant.

Table 5.12 New Capital Issues by Non-Govt. Pub Ltd Cos-No of Issues

(Nos)

Period	Ordinary Shares	Preference shares	Debentures	Total
1971-80	-	-	-	1657
1981-82 - 1990-91	4190 *(82.9)*	55 *(1.08)*	807 *(15.9)*	5052 *(100)*
1991-92 – 2000-01	6476 *(89.5)*	34 *(0.47)*	724 *(10)*	7234 *(100)*
2001-02 – 2004-05	97 *(80.8)*	0	23 *(19.1)*	120 *(100)*

Source: RBI, Handbook of Statistics on the Indian Economy, 2004-05 (computed values), Values in parenthesis shows percentage of the total.

The number of equity issues and debentures increased considerably during the period 1981-82 to 2000-01, while the number of preference shares turned down to a negligible level.

Table 5.13 New Capital Issues by Non-Govt. Pub Ltd Cos: the average size of issues

[Crs]

Period	Ordinary shares	Preference Shares	Debentures
1981-82 – 1990-91	1.88	0.73	19.16
1991-92 – 2000-01	10.24	16.61	69.62
2001-02 – 2004-05	157.15	0	396.86

Source: RBI, Handbook of Statistics on the Indian Economy, 2004-05 (computed values)

The 1980s marked an increase in the amount and the number of equity issues and debentures. In 1990's substantial improvement was made in the average size of issues of ordinary shares, preference shares and debentures, even though the growth of debentures was much greater than the other two. The recent tendency of the size of capital issues point towards a staggeringly high level, more predominantly in debentures.

Thus, in new capital issues by non-Government public limited companies since 1990's, ordinary shares outdo preference shares and debentures in terms of amount raised and number of issues, where as debentures show substantial growth in the size of issues.

Table 5.14 New Capital Issues by non-Govt. Pub Ltd Cos – New & Existing Issues

(Rs in Crs)

Period	New Capital Issues		Existing Capital Issues		Total	
	No (%)	Amount (%)	No (%)	Amount (%)	No (%)	Amount (%)
1971-80	869	488.7	788	492.6	1657	981.3
	52.4	*49.8*	*47.6*	*50.2*	*100*	*100*
1981-82 - 1990-91	2915	5315.7	2137	18043.9	5052	23359.6
	57.7	*22.8*	*42.3*	*77.2*	*100*	*100*
1991-92 - 2000-01	1993	24952.1	5241	92321.3	7234	117273.4
	27.6	*21.3*	*72.5*	*78.7*	*100*	*100*
2001-02 - 2004-05	38	6457.1	82	17914	120	24371.1
	31.7	*26.5*	*68.3*	*73.5*	*100*	*100*

Source *RBI, Handbook of Statistics on the Indian Economy, 2004-05 (computed values), Values in italics shows percentage of the total.*

*Note: New capital issues exclude bonus shares, private placement, and offer for sale. *The concepts of 'initial' and 'further' issues were changed to 'new' and 'existing' issues.*

The split-up of the capital issues of new and existing issues shows variations in the two decades of 80's and 90's. The percentage share of the amount raised and its number declined in the case of new capital issues in 1990s where as it increased in the case of existing issues. It increased from 42% to 73% in the number of issues and 77% to 79% in terms of amount. However, the tendency reversed in recent years.

From the above observations, it can be inferred that the main factors behind the development of new capital issues of non-Government public limited companies are the spurt in the issues of ordinary shares and debentures of the existing companies, explaining the "narrowness"[6] of the equity market.

In addition to the traditional methods of raising resources through public and right issues, 'private placement' has also gained ground in recent years. The major advantage of tapping this source of finance is in terms of cost and time effectiveness and can be structured to the requirements of issuers. It also does not require detailed compliance of formalities that are necessary for public or rights issues. The market witnessed the introduction of several innovative debt instruments like step-down/step-up debentures, liquid income debentures and subordinated bonds[7].

[6] Abid Hussain Committee (1989)

[7] RBI (1997), p. 94

Table 5.15 Resource Mobilisation in the Private Placement Market: Private Sector

[Crore]

Period	Financial Institutions		Non-financial Institutions		Total	
	No of Issues	Amount	No of Issues	Amount	No of Issues	Amount
1995-96–2000-01	471	44618.7	455	30653.3	1065*	75272
2001-02–2004-05	1289	58997.8	1616	49203.2	2905	108201

Source *RBI, Handbook of Statistics on the Indian Economy, 2004-05 (computed values)*

** as given in the data source.*

The amount raised from the private placement market by the private sector during the period 1996-2001 from 1065 issues was 1.65 times higher than the new capital issues from 2869 issues in the form of shares and debentures in that period. During the period 2002 – 2005, the amount mobilized from the private placement market was 4.44 times higher than the new capital issues through shares and debentures. The number of issues is 24 times higher during the same period.

Table 5.16 Private Placement Market: Public & Private Sector

[Rs. Crore]

Period	Private Sector Total		Public Sector Total		Grand Total	
	No. of Issues	Amount	No. of Issues	Amount	No. of Issues	Amount
1995-96 – 2000-01	1065 *(61.3)*	75272 *(31.7)*	673 *(38.7)*	162028 *(68.3)*	1738 *(100)*	237300 *(100)*
2001-02 – 2004-05	2905 *(74.7)*	108201 *(38.7)*	985 *(25.3)*	171575.7 *(61.3)*	3890 *(100)*	279776.7 *(100)*

Source: RBI, HB, 2004-05

The amount raised from the private placement market by the public sector is much higher than that of the private sector. Out of a total of Rs. 237300 Crs raised during the period 1995-96 to 2000-01, about 68.3% was bagged by the public sector. In 2001-02 to 2004-05, the share of public sector in private placement market was 61.3%.

In new capital issues by non-Government public limited companies since 1990s, ordinary shares outdo preference shares and debentures in terms of amount raised and the number of issues particularly of existing company's, where as debentures show substantial growth in the size of issues. The amount raised from the private placement market by the private sector during the period 1996-2001 was 1.65 times higher and during the period 2002 – 2005 was 4.44 times higher than the new capital issues from shares and debentures in that period. In the private placement market, the amount raised by the public sector was much higher than that of the private sector. Its share in total amount was 68% during the period 1996-2001 and 61% in the period 2002-2005.

2. Financing Non-Government Non-financial Companies

Financing of project cost of non-government non-financial companies through prospectus in the form of share capital, debentures, loans and other assets can be shown in Table 5.17.

Table 5.17 Financing of Project cost of Non-Government Non-Financial Companies*

[Rs. in Crore]

Period	No.of Cos	Share Capital*[1]	Debenture/ Bonds	Loans*[2]	Others*[3]	Total
1971-72 – 1980-81	828	669 *(28.3)*	110 *(4.6)*	1263 *(53.5)*	319 *(13.5)*	2361 *(100)*
1981-82 – 1990-91	3183	10839 *(41.7)*	5768 *(22.2)*	8468 *(32.6)*	941 *(3.6)*	26016 *(100)*
1991-92 – 2000-01	2922	26685 *(43.2)*	3360 *(5.4)*	27571 *(44.6)*	4151 *(6.7)*	61767 *(100)*
2001-02 – 2003-04[P]	20	3147 *(52.6)*	0	2827 *(47.2)*	15 *(0.2)*	5989 *(100)*

*Source Department of Company Affairs, Ministry of Finance, GoI, (Given in HB, RBI 2004-05), *Cos which issue prospectus*

*Notes: *[1]Share capital includes; domestic equity and preference capital. *[2]Others include; foreign equity capital, reserves and surplus, subsidy from central government, deferred payments. *[3]Loans constitutes; loans from IDBI, IFCI, ICICI, UTI, LIC, SFCs & SIDCs, Banks, Promoters/Directors etc., Insurance Companies, GIC, and other sources (foreign and Indian)*

Of the total project costs of non-government non-financial companies in the 1980s, 41.7% was financed through domestic share capital. Loans and debentures constitute 32.5% and 22.2% respectively. 'Others' was only 3.6%. But in 1990s, the part of loan

capital (44.6%), exceeded share capital (43.2%). The contribution of debenture declined and 'others' increased to 6.8%. The picture of the growth of loan capital over share capital in the two decades can be clearly seen in Table 5.18.

Table 5.18 Financing of Project cost of Non-Government Non-Financial Companies in the 1980's and 1990's

[Rs. in Crore]

Year	No of Cos		Share Capital		Debenture		Loans		Others	Total
1981-82	244		273		222		875		89	1459
1982-83	353		207		208		322		101	838
1983-84	441		254		29		305		33	621
1984-85	395		330		73		445		78	926
1985-86	676		575		90		767		51	1483
1986-87	385		738		576		1150		127	2591
1987-88	119		746		184		584		56	1570
1988-89	178	1074	719	**9200**	950	**5146**	1390	**5754**	94	3153
1989-90	262	34%	4263	85%	2681	89%	1231	68%	100	8275
1990-91	130		2734		755		1399		212	5100
sub total	3183		**10839**		**5768**		**8468**		941	26016
1991-92	159		1969		653		1570		211	4403
1992-93	426		3592		737		2291		279	6899
1993-94	525	2491	5747	**22526**	320	**3360**	7023	**24857**	1453	14543
1994-95	800	85%	7199	84%	1097	100%	9566	90%	1529	19391
1995-96	581		4019		553		4407		617	9596
1996-97	269		1117		0		1417		11	2545
1997-98	13		114		0		130		6	250
1998-99	5		55		0		30		1	86
1999-00	53		1889		0		457		2	2348
2000-01	91		984		0		680		42	1706
sub total	2922		**26685**		**3360**		**27571**		4151	61767
2001-02	4		1702		0		781		0	2483
2002-03	3		199		0		79		0	278
2003-04	13		1246		0		1967		15	3228
sub total	20		3147				2827		15	5989

Source: RBI, HB, 2004-05 (computed)
Notes: as given above.

The financing of the project cost of Non-Government Non-financial companies indicated an upward trend in terms of share capital and loans in the 1990's over the previous decade. In absolute values, share capital more than doubled and loan capital more than trebled. Out of Rs 10839 Crs of share capital mobilized in the 1980's, 85% (Rs 9200 Crs) was collected in the second half of the period (1986-87 to 1990-91) from 33.7% of companies. The same in the 1990's indicated that more than 84% was financed in the first half of the decade (1991-92 to 1995-96) from 85% of companies. The part of loan capital brought together during the second half of 80's and the first half of 90's

constituted 68% (Rs. 5754 Cr) and 90% (Rs 24857 Crs) of its decadal total. In between share capital and loan financing, share capital outperformed loan financing in the second half of 80's whereas the reverse is true in the first half of 90's. The period 1986-96 marked a substantial spurt in the disbursement of loan capital by NBFIs and banks to the project cost of non-Government non-financial companies.

Thus, in terms of both share capital and loan capital, the period 1985-96 has expressed high degree of momentum in the financing of the project cost of non-government non-financial companies.

Table 5.19 Financing of Project Cost of NGNF Companies: Periodical Changes

(Rs. Crs)

Period	No of Cos	Share Capital	Debt Capital	Others	Total
Overall	6125	43727	47994	2051	93772
		46.6	*51.2*	*2.2*	*100*
Pre-reform	3183	10861	14236	919	26016
		41.7	*54.7*	*3.5*	*100*
Post-reform	2942	32866	33758	1132	67756
		48.5	*49.8*	*1.7*	*100*

Source: RBI Bulletin, (Computed)

Notes; (1)Equity capital includes domestic equity and preference capital and foreign equity capital.

(2) Debt capital includes loan from IDBI, IFCI, ICICI, UTI, LIC, SFCs, SIDCs, Banks, Promoters/Directors, Insurance Cos, GIC, Other Sources(foreign and Indian) and Debentures/Bonds

In a comparison between equity and debt capital in the pre and post-reform periods, equity capital increased from 42% to 49% whereas debt capital declined from 55% to 50% of the total finance. However, the picture becomes clear when we split up the decadal change based on five year periods. Though the number of NGNF companies financed through equity and debt capital had declined from 3183 in 1981-91 to 2942 in 1991-04, the percentage share of debt capital continued to dominate equity capital during the first half of the post-reform period. Since then the absolute amount of both equity and debt capital declined, more predominantly in debt capital; particularly debentures. The changes in the percentage shares of equity and debt capital during the period 1981- 2004 based on five year periods can be shown below:

Table 5.20 Financing of Project Cost of NGNF Companies: Changes on 5 Year Periods

(Rs in Crs)

Period	No of Cos	Equity Capital	Debt Capital	Others	Total
1981-86	2109	1640 (30.8)	3336 (62.6)	351 (6.6)	5327 (100)
1986-91	1074	9221 (44.6)	10900 (52.7)	568 (2.7)	20689 (100)
1991-96	2491	25537 (46.6)	28217 (51.5)	1078 (1.9)	54832 (100)
1996-01	431	4167 (60.1)	2714 (39)	54 (0.9)	6935 (100)

Source: RBI Bulletin (computed)

Note: figure in parenthesis shows the percentage of the total.

-Equity capital includes domestic equity, preference and foreign equity capital

-Debt capital includes loans of Development Banks, SFCs, Banks, Promoters, Insurance Cos, GIC, Other sources and Debenture/Bonds

Thus, from the observations of new capital issues of non-government public limited companies and the financing of project cost of all non-government non-financial companies, it can be seen that in both cases, the volume of equity capital and debt capital increased in the post reform period compared to the pre reform period. The amount financed through equity capital and debt capital have improved considerably in the first half of 1990s, nevertheless, it declined in the second half of the post-reform decade.

The secondary market, usually referred to as stock market, is an important part of the capital market. A recent study on the implications of stock market development for intermediation and economic growth shows that stock markets may affect economic activity through creation of liquidity. Demirguc-Kunt and Levine (1996)[8] examined the interaction between stock market development and financial intermediaries on growth. In an empirical investigation on the effect of stock market development on firm's finances, they observed that both equity and debt have increased in the early stages of economic development.

In India, UTI, the first mutual fund and the major institutional investor in the stock market was set up in 1964. Since 1987, public sector banks have formed mutual funds as per the amendment of the Banking Regulation Act, (1983). After that financial

[8] Demirguc-Kunt, Asli and Ross Levine, (1996), 'Stock Market Development and Financial Intermediaries; Stylised Fact', The World Bank Economic Review, Vol.10, No.2

institutions sponsored and mutual funds initiated by private sector have become operational. Mutual funds are associations or trusts of public members who wish to make financial investments in financial assets for the mutual benefit of its members. The funds collected from the members are invested in a diversified portfolio of financial assets with a view to reduce risks and to maximize income/capital appreciation to its members on a pro-rata basis.

Table 5.21 Net Resources Mobilised by Mutual Funds in India

(Rs. in Crs)

Period	UTI	Others	Total
1971-81	434.5	-	434.5
1981-91	19614.6	4728.8	24343.4
1991-01	36208.4	42724.5	78932.9
2001-05	-18390.5	83980.5	65590

Source: RBI, HB 2004-05 (p.130)

Foreign Institutional Investors (FIIs) were allowed to invest in the Indian capital market securities from September 1992. However, investments by them were made first in January 1993. FII's net investment in equities can be shown in Table 5.22.

Table 5.22 Net Investments by FIIs in the Indian Capital Market

(Rs in Crs)

Year	Investment (as on March)
1992-93	4.27
1993-94	5444.6
1994-95	4776.6
1995-96	6720.9
1996-97	7386.2
1997-98	5908.45
1998-99	-729.11
1999-00	9765.13
2000-01	9682.52
2001-02	8272.9
2002-03	2668.9
2003-04	44000.03
2004-05	41416.45

Since 1992, Indian companies were allowed to raise funds from abroad through Global Depository Receipts (GDRs). The amount raised through Euro Issues can be seen from the table given below:

Table 5.23 Number and Quantum of Euro Issues

(Rs in Crs)

Year	No of Issues	Amount
1992-93	2	702.32
1993-94	27	7897.82
1994-95	31	6743.23
1995-96	5	1296.69
1996-97	16	5594.27
1997-98	7	4009.46
1998-99	3	1147.78
1999-00	6	3487.21
2000-01	13	4197.07
2001-02	5	2384.81
2002-03	11	3426.42
2003-04	18	3097.55
2004-05	15	3353.25

Of the total project costs of non-government non-financial companies, a comparison between equity and debt capital in the pre and post-reform periods indicated that, equity capital increased from 42% to 49% whereas debt capital declined from 55% to 50% of the total finance; mainly due to the depleting debentures. In between share capital and loans, share capital outperformed loan financing in the second half of 1980s whereas the reverse is true in the first half of 1990s. The period 1986-96 marked a substantial spurt in the disbursement of loan capital by NBFIs and banks to the project cost of non-Government non-financial companies.

Thus, from the observations of new capital issues of non-government public limited companies and the financing of project cost of all non-government non-financial companies, it can be seen that in both cases, the volume of equity capital and debt capital increased in the post-reform period compared to the pre-reform period. The amount financed through equity capital and debt capital have improved considerably in the first half of 1990s, nevertheless, it declined in the second half of the post-reform decade.

3. The Growth of corporate financing in India – Evidences

The main issues addressed in this context are; (1) is there any discernible change in the pattern of corporate finance in the pre and post reform periods with respect to; (a) Equity Vs debt capital, and, (b) Internal Vs External finance?, (2) what are the relative shares of these components in total finance during these periods?

To answer these questions, the financing pattern of large Non-Government Non-Financial (NGNF) Public Limited Companies (each with a paid-up capital of Rs.1 Cr and above) taken up by the RBI in different sets of samples over the period 1982-83 to 2002-03 has been considered. The paid-up capital of these samples of companies ranges from 13.6 % to 45.7 % of all the NGNF public limited companies. We have used absolute values obtained from the combined balance sheet and computed selected financial ratios for analysis. Since the sample size and the sets of companies vary, the observations drawn are subject to limitations.

The Financial Structure of Selected Companies

The financial structure of selected NGNF Public Limited Companies during the period 1983-2003 exhibited that, total finance was Rs 20881 Crs in 1982-83 (500 companies), increased to Rs 348800 Crs in 2002-03 (997 companies). The sample size doubled whereas total finance augmented by 17 times. Current Liabilities including trade dues and other current liabilities and provisions increased by 13 times, borrowings consisting of debentures, loans and advances grew by 16 times, and share capital witnessed more than 11 fold increase during these periods. The remarkable progress was observed in reserves and surplus in this period. It increased by 27 times Table 5.24(a)]. In periodical basis, total finance rose by around 7 times while current liabilities improved by 5 times, borrowings and share capital by 7 and 6 times, and, reserves and surplus by 9 times in the post-reform period compared to the pre-reform period. The sample size doubled during these periods [Table 5.24(b)].

Table 5.24(a) Financial Structure of Selected NGNF Pub Ltd Cos: 1983-2003 [Rs in Crs]

Year	No of Cos	Current Liabilities	Borrow-ings	Share Capital	Reserves & Surplus	Total Finance
1982-83 Pre-reform	500	6972	7700	2269	3939	20881
		33.4	*36.9*	*10.9*	*18.9*	*100*
1983-84	500	7385	9005	2466	4703	23560
		31.3	*38.2*	*10.5*	*20.0*	*100*
1984-85	535	8694	10789	2750	6443	28676
		30.3	*37.6*	*9.6*	*22.5*	*100*
1985-86	581	10330	13555	2936	9179	35999
		28.7	*37.7*	*8.2*	*25.5*	*100*
1986-87	581	11600	15792	3261	9926	40579
		28.6	*38.9*	*8.0*	*24.5*	*100*
1987-88	622	11280	15755	3524	10390	40949
		27.5	*38.5*	*8.6*	*25.4*	*100*
1988-89	622	13517	18800	3794	11626	47738
		28.3	*39.4*	*7.9*	*24.4*	*100*
1989-90	640	15860	24038	4430	13725	58053
		27.3	*41.4*	*7.6*	*23.6*	*100*
1990-91	645	18323	27730	5206	17079	68338
		26.8	*40.6*	*7.6*	*25.0*	*100*
1991-92	648	24370	40912	7058	23090	95430
		25.5	*42.9*	*7.4*	*24.2*	*100*
1992-93 Post-reform	650	26967	48672	7984	28086	111709
		24.1	*43.6*	*7.1*	*25.1*	*100*
1993-94	655	28352	49744	8710	39702	126508
		22.4	*39.3*	*6.9*	*31.4*	*100*
1994-95	680	30312	52745	9781	47959	140797
		21.5	*37.5*	*6.9*	*34.1*	*100*
1995-96	700	32343	53062	9377	51240	146022
		22.1	*36.3*	*6.4*	*35.1*	*100*
1996-97	756	40203	73463	12284	72525	198475
		20.3	*37.0*	*6.2*	*36.5*	*100*
1997-98	807	50170	103124	16439	90593	260326
		19.3	*39.6*	*6.3*	*34.8*	*100*
1998-99	820	50335	99923	16866	77741	244865
		20.6	*40.8*	*6.9*	*31.7*	*100*
1999-00	855	56712	116767	22028	100216	295723
		19.2	*39.5*	*7.4*	*33.9*	*100*
2000-01	964	58266	117024	22073	92504	289867
		20.1	*40.4*	*7.6*	*31.9*	*100*
2001-02	990	59403	91284	24015	64293	238995
		24.9	*38.2*	*10.0*	*26.9*	*100*
2002-03	997	92173	126268	25181	105178	348800
		26.4	*36.2*	*7.2*	*30.2*	*100*

*Source: RBI Bulletin various vols: 1983-84 to March 2004. *Borrowings include debentures, loans and advances, deferred payments and public deposits. Current liabilities include trade dues and other current liabilities and provisions.*

Table 5.24(b) Financial Structure of Selected Cos: Periodical Changes [Rs in Crs]

Period	No of Cos	Current Liabilities	Borrowings	Share Capital	Reserves & Surplus	Total Finance
Overall	14748	653567	1116151	212433	880138	2862289
		22.8	*39.0*	*7.4*	*30.7*	*100*
Pre-reform	5226	103961	143163	30637	87011	364772
		28.5	*39.2*	*8.4*	*23.9*	*100*
Post-reform	9522	549606	972988	181796	793127	2497517
		22.0	*39.0*	*7.3*	*31.8*	*100*

Internal and External Finance

The changes in the composition of Total Long term Finance including internal and external sources has been given in Table 5.25(a). It is obtained by considering the average values of financial variables every year. Total External Finance consists of borrowings and share capital. Total Internal Finance comprises reserves and surplus. The reserves and surplus of RBI data accommodate share premium reserves as well. Therefore, the share of Total External Finance out of Total Long-term Finance declined from 71.7% in 1982-83 to 59% in 2002-03. Total Internal Finance during the same period improved from 28.3% to 41%. In a periodical basis, the share of Total External Finance declined from 66.8% before the reforms to 59.3% after the reforms whereas, Total Internal Finance enhanced from 33.2% to 40.7% during the same period.

Table 5.25(a) External and Internal Sources of Finance [Rs in Crs]

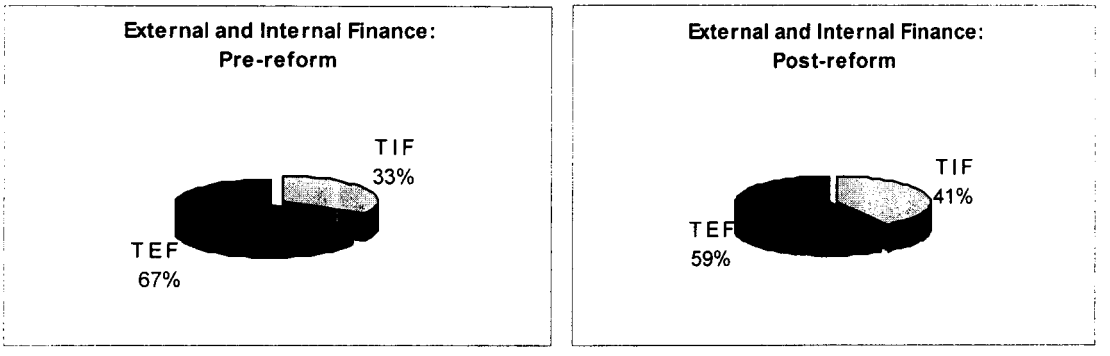
Year	Total External Finance	Total Internal Finance	Total Long-term Finance
1982-83	19.9	7.9	27.8
Pre-reform	71.7	28.3	100
1983-84	22.9	9.4	32.4
	70.9	29.1	100
1984-85	25.3	12.0	37.3
	67.8	32.2	100
1985-86	28.4	15.8	44.2
	64.2	35.8	100
1986-87	32.8	17.1	49.9
	65.7	34.3	100
1987-88	31.0	16.7	47.7
	65.0	35.0	100
1988-89	36.3	18.7	55.0
	66.0	34.0	100
1989-90	44.5	21.4	65.9
	67.5	32.5	100
1990-91	51.1	26.5	77.5
	65.9	34.1	100
1991-92	74.0	35.6	109.7
Post-reform	67.5	32.5	100
1992-93	87.2	43.2	130.4
	66.9	33.1	100
1993-94	89.2	60.6	149.9
	59.6	40.4	100
1994-95	92.0	70.5	162.5
	56.6	43.4	100
1995-96	89.2	73.2	162.4
	54.9	45.1	100
1996-97	113.4	95.9	209.4
	54.2	45.8	100
1997-98	148.2	112.3	260.4
	56.9	43.1	100
1998-99	142.4	94.8	237.2
	60.0	40.0	100
1999-00	162.3	117.2	279.5
	58.1	41.9	100
2000-01	144.3	96.0	240.3
	60.1	39.9	100
2001-02	116.5	64.9	181.4
	64.2	35.8	100
2002-03	151.9	105.5	257.4
	59.0	41.0	100

**Percentages are given in italics **Data based on the average values of financial variables every year.*

Table 5.25(b) External and Internal Sources of Finance: Periodical Changes

Period	TEF	TIF	TLF
Overall	1703	1115	2818
	60.4	39.6	100
Pre-reform	292	146	438
	66.8	33.2	100
Post-reform	1411	970	2380
	59.3	40.7	100

Fig 5.25(a) Composition of Internal and External Finance: Periodical Changes



The components of external sources of finance over the period 1983-2003 revealed that the share of borrowings have progressed compared to share capital. Borrowings include debentures and long-term loans. Its share improved from 77.2% of Total External Finance in 1982-83 to 83.4% in 2002-03. The part of share capital on the other hand depleted from 22.8% to 16.6% during the same period. In periodical basis, borrowings progressed from 82.2% in the pre-reform period to 84.4% in the post-reform period while share capital deteriorated from 17.8% to 15.6%. It has been given in the following tables.

Table 5.26(a) Components of External Sources of Finance [Rs in Crs]

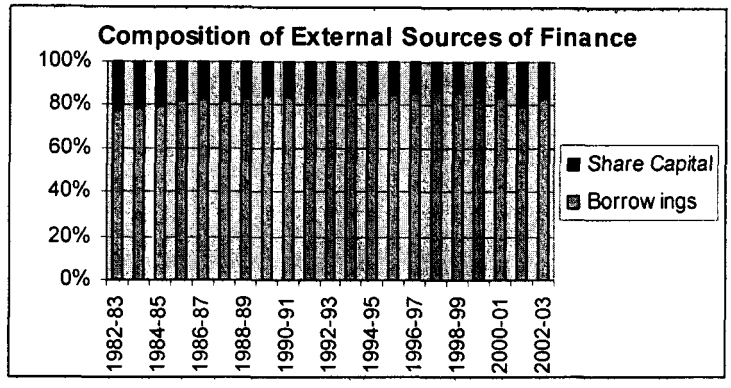
Year	Borrowings	Share Capital	Total External Finance
1982-83	15.4	4.5	19.9
Pre-reform	77.2	22.8	100
1983-84	18.0	4.9	22.9
	78.5	21.5	100
1984-85	20.2	5.1	25.3
	79.7	20.3	100
1985-86	23.3	5.1	28.4
	82.2	17.8	100
1986-87	27.2	5.6	32.8
	82.9	17.1	100
1987-88	25.3	5.7	31.0
	81.7	18.3	100
1988-89	30.2	6.1	36.3
	83.2	16.8	100
1989-90	37.6	6.9	44.5
	84.4	15.6	100
1990-91	43.0	8.1	51.1
	84.2	15.8	100
1991-92	63.1	10.9	74.0
Post-reform	85.3	14.7	100
1992-93	74.9	12.3	87.2
	85.9	14.1	100
1993-94	75.9	13.3	89.2
	85.1	14.9	100
1994-95	77.6	14.4	92.0
	84.4	15.6	100
1995-96	75.8	13.4	89.2
	85.0	15.0	100
1996-97	97.2	16.2	113.4
	85.7	14.3	100
1997-98	127.8	20.4	148.2
	86.3	13.7	100
1998-99	121.9	20.6	142.4
	85.6	14.4	100
1999-00	136.6	25.8	162.3
	84.1	15.9	100
2000-01	121.4	22.9	144.3
	84.1	15.9	100
2001-02	92.2	24.3	116.5
	79.2	20.8	100
2002-03	126.6	25.3	151.9
	83.4	16.6	100

**Percentages are given in italics **Data based on the average values of financial variables every year.*

Table 5.26(b) Components of External Sources of Finance: Periodical Changes

Period	Borrowings	Share Capital	TEF
Overall	1431.16	271.65	1702.81
	84.0	16.0	100
Pre-reform	240.19	52.04	292.23
	82.2	17.8	100
Post-reform	1190.97	219.62	1410.58
	84.4	15.6	100

Fig 5.26 Composition of External Sources of Finance



Conclusion

In short, the RBI data based on different sample size and different sets of companies over the period 1983-2003 exhibited that, in Total Long-term Finance the share of Total External Finance declined in the post-reform period compared to the pre-reform period. The Total Internal Finance on the other hand, enhanced. Here, RBI data includes Share Premium Reserves under Internal Finance. The composition of Total External Finance revealed that, the share of borrowing including Debentures and Long-term Loans progressed in the reform period while the part of Share Capital declined.

CHAPTER – 6 (1)

THE PATTERN OF INVESTMENT OF THE PRIVATE CORPORATE SECTOR IN INDIA; 1983-2003

- Pattern of Private Corporate Investment in India: Aggregate Level
- Pattern of Investment: Industry-wise and Size-wise
- Pattern of Investment: Firm Level
- Conclusion

Chapter – 6(1)

The Pattern of Investment of the Private Corporate Sector in India; 1983-2003

To study the pattern of investment of the private corporate sector in India, we have analysed the asset structure of 150 Non-Government Non-Financial (NGNF) Public Limited Companies. The asset structure refers to total assets and their components. It includes all types of assets of the company such as fixed assets and current assets. The asset structure of companies from its Balance Sheet Account data for the period 1983–2003 was obtained from the Bombay Stock Exchange Official Directory and audited Annual Accounts of Company's data source. To distinguish the pre and the post-reform phenomena in respect of investment, we have classified the data of 21 years from 1983 to 2003 into; (1) 1983-1991 (pre-reform) and (2) 1992-2003 (post-reform) periods. The variables considered from the balance sheet account, and their compositions are the same as that of Bombay Stock Exchange Official Directory. The pattern of investment has been analysed in an aggregate level and firm level during the period 1983-2003. This section begins with an aggregate level analysis, followed by industry-wise, and size-wise cataloging. For industry classification we have followed the company classification of BSE. The size-wise sorting is based on RBI pattern.

TNA = CA + NFA + OA

CA = Cash and Bank Balances + Sundry Debtors + Inventory + Misc. Curr. Assets

NFA = NET (Plant and Machinery + Land and Buildings)

OA = Investment in Subsidiaries + Misc. Assets + Intangible Assets

1. Pattern of Private Corporate Investment in India

Aggregate Level

The balance sheet account data of 150 NGNF companies were consolidated for the period 1983-2003. Total Net Asset comprising Current Assets, Net Fixed Assets and 'Other Assets' ('Other Assets' include investment in subsidiaries, miscellaneous assets and intangible assets) have increased over the period 1983-2003 [Table 6.11(a)]. The

Total Net Assets increased from Rs 8830 Crs in 1982-83 to Rs 182012 Crs; about 21 times in 2002-03. Its components Current Assets advanced from Rs 4856 Crs in 1982-83 to Rs 79965 Crs in 2002-03; growth of around 16 times, Net Fixed Assets progressed from Rs 3890 Crs to Rs 70925 Crs; an increase of about 18 times, and Other Assets shoot up from 84 Crs to 31122 Crs; rose by 371 times during the same period. We have obtained the growth of Other Assets such as Plant and Machinery and 'others' (include land and buildings). Plant and Machinery grew up from Rs 4071 Crs in 1982-83 to Rs 96067 Crs (growth by 24 times) in 2002-03. 'Others' including land and buildings augmented from Rs 1874 Crs to Rs 25866 Crs (14 times) during this period.

A paradigm upward shift can be seen in these variables since 1991 [Fig. 6.11(a)]. The Total Net Assets curve has become steeper during the period 1993-97. It has slowed down for the period 1998-2000. The Net Fixed Assets curve has steadily increased from 1991 to 1997. It was almost stagnant for the period 1997-2000. Other Assets have considerably increased since 1991.

In periodical basis, the Total Net Assets increased by 8 times, Current Assets by around 7 times, Net Fixed Assets and Plant & Machinery grew up by about 8 times in the post-reform period. Other Assets have advanced by more than 79 times in the post-reform period compared to the pre-reform period. As a percentage of Total Net Assets, the position of Current Assets and Net Fixed Assets deteriorated whereas Other Assets advanced. It can be viewed from Table 6.11(b).

The overall, pre-reform and post-reform compound rate of growth of asset components may give a better picture of the growth of investment of the private corporate sector over the period 1983-2003. The rate of growth of Total Net Assets remains the same (15.1%). In the case of Net Fixed Assets and Other Assets the rate of growth accelerated in the post-reform period whereas it declined in Current Assets. The rate of growth of Net Fixed Assets advanced from 13.2% to 15% and Other Assets from 20.4% to 42%. In the case of Current Assets, it declined from 16.6% to 11.7%. Plant and

Machinery also witnessed increased rate of growth in the reform period. It has been depicted in Table 6.11(c).

Table 6.11(a) Asset Structure: Aggregate Level At current prices [Rs in Crores]

Year	Current Assets (1)	Net Fixed Assets (2)	Other Assets** (3)	Plant & Machinery*** (4)	Others* (5)	Total Net Assets (1+2+3)
1983 Pre-reform	4856 (55.0)	3890 (44.1)	84 (1.0)	4071 (46.1)	1874 (21.2)	8830
1984	5310 (51.7)	4852 (47.3)	102 (1.0)	4950 (48.2)	2329 (22.7)	10264
1985	6521 (51.9)	5931 (47.2)	106 (0.8)	6093 (48.5)	2887 (23.0)	12557
1986	7917 (52.4)	7039 (46.6)	139 (0.9)	7384 (48.9)	3158 (20.9)	15096
1987	8428 (52.8)	7279 (45.6)	270 (1.7)	7851 (49.1)	3788 (23.7)	15976
1988	9561 (54.3)	7839 (44.5)	208 (1.2)	8641 (49.1)	3939 (22.4)	17609
1989	11748 (55.1)	9324 (43.8)	236 (1.1)	10621 (49.8)	4143 (19.4)	21308
1990	13612 (58.4)	9451 (40.6)	240 (1.0)	11321 (48.6)	4120 (17.7)	23302
1991	17030 (58.2)	11800 (40.3)	431 (1.5)	13847 (47.3)	5674 (19.4)	29262
1992 Post-reform	20149 (56.2)	15146 (42.3)	551 (1.5)	15997 (44.6)	8230 (23.0)	35846
1993	25761 (57.5)	17925 (40.0)	1082 (2.4)	20082 (44.9)	8584 (19.2)	44768
1994	31120 (55.9)	22051 (39.6)	2463 (4.4)	23207 (41.7)	10888 (19.6)	55635
1995	40520 (55.2)	29523 (40.3)	3304 (4.5)	29148 (39.7)	14028 (19.1)	73346
1996	47347 (52.5)	38015 (42.2)	4743 (5.3)	35783 (39.7)	18055 (20.0)	90106
1997	50740 (48.5)	45595 (43.6)	8278 (7.9)	44148 (42.2)	20821 (19.9)	104613
1998	55017 (46.3)	53969 (45.4)	9784 (8.2)	53812 (45.3)	23480 (19.8)	118770
1999	57731 (47.4)	51825 (42.5)	12327 (10.1)	58252 (47.8)	21480 (17.6)	121882
2000	55454 (40.8)	53697 (39.6)	26618 (19.6)	67141 (49.5)	19795 (14.6)	135769
2001	60969 (44.4)	52842 (38.5)	23365 (17.0)	69986 (51.0)	21117 (15.4)	137176
2002	74615 (44.6)	72071 (43.1)	20526 (12.3)	92388 (55.3)	24144 (14.4)	167211
2003	79965 (43.9)	70925 (39.0)	31122 (17.1)	96067 (52.8)	25866 (14.2)	182012

Source: Computed from BSEOD, Mumbai. Others include land and buildings etc. **Other Assets include investment in subsidiaries, miscellaneous assets and intangible assets. ***Plant and Machinery, Others include depreciation. Amount as a percentage to Total Net Assets is given in parenthesis.*

Table 6.11(b) Asset Structure: Periodical Changes [Rs in Crores]

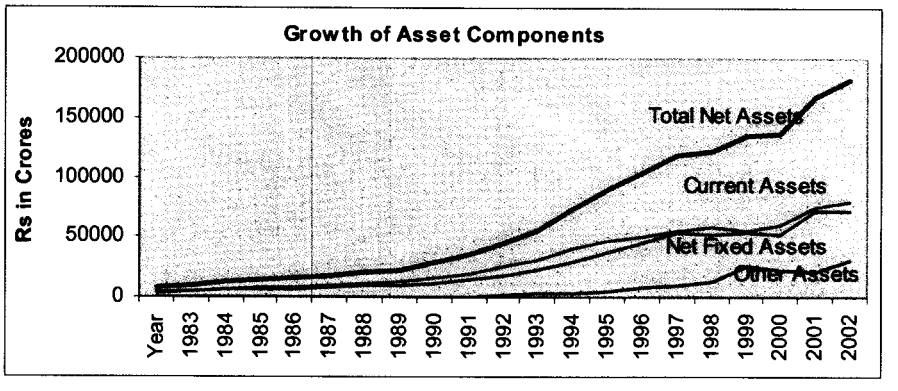
	Current Assets	Net Fixed Assets	Other Assets	Plant & Machinery	Others	Total Net Assets
Overall	684369	590990	145979	680791	248401	1421338
	(48.1)	(41.6)	(10.3)	(47.9)	(17.5)	
Pre-reform	84982	67405	1816	74778	31912	154203
	(55.1)	(43.7)	(1.2)	(48.5)	(20.7)	
Post-reform	599387	523585	144163	606013	216489	1267135
	(47.3)	(41.3)	(11.4)	(47.8)	(17.1)	

Table 6.11(c) Rate of Growth of Asset Components*

	Current Assets	Net Fixed Assets	Other Assets	Plant & Machinery	Others	Total Net Assets
Overall	16.2	16.7	39.8	17.6	15.1	17.5
Pre-reform	16.6	13.2	20.4	15.5	12.5	15.1
Post-reform	11.7	14.9	41.9	17.9	10.6	15.1

* *Compound rate of growth*

Fig 6.11(a) Growth of Asset Components (At current prices)



A detailed analysis of the composition of Total Net Assets comprising Current Assets, Net Fixed Assets, and Other Assets demonstrate that the share of Current Assets in total net assets which increased steadily from 1984 to 1991, declined there after. The share of Net Fixed Assets on the other hand declined gradually from 1984 to 1991 and other assets remain unchanged during this period. The tendency however, reversed in the post-reform period. That is, the share of Current Assets declined from 56% in 1992 to 44% in 2003 whereas the share of Net Fixed Assets and Other Assets together (NFA+OA) rose from 44% in 1992 to 56% in 2003. 'Other Assets' including investment in subsidiaries, intangible assets and miscellaneous assets registered substantial progress

in the post-reform period. It is evident from Fig 6.11(a). The periodical changes also disclose the same fact. The share of Current Assets was 55% and the contribution of Net Fixed Assets and Other Assets was 45% in the pre-reform period. It changed to 47% and 53% respectively during the post-reform period. The share of Other Assets alone changed from 1.2% in the former period to 11.4% in the latter period. These are presented in Fig 6.11(b) and (c).

Fig 6.11(b) Composition of Total Net Assets

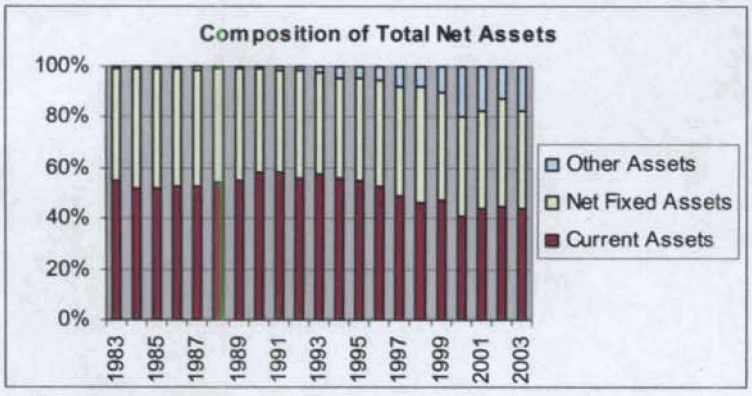
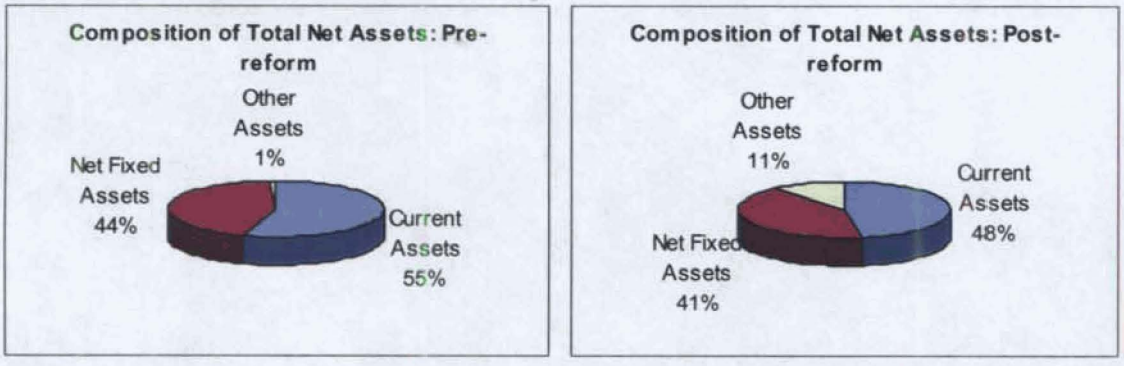
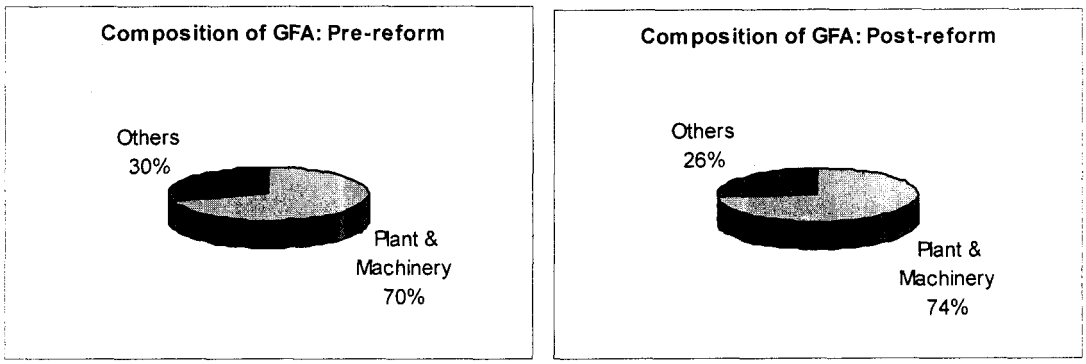


Fig 6.11(c) Composition of Total Net Assets: Periodical Changes



In Gross Fixed Assets, the changes in its components during the period 1983-2003 confirmed that, Plant and Machinery occupied a major share throughout the period. Its share increased from 70% in the pre-reform period to 74% in the post-reform period. The share of 'Others' including land and buildings declined from 30% to 26% in these two periods. The rate of growth of plant and machinery also advanced in the reform period. These are depicted in Fig 6.11(d).

Fig 6.11(d) Composition of GFA: Periodical Changes



We can further observe that even in the post-reform period, the period 1991-98 marked a considerable spurt in assets. The average annual rate of growth of Total Net Assets was around 23% in the 1991-98 periods whereas it was only 9% in the 1999-2003 periods. Similarly, the rates of growth of Net Fixed Assets, Other Assets and Plant and Machinery were 24%, 63% and 22% respectively during the period 1991-98 while it was 7%, 34% and 13% in the 1999-03 periods.

The Average Annual Growth Rate of Assets in the Post-reform Period

Period	Current Assets	Net Fixed Assets	Other Assets	Plant & Machinery	Others	Total Net Assets
1991-1998	19.3	24.4	62.7	21.6	24.9	22.7
1999-2003	8.1	6.6	33.8	12.7	2.4	9.2

A paradigm upward shift has been observed in current assets, net fixed assets and 'other assets' since 1991. The role of current assets exceeded net fixed assets and other assets together before the reform period whereas it reversed after the reforms. The rate of growth of Net Fixed Assets, Plant & Machinery and Other Assets increased in the post-reform period compared to the pre-reform period. Even in the post-reform period, the period 1991-98 marked a considerable spurt in assets. The rate of growth of Net Fixed Assets (24.4%) exceeded the rate of growth of Total Net Assets (22.7%) and Plant and Machinery (21.6%) during this period.

Ratio Analysis: Aggregate Level

Asset Ratios

We have considered four asset ratios such as;

(1) Current Assets to Total Net Assets (CA/TNA),

(2) Net Fixed Asset to Total Net Assets (NFA/TNA),

(3) Other Assets to Total Net Assets (OA/TNA), and,

(4) Plant and Machinery to Total Net Assets (P&M/TNA).

The ratio of Current Assets to Total Net Assets was in the range of 51.7% to 58.4% in the pre-reform period. Its share in Total Net Assets declined in the post-reform period; ranging 40.8% to 57.5%. The periodical changes revealed that the ratio declined from 55.1% in the initial period to 47.3% in the latter period. The ratio of Net Fixed Assets to Total Net Assets has declined from 1984 to 1991 and increased gradually from 1994 to 1998. Its periodical changes however showed a declining tendency from 43.7% before reforms to 41.3% after reforms. The part of Other Assets in Total Net Assets recorded crucial growth in the post-reform period. The periodical changes show that its share rose from 1.2% to 11.4% in the reform period. Apart from the components of total net assets such as current assets, net fixed assets and other assets, we have computed the ratio of gross Plant and Machinery to Total Net Assets (P&M/TNA). Its portion has increased from 1983 to 1989 and then declined up to 1996. It has increased since then [Table 6.12(a) and Fig. 6.12(a)]. This shows that in total net assets, the part of current assets decreased in the post-reform period whereas other components increased.

Table 6.12(a) Asset Ratios At current prices (%)

Year	CA/TNA	NFA/TNA	OA/TNA	P&M/TNA
1983	55.0	44.1	1.0	46.1
1984	51.7	47.3	1.0	48.2
1985	51.9	47.2	0.8	48.5
1986	52.4	46.6	0.9	48.9
1987	52.8	45.6	1.7	49.1
1988	54.3	44.5	1.2	49.1
1989	55.1	43.8	1.1	49.8
1990	58.4	40.6	1.0	48.6
1991	58.2	40.3	1.5	47.3
1992	56.2	42.3	1.5	44.6
1993	57.5	40.0	2.4	44.9
1994	55.9	39.6	4.4	41.7
1995	55.2	40.3	4.5	39.7
1996	52.5	42.2	5.3	39.7
1997	48.5	43.6	7.9	42.2
1998	46.3	45.4	8.2	45.3
1999	47.4	42.5	10.1	47.8
2000	40.8	39.6	19.6	49.5
2001	44.4	38.5	17.0	51.0
2002	44.6	43.1	12.3	55.3
2003	43.9	39.0	17.1	52.8

Table 6.12(b) Asset Ratios: Periodical Changes

Period	CA/TNA	NFA/TNA	OA/TNA	P&M/TNA
Overall	48.1	41.6	10.3	47.9
Pre-reform	55.1	43.7	1.2	48.5
Post-reform	47.3	41.3	11.4	47.8

Asset Structure at 1993-94 prices

At constant prices (1993-94 prices), the Total Net Assets rose from Rs 23995 Crs in 1983 to 118190 Crs in 2003; an increase of around 5 times. The share of current assets in total net assets grew steadily from 51.7% in 1984 to 58.2% in 1991 and it declined thereafter. The part of net fixed assets in total net assets at the same time declined from 47.3% to 40.3% and then increased to 45.4% in 1998. The Other Assets highlighted crucial change during these periods. Its share in total net assets was in the range of 0.8% to 1.5% during the 1983-91 periods, shoot up to 17.1% of total net assets in 2003. Plant & machinery rose from 46% in 1983 to 53% in 2003. It is presented in Table 6.13(a). Its periodical changes confirmed that the role of current assets in total net assets declined from 55% in the pre-reform period to 48% in the post-reform period. Net fixed assets and other assets together grew up from 45% to 52% during the same period. At constant prices also the contribution of Other Assets shoot up from 1.1% of total net assets to 10.6% during this period. These are depicted in 6.13(b) below:

Table 6.13(a) Asset Structure: Aggregate Level At 1993-94 prices* [Rs in Crs]

Year	Current Assets (1)	Net Fixed Assets (2)	Other Assets (3)	Plant & Machinery (4)	Others (5)	Total Net Assets (1+2+3)
1983 Pre-reform	13195 (55.0)	10572 (44.1)	228 (1.0)	11062 (46.1)	5091 (21.2)	23995
1984	13409 (51.7)	12252 (47.3)	257 (1.0)	12499 (48.2)	5881 (22.7)	25918
1985	14887 (51.9)	13540 (47.2)	242 (0.8)	13911 (48.5)	6591 (23.0)	28670
1986	16158 (52.4)	14366 (46.6)	284 (0.9)	15070 (48.9)	6445 (20.9)	30808
1987	15932 (52.8)	13759 (45.6)	510 (1.7)	14841 (49.1)	7161 (23.7)	30200
1988	17043 (54.3)	13974 (44.5)	370 (1.2)	15403 (49.1)	7022 (22.4)	31388
1989	18857 (55.1)	14966 (43.8)	379 (1.1)	17048 (49.8)	6649 (19.4)	34202
1990	19641 (58.4)	13637 (40.6)	347 (1.0)	16336 (48.6)	5945 (17.7)	33625
1991	22291 (58.2)	15445 (40.3)	565 (1.5)	18124 (47.3)	7427 (19.4)	38300
1992 Post-reform	23457 (56.2)	17632 (42.3)	641 (1.5)	18623 (44.6)	9581 (23.0)	41730
1993	27318 (57.5)	19009 (40.0)	1147 (2.4)	21295 (44.9)	9103 (19.2)	47474
1994	31120 (55.9)	22051 (39.6)	2463 (4.4)	23207 (41.7)	10888 (19.6)	55635
1995	37518 (55.2)	27336 (40.3)	3060 (4.5)	26989 (39.7)	12989 (19.1)	67913
1996	40158 (52.5)	32244 (42.2)	4023 (5.3)	30351 (39.7)	15314 (20.0)	76425
1997	40657 (48.5)	36535 (43.6)	6633 (7.9)	35375 (42.2)	16684 (19.9)	83824
1998	42484 (46.3)	41675 (45.4)	7555 (8.2)	41554 (45.3)	18131 (19.8)	91714
1999	42732 (47.4)	38360 (42.5)	9124 (10.1)	43118 (47.8)	15900 (17.6)	90216
2000	39723 (40.8)	38465 (39.6)	19067 (19.6)	48096 (49.5)	14180 (14.6)	97256
2001	42457 (44.4)	36798 (38.5)	16271 (17.0)	48737 (51.0)	14706 (15.4)	95526
2002	49024 (44.6)	47353 (43.1)	13486 (12.3)	60701 (55.3)	15864 (14.4)	109863
2003	51925 (43.9)	46055 (39.0)	20209 (17.1)	62381 (52.8)	16796 (14.2)	118190

Source: *BSEOD and NAS – EPWRF Dec 2004, Price Deflators 1993-94=100*

** Values have been deflated with the price deflator of capital formation-(GDCF unadjusted).*

*** Percentage to Total Net Assets is given in parenthesis.*

Table 6.13(b) Asset Structure: Periodical Changes At 1993-94 prices [Rs in Crores]

Period	CA	NFA	OA	P&M	Others	TNA
Overall	619988 (49.5)	526025 (42.0)	106862 (8.5)	594721 (47.5)	228347 (18.2)	1252874
Pre-reform	151413 (54.6)	122512 (44.2)	3181 (1.1)	134294 (48.5)	58213 (21.0)	277107
Post-reform	468575 (48.0)	403513 (41.4)	103680 (10.6)	460428 (47.2)	170134 (17.4)	975768

Table 6.13(c) Rate of Growth of Asset Components At 1993-94 prices [Rs in Crores]

Period	CA	NFA	OA	P&M	Others	TNA
Overall	7.7	8.2	29.6	9.1	6.7	9.0
Pre-reform	6.5	3.4	9.9	5.5	2.8	5.2
Post-reform	6.0	9.0	34.6	11.8	5.0	9.2

* *Compound rate of growth*

The rate of growth of asset components at constant prices during the overall, pre-reform and post-reform periods has been computed [Table 6.13(c)]. The rate of growth of total net assets increased from 5.2 in the pre-reform period to 9.2 in the post-reform period. In net fixed assets and plant & machinery it rose from 3.4 and 4.7 in the former period to 9.0 and 11.8 respectively in the latter period. Other assets exhibited high rate of growth (from 9.9 to 34.6) during these periods. The rate of growth of current assets, on the other hand, declined from 6.5 in the pre-reform period to 6.0 in the post-reform period.

Asset Ratios: at constant prices

The asset ratios at constant prices witnessed an advancement of net fixed assets and other assets over current assets in the post-reform period. Its periodical changes indicated that the ratio of Current Assets to Total Net Assets declined from 54.6% in the pre-reform period to 48% in the post-reform period. The position of Net Fixed Assets and Other Assets together progressed from 45.4% to 52% during the same periods. It can be viewed from Table 6.13(d).

Table 6.13(d) Asset Ratios: Periodical Changes
(At constant prices)

Period	CA/TNA	NFA/TNA	OA/TNA	P&M/TNA
Overall	49.5	42.0	8.5	47.5
Pre-reform	54.6	44.2	1.1	48.5
Post-reform	48.0	41.4	10.6	47.2

2. Pattern of Investment: Industry-wise

We have followed industry-wise cataloging based on the company classification of BSE. The 150 NGNF Public Limited Companies fall under ten groups- range from 5 to 31 number of companies. The asset structure of each group at the aggregate level, its exponential rate of growth and the asset ratios have been computed for analysis. The industry-wise classification of companies has been given in the following table.

Distribution of Companies: Industry-wise

Industry/Industry Group	No of Cos	%
1. Potteries, Tiles, Refractories, Glass & Cement	6	4
2. Metals, Alloys, Metal Products & Structurals	5	3
3. Cotton Spinning Mills	31	21
4. Paper, Pulp and HB	17	11
5. Food, Sugar & Brewery	16	11
6.Chemicals, Dyes & Pharmaceuticals	27	18
7.General Engineering	18	12
8.Electrical Equipment, Cables & Transformers	12	8
9.Synthetic Fibers, Silk, Woolen Textiles	6	4
10. Miscellaneous	12	8
Total	150	100

**As per the company classification of BSEOD*

Trend of Fixed Asset Components of Industry Groups 1-10

(Total Net Assets, Current Assets, Net Fixed Assets, Other Assets, and Plant & Machinery)

The changes in the aggregate amount of fixed asset components including Total Net Assets, Current assets, Net Fixed Assets, Other Assets and Plant & Machinery during the overall (1983-2003), pre-reform (1983-1991) and post-reform (1992-2003) periods have been given in Table 6.14(a). The periodical growth of Total Net Assets ranges from 4 times to 12.4 times. Group 9 (Synthetic Fibers, Silk, and Woolen Textiles) and Group 5 (Food, Sugar and Brewery) witnessed high variations in total net assets, whereas Group 4 (Paper, Pulp and HB) showed low variation in the post-reform period. In Current Assets also, the periodical growth of Group5 and 9 is remarkable. It progressed by 9.8 and 9.3 times respectively. Group 1 (Potteries, Tiles, Refractories, Glass and Cement) showed

low variation. In Net Fixed Assets, again Groups 9 and 5 followed highest growth. It improved by 11.6 and 10.4 times in the reform period in contrast to Group 4 whose growth was only 3.2 times in this periods. The growth of Other Assets during these periods ranges from 10.5 to 178.7 times. Groups 9, 7, and 5 expressed highest growth in this component against Group 4, in which its growth was low. In Plant and Machinery also, the growth of Groups 9 and 5 was remarkably high and Group 4 followed little change. Thus, in absolute terms, the growth of asset components like Total Net Assets, Current Assets, Net Fixed Assets, Other Assets, and Plant and Machinery of Groups 9 and 5 was substantially higher than other groups while Group 4 witnessed lowest growth.

Table 6.14(a) Periodical Changes* in Fixed Asset Components: Industry-wise [Rs in Crs]

1. Total Net Assets				
Ind Gps	Overall	Pre-reform	Post-reform	Change
1	47945	7002	40943	5.8
2	15310	1730	13581	7.9
3	158340	22030	136309	6.2
4	36361	7296	29065	4.0
5	63832	5364	58468	10.9
6	233182	26193	206988	7.9
7	263881	30567	233313	7.6
8	54830	7096	47734	6.7
9	419372	31404	387968	12.4
10	128284	15519	112765	7.3

2. Current Assets				
Ind Gps	Overall	Pre-reform	Post-reform	Change
1	18477	3121	15356	4.9
2	7567	960	6607	6.9
3	74636	10620	64017	6.0
4	16170	2578	13591	5.3
5	33719	3131	30588	9.8
6	130658	17119	113539	6.6
7	148879	18033	130847	7.3
8	40830	5608	35222	6.3
9	146131	14191	131941	9.3
10	67302	9621	57680	6.0

3. Net Fixed Assets				
Ind Gps	Overall	Pre-reform	Post-reform	Change
1	27714	3787	23927	6.3
2	6660	748	5912	7.9
3	75347	11261	64087	5.7
4	19423	4651	14772	3.2
5	24703	2163	22540	10.4
6	77040	8538	68502	8.0
7	89202	12237	76965	6.3
8	11231	1446	9785	6.8
9	213255	16880	196375	11.6
10	46415	5695	40721	7.2

4. Other Assets				
Ind Gps	Overall	Pre-reform	Post-reform	Change
1	1753	93	1660	17.9
2	1084	22	1062	48.5
3	8356	150	8206	54.6
4	769	67	702	10.5
5	5410	70	5340	76.0
6	25485	536	24948	46.5
7	25800	298	25502	85.5
8	2770	42	2728	65.0
9	59986	334	59652	178.7
10	14567	203	14364	70.6

5. Plant & Machinery				
Ind Gps	Overall	Pre-reform	Post-reform	Change
1	27220	3789	23431	6.2
2	7467	940	6527	6.9
3	95371	13864	81507	5.9
4	25409	5253	20157	3.8
5	26278	2370	23908	10.1
6	81582	11065	70516	6.4
7	95748	11455	84293	7.4
8	11368	1644	9724	5.9
9	262461	18789	243673	13.0
10	47888	5610	42277	7.5

**Change is obtained by dividing the post-reform value by the pre-reform value.*

These periodical changes of asset components among industry groups revealed that there is wide disparity in the growth of assets in between industry groups when compared to its growth at the aggregate level. About 74% of groups lie below the average level.

Table 6.14(b) Periodical Change of Asset Components among Industry Groups (A comparison with aggregate level changes)

Aggregate Level	
Assets	Periodical Change
TNA	8.2
CA	7.1
NFA	7.8
OA	79.4
P&M	8.1

Industry-groups (Total 10 Groups)		
Assets	Periodical Change (Range)	No of Gps below the average
TNA	4.0 - 12.4	8
CA	4.9 - 9.8	7
NFA	3.2 - 11.6	6
OA	10.5 - 178.7	8
P&M	3.8 - 13.0	8
		74%

Table 6.14(c) explains the distribution of Total Net Assets and its components – Current Assets, Net Fixed Assets and Other Assets – among 10 industry groups in the pre and post-reform periods. As a percentage of the periodical aggregate of 150 companies, the share of 4 industry groups was 70.6% in Current Assets, 72.6% each in Net Fixed Assets and Other Assets and 71.5% in Total Net Assets during the pre-reform period. It increased to 73.5% in Current Assets, 77.5% in Net Fixed Assets, 82.1% in Other Assets and 76.1% in Total Net Assets in the post-reform period; sets of groups remain the same. This indicates that the concentration of assets among few groups advanced in the reform

period; prominent among them are Cotton Spinning Mills (Gp-3), Chemicals Dyes & Pharmaceuticals (Gp-6), General Engineering (Gp-7), and Synthetic Fibers, Silks, Woolen Textiles (Gp-9). Among these, industry Group-9 (Synthetic Fibers, Silks, Woolen Textiles) outperform all the others. Its share in Total Net Assets improved from 20% to 31% and in Other Assets it grew up from 18% to 41% in the reform period.

Table 6.14(c) Inter-Industry Distribution of Assets: A Periodical Comparison
(As % of the periodical aggregates of 150 Companies)

1. Pre-reform				
Ind Gps	Current Assets	Net Fixed Assets	Other Assets	Total Net Assets
1	3.7	5.6	5.1	4.5
2	1.1	1.1	1.2	1.1
3	12.5	16.7	8.3	14.3
4	3.0	6.9	3.7	4.7
5	3.7	3.2	3.9	3.5
6	20.1	12.7	29.5	17.0
7	21.2	18.2	16.4	19.8
8	6.6	2.1	2.3	4.6
9	16.7	25.0	18.4	20.4
10	11.3	8.4	11.2	10.1
	100	100	100	100
	Share of 4 Gps= 70.6%	Share of 4 Gps= 72.6%	Share of 4 Gps= 72.6%	Share of 4 Gps= 71.5%

2. Post-reform				
Ind Gps	Current Assets	Net Fixed Assets	Other Assets	Total Net Assets
1	2.6	4.6	1.2	3.2
2	1.1	1.1	0.7	1.1
3	10.7	12.2	5.7	10.8
4	2.3	2.8	0.5	2.3
5	5.1	4.3	3.7	4.6
6	18.9	13.1	17.3	16.3
7	21.8	14.7	17.7	18.4
8	5.9	1.9	1.9	3.8
9	22.0	37.5	41.4	30.6
10	9.6	7.8	10.0	8.9
	100	100	100	100
	Share of 4 Gps= 73.5%	Share of 4 Gps= 77.5%	Share of 4 Gps= 82.1%	Share of 4 Gps= 76.1%

We have computed the compound rate of growth of Total Net Assets, Current Assets, Net Fixed Assets, Other Assets and Plant and Machinery during the overall, pre and post-reform periods. The rate of growth of total net assets, net fixed assets and plant & machinery of all the groups showed upward trend in these three periods. In the post-reform period, the rate of growth of Total Net Assets of four groups (1, 2, 7 and 10) was higher than that of the pre-reform period. In Net Fixed Assets, the rate of growth of five groups (1, 2, 3, 4, and 7) increased. In Plant & Machinery, the rate of growth of four groups (1, 2, 6, and 9) moved up during the post-reform period. Interestingly, the Other Assets of all the groups demonstrated higher rate of growth in the post-reform period. Its rate of growth in 7 groups was higher in the reform period than the overall rate of growth

of these groups. At the same time the rate of growth of Current Assets of all the groups deteriorated.

Table 6.15(a) Rate of Growth of Fixed Asset Components: Industry-wise

1. Total Net Assets			
Ind Gps	Overall	Pre-reform	Post-reform
1	13.3	7.4	11.0
2	17.4	15.8	17.3
3	13.8	12.1	7.4
4	10.5	10.0	10.0
5	21.1	21.5	18.2
6	17.3	16.2	14.5
7	16.7	13.5	14.7
8	15.5	16.5	9.9
9	22.2	21.5	20.1
10	16.2	13.4	13.7

2. Current Assets			
Ind Gps	Overall	Pre-reform	Post-reform
1	11.6	12.0	3.8
2	16.2	16.7	13.7
3	13.4	14.9	3.4
4	12.9	12.9	8.0
5	19.8	19.9	17.0
6	16.0	18.1	12.8
7	16.1	14.5	11.3
8	14.8	16.7	8.3
9	19.8	23.7	16.6
10	14.2	12.7	10.9

3. Net Fixed Assets			
Ind Gps	Overall	Pre-reform	Post-reform
1	14.0	4.0	15.8
2	17.4	14.8	18.7
3	13.2	9.5	9.9
4	8.8	8.5	11.2
5	20.9	24.2	15.2
6	16.4	12.2	11.0
7	14.9	11.6	14.7
8	15.6	15.5	12.3
9	21.2	19.7	18.2
10	16.2	14.1	14.1

4. Other Assets			
Ind Gps	Overall	Pre-reform	Post-reform
1	22.8	-5.9	48.8
2	33.3	8.3	41.2
3	35.0	12.3	23.6
4	18.0	-2.3	34.8
5	37.0	16.7	46.9
6	38.2	32.7	46.2
7	40.5	20.5	46.5
8	38.4	22.6	31.0
9	49.2	22.5	49.4
10	39.9	23.8	35.5

6. Plant & Machinery			
Ind Gps	Overall	Pre-reform	Post-reform
1	14.6	9.4	18.1
2	16.4	15.6	18.6
3	14.2	14.6	10.2
4	10.6	11.8	10.8
5	20.8	23.7	18.1
6	14.8	11.4	14.4
7	16.7	15.1	15.1
8	14.6	15.3	12.4
9	22.6	20.2	24.7
10	16.9	16.2	14.8

To see whether there is any industry specific growth of investment, we have analysed the intra-industry rate of growth of investment in the pre and post reform periods. It reveals that in Total Net Assets, though the rate of growth of the industry groups 1, 2, 7 and 10 increased in the post-reform period, all the firms in these groups have not followed an accelerated rate of growth during this period. About 50% of group

1, 40% of group 2, 72% of group 7 and 83% of group 10 lie below the average rate of growth of 150 companies (15.1%) in the post-reform period. Similarly, in Net Fixed Assets, the rate of growth of five industry groups (1, 2, 3, 4, and 7) has progressed in the reform period, nevertheless, all the firms in these groups have not witnessed an advanced rate of growth in the latter period. Around 33% of group 1, 40% of group 2, 65% of group 3, 53% of group 4 and 61% of group 7 fall below the average rate of growth of Net Fixed Assets. The rate of growth in Plant and Machinery of four groups improved in the reform period (1, 2, 6 and 9); however, all the firms have not exhibited an accelerated rate of growth in the post-reform period; 33% of group 1, 40% of group 2, 74% of group 6 and 83% of group 9 lie below the average rate of growth during this period. This shows that the accumulation of capital is not industry specific. These are presented in the following table.

Table 6.15(b) Rate of Growth of Investment: Intra-industry Level*

Total Net Assets: Pre-reform											
Rate of growth	1	2	3	4	5	6	7	8	9	10	Total
Less than 0			2	1			1				4
1-5			4	5				2		1	12
6 - 10	5	1	12	4	1	4	6			3	36
11 - 15	1	2	4	4	1	10	6	4		3	35
16 - 20			5	1	7	3	3	4	3	1	27
21 - 25		2	2	2	4	6	1	1	2	2	22
26 - 30					2	2					4
30 +			2		1	2	1	1	1	2	10
#											0
Total	6	5	31	17	16	27	18	12	6	12	150
Total Net Assets: Post-reform											
Rate of growth	1	2	3	4	5	6	7	8	9	10	Total
Less than 0		1	11	3	1		1		2	1	20
1-5	1		5	2		4	2	3	1	1	19
6 - 10	1		8	2	5	7	5	6		2	36
11 - 15	1	2	4	6	5	6	5	1	2	7	39
16 - 20	2	1	1	1	3	7	4	1			20
21 - 25	1		2	3		2	1		1		10
26 - 30		1			1						2
30 +					1	1		1		1	4
#											0
Total	6	5	31	17	16	27	18	12	6	12	150

**Number of firms fall under each industry group are represented against the rate of growth*

'#' - indeterminate,

Net Fixed Assets: Pre-reform											
Rate of growth	1	2	3	4	5	6	7	8	9	10	Total
Less than 0		1	7	6		2	1	1		1	19
1-5	1	1	8	4	2	5	4	3			28
6 - 10	2	2	5	3	1	2	4	1		3	23
11 - 15	1		2	1		4	5	3	2	2	20
16 - 20	2		5	3	3	6	1		1	2	23
21 - 25			2		5	2	1	1	2	1	14
26 - 30		1			1	2	1	1		1	7
30 +			2		4	4	1	2	1	2	16
#											
Total	6	5	31	17	16	27	18	12	6	12	150
Net Fixed Assets: Post-reform											
Rate of growth	1	2	3	4	5	6	7	8	9	10	Total
Less than 0	1	1	11	3		3	3	1	2	1	26
1-5			4	1	1	6	2		1	1	16
6 - 10	1		5	3	6	5	2	5	1	2	30
11 - 15		1	2	3	2	3	6	2	1	3	23
16 - 20	3	1	5	4	4	7	4	2	1	3	34
21 - 25	1					1	1	1			4
26 - 30		1	3	2		1					7
30 +		1	1	1	2	1		1		2	9
#					1						1
Total	6	5	31	17	16	27	18	12	6	12	150

Plant & Machinery: Pre-reform											
Rate of growth	1	2	3	4	5	6	7	8	9	10	Total
Less than 0			1				1			1	3
1-5	1		5	3		3		2			14
6 - 10	4	1	9	6	2	6	5	2		1	36
11 - 15		3	6	5	1	6	6	3	2	2	34
16 - 20			5	1	4	4	2	1	1	4	22
21 - 25		1	2	1	4	3	1	1	2		15
26 - 30	1		1		1	2	1	1		2	9
30 +			2	1	3	3	1	2	1	2	15
#					1		1				2
Total	6	5	31	17	16	27	18	12	6	12	150
Plant & Machinery: Post-reform											
Rate of growth	1	2	3	4	5	6	7	8	9	10	Total
Less than 0			6	1	1	3	2				13
1-5			2	1		4	1	2	2	2	14
6 - 10			9	4	3	5	3	2	2	1	29
11 - 15	2	1	2	5	4	5	7	3		4	33
16 - 20	3	1	5	4	4	3	4	2	1	3	30
21 - 25			1	1	2	3	1				8
26 - 30	1	2	2			1				1	7
30 +			1		2	1		2	1	1	8
#		1	3	1		2		1			8
Total	6	5	31	17	16	27	18	12	6	12	150

**Number of firms fall under each industry group are represented against the rate of growth*

#- indeterminate

Trend of Asset Ratios of Industry Groups 1-10

(CA/TNA, NFA/TNA, OA/TNA, and P&M/TNA)

The asset ratios such as Current Assets to Total Net Assets, Net Fixed Assets to Total Net Assets, Other Assets to Total Net Assets, and Plant & Machinery to Total Net Assets have been used to measure the relative share of asset components in total net assets during the pre and post-reform periods. The ratio of current assets to total net assets of all the industry-groups declined except one group (group 4) in the post-reform period. The share of net fixed assets in total net assets of four groups (1, 2, 6, and, 8) increased in the post-reform period compared to the pre-reform period. The proportionate share of NFA in Group 1 was higher than other groups in the post-reform period. The industry group 8 (Electrical Equipment, Cables & Transformers) occupied the lowest position in net fixed assets compared to other groups throughout the period. The ratio of Other Assets to total net assets of all the groups advanced in the post-reform period compared to the pre-reform period. The ratio was in the range of 0.6% to 2.0% during the pre-reform period, gone up to the range of 2.4% and 15.4% in the post-reform period. Four industry-groups (groups 6, 7, 9 and 10) witnessed more than 10% growth in other assets in the post-reform period. The part of Plant and Machinery of three groups (1, 9 and 10) advanced in the reform period. Its proportionate share in Group 4 was high. Like net fixed assets, the industry group 8 possessed lowest status in Plant and Machinery. It is given in Table 6.16(a).

Table 6.16(a) Periodical Changes in Fixed Asset Ratios: Industry-wise

1. CA/TNA			
Ind Gps	Overall	Pre-reform	Post-reform
1	38.5	44.6	37.5
2	49.4	55.5	48.7
3	47.1	48.2	47.0
4	44.5	35.3	46.8
5	52.8	58.4	52.3
6	56.0	65.4	54.9
7	56.4	59.0	56.1
8	74.5	79.0	73.8
9	34.8	45.2	34.0
10	52.5	62.0	51.2

2. NFA/TNA			
Ind Gps	Overall	Pre-reform	Post-reform
1	57.8	54.1	58.4
2	43.5	43.2	43.5
3	47.6	51.1	47.0
4	53.4	63.7	50.8
5	38.7	40.3	38.6
6	33.0	32.6	33.1
7	33.8	40.0	33.0
8	20.5	20.4	20.5
9	50.9	53.8	50.6
10	36.2	36.7	36.1

3. OA/TNA			
Ind Gps	Overall	Pre-reform	Post-reform
1	3.7	1.3	4.1
2	7.1	1.3	7.8
3	5.3	0.7	6.0
4	2.1	0.9	2.4
5	8.5	1.3	9.1
6	10.9	2.0	12.1
7	9.8	1.0	10.9
8	5.1	0.6	5.7
9	14.3	1.1	15.4
10	11.4	1.3	12.7

4. P&M/TNA			
Ind Gps	Overall	Pre-reform	Post-reform
1	56.8	54.1	57.2
2	48.8	54.3	48.1
3	60.2	62.9	59.8
4	69.9	72.0	69.4
5	41.2	44.2	40.9
6	35.0	42.2	34.1
7	36.3	37.5	36.1
8	20.7	23.2	20.4
9	62.6	59.8	62.8
10	37.3	36.2	37.5

A periodical comparison of the asset ratios of all the industry groups with respect to Total Net Assets is depicted in the Table 6.16(b). The share of Current Assets was more than 50% of Total Net Assets in 6 industry groups in the pre-reform period, declined to 5 industry groups in the post-reform period. That is the share of Net Fixed Assets and Other Assets exceeded 50% of Total Net Assets from 4 industry groups in the pre-reform period to 5 groups in the post-reform period; shows increase in investment. The ratio of Current Assets to Total Net Assets of industry group 8 was higher than other groups in both the periods. This ratio declined in all the nine groups in the reform period compared to the initial period. Its position was the lowest in Group 9 during the reforms against Group 4 in the initial period. The percentage share of Net Fixed Assets was high in Group 4 in both the periods. The ratio was the lowest in the case of Group 8 in the pre and post-reform periods. Its position in 4 groups advanced while in 6 groups, it depleted. Other assets of all the groups progressed in the reform period.

Table 6.16 (b) Share of the Components of TNA: An Industry-wise Comparison

Pre-reform				
Ind Gps	CA/TNA	NFA/TNA	OA/TNA	TNA
1	44.6	54.1	1.3	100
2	55.5	43.2	1.3	100
3	48.2	51.1	0.7	100
4	35.3	63.7	0.9	100
5	58.4	40.3	1.3	100
6	65.4	32.6	2.0	100
7	59.0	40.0	1.0	100
8	79.0	20.4	0.6	100
9	45.2	53.8	1.1	100
10	62.0	36.7	1.3	100

Post-reform				
Ind Gps	CA/TNA	NFA/TNA	OA/TNA	TNA
1	37.5	58.4	4.1	100
2	48.7	43.5	7.8	100
3	47.0	47.0	6.0	100
4	46.8	50.8	2.4	100
5	52.3	38.6	9.1	100
6	54.9	33.1	12.1	100
7	56.1	33.0	10.9	100
8	73.8	20.5	5.7	100
9	34.0	50.6	15.4	100
10	51.2	36.1	12.7	100

An inter-industry comparison of asset ratios has been presented in the following table. It demonstrates that, the changes in the shares of Net Fixed Assets and Other Assets are independent of each other. That is, while considering the shares of Net Fixed Assets and Other Assets in both the periods, it is evident that the share of Net Fixed Assets of six groups declined in the reform period; of which the Other Assets of only two groups have increased over and above the average share of all the companies during this period. This shows that the changes in the share of Net Fixed Assets and Other Assets are not related.

Table 6.16(c) Asset Ratios: An Inter-Industry Comparison

Asset Ratios: Aggregate Level				
Period	CA/TNA	NFA/TNA	OA/TNA	TNA
Pre-reform	55.1	43.7	1.2	100
Post-reform	47.3	41.3	11.4	100

Asset Ratios: Industry-wise									
Pre-reform					Post-reform				
Ind Gps	CA/TNA	NFA/TNA	OA/TNA	TNA	Ind Gps	CA/TNA	NFA/TNA	OA/TNA	TNA
1	44.6	54.1	1.3	100	1	37.5	58.4	4.1	100
2	55.5	43.2	1.3	100	2	48.7	43.5	7.8	100
3	48.2	51.1	0.7	100	3	47.0	47.0	6.0	100
4	35.3	63.7	0.9	100	4	46.8	50.8	2.4	100
5	58.4	40.3	1.3	100	5	52.3	38.6	9.1	100
6	65.4	32.6	2.0	100	6	54.9	33.1	12.1	100
7	59.0	40.0	1.0	100	7	56.1	33.0	10.9	100
8	79.0	20.4	0.6	100	8	73.8	20.5	5.7	100
9	45.2	53.8	1.1	100	9	34.0	50.6	15.4	100
10	62.0	36.7	1.3	100	10	51.2	36.1	12.7	100

The above table further brings out that the disparity in the relative shares of assets among industry groups increased in the reform period; particularly in Other Assets. That is, the relative shares of assets of about 50% of industry groups fall below the average level during the pre-reform period increased to 53% of groups in the post-reform period.

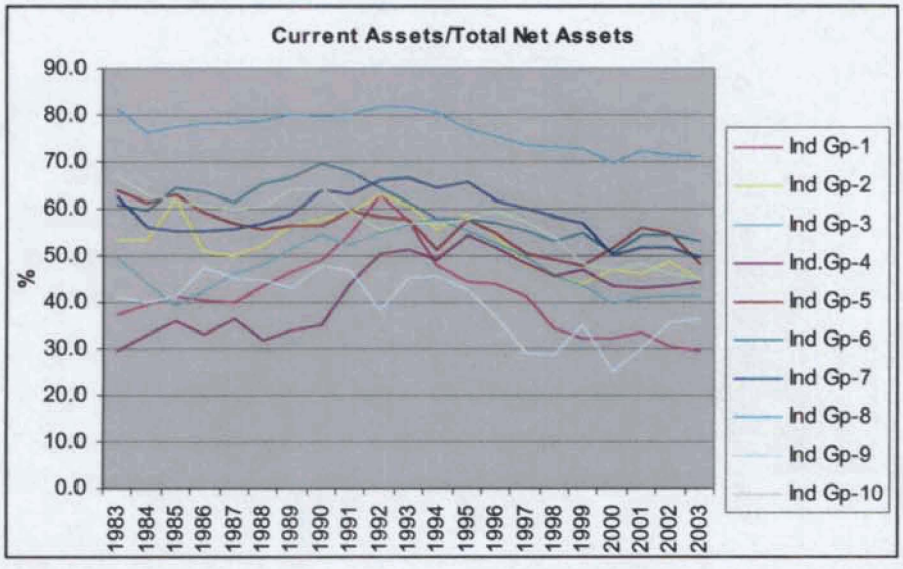
	No of Ind Gps below the average level	
Asset Ratios	Pre-reform	Post-reform
CA/TNA	4	4
NFA/TNA	6	5
OA/TNA	5	7
P&M/TNA	5	5
	50%	52.5%

The observation of each of these fixed asset ratios in all the 10 groups together brings out certain specific characteristics. The ratio of Current Assets to Total Net Assets of all the groups declined in the post-reform period particularly after 1993-95. The ratio of group 8 was relatively high in the whole period. The ratio of group 9 moved down steeply after 1994.

Table 6.17 CA/TNA 1983-2003: Industry-wise
[Industry Groups 1 – 10]

Year	Ind Gp-1	Ind Gp-2	Ind Gp-3	Ind. Gp-4	Ind Gp-5	Ind Gp-6	Ind Gp-7	Ind Gp-8	Ind Gp-9	Ind Gp-10
1983	37.3	53.5	49.7	29.7	64.1	60.9	62.8	81.5	41.1	67.0
1984	39.7	53.5	43.9	33.1	61.2	59.7	55.9	76.1	40.0	63.2
1985	41.1	62.1	39.0	36.2	63.1	64.5	55.2	77.3	41.4	61.7
1986	40.5	50.9	42.2	32.8	59.0	63.4	55.4	78.2	47.4	60.4
1987	40.2	50.0	46.0	36.5	57.1	61.1	55.5	78.1	45.4	60.0
1988	43.3	52.2	47.7	31.9	55.7	65.3	57.1	78.8	44.9	60.6
1989	46.7	56.5	51.3	33.7	56.3	66.3	58.7	79.8	43.0	63.7
1990	49.3	58.0	54.1	35.2	56.7	69.7	63.9	79.7	47.7	64.3
1991	55.0	59.1	52.1	44.0	59.6	67.7	63.2	79.8	46.9	59.6
1992	62.8	62.9	54.9	50.3	58.3	64.2	66.3	81.8	38.4	55.5
1993	57.2	61.0	56.5	51.1	57.7	61.2	66.5	81.7	45.3	56.9
1994	47.8	55.8	58.0	49.2	51.5	57.8	64.3	80.5	45.4	56.9
1995	44.5	58.5	55.2	54.5	57.6	57.6	65.6	77.1	42.5	57.9
1996	44.0	54.4	52.7	51.9	54.8	56.9	61.6	75.4	36.7	59.4
1997	41.3	47.8	49.6	48.4	50.6	55.3	59.8	73.5	29.1	57.4
1998	34.3	45.5	45.7	45.5	49.2	53.1	58.2	72.9	28.7	54.1
1999	32.0	44.1	43.5	46.8	48.0	54.9	57.1	72.8	35.2	48.3
2000	32.4	46.8	39.4	43.4	51.8	50.4	50.0	69.6	25.3	47.1
2001	33.3	46.2	41.0	43.0	56.0	54.3	51.7	72.1	30.2	48.3
2002	30.5	48.8	41.2	43.4	54.7	54.5	51.6	71.3	35.5	46.2
2003	29.5	44.8	41.4	44.3	48.2	53.0	49.8	71.1	36.5	45.1

Fig 6.17 CA/TNA 1983-2003: Industry-wise [Industry Groups 1 – 10]

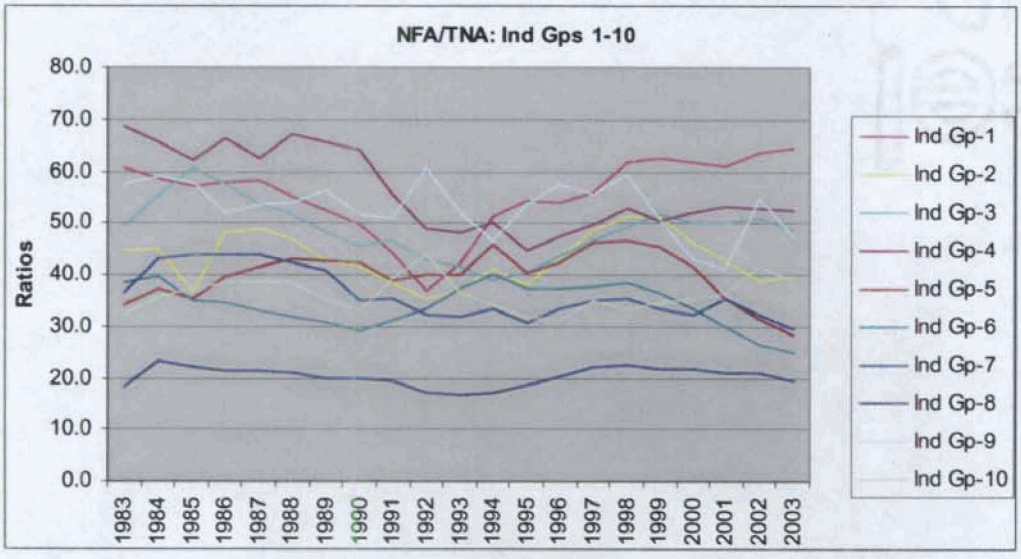


The NFA/TNA of 10 groups in the industry-wise sorting indicates that, it has a declining trend after 1988 in almost all the groups. It reached the lowest level in 1994-95 and moved up thereafter. Again it witnessed a declining tendency after 1998. The ratio was the highest in the Group 4 (Paper, Pulp & HB) during the pre-reform period and in Group 1 after 1998. The Group 1 (Potteries, Tiles, Refractories, Glass & Cement) expressed a very sharp rising trend in NFA/TNA in the post-reform period compared to all the other groups. The ratio was higher than 30% in all the groups except group 8 (Electrical Equipment, Cables & Transformers) over the whole period. It has been plotted in Fig 6.18.

Table 6.18 NFA/TNA 1983-2003: Industry-wise
[Industry Groups 1 – 10]

Year	Ind Gp-1	Ind Gp-2	Ind Gp-3	Ind Gp-4	Ind Gp-5	Ind Gp-6	Ind Gp-7	Ind Gp-8	Ind Gp-9	Ind Gp-10
1983	60.7	44.8	49.5	68.8	34.3	38.6	36.4	18.1	57.6	32.3
1984	58.5	44.9	55.3	65.5	37.1	39.6	43.2	23.4	58.9	35.9
1985	57.2	36.5	60.5	62.2	35.4	34.9	44.0	22.2	57.8	37.4
1986	58.0	48.0	57.4	66.4	39.6	34.6	43.9	21.2	52.1	38.4
1987	58.2	48.8	53.4	62.7	41.5	33.1	43.7	21.4	53.7	38.9
1988	55.1	46.9	51.8	67.4	43.1	32.0	42.2	20.8	54.0	38.4
1989	52.5	42.9	48.2	65.5	42.6	30.6	40.6	19.7	56.4	35.3
1990	49.7	41.5	45.4	64.1	42.3	29.1	34.8	19.6	51.8	33.0
1991	44.4	38.5	46.7	55.4	38.9	31.1	35.3	19.3	50.8	39.0
1992	36.9	35.2	42.6	49.0	40.0	33.6	32.1	17.3	60.5	44.0
1993	42.4	36.7	41.5	48.2	40.1	37.4	31.7	16.8	52.0	36.5
1994	51.3	41.3	38.9	50.3	46.0	39.9	33.4	17.0	46.6	34.0
1995	54.5	38.2	40.4	44.6	40.2	37.4	30.6	18.5	53.6	32.0
1996	54.0	43.0	43.4	47.2	42.5	37.3	33.2	20.1	57.4	31.3
1997	56.1	48.6	46.7	49.6	46.2	37.6	35.0	21.9	55.7	34.8
1998	61.8	51.1	49.3	52.9	46.8	38.5	35.4	22.6	59.3	33.4
1999	62.6	51.3	51.8	50.7	45.3	36.3	33.4	21.8	50.8	34.6
2000	61.7	46.3	49.9	52.2	41.7	33.2	32.4	21.7	43.3	35.2
2001	60.9	42.7	50.0	53.4	35.3	29.9	35.5	21.1	41.2	36.4
2002	63.7	38.8	50.9	52.7	31.5	26.5	32.4	21.1	54.6	41.6
2003	64.5	39.5	48.5	52.4	28.5	24.7	29.6	19.6	47.2	39.0

Fig 6.18 NFA/TNA 1983-2003: Industry-wise [Industry Groups 1 – 10]

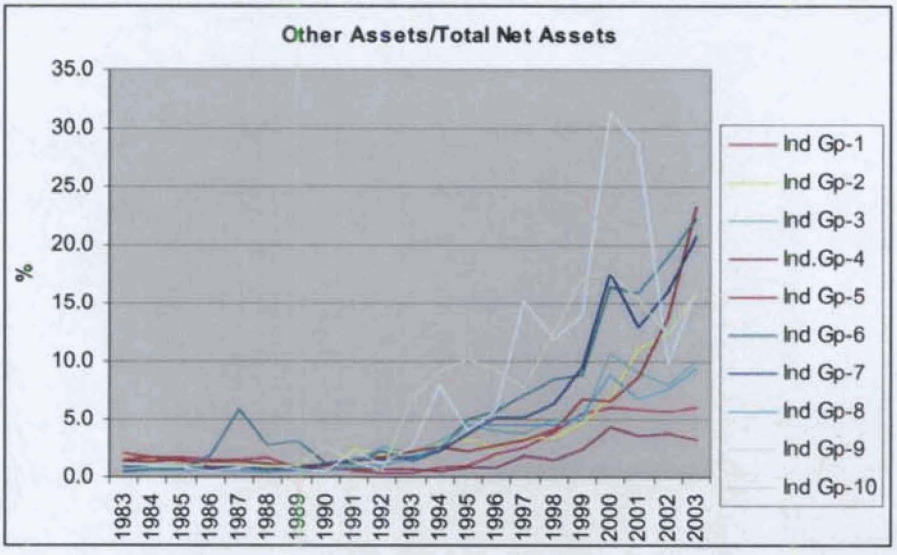


Other Assets relative to Total Net Assets shoot up sharply after 1991. Its growth was exceedingly high in group 9. Other groups such as 6, 7 and 10 also witnessed considerable growth while group 4 has made gradual progress in it.

Table 6.19 OA/TNA 1983-2003: Industry-wise [Industry Groups 1 – 10]

Year	Ind Gp-1	Ind Gp-2	Ind Gp-3	Ind. Gp-4	Ind Gp-5	Ind Gp-6	Ind Gp-7	Ind Gp-8	Ind Gp-9	Ind Gp-10
1983	2.0	1.7	0.8	1.5	1.6	0.5	0.8	0.4	1.3	0.8
1984	1.8	1.6	0.9	1.4	1.7	0.7	0.9	0.5	1.1	0.9
1985	1.7	1.4	0.5	1.6	1.5	0.6	0.8	0.5	0.8	0.9
1986	1.5	1.1	0.5	0.8	1.4	1.9	0.7	0.6	0.5	1.1
1987	1.6	1.2	0.6	0.8	1.4	5.8	0.8	0.4	0.9	1.1
1988	1.7	0.9	0.5	0.8	1.2	2.7	0.7	0.4	1.0	1.0
1989	0.9	0.6	0.5	0.8	1.1	3.1	0.7	0.5	0.6	1.0
1990	1.0	0.5	0.5	0.7	1.0	1.1	1.3	0.7	0.6	2.7
1991	0.6	2.4	1.2	0.6	1.5	1.2	1.6	0.8	2.2	1.3
1992	0.3	1.9	2.5	0.7	1.7	2.2	1.6	1.0	1.2	0.6
1993	0.4	2.3	2.0	0.6	2.2	1.4	1.7	1.5	2.6	6.7
1994	0.9	2.9	3.1	0.5	2.5	2.2	2.3	2.5	8.0	9.1
1995	1.0	3.3	4.4	0.9	2.2	5.0	3.7	4.4	4.0	10.1
1996	2.0	2.6	3.9	0.8	2.8	5.8	5.2	4.5	5.9	9.4
1997	2.6	3.5	3.7	2.0	3.3	7.1	5.3	4.6	15.2	7.8
1998	4.0	3.4	4.9	1.6	4.1	8.4	6.4	4.5	11.9	12.5
1999	5.4	4.7	4.7	2.5	6.7	8.8	9.6	5.3	14.0	17.2
2000	6.0	6.9	10.7	4.4	6.5	16.4	17.6	8.7	31.4	17.6
2001	5.8	11.1	9.0	3.6	8.6	15.8	12.9	6.7	28.6	15.4
2002	5.8	12.4	7.9	3.9	13.8	19.0	16.0	7.5	9.9	12.2
2003	6.1	15.7	10.1	3.2	23.3	22.3	20.6	9.3	16.3	16.0

Fig 6.19 OA/TNA 1983-2003: Industry-wise [Industry Groups 1 – 10]*

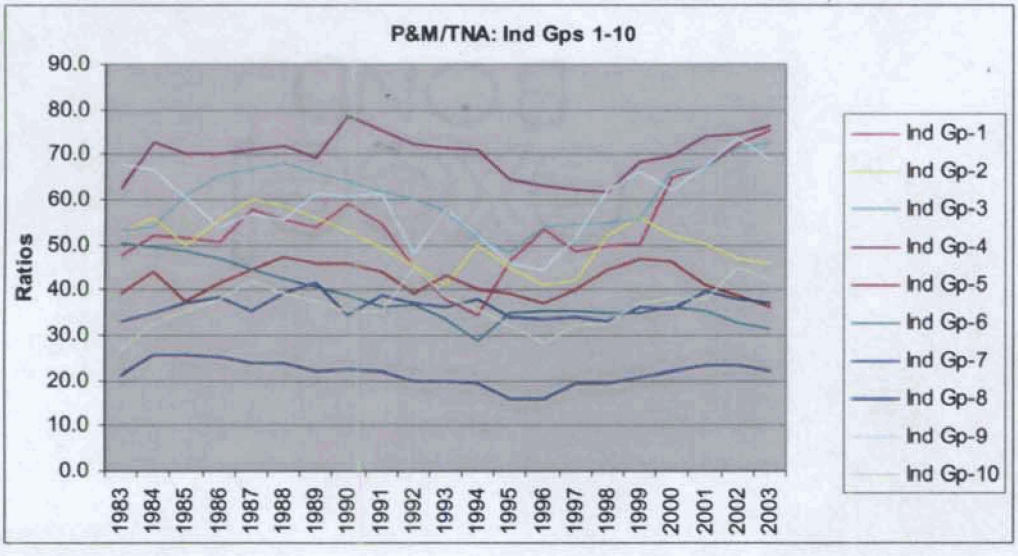


Plant & Machinery has also exhibited certain common features during the period 1983-2003. It showed a declining trend from 1987-89 to 1994-96 and then increased in almost all the industry groups. It was more than 28% in all groups except group 8 over the whole period. Like Net Fixed Assets, the group 1 (Potteries, Tiles, Refractories, Glass & Cement) witnessed a sharp rise in Plant and Machinery after 1994. The group 8 (Electrical Equipment, Cables & Transformers) witnessed lowest position in Plant & machinery and group 4 (Paper, Pulp and Hard Board) occupied the highest position. It can be viewed from Fig 6.20.

Table 6.20 P&M/TNA 1983-2003: Industry-wise
[Industry Groups 1 – 10]

Year	Ind Gp-1	Ind Gp-2	Ind Gp-3	Ind Gp-4	Ind Gp-5	Ind Gp-6	Ind Gp-7	Ind Gp-8	Ind Gp-9	Ind Gp-10
1983	47.6	52.7	52.9	62.5	39.3	50.3	33.0	21.1	67.8	27.1
1984	52.0	56.0	53.8	72.8	44.3	49.5	34.6	25.7	66.6	32.7
1985	51.5	49.8	61.0	70.3	37.5	48.4	37.0	25.6	60.4	35.1
1986	50.8	55.8	65.4	70.1	41.4	46.9	38.4	25.1	53.7	38.0
1987	57.7	60.0	66.5	71.1	44.7	44.8	35.2	23.7	56.7	41.8
1988	55.8	58.8	67.9	72.1	47.0	42.1	39.3	23.8	55.5	39.4
1989	53.9	56.1	65.9	69.4	45.7	40.5	41.3	22.1	61.3	37.6
1990	59.1	52.8	64.2	78.7	45.7	38.6	34.6	22.3	60.8	35.2
1991	54.8	49.4	61.8	75.4	44.2	36.0	38.7	21.9	61.3	35.5
1992	45.1	45.5	59.9	72.2	39.4	36.5	37.2	20.1	48.2	45.0
1993	37.8	40.8	57.4	71.6	43.3	33.6	36.0	19.7	57.9	38.2
1994	34.4	49.8	51.7	71.0	40.1	28.6	38.0	19.2	52.0	35.8
1995	46.4	45.2	48.2	64.6	39.2	34.8	34.0	16.0	45.8	32.3
1996	53.5	41.2	53.9	63.0	37.2	35.4	33.5	16.1	44.4	28.3
1997	48.4	41.7	54.4	62.1	40.4	35.1	33.9	19.2	51.6	32.0
1998	49.8	52.2	54.8	61.9	44.5	34.9	33.0	19.6	62.1	32.8
1999	50.1	55.9	55.8	68.5	46.8	35.0	36.0	20.6	66.4	37.2
2000	64.7	52.2	66.2	69.9	46.3	36.1	35.8	22.2	62.2	38.5
2001	67.6	50.3	66.9	73.9	40.9	35.3	39.7	23.3	67.5	38.0
2002	72.6	46.8	71.5	74.6	38.8	32.6	38.0	23.5	73.7	44.8
2003	75.3	45.9	72.3	76.2	36.3	31.2	37.1	22.2	68.7	42.5

Fig 6.20 P&M/TNA 1983-2003: Industry-wise [Industry Groups 1 – 10]



Thus, the fixed asset ratios - NFA/TNA and P&M/TNA of all the groups taken together brings out that it has followed a declining trend during the period 1986-88 to 1994-96 and an increasing trend after 1995-96 periods. In the accumulation of these assets- NFA and P&M, the Group 1 (Potteries, Tiles, Refractories, Glass & Cement) out

performed other groups in the post-reform period. That is, its NFA/TNA rose from 36.9% in 1992 to 64.5% in 2003. P&M/TNA improved from 45.1% to 75.3% during the same period. Similarly, Group 4 (Paper, Pulp and Hard Board) has occupied a dominating position among all the other groups in NFA and P&M throughout the period. Its NFA/TNA was higher than 45% and P&M was higher than 62% over the whole period 1983-2003. The accumulation of capital in terms of these fixed asset ratios was poor in the Group 8 (Electrical Equipment, Cables & Transformers) when compared to all the other groups. It has not exceeded more than 23% in NFA/TNA and 26% in P&M/TNA during the entire period. The other asset ratios such as Other Assets to Total Net Assets and Current Assets to Total Net Assets of all the groups demonstrated homogenous change during this period. The Other Assets to Total Net Assets advanced crucially after 1991. Current Assets to Total Net Assets declined after 1993-95 periods.

3. Pattern of Investment: Size-wise

For size-wise analysis we have followed RBI pattern of classification. Based on the paid-up capital as on March 31st, 2002-03, we have categorised the whole set of 150 companies in 5 groups. The number of companies ranges from 9 (6%) to 63 (42%). The consolidated balance sheet variables have been taken up for analysis.

Distribution of Companies: Size-wise

Size	PUC* Range (Rs)	No of Cos & (%)
1	Below 5 Crore	34 (23%)
2	5 Cr – 25 Cr	63 (42%)
3	25 Cr – 50 Cr	30 (20%)
4	50 Cr – 100 Cr	9 (6%)
5	100 Cr Above	14 (9%)
Total		150 (100)

**As per annual accounts of Companies on March 31st, 2002-03.*

Trend of Fixed Asset Components of Size Groups 1 - 5

(Total Net Assets, Current Assets, Net Fixed Assets, Other Assets, and Plant & Machinery)

The changes in the absolute amount of the components of fixed assets for the overall, pre and post reform periods are presented in Table 6.21(a). The variations of Total Net Assets range from 3.8 to 12 times in the reform period compared to the pre-reform period. Its variation in Group 5 was the highest. In Current Assets, the change vary from 3.5 to 9.8 times, the variation was highest in Group 5. In Net Fixed Assets, the change differ from 3.6 to 11.1 times, Group 5 registered maximum growth. Other Assets of these groups limit from 29.7 to 126.4 times. Here also Group 5 expressed high variation. In Plant & Machinery also this is true.

Table 6.21(a) Periodical Change* in Fixed Asset Components: Size-wise [Rs in Crs]

1. Total Net Assets				
Size Gps	Overall	Pre-reform	Post-reform	Change
1	27743	5812	21931	3.8
2	196020	28567	167453	5.9
3	250693	33174	217518	6.6
4	181352	27560	153793	5.6
5	765530	59090	706440	12.0

2. Current Assets				
Size Gps	Overall	Pre-reform	Post-reform	Change
1	16091	3554	12536	3.5
2	109302	17339	91963	5.3
3	141207	19556	121652	6.2
4	79824	13173	66651	5.1
5	337944	31360	306584	9.8

3. Net Fixed Assets				
Size Gps	Overall	Pre-reform	Post-reform	Change
1	10159	2224	7936	3.6
2	77711	10935	66775	6.1
3	88082	13277	74806	5.6
4	88468	14032	74436	5.3
5	326569	26937	299631	11.1

4. Other Assets				
Size Gps	Overall	Pre-reform	Post-reform	Change
1	1493	34	1459	42.9
2	9007	293	8714	29.7
3	21403	342	21061	61.6
4	13060	355	12705	35.8
5	101017	793	100225	126.4

5. Plant & Machinery				
Size Gps	Overall	Pre-reform	Post-reform	Change
1	13791	2749	11042	4.0
2	94524	13102	81422	6.2
3	106254	16578	89675	5.4
4	108819	16041	92778	5.8
5	357403	26308	331095	12.6

**Change is obtained by dividing the post-reform value by the pre-reform value.*

A comparison of the periodical changes of asset components at the aggregate level and size-wise level shows considerable disparity in the growth of assets among size groups during the reform period. Out of five groups, the periodical changes of 4 groups each (80%) fell below the average level in all the asset components. The size group 5 with 'Paid-up Capital Rs 100 Crs and above' witnessed maximum variation in all the asset components in the latter period. The group 1 – (Paid-up Capital below Rs 5 Crs) - has lowest growth.

Table 6.21(b) The Periodical Change of Asset Components among Size-Groups (A comparison with aggregate level changes)

Aggregate Level	
Assets	Periodical Change
TNA	8.2
CA	7.1
NFA	7.8
OA	79.4
P&M	8.1

Size-wise (Total 5 Groups)		
Assets	Periodical Change (Range)	No of Gps below the average
TNA	3.8 - 12.0	4
CA	3.5 - 9.8	4
NFA	3.6 - 11.1	4
OA	29.7-126.4	4
P&M	4.0 - 12.6	4
		80%

Table 6.21(c) explains the distribution of Total Net Assets and its components – Current Assets, Net Fixed Assets and Other Assets- among 5 size groups in the pre and post-reform periods. As a percentage of the periodical aggregates of 150 companies, the share of 3 size groups was 75% in Current Assets, 81% in Net Fixed Assets, 82% in Other Assets and 78% in Total Net Assets during the pre-reform period. It increased to 83% in Current Assets, 86% in Net Fixed Assets, 93% in Other Assets and 85% in Total Net Assets in the post-reform period; the number and sets of groups remain the same. This indicates that the concentration of assets among few size-groups advanced in the reform period; predominantly in the group 5 with 'Paid-up Capital Rs 100 Crs and above'. It possesses around 56% of the Total Net Assets and 70% of Other Assets of all the groups in the reform period.

Table 6.21(c) Inter-Size Distribution of Assets: A Periodical Comparison
(As % of the periodical aggregates of 150 Companies)

Pre-reform				
Size Gps	Current Assets	Net Fixed Assets	Other Assets	Total Net Assets
1	4.2	3.3	1.9	3.8
2	20.4	16.2	16.1	18.5
3	23.0	19.7	18.8	21.5
4	15.5	20.8	19.5	17.9
5	36.9	40.0	43.7	38.3
	100	100	100	100
	Share of 3 Gps= 75.4%	Share of 3 Gps= 80.5%	Share of 3 Gps= 82.0%	Share of 3 Gps= 77.7%

Post-reform				
Size Gps	Current Assets	Net Fixed Assets	Other Assets	Total Net Assets
1	2.1	1.5	1.0	1.7
2	15.3	12.8	6.0	13.2
3	20.3	14.3	14.6	17.2
4	11.1	14.2	8.8	12.1
5	51.1	57.2	69.5	55.8
	100	100	100	100
	Share of 3 Gps= 82.6%	Share of 3 Gps= 85.7%	Share of 3 Gps= 92.9%	Share of 3 Gps= 85.1%

The rate of growth of investment of these size groups during the overall, pre-reform and post-reform periods were obtained by computing the compound rate of growth of the asset components. All the asset variables have revealed upward trend in these three periods. Size Group 5 with paid-up capital (PUC) Rs 100 Crs and above demonstrated an increased rate of growth in all the asset variables in the post-reform period compared to the pre-reform period. Group 2 also witnessed higher growth in Net Fixed assets, Plant and Machinery in the post-reform period. The Group 1 (PUC below Rs 5 Crs) exhibited lowest rate of growth in Total Net Assets, Net Fixed Assets, and Plant and Machinery in the reform period. The rate of growth of Other Assets of all the five groups progressed in the latter period. It is given in Table 6.22(a).

Table 6.22(a) Rate of Growth of Fixed Asset Components: Size-wise

1. Total Net Assets			
Size Gps	Overall	Pre-reform	Post-reform
1	10.0	11.5	7.2
2	14.3	14.5	10.7
3	15.1	13.9	10.8
4	13.9	16.9	8.4
5	21.1	15.8	19.9

2. Current Assets			
Size Gps	Overall	Pre-reform	Post-reform
1	9.5	12.2	6.6
2	13.2	15.3	8.0
3	14.6	14.4	9.5
4	13.0	19.5	4.6
5	19.5	18.2	15.9

3. Net Fixed Assets			
Size Gps	Overall	Pre-reform	Post-reform
1	9.1	10.4	5.0
2	14.6	13.2	12.9
3	13.5	13.0	8.7
4	13.1	14.4	8.6
5	20.0	13.0	19.2

4. Other Assets			
Size Gps	Overall	Pre-reform	Post-reform
1	32.2	13.2	38.1
2	29.4	14.9	28.5
3	37.8	21.8	32.6
4	31.6	17.9	34.8
5	45.6	22.9	51.6

5. Plant & Machinery			
Size Gps	Overall	Pre-reform	Post-reform
1	10.7	12.8	7.9
2	15.0	14.0	14.1
3	13.5	14.3	10.1
4	14.4	16.7	10.5
5	21.8	16.6	24.8

To see whether the rate of growth of investment is size group specific, we have obtained the intra-size rate of growth of assets in the two periods. It highlighted that even if the rate of growth of investment of size group 5 (paid-up capital of Rs 100 Crores and above) has increased in the reform period in terms of Total Net Assets, Net Fixed Assets and Plant and Machinery, all the firms in this group have not followed a uniform pattern of change during these periods. Around 43% of firms in Total Net Assets and Plant and Machinery fall below the average rate of growth in the post-reform period. In Net Fixed Assets, about 35% of firms lie below the average level. This shows that the rate of growth of investment is not size group specific in the reform period.

Table 6.22(b) Rate of Growth of Investment: Intra-size Level*

Total Net Assets

Pre-reform						
Growth rate	1	2	3	4	5	Total
Less than 0	2	1			1	4
1-5	6	5		1		12
6 - 10	9	15	9	1	2	36
11 - 15	6	19	5	1	4	35
16 - 20	7	10	4	4	2	27
21 - 25	3	8	7	1	3	22
26 - 30		1	1	1	1	4
30 +	1	4	4		1	10
#						0
Total	34	63	30	9	14	150

Post-reform						
Growth rate	1	2	3	4	5	Total
Less than 0	13	4	2	1		20
1-5	4	7	5	1	2	19
6 - 10	7	21	4	2	2	36
11 - 15	6	15	11	5	2	39
16 - 20	3	8	6		3	20
21 - 25	1	5			4	10
26 - 30		2				2
30 +		1	2		1	4
#						0
Total	34	63	30	9	14	150

Net Fixed Assets

Pre-reform						
Growth rate	1	2	3	4	5	Total
Less than 0	8	7	2	1	1	19
1-5	9	12	4		3	28
6 - 10	4	13	3	1	2	23
11 - 15	4	7	4	3	2	20
16 - 20	5	11	4		3	23
21 - 25	1	4	6	2	1	14
26 - 30		2	3	1	1	7
30 +	3	7	4	1	1	16
#						0
Total	34	63	30	9	14	150

Post-reform						
Growth rate	1	2	3	4	5	Total
Less than 0	13	5	5	2	1	26
1-5	4	8	3		1	16
6 - 10	7	10	8	3	2	30
11 - 15	4	12	4	2	1	23
16 - 20	3	15	8	1	6	33
21 - 25	2	2			1	5
26 - 30		6			1	7
30 +		5	2	1	1	9
#	1					1
Total	34	63	30	9	14	150

Plant & Machinery

Pre-reform						
Growth rate	1	2	3	4	5	Total
Less than 0		1		1	1	3
1-5	6	5	3			14
6 - 10	11	17	4	1	3	36
11 - 15	8	17	4	1	4	34
16 - 20	2	7	8	3	2	22
21 - 25	2	7	4	1	1	15
26 - 30	1	4	1	1	2	9
30 +	4	5	4	1	1	15
#			2			2
Total	34	63	30	9	14	150

Post-reform						
Growth rate	1	2	3	4	5	Total
Less than 0	8	2	2	1		13
1-5	3	4	4	1	2	14
6 - 10	11	9	6	3		29
11 - 15	5	16	6	2	4	33
16 - 20	2	20	3	2	3	30
21 - 25	1	1	3		3	8
26 - 30		5	2			7
30 +	1	3	2		2	8
#	3	3	2			8
Total	34	63	30	9	14	150

**Number of firms fall under each size group are re presented against rate of growth, # - indeterminate*

Trend of Asset Ratios of Size Groups 1-5

(CA/TNA, NFA/TNA, OA/TNA, and P&M/TNA)

The periodical changes in the asset ratios have been used to compute the relative changes in the assets of different size groups over the period 1983-2003. The ratio of Current Assets to Total Net Assets of all the groups declined in this period. The Net

Fixed Assets as a percentage of Total Net Assets of one group (Group 2) moved up in the post-reform period. The ratio of Other Assets to Total Net Assets of all the groups increased in the post-reform period. The share of Plant and Machinery of 4 groups (1, 2, 4, and 5) progressed in the latter period. These are expressed in Table 6.23(a).

Table 6.23(a) Periodical Changes in Fixed Asset Ratios: Size-wise

1. CA/TNA			
Size Gps	Overall	Pre-reform	Post-reform
1	58.0	61.2	57.2
2	55.8	60.7	54.9
3	56.3	58.9	55.9
4	44.0	47.8	43.3
5	44.1	53.1	43.4

2. NFA/TNA			
Size Gps	Overall	Pre-reform	Post-reform
1	36.6	38.3	36.2
2	39.6	38.3	39.9
3	35.1	40.0	34.4
4	48.8	50.9	48.4
5	42.7	45.6	42.4

3. OA/TNA			
Size Gps	Overall	Pre-reform	Post-reform
1	5.4	0.6	6.7
2	4.6	1.0	5.2
3	8.5	1.0	9.7
4	7.2	1.3	8.3
5	13.2	1.3	14.2

4. P&M/TNA			
Size Gps	Overall	Pre-reform	Post-reform
1	49.7	47.3	50.3
2	48.2	45.9	48.6
3	42.4	50.0	41.2
4	60.0	58.2	60.3
5	46.7	44.5	46.9

A comparison of the components of Total Net Assets among different size groups demonstrates that the fraction of Current Assets exceeded more than 50% of Total Net Assets in 4 size groups in the pre-reform period. Its position however, declined to 3 groups in the overall and post-reform periods. That is, the part of Net Fixed Assets and Other Assets together (NFA+OA) advanced. It further reveals that the Current Assets continue to occupy a dominating position in first three groups in the latter period.

Table 6.23(b) Share of the Components of TNA: A Size-wise Comparison

Pre-reform				
Size Gps	CA/TNA	NFA/TNA	OA/TNA	TNA
1	61.2	38.3	0.6	100
2	60.7	38.3	1.0	100
3	58.9	40.0	1.0	100
4	47.8	50.9	1.3	100
5	53.1	45.6	1.3	100

Post-reform				
Size Gps	CA/TNA	NFA/TNA	OA/TNA	TNA
1	57.2	36.2	6.7	100
2	54.9	39.9	5.2	100
3	55.9	34.4	9.7	100
4	43.3	48.4	8.3	100
5	43.4	42.4	14.2	100

An inter-size comparison of asset ratios with the ratios at the aggregate level illustrates that, the changes in the shares of Net Fixed Assets and Other Assets are independent of each other. That is, when we consider the relative shares of Net Fixed Assets and Other Assets in both the periods, the share of Net Fixed Assets of four groups declined in the reform period, among these the share of Other Assets of only one group grew above the average level of all the companies during this period. This shows that the changes in the shares of these two components of assets are independent.

Table 6.23(c) Asset Ratios: An Inter-Size Comparison

Asset Ratios: Aggregate Level				
Period	CA/TNA	NFA/TNA	OA/TNA	TNA
Pre-reform	55.1	43.7	1.2	100
Post-reform	47.3	41.3	11.4	100

Asset Ratios: Size-wise									
Pre-reform						Post-reform			
Size Gps	CA/TNA	NFA/TNA	OA/TNA	TNA		Size Gps	CA/TNA	NFA/TNA	OA/TNA	TNA
1	61.2	38.3	0.6	100		1	57.2	36.2	6.7	100
2	60.7	38.3	1.0	100		2	54.9	39.9	5.2	100
3	58.9	40.0	1.0	100		3	55.9	34.4	9.7	100
4	47.8	50.9	1.3	100		4	43.3	48.4	8.3	100
5	53.1	45.6	1.3	100		5	43.4	42.4	14.2	100

From the above table, it can be inferred that there is disparity in the relative shares of assets among size groups. About 55% of size groups fall below the average shares of assets in both the periods. This shows that the disparity in the distribution of assets in between size groups (55%) is severe than that of industry-groups (53%) in the reform period.

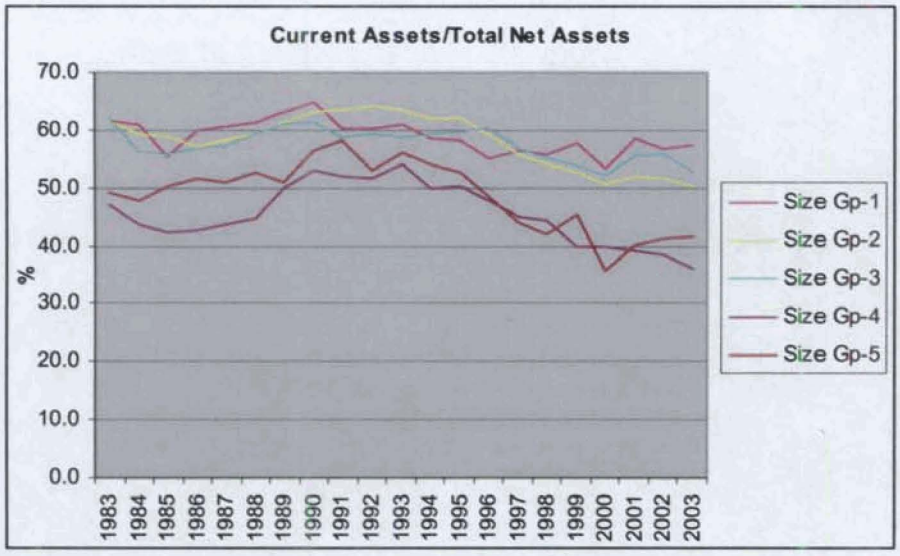
	No of Size Gps below the average level	
Asset Ratios	Pre-reform	Post-reform
CA/TNA	2	2
NFA/TNA	3	3
OA/TNA	3	4
P&M/TNA	3	2
	55%	55%

The analysis of each of these investment ratios in all the five size groups together demonstrated certain peculiar characteristics. The ratio of Current Assets to Total Net Assets of all the groups declined during the post-reform period particularly after 1993. It declined from the range of 42.3% and 64.9% in the pre-reform period to 35.8% and 58.5% in the post-reform period. The group 5 witnessed sharp declining tendency in the post-reform period.

Table 6.24 CA/TNA 1983-2003: Size-wise [Groups 1 – 5]

Year	Size Gp-1	Size Gp-2	Size Gp-3	Size Gp-4	Size Gp-5
1983	61.7	61.6	62.0	47.3	49.3
1984	61.0	59.3	56.0	43.7	47.7
1985	55.5	58.8	55.9	42.3	50.3
1986	60.1	57.1	56.7	42.5	51.6
1987	60.8	58.2	57.3	43.8	51.0
1988	61.3	59.4	59.4	44.6	52.7
1989	63.2	61.2	61.0	50.0	50.9
1990	64.9	63.1	61.4	53.1	56.4
1991	60.3	63.3	58.6	51.8	58.4
1992	60.3	64.1	59.3	51.5	52.9
1993	60.9	63.5	58.5	54.0	56.0
1994	58.5	61.9	59.4	50.0	54.2
1995	58.1	61.9	59.7	50.3	52.7
1996	55.3	59.2	60.4	47.7	48.6
1997	56.6	55.9	57.0	45.1	44.0
1998	55.9	54.0	55.0	44.3	41.8
1999	58.0	52.8	53.7	39.8	45.5
2000	53.4	50.5	51.8	39.7	35.8
2001	58.5	52.0	55.6	39.3	40.3
2002	56.7	51.6	55.9	38.5	41.3
2003	57.6	50.3	52.6	36.2	41.6

Fig 6.24 CA/TNA 1983-2003: Size-wise [Groups 1 – 5]

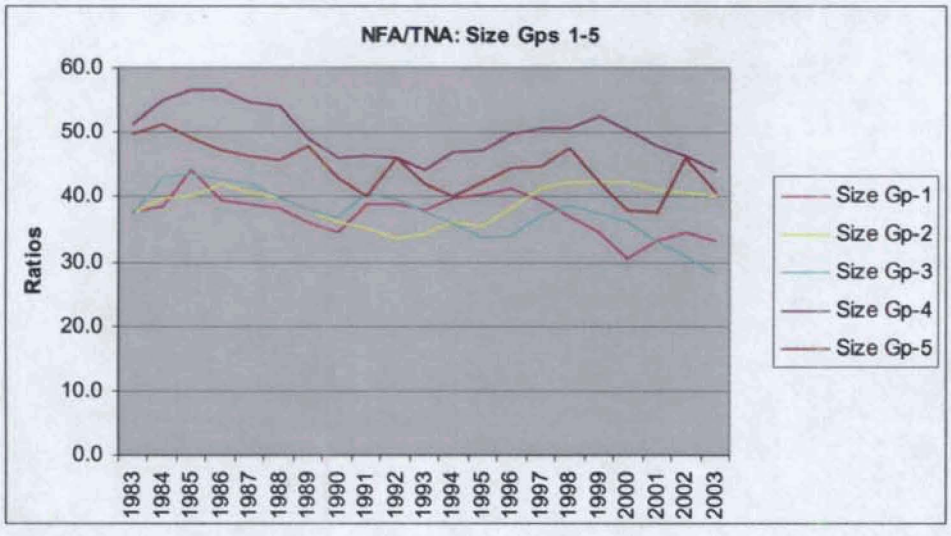


The NFA/TNA of all the groups showed a declining trend from 1985-86 to 1993-95 and moved up thereafter. Again it showed a declining trend after 1998-99. In this classification, the Group 4 (PUC Rs. 50 – 100 Cr) and Group 5 (PUC Rs. 100 Cr and Above) occupied highest position in terms of NFA/TNA over the whole period. Generally, it was higher than 44% in the case of group 4 and more than 37.7% in group 5 all over the period. The ratio was higher than 30% throughout the period when we take into account all the five groups together. It can be viewed from Fig.6.25.

Table 6.25 NFA/TNA 1983-2003: Size-wise [Groups 1 – 5]

Year	Size Gp-1	Size Gp-2	Size Gp-3	Size Gp-4	Size Gp-5
1983	37.7	37.3	37.2	51.4	49.8
1984	38.4	39.6	43.0	55.0	51.4
1985	44.0	40.2	43.4	56.5	49.0
1986	39.5	41.9	42.6	56.5	47.3
1987	38.7	40.9	42.0	54.8	46.2
1988	38.2	39.7	39.9	54.2	45.7
1989	36.2	37.9	37.9	49.0	47.8
1990	34.5	36.1	36.8	45.9	42.9
1991	39.0	35.2	40.3	46.3	40.1
1992	39.0	33.6	39.5	46.1	46.1
1993	38.0	34.3	37.6	44.3	41.9
1994	39.8	36.0	35.6	46.9	40.2
1995	40.3	35.5	33.6	47.1	42.4
1996	41.2	38.3	34.0	49.6	44.6
1997	39.4	41.3	37.1	50.6	44.9
1998	37.1	42.3	38.5	50.7	47.5
1999	34.5	42.1	37.2	52.6	42.2
2000	30.6	42.2	36.2	50.5	38.0
2001	33.2	41.1	33.0	47.9	37.7
2002	34.6	40.8	30.9	46.5	46.1
2003	33.4	40.2	28.0	44.2	40.8

Fig 6.25 NFA/TNA 1983-2003: Size-wise [Groups 1 – 5]

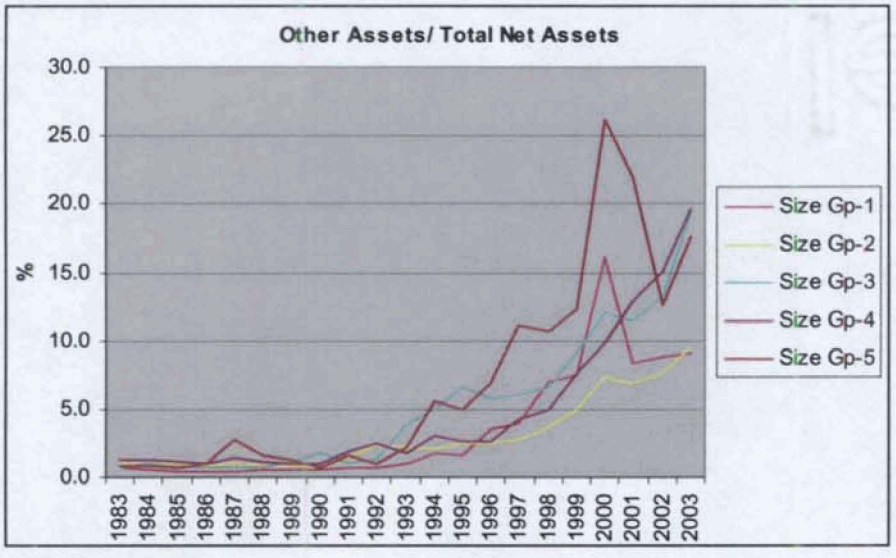


The ratios of Other Assets to Total Net Assets of all the groups shoot up after 1991. It can be observed that the immediate effect of reforms was an upsurge in Other Assets. Its rate of growth was high in the size group 5. In this group the ratio rose from 0.7% to 26.2% in the entire period.

Table 6.26 OA/TNA 1983-2003: Size-wise [Groups 1 – 5]

Year	Size Gp-1	Size Gp-2	Size Gp-3	Size Gp-4	Size Gp-5
1983	0.7	1.0	0.8	1.4	0.8
1984	0.6	1.1	1.0	1.3	0.9
1985	0.5	1.0	0.7	1.2	0.7
1986	0.4	0.9	0.7	1.0	1.0
1987	0.5	1.0	0.7	1.4	2.8
1988	0.6	0.9	0.8	1.2	1.6
1989	0.6	0.9	1.2	1.0	1.3
1990	0.6	0.8	1.8	1.0	0.8
1991	0.8	1.5	1.1	1.9	1.6
1992	0.7	2.3	1.2	2.4	1.0
1993	1.1	2.2	3.9	1.8	2.1
1994	1.7	2.0	5.0	3.1	5.6
1995	1.6	2.5	6.6	2.6	4.9
1996	3.5	2.5	5.6	2.6	6.8
1997	3.9	2.8	6.0	4.3	11.1
1998	7.0	3.7	6.6	5.0	10.7
1999	7.4	5.0	9.1	7.6	12.3
2000	16.1	7.3	12.0	9.8	26.2
2001	8.3	6.8	11.4	12.8	22.0
2002	8.7	7.6	13.2	15.0	12.6
2003	9.0	9.5	19.4	19.7	17.6

Fig 6.26 OA/TNA 1983-2003: Size-wise [Groups 1 – 5]

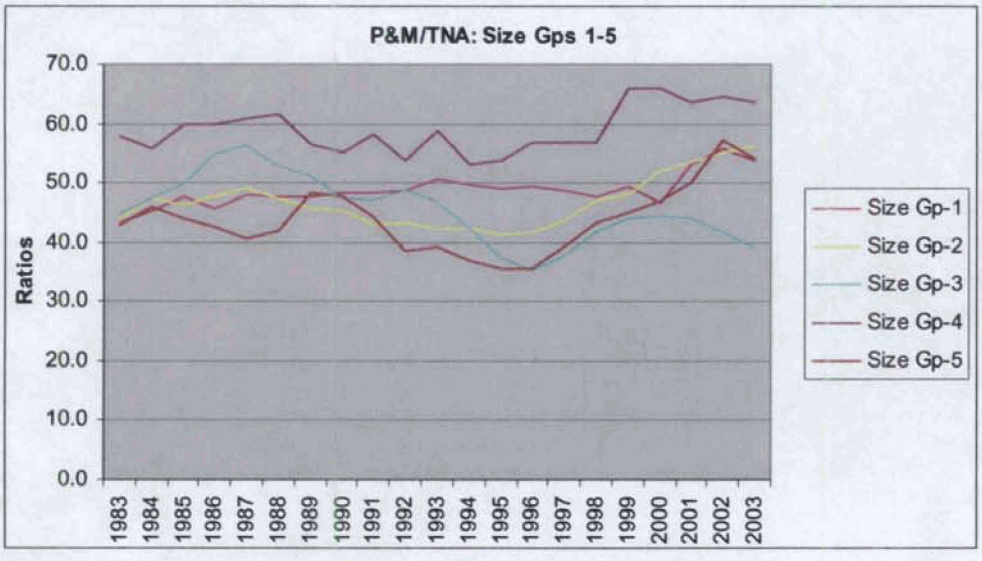


P&M has showed a declining trend from 1987-89 to 1994-96 and an upward trend after that. In Plant and Machinery also, the group 4 has taken a predominant position. Its part was higher than 53% over the entire period. The group 5 witnessed sharp rise in Plant and Machinery after 1996. It is depicted in Fig 6.27.

Table 6.27 P&M/TNA 1983-2003: Size-wise [Groups 1 – 5]

Year	Size Gp-1	Size Gp-2	Size Gp-3	Size Gp-4	Size Gp-5
1983	43.2	43.9	44.8	57.9	43.0
1984	45.5	47.2	47.3	55.9	46.0
1985	47.8	46.5	49.6	59.8	44.0
1986	45.5	47.5	54.7	59.7	42.8
1987	47.9	48.9	56.2	61.0	40.5
1988	47.8	47.3	52.7	61.4	42.0
1989	47.7	45.6	51.0	56.6	48.3
1990	48.5	45.3	47.3	55.0	47.6
1991	48.5	43.1	47.1	58.3	44.2
1992	48.9	43.3	48.6	53.9	38.6
1993	50.7	42.2	46.8	58.8	39.4
1994	49.7	42.4	42.4	53.0	37.0
1995	49.0	41.1	37.1	53.9	35.5
1996	49.2	41.5	35.2	56.7	35.5
1997	48.7	43.8	37.7	56.7	39.3
1998	47.7	47.0	41.5	56.7	43.4
1999	49.4	48.1	43.8	65.8	44.8
2000	46.7	52.2	44.1	66.0	47.1
2001	53.2	53.4	43.8	63.6	49.9
2002	55.6	55.2	41.5	64.7	57.1
2003	53.6	56.1	38.9	63.6	54.1

Fig 6.27 P&M/TNA 1983-2003: Size-wise [Groups 1 – 5]



4. Pattern of Investment: Firm Level

Firm level analysis of 150 companies was done by computing the compound rate of growth of asset components and the asset ratios. The compound rate of growth of Net Fixed Assets of a majority of firms progressed in the reform period. Its rate of growth was in the range of 5 – 20 % in 63% of firms in the overall period. It grew up from 48% of firms in the pre-reform period to 59% of firms in the post-reform period.

Table 6.28(a) Firm Level Rate of Growth of Net Fixed Assets

Overall		
NFA	No of Cos	%
Negative	8	5.3
0 - 5	9	6.0
5 - 10	27	18.0
10 - 15	30	20.0
15 - 20	38	25.3
20 - 25	22	14.7
25 - 30	8	5.3
30 Above	7	4.7
#	1	0.7
	150	100

Pre-reform		
NFA	No of Cos	%
Negative	19	12.7
0 - 5	20	13.3
5 - 10	30	20.0
10 - 15	19	12.7
15 - 20	23	15.3
20 - 25	15	10.0
25 - 30	8	5.3
30 Above	16	10.7
#		
	150	100

Post-reform		
NFA	No of Cos	%
Negative	23	15.3
0 - 5	15	10.0
5 - 10	28	18.7
10 - 15	24	16.0
15 - 20	37	24.7
20 - 25	5	3.3
25 - 30	7	4.7
30 Above	10	6.7
#	1	0.7
	150	100

 # - is indeterminate

The rate of growth of Current Assets was above 15% in 58% of companies in the pre-reform period, declined to 15% of firms in the post-reform period. In the overall period it was 37%.

Table 6.28(b) Firm Level Rate of Growth of Current Assets

Overall		
CA	No of Cos	%
Negative	5	3.3
0 - 5	10	6.7
5 - 10	25	16.7
10 - 15	53	35.3
15 - 20	30	20.0
20 - 25	16	10.7
25 - 30	5	3.3
30 Above	4	2.7
#	2	1.3
	150	100

Pre-reform		
CA	No of Cos	%
Negative	3	2.0
0 - 5	10	6.7
5 - 10	16	10.7
10 - 15	33	22.0
15 - 20	39	26.0
20 - 25	24	16.0
25 - 30	12	8.0
30 Above	12	8.0
#	1	0.7
	150	100

Post-reform		
CA	No of Cos	%
Negative	24	16.0
0 - 5	33	22.0
5 - 10	39	26.0
10 - 15	30	20.0
15 - 20	12	8.0
20 - 25	5	3.3
25 - 30	1	0.7
30 Above	5	3.3
#	1	0.7
	150	100

 # - is indeterminate

The compound rate of growth of Other Assets was above 20% in 48% of firms in the overall period. It was 27% of companies in the pre-reform period enhanced to 52% of firms in the post-reform period.

Table 6.28(c) Firm Level Rate of Growth of Other Assets

Overall		
OA	No of Cos	%
Negative	4	2.7
0 - 5	1	0.7
5 - 10	7	4.7
10 - 15	7	4.7
15 - 20	4	2.7
20 - 25	5	3.3
25 - 30	9	6.0
30 Above	58	38.7
#	55	36.7
	150	100

Pre-reform		
OA	No of Cos	%
Negative	33	22.0
0 - 5	12	8.0
5 - 10	6	4.0
10 - 15	9	6.0
15 - 20	8	5.3
20 - 25	7	4.7
25 - 30	6	4.0
30 Above	28	18.7
#	41	27.3
	150	100

Post-reform		
OA	No of Cos	%
Negative	8	5.3
0 - 5	4	2.7
5 - 10	7	4.7
10 - 15	4	2.7
15 - 20	6	4.0
20 - 25	4	2.7
25 - 30	14	9.3
30 Above	60	40.0
#	43	28.7
	150	100

 # - is indeterminate

Asset Ratios

Firm level asset ratios include;

1. Current Assets to Total Net Assets (CA/TNA),
2. Net Fixed Assets to Total Net Assets (NFA/TNA),
3. Other Assets to Total Net Assets (OA/TNA) and
4. Plant & Machinery to Total Net Assets (P&M/TNA).

Current Assets to Total Net Assets (CA/TNA)

The aggregate level ratios brings out that, on the average, current assets to total net assets (CA/TNA) was 48.1% at the overall, 55.1% at the pre-reform and 47.3% at the post-reform periods. The firm level ratios indicate that, the ratio was above 50% in more than 65% of companies during the overall period. The same in the pre-reform period was around 73% of companies and it declined to 63% in the post-reform period. Thus, the share of current assets out of total net assets has come down in a number of companies in the post-reform period.

Table 6.29 Asset Ratios- CA/TNA: Firm Level

Overall		
CA/TNA	No of Cos	%
Below 10	-	-
10-20	-	-
20-30	2	1.3
30-40	20	13.3
40-50	30	20.0
50-60	49	32.7
60-70	27	18.0
Above 70	22	14.7
	150	100

Pre-reform		
CA/TNA	No of Cos	%
Below 10	-	-
10-20	1	0.7
20-30	3	2.0
30-40	14	9.3
40-50	23	15.3
50-60	29	19.3
60-70	41	27.3
Above 70	39	26.0
	150	100

Post-reform		
CA/TNA	No of Cos	%
Below 10	-	-
10-20	-	-
20-30	4	2.7
30-40	16	10.7
40-50	35	23.3
50-60	48	32.0
60-70	26	17.3
Above 70	21	14.0
	150	100

Net Fixed Assets to Total Net Assets (NFA/TNA)

The ratio of Net Fixed Assets to Total Net Assets (NFA/TNA) of all the companies highlighted that it was 41.6% at the overall, 43.7% and 41.3% at the pre and post-reform periods. The firm level ratios indicated that, the ratio was more than 40% in 48.7 % of companies at the overall and post-reform periods against 45.3% of companies during the pre-reform period. The ratio was less than 30% in 31% of companies in the pre-reform period, declined to 27% of companies in the post-reform period. This explains that the role of net fixed assets in total net assets of more companies improved in the post-reform period compared to the pre-reform period.

Table 6.30 Asset Ratios- NFA/TNA: Firm Level

Overall		
NFA/TNA	No of Cos	%
Below 10	4	2.7
10-20	14	9.3
20-30	22	14.7
30-40	37	24.7
40-50	35	23.3
50-60	26	17.3
60-70	11	7.3
Above 70	1	0.7
	150	100

Pre-reform		
NFA/TNA	No of Cos	%
Below 10	4	2.7
10-20	12	8.0
20-30	30	20.0
30-40	36	24.0
40-50	29	19.3
50-60	22	14.7
60-70	13	8.7
Above 70	4	2.7
	150	100

Post-reform		
NFA/TNA	No of Cos	%
Below 10	4	2.7
10-20	17	11.3
20-30	20	13.3
30-40	36	24.0
40-50	35	23.3
50-60	26	17.3
60-70	9	6.0
Above 70	3	2.0
	150	100

Other Assets to Total Net Assets (OA/TNA)

The relative position of other assets to total net assets was 1.2% when we consider all the companies together during the pre-reform period. It grew up to 11.4% in the post-reform period. The firm level analysis disclosed that the ratio was less than 10% in 99.3% of companies in the pre-reform period, declined to 75% of companies in the post-reform period. Its share grew up to more than 10% in 25% of companies in the post-reform period against 1% of companies in the pre-reform period. 6% of companies witnessed more than 20% growth of Other Assets in the latter period.

Table 6.31 Asset Ratios-OA/TNA: Firm Level

Overall		
OA/TNA	No of cos	%
Below 10	120	80.0
10-20	25	16.7
20-30	4	2.7
30-40	1	0.7
40-50	-	-
50-60	-	-
60-70	-	-
Above 70	-	-
	150	100

Pre-reform		
OA/TNA	No of Cos	%
Below 10	149	99.3
10-20	1	0.7
20-30	-	-
30-40	-	-
40-50	-	-
50-60	-	-
60-70	-	-
Above 70	-	-
	150	100

Post-reform		
OA/TNA	No of Cos	%
Below 10	113	75.3
10-20	28	18.7
20-30	8	5.3
30-40	1	0.7
40-50	-	-
50-60	-	-
60-70	-	-
Above 70	-	-
	150	100

Plant & Machinery to Total Net Assets (P&M/TNA)

At the firm level, the fraction of plant and machinery in total net assets was more than 40% in 65.3% of companies at the overall period. It progressed from 62% of companies during the pre-reform period to 64.7% of companies in the post-reform period. The ratio at the aggregate level was 47.9% in overall, 48.5% at the pre-reform and 47.8% in the post-reform periods. It has been depicted in Table 6.32.

Table 6.32 Asset Ratios-P&M/TNA: Firm Level

Overall		
P&M/TNA	No of cos	%
Below 10	4	0.3
10-20	12	8.0
20-30	26	17.3
30-40	10	6.7
40-50	20	13.3
50-60	29	19.3
60-70	31	20.7
Above 70	18	12.0
	150	100

Pre-reform		
P&M/TNA	No of cos	%
Below 10	3	2.0
10-20	11	7.3
20-30	22	14.7
30-40	21	14.0
40-50	22	14.7
50-60	33	22.0
60-70	21	14.0
Above 70	17	11.3
	150	100

Post-reform		
P&M/TNA	No of Cos	%
Below 10	4	2.7
10-20	15	10.0
20-30	21	14.0
30-40	13	8.7
40-50	20	13.3
50-60	27	18.0
60-70	22	14.7
Above 70	28	18.7
	150	100

Thus, when we consider the components of Total Net Assets – Current Assets, Net Fixed Assets and Other Assets at the firm level, the share of current assets declined while the part of net fixed assets and other assets progressed. Specifically, the position of current assets was more than 40% in 88% of companies during the pre-reform period, declined to 86.7% of companies in the post-reform period. The portion of net fixed assets was more than 40% in 45.3% of companies in the initial period, enhanced to 48.6% of companies in the reform period. The part of other assets was more than 10% in 0.7% of companies in the pre-reform period rose to 24.7% of companies in the latter period.

Conclusion

The analysis of the pattern of investment of 150 companies at the aggregate level brings out the fact that, the compound rate of growth of Net Fixed Assets and Other Assets progressed while that of Current Assets depleted in the post-reform period compared to the pre-reform period. The rate of growth of Net Fixed Assets improved from 13.2% in the initial period to around 15% in the second period. The rate of growth of Other Assets grew up from 20.4% to 41.9% whereas, it declined in the case of Current Assets from 16.6% to 11.7% during the same period. This trend has been found true at constant prices also.

The asset ratios at the aggregate level explained that the share of Net Fixed Assets in Total Net Assets declined marginally in the reform period. The fraction of Current Assets in Total Net Assets also declined while the role of Other Assets in Total Net Assets augmented in the post-reform period. That is, the share of Net Fixed Assets declined from 43.7% to 41.3% and Current Assets from 55.1% to 47.3% in the reform period against the initial period. The part of Other Assets at the same time advanced from 1.2% to 11.4%. This pattern has been observed at constant prices also.

The industry-wise analysis at the aggregate level disclosed that, the rate of growth of Net Fixed Assets of five out of ten groups advanced in the reform period. It declined in all the groups in the case of Current Assets whereas it enhanced in all the groups in the case of Other Assets. To see whether there is industry specific growth of investment, the intra-industry rate of growth of investment in both the periods were observed. It revealed that the rate of growth of investment is not industry specific.

The size-wise analysis at the aggregate level brings out that, the rate of growth of Net Fixed Assets of size group 5 (PUC above Rs 100 Crs) advanced in the post-reform period. It declined in all the groups in the case of Current Assets in contrast to Other Assets during these periods. To observe whether the rate of growth of investment is size-

group specific, the intra-size rate of growth was obtained. It explained that the rate of growth of investment is not size-group specific.

The pattern of investment at the firm level highlighted that, the compound rate of growth of Net Fixed Assets of a majority of firms accelerated in the reform period. It was in the range of 5 – 20% in 48% of firms in the pre-reform period grew-up to 59% of firms after the reforms. In Current Assets, it was above 15% in 58% of companies in the initial period, declined to 15% of firms in the second period. The rate of growth of Other Assets at the same time was above 20% in 27% of firms in the former period improved to 52% of firms in the latter period.

The firm level asset ratios demonstrated that, the share of Net Fixed Assets in Total Net Assets of more firms advanced in the reform period. It was more than 40% in 49% of firms in the latter period in contrast to 45% of firms in the former period. The share of Current Assets declined during these periods. It was above 50% in 73% of firms before the reforms come down to 63% of firms after the reforms. The fraction of Other Assets also appreciated in the reform period. It was less than 10% in 99% of firms in the initial period augmented to more than 10% in 25% of firms in the reform period.

At the aggregate level, among the components of total net assets, the shares of Net Fixed Assets and Other Assets together progressed in the post-reform period while Current Asset depleted. Industry-wise and size-wise analysis brings into light certain homogenous pattern of change in the asset ratios. The NFA/TNA and P&M/TNA expressed declining trend from 1986-88 to 1994-96 and an increasing trend thereafter. Certain groups occupied a predominant position in the concentration of assets. The Group 4 (Paper, Pulp and HB) in industry-wise grouping has got a leading position by possessing high fixed asset ratios whereas the same in size-wise grouping was taken by the group whose paid-up capital falls in the range of Rs. 50- 100 Crs.

CHAPTER – 6 (2)

FINANCING PATTERN OF THE PRIVATE CORPORATE SECTOR IN INDIA; 1983-2003

- Financing Pattern: Aggregate Level
- Financing Pattern: Industry-wise and Size-wise
- Financing Pattern: Firm Level
- Conclusion

Chapter – 6(2)

Financing Pattern of the Private Corporate Sector in India; 1983-2003

1. Financing Pattern: Aggregate Level

A company can raise finance from various sources such as shares, debentures, and long-term borrowings. The financial structure of a company refers to the way the assets are financed. It includes all the long-term and short-term sources of finance. To study the financing pattern of the private corporate sector in India, we have analysed the financial structure of 150 Non-Government Non-Financial Public Limited Companies (NGNF) at the aggregate level, group level (industry and size wise) and firm level. The consolidated balance sheet data of the companies brings out its aggregate level financing pattern for the period 1983-2003. We have broadly classified the Total Long term Finance (TLF) into Total External Finance (TEF) and Total Internal Finance (TIF). Total external finance comprises debenture, long-term loans, share capital and share premium reserves. Total internal finance is obtained by deducting share premium reserves from share holder's reserves. The total liabilities and current liabilities are also highlighted. These financial variables and its percentage share to Total Long-term Finance have been presented in Table 6.40(a).

Total Long-term Finance = Total External Finance + Total Internal Finance

ie, $TLF = TEF + TIF$

Total External Finance = Debenture + Long-term Loans + Share Capital + Share-Premium Reserves

ie, $TEF = Deb + LTL + SC + SPR$

Total Internal Finance = Shareholder's Reserves – Share Premium Reserves

ie, $TIF = SHR - SPR$

Aggregate finances of companies in terms of Total Long-term Finance (TLF), Total External Finance (TEF) and Total Internal Finance (TIF) progressed during the period 1983-2003. It has expressed a paradigm upward shift since 1991. TLF grew by more than 38 times (from Rs 2944 Crs in 1983 to Rs 112913 Crs in 2003), TEF progressed by 76 times (from Rs 983 Crs in 1983 to Rs 74429 Crs in 2003) and TIF enhanced by 20 times (from Rs 1961 Crs in 1983 to Rs 38484 Crs in 2003) during this period. Among the components of Total External Finance, Debentures increased by 42 times (from Rs 446 Crs in 1983 to Rs 18771 Crs in 2003), Long-term Loans by 17 times (from Rs 1310 Crs in 1984 to Rs 22154 Crs in 2003), Share Capital by 8 times (Rs 821 Crs in 1983 to Rs 6644 Crs in 2003), and Share Premium Reserves by 746 times (from Rs 36 Crs in 1983 to Rs 26859 Crs in 2003). The Total Liabilities and Current Liabilities progressed by 18 times (from Rs 6012 Crs in 1983 to Rs. 110024 Crs in 2003) and 12 times (from Rs 5887 Crs in 1983 to Rs 69099 Crs in 2003), over the period 1983-2003.

The periodical changes in these financial variables explain that, Total Long-term Finance progressed by 9.5 times whereas Total External and Internal Finance grew up by 11 and 7.4 times respectively in the post-reform period compared to the pre-reform period. Among the components of Total External Finance, the periodical changes of Share Premium Reserves (33.5 times) and Long-term Loans (11.7 times) were higher than Debentures (7.8 times) and Share Capital (5.0 times). Total Liabilities and Current Liabilities showed 7.6 and 6.6 fold increase [Table 6.40(b)].

The rate of growth of these financial variables indicates that they have upward trend in both the periods, nevertheless, the rate of growth of total liabilities, current liabilities, share capital and total internal finance showed only marginal increase in the reform period. The rate of growth of Long-term loans increased considerably in the latter period [Table 6.40(c)].

Table 6.40(a) Financial Structure of 150 Companies 1983-2003

[Rs in Crores]

Year	Total Liabilities (1)	Current Liabilities (2)	Deben-tures (3)	Long-term Loans (4)	Share Capital (5)	Share Premium Reserves (6)	*Total Ext. Finance (7) (3+4+5+6)	*Total Internal Finance (8)	*Total Long term Finance (7+ 8)
1983 *Pre-reform*	6012 *(204.2)*	5887 *(200.0)*	446 *(15.1)*	-320 *(-10.9)*	821 *(27.9)*	36 *(1.2)*	983 *(33.4)*	1961 *(66.6)*	2944
1984	6786 *(123.7)*	4776 *(87.0)*	701 *(12.8)*	1310 *(23.9)*	939 *(17.1)*	113 *(2.1)*	3063 *(55.8)*	2425 *(44.2)*	5488
1985	8198 *(111.7)*	5221 *(71.2)*	1290 *(17.6)*	1687 *(23.0)*	974 *(13.3)*	151 *(2.1)*	4102 *(55.9)*	3234 *(44.1)*	7337
1986	10011 *(121.6)*	6860 *(83.3)*	1447 *(17.6)*	1705 *(20.7)*	1093 *(13.3)*	166 *(2.0)*	4410 *(53.5)*	3826 *(46.5)*	8236
1987	10306 *(109.0)*	6523 *(69.0)*	1924 *(20.3)*	1860 *(19.7)*	1265 *(13.4)*	345 *(3.6)*	5393 *(57.1)*	4060 *(42.9)*	9453
1988	10795 *(99.1)*	6717 *(61.7)*	2024 *(18.6)*	2054 *(18.9)*	1426 *(13.1)*	885 *(8.1)*	6389 *(58.7)*	4502 *(41.3)*	10892
1989	13786 *(116.3)*	9452 *(79.7)*	2170 *(18.3)*	2165 *(18.3)*	1559 *(13.2)*	1075 *(9.1)*	6969 *(58.8)*	4887 *(41.2)*	11856
1990	15447 *(119.9)*	10416 *(80.8)*	2741 *(21.3)*	2290 *(17.8)*	1590 *(12.3)*	1094 *(8.5)*	7715 *(59.9)*	5172 *(40.1)*	12887
1991	19328 *(115.4)*	12509 *(74.7)*	3720 *(22.2)*	3098 *(18.5)*	1818 *(10.9)*	1295 *(7.7)*	9932 *(59.3)*	6821 *(40.7)*	16753
1992 *Post-reform*	23929 *(111.3)*	14348 *(66.7)*	4156 *(19.3)*	5425 *(25.2)*	1979 *(9.2)*	1735 *(8.1)*	13295 *(61.8)*	8203 *(38.2)*	21498
1993	28813 *(104.3)*	17146 *(62.1)*	5262 *(19.0)*	6405 *(23.2)*	2568 *(9.3)*	3777 *(13.7)*	18012 *(65.2)*	9611 *(34.8)*	27622
1994	33248 *(92.9)*	19849 *(55.5)*	6284 *(17.6)*	7116 *(19.9)*	3048 *(8.5)*	7298 *(20.4)*	23745 *(66.4)*	12041 *(33.6)*	35786
1995	40694 *(84.4)*	25115 *(52.1)*	6625 *(13.7)*	8954 *(18.6)*	3801 *(7.9)*	13748 *(28.5)*	33128 *(68.7)*	15104 *(31.3)*	48232
1996	50227 *(84.8)*	30869 *(52.1)*	7988 *(13.5)*	11370 *(19.2)*	4501 *(7.6)*	14885 *(25.1)*	38743 *(65.4)*	20493 *(34.6)*	59236
1997	65159 *(98.4)*	38407 *(58.0)*	12587 *(19.0)*	14165 *(21.4)*	4657 *(7.0)*	11411 *(17.2)*	42820 *(64.7)*	23386 *(35.3)*	66205
1998	68684 *(83.2)*	36245 *(43.9)*	16341 *(19.8)*	16098 *(19.5)*	5792 *(7.0)*	15437 *(18.7)*	53668 *(65.0)*	28857 *(35.0)*	82525
1999	73453 *(88.4)*	38784 *(46.7)*	11268 *(13.6)*	23401 *(28.2)*	6013 *(7.2)*	15742 *(18.9)*	56424 *(67.9)*	26675 *(32.1)*	83098
2000	84567 *(98.8)*	50143 *(58.6)*	11233 *(13.1)*	23191 *(27.1)*	6311 *(7.4)*	16996 *(19.8)*	57731 *(67.4)*	27895 *(32.6)*	85626
2001	83261 *(95.1)*	49623 *(56.7)*	11321 *(12.9)*	22318 *(25.5)*	6060 *(6.9)*	17177 *(19.6)*	56875 *(65.0)*	30678 *(35.0)*	87553
2002	99875 *(92.5)*	59269 *(54.9)*	16243 *(15.0)*	24362 *(22.6)*	6247 *(5.8)*	27602 *(25.6)*	74454 *(69.0)*	33488 *(31.0)*	107942
2003	110024 *(97.4)*	69099 *(61.2)*	18771 *(16.6)*	22154 *(19.6)*	6644 *(5.9)*	26859 *(23.8)*	74429 *(65.9)*	38484 *(34.1)*	112913

***Source**: Bombay Stock Exchange Official Directory, Mumbai*

**TEF=Debenture + Long term Loans + Share capital+ Share Premium Reserves*

**TIF= Shareholder's Reserves - Share Premium Reserves*

**TLF=TEF+TIF, *Total Liabilities= Current Liabilities + Debentures + Long-term Loans*

**Percentage to Total Long-term Finance is given in parenthesis*

Table 6.40(b) Financial Structure (Aggregate Level): Periodical Changes [Rs in Crs]

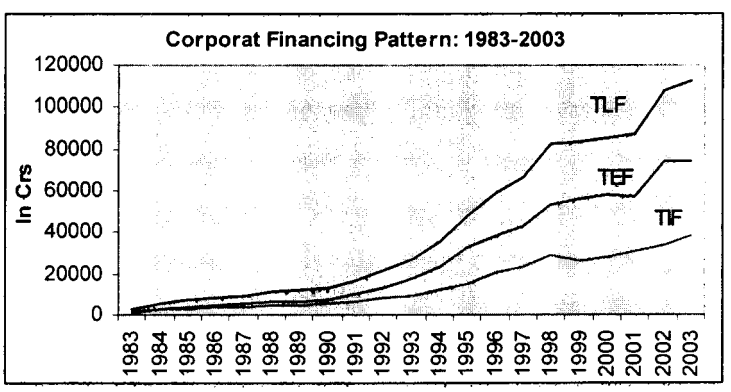
Period	Total Liabilities	Current Liabilities	Deben-tures	Long-term Loans	Share Capital	Share Premium Reserves	Total Ext. Finance	Total Internal Finance	Total Long term Finance
Overall	862604 *95.4*	517256 *57.2*	144540 *16.0*	200809 *22.2*	69105 *7.6*	177826 *19.7*	592280 *65.5*	311802 *34.5*	904082
Pre-reform	100670 *117.3*	68358 *79.6*	16461 *19.2*	15850 *18.5*	11485 *13.4*	5161 *6.0*	48957 *57.0*	36888 *43.0*	85845
Post-reform	761934 *93.1*	448898 *54.9*	128078 *15.7*	184959 *22.6*	57620 *7.0*	172666 *21.1*	543323 *66.4*	274914 *33.6*	818237

** Percentage to Total Long-term Finance is given in parenthesis*

Table 6.40(c) Rate of Growth of Financial Variables
(3 Year Moving Average Exponential Rate of Growth)

Period	Total Liabilities	Current Liabilities	Deben-tures	Long-term Loans	Share Capital	Share Premium Reserves	Total Ext. Finance	Total Internal Finance	Total Long-term Finance
Overall	17.1	15.7	17.7	21.0	13.0	36.8	20.9	16.8	19.3
Pre-reform	14.9	13.2	21.3	16.5	10.4	49.6	18.9	13.4	16.5
Post-reform	15.2	14.7	13.0	18.1	11.8	20.8	16.6	15.2	16.1

Fig 6.40(a) Corporate Financing Pattern: 1983-2003



The composition of Total Long-term Finance including Total External Finance and Internal Finance revealed that the share of Total External Finance in Total Long-term Finance was 33 % in 1983 increased to 66 % in 2003 whereas the share of Total Internal Finance declined from 67 % in 1983 to 34 % in 2003. The total external finance has occupied more than 60% of Total Long-term Finance since 1991, reached the maximum level of about 69% in 2002. Its periodical change brings out that the position of external finance improved from 57% before the reforms to 66.4% after the reforms while internal finance turned down from 43% to 33.6% during the same period [Fig 6.40(b) and (c)].

Fig 6.40(b) Composition of Total Long-term Finance

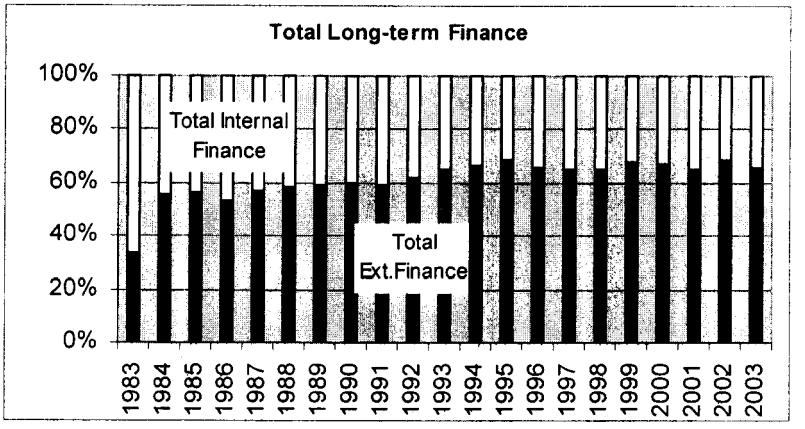
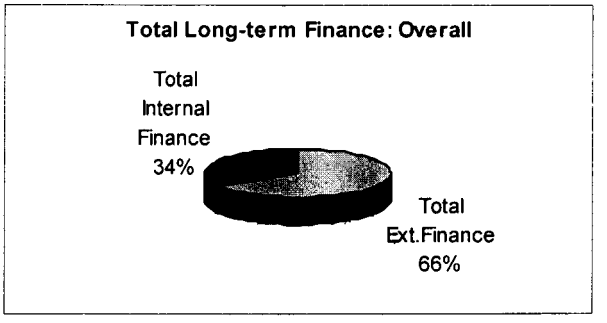
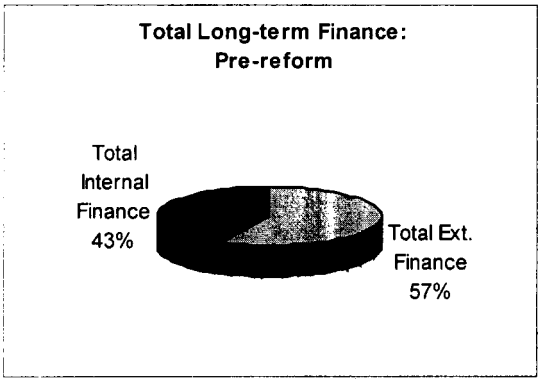
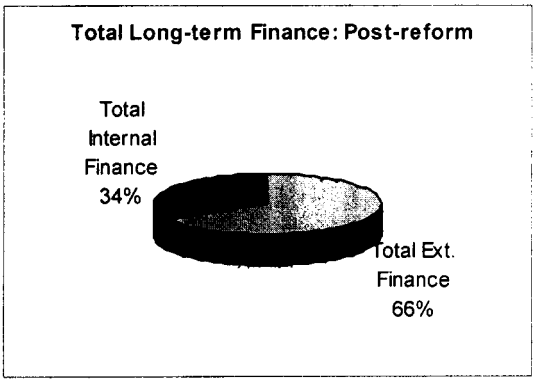


Fig 6.40(c) Components of Total Long-term Finance: Periodical Changes







The composition of total external finance including debentures, long-term loans, share capital and share premium reserves has been presented in Table 6.41(a). Debt finance consists of debentures and long-term loans occupied 66% of total external finance in 1984, declined to 55% in 2003 whereas share capital and share premium reserves together improved from 34% to 45% during the same period. The variables like share

capital and share premium reserves have followed more or less steady pattern of change over the period; share capital gradually declined and share premium reserves moved up. Debentures and long-term loans, however, have exhibited erratic pattern of change during this period. In 1992, the shares of debentures and long-term loans were 31% and 41% of total external finance changed into 20% and 39% respectively in 2001.

The periodical break-up may provide a better explanation of the changes of these variables [Table 6.41(b)]. Debt finance (Debenture + Long-term Loans) occupied 66% and share capital and share premium reserves together possessed 34% of total external finance in the pre-reform period. It changed into 58% and 42% respectively in the post-reform period. In debt finance, the share of debentures declined from 34% to 24% and long term loans rose from 32% to 34%. Share capital depleted from 23.5% to 10.6% while share premium reserves revived from 10.5% to 32% during these periods. The composition of total external finance from 1983 to 2003 has been depicted in Figure 6.41(a). It is evident from the figure that, the positions of share capital and debentures have deteriorated in the post-reform period. Share premium reserves have increased since 1992 and exceeded more than 40% of total external finance in 1995. Its share progressed after 1997. The rate of growth of Long-term Loans and Share Capital advanced during these periods. It is already depicted in Table 6.40(c).

Table 6.41(a) Composition of Total External Finance [Rs in Crs]

Year	Debentures (1)	Long-term Loans (2)	Share Capital (3)	Share Premium Reserves (4)	*Total Ext.Finance (1+2+3+4)
1983 *Pre-reform*	446 *45.3*	-320 *-32.5*	821 *83.5*	36 *3.6*	983 *100*
1984	701 *22.9*	1310 *42.8*	939 *30.7*	113 *3.7*	3063 *100*
1985	1290 *31.4*	1687 *41.1*	974 *23.7*	151 *3.7*	4102 *100*
1986	1447 *32.8*	1705 *38.7*	1093 *24.8*	166 *3.8*	4410 *100*
1987	1924 *35.7*	1860 *34.5*	1265 *23.5*	345 *6.4*	5393 *100*
1988	2024 *31.7*	2054 *32.1*	1426 *22.3*	885 *13.9*	6389 *100*
1989	2170 *31.1*	2165 *31.1*	1559 *22.4*	1075 *15.4*	6969 *100*
1990	2741 *35.5*	2290 *29.7*	1590 *20.6*	1094 *14.2*	7715 *100*
1991	3720 *37.5*	3098 *31.2*	1818 *18.3*	1295 *13.0*	9932 *100*
1992 *Post-reform*	4156 *31.3*	5425 *40.8*	1979 *14.9*	1735 *13.1*	13295 *100*
1993	5262 *29.2*	6405 *35.6*	2568 *14.3*	3777 *21.0*	18012 *100*
1994	6284 *26.5*	7116 *30.0*	3048 *12.8*	7298 *30.7*	23745 *100*
1995	6625 *20.0*	8954 *27.0*	3801 *11.5*	13748 *41.5*	33128 *100*
1996	7988 *20.6*	11370 *29.3*	4501 *11.6*	14885 *38.4*	38743 *100*
1997	12587 *29.4*	14165 *33.1*	4657 *10.9*	11411 *26.6*	42820 *100*
1998	16341 *30.4*	16098 *30.0*	5792 *10.8*	15437 *28.8*	53668 *100*
1999	11268 *20.0*	23401 *41.5*	6013 *10.7*	15742 *27.9*	56424 *100*
2000	11233 *19.5*	23191 *40.2*	6311 *10.9*	16996 *29.4*	57731 *100*
2001	11321 *19.9*	22318 *39.2*	6060 *10.7*	17177 *30.2*	56875 *100*
2002	16243 *21.8*	24362 *32.7*	6247 *8.4*	27602 *37.1*	74454 *100*
2003	18771 *25.2*	22154 *29.8*	6644 *8.9*	26859 *36.1*	74429 *100*

* *TEF=Debenture + Long-term Loans + Share Capital + Share Premium Reserves*

* *Percentage to total external finance is given in parenthesis*

Table 6.41(b) Composition of Total External Finance: Periodical Changes [Rs in Crs]

Period	Debentures	Long-term Loans	Share Capital	Share Premium Reserves	Total Ext.Finance
Overall	144540 *24.4*	200809 *33.9*	69105 *11.7*	177826 *30.0*	592280 *100*
Pre-reform	16461 *33.6*	15850 *32.4*	11485 *23.5*	5161 *10.5*	48957 *100*
Post-reform	128078 *23.6*	184959 *34.0*	57620 *10.6*	172666 *31.8*	543323 *100*

Fig 6.41(a) Composition of Total External Finance

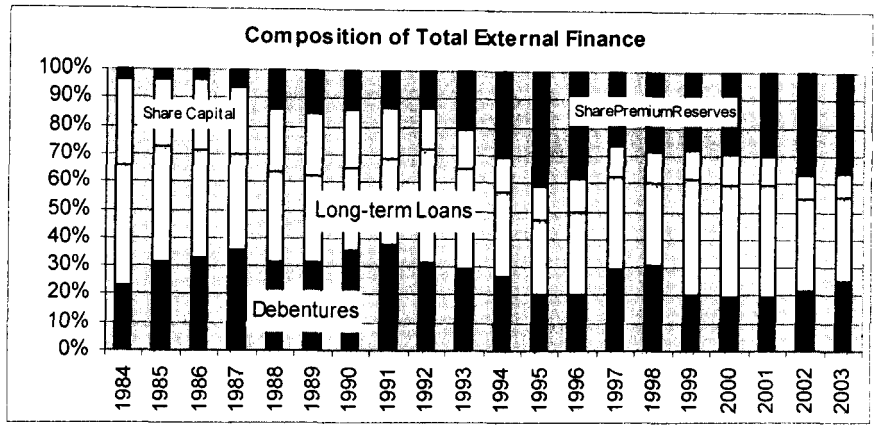
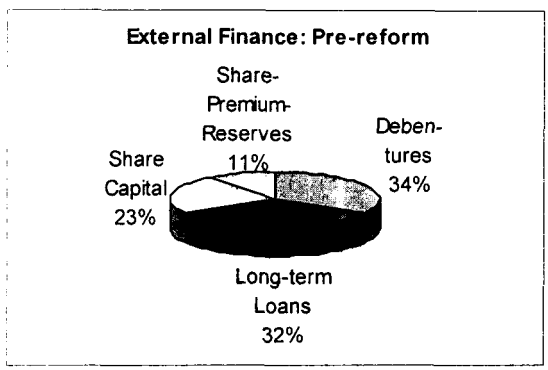
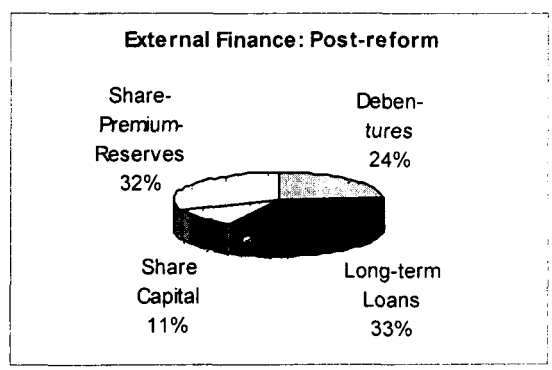


Fig 6.41(b) Components of Total External Finance





Ratio Analysis

For financial ratio analysis, we have computed six ratios such as;

(1) Debenture to Total Long term Finance (Deb/TLF),

(2) Long-term Loans to Total Long-term Finance (LTL/TLF),

(3) Share Capital to Total Long-term Finance (SC/TLF),

(4) Share Premium Reserve to Total Long-term Finance (SPR/TLF),

(5) Total External Finance to Total Long-term Finance (TEF/TLF),

(6) Total Internal Finance to Total Long-term Finance (TIF/TLF) and finally,

(7) Debt to Equity (D/E).

The ratio of Debenture to Total Long-term Finance (Deb/TLF) improved progressively from 15% in 1983 to 22% in 1991. It declined to 13.5% in 1996 and rose to

16.6% in 2003. The share of Long-term Loans (LTL/TLF) move downward from 23.9 % in 1984 to 17.8 % in 1990. It gradually improved to 28.2% in 1999 and declined thereafter. The position of Share Capital (SC/TLF) deteriorated steadily from 28% in 1983 to 5.8% in 2003. Share Premium Reserves (SPR/TLF) increased continuously from 1.2% in 1983 to 28.5 % in 1995. It declined to 17 % in 1997 and then increased. The role of Total External Finance to Total Long-term Finance (TEF/TLF) was in the range of 62 % and 69 % in the post-reform period while it was less than 60% in the pre-reform period. The part of Internal Finance (TIF/TIF) depleted to 31 % in 2002 which was less than half of its share in 1983 (67%). Debt-Equity ratio increased from 57.8 % in 1984 to 80.4% in 1992 and then declined to 47.7 % in 1995. It again rose to 71.6 % in 1999 and declined thereafter. These are plotted in Fig 6.42(a). The periodical changes indicate that, the long-term loans, share premium reserves, total external finance and debt-equity ratio advanced in the reform period.

Table 6.42(a) Selected Financial Ratios

Year	Deb/TLF	LTL/TLF	SC/TLF	SPR/TLF	TEF/TLF	TIF/TLF	D/E
1983	15.1	-10.9	27.9	1.2	33.4	66.6	4.5
1984	12.8	23.9	17.1	2.1	55.8	44.2	57.8
1985	17.6	23.0	13.3	2.1	55.9	44.1	68.3
1986	17.6	20.7	13.3	2.0	53.5	46.5	62.0
1987	20.3	19.7	13.4	3.6	57.1	42.9	66.7
1988	18.6	18.9	13.1	8.1	58.7	41.3	59.9
1989	18.3	18.3	13.2	9.1	58.8	41.2	57.6
1990	21.3	17.8	12.3	8.5	59.9	40.1	64.0
1991	22.2	18.5	10.9	7.7	59.3	40.7	68.6
1992	19.3	25.2	9.2	8.1	61.8	38.2	80.4
1993	19.0	23.2	9.3	13.7	65.2	34.8	73.1
1994	17.6	19.9	8.5	20.4	66.4	33.6	59.9
1995	13.7	18.6	7.9	28.5	68.7	31.3	47.7
1996	13.5	19.2	7.6	25.1	65.4	34.6	48.5
1997	19.0	21.4	7.0	17.2	64.7	35.3	67.8
1998	19.8	19.5	7.0	18.7	65.0	35.0	64.8
1999	13.6	28.2	7.2	18.9	67.9	32.1	71.6
2000	13.1	27.1	7.4	19.8	67.4	32.6	67.2
2001	12.9	25.5	6.9	19.6	65.0	35.0	62.4
2002	15.0	22.6	5.8	25.6	69.0	31.0	60.3
2003	16.6	19.6	5.9	23.8	65.9	34.1	56.8

Table 6.42(b) Financial Ratios: Periodical Changes

Period	Deb/TLF	LTL/TLF	SC/TLF	SPR/TLF	TEF/TLF	TIF/TLF	D/E
Overall	16.0	22.2	7.6	19.7	65.5	34.5	61.8
Pre-reform	19.2	18.5	13.4	6.0	57.0	43.0	60.4
Post-reform	15.7	22.6	7.0	21.1	66.4	33.6	62.0

Fig 6.42(a) Financial Ratios 1983-2003

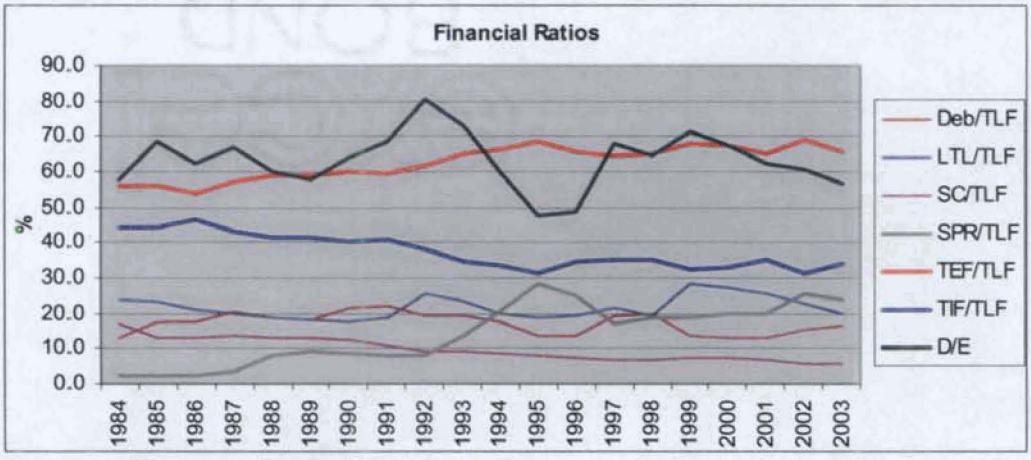
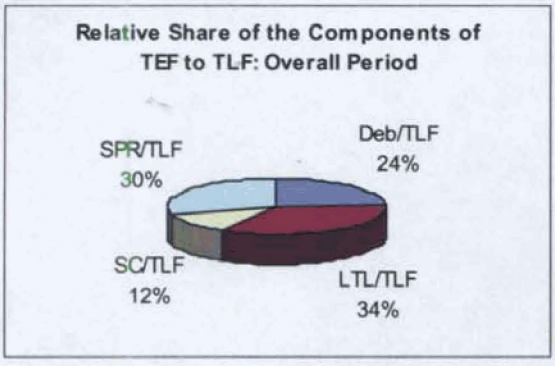
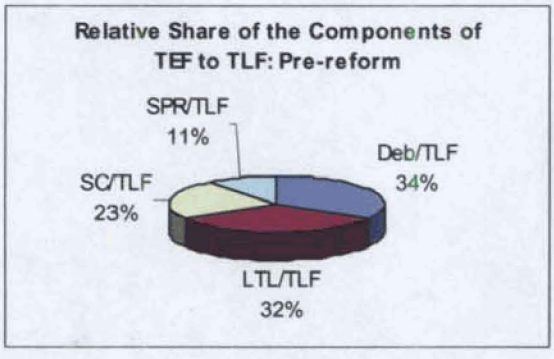


Fig 6.42(b) The Relative Share of the Components of TEF to TLF: Periodical Basis





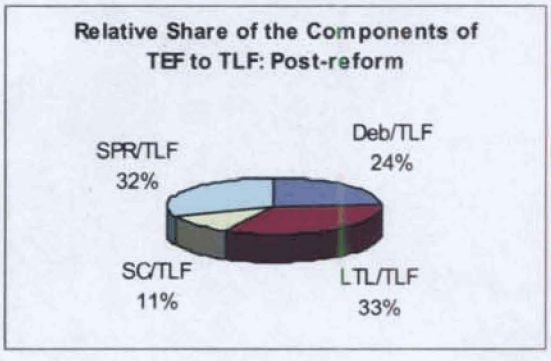
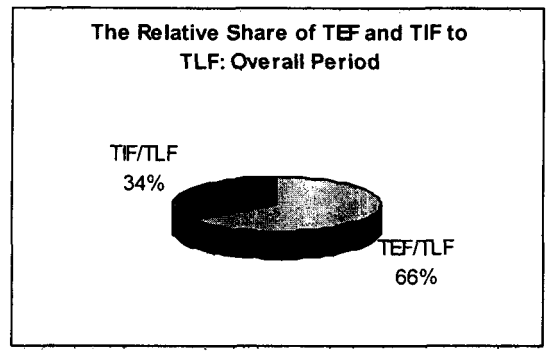
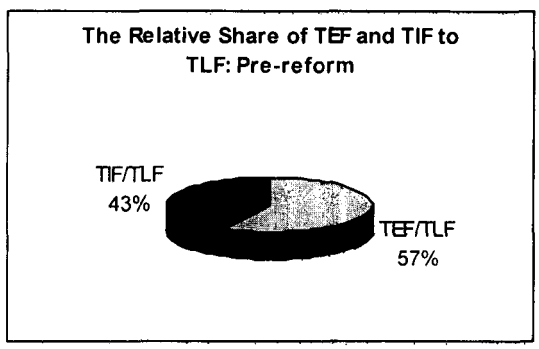
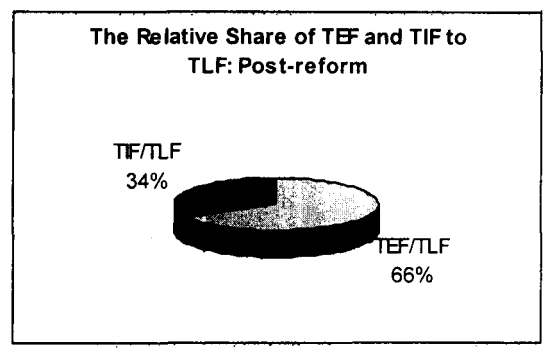


Fig 6.42(c) The Relative Share of TEF and TIF to TLF: Periodical Basis







Thus, from the financial ratios, the relative shares of the components of Total External Finance to Total Long-term Finance brings out that long-term loans and share premium reserves of the private corporate sector has improved in the post-reform period [Fig 6.42(b)]. In between Total External Finance and Total Internal Finance, the share of Total External Finance progressed after the reforms [Fig 6.42(c)].

Share capital which occupied a predominant position (30.7%) in total external finance in 1984, declined steadily to 8.9 % in 2003. Debentures also declined from 45.3% in 1983 to 25.2% in 2003. Long-term loans, though expressed a declining tendency at the end of 1980's, improved after 1995. The part of share premium reserves moved considerably in the upward direction since 1983. It has grown from 3.6% in 1983 to 36.1% of total external finance in 2003.

The ratio analysis explained that the ratio of Debt-Equity and Total External Finance to Total Long-term Finance increased in the post-reform period compared to the pre-reform period. Debt-Equity ratio improved from 60.4% in the initial period to 62% in the second period and Total External Finance to Total Long-term Finance augmented from 57% to 66.4% in these periods. The share of Total Internal Finance in Total Long-term Finance on the other hand depleted from 43% before the reforms to 33.6% after the reforms.

2. Financing Pattern: Industry-wise

The industry-wise classification is described in section 6.2. The financial structure of industry groups, periodical changes in financial variables, its rate of growth and financial ratios are used to study the industry-wise financing pattern. The financial variables like current liabilities, debentures, long-term loans, share capital, share premium reserves, total internal finance and Total Long-term Finances are taken up for analysis. The ratios include Deb/TLF, LTL/TLF, SC/TLF, SPR/TLF, TIF/TLF and Debt/Equity.

Trend of Financial Variables of Industry Groups 1 - 10

The aggregate amount of financial variables in the overall, pre and post-reform periods indicates that, the changes in total liabilities, current liabilities, debentures, share capital, and Total Long-term Finance of industry group 9 was high in the latter period.

The group 4 expressed lowest variation in total liabilities, current liabilities, long-term loans, share capital, total external finance and Total Long-term Finance. Long-term loans of Group 2 and share premium reserves of Group 5 were higher in the post-reform period.

Table 6.43(a) Periodical Changes in Financial Variables: Industry-wise [Rs in Crs]

1.Total Liabilities				
Ind Gps	Overall	Pre-reform	Post-reform	Change
1	32280	4803	27477	5.7
2	8965	995	7971	8.0
3	110855	14558	96297	6.6
4	25078	4973	20105	4.0
5	37224	3450	33774	9.8
6	130594	16586	114008	6.9
7	154477	21076	133401	6.3
8	34219	4889	29330	6.0
9	248824	19750	229075	11.6
10	80087	9591	70497	7.4

2. Current Liabilities				
Ind Gps	Overall	Pre-reform	Post-reform	Change
1	18237	2907	15330	5.3
2	5306	750	4556	6.1
3	53129	8546	44583	5.2
4	12404	2688	9716	3.6
5	26763	2541	24221	9.5
6	94463	12814	81650	6.4
7	103317	15593	87724	5.6
8	30294	5091	25203	5.0
9	114242	9920	104323	10.5
10	59099	7508	51591	6.9

3. Debentures				
Ind Gps	Overall	Pre-reform	Post-reform	Change
1	4578	637	3942	6.2
2	1235	104	1132	10.9
3	13232	2032	11199	5.5
4	1888	312	1575	5.0
5	2760	292	2468	8.5
6	14781	2390	12391	5.2
7	22979	3129	19849	6.3
8	1673	306	1367	4.5
9	74317	6140	68178	11.1
10	7097	1119	5978	5.3

4. Long-term Loans				
Ind Gps	Overall	Pre-reform	Post-reform	Change
1	9465	1259	8205	6.5
2	2424	141	2283	16.2
3	44494	3979	40515	10.2
4	10786	1973	8813	4.5
5	7701	617	7084	11.5
6	21350	1382	19968	14.4
7	28181	2353	25828	11.0
8	2252	-508	2760	-5.4
9	60265	3691	56574	15.3
10	13891	963	12928	13.4

5. Share Capital				
Ind Gps	Overall	Pre-reform	Post-reform	Change
1	2530	545	1986	3.6
2	756	131	625	4.8
3	8433	1238	7196	5.8
4	3452	928	2525	2.7
5	4241	558	3683	6.6
6	14500	2864	11636	4.1
7	10017	1663	8354	5.0
8	2802	466	2337	5.0
9	14329	1852	12477	6.7
10	8043	1241	6802	5.5

6. Share Premium Reserves				
Ind Gps	Overall	Pre-reform	Post-reform	Change
1	3445	9	3436	362.1
2	1044	17	1026	59.9
3	20264	119	20145	168.7
4	1333	9	1324	150.3
5	4777	28	4749	169.5
6	18053	550	17503	31.8
7	32332	463	31869	68.8
8	5221	148	5073	34.2
9	83597	3696	79901	21.6
10	7759	120	7639	63.7

7. Total External Finance				
Ind Gps	Overall	Pre-reform	Post-reform	Change
1	20019	2450	17569	7.2
2	5459	393	5066	12.9
3	86423	7369	79055	10.7
4	17459	3221	14238	4.4
5	19480	1495	17985	12.0
6	68684	7186	61498	8.6
7	93509	7609	85900	11.3
8	11949	412	11537	28.0
9	232509	15378	217130	14.1
10	36790	3443	33347	9.7

8. Total Internal Finance				
Ind Gps	Overall	Pre-reform	Post-reform	Change
1	9688	1645	8044	4.9
2	4546	587	3959	6.7
3	18787	6115	12672	2.1
4	6498	1387	5111	3.7
5	17589	1328	16262	12.2
6	70035	6194	63841	10.3
7	67055	7365	59690	8.1
8	12588	1593	10995	6.9
9	72621	6106	66515	10.9
10	32396	4568	27827	6.1

9. Total Long-term Finance				
Ind Gps	Overall	Pre-reform	Post-reform	Change
1	29707	4095	25613	6.3
2	10004	980	9024	9.2
3	105210	13484	91726	6.8
4	23957	4608	19349	4.2
5	37069	2823	34246	12.1
6	138718	13380	125339	9.4
7	160564	14974	145589	9.7
8	24537	2005	22531	11.2
9	305130	21485	283645	13.2
10	69185	8011	61174	7.6

A comparison of the periodical growth of financial variables at the aggregate level and industry level highlighted considerable variations in financing pattern among the industry groups; especially in debentures. On the whole, around 56% of groups fall below the average level. It has been depicted below:

Table 6.43(b) Financing Pattern: Aggregate Level and Industry-wise Periodical Changes

Aggregate Level Changes	
Financial Variables	Periodical Changes
Total Liabilities	7.6
Current Liabilities	6.6
Debentures	7.8
Long-term Loans	11.7
Share Capital	5.0
Share Premium Reserves	33.5
Total External Finance	11.1
Total Internal Finance	7.5
Total Long term Finance	9.5

Industry-wise Changes (Total 10 Groups)		
Financial Variables	Periodical Changes (Range)	No of Gps below the average
Total Liabilities	4.0 - 11.6	7
Current Liabilities	3.6 - 10.5	7
Debenture	4.5 - 11.1	7
Long-term Loans	-5.3 - 15.3	6
Share Capital	2.7 - 6.7	4
Share Premium Reserves	21.6 -169.5	2
Total External Finance	4.4 - 28.0	5
Total Internal Finance	2.1 - 12.2	6
Total Long-term Finance	4.2 - 13.2	6
		56%

An inter-industry comparison of periodical aggregates as a percentage of the aggregates of 150 companies illustrated that certain industry groups occupy a dominating position in the capital market particularly, in the debt market. In the debt market, the share of 4 industry groups (Groups: 3, 6, 7, and 9) in debentures was 83.2% during the pre-reform period advanced to 87.1% in the post-reform period. In Long-term Loans its share augmented from 72% to 77.3% during the same period. Its role in Share Capital progressed from 66.3% to 68.8% while it declined in Share Premium Reserves. In Total External Finance, that is in the capital market, its position enhanced from 76.7% before the reforms to 81.6% after the reforms. The performance of industry group 9 in this respect is remarkable. It is evident from the Table 6.43(c) that, except in Share Premium Reserves, its position advanced in all financial variables. It occupies 31% of Long-term Loans and 40% of the whole capital market (External Finance) in the reform period.

Table 6.43(c) Financing Pattern: An Inter-industry Comparison
(As a Percentage of Periodical Aggregates of 150 Cos)

Pre-reform									
Ind Gps	Total Liabilities	Current Liabilities	Debent-ures	Long-term Loans	Share Capital	Share Premium Reserves	TEF	TIF	TLF
1	4.8	4.3	3.9	7.9	4.7	0.2	5.0	4.5	4.8
2	1.0	1.1	0.6	0.9	1.1	0.3	0.8	1.6	1.1
3	14.5	12.5	12.3	25.1	10.8	2.3	15.1	16.6	15.7
4	4.9	3.9	1.9	12.4	8.1	0.2	6.6	3.8	5.4
5	3.4	3.7	1.8	3.9	4.9	0.5	3.1	3.6	3.3
6	16.5	18.7	14.5	8.7	24.9	10.7	14.7	16.8	15.6
7	20.9	22.8	19.0	14.8	14.5	9.0	15.5	20.0	17.4
8	4.9	7.4	1.9	-3.2	4.1	2.9	0.8	4.3	2.3
9	19.6	14.5	37.3	23.3	16.1	71.6	31.4	16.6	25.0
10	9.5	11.0	6.8	6.1	10.8	2.3	7.0	12.4	9.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share of 4 Gps	71.5	68.6	83.2	72.0	66.3	93.6	76.7	69.9	73.8

Post-reform									
Ind Gps	Total Liabilities	Current Liabilities	Debent-ures	Long-term Loans	Share Capital	Share Premium Reserves	TEF	TIF	TLF
1	3.6	3.4	3.1	4.4	3.4	2.0	3.2	2.9	3.1
2	1.0	1.0	0.9	1.2	1.1	0.6	0.9	1.4	1.1
3	12.6	9.9	8.7	21.9	12.5	11.7	14.6	4.6	11.2
4	2.6	2.2	1.2	4.8	4.4	0.8	2.6	1.9	2.4
5	4.4	5.4	1.9	3.8	6.4	2.8	3.3	5.9	4.2
6	15.0	18.2	9.7	10.8	20.2	10.1	11.3	23.2	15.3
7	17.5	19.5	15.5	14.0	14.5	18.5	15.8	21.7	17.8
8	3.8	5.6	1.1	1.5	4.1	2.9	2.1	4.0	2.8
9	30.1	23.2	53.2	30.6	21.7	46.3	40.0	24.2	34.7
10	9.3	11.5	4.7	7.0	11.8	4.4	6.1	10.1	7.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share of 4 Gps	75.2	70.9	87.1	77.3	68.8	86.5	81.6	73.7	79.0

The rate of growth of these financial variables indicates that they have followed varied pattern of change over the period. Total liabilities and current liabilities showed an upward trend in all the periods. The rate of growth of total liabilities of 6 groups and current liabilities of 7 groups have increased in the post-reform period. Its rate of growth in group 9 was higher than the other groups in the reform period. Debentures of 8 groups demonstrated an upward trend in the reform period against all the groups in the overall and pre-reform periods. Long-term loans of all the groups highlighted an increasing trend in the post-reform period in contrast to 7 groups in the pre-reform period. In nine out of ten groups its rate increased in the reform period. Share capital and share premium reserves of all the groups exhibited a rising trend in all the three periods. The total external finance of all the groups showed positive trend in the post-reform period. These are depicted in Table 6.44.

Table 6.44 Rate of Growth of Financial Variables: Industry-wise

1. Total Liabilities			
Ind Gps	Overall	Pre-reform	Post-reform
1	13.2	6.4	12.0
2	17.5	15.6	16.1
3	14.9	13.9	9.0
4	10.7	8.5	12.5
5	20.1	21.9	16.7
6	16.1	17.0	12.3
7	15.1	13.4	14.0
8	14.3	15.7	8.4
9	21.6	19.7	20.8
10	16.1	11.2	13.9

2. Current Liabilities			
Ind Gps	Overall	Pre-reform	Post-reform
1	12.5	8.0	10.9
2	14.6	13.7	14.3
3	12.6	12.2	6.9
4	9.6	8.4	10.8
5	19.8	20.6	17.7
6	15.7	16.9	14.2
7	13.5	8.7	12.5
8	12.1	6.0	8.4
9	20.9	13.2	22.4
10	15.7	11.3	16.6

3. Debentures			
Ind Gps	Overall	Pre-reform	Post-reform
1	15.9	13.8	31.6
2	29.3	76.5	10.1
3	11.0	20.0	-6.0
4	15.1	30.9	8.2
5	21.4	46.3	6.4
6	13.7	24.0	4.5
7	17.5	26.1	21.5
8	13.0	23.6	11.4
9	22.4	31.0	16.9
10	12.6	23.5	-2.5

4. Long-term Loans			
Ind Gps	Overall	Pre-reform	Post-reform
1	12.6	2.2	5.8
2	24.2	8.8	26.2
3	19.4	15.5	16.3
4	11.5	6.2	15.6
5	21.2	20.5	17.6
6	20.4	8.8	8.9
7	#	#	14.8
8	#	#	8.7
9	23.2	20.3	21.9
10	19.4	-0.4	10.9

5. Share Capital			
Ind Gps	Overall	Pre-reform	Post-reform
1	9.5	6.6	10.8
2	12.1	8.6	13.5
3	13.3	6.2	12.6
4	6.9	6.7	6.5
5	15.8	16.9	12.9
6	10.6	8.8	10.3
7	11.9	10.1	6.3
8	12.4	10.9	11.1
9	16.2	17.8	15.2
10	13.2	11.2	10.3

6. Share Premium Reserves			
Ind Gps	Overall	Pre-reform	Post-reform
1	67.0	54.1	63.8
2	34.3	7.5	21.4
3	61.1	82.3	24.0
4	46.8	16.1	23.5
5	48.6	12.3	20.4
6	34.3	40.1	23.6
7	42.2	45.4	13.1
8	45.6	89.5	19.2
9	35.4	69.4	24.0
10	38.5	29.1	17.4

7. TEF			
Ind Gps	Overall	Pre-reform	Post-reform
1	15.1	4.9	15.4
2	21.7	15.8	17.1
3	19.4	15.3	12.5
4	11.4	7.9	12.8
5	21.8	21.8	15.8
6	17.3	14.8	10.9
7	#	#	14.0
8	#	#	12.9
9	24.7	30.1	20.3
10	17.7	11.5	8.9

8. TIF			
Ind Gps	Overall	Pre-reform	Post-reform
1	10.9	10.1	2.3
2	16.9	18.8	20.8
3	#	8.4	#
4	9.2	20.2	-0.7
5	22.3	23.0	21.2
6	19.9	16.6	18.9
7	17.4	13.2	19.3
8	16.2	18.3	11.4
9	19.9	16.0	15.7
10	15.4	19.1	13.4

9. TLF			
Ind Gps	Overall	Pre-reform	Post-reform
1	13.8	7.1	10.8
2	19.1	17.6	18.8
3	14.5	12.0	7.5
4	11.0	11.1	9.5
5	22.1	22.4	18.4
6	18.6	15.6	14.8
7	26.0	56.6	16.1
8	#	#	12.0
9	23.3	25.3	19.2
10	16.6	15.4	11.2

'#' – indeterminate due to negative or zero absolute values

Trend of Financial Ratios of Industry Groups 1 - 10

The financial ratios of industry groups in the pre and post-reform periods explain the relative position of these variables with respect to Total Long-term Finance. The share of debentures (Deb/TLF) of the Group 9 was high in both the pre and post-reform periods. The ratio declined in all the groups except Groups 2 and 4 in the post-reform period. The fraction of (LTL/TLF) was more than 10% in all the groups except Group 8 in the pre-reform period, increased to more than 12% in all the groups in the post-reform period. The ratio was the highest in Group 4 in both the periods. The ratio increased in all the groups except group 5 in the reform period. The role of Share Capital in Total Long-term Finance (SC/TLF) declined in all the groups in the latter period. The part of Share Premium Reserves in Total Long-term Finance (SPR/TLF) increased substantially in all the groups in the reform period. The Total External Finance (TEF/TLF) of 8 groups

enhanced in the post-reform period whereas internal finance (TIF/TLF) depleted. The Debt-Equity ratio of all the groups improved in the post-reform period. Its value increased in 6 groups during this period.

Table 6.45 Periodical Changes in Financial Ratios: Industry-wise

Deb/TLF			
Ind Gps	Overall	Pre-reform	Post-reform
1	15.4	15.5	15.4
2	12.3	10.6	12.5
3	12.6	15.1	12.2
4	7.9	6.8	8.1
5	7.4	10.3	7.2
6	10.7	17.9	9.9
7	14.3	20.9	13.6
8	6.8	15.3	6.1
9	24.4	28.6	24.0
10	10.3	14.0	9.8

LTL/TLF			
Ind Gps	Overall	Pre-reform	Post-reform
1	31.9	30.8	32.0
2	24.2	14.4	25.3
3	42.3	29.5	44.2
4	45.0	42.8	45.5
5	20.8	21.9	20.7
6	15.4	10.3	15.9
7	17.6	15.7	17.7
8	9.2	-25.3	12.2
9	19.8	17.2	19.9
10	20.1	12.0	21.1

SC/TLF			
Ind Gps	Overall	Pre-reform	Post-reform
1	8.5	13.3	7.8
2	7.6	13.4	6.9
3	8.0	9.2	7.8
4	14.4	20.1	13.0
5	11.4	19.8	10.8
6	10.5	21.4	9.3
7	6.2	11.1	5.7
8	11.4	23.2	10.4
9	4.7	8.6	4.4
10	11.6	15.5	11.1

SPR/TLF			
Ind Gps	Overall	Pre-reform	Post-reform
1	11.6	0.2	13.4
2	10.4	1.7	11.4
3	19.3	0.9	22.0
4	5.6	0.2	6.8
5	12.9	1.0	13.9
6	13.0	4.1	14.0
7	20.1	3.1	21.9
8	21.3	7.4	22.5
9	27.4	17.2	28.2
10	11.2	1.5	12.5

TEF/TLF			
Ind Gps	Overall	Pre-reform	Post-reform
1	67.4	59.8	68.6
2	54.6	40.1	56.1
3	82.1	54.6	86.2
4	72.9	69.9	73.6
5	52.5	53.0	52.5
6	49.5	53.7	49.1
7	58.2	50.8	59.0
8	48.7	20.5	51.2
9	76.2	71.6	76.5
10	53.2	43.0	54.5

TIF/TLF			
Ind Gps	Overall	Pre-reform	Post-reform
1	32.6	40.2	31.4
2	45.4	59.9	43.9
3	17.9	45.4	13.8
4	27.1	30.1	26.4
5	47.5	47.0	47.5
6	50.5	46.3	50.9
7	41.8	49.2	41.0
8	51.3	79.5	48.8
9	23.8	28.4	23.5
10	46.8	57.0	45.5

Debt/Equity			
Ind Gps	Overall	Pre-reform	Post-reform
1	89.7	86.2	90.2
2	57.7	33.3	60.9
3	121.6	80.4	129.2
4	112.3	98.4	115.9
5	39.3	47.5	38.7
6	35.2	39.3	34.8
7	46.8	57.8	45.7
8	19.0	-9.1	22.4
9	78.9	84.3	78.5
10	43.5	35.1	44.7

From the above table it has been observed that, the part of Total External Finance was more than 50% of Total Long-term Finance in 7 out of 10 groups during the pre-reform period increased to 9 out of 10 groups in the post-reform period. Among the components of external sources, Long-term Loans possesses a lion's share in 7 out of 10 groups in the post-reform period whereas it was only 5 out of 10 groups during the pre-reform period. Its status appreciated in 9 groups during this period. Debentures and Share Capital were important in 2 and 3 groups in the pre-reform period while no groups witnessed this after the reforms. Moreover, as a component of Total External Finance, the position of Debentures deteriorated in 6 groups in the post-reform period compared to the pre-reform period. The comparative positions of Share Capital depleted whereas Share Premium Reserves enhanced in all the groups in the latter period.

A comparison of the relative shares of the components of Total External Finance at the aggregate level and industry level has been depicted below. It shows that the disparity in the financing pattern at the inter-industry level – particularly, in Long-term Loans, Share Capital and Share Premium Reserves – has come down in the reform period. ie, capital market reforms helped to reduce inter-industry disparity in the financing pattern during the period 1992-2003. About 60% of industry groups that fall below the average level during the pre-reform period, declined to 58% in the post-reform period. The pattern of financing by means Debentures has become crucial in only one group during the reform period.

Table 6.46 Total External Finance: An Inter-industry Comparison

Share of the components of TEF: Aggregate Level					
Period	Deb/TEF	LTL/TEF	SC/TEF	SPR/TEF	TEF
Pre-reform	33.6	32.4	23.5	10.5	100
Post-reform	23.6	34.0	10.6	31.8	100

Share of the components of TEF: Industry-wise

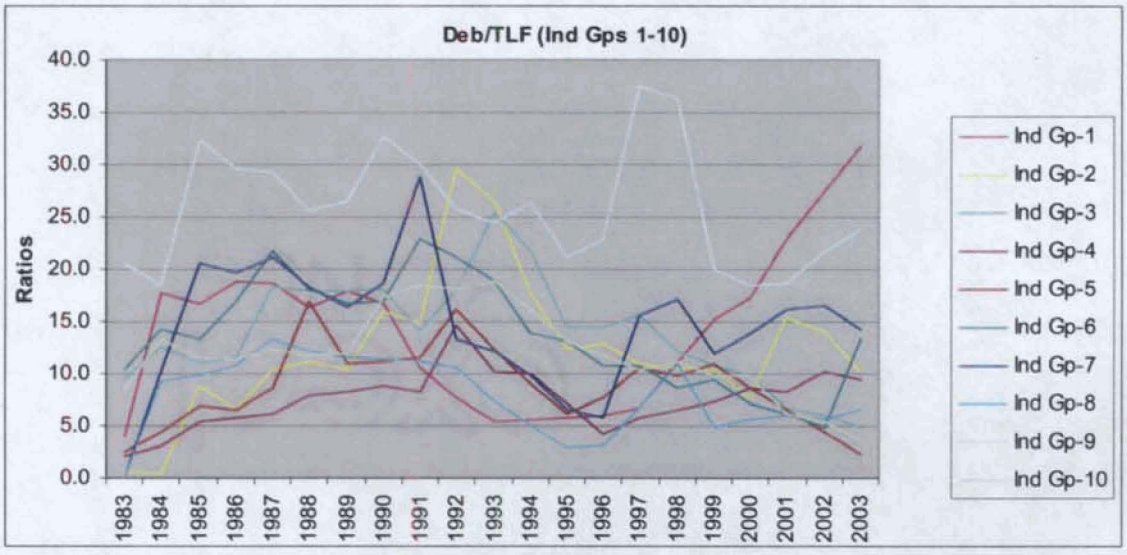
Pre-reform					
Ind Gps	Deb/TEF	LTL/TEF	SC/TEF	SPR/TEF	TEF
1	26.0	51.4	22.2	0.4	100
2	26.4	35.8	33.4	4.4	100
3	27.6	54.0	16.8	1.6	100
4	9.7	61.2	28.8	0.3	100
5	19.5	41.3	37.3	1.9	100
6	33.3	19.2	39.9	7.7	100
7	41.1	30.9	21.9	6.1	100
8	74.3	-123.3	113.0	36.0	100
9	39.9	24.0	12.0	24.0	100
10	32.5	28.0	36.0	3.5	100

Post-reform					
Ind Gps	Deb/TEF	LTL/TEF	SC/TEF	SPR/TEF	TEF
1	22.4	46.7	11.3	19.6	100
2	22.3	45.1	12.3	20.3	100
3	14.2	51.2	9.1	25.5	100
4	11.1	61.9	17.7	9.3	100
5	13.7	39.4	20.5	26.4	100
6	20.1	32.5	18.9	28.5	100
7	23.1	30.1	9.7	37.1	100
8	11.8	23.9	20.3	44.0	100
9	31.4	26.1	5.7	36.8	100
10	17.9	38.8	20.4	22.9	100

	No of Ind Gps below the Average level	
Period	Pre-reform	Post-reform
Deb/TEF	7	9
LTL/TEF	5	4
SC/TEF	4	3
SPR/TEF	8	7
	60%	58%

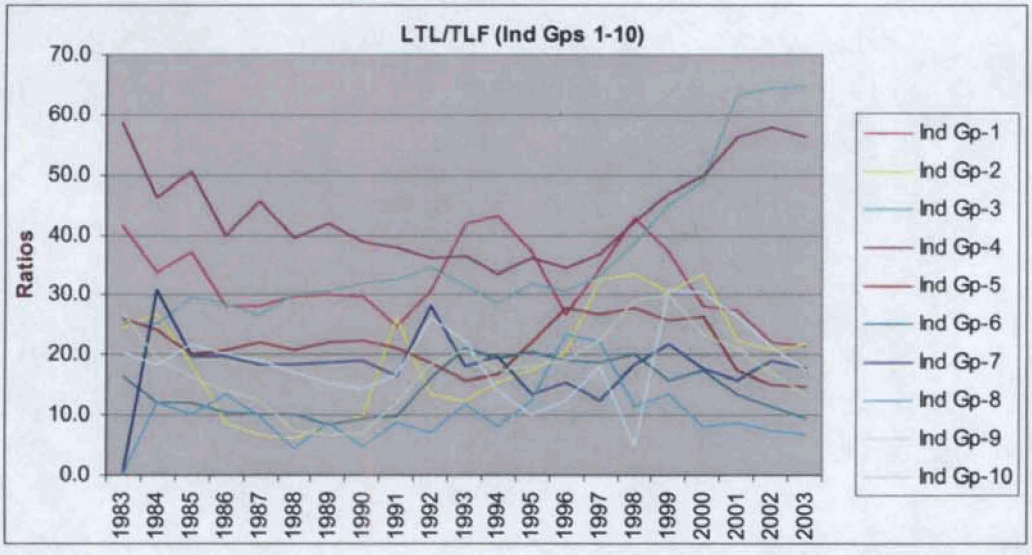
By observing the financial ratios of all the 10 industry groups together, we can see that, the ratio Debenture to Total Long-term Finance (Deb/TLF) exemplify an increasing trend from 1983 to 1992-93 in a majority of groups. After that it declined from 1992-93 to 1995-96 periods. Again it followed an upward movement for the 1996-98 periods and declined thereafter. As against all the industry groups, the group 1 witnessed a very sharp increase in debentures after 1996. It increased from 3.2% in 1996 to 32% in 2003. The percentage share of debentures was higher in the group-9 (Synthetic Fibers, Silk & Woolen Textiles) than all the other groups throughout the period. This has been shown in Fig 6.47. [Table 6.47 is given in Appendix-1]

Fig 6.47 The Ratio of Debenture to TLF of Industry Groups 1-10



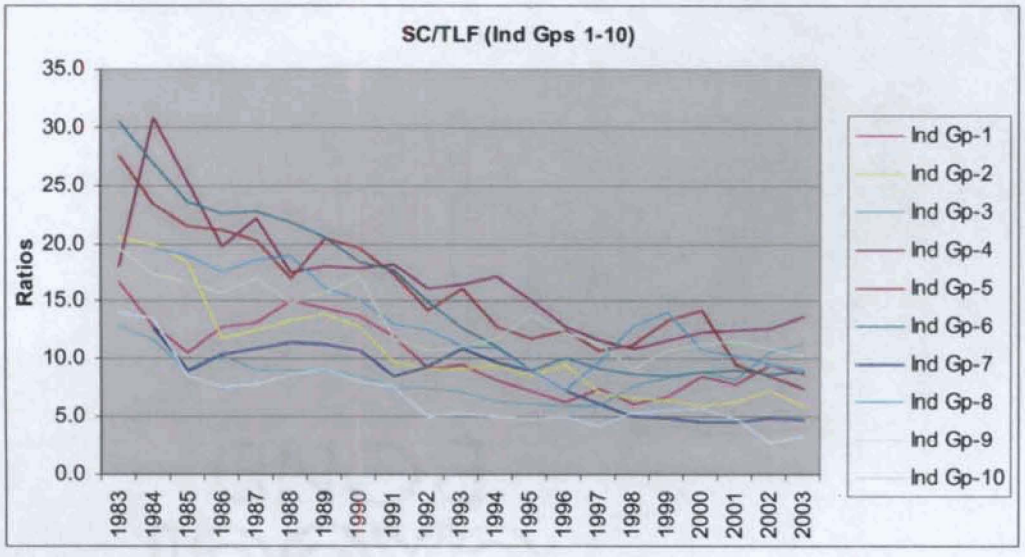
The ratio LTL/TLF demonstrated an upward movement in almost all the groups after 1990-91. It increased to a remarkable level in groups 3 (Metals, Alloys, Metal Products & Structurals) and 4 (Paper, Pulp & Hard Board) during the period 1996 - 2003. The ratio declined after 2000. It can be viewed in Fig 6.48 [Table 6.48 in Appendix-2].

Fig 6.48 The Ratio of LTL to TLF of Industry Groups 1-10



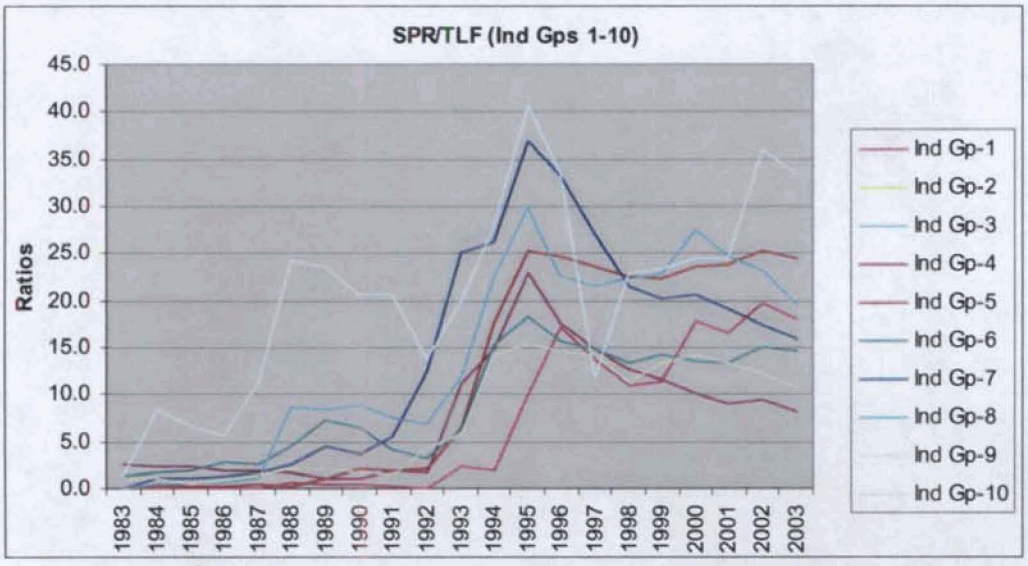
The ratio of SC/TLF declined sharply during the period 1983-2003. All the groups witnessed this phenomenon during the period of study. It has been highlighted in Fig 6.49 [Table 6.49 in Appendix-3]. The SC/TLF of group 6 falls off from the range of 30.5 in 1983 to 8.8 in 2003.

Fig 6.49 The Ratio of SC to TLF of Industry Groups 1-10



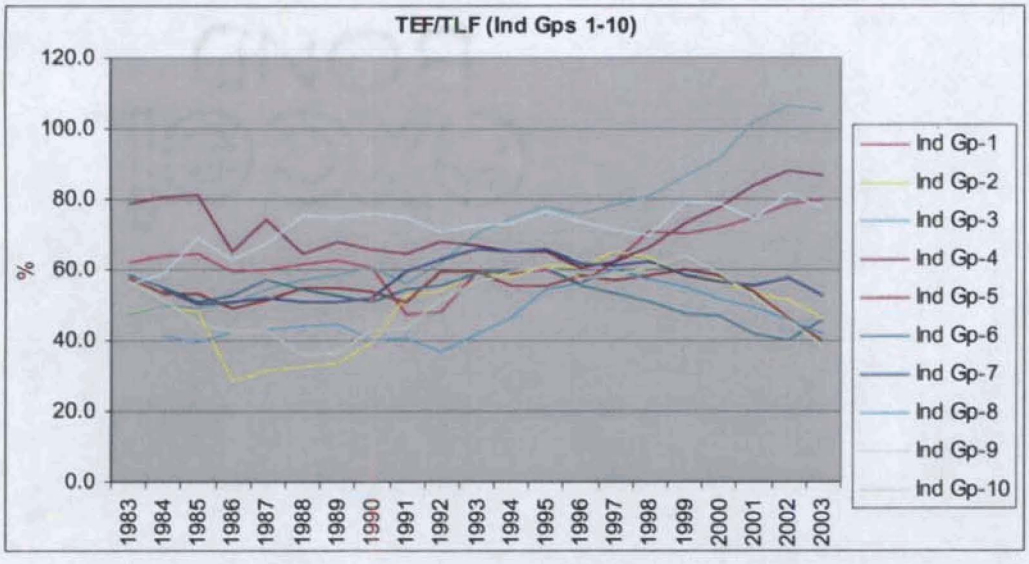
Share Premium Reserve to Total Long-term Finance (SPR/TLF) has exhibited an amazingly upward trend after 1991-92, reached the peak level in 1995 in the case of all the industry groups. It rose from the range of 0.3 (Gp-1) in 1991 to 10.1 (Gp-1) in 1995. Thus, the period 1991-95 can be considered as critical because of the spurt in SPR. The Share Premium Reserve of the group 9 (Synthetic Fibers, Silk & Woolen Textiles) was higher than all the other groups during the period 1983-2003. It is given in the following diagram [Table 6.50 in Appendix-4].

Fig 6.50 The Ratio of SPR to TLF of Industry Groups 1-10



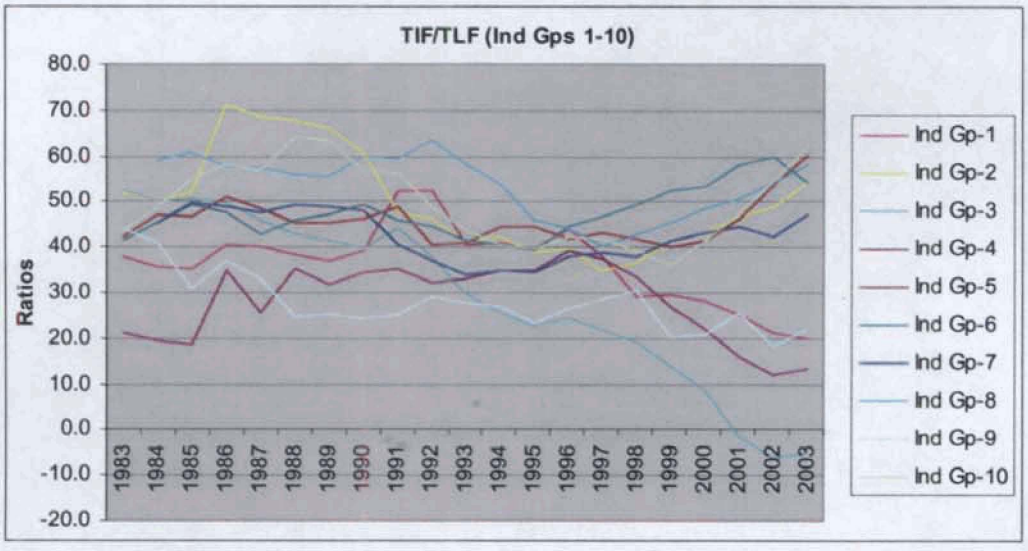
The ratio of TEF/TLF of many groups showed a rising trend since 1991-92, however, it reversed after 1995 except in the case of groups 1, 3, 4 and 9. It steadily increased in group 3 since 1991. The ratio of groups 9 and 3 were higher than other groups throughout the period. In a majority of groups, the ratio was in the range of 40 – 80%.

Fig 6.51 The Ratio of TEF to TLF of Industry Groups 1-10



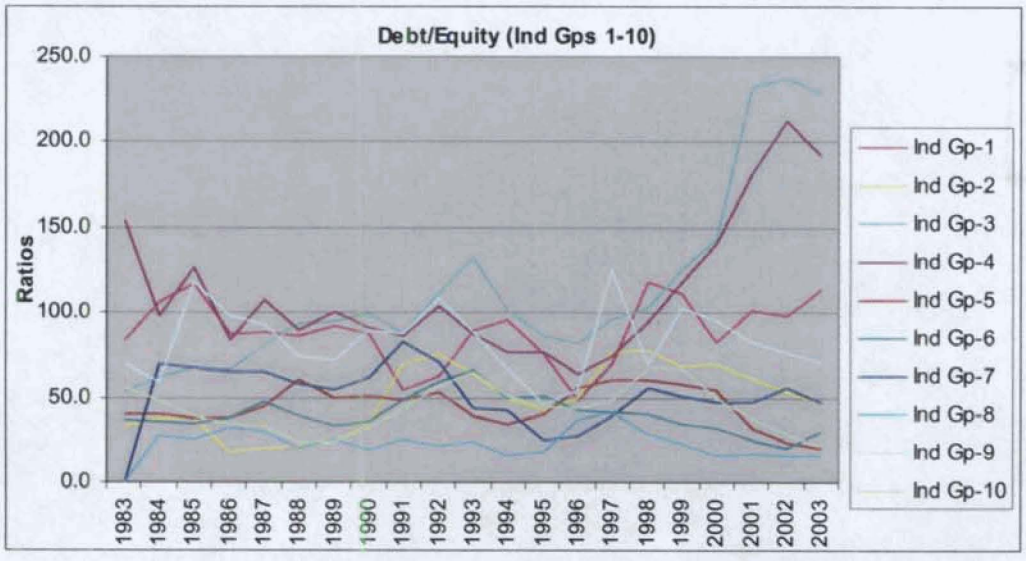
Total Internal Finance to TLF maintained more than 30% in all the groups except Cotton Spinning Mills (group 3) and, Synthetic Fibers, Silk & Woolen Textiles (group 9) up to the period 1998. It declined in 1994-95 in all the groups and increased thereafter. The part of internal finance was high in Chemicals, Dyes & Pharmaceuticals than all the other groups. In Cotton Spinning Mills (3) it decreased since 1991 and occupied the lowest share. TIF has an increasing trend in a majority of groups after 1995. It is presented below [Table 6.52 in Appendix-6].

Fig 6.52 The Ratio of TIF to TLF of Industry Groups 1-10



The Debt/Equity ratio was more than 25% in all the groups except group 2 (Metals, Alloys, Metal Products & Structurals) and 8 (Electrical Equipment, Cables & Transformers) over the whole period. The ratio witnessed an upward trend after 1995-96 in the case of all groups. The ratio was higher in group 3 (Cotton Spinning Mills) and lower in group 8 (Electrical Equipment, Cables & Transformers) than other groups after 1990. It is depicted in Fig 6.63 [Table 6.53 in Appendix-7].

Fig 6.53 The Ratio of Debt to Equity of Industry Groups 1-10



From the above observations it can be inferred that the ratio of Debt-Equity has a declining tendency during the period 1992-1996 because of the downward movement of Debentures in spite of the growth of Long term Loans. However, the increasing debt (Long term Loans and debentures) was responsible for the growth of Debt/Equity ratio beyond the period 1996.

Thus, the increasing Long-term Loans and Share Premium Reserves on the one hand and, the declining debentures and Share capital on the other have been seen in the industry-wise analysis of 150 companies over the period 1983-2003.

3. Financing Pattern: Size-wise

The size-wise classification of companies based on its paid-up capital has already been described in section 6.3. The financial structure, its periodical variations and rate of growth, and financial ratios have been used to analyse the pattern of financing of companies under this cataloguing.

Trend of Financial Variables of Size Groups 1- 5

The periodical changes in the financing pattern of all the groups are given in the following tables. It can be observed that the periodical variation of group 5 was higher

than its counterparts in terms of all the variables except share premium reserves. The reverse has happened in group 1. It witnessed low variations in all the financial variables except Share Premium Reserves. The Share Premium Reserves of group 2 expressed substantial change in the post-reform period compared to the pre-reform period.

Table 6.54(a) Periodical Changes* in Financial Variables: Size-wise [Rs in Crs]

Total Liabilities				
Size Gps	Overall	Pre-reform	Post-reform	Change
1	28514	5048	23465	4.6
2	129075	18969	110105	5.8
3	148661	20970	127691	6.1
4	112228	17524	94704	5.4
5	444127	38159	405969	10.6

Current Liabilities				
Size Gps	Overall	Pre-reform	Post-reform	Change
1	17058	3455	13604	3.9
2	83218	14732	68486	4.6
3	103306	15799	87507	5.5
4	60889	10173	50716	5.0
5	252785	24199	228585	9.4

Debentures				
Size Gps	Overall	Pre-reform	Post-reform	Change
1	492	135	356	2.6
2	9381	1470	7912	5.4
3	14826	2786	12040	4.3
4	27622	4393	23229	5.3
5	92218	7677	84541	11.0

Long-term Loans				
Size Gps	Overall	Pre-reform	Post-reform	Change
1	10963	1458	9506	6.5
2	36475	2767	33708	12.2
3	30529	2385	28144	11.8
4	23717	2958	20759	7.0
5	99124	6282	92842	14.8

Share Capital				
Size Gps	Overall	Pre-reform	Post-reform	Change
1	1666	461	1205	2.6
2	10046	2070	7975	3.9
3	14046	2595	11451	4.4
4	8800	1751	7049	4.0
5	34547	4608	29939	6.5

Share Premium Reserves				
Size Gps	Overall	Pre-reform	Post-reform	Change
1	828	22	806	36.9
2	13136	198	12938	65.3
3	26017	490	25527	52.1
4	16221	548	15672	28.6
5	121624	3902	117722	30.2

TEF				
Size Gps	Overall	Pre-reform	Post-reform	Change
1	13950	2076	11873	5.7
2	69038	6506	62533	9.6
3	85419	8255	77163	9.3
4	76360	9651	66709	6.9
5	347513	22469	325044	14.5

TIF				
Size Gps	Overall	Pre-reform	Post-reform	Change
1	-3266	280	-3546	-12.6
2	43764	7330	36434	5.0
3	61968	9120	52848	5.8
4	44104	7736	36368	4.7
5	165232	12422	152810	12.3

TLF				
Size Gps	Overall	Pre-reform	Post-reform	Change
1	10684	2357	8327	3.5
2	112802	13835	98967	7.2
3	147387	17376	130011	7.5
4	120464	17387	103077	5.9
5	512745	34891	477855	13.7

**Change is obtained by dividing the post-reform value by the pre-reform value*

A comparison of the periodical growth of financial variables at the aggregate level and size-wise level exhibited considerable variations in the financing pattern among size groups. Out of nine financial variables considered, about 73.3% of size groups fall below the average level.

Table 6.54(b) Financing: Periodical Change among Size-Groups
(in multiples)

Aggregate Level Changes	
Financial Variables	Periodical Changes
Total Liabilities	7.6
Current Liabilities	6.6
Debentures	7.8
Long-term Loans	11.7
Share Capital	5.0
Share Premium Reserves	33.5
Total Ext.Finance	11.1
Total Internal Finance	7.5
Total Long term Finance	9.5

Size-wise Changes (Total 5 Groups)		
Financial Variables	Periodical Changes (Range)	No of Gps below the average level
Total Liabilities	4.6 - 10.6	4
Current Liabilities	3.9 - 9.4	4
Debenture	2.6 - 11.0	4
Long-term Loans	6.5 - 14.8	3
Share Capital	2.6 - 6.5	4
Share Premium Reserves	28.6 - 65.3	2
Total External Finance	5.7 - 14.5	4
Total Internal Finance	-12.6 - 12.3	4
Total Long-term Finance	3.5 - 13.7	4
		73.3%

An inter-size comparison of periodical aggregates as a percentage of the aggregates of 150 companies explained that certain size groups play a leading role in the capital market; particularly in the debt market. The share of 3 groups in debentures was 90% in the initial period, improved to 96% in the latter period. Long-term Loans of these same set of groups enhanced from 73% to 77%. In Total External Finance (capital market), it occupies 86% of the total market in the reform period in contrast to 83% before the reforms. This shows that the share of size groups with 'PUC Rs 25 Crores and above' has progressed in the capital market during the reform period. The part of size group 5 with 'PUC Rs 100 Crs Above' is decisive in this regard. Its role in the capital market (Total External Finance) augmented from 46% before the reforms to 60% after the reforms. The position of all the other groups on the other hand, depleted.

Table 6.54(c) Inter-size Financing Pattern: A Periodical Comparison
(As a % of the periodical aggregates of 150 Cos)

Pre-reform									
Size Gps	Total Liabilities	Current Liabilities	Debent-ures	Long-term Loans	Share Capital	Share Premium Reserves	TEF	TIF	TLF
1	5.0	5.1	0.8	9.2	4.0	0.4	4.2	0.8	2.7
2	18.8	21.6	8.9	17.5	18.0	3.8	13.3	19.9	16.1
3	20.8	23.1	16.9	15.0	22.6	9.5	16.9	24.7	20.2
4	17.4	14.9	26.7	18.7	15.2	10.6	19.7	21.0	20.3
5	37.9	35.4	46.6	39.6	40.1	75.6	45.9	33.7	40.6
	100	100	100	100	100	100	100	100	100
Share of 3 Gps	76.1	73.4	90.2	73.3	78.0	95.7	82.5	79.4	81.1

Post-reform									
Size Gps	Total Liabilities	Current Liabilities	Debent-ures	Long-term Loans	Share Capital	Share Premium Reserves	TEF	TIF	TLF
1	3.1	3.0	0.3	5.1	2.1	0.5	2.2	-1.3	1.0
2	14.5	15.3	6.2	18.2	13.8	7.5	11.5	13.3	12.1
3	16.8	19.5	9.4	15.2	19.9	14.8	14.2	19.2	15.9
4	12.4	11.3	18.1	11.2	12.2	9.1	12.3	13.2	12.6
5	53.3	50.9	66.0	50.2	52.0	68.2	59.8	55.6	58.4
	100	100	100	100	100	100	100	100	100
Share of 3 Gps	82.5	81.7	93.5	76.6	84.1	92.0	86.3	88.0	86.9

The rate of growth of financial variables has been depicted in Table 6.55. The Debentures of only 3 groups showed upward trend in the latter period against all the groups in the former period. The rate of growth of Long-term Loans of 4 groups increased in the post-reform period and it was impressive in the case of group 5. The rate of growth of Share Capital of first 3 groups increased in the post-reform period but it declined in the 4^{th} and 5^{th} groups. The rate of growth of Share Premium Reserves of group 5 and 2 was remarkable, however its position weakened in all the groups. The Total External Finance of three groups increased in contrast to the Total Internal Finance of one group in the post-reform period. The group 5 registered high rate of growth in all the financial variables in the post-reform period.

Table 6.55 Rate of Growth of Financial Variables: Size-wise

Total Liabilities			
Size Gps	Overall	Pre-reform	Post-reform
1	12.2	14.6	10.1
2	14.3	14.7	11.7
3	14.4	14.3	9.6
4	13.4	18.0	7.9
5	20.1	13.5	19.8

Current Liabilities			
Size Gps	Overall	Pre-reform	Post-reform
1	10.1	13.4	6.2
2	12.7	14.2	10.1
3	14.2	14.0	10.7
4	12.7	14.0	10.2
5	19.3	14.8	19.8

Debentures			
Size Gps	Overall	Pre-reform	Post-reform
1	4.8	28.9	-8.6
2	13.9	27.1	6.1
3	10.0	20.7	-0.9
4	13.7	32.3	2.6
5	20.4	16.7	20.2

Long-term Loans			
Size Gps	Overall	Pre-reform	Post-reform
1	15.8	16.6	17.2
2	18.9	12.8	16.9
3	17.3	10.6	11.0
4	15.1	15.9	8.1
5	22.1	5.3	19.2

Share Capital			
Size Gps	Overall	Pre-reform	Post-reform
1	6.6	5.4	7.6
2	10.0	6.6	9.1
3	11.4	7.4	11.3
4	10.7	13.7	8.0
5	15.0	13.1	12.4

Share Premium Reserves			
Size Gps	Overall	Pre-reform	Post-reform
1	38.9	67.3	17.0
2	40.3	36.3	21.9
3	39.1	43.0	20.1
4	33.4	46.2	13.9
5	34.8	51.2	22.8

TEF			
Size Gps	Overall	Pre-reform	Post-reform
1	14.4	14.6	14.9
2	17.8	13.9	14.4
3	17.2	14.0	10.5
4	15.7	23.5	7.0
5	22.9	16.1	19.6

TIF			
Size Gps	Overall	Pre-reform	Post-reform
1	#	#	#
2	11.9	16.2	5.9
3	14.0	14.7	11.3
4	11.8	12.4	8.2
5	21.2	12.3	20.6

TLF			
Size Gps	Overall	Pre-reform	Post-reform
1	9.2	7.6	8.8
2	15.4	14.9	11.1
3	15.8	14.3	10.9
4	14.0	18.3	7.4
5	22.3	14.7	19.9

'#' – indeterminate due to zero or negative absolute values

Trend of Financial Ratios of Size Groups 1 - 5

The financial ratios demonstrate the relative share of components of finance with respect to Total Long-term Finance. Debentures out of Total Long-term Finance (Deb/TLF) of groups 4 & 5 continued to occupy a remarkable level in both pre and post-reform periods. Long-term Loans of group 1 exceeded Total Long-term Finance in the

post-reform period. Its share was lower in groups 4 & 5 than other groups during this period. The ratio of Share Capital to Total Long-term Finance (SC/TLF) was high in group 1 while it was low in group 5, however, the reverse has happened in the case of Share Premium Reserves in the post-reform period. The Total External Finance of all the groups was higher than Total Internal Finance in the reform period. The Debt-Equity ratio of 3 groups progressed but it declined in the group 5. These are highlighted in Table 6.56.

Table 6.56 Periodical Changes in Financial Ratios: Size-wise

Deb/TLF			
Size Gps	Overall	Pre-reform	Post-reform
1	4.6	5.7	4.3
2	8.3	10.6	8.0
3	10.1	16.0	9.3
4	22.9	25.3	22.5
5	18.0	22.0	17.7

LTL/TLF			
Size Gps	Overall	Pre-reform	Post-reform
1	102.6	61.9	114.1
2	32.3	20.0	34.1
3	20.7	13.7	21.6
4	19.7	17.0	20.1
5	19.3	18.0	19.4

SC/TLF			
Size Gps	Overall	Pre-reform	Post-reform
1	15.6	19.6	14.5
2	8.9	15.0	8.1
3	9.5	14.9	8.8
4	7.3	10.1	6.8
5	6.7	13.2	6.3

SPR/TLF			
Size Gps	Overall	Pre-reform	Post-reform
1	7.8	0.9	9.7
2	11.6	1.4	13.1
3	17.7	2.8	19.6
4	13.5	3.2	15.2
5	23.7	11.2	24.6

TEF/TLF			
Size Gps	Overall	Pre-reform	Post-reform
1	130.6	88.1	142.6
2	61.2	47.0	63.2
3	58.0	47.5	59.4
4	63.4	55.5	64.7
5	67.8	64.4	68.0

TIF/TLF			
Size Gps	Overall	Pre-reform	Post-reform
1	-30.6	11.9	-42.6
2	38.8	53.0	36.8
3	42.0	52.5	40.6
4	36.6	44.5	35.3
5	32.2	35.6	32.0

Debt/Equity			
Size Gps	Overall	Pre-reform	Post-reform
1	-1485.7	208.7	-642.6
2	68.5	44.1	72.6
3	44.5	42.4	44.7
4	74.3	73.2	74.4
5	59.5	66.7	59.0

'-ve' due to negative net worth

In the broad classification of Total Long-term Finance into total external and internal finance; the status of Total External Finance was more than 50% in three groups in the pre-reform period, grew up to all the five groups in the post-reform period. Among the components of Total External Finance, Debentures of three groups were significant in the pre-reform period, declined to only one group in the post-reform period. Long-term Loans played a key role in three groups in the post-reform period in contrast to two groups in the pre-reform period.

It further indicates that, the ratios of Debenture to Total Long-term Finance (Deb/TLF) and Share Capital to Total Long-term Finance (SC/TLF) declined in all the groups in the post-reform period while the ratios of Long-term Loans to Total Long-term Finance (LTL/TLF) and Share Premium Reserves to Total Long-term Finance (SPR/TLF) increased. This exhibits a general tendency in favour of Long-term Loans and Share Premium Reserves in the reform period. It is evident from the table that Share Capital and Share Premium Reserves have not followed a unique pattern of change during the reform period. Moreover, it is clear from Fig 6.61 that the immediate effect of reforms was the spurt in Share Premium Reserves.

A comparison of the relative shares of the components of Total External Finance at the aggregate level and size-wise level has been depicted below. It shows that the disparity in the financing pattern – particularly, in Long-term Loans, Share Capital and Share Premium Reserves – at the inter-size level has come down in the reform period. ie, capital market reforms helped to reduce inter-size disparity in the financing pattern. When we consider the capital market as a whole (including debt and equity market), the relative shares in Debenture, Long-term Loans, Share Capital and Share Premium Reserves of about 60% of size groups that fall below the average level during the pre-reform period, declined to 45% of groups in the post-reform period.

Among the size groups, Debentures occupied a leading role in 3 groups during the pre-reform period, declined to only one group in the post-reform period. The share of Long-term Loans was crucial in 2 groups before the reforms, increased to 3 groups after the reforms. Share Capital has not played a major role in any group in these periods while Share Premium Reserve has become critical in one group in the post-reform period. It further reveals that the relative position of Debenture and Share Capital depleted in all the groups in the reform period whereas it appreciated in Long-term Loans and Share Premium Reserves in all the groups. These are depicted in Table 6.57.

Table 6.57 Total External Finance: An Inter-size Comparison

Share of the components of TEF: Aggregate Level					
Period	Deb/TEF	LTL/TEF	SC/TEF	SPR/TEF	TEF
Pre-reform	33.6	32.4	23.5	10.5	100
Post-reform	23.6	34.0	10.6	31.8	100

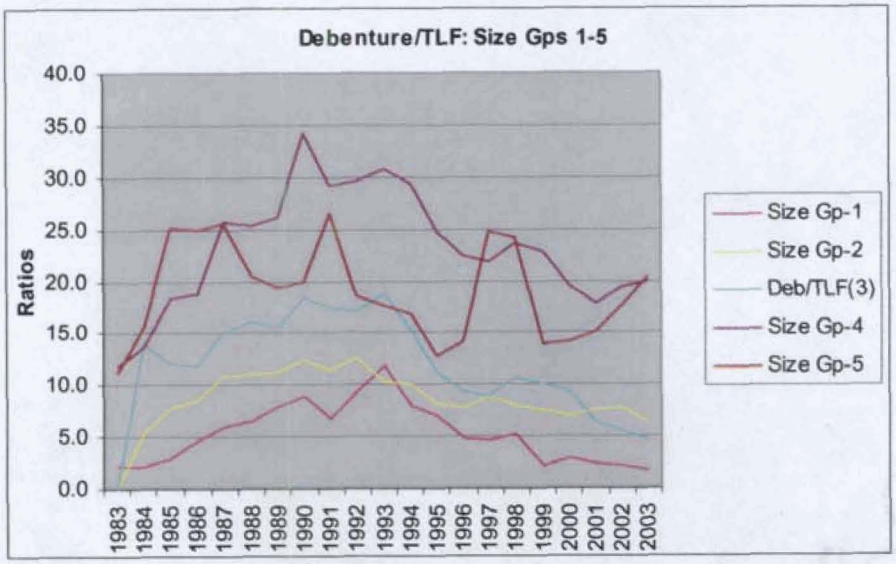
Share of the components of TEF: Size-wise					
Pre-reform					
Gps	Deb/TEF	LTL/TEF	SC/TEF	SPR/TEF	TEF
1	6.5	70.2	22.2	1.1	100
2	22.6	42.5	31.8	3.0	100
3	33.8	28.9	31.4	5.9	100
4	45.5	30.7	18.1	5.7	100
5	34.2	28.0	20.5	17.4	100

Post-reform					
Gps	Deb/TEF	LTL/TEF	SC/TEF	SPR/TEF	TEF
1	3.0	80.1	10.1	6.8	100
2	12.7	53.9	12.8	20.7	100
3	15.6	36.5	14.8	33.1	100
4	34.8	31.1	10.6	23.5	100
5	26.0	28.6	9.2	36.2	100

	No of Size groups below the average	
Period	Pre-reform	Post-reform
Deb/TEF	2	3
LTL/TEF	3	2
SC/TEF	3	1
SPR/TEF	4	3
	60%	45%

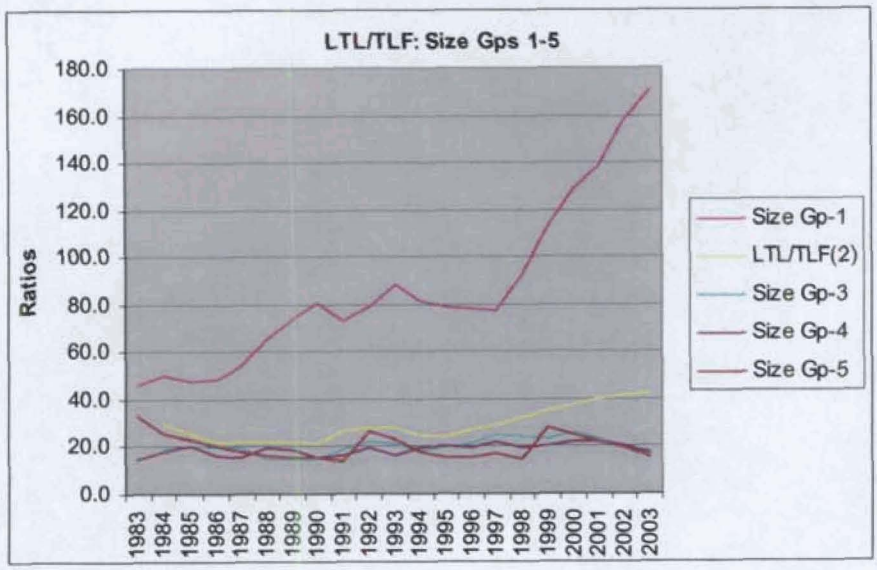
While observing the status of each of these ratios in all the five size groups together, we can see certain homogeneous pattern of changes in these groups over the period 1983-2003. The ratio of Debenture to TLF has a declining trend in all the groups except group 5. Group 5 exhibited an increasing trend in debentures after 1995. The ratio of Deb/TLF of group 4 was higher than all the other groups during the period 1987-97 whereas it was the lowest in group1. It is given in Fig 6.58 [Table 6.58 in Appendix-8].

Fig 6.58 The Ratio of Debenture to TLF of Size Groups 1-5



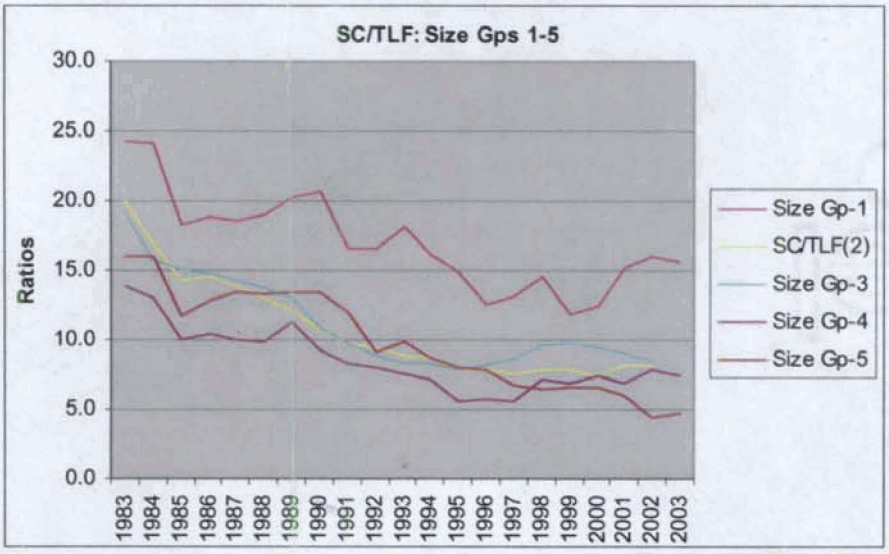
The ratio LTL/TLF in size groups 1 and 2 which represent 65% of total companies, demonstrated that it increased particularly after 1995-97 periods. In the case of group 1 (PUC Below 5 Cr) the ratio shoot up from 77.6% in 1997 to 171% in 2003. In group 2 (PUC 5 Cr – 25 Cr), the ratio rose from 24% in 1995 to 43% in 2003. It was around 20% in all the other groups throughout the period. The ratio of groups 1, 2 and 5 (74% of total companies) showed a declining trend during the periods 1992-1997 [Table 6.59 in Appendix-9].

Fig 6.59 The Ratio of LTL to TLF of Size Groups 1-5



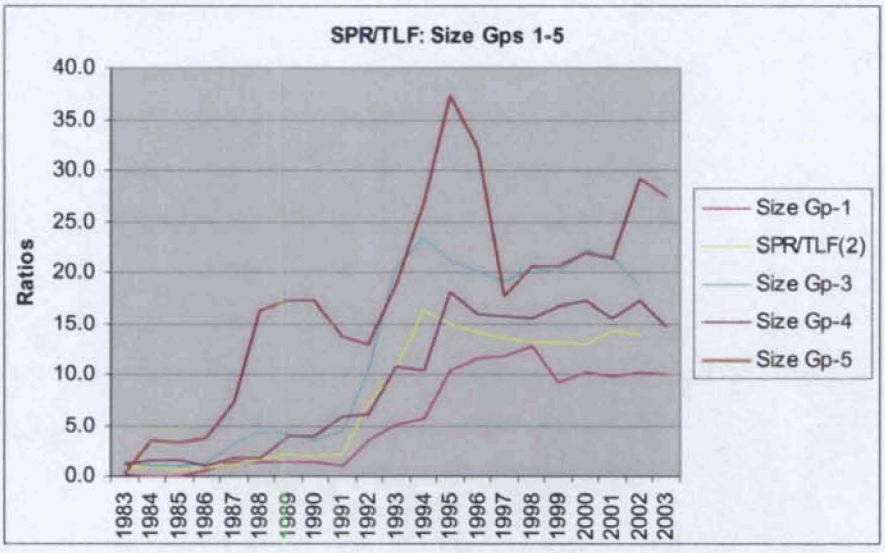
Like industry-wise grouping, size-wise classification also illustrated that the ratio SC/TLF has declined over the period 1983-2003. Its role was comparatively higher in group 1 and lowest in group 4. The group 4, (PUC range Rs. 50 Crore - Rs 100 Crore) witnessed an upward movement in Share Capital after 1995. The ratio in group 5 has steadily declined since 1993. This has been highlighted in Fig 6.60 [Table 6.60 in Appendix-10].

Fig 6.60 The Ratio of SC to TLF of Size Groups 1-5



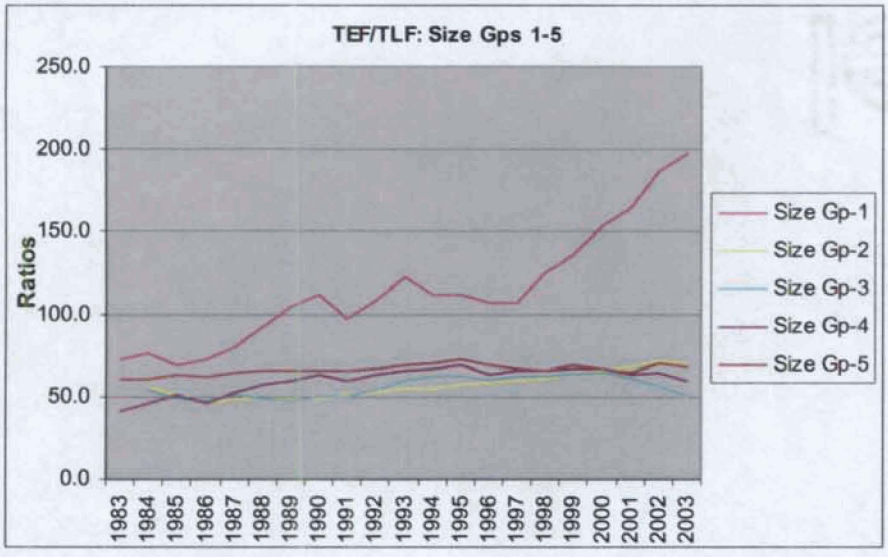
The Share Premium Reserves of all the groups increased sharply after 1991. Its growth was higher in group 5 and 3 during the period 1991-1995 than all the other groups. Though it declined after 1994-95 in all the groups, the ratio has gained momentum again after 1997 in groups 5 and 3. The ratio was the lowest in the groups 1 and 2. It has been shown in Fig 6.61 [Table 6.61 in Appendix-11].

Fig 6.61 The Ratio of SPR to TLF of Size Groups 1-5



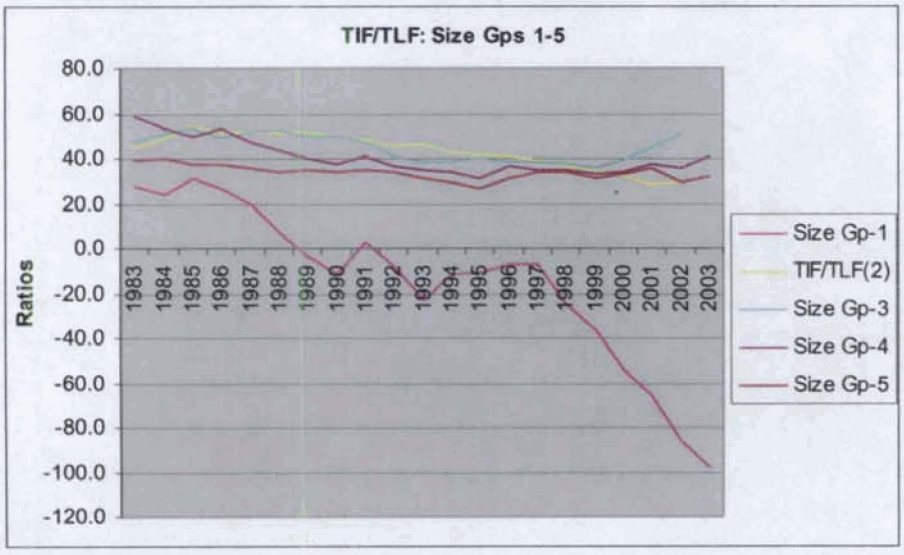
The Total External Finance of group 1 was higher than all the other groups in the entire period. It rose from 72.5% in 1983 to 123% in 1993 and later it shoot up from 107% in 1997 to 198% in 2003. The position of group 5 was also high, but it was in the range of 61% and 73% over the whole period. All the groups witnessed an upward trend in Total External Finance during the 1991-95 periods [Table 6.62 in Appendix- 12].

Fig 6.62 The Ratio of TEF to TLF of Size Groups 1-5



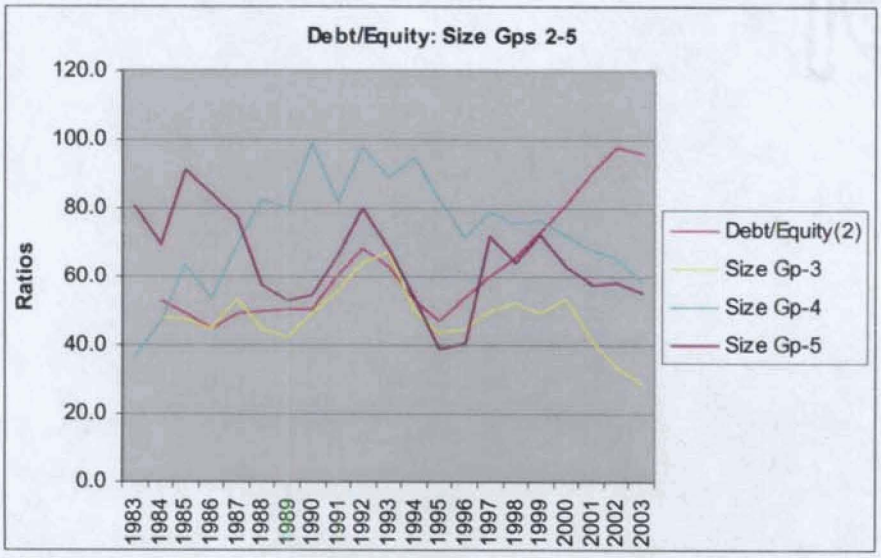
The Total Internal Finance to TLF was more than 25% in all the groups except group 1 (PUC below Rs. 5 Cr). It has increased in groups 3, 4, and 5 since 1995. It can be viewed in Fig 6.63 [Table 6.63 in Appendix-13].

Fig 6.63 The Ratio of TIF to TLF of Size Groups 1-5



The Debt-Equity ratio was above 40% in groups 2, 3, 4 and 5 against sharp fluctuations in group1 in the entire period. The debt-equity ratio was higher in group 4 and 5 than others for a long period. However, D/E ratio increased substantially after 1995 in group 2. It showed a declining tendency in groups 3, 4 and 5 after 1999. It is plotted in Fig. 6.64 [Table 6.64 in Appendix-14].

Fig 6.64 Debt-Equity Ratio of Size Groups 2-5



4. Financing Pattern: Firm Level

We have used the following financial ratios for firm level analysis.

1. Debenture to Total Long-term Finance (Deb/TLF),
2. Long-term Loans to Total Long-term Finance (LTL/TLF),
3. Share Capital to Total Long-term Finance (SC/TLF),
4. Share Premium Reserves to Total Long-term Finance (SPR/TLF),
5. Total External Finance to Total Long-term Finance (TEF/TLF),
6. Total Internal Finance to Total Long-term Finance (TIF/TLF) and
7. Debt to Equity (D/E).

Debenture to Total Long-term Finance (Deb/TLF)

The portion of debentures in total long-term finance was less than 10% in 70% of companies in the post-reform period against 58% of companies in the pre-reform period. It was more than 30% in 6% of companies in the pre-reform period declined to 2% of companies in the post-reform period. On the average debentures occupied 19.2% and 15.7% of total long term finance during the pre and post-reform periods.

Table 6.65 Financial Ratios-Deb/TLF: Firm Level

Overall		
Deb/TLF	No of Cos	%
Below 10	102	68.0
10-20	35	23.3
20-30	12	8.0
30-40		
40-50	1	0.7
50-60		
60-70		
Above 70		

Pre-reform		
Deb/TLF	No of Cos	%
Below 10	87	58.0
10-20	37	24.7
20-30	17	11.3
30-40	9	6.0
40-50		
50-60		
60-70		
Above 70		

Post-reform		
Deb/TLF	No of Cos	%
Below 10	105	70.0
10-20	34	22.7
20-30	8	5.3
30-40	1	0.7
40-50		
50-60	1	0.7
60-70		
Above 70	1	0.7

Long-term Loans to Total Long-term Finance (LTL/TLF)

Long term loans as a percentage of total long term finance was more than 50% in 18% of companies in the overall period. It was 15% of companies in the pre-reform, improved to 17.4% of companies in the latter period. Its part in total long term finance was more than 70% in 8% of companies in the reform period in contrast to 4.7% of companies before the reforms. It was less than 20% in 55% of companies in the initial period; declined to 42% of companies in the reform period. In the aggregate level long-term loans contributed 18.5% of total long-term finance in the initial period and 22.6% in the reform period.

Table 6.66 Financial Ratios-LTL/TLF: Firm Level

Overall		
LTL/TLF	No of Cos	%
Below 10	36	24.0
10-20	26	17.3
20-30	22	14.7
30-40	25	16.7
40-50	14	9.3
50-60	10	6.7
60-70	7	4.7
Above 70	10	6.7

Pre-reform		
LTL/TLF	No of Cos	%
Below 10	33	22.0
10-20	50	33.3
20-30	15	10.0
30-40	19	12.7
40-50	10	6.7
50-60	8	5.3
60-70	8	5.0
Above 70	7	4.7

Post-reform		
LTL/TLF	No of Cos	%
Below 10	36	24.0
10-20	27	18.0
20-30	22	14.7
30-40	20	13.3
40-50	19	12.7
50-60	10	6.7
60-70	4	2.7
Above 70	12	8.0

Share Capital to Total Long-term Finance (SC/TLF)

The fraction of Share Capital was less than 10% in 52% of companies in the post-reform period in contrast to 25% of companies in the pre-reform period. Its role was more than 30% in 15% of companies in the initial period, declined to 8% of companies in the latter period. On the average, the role of share capital out of total long-term finance was 13.4% and 7% during the pre and post-reform periods.

Table 6.67 Financial Ratios-SC/TLF: Firm Level

Overall		
SC/TLF	No of Cos	%
Below 10	70	46.7
10-20	55	36.7
20-30	15	10.0
30-40	5	3.3
40-50		
50-60	3	2.0
60-70	2	1.3
Above 70		

Pre-reform		
SC/TLF	No of Cos	%
Below 10	38	25.3
10-20	60	40.0
20-30	30	20.0
30-40	16	10.7
40-50	4	2.7
50-60	1	0.7
60-70		
Above 70	1	0.7

Post-reform		
SC/TLF	No of Cos	%
Below 10	78	52.0
10-20	47	31.3
20-30	13	8.7
30-40	4	2.7
40-50	2	1.3
50-60	1	0.7
60-70	3	2.0
Above 70	2	1.3

Share Premium Reserves to Total Long-term Finance (SPR/TLF)

Share premium reserves shoot up considerably in the post-reform period. At the aggregate level its role in total long-term finance was 6% in the pre-reform period and 21% in the post-reform period. The firm level analysis demonstrated that its share was more than 10% in 5% of companies in the pre-reform period, increased to 46% of companies in the post-reform period. Its part was more than 30% in 1% of companies in the initial period, improved to 11% of companies in the reform period.

Table 6.68 Financial Ratios-SPR/TLF: Firm Level

Overall		
SPR/TLF	No of Cos	%
Below 10	86	57.3
10-20	35	23.3
20-30	16	10.7
30-40	9	6.0
40-50	4	2.7
50-60		
60-70		
Above 70		

Pre-reform		
SPR/TLF	No of Cos	%
Below 10	142	94.7
10-20	7	4.7
20-30		
30-40	1	0.7
40-50		
50-60		
60-70		
Above 70		

Post-reform		
SPR/TLF	No of Cos	%
Below 10	81	54.0
10-20	36	24.0
20-30	16	10.7
30-40	12	8.0
40-50	4	2.7
50-60	1	0.7
60-70		
Above 70		

Total External Finance to Total Long-term Finance (TEF/TLF)

Total external finance- comprising debentures, long-term loans, share capital, share premium reserves – played a key role against total internal finance in the post-reform period. At the aggregate level its share enhanced from 57% before the reforms to 66.4% in the reform period. The firm level observations brings out that, external finance contributed more than 50% of total long-term finance in 64.7% of companies in the overall period, 58.7% of companies in the pre-reform and 65.3% of companies in the post-reform periods. Its share was more than 70% in 39% of companies in the reform period against 19% of companies before reforms.

Table 6.69 Financial Ratios-TEF/TLF: Firm Level

Overall		
TEF/TLF	No of Cos	%
Below 10	4	2.7
10-20	4	2.7
20-30	10	6.7
30-40	15	10.0
40-50	20	13.3
50-60	24	16.0
60-70	22	14.7
Above 70	51	34.0

Pre-reform		
TEF/TLF	No of Cos	%
Below 10	2	1.3
10-20	3	2.0
20-30	4	2.7
30-40	22	14.7
40-50	31	20.7
50-60	36	24.0
60-70	24	16.0
Above 70	28	18.7

Post-reform		
TEF/TLF	No of Cos	%
Below 10	4	2.7
10-20	6	4.0
20-30	14	9.3
30-40	10	6.7
40-50	18	12.0
50-60	26	17.3
60-70	14	9.3
Above 70	58	38.7

Total Internal Finance to Total Long-term Finance (TIF/TLF)

The relative share of total internal finance declined in the post-reform period compared to the pre-reform period. It was less than 40% in 48% of companies in the post-reform period against 35% of companies in the pre-reform period. On the average it was 43% during the pre-reform period and 33.6% in the post-reform period.

Table 6.70 Financial Ratios-TIF/TLF: Firm Level

Overall		
TIF/TLF	No of Cos	%
Below 10	22	14.7
10-20	11	7.3
20-30	18	12.0
30-40	22	14.7
40-50	24	16.0
50-60	20	13.3
60-70	14	9.3
Above 70	19	12.7

Pre-reform		
TIF/TLF	No of Cos	%
Below 10	12	8.0
10-20	7	4.7
20-30	9	6.0
30-40	24	16.0
40-50	35	23.3
50-60	32	21.3
60-70	22	14.7
Above 70	9	6.0

Post-reform		
TIF/TLF	No of Cos	%
Below 10	23	15.3
10-20	12	8.0
20-30	23	15.3
30-40	14	9.3
40-50	26	17.3
50-60	17	11.3
60-70	11	7.3
Above 70	24	16.0

Debt to Equity (D/E)

The debt-equity ratio was more than 50% in 50% of companies during the overall and pre-reform periods, declined to 48% of companies in the post-reform period. However, its share was more than 70% in more than 37% of companies in the post-reform period against 32% of companies before the reforms.

Table 6.71 Financial Ratios-Debt/Equity: Firm Level

Overall		
D/E	No of Cos	%
Below 10	25	16.7
10-20	14	9.3
20-30	12	8.0
30-40	12	8.0
40-50	12	8.0
50-60	10	6.7
60-70	8	5.3
Above 70	57	38.0

Pre-reform		
D/E	No of Cos	%
Below 10	20	13.3
10-20	6	4.0
20-30	20	13.3
30-40	13	8.7
40-50	16	10.7
50-60	10	6.7
60-70	17	11.3
Above 70	48	32.0

Post-reform		
D/E	No of Cos	%
Below 10	28	18.7
10-20	17	11.3
20-30	14	9.3
30-40	11	7.3
40-50	8	5.3
50-60	6	4.0
60-70	10	6.7
Above 70	56	37.3

To sum up, the number of companies financed less than 10% of total long-term funds by way of debentures increased in the post-reform period. The relative share of long term loans was more than 20% in 58% of companies in the reform period against 44% of companies before the reforms. Its contribution was more than 70% in 8% of companies during reforms in contrast to 5% of companies in the pre-reform period. Share capital to total long-term finance was less than 10% in 25% of companies in the pre-reform period, worsened to 52% of companies in the post-reform period. The share

premium reserves was more than 10% in 5% of companies in the pre-reform period, grew up to 46% of companies in the post-reform period. Total external finance was more than 70% in 39% of companies in the reform period against 19% of companies before the reforms. Total internal finance was less than 40% in 48% of companies in the post-reform period against 35% of companies in the pre-reform period. The number of companies increased whose debt-equity ratio is more than 70%. Thus, the firm level analysis demonstrated that the position of Debenture, Share Capital, and Total Internal Finance to Total Long-term Finance weakened whereas, Long-term Loans, Share Premium Reserves and Total External Finance to Total Long-term Finance progressed.

Conclusion

Thus, the industry-wise and size-wise financing pattern explains that, among total external and internal finance, the importance of total external finance elevated. When we consider the components of total external finance, the significance of Long-term Loans and Share Premium Reserves were enhanced. It further reveals that, capital market reforms helped to reduce disparity in the financing pattern among industry groups and size groups in the reform period.

The industry-wise, size-wise and firm level analysis demonstrates that, the debentures and Share Capital have a declining trend in the post-reform period. Long term loans have an increasing trend and Share Premium Reserves rose sharply in all the groups. The ratio of TEF/TLF played a crucial role in all the industry groups by occupying more than 50% in the entire period. The same ratio in size-wise analysis illustrated that it increased in those groups which lie in the upper part of the distribution.

CHAPTER – 6 (3)

THE DETERMINANTS OF INVESTMENT

- Financial Management Ratios: Aggregate and Firm Level
- The Determinants of Investment
- Conclusion

Chapter – 6(3)

The Determinants of Investment

The pattern of investment at the aggregate level, group level and firm level illustrated that investment has increased in the post-reform period. Moreover, we have seen that the abrupt effect of reforms was the upsurge in Other Assets and Share Premium Reserves. Now, to answer the questions as to what determines investment, why Other Assets and Share Premium Reserves advanced, we have computed Financial Management Ratios at the aggregate level and firm level. The aggregate level ratios are compared against firm level ratios.

Financial Management Ratios: Aggregate Level

The important ratios include;

1. Liquidity Ratio such as Current Ratio,
2. Capital Structure Ratios like;
   - Debt-Equity Ratio,
   - Solvency Ratio,
   - Fixed Assets Ratio, and
   - Debt Service Ratio.
3. The Activity Ratios include;
   - Total Assets Turnover Ratio,
   - Fixed Assets Turnover Ratio and
   - Capital Turnover Ratio.
4. Profitability Ratios like; Net Profit Ratio.

Table 6.80 Financial Management Ratios: Aggregate Level

Ratios	Overall	Pre-reform	Post-reform
Current Ratio	132.3	124.3	133.5
D/E Ratio	61.8	60.4	62.0
Solvency Ratio	60.7	65.3	60.1
Fixed Assets Ratio	153.0	127.4	156.3
Debt Service Ratio	181.0	107.3	193.4
Total Assets Turn Over Ratio	92.9	120.0	89.6
Fixed Assets Turn Over Ratio	223.5	274.4	216.9
Capital Turn Over Ratio	146.1	215.5	138.8
Net Profit Ratio	6.0	3.6	6.4

*Ratios are expressed in percentages

Among these ratios, the current ratio, Debt-Equity ratio, Fixed Assets ratio, Debt Service ratio, Net Profit ratio, Reserves to Capital ratio and Solvency ratio have progressed in the reform period compared to the pre-reform period.

Financial Management Ratios: Firm Level

1. Liquidity Ratio

Current Ratio: Current Ratio may be defined as the relationship between current assets and current liabilities. Current ratio of a firm measures its short-term solvency and reflects its ability to meet short-term obligations when they are due. Generally, a current ratio of 2:1 is considered satisfactory.

Current Ratio = Current Assets/ Current Liabilities.

The ratio on the average was 124.3 in the pre-reform period and 133.5 in the post-reform period. The firm level data shows that it was in the range of 100 - 250 in 87% of companies in the pre-reform period declined to 77% of companies in the post-reform reform period. However, in the case of 5% of companies the Ratio was more than 250 % in the post-reform period whereas no companies witnessed this during the pre-reform period. Thus, the short-term solvency position of certain companies advanced and some other companies worsened.

Table 6.81 Liquidity Ratio: Current Ratio

Overall		
Current Ratio (%)	No of Cos	%
Below 50	3	2.0
50 - 100	24	16.0
100 - 150	80	53.3
150 - 200	29	19.3
200 - 250	9	6.0
250 - 300	2	1.3
Above 300	3	2.0
	150	100

Pre-reform		
Current Ratio (%)	No of Cos	%
Below 50	3	2.0
50 - 100	16	10.7
100 - 150	101	67.3
150 - 200	24	16.0
200 - 250	6	4.0
250 - 300	0	0.0
Above 300	0	0.0
	150	100

Post-reform		
Current Ratio (%)	No of Cos	%
Below 50	4	2.7
50 - 100	22	14.7
100 - 150	75	50.0
150 - 200	29	19.3
200 - 250	12	8.0
250 - 300	5	3.3
Above 300	3	2.0
	150	100

2. Capital Structure or Leverage Ratios

Leverage or capital structure ratios are calculated to judge the long-term solvency or financial position of the firm. There are two types of such ratios; (i) those capital structure ratios which are based on the relationship of borrowed funds and owner's fund. This ratio enables us to know the ability of the firm to repay the principal amount when it is due. (ii) which are calculated to ascertain the firm's capacity for regular payment of interest and dividend. We have considered the following ratios.

Debt-Equity Ratio: The debt-equity ratio reveals the relationship between internal and external sources of funds of a firm. It indicates the firm's capacity to pay long-term debts and procure additional loans and informs whether the firm is following the policy of trading on equity. A low debt-equity ratio provides sufficient safety margin to creditors due to high stake of owners in the capital of the company. For the company, the servicing of debt (interest) is less burdensome and consequently its ability to raise additional funds is not adversely affected. But the share holders of the company are deprived of the benefits of trading on equity. A high debt-equity ratio shows that the claims of creditors are greater than those of owners, hence lesser safety. A high ratio is unfavourable from the firm's point of view because it increased inflexibility in firm's operations due to increasing interference and pressures from creditors. Normally, debt-equity ratio of 1:1 is reasonable.

Debt-Equity Ratio = Total Long-term Debts/Net Worth

**Total Long-term Debts=Deferred Liabilities*

At the aggregate level, the Debt-Equity ratio was 60.4 % in the pre-reform period and 62% after the reforms. The ratio at the firm level indicates that, it was more than 100% in 18.6% of companies in the in pre-reform period and 24.6% of companies in the post-reform period. This shows that Debt-Equity ratio of more companies progressed in the reform period.

Table 6.82 Capital Structure Ratios: Debt-Equity Ratio

Overall		
D/E (%)	No of Cos	%
Below 50	75	50.0
50 - 100	37	24.7
100 - 150	20	13.3
150 - 200	7	4.7
200 - 250	3	2.0
250 - 300	1	0.7
Above 300	7	4.7
	150	100

Pre-reform		
D/E (%)	No of Cos	%
Below 50	75	50.0
50 - 100	47	31.3
100 - 150	14	9.3
150 - 200	6	4.0
200 - 250	5	3.3
250 - 300		0.0
Above 300	3	2.0
	150	100

Post-reform		
D/E (%)	No of Cos	%
Below 50	78	52.0
50 - 100	35	23.3
100 - 150	21	14.0
150 - 200	5	3.3
200 - 250	6	4.0
250 - 300		0.0
Above 300	5	3.3
	150	100

Solvency or Debt to Total Assets Ratio: This measures the long-term solvency of the business. It reveals the relationship between total assets and total external liabilities. This ratio measures the proportion of total assets provided by creditors (long-term and short-term) of the firm. i.e, what part of assets is being financed from loans. If total assets are more than external liabilities, the firm is treated as solvent.

Solvency Ratio = Total Liabilities/ Total Assets

The Solvency Ratio at the aggregate level has declined from 65.3% before the reforms to 60.1 after the reforms; thus improved the solvency position. The firm level data brings out that, the ratio was less than 100% in 97% of companies in the initial period, declined to 93% of companies in the reform period. Nevertheless, it was less than

50% in 17% of companies in the post-reform period in contrast to 8% of companies in the initial period, thus the solvency position of certain companies improved.

Table 6.83 Capital Structure Ratios: Solvency Ratio

Overall		
Solvency Ratio (%)	No of Cos	%
Below 50	25	16.7
50 - 100	118	78.7
100 - 150	4	2.7
150 - 200	1	0.7
200 - 250	1	0.7
250 - 300		0.0
Above 300	1	0.7
	150	100

Pre-reform		
Solvency Ratio (%)	No of Cos	%
Below 50	13	8.7
50 - 100	133	88.7
100 - 150	2	1.3
150 - 200	1	0.7
200 - 250		0.0
250 - 300		0.0
Above 300	1	0.7
	150	100

Post-reform		
Solvency Ratio (%)	No of Cos	%
Below 50	26	17.3
50 - 100	114	76.0
100 - 150	6	4.0
150 - 200	2	1.3
200 - 250		0.0
250 - 300		0.0
Above 300	2	1.3
	150	100

Fixed Assets Ratio: As per sound financial policy, acquisition of fixed assets should be financed from long-term funds only. The ratio expresses the relationship between long-term funds and fixed assets of the firm. Fixed Assets Ratio of more than one reveals that long-term funds have been employed to finance current assets. On the contrary, a ratio of less than one indicates that a part of fixed assets is financed by short-term funds i.e., bank overdraft. Normally, a ratio of 1.5:1 is considered good. Long-term funds include equity share capital, all reserves and surplus and long-term loans and debentures. Fixed asset means net fixed assets.

Fixed Assets Ratio = Long-term Funds/ Fixed Assets

**Long-term funds=Deferred Liabilities + Net worth, Fixed Assets=Net Fixed Assets*

The Fixed Asset Ratio was 127.4% and 156.3% during the pre and post-reform periods at the aggregate level. However, the ratio was more than 200% in 12.6% of companies before the reforms and 24% of companies after the reforms.

Table 6.84 Capital Structure Ratios: Fixed Assets Ratio

Overall		
Fix Assets Ratio (%)	No of Cos	%
Below 50	5	3.3
50 - 100	15	10.0
100 - 150	63	42.0
150 - 200	34	22.7
200 - 250	14	9.3
250 - 300	7	4.7
Above 300	12	8.0
	150	100

Pre-reform		
Fix Assets Ratio (%)	No of Cos	%
Below 50	5	3.3
50 - 100	13	8.7
100 - 150	79	52.7
150 - 200	34	22.7
200 - 250	9	6.0
250 - 300	5	3.3
Above 300	5	3.3
	150	100

Post-reform		
Fix Assets Ratio (%)	No of Cos	%
Below 50	7	4.7
50 - 100	12	8.0
100 - 150	62	41.3
150 - 200	33	22.0
200 - 250	15	10.0
250 - 300	10	6.7
Above 300	11	7.3
	150	100

Debt Service Ratio: This ratio measures the debt servicing capacity of a firm, particularly, where payment of fixed interest on long-term loans is concerned. The ratio gives an idea of the number of times the fixed interest charges are covered by net earnings of the firm out of which they will be paid. The higher the ratio, the more is the interest paying capacity of the firm and safety margin available to long-term creditors. The low ratio indicates that the firm is using excessive debt. The investors can forecast the financial risk by comparing interest coverage ratio with standard ratio of the industry. The standard for this ratio should be about 6 or 7 times.

Debt-Service Ratio = Net Profit (before interest and tax)/ Fixed Interest Charges.

The debt-servicing capacity of firms on the average was 107.3% during the initial period and 193.4% in the latter period. The firm level data shows that the debt-service capacity of more companies worsened in the post-reform period.

Table 6.85 Capital Structure Ratios: Debt Service Ratio

Overall		
Debt Service Ratio (%)	No of Cos	%
Below 50	61	40.7
50 - 100	21	14.0
100 - 150	21	14.0
150 - 200	8	5.3
200 - 250	5	3.3
250 - 300	2	1.3
Above 300	32	21.3
	150	100

Pre-reform		
Debt Service Ratio (%)	No of Cos	%
Below 50	33	22.0
50 - 100	43	28.7
100 - 150	24	16.0
150 - 200	14	9.3
200 - 250	10	6.7
250 - 300	3	2.0
Above 300	23	15.3
	150	100

Post-reform		
Debt Service Ratio (%)	No of Cos	%
Below 50	59	39.3
50 - 100	28	18.7
100 - 150	14	9.3
150 - 200	7	4.7
200 - 250	7	4.7
250 - 300	3	2.0
Above 300	32	21.3
	150	100

3. Activity or Efficiency Ratios

The funds of creditors and owners are invested in various assets to generate sales and profits. The better the management of these assets, the larger will be the amount of sales. Activity ratios enable the firm to know how efficiently these assets are being converted by it.

Total Assets Turnover Ratio: This ratio expresses the relationship between costs of goods sold/ net sales and total assets/ investments of a firm. This ratio indicates the number of times the assets are turned over in a year in relation to sales. A higher total assets turnover ratio is the indicator of effective utilization of investment in assets, whereas lower assets turnover ratio indicates that assets are not properly utilized in comparison to sales.

Total Assets Turnover Ratio = Net Sales/ Total Assets

The Total Assets Turnover Ratio of all the firms taken together indicates that it has deteriorated from 120% in the pre-reform period to 89.6% in the post-reform period. The ratio at the firm level weakened in the post-reform period compared to the pre-reform period. It was more than 100% in 76% of companies before reforms, declined to only 49% of companies after the reforms.

Table 6.86 Activity Ratios: Total Asset Turnover Ratio

Overall		
Total Assets Turnover Ratio	No of Cos	%
Below 50	7	4.7
50 - 100	59	39.3
100 - 150	58	38.7
150 - 200	19	12.7
200 - 250	5	3.3
250 - 300	2	1.3
Above 300		0.0
	150	100

Pre-reform		
Total Assets Turnover Ratio	No of Cos	%
Below 50	5	3.3
50 - 100	31	20.7
100 - 150	70	46.7
150 - 200	29	19.3
200 - 250	9	6.0
250 - 300	3	2.0
Above 300	3	2.0
	150	100

Post-reform		
Total Assets Turnover Ratio	No of Cos	%
Below 50	8	5.3
50 - 100	69	46.0
100 - 150	49	32.7
150 - 200	17	11.3
200 - 250	6	4.0
250 - 300		0.0
Above 300	1	0.7
	150	100

* *Ratios in percentages*

Fixed Assets Turnover Ratio: This ratio expresses the relationship between fixed assets (less depreciation) and net sales. The ratio measures the efficiency and profit earning capacity of the firm. The higher the ratio, the greater is the intensive utilization of fixed assets. Lower the ratio means under utilization of fixed assets and excessive investment in these assets. As the volume of sales depends on a variety of factors such as price, quality of goods, salesmanship, marketing etc. the ratio is of limited applicability.

Fixed Assets Turnover Ratio = Sales/ Net Fixed Assets

On the average the Fixed Asset Turnover Ratio has declined from 274.4% in the initial period to 216.9% in the latter period. At the firm level, the ratio has improved in all the range except the upper range of 'Above 300'. On the whole, the Fixed Assets Turnover Ratio appreciated.

Table 6.87 Activity Ratios: Fixed Asset Turnover Ratio

Overall		
Fixed Assets Turnover Ratio	No of Cos	%
Below 50	1	0.7
50 - 100	6	4.0
100 - 150	16	10.7
150 - 200	31	20.7
200 - 250	14	9.3
250 - 300	20	13.3
Above 300	62	41.3
	150	100

Pre-reform		
Fixed Assets Turnover Ratio	No of Cos	%
Below 50	2	1.3
50 - 100	2	1.3
100 - 150	14	9.3
150 - 200	19	12.7
200 - 250	11	7.3
250 - 300	12	8.0
Above 300	90	60.0
	150	100

Post-reform		
Fixed Assets Turnover Ratio	No of Cos	%
Below 50	1	0.7
50 - 100	8	5.3
100 - 150	18	12.0
150 - 200	28	18.7
200 - 250	16	10.7
250 - 300	18	12.0
Above 300	61	40.7
	150	100

* *Ratios in percentages*

Capital Turnover Ratio: This ratio establishes the relationship between net sales or cost of goods sold and capital employed. The ratio is a better measurement of efficient use of capital employed. Efficient use of capital symbolizes profit earning capacity and managerial efficiency of the business. Higher ratio shows higher profit and lower ratio shows lower profit.

Capital Turnover Ratio = Sales/ Capital Employed.

*Capital employed is the sum of Deferred Liabilities and Net Worth

The Capital Turnover Ratio declined considerably after the reforms when we take into account the companies at the aggregate level. It turned down from 215.5% to 138.8%. At the firm level, the number of companies with the Capital Turnover Ratio above 100 % has comedown from 92% in the former period to 83% in the latter period.

Table 6.88 Activity Ratios: Capital Turnover Ratio

Overall		
Capital Turnover Ratio	No of Cos	%
Below 50	1	0.7
50 - 100	14	9.3
100 - 150	19	12.7
150 - 200	34	22.7
200 - 250	34	22.7
250 - 300	20	13.3
Above 300	28	18.7
	150	100

Pre-reform		
Capital Turnover Ratio	No of Cos	%
Below 50	5	3.3
50 - 100	7	4.7
100 - 150	22	14.7
150 - 200	17	11.3
200 - 250	25	16.7
250 - 300	22	14.7
Above 300	52	34.7
	150	100

Post-reform		
Capital Turnover Ratio	No of Cos	%
Below 50	4	2.7
50 - 100	22	14.7
100 - 150	36	24.0
150 - 200	29	19.3
200 - 250	22	14.7
250 - 300	11	7.3
Above 300	26	17.3
	150	100

4. Profitability Ratio

The firm's ability to earn maximum profit by the best utilization of its resources is called profitability.

Net Profit Ratio: This ratio measures the relationship between net profit and sales of a firm. The ratio is the indication of overall profitability and efficiency of the business.

$\text{Net Profit Ratio} = \frac{\text{Net Profit}}{\text{Net Sales}} \times 100$

Aggregate level Net Profit Ratio improved from 3.6% to 6.4% during the pre-reform and post-reform periods. At the firm level these ratios doesn't show remarkable variations.

Table 6.89 Profitability Ratios: Net Profit Ratio

Overall		
Net Profit Ratio (%)	No of Cos	%
Below 50	150	100
50 - 100		
100 - 150		
150 - 200		
200 - 250		
250 - 300		
Above 300		
	150	100

Pre-reform		
Net Profit Ratio (%)	No of Cos	%
Below 50	150	100
50 - 100		
100 - 150		
150 - 200		
200 - 250		
250 - 300		
Above 300		
	150	100

Post-reform		
Net Profit Ratio (%)	No of Cos	%
Below 50	150	100
50 - 100		
100 - 150		
150 - 200		
200 - 250		
250 - 300		
Above 300		
	150	100

Thus, the short-term solvency position of certain companies advanced and some other companies worsened. The Capital Structure Ratios (Leverage Ratios) such as the Debt-Equity ratio, Solvency Ratio, and Fixed Asset Ratio of more companies progressed in the reform period. Among the Capital Structure Ratios the Debt-Service Ratio of more companies worsened in the post-reform period. The Activity Ratios like; the Total Assets Turnover and Capital Turnover Ratios were weakened in the post-reform period compared to the pre-reform period whereas the Fixed Assets Turnover Ratio appreciated. The Net Profit Ratio has not made remarkable progress in the reform period.

The impact of capital market reforms on corporate investment in India

In order to analyse the impact of capital market reforms on corporate investment in India, we have observed the rate of growth of investment, the role of capital market, the cost of capital in terms of interest rate and dividend rate and the weighted average cost of capital of 150 NGNF Public Limited Companies during the pre and post reform periods. It revealed that, the compound rate of growth of investment of 48% of companies was in the range of 5-20% in the pre-reform period advanced to 59% of companies in the post-reform period. The mobilization of finance through the capital

market remained high during these periods. The share of Total External Finance out of Total Long-term Finance was more than 50% in 59% of companies during the initial period augmented to more than 65% of companies in the post-reform period. Out of Total External Finance, the position of Long-term Loans was above 50% in 41% of companies in the former period, progressed to 44% of companies in the reform period. The part of Share Capital on the other hand deteriorated in these periods. It was more than 50% of Total External Finance in 16% of companies before the reforms declined to 14% of companies after the reforms. The cost of capital in terms of interest rate indicated that, it was less than 20% in 39% of companies in the reform period in contrast to 27% of companies in the pre-reform period. The dividend rate during these periods increased. This shows that the decline in the rate of interest was primarily responsible for the growth of long-term loans in the post-reform period. On the whole, the weighted average cost of capital declined from 24.01 during the pre-reform period to 19.33 in the post-reform period. Thus, capital market reforms helped to reduce the cost of capital and accelerate the rate of growth of corporate investment in India.

Table 6.90 Rate of Growth of Investment (NFA): Firm Level

Overall		
NFA	No of Cos	%
Negative	8	5.3
0 - 5	9	6.0
5 - 10	27	18.0
10 - 15	30	20.0
15 - 20	38	25.3
20 - 25	22	14.7
25 - 30	8	5.3
30 Above	7	4.7
Indeterminate	1	0.7
	150	100

Pre-reform		
NFA	No of Cos	%
Negative	19	12.7
0 - 5	20	13.3
5 - 10	30	20.0
10 - 15	19	12.7
15 - 20	23	15.3
20 - 25	15	10.0
25 - 30	8	5.3
30 Above	16	10.7
Indeterminate		
	150	100

Post-reform		
NFA	No of Cos	%
Negative	23	15.3
0 - 5	15	10.0
5 - 10	28	18.7
10 - 15	24	16.0
15 - 20	37	24.7
20 - 25	5	3.3
25 - 30	7	4.7
30 Above	10	6.7
Indeterminate	1	0.7
	150	100

Table 6.91 Share of Total External Finance: Firm Level

Overall		
TEF/TLF	Cos	%
Below 50%	52	34.6
Above 50%	98	65.3
	150	100

Pre-reform		
TEF/TLF	Cos	%
Below 50%	62	41.3
Above 50%	88	58.6
	150	100

Post-reform		
TEF/TLF	Cos	%
Below 50%	52	34.6
Above 50%	98	65.3
	150	100

Table 6.92 Role of Share Capital: Firm Level

Overall		
SC/TLF	Cos	%
Below 50%	132	88.0
Above 50%	18	12.0
	150	100

Pre-reform		
SC/TLF	Cos	%
Below 50%	126	84.0
Above 50%	24	16.0
	150	100

Post-reform		
SC/TLF	Cos	%
Below 50%	129	86.0
Above 50%	21	14.0
	150	100

Table 6.93 Share of Long-term Loans: Firm Level

Overall		
LTL/TLF	Cos	%
Below 50%	85	56.6
Above 50%	65	43.3
	150	100

Pre-reform		
LTL/TLF	Cos	%
Below 50%	88	58.6
Above 50%	62	41.3
	150	100

Post-reform		
LTL/TLF	Cos	%
Below 50%	84	56.0
Above 50%	66	44.0
	150	100

Table 6.94 Interest Rate*: Firm Level

Overall		
Interest rate (%)	No of Cos	%
Below 10	8	5.3
10 - 20	49	32.7
20 - 30	43	28.7
30 - 40	23	15.3
40 - 50	10	6.7
Above 50	17	11.3
	150	100

Pre-reform		
Interest rate (%)	No of Cos	%
Below 10	6	4.0
10 - 20	34	22.7
20 - 30	37	24.7
30 - 40	26	17.3
40 - 50	19	12.7
Above 50	28	18.7
	150	100

Post-reform		
Interest rate (%)	No of Cos	%
Below 10	9	6.0
10 - 20	49	32.7
20 - 30	36	24.0
30 - 40	27	18.0
40 - 50	14	9.3
Above 50	15	10.0
	150	100

Table 6.95 Dividend Rate†: Firm Level

Overall		
Dividend Rate (%)	No of Cos	%
Below 5	116	77.3
5 - 10	24	16.0
10 - 15	7	4.7
15 - 20	0	0.0
Above 20	3	2.0
	150	100

Pre-reform		
Dividend Rate (%)	No of Cos	%
Below 5	105	70.0
5 - 10	37	24.7
10 - 15	7	4.7
15 - 20	0	0.0
Above 20	1	0.7
	150	100

Post-reform		
Dividend Rate (%)	No of Cos	%
Below 5	116	77.3
5 - 10	22	14.7
10 - 15	6	4.0
15 - 20	1	0.7
Above 20	5	3.3
	150	100

The Determinants of Investment

To observe the determinants of corporate investment, a regression function was fitted with the rate of growth of investment as the dependent variable and Solvency Ratio, Fixed Assets Turnover Ratio, Net Profit Ratio, The ratio of Total Internal Finance to External Finance, Rate of Interest, Rate of Dividend, the ratios of Share Premium

* Interest cost as a percentage of total debt.
† Profit distributed as a percentage of net worth.

Reserves, Long-term Loans, Share Capital, and Debentures to Total Long-term Finance, Debt-Equity Ratio, the ratio of Current Assets to Current Liabilities and size index as explanatory variables. The function for pooled data illustrated that, Net Profit Ratio (NPR), the ratio of Share Premium Reserves to Total Long-term Finance (SPR/TLF), Debt-Equity ratio (D/E), the ratios of Debenture to Total Long-term Finance (Deb/TLF) and Total Internal Finance to Total External Finance (TIF/TEF) are significantly affecting the rate of growth of investment. It explains about 62% of variations in the rate of growth of corporate investment over the period 1983-2003. These variables explained 47% of variations in the pre-reform and 40% of variations in the post-reform periods.

Model 1. Overall Period

$Y = \alpha + \Sigma\beta iXi + u$

Where, Y – Rate of growth of Total Net Assets, X_1 – Solvency Ratio (SR), X_2 - Fixed Assets Turnover Ratio (FATR), X_3 – Net Profit Ratio (NPR), X_4. Ratio of Total Internal Finance to External Finance (TIF/TEF), X_5 - Interest Rate, X_6. Dividend Rate, X_7 - Ratio Share Premium Reserve to Total Long-term Finance (SPR/TLF), X_8 – Ratio of Long-term Loans to Total Long-term Finance (LTL/TLF), X_9 – Share Capital to Total Long-term Finance (SC/TLF), X_{10} – Debenture to Total Long-term Finance (Deb/TLF), X_{11} – Debt-Equity ratio (D/E), X_{12} – Current Assets to Current Liabilities (CA/CL), X_{13} – Size index.

Summary Output

	Coefficients	*Standard Error*	*t Stat*	*R Square*
Intercept	6.419	1.388	4.625	0.623
Net Profit Ratio	112.013	10.357	10.815	
SPR/TLF	13.652	2.496	5.469	
D/E	2.938	0.912	3.223	
Deb/TLF	10.800	5.001	2.160	
TIF/TEF	-1.095	0.515	-2.126	

Model 2. Pre-reform Period (1983-1991)

The results for the pre-reform period shows that, the major factors influencing the rate of growth of investment are Share Premium Reserves to Total Long-term Finance, Net Profit Ratio, Dividend rate, Share Capital to Total Long-term Finance and Size index. This model explains 47% of variations during this period.

Summary Output

	Coefficients	*Standard Error*	*t Stat*	*R Square*
Intercept	13.101	2.243	5.842	0.472
SPR/TLF	64.923	10.282	6.314	
Net Profit Ratio	76.572	25.338	3.022	
Dividend rate	111.616	28.756	3.881	
SC/TLF	-30.495	8.969	-3.400	
Size index	-1.014	0.422	-2.402	

Model 3. Post-reform Period (1992-2003)

In this period only three variables i.e., Net Profit Ratio (NPR), the ratio of Long-term Loans to Total Long-term Finance (LTL/TLF) and Total Internal Finance to Total External Finance (TIF/TEF) are influencing the rate of growth of investment. These variables explain about 40 % of the variations during this period.

Summary Output

	Coefficients	*Standard Error*	*t Stat*	*R Square*
Intercept	4.935	1.723	2.864	0.400
Net Profit Ratio	116.780	13.201	8.846	
LTL/TLF	10.911	4.275	2.552	
TIF/TEF	-.971	0.412	-2.356	

Why Other Assets progressed?

The industry-wise and size-wise grouping illustrated that there is abrupt progress in Other Assets in the post-reform period. In order to answer the question as to why Other Assets progressed in the post-reform period, we have classified all the firms based on the rate of growth of Other Assets in the post-reform period. The financial management ratios of those firms whose rate of growth of Other Assets are above the average level

and below the average has been compared in the post-reform period. The Capital Structure Ratios, Activity Ratios, and Profitability Ratios were taken into account. It shows that the solvency position of those firms whose rate of growth of Other Assets above the average was better than that of other firms. Its solvency ratio (Total Liabilities/Total Assets) is 0.56 against 0.65 of other firms; indicates higher level of Total Assets. The low value of fixed assets ratio (Long term Funds/Fixed Assets) explains that Fixed Assets are also higher in the case of firms which registered high rate of growth in Other Assets. Its ratio is 0.29 compared to 0.43 of the rest of the firms that booked low rate of growth of Other Assets. The fixed assets turnover ratio (Sales/Net Fixed Assets) of the first category firms is higher than that of the others, shows intensive utilization of fixed assets. The efficiency and profit earning capacity of these firms are high. The ratio is 2.21 in contrast to 2.00 of the remaining firms. Capital turnover ratio [Sales/(Deferred Liabilities + Net worth)] is also higher in the first group of firms, indicates higher profit earning capacity and managerial efficiency of the business. The net profit ratio (Net Profit/Net Sales) of the first group of firms registered high value, explains the overall profitability and efficiency of the business. It is 0.08 compared to 0.03. These companies were able to maintain a high rate of dividend during this period; which is an important determinant of the market value of companies. Thus, with sound solvency position, managerial efficiency and profitability, firms seek new avenues of investment and more investment in intangible assets. So its rate of growth of Other Assets is higher in the post-reform period.

Other Assets: Financial Management Ratios (Post-reform)

Rate of growth of Other assets of Firms	Solvency ratio	Fixed Assets ratio	Fixed Assets Turnover Ratio	Capital Turnover Ratio	Net Profit Ratio	Dividend Rate
Above the average	0.56	0.29	2.21	1.36	0.08	0.06
Below the average	0.65	0.43	2.00	1.35	0.03	0.03

The correlation coefficient of the firms that witnessed below average rate of growth of Other Assets in the post-reform period explained that it has significant negative relationship with Solvency Ratio and positive relationship with Net Profit Ratio; justify our above observation.

Why Share Premium Reserves enhanced?

The industry-wise and size-wise analysis further revealed that the instantaneous result of reforms was the upsurge in Share Premium Reserves. What determines Share Premium Reserves is a question of empirical investigation and research. Nevertheless, we have computed the financial management ratios of the companies that registered high and low rate of growth of Share Premium Reserves in the pre and post-reform periods. When we consider the Dividend Rate we can see that those companies that booked high rate of growth of Share Premium Reserves in the post-reform period have a track record of high dividend rate in the pre-reform period, however, it declined in the post-reform period. Similarly, the Net Profit Ratio of the companies that followed high rate of growth of Share Premium Reserves in the post-reform period enhanced considerably during this period when compared to the pre-reform period. However, none of these variables show any correlation during these periods. So we come to the conclusion that expected profitability has considerable influence on the rate of growth of Share Premium Reserves.

Share Premium Reserves: Financial Management Ratios (Post-reform)

Rate of growth of Share Premium Reserves of Firms	Solvency ratio	Fixed Assets ratio	Net Profit Ratio	Dividend Rate
Above the average	0.57	0.32	0.09	0.04
Below the average	0.62	0.33	0.05	0.05

Share Premium Reserves: Financial Management Ratios (Pre-reform)

Rate of growth of Share Premium Reserves of Firms	Solvency ratio	Fixed Assets ratio	Net Profit Ratio	Dividend Rate
Above the average	0.62	0.22	0.05	0.05
Below the average	0.66	0.21	0.03	0.04

Conclusion

The aggregate and firm level analysis of the asset structure of companies in the corporate sector during the period 1983-2003 revealed that investment has accelerated in the post-reform period. Among the components of Total Net Assets the share of Current Assets worsened whereas Net Fixed Assets and Other Assets advanced. In Net Fixed Assets, though the result of the aggregate level analysis was not impressive, the industry-wise and size-wise grouping revealed that certain groups outperformed others in the accumulation of Net Fixed Assets during the reform period. It has been further revealed that the immediate response of capital market reforms was the spurt in Other Assets. It includes investment in subsidiaries, miscellaneous assets and intangible assets. The financial structure of companies witnessed considerable variation during this period. The external financing improved further in the reform period. Among the external sources, the position Debentures depleted while the role of Long-term Loans advanced. The industry-wise and size-wise classification exhibited that the sudden impact of reforms was the upswing of Share Premium Reserves. This augmented the liquidity position of companies. Share Capital on the other hand weakened steadily since 1983, showing the narrowness of the equity market. The financial management ratios at the aggregate and firm level expressed that the solvency position of companies improved. The capital structure ratios and certain activity ratios have made progress during the reform period. While analyzing the determinants of investment using step-wise multiple regression method, we could find that, Net Profit Ratio, Share Premium Reserves to Total Long-term Finance, Debt-equity ratio, Debenture to Total Long-term Finance, and Total Internal Finance to External Finance have significant influence on investment in the overall period. Thus, the study of 150 NGNF Public Limited Companies during the period 1983-2003 enable us to conclude that capital market reforms helped to augment private corporate investment in India. It helped to ameliorate the resource mobilization pattern of the corporate entities in the post-reform period.

CHAPTER – 7

SUMMARY OF THE FINDINGS

CONCLUSION

Chapter – 7

Summary of findings

Pattern of Investment and Finance: RBI data

- The average annual rate of growth of Net Fixed Assets (NFA) increased in the post-reform period (1992-2003) compared to the pre-reform period (1983-1991). It declined in the case of Current Assets (CA) and Other Assets (OA) during the same periods.
- The asset ratios explained that, the ratio of Net Fixed Assets to Total Net Assets (NFA/TNA) increased in the post-reform period compared to the pre-reform period. The relative share of Other Assets also increased while that of Current Assets declined in these periods.
- This pattern of change has been found true at constant prices (1993-94) also. The relative shares of Net Fixed Assets in Total Net Assets (NFA/TNA) and Other Assets in Total Net Assets (OA/TNA) progressed in the post-reform period whereas the share of Current Assets in Total Net Assets (CA/TNA) deteriorated.

Financing Pattern: RBI data

- The changes in the composition of Total Long-term Finance revealed that, the share of Total External Finance declined in the post-reform period compared to the pre-reform period. The Total Internal Finance on the other hand, enhanced. (Here, RBI data includes Share Premium Reserves under Reserves and Surplus)
- In Total External Finance, the share of Borrowings (including Debentures and Long-term Loans) progressed in the post-reform period compared to the pre-reform period while the part of Share Capital declined.

Pattern of Investment of 150 NGNF Public Ltd Companies in India

Aggregate Level Analysis

- The compound rate of growth of Net Fixed Assets increased from 13.2% in the pre-reform period to 14.9% in the post-reform period. The rate of growth of Current Assets declined from 16.6% to 11.7% while it increased from 20.4% to 41.9% in the case of Other Assets.
- At constant prices, the rate of growth of Net Fixed Assets advanced from 3.4% in the initial period to 9% in the reform period. It declined in the case of Current Assets from 6.5% to 6%. The rate of growth of Other Assets progressed from 9.9% to 34.6% during the same periods.

Asset Ratios

- The Asset Ratios at the aggregate level showed that the share of Net Fixed Assets in Total Net Assets declined marginally in the reform period. The fraction of Current Assets in Total Net Assets also declined whereas the role of Other Assets in Total Net Assets augmented in the post-reform period.
- The asset ratios at constant prices also demonstrated that the shares of Net Fixed Assets and Current Assets with respect to Total Net Assets declined in the post-reform period. The share of Other Assets progressed.

Industry-wise: Aggregate Level

- The trend of Net Fixed Assets, Current Assets and Other Assets were upward slopping in all the industry groups in the overall, pre and post-reform periods. The rate of growth of Net Fixed Assets of five groups out of ten groups advanced in the reform period. It declined in all the groups in the case of Current Assets whereas it enhanced in all the groups in the case of Other Assets.
- To see whether there is industry specific growth of investment, the intra-industry rate of growth of investment in the pre and post-reform periods were computed. It revealed that the rate of growth of investment is not industry specific.

Asset Ratios

- The periodical changes of asset ratios showed that the share of Net Fixed Assets in Total Net Assets of four industry groups out of ten groups increased in the post-reform period. The part of Other Assets of all the groups progressed whereas it declined in the case of Current Assets in nine groups.

Size-wise: Aggregate Level

- The rate of growth of Net Fixed Assets of size group 5 (PUC Above Rs 100 Crores) advanced in the post-reform period. The rate of growth of Current Assets of all the five size groups declined in the latter period whereas it enhanced in the case of Other Assets.
- To observe whether the rate of growth of investment is size group specific, we have obtained the intra-size rate of growth of Net Fixed Assets in the two periods. It explained that the rate of growth of investment is not size group specific in the reform period.

Asset Ratios

- The relative share of Net Fixed Assets in Total Net Assets of one group out five groups increased in the reform period, the part of Current Assets declined in all the groups whereas the fraction of Other Assets advanced in all the groups in the post-reform period.

Pattern of Investment: Firm Level

- At the firm level, the compound rate of growth of Net Fixed Assets accelerated in the reform period. Its rate of growth was in the range of 5-20% in 63% of firms in the overall period. It grew up from 48% of firms in the pre-reform period to 59% of firms in the post-reform period. The rate of growth of Current Assets was above 15% in 58% of companies in the pre-reform period, declined to 15% of firms in the post-reform period. In the overall period it was 37%. The rate of growth of Other Assets

was above 20% in 48% of firms in the overall, 27% in the pre-reform and 52% in the post-reform periods.

Asset Ratios

- The firm level asset ratios indicated that the relative share of Net Fixed Assets (NFA/TNA) was more than 40% in 49% of firms at the overall and post-reform periods against 45% of companies during the pre-reform period. The share of Current Assets in Total Net Assets which was above 50% in 73% of firms before the reforms declined to 63% of firms after the reforms. It was 65% of firms in the overall period. The ratio of Other Assets to Total Net Assets was less than 10% in 99% of firms in the initial period. It grew up to more than 10% in 25% firms in the latter period. It was more than 10% in 20% of companies in the overall period.

Financing Pattern of 150 NGNF Public Limited Companies in India

Aggregate Level

- The financial structure of 150 NGNF Public Limited Companies revealed that in Total Long-term Finance, the share of Total External Finance progressed from 57% in the pre-reform period to 66% in the post-reform period. The share of Total Internal Finance on the other hand depleted from 43% to 34%.
- The ratio analysis showed that the ratio of Debt-Equity and Total External Finance to Total Long-term Finance increased in the post-reform period compared to the pre-reform period. The share of Total Internal Finance in Total Long-term Finance on the other hand depleted.

Industry-wise

Financial Ratios

- The industry-wise analysis of financial ratios brings out that, the role of capital market enhanced in the reform period. The Debt-Equity ratio of six industry groups and the share of Total External Finance (TEF/TLF) of eight groups progressed in the post-reform period.

Size-wise

Financial Ratios

- The size-wise cataloguing also witnessed the growth of capital market financing in the reform period. The Debt-Equity ratio of three size groups and the share of Total External Finance (TEF/TLF) of all the five groups augmented in the latter period.

Financing Pattern: Firm Level

- At the firm level, the role of capital market was more than 50% of Total Long-term Finance in 65% of companies in the overall period. It was 59% of companies before the reforms and progressed to 65% of companies after the reforms.
- The Debt-Equity ratio was more than 70% in 38% of companies in the overall period. It was 37% in the reform period against 32% of companies before the reforms.

Financial Management Ratios: Firm Level

Liquidity Ratio: Current Ratio

- The Current Ratio was more than 200% in 4% of companies in the pre-reform period which improved to 13% of companies after the reforms. It was 9% in the overall period.

Capital Structure Ratios

Debt-Equity Ratio

- The Debt-Equity ratio was more than 70% in 32% of companies in the former period, progressed to 37% of companies in the latter period. 38% of companies were above 70% in the overall period.

Solvency Ratio

- This ratio was in the range of 50-100% in 89% of firms in the pre-reform period, declined to 76% of firms in the reform period; showing that Total Assets enhanced in the latter period.

Activity Ratio

Fixed Assets Turnover Ratio

- The ratio was above 50% in 98.7% of companies in the pre-reform period, improved to 99.3% of companies in the post-reform and overall periods.

Profitability Ratio

Net Profit Ratio

- At the firm level this ratio was more than 5% in 35% of companies in the reform period against 28% of companies before the reforms. It was 33% of companies in the overall period.

Cost of Capital

Interest Rate

The interest rate of debt capital was less than 20% in 38% of companies in the overall period. It was less than 20% in 39% of companies in the post-reform period against 27% of companies in the pre-reform period.

Dividend Rate

Dividend rate was less than 10% in 93% companies in the overall period. It declined from 95% of companies in the pre-reform period to 92% of companies in the reform period. Moreover, the dividend rate of 3% of companies was higher than 20% in the second period in contrast to less than 1% of companies in the initial period.

The impact of capital market reforms on corporate investment in India

In order to analyse the impact of capital market reforms on corporate investment in India, we have observed the rate of growth of investment, the role of capital market, the cost of capital in terms of interest rate and dividend rate and the weighted average cost of capital of 150 NGNF Public Limited Companies in the pre and post-reform periods. It revealed that, capital market reforms helped to reduce the cost of capital and accelerate the rate of growth of corporate investment in India.

The Determinants of Investment

To observe the determinants of corporate investment, a regression function was fitted for the overall, pre and post-reform periods. The function for pooled data illustrated that, Net Profit Ratio (NPR), the ratio of Share Premium Reserves to Total Long-term Finance (SPR/TLF), Debt-Equity ratio (D/E), the ratios of Debenture to Total Long-term Finance (Deb/TLF), and Total Internal Finance to Total External Finance (TIF/TEF) are significantly affecting the rate of growth of investment. It explains about 62% of variations in the rate of growth of investment in the overall period, 47% of variations in the pre-reform and 40% of variations in the post-reform periods.

Conclusion

The study on 'Capital Market Reforms and Corporate Investment Behaviour in India' is an attempt to answer certain questions like, how far capital market reforms helped to ameliorate the resource mobilization pattern and investment behaviour of the private corporate sector? Or what financial sector reforms contributed to our real sector? Or what globalization contributed to our real economy? We have analysed (i) RBI data of different sets of companies over the period 1983-2003 and (ii) the balance sheet and profit and loss account data of 150 Non-Government Non-Financial Public Limited Companies for the period 1983-2003 in general and the pre-reform (1983-1991) and post-reform (1992-2003) periods in particular by using Bombay Stock Exchange Official Directory (BSEOD) data base. The analysis was done on three levels: the aggregate level, group level (industry-wise, size-wise) and firm level. For investment, the variables such as Total Net Assets and its components Current Assets, Net Fixed Assets and Other Assets were considered. The broad measures of financing like Total External Finance, Total Internal Finance and Total Long-term Finance was computed. The components of Total External Finance include Debenture, Long-term Loans, Share Capital and Share

Premium Reserves. Retained Profits other than share premium reserves was the main component of Total Internal Finance. The absolute and relative measures of the variables and rates of growth were computed.

Investment Behaviour

The analysis of the pattern of investment using RBI data revealed that the rate of growth of investment increased in the post-reform period. The share of Net Fixed Assets in Total Net Assets also enhanced during this period. The data of 150 companies at the aggregate level brings out that the compound rate of growth of Net Fixed Assets and Other Assets progressed while that of Current Assets depleted in the post-reform period compared to the pre-reform period. This trend has been found true at constant prices also. The asset ratios at the aggregate level explained that the share of Net Fixed Assets in Total Net Assets declined marginally in the reform period. The fraction of Current Assets in Total Net Assets also declined while the role of Other Assets in Total Net Assets augmented in the post-reform period.

The industry-wise analysis at the aggregate level disclosed that the rate of growth of Net Fixed Assets of five out of ten groups advanced in the reform period. It declined in all the groups in the case of Current Assets whereas it enhanced in all the groups in the case of Other Assets. To see whether there is industry specific growth of investment, the intra-industry rate of growth of investment in both the periods were observed. It revealed that the rate of growth of investment is not industry specific. The size-wise analysis at the aggregate level disclosed that, the rate of growth of Net Fixed Assets of size group 5 (PUC above Rs 100 Crs) advanced in the post-reform period. It declined in all the groups in the case of Current Assets in contrast to Other Assets during these periods. To observe whether the rate of growth of investment is size-group specific, the intra-size rate of growth was obtained. It explained that the rate of growth of investment is not size-group specific.

The pattern of investment at the firm level highlighted that, the compound rate of growth of Net Fixed Assets of a majority of firms accelerated in the reform period. The firm level asset ratios demonstrated that the share of Net Fixed Assets in Total Net Assets of more firms advanced in the reform period. The share of Current Assets declined during these periods. The fraction of Other Assets also appreciated in the reform period. The analysis viewed that the instantaneous effect of reforms was the spurt in Other Assets.

Financing Pattern

The analysis of RBI data revealed that the share of Borrowings including Debentures and Long-term Loans progressed in the reform period whereas the part of Share Capital declined. The financing pattern of 150 companies at the aggregate level illustrated that, Share capital which occupied a predominant position (30.7%) in total external finance in 1984, declined steadily to 8.9 % in 2003. Debentures also declined from 45.3% in 1983 to 25.2% in 2003. Long-term loans, though expressed a declining tendency at the end of 1980s, improved after 1995. The part of share premium reserves moved considerably in the upward direction since 1983. It has grown from 3.6% in 1983 to 36.1% of total external finance in 2003. The ratio analysis explained that the ratio of Debt to Equity (D/E) and Total External Finance to Total Long-term Finance (TEF/TLF) increased in the post-reform period compared to the pre-reform period. Debt-Equity ratio improved from 60.4% in the initial period to 62% in the second period and Total External Finance to Total Long-term Finance augmented from 57% to 66.4% in these periods. The share of Total Internal Finance in Total Long-term Finance on the other hand depleted from 43% before the reforms to 33.6% after the reforms.

In industry-wise analysis, the part of Total External Finance which was more than 50% of Total Long-term Finance in 7 out of 10 groups during the pre-reform period increased to 9 out of 10 groups in the post-reform period. Among the components of external sources, Long-term Loans possesses a lion's share in 7 out of 10 groups in the post-reform period whereas it was only 5 out of 10 groups during the pre-reform period.

Its status appreciated in 9 groups during this period. The role of Debentures and Share Capital deteriorated after the reforms whereas Share Premium Reserves enhanced in all the groups in the latter period. Debt-Equity ratio of all the groups improved in the post-reform period. Its value increased in 6 groups during this period. In size-wise cataloguing the status of Total External Finance was more than 50% of Total Long-term Finance in 3 groups out of 5 groups in the pre-reform period which grew up to all the five groups in the post-reform period. Among the components of Total External Finance, Debentures of three groups were significant in the pre-reform period, declined to only one group in the post-reform period. Long-term Loans played a key role in three groups in the post-reform period in contrast to two groups in the pre-reform period. The part of Share Capital to Total Long-term Finance (SC/TLF) declined in all the groups in the post-reform period while Share Premium Reserves to Total Long-term Finance (SPR/TLF) increased. The Debt-Equity ratio of 3 groups progressed in the latter period.

The firm level analysis demonstrated that the position of Debenture, Share Capital, and Total Internal Finance to Total Long-term Finance weakened whereas, Long-term Loans, Share Premium Reserves and Total External Finance to Total Long-term Finance progressed. The Debt-Equity ratio of firms increased in the latter period. The analysis further revealed that the abrupt effect of reforms was the upsurge in Share Premium Reserves. The financial management ratios illustrated that, liquidity ratios, capital structure ratios (leverage ratios) and investment analysis ratios enhanced in the reform period whereas activity ratios and profitability ratios have made only moderate improvement. While analyzing the impact of capital market reforms on corporate investment in India, we could find that the capital market reforms helped to reduce the cost of capital and thereby accelerated the rate of growth of investment.

To identify significant financial variables that determine corporate investment, we have used stepwise multiple regression analysis. The results illustrated that in the overall period (1983-2003), Net Profit Ratio, the ratio of Share Premium Reserves to Total Long-

term Finance, Debt-Equity ratio, the ratios of Debenture to Total Long-term Finance and Total Internal Finance to Total External Finance have significant impact on investment. Thus, we come to the conclusion that capital market reforms helped to augment the private corporate investment in India. It helped to ameliorate the resource mobilization pattern of the corporate entities in the post-reform period.

Limitations of the study

The study mainly used Bombay Stock Exchange Official Directory Database. The BSEOD data does not provide separate entries of paid-up capital under external and internal sources of finance. Moreover, the study does not properly answer why Other Assets (including investment in subsidiaries, miscellaneous assets and intangible assets) and Share Premium Reserves shoots up in the reform period. It has not taken into account the other factors affecting investment.

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Appendices

Appendix-1

Table 6.47 The Ratio of Debenture to TLF of Industry Groups 1-10

Year	Ind Gp-1	Ind Gp-2	Ind Gp-3	Ind Gp-4	Ind Gp-5	Ind Gp-6	Ind Gp-7	Ind Gp-8	Ind Gp-9	Ind Gp-10
1983	4.1	0.6	9.4	2.1	2.5	10.4	0.0	0.0	20.5	8.5
1984	17.7	0.4	12.6	3.1	4.4	14.2	10.2	9.2	18.5	13.3
1985	16.8	8.8	11.0	5.3	7.0	13.2	20.6	9.9	32.3	11.6
1986	18.8	6.5	11.5	5.7	6.6	16.9	19.7	10.8	29.7	11.4
1987	18.7	10.3	18.3	6.2	8.7	21.7	21.2	13.3	29.1	12.4
1988	16.4	11.2	17.9	7.9	16.9	18.0	18.3	12.1	25.6	11.8
1989	17.8	10.3	17.9	8.3	11.1	16.7	16.4	11.5	26.6	12.0
1990	16.8	16.0	18.1	8.8	11.1	16.9	18.7	11.4	32.7	17.4
1991	10.5	14.9	14.1	8.4	11.6	22.9	28.9	11.1	29.9	18.4
1992	7.6	29.7	17.9	14.7	16.2	21.2	13.3	10.6	25.8	18.0
1993	5.5	26.5	25.4	10.1	12.2	18.8	12.1	7.3	24.5	18.8
1994	5.5	17.8	21.7	9.9	9.0	13.8	9.8	5.0	26.3	16.1
1995	5.7	12.3	14.4	7.1	6.2	13.1	6.6	3.0	21.1	13.1
1996	5.9	12.8	14.5	4.2	7.7	10.8	5.9	3.2	23.0	11.7
1997	6.6	11.1	15.7	5.8	10.6	10.7	15.6	6.7	37.6	10.3
1998	11.1	10.5	12.2	6.5	9.8	8.7	17.2	10.9	36.3	11.1
1999	15.2	10.3	10.7	7.3	11.0	9.5	12.0	4.7	20.0	9.8
2000	17.3	7.6	9.8	8.6	8.6	7.0	13.9	5.6	18.5	9.8
2001	22.8	15.3	6.7	8.2	6.5	6.2	16.2	6.0	18.7	6.2
2002	27.6	14.0	6.0	10.2	4.4	4.8	16.5	5.7	21.7	5.3
2003	31.8	10.1	4.9	9.4	2.3	13.2	14.2	6.6	23.8	3.6

Appendix-2

Table 6.48 The Ratio of LTL to TLF of Industry Groups 1-10

Year	Ind Gp-1	Ind Gp-2	Ind Gp-3	Ind Gp-4	Ind Gp-5	Ind Gp-6	Ind Gp-7	Ind Gp-8	Ind Gp-9	Ind Gp-10
1983	41.5	24.3	25.2	58.5	26.3	16.3	0.0	0.0	20.4	27.1
1984	33.7	26.8	25.3	46.2	24.2	12.1	30.7	12.0	18.6	19.5
1985	37.2	18.5	29.4	50.6	20.2	12.1	19.8	10.0	21.7	16.4
1986	28.0	8.6	28.4	39.7	20.7	10.4	19.7	13.5	19.9	14.2
1987	28.2	6.5	26.4	45.7	22.2	10.2	18.3	9.8	19.0	12.3
1988	29.7	6.0	30.3	39.4	20.8	10.0	18.5	4.5	17.0	7.2
1989	30.2	8.5	30.5	41.8	22.0	8.3	18.8	8.6	15.4	6.8
1990	29.8	9.8	31.7	39.0	22.4	9.4	19.1	4.8	14.4	6.9
1991	24.7	26.0	32.5	37.7	21.2	9.7	16.5	8.9	16.6	12.0
1992	31.0	13.4	34.6	36.1	18.6	16.1	28.0	6.9	26.2	18.3
1993	42.0	12.3	31.5	36.5	15.9	21.0	18.0	11.7	22.6	20.7
1994	43.4	15.4	28.6	33.4	16.6	19.5	19.8	8.1	14.0	17.5
1995	37.1	17.4	31.9	36.2	22.1	20.5	13.2	12.4	10.2	18.1
1996	26.8	20.3	30.5	34.4	27.7	18.9	15.6	23.3	12.3	19.0
1997	34.5	32.4	33.2	36.9	26.8	18.6	12.5	22.2	17.9	22.3
1998	43.0	33.5	38.5	42.1	27.9	20.1	18.5	11.5	4.9	29.1
1999	37.3	30.3	44.8	46.8	25.8	15.7	21.7	13.2	30.8	30.2
2000	28.0	33.5	49.1	49.8	26.4	17.3	17.9	8.0	30.4	23.4
2001	27.6	22.6	63.2	56.2	17.4	13.4	15.7	8.6	26.4	21.2
2002	22.0	20.8	64.3	57.8	15.1	11.5	18.9	7.5	21.5	17.0
2003	21.4	21.9	64.7	56.4	14.7	9.4	17.9	6.7	17.5	13.5

Appendix-3

Table 6.49 The Ratio of SC to TLF of Industry Groups 1-10

Year	Ind Gp-1	Ind Gp-2	Ind Gp-3	Ind Gp-4	Ind Gp-5	Ind Gp-6	Ind Gp-7	Ind Gp-8	Ind Gp-9	Ind Gp-10
1983	16.6	20.4	12.8	18.0	27.6	30.5			14.0	19.6
1984	12.8	19.9	11.6	30.8	23.4	26.8	12.6	19.5	13.5	17.4
1985	10.5	18.3	8.8	25.2	21.6	23.5	9.0	19.0	8.6	16.5
1986	12.8	11.9	10.1	19.8	21.1	22.5	10.4	17.4	7.6	15.7
1987	13.1	12.5	9.0	22.2	20.3	22.7	11.0	18.5	7.7	17.0
1988	15.2	13.4	9.0	17.4	16.9	21.8	11.4	18.8	8.7	14.9
1989	14.4	13.8	9.1	17.9	20.4	20.5	11.3	16.2	9.2	15.7
1990	13.7	12.8	8.5	17.8	19.5	18.3	10.7	15.1	8.0	17.1
1991	12.0	9.7	7.4	18.2	17.3	17.6	8.5	13.1	7.7	11.7
1992	9.2	9.1	7.4	16.2	14.2	15.0	9.4	12.4	5.0	10.7
1993	9.6	9.2	7.0	16.5	16.1	12.7	10.8	11.1	5.4	11.1
1994	8.2	9.5	6.3	17.2	12.9	11.1	9.6	10.9	5.1	11.8
1995	7.3	8.4	6.1	15.0	11.8	9.0	9.1	8.9	4.8	13.8
1996	6.2	9.6	6.0	12.9	12.4	10.1	7.3	7.2	5.0	12.3
1997	7.5	7.0	5.9	11.6	10.7	9.2	6.1	9.7	4.1	11.3
1998	6.0	6.6	7.7	10.9	11.3	8.6	5.1	12.8	5.4	9.2
1999	6.7	6.4	8.3	11.6	13.4	8.4	4.8	14.1	5.6	10.7
2000	8.6	5.9	8.8	12.2	14.2	8.9	4.5	10.7	5.8	11.3
2001	7.9	6.2	8.2	12.4	9.5	8.9	4.5	10.2	4.8	11.7
2002	9.5	7.3	10.6	12.7	8.5	8.7	4.8	9.5	2.8	11.0
2003	8.7	5.9	11.3	13.6	7.5	8.8	4.8	9.1	3.3	10.2

Appendix-4

Table 6.50 The Ratio of SPR to TLF of Industry Groups 1-10

Year	Ind Gp-1	Ind Gp-2	Ind Gp-3	Ind Gp-4	Ind Gp-5	Ind Gp-6	Ind Gp-7	Ind Gp-8	Ind Gp-9	Ind Gp-10
1983	0.0	2.6	0.0	2.6	0.0	1.3	0.0	0.0	1.2	1.1
1984	0.0	2.5	0.2	2.5	0.2	1.6	1.0	0.4	8.3	1.0
1985	0.0	2.3	0.2	2.3	0.2	2.0	1.0	0.4	6.6	0.5
1986	0.0	1.9	0.2	1.9	0.2	2.8	1.2	0.5	5.6	0.8
1987	0.0	1.9	0.4	1.9	0.4	2.5	1.8	1.2	11.3	1.5
1988	0.6	1.8	0.3	1.8	0.3	4.6	2.6	8.6	24.2	2.1
1989	0.5	1.2	1.0	1.2	1.0	7.2	4.4	8.3	23.5	2.2
1990	0.4	1.0	2.1	1.0	2.1	6.4	3.6	8.8	20.6	1.7
1991	0.3	1.9	2.0	1.9	2.0	4.0	5.5	7.6	20.7	1.6
1992	0.0	1.8	2.1	1.8	2.1	3.3	12.3	6.9	13.6	4.3
1993	2.3	11.2	6.5	11.2	6.5	6.3	25.0	11.8	19.9	5.7
1994	2.0	14.9	17.7	14.9	17.7	15.2	26.1	22.3	27.8	14.2
1995	10.1	22.9	25.2	22.9	25.2	18.3	36.8	29.7	40.7	15.5
1996	17.2	17.6	24.6	17.6	24.6	15.6	33.2	22.4	33.4	14.6
1997	13.7	14.8	23.6	14.8	23.6	14.8	27.0	21.5	11.7	14.2
1998	11.0	12.7	22.4	12.7	22.4	13.2	21.5	22.2	23.0	11.4
1999	11.3	11.5	22.2	11.5	22.2	14.0	20.1	22.7	23.4	13.3
2000	17.9	10.0	23.6	10.0	23.6	13.4	20.5	27.4	24.4	14.1
2001	16.4	9.1	23.7	9.1	23.7	13.3	19.1	24.6	24.4	13.2
2002	19.8	9.3	25.4	9.3	25.4	14.9	17.4	23.1	36.0	12.1
2003	18.1	8.1	24.4	8.1	24.4	14.6	15.9	19.4	33.5	10.8

Appendix-5

Table 6.51 The Ratio of TEF to TLF of Industry Groups 1-10

Year	Ind Gp-1	Ind Gp-2	Ind Gp-3	Ind Gp-4	Ind Gp-5	Ind Gp-6	Ind Gp-7	Ind Gp-8	Ind Gp-9	Ind Gp-10
1983	62.3	47.9	47.4	78.8	57.5	58.5			56.1	56.3
1984	64.3	49.6	49.7	80.4	52.9	54.8	54.6	41.2	58.9	51.2
1985	64.5	47.9	49.4	81.3	53.2	50.8	50.4	39.2	69.2	45.1
1986	59.6	28.8	50.2	65.3	48.9	52.5	50.9	42.2	62.8	42.0
1987	60.0	31.3	54.1	74.2	51.4	57.1	52.2	42.8	67.1	43.1
1988	61.8	32.4	57.4	64.8	54.8	54.4	50.8	44.0	75.4	36.0
1989	62.8	33.8	58.4	68.3	54.7	52.7	50.9	44.6	74.7	36.7
1990	60.6	39.5	60.4	65.7	54.0	50.9	52.2	40.0	75.8	43.0
1991	47.5	52.5	56.0	64.8	50.9	54.2	59.3	40.6	74.9	43.7
1992	47.7	53.9	61.9	67.7	59.5	55.5	63.0	36.8	70.7	51.3
1993	59.3	59.2	70.5	66.9	59.2	58.7	66.0	41.9	72.4	56.4
1994	59.0	57.6	74.3	65.1	55.5	59.5	65.3	46.4	73.2	59.7
1995	60.2	61.0	77.6	65.0	55.4	60.8	65.7	54.0	76.8	60.5
1996	56.2	60.4	75.5	60.6	58.0	55.5	62.0	56.2	73.6	57.6
1997	62.3	65.3	78.4	62.4	57.0	53.3	61.1	60.1	71.4	58.1
1998	71.1	63.3	80.9	66.5	58.0	50.6	62.3	57.4	69.6	60.8
1999	70.4	58.5	86.1	72.9	60.0	47.7	58.5	54.8	79.6	64.0
2000	71.8	57.0	91.3	77.9	58.6	46.6	56.8	51.7	79.1	58.6
2001	74.8	53.2	101.8	84.0	53.7	41.8	55.5	49.4	74.3	52.4
2002	78.8	51.3	106.2	88.0	46.2	40.0	57.6	45.7	82.0	45.5
2003	79.9	46.0	105.2	86.8	39.8	46.0	52.8	41.7	78.0	38.1

Appendix-6

Table 6.52 The Ratio of TIF to TLF of Industry Groups 1-10

Year	Ind Gp-1	Ind Gp-2	Ind Gp-3	Ind Gp-4	Ind Gp-5	Ind Gp-6	Ind Gp-7	Ind Gp-8	Ind Gp-9	Ind Gp-10
1983	37.7	52.1	52.6	21.2	42.5	41.5			43.9	43.7
1984	35.7	50.4	50.3	19.6	47.1	45.2	45.4	58.8	41.1	48.8
1985	35.5	52.1	50.6	18.7	46.8	49.2	49.6	60.8	30.8	54.9
1986	40.4	71.2	49.8	34.7	51.1	47.5	49.1	57.8	37.2	58.0
1987	40.0	68.7	45.9	25.8	48.6	42.9	47.8	57.2	32.9	56.9
1988	38.2	67.6	42.6	35.2	45.2	45.6	49.2	56.0	24.6	64.0
1989	37.2	66.2	41.6	31.7	45.3	47.3	49.1	55.4	25.3	63.3
1990	39.4	60.5	39.6	34.3	46.0	49.1	47.8	60.0	24.2	57.0
1991	52.5	47.5	44.0	35.2	49.1	45.8	40.7	59.4	25.1	56.3
1992	52.3	46.1	38.1	32.3	40.5	44.5	37.0	63.2	29.3	48.7
1993	40.7	40.8	29.5	33.1	40.8	41.3	34.0	58.1	27.6	43.6
1994	41.0	42.4	25.7	34.9	44.5	40.5	34.7	53.6	26.8	40.3
1995	39.8	39.0	22.4	35.0	44.6	39.2	34.3	46.0	23.2	39.5
1996	43.8	39.6	24.5	39.4	42.0	44.5	38.0	43.8	26.4	42.4
1997	37.7	34.7	21.6	37.6	43.0	46.7	38.9	39.9	28.6	41.9
1998	28.9	36.7	19.1	33.5	42.0	49.4	37.7	42.6	30.4	39.2
1999	29.6	41.5	13.9	27.1	40.0	52.3	41.5	45.2	20.4	36.0
2000	28.2	43.0	8.7	22.1	41.4	53.4	43.2	48.3	20.9	41.4
2001	25.2	46.8	-1.8	16.0	46.3	58.2	44.5	50.6	25.7	47.6
2002	21.2	48.7	-6.2	12.0	53.8	60.0	42.4	54.3	18.0	54.5
2003	20.1	54.0	-5.2	13.2	60.2	54.0	47.2	58.3	22.0	61.9

Appendix-7

Table 6.53 The Ratio of Debt to Equity of Industry Groups 1-10

Year	Ind Gp-1	Ind Gp-2	Ind Gp-3	Ind Gp-4	Ind Gp-5	Ind Gp-6	Ind Gp-7	Ind Gp-8	Ind Gp-9	Ind Gp-10
1983	83.9	33.2	52.9	153.8	40.4	36.5	0.0	0.0	69.2	55.1
1984	105.9	37.4	60.9	97.5	40.0	35.7	69.4	26.9	58.9	48.7
1985	117.3	37.6	67.7	126.6	37.3	33.9	67.7	24.7	117.4	39.0
1986	87.8	17.7	66.3	83.2	37.6	37.4	64.9	32.0	98.4	34.4
1987	88.1	20.3	80.7	107.9	44.7	46.9	65.2	30.0	92.9	32.7
1988	85.5	20.8	92.9	89.7	60.5	38.9	58.3	19.9	74.2	23.5
1989	92.2	23.2	93.8	100.7	49.5	33.3	54.3	25.3	72.4	23.2
1990	87.3	34.6	99.4	91.3	50.3	35.5	60.9	19.3	89.1	32.0
1991	54.4	69.2	87.2	85.5	48.7	48.4	83.1	25.0	87.1	43.7
1992	62.8	75.6	110.3	103.3	53.5	59.3	70.5	21.2	108.7	56.9
1993	90.2	63.4	132.2	87.3	39.1	66.0	43.1	23.4	89.0	65.4
1994	95.5	49.8	101.3	76.4	34.4	49.9	42.1	15.1	67.6	50.6
1995	75.0	42.3	86.2	76.4	39.6	50.5	24.7	18.2	45.5	45.3
1996	48.6	49.7	81.6	63.1	54.9	42.3	27.3	36.1	54.5	44.2
1997	69.8	76.7	95.6	74.5	59.9	41.4	39.0	40.7	124.8	48.4
1998	117.6	78.4	102.9	94.4	60.5	40.4	55.4	28.9	70.1	67.3
1999	110.5	68.5	125.1	117.9	58.1	33.7	50.8	21.9	103.0	66.7
2000	83.0	69.9	143.1	140.7	53.8	32.1	46.6	15.7	95.5	49.6
2001	101.9	61.1	232.1	181.2	31.4	24.4	46.9	17.1	82.2	37.9
2002	98.3	53.2	236.5	212.8	24.2	19.5	54.9	15.2	76.2	28.8
2003	113.6	47.1	228.9	192.3	20.5	29.3	47.3	15.2	70.3	20.7

Appendix-8

Table 6.58 The Ratio of Debenture to TLF of Size Groups 1-5

Year	Size Gp-1	Size Gp-2	Size Gp-3	Size Gp-4	Size Gp-5
1983	2.2	0.0	0.0	11.9	11.3
1984	2.2	5.3	14.0	13.7	15.7
1985	2.8	7.7	12.0	18.3	25.1
1986	4.7	8.5	11.8	18.7	25.0
1987	6.0	10.9	15.1	25.6	25.5
1988	6.5	11.1	16.0	25.3	20.4
1989	8.0	11.3	15.4	26.0	19.4
1990	8.9	12.3	18.4	34.3	19.9
1991	6.7	11.3	17.4	29.2	26.4
1992	9.3	12.6	17.0	29.6	18.5
1993	11.7	10.3	18.8	30.7	17.6
1994	7.9	10.1	15.3	29.5	16.9
1995	6.9	8.1	11.1	24.7	12.8
1996	4.8	7.7	9.3	22.4	14.0
1997	4.7	8.9	8.9	21.9	24.8
1998	5.2	7.9	10.6	23.6	24.2
1999	2.1	7.6	10.0	22.8	13.9
2000	2.9	7.0	9.3	19.6	14.1
2001	2.3	7.5	6.3	17.9	15.0
2002	2.1	7.7	5.4	19.3	17.7
2003	1.7	6.3	4.7	20.0	20.3

Appendix-9

Table 6.59 The Ratio of LTL to TLF of Size Groups 1-5

Year	Size Gp-1	Size Gp-2	Size Gp-3	Size Gp-4	Size Gp-5
1983	45.9			14.8	33.3
1984	49.7	29.3	18.6	18.0	25.1
1985	47.7	25.5	20.1	20.5	22.6
1986	48.8	22.5	19.1	16.2	20.6
1987	54.3	22.1	19.7	15.4	18.1
1988	65.7	22.3	14.9	19.8	16.1
1989	74.1	22.4	14.4	18.5	15.3
1990	80.3	21.4	14.7	15.5	15.4
1991	72.8	26.4	18.4	15.8	13.6
1992	78.8	27.8	22.1	19.7	26.0
1993	88.1	28.3	21.4	16.3	23.0
1994	81.3	24.6	17.9	19.3	17.9
1995	78.9	23.9	19.2	20.4	15.0
1996	77.7	27.5	21.5	19.2	14.9
1997	77.6	28.5	24.4	22.1	17.0
1998	92.3	31.9	23.8	19.3	14.8
1999	113.2	34.6	23.1	20.7	28.1
2000	128.9	37.7	25.5	22.3	24.5
2001	138.3	40.1	22.9	22.4	21.7
2002	158.1	41.7	19.6	20.2	19.1
2003	170.6	42.6	17.7	16.9	15.4

Appendix-10

Table 6.60 The Ratio of SC to TLF of Size Groups 1-5

Year	Size Gp-1	Size Gp-2	Size Gp-3	Size Gp-4	Size Gp-5
1983	24.3	0.0	0.0	13.8	16.0
1984	24.1	20.1	19.1	13.0	16.0
1985	18.2	16.8	15.7	10.0	11.7
1986	18.9	14.3	15.0	10.4	12.9
1987	18.6	14.6	14.8	10.0	13.4
1988	19.0	13.9	14.3	9.8	13.3
1989	20.3	13.0	13.8	11.2	13.4
1990	20.7	12.1	13.0	9.3	13.5
1991	16.6	10.8	10.8	8.3	12.0
1992	16.5	9.7	9.7	8.0	9.1
1993	18.2	9.4	8.9	7.6	9.8
1994	16.2	8.9	8.3	7.1	8.8
1995	14.9	8.7	8.3	5.6	8.1
1996	12.6	7.8	7.9	5.7	7.9
1997	13.1	7.9	8.1	5.5	6.8
1998	14.6	7.5	8.6	7.1	6.4
1999	11.8	7.8	9.6	6.8	6.5
2000	12.4	7.8	9.7	7.4	6.6
2001	15.1	7.5	9.5	6.9	6.0
2002	16.0	8.1	9.0	7.8	4.4
2003	15.6	8.1	8.4	7.5	4.7

Appendix-11

Table 6.61 The Ratio of SPR to TLF of Size Groups 1-5

Year	Size Gp-1	Size Gp-2	Size Gp-3	Size Gp-4	Size Gp-5
1983	0.1	0.0	0	1.3	0.3
1984	0.1	0.8	1.3	1.6	3.4
1985	0.1	0.9	1.1	1.6	3.4
1986	0.7	0.7	1.0	1.0	3.7
1987	1.4	0.7	1.2	1.7	7.2
1988	1.3	1.1	3.2	1.8	16.2
1989	1.4	1.6	4.3	4.0	17.2
1990	1.3	2.2	4.1	3.9	17.2
1991	1.1	2.0	3.5	6.0	13.7
1992	3.6	2.2	4.2	6.1	13.0
1993	5.2	7.0	10.2	10.7	18.7
1994	5.7	10.5	20.3	10.4	26.9
1995	10.4	16.3	23.4	18.0	37.4
1996	11.5	14.9	21.2	15.8	32.2
1997	11.8	14.2	20.1	15.7	17.6
1998	12.7	13.5	19.0	15.4	20.5
1999	9.1	13.2	20.3	16.7	20.5
2000	10.2	13.2	20.1	17.2	21.9
2001	9.9	13.0	22.2	15.4	21.4
2002	10.2	14.3	21.6	17.3	29.2
2003	10.1	14.0	18.7	14.8	27.5

Appendix-12

Table 6.62 The Ratio of TEF to TLF of Size Groups 1-5

Year	Size Gp-1	Size Gp-2	Size Gp-3	Size Gp-4	Size Gp-5
1983	72.5			41.8	60.9
1984	76.1	55.4	53.0	46.5	60.3
1985	68.8	50.8	48.9	50.4	62.7
1986	73.0	45.9	46.9	46.3	62.2
1987	80.3	48.3	50.8	52.8	64.1
1988	92.5	48.4	48.4	56.7	66.0
1989	103.8	48.3	47.9	59.7	65.3
1990	111.2	48.0	50.2	62.9	65.9
1991	97.2	50.4	50.2	59.2	65.7
1992	108.2	52.4	52.9	63.4	66.6
1993	123.1	55.1	59.3	65.3	69.2
1994	111.1	54.1	61.8	66.2	70.4
1995	111.1	57.1	62.1	68.6	73.2
1996	106.7	57.9	59.9	63.2	69.1
1997	107.1	59.5	61.4	65.2	66.2
1998	124.8	60.8	62.0	65.4	65.9
1999	136.3	63.2	63.1	66.9	69.0
2000	154.5	65.8	64.6	66.5	67.1
2001	165.6	68.1	60.9	62.6	64.0
2002	186.4	71.8	55.6	64.6	70.4
2003	198.0	71.0	49.5	59.1	67.9

Appendix-13

Table 6.63 The Ratio of TIF to TLF of Size Groups 1-5

Year	Size Gp-1	Size Gp-2	Size Gp-3	Size Gp-4	Size Gp-5
1983	27.5	0.0	0.0	58.2	39.1
1984	23.9	44.6	47.0	53.5	39.7
1985	31.2	49.2	51.1	49.6	37.3
1986	27.0	54.1	53.1	53.7	37.8
1987	19.7	51.7	49.2	47.2	35.9
1988	7.5	51.6	51.6	43.3	34.0
1989	-3.8	51.7	52.1	40.3	34.7
1990	-11.2	52.0	49.8	37.1	34.1
1991	2.8	49.6	49.8	40.8	34.3
1992	-8.2	47.6	47.1	36.6	33.4
1993	-23.1	44.9	40.7	34.7	30.8
1994	-11.1	45.9	38.2	33.8	29.6
1995	-11.1	42.9	37.9	31.4	26.8
1996	-6.7	42.1	40.1	36.8	30.9
1997	-7.1	40.5	38.6	34.8	33.8
1998	-24.8	39.2	38.0	34.6	34.1
1999	-36.3	36.8	36.9	33.1	31.0
2000	-54.5	34.2	35.4	33.5	32.9
2001	-65.6	31.9	39.1	37.4	36.0
2002	-86.4	28.2	44.4	35.4	29.6
2003	-98.0	29.0	50.5	40.9	32.1

Appendix-14

Table 6.64 Debt-Equity Ratio of Size Groups 2-5

Year	Size Gp-1	Size Gp-2	Size Gp-3	Size Gp-4	Size Gp-5
1983	92.7			36.4	80.5
1984	108.0	53.0	48.4	46.6	69.1
1985	102.3	49.6	47.4	63.5	90.9
1986	115.2	44.9	44.7	53.8	83.9
1987	151.6	49.2	53.4	69.6	77.2
1988	259.7	50.1	44.6	82.4	57.6
1989	457.9	50.7	42.6	80.1	53.0
1990	823.7	50.8	49.6	98.9	54.6
1991	388.2	60.5	56.0	81.8	66.7
1992	739.9	68.0	64.0	97.4	80.2
1993	42858.2	63.1	67.1	88.9	68.4
1994	829.2	53.1	49.8	95.0	53.2
1995	604.9	47.2	43.5	82.1	38.5
1996	472.2	54.2	44.6	71.4	40.7
1997	464.5	59.8	49.9	78.6	71.9
1998	3908.6	66.1	52.5	75.1	63.9
1999	-753.6	73.0	49.6	76.7	72.3
2000	-414.3	80.9	53.3	72.0	62.9
2001	-346.6	90.7	41.3	67.4	57.9
2002	-266.3	97.7	33.3	65.3	58.1
2003	-238.4	95.7	29.0	58.3	55.5

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