CHAPTER II

Non-Banking Financial Institutions: A Literature Review
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NON–BANKING FINANCIAL INSTITUTIONS: A LITERATURE REVIEW

2.1. Introduction

The following sections provide a review of the literature pertaining to regulatory framework, empirical studies on drivers of performance of financial institutions, financial services, empirical study on key financial ratios as performance measures, empirical studies on shareholders’ wealth, dimensions measuring cost control and earnings, and finally, the empirical studies on macroeconomic variables and corporate earnings.

2.2. Empirical Studies on Effect of Regulation

Based on the recommendations of the Shah Committee (Shah 1992) and Vasudev Committee (Vasudev 1998), the Reserve Bank of India has brought in innumerable changes to the regulatory framework governing the Non-Banking Finance Companies (Reserve Bank 1998). It has put in place a comprehensive, consolidated new regulatory framework with the issue of directions applicable to these companies by the Reserve Bank of India (Taxmann 2004). The Reserve Bank of India amended the directions in 1999, 2000, 2003 (Taxmann 2004) and subsequently in 2006 (Reserve Bank 2006). The major salient features of the regulatory framework are:

The Non-Banking Finance Companies classification by the Reserve Bank is very objective oriented, i.e., the supervisory and control objectives (Khan
2003). He lists the classification of the NBFCs as below. Deposit taking Non-Banking Financial Company receiving deposits from public, institutions and corporate bodies Non-Deposit are taking Non-Banking Financial Company that does not receive deposits from general public, institutions and corporate bodies. Asset Finance Companies are the non-banking finance companies, which primarily have business focus on equipment leasing, hire-purchase finance and whose lending to physical asset creation is at least 60% of its total assets. Financial Institution carrying on as its principal business the providing of finance whether by loans or advances or otherwise for any activity other than its own. Financial Institution carrying on as its principal business the acquisition of securities. According to Rakesh Mohan, the linking of net owned funds (NOF), capital adequacy, and rating requirements are aimed at protecting the interests of the depositors. A NBFC can mobilize public deposit, if it is, Company having NOF of less than Rs.2.5 million cannot accept any public deposit, Company having NOF of Rs.2.5 million and above and complying with all prudential norms and having minimum investment grade rating can accept 400% of its NOF Company with NOF of Rs.2.5 million and above and complying with all prudential norms but not have minimum investment grade rating and have capital adequacy ratio of atleast 15% can accept 150% of NOF or Rs.10 Crore whichever is less (Mohan Rakesh 2004).
The inability of the non-banking finance companies to meet the liability of refunding the matured deposits forces us to suggest that all the Non-Banking Finance Companies shall maintain 15% of public deposits as statutory liquidity ratio in the form of approved securities not less than 10% and the remaining in unencumbered term deposits with commercial banks (Vasudev 1998).

The Non-Banking Finance Companies having public deposits of Rs.50 Crore and above on 31st March 2002 are required to submit returns on the exposure to capital market. With the stock market scam, the exposure of Non-Banking Finance Companies in the form of lending on equities, initial public offerings are severely restricted to protect the interests of the depositors (Ingres 2006). As the lending of this sector is conditioned with uncertainty of recovery, the prudential norms prescribing the income recognition on the basis of provisioning requirements have put these companies on par with banks besides affecting the profitability due to non-performing assets norms (Kshisagar 2003). The equipment leasing and hire purchase financing, which were major financing avenues, have become less attractive and the non-banking finance companies have diversified their businesses into fee based activities like consultancy, underwriting of public issues, and travel services (Crisil 2006). The relaxation of entry norms for undertaking insurance, asset management, has prompted non-banking finance companies with NOF of more than Rs.100 crores starting many joint
ventures in insurance, which added substantial income to their businesses (Khan 2003). Regulations discriminate between deposit taking and non-deposit taking NBFCs. Even the deposit taking NBFCs are regulated in a less rigid sphere than banks. Available opportunity to NBFCs is regulatory arbitrage (Narashiman 2006).

2.3. **Empirical Studies on Financial Ratios Approach to Performance Measurement**

According to Fraser and Fraser (1990), and as indicated by the review of conceptual frameworks, the most commonly used financial ratios are those of ROE and ROA. The link between ROE and ROA is the equity multiplier as shown below:

\[
\text{ROA} \left( \frac{\text{Net Income}}{\text{Average Assets}} \right) \times \text{EM} \left( \frac{\text{Average Assets}}{\text{Average Equity}} \right) = \text{ROE} \left( \frac{\text{Net Income}}{\text{Average Equity}} \right)
\]

In essence, ROA is a measure of bank's profitability, EM is a measure of risk, and ROE is a summary measure of bank performance. According to Sinkey, the best measures of a firm's overall performance are the profitability ratios ROE and ROA (Sinkey 1992). Although the words performance and profitability are sometimes used interchangeably as above, profitability ratios can be separated from risk ratios; in turn, profitability is represented under overall performance. Following table reviews key financial ratios on profitability overall performance.
Thygerson stated that "...little academic research has been done on the subject of bank profitability" (Thygerson 1991). The assertion of Thygerson is true in spite of many researchers attempted at arriving an overall performance model. Existing literature on measuring performance is dominated by reports of practitioners in the field or consultants, and the common denominator of these reports is management accounting. On the other hand, academic research is generally characterised by the development of econometric models, comprised of the multiple regression studies.

According to Kantawala, the ANOVA along with the details about average ratios may become a useful guide to companies to decide about diversification or continuation in the same line of business considering profitability within the regulatory framework (Kantawala S Amita 2004). He used 19 ratios in the study and profitability; asset utilization, turnover and return to investors are the dimensions that are explored in that study. The literature on stock predictability has evolved considerably over the last 20 years. Initial tests produced strong evidence that market returns are predictable, but subsequent research has argued that small sample biases explain the bulk of apparent predictability. The accumulated evidence suggests that Dividend Yield, Book to Market Value Ratio, and Earnings Price have, at best, weak power to predict returns (Lewellen Jonathan 2002). A bank's operating performance is frequently measured using accounting
ratios such as return on assets and return on investment. These ratios provide a great deal of information about a bank's financial performance compared with prior periods and compared with other banks' performance. Nevertheless, there are limitations to the use of these ratios. One is that financial ratios fail to consider the value of management's actions and investment decisions that will affect future as opposed to current performance (Sherman, Franklin Gold 1985).

A linear regression of an accounting measure of profit rate on the fraction of shares owned by the five largest shareholding interests and on a set of control variables, in which ownership structure is treated as an endogenous variable, gives no evidence of a relation between profit rate and ownership concentration. In attempting to assess the effect of ownership structure on firm performance, is it more sensible to look at an estimate of what management has accomplished or at an estimate of the second difference is in who is actually measuring performance. For the accounting profit rate, this is the accountant constrained by standards set by his profession (Demsetz, Villalonga 2001). According to Harker and Zenios (1998), financial performance of an institution observable but non-actionable can be affected by its performance along the axis of service delivery and financial intermediation. They concluded that the drivers of performance can be classified into, strategy, execution of strategy and the environment. Further, they felt diversified institutions benefit from opportunities for internal
resource allocation and, therefore, can hold less capital and do more lending than more focused institutions. From the environment angle, they felt that drivers are innovation, regulations and technology (Information Technology).

In comparing bank performance among banks from different countries, especially across developed and developing countries, considerable care must be taken to allow for differences in product mix, capital structure, accounting conventions and especially inflation rates before drawing firm conclusions (Vittas Dimitri 1991). The financial sector reforms in India have significantly enhanced the productivity (performance) of private banks vis-à-vis public sector banks. Total assets and total credit advanced have grown. Additionally, the foreign banks outperform Indian private banks, and overall competitiveness has improved. Finally, the findings are increased competition has had a stronger positive effect on the productivity of domestic banks than on foreign banks. The variables included in the study were diversification measure, size, share of non-interest expenditure, and the profit (Sanyal Paroma & Shankar Rashmi 2005).

The cross country empirical evidence for Asia suggests that the limited openness necessarily results in slower institutional development, greater fragility and higher costs of financial services. World over, the financial services industry has made tremendous progress following the supply
leading approach (Nisture Rupa Rege 2003). Turnover Index based on the financial products is found to be reliable to assess the state of financial services in the Indian economy. The index could be used as an indicator of performance of a particular company against the performance of industry or economy (Mohanty and others 2003). Economic Value Added (EVA) is a useful measure for assessing the performance so as to arrive at executive compensation. But Refined Economic Value Added (REVA) is a more appropriate performance measure from the investors’ viewpoint (Bacidore Jeffrey, Boquist John and others 1997). EVA, the difference after tax operating profits and the total cost of capital is promoted as a measure of a company’s real profitability, and it is the only performance measure that ties directly to a stock’s intrinsic value (Stewart 1991).

Credit Rating is a good measure of performance and that reflects the ability of the companies to meet the contingencies. However, rating alone is insufficient to address the issue. Therefore, capital adequacy can be a better measure of performance together (Altman, Saunders 2000). Non-Banking Financial Institutions in United Kingdom, have also received growing attention as banks since the adoption of audit and disclosure standards. The regulations have strengthened the muscles of the banks and institutions, in which sector there were lot of failures in nineteenth century in Britain. Hence, the achievement of financial standards could be performance measure (Barth, Caprio and Levine 2001). The market value added is
significantly and positively associated with both the return on net operating assets and growth even after considering the effect of stock returns on the market value multipliers. Therefore, the accounting returns are preferable measures than residual returns (Tezel Ahmet 2003).

2.4. Empirical Studies on Shareholders’ Wealth in Financial Institutions

Literatures on financial management invariably cite the primary objective of corporate decision making as maximising the shareholders’ wealth (net worth) or market value of the firm to its shareholders (Aragon 1989; Bruce et al. 1991; Van Horne and Wachowicz 1995). Furthermore, the concept of maximising the equity value either historical or marketable, is not confined to academe. It is almost religiously quoted by chairpersons and managing directors in annual reports. In Kooken's words, "Increasing shareholder value has become the explicit goal of senior management..." (Kooken 1989). It is essentially an acknowledgment of management's accountability to shareholders, where agency costs can be minimised, and scarce resources allocated efficiently and effectively.

Hempel and Yawitz who have addressed the principle of shareholders’ return maximisation in the context of financial institutions, start off from the premise that "Wealth maximisation is the maximisation of the discounted cash benefits to shareholders" (Hempel and Yawitz 1977, p.20). They then proceed to identify the key variables in cash benefits as gross receipts from
assets, cost of liabilities, overhead costs, taxes, and appropriate risk premium to be added onto the risk-free interest rate; managerial decisions are expected to be examined for the different ways they may interact with these key variables.

While emphasizing the need to remember the principle of maximising shareholders' wealth in all decisions, Hempel and Yawitz (1977) also underscore the need for focusing this principle for the benefit of day-to-day decision-making. With the latter need in mind, they produce four categories of key variables influencing the equity value, namely, spread management, control of overhead, liquidity management, and capital management. These categories are briefly explained next with the help of Hempel and Yawitz (1977) and De Lucia et al. (1987).

Spread management refers to management of the difference between gross revenues and interest expenses. Although it is possible to realise high spreads in the short run by mixing short term liabilities with long term assets, a more desirable state of affairs is to sustain a high positive spread over time within prudential supervision. High gross spreads may not always translate into high net spreads if investment decisions are not closely scrutinised for their impact on non-interest expenses. Liquidity management demands the presence of short term assets that can be quickly converted to cash to meet unexpected deposit withdrawals or funding needs, and liquidity
requirements of the Supervising Bank. Interest rates and monetary growth within the economy have to be monitored as part of this process. The bank management will attempt to hold enough short-term assets to meet anticipated liquidity requirements, without unnecessarily lowering the profit performance due to the generally lower yields associated with such assets.

Capital management refers to balancing the level of capital in such a manner that growth of assets and liabilities is sustainable without eroding public confidence or profitability. Sinkey (1992) uses Hempel and Yawitz's (1977) framework to arrive at a similar conceptual framework. The bank's primary objective of maximising shareholders' wealth is depicted as being shaped by owners' preferences, management's attitudes and decisions, and society; also listed are six policy strategies to achieve that objective. Management’s attitudes and decisions, the regulatory and economic environment, and the objective of maximising investors’ wealth (shareholders), in turn, influence these policies. The success of these policy strategies depends on the riskiness of a bank's balance sheet, that is, the nature of assets and the concentration of loan portfolios (Sinkey 1992). The primary objective of the board is to increase the realizable value of the equity whether on liquidation or through trading. The market value is conditioned by many factors viz., endogenous factors, namely, management attitudes, strategies, long-term business prospects and quality of assets and exogenous factors such as political, socio-economic environment and/or external shocks, therefore is
subject to volatility (Kantawala 2004). The book value is conditioned primarily by the endogenous factors such as profit generated, management attitude to share the wealth of the company with the shareholders and is more likely to stay stable. Further it is based on historical cost. Therefore, the increase in book value could be a best indicator of performance (Khan M.Y 2003).

Large block holdings are not homogenous and we therefore distinguish between types of shareholdings. Insider control by families may be more efficient as ownership is in the hands of principals. They might feel more committed to the firm than outside agents such as financial institutions, which might take into account interests other than maximizing shareholder value, especially if they also have large credit arrangements with the firm (Gebhardt Günther 2001). The size effect focuses on management’s tendency to engage in an over acquisitive program. However, there are countervailing considerations that might lead management to pursue an under acquisitive program. The action of management ends in loss of wealth of shareholders. This, again, triggers the shareholders’ to look for maximization of their wealth, and to demand value creation (Linda Allen 1991). The meta-analytic findings suggest that corporate virtue in the form of social responsibility and, to a lesser extent, environmental responsibility is likely to pay off, although the operationalizations of Corporate Social Performance (CSP) and Corporate Financial Performance (CFP) also
moderate the positive association. For example, CSP appears to be more highly correlated with accounting based measures of CFP than with market based indicators, and CSP reputation indices are more highly correlated with CFP than are other indicators of CSP (Marc Orlitzky 2003). The California Public Employees' Retirement System (CalPERS) was a leader in this wave of activism. Their study investigated the long-term returns an investor with public information could earn by buying a portfolio of firms targeted by CalPERS and whether the success of CalPERS' activism depends on the aggressiveness of the targeting. The evidence supports the idea that visible and aggressive activism leads to substantial increases in shareholder wealth while a quieter activism does not (Crutchley, Hudson, and Jensen 1998).

Therefore, the measure of shareholders’ wealth plays a crucial role in assessing the performance. Much literature surveyed, uses either Market Value Added (MVA) or Economic Value Added (EVA) to assess the performance of a company. They ignore the important fact that not all the companies in the financial sector are listed, and/or actively traded. This is a peculiar situation in emerging and underdeveloped market economies (Brigham 2004).

So long as the performance of NBFCs is within the guidelines laid down by the RBI and their capital adequacy and lending operations are in order, no purpose is served by a ceiling on lending by banks to NBFCs. Indeed, this would amount to subverting priority lending (Venkitaramanan, 2006).
Finance theorists have argued that banks have a comparative advantage over public debt holders and other suppliers of debt both in gathering information about and in monitoring corporate borrowers. Although underwriters of public debt issues and private placements have access to inside information when executing specific transactions, commercial bankers have ongoing relationships with their corporate borrowers that have often been built up over years. Perhaps more important, banks are also often in a better position and have stronger incentives than a dispersed collection of bondholders to keep tabs on what the borrower do after receiving the capital (Datta, Patel, 2007). Bank relationship matters in public debt offerings. This is applicable in case of NBFCs also. As the authors interpret their findings, a banking relationship not only helps to ‘certify’ the value of corporate borrowers to their stockholders, but also provides other lenders with valuable ‘cross-monitoring’ benefits that are reflected in lower borrowing costs.

2.5. Non Bank Financial Institutions Creditable but Unrecognized Role

In a large country like India with substantial service sector activity, it is important that the role played by NBFCs in credit provision is recognized. They have an extensive network and credibility among their constituents, both borrowers and lenders. In fact, for the unorganized sector they are the source of finance. But they are being given the short-shrift (Vaidyanathan, 2005). Bank financing of trade (non food credit plus food credit) totaled Rs.
72,057 crore in 2003 or about 40 percent of the credit absorbed by the sector (RBI Annual Report 2004). In other words, more than 60 percent of the financial requirement of the non corporate sector in trade is met by NBFCs. This again is an under estimation as a substantial amount of the food credit by banks goes to government organizations such as the Food Corporation of India. Remember that the truck financing activity is the most innovative and efficient symbol of the NBFC sector. Second hand truck financing has created a fascinating backbone for the transport industry by focusing on the small man and this has been one of the major contributions of the NBFC sector to the economy. One can, therefore, say that the role of NBFCs in the credit delivery system in both manufacturing and service is significant per se compared to the commercial banks also (Vaidyanathan, 2005).

A microfinance institution or even a non-governmental organization can borrow money through the ECB (external commercial borrowing) route. but not NBFCs, which have been doing just micro credit for the last half century (Ramesh, 2005). The RBI guidelines restricting deposit taking by NBFCs are ‘irrational’ and said that the “RBI should appreciate what would have happened if one of the public sector banks, with a weak bottom line and high NPAs, had been prohibited from receiving fresh deposits, which is what was done to the NBFCs...” (Venkitaramanan, 2008).
2.6. Evolution of Non Bank Financial Institutions in India

Initially NBFCs started out as support companies for industrial houses. Their purpose was to act as a fixed deposit collection front and at best, work out leasing deals for the clients of these industrial houses. Soon the need for NBFCs to assume a larger role as financial intermediaries involved in efficient allocation of monetary resources started to surface. Their product and service profile changed with the addition of new products like hire purchase and leasing (Ravichandran, 1999).

With the introduction of economic reforms and abolition of the Controller of Capital Issues regime and the allowing of free pricing of public offers, there was a boom in the financial services sector (Ravichandran, 1999). As more companies needed to tap the capital market, NBFCs also entered into merchant banking. Investment banking was the next logical step. Merchant banking involves a wide range of activities most of which are non fund based. Merchant banking is generally international in nature, and financial services and advice are generally offered for a fee. Thus, NBFCs branched out from fund-based activities to fee-based activities. The situation was that with the huge demand and the low entry barriers, many could start and own financial service companies during that period. Finance could be accessed from capital markets without any need for an established track record. Thus, it was possible for many fly by night companies to just advertise for and start accepting deposits, without being subjected to any kind of appraisal.
These companies got their business from corporate which did not have market standing and could not access funds from banks. Despite the high cost of funds, they preferred borrowing from NBFCs because only few questions were asked, service was speedy and there was great flexibility in structuring the repayments. Thus, NBFCs could command high premiums and grew at a frantic pace. The total number of NBFCs in India, as of 1998 was estimated to be around 45000 and in order to get high returns, a riskier portfolio of assets were maintained by them, which increased the depositors’ risk in the long run (Ravichandran, 1999). Moreover, the low ratio between paid up capital and deposits and the lack of deposit insurance made it even riskier proposition. The fact that NBFCs have also grown along with banks and financial institutions, reflect the preference of some investors who prefer to make a more risky investment in NBFCs with higher return expectation.

2.7. Growth of Non Bank Financial Institutions over Time and Contribution to Economy

The development of a country depends on the development and growth of all economic entity. The financial system is the ultimate engine for achieving economic prosperity of a country, and is involved in the mobilization of financial resources from the surplus to the deficit sector. Though in the initial stage bank financial institutions plays a vital role in mobilization of funds in most of the countries, particularly in developing
countries. However, the development of both banks and non-bank financial institutions are necessary for assuring a strong and stable financial system for the country as a whole (Pirtea, Iovu, & Milos, 2008; Raina & Bakker, 2003).

In addition, NBFIs add power to the economy in such a way that enhances the resilience of the financial system to economic crisis (Carmichael & Pomcerleano, 2002). These NBFIs offer wide range of products and services to mitigate the financial intermediation gap and thereby, play an important complementary role of commercial banks in the society (Shrestha, 2007; Sufian, 2008; Vittas, 1997). According to Ahmed and Chowdhury (2007), the fundamental limitations existed in the banking sector are, in fact, laid down the foundation of the accelerated development process of NBFIs. Firstly, the regulations adopted by the central bank of a country do not allow banks to embrace financial services for all areas of business; secondly, banks always face a mismatch in maturity intermediation since they have to fulfill the long-term financing needs with short-term resources; and finally extending the operational horizon through product innovations is not always possible for banks. These areas create new opportunities for the NBFIs to grab with utmost success.

As a result, the NBFIs are nowadays treated as an important sub-sector of the financial system, which has been expanding rapidly and attaining
importance on a continuous basis due to their ability to meet the diverse financial requirements of business enterprises (Islam & Osman, 2011). The development, growth and their changes over time as well as impact on the economy have been analyzed by many researchers to evaluate the structure of the banking industry. Various changes in the banking industry initiated by the financial reform policy make the analysis even more important to the policy makers. However, the research on various issues of NBFIs remains substantially scarce (Sufian, 2008), in spite of the fact that recent emergence of NBFIs as financial intermediaries is noticeable not only in developed countries but also in developing countries. Empirical evidence to evaluate the development and growth of the non-banking sector stays even more insignificant, particularly in the context of developing countries. Although both direct and indirect forms of financial intermediation are available in Bangladesh, similar to many developing countries the indirect form dominates the other form in the financial market to a great extent (Beck & Rahman, 2006; Uddin & Suzuki, 2011). The journey of NBFIs was started in 1981, ten years after the independence of the country. A private sector NBFI, namely, Industrial Promotion and Development Company (IPDC) was the pioneer in the sector in Bangladesh. Over the years, the non-banking sector has grown in numbers as many state-owned, private, and joint-venture firms started to join the sector, and by the end of 2010 a total of 35 firms were reported by the Ministry of Finance as NBFIs. The size of the
nonbanking sector in respect of both absolute and relative terms has also expanded. For instance, the absolute size of the non-banking sector, measured in terms of assets, was BDT Ahmed & Chowdhury, (2007) 78.84 billion in 2000 and by the end of 2010 it became BDT414.11 billion. On the other hand, the relative size of the non-banking sector, measured in terms of assets relative to gross domestic product (GDP), increased to 5.96 per cent in 2010 from 3.85 per cent in 2000. Moreover, the importance of non-banking sector has been accelerated rapidly due to the development of new areas of business operations like leasing, term lending, housing and real estate financing, merchant banking, factoring, and so on by NBFIs; Debnath, 2004; Hossain & Shahiduzzaman, 2002; Nasreen & Jahan, 2007).

Goldsmith (1969) opine that NBFIs alongside the banking sector contributing prominently in influencing and mobilizing saving for investment Beck and Rahman (2006) has shown the robust relationship between the development of financial intermediaries and economic growth. They also added that financial intermediaries not only contribute to the economic growth but also control the reverse causation of economic growth.

Islam & Osman (2011) examined the long-run relationship between per capital real GDP and the NBFIs based on Malaysian market. They revealed that there is a long run stable relationship between per capita real GDP and the NBFIs’ investment, trade openness, and employment. From their
empirical result they showed that NBFIs is a vital component of the financial sector through which flow of financial resource effectively channelized from the surplus units to the deficit units and promote long-run sustainable economic growth.

Pirtea, Iovu & Milos (2008) expressed that with the development NBFIs financial system and domestic capital market also develops that in turn contribute to the overall economic development of the country. Thus sustainable economic growth largely depends on the development of efficient financial intermediation. Vittas (1997) opine that creating new marketable securities in the area of leasing, factoring and venture capital NBFIs creates long-term financial resources and provide a strong stimulus to the development of capital market.

With regard to the literature concerning the nonbanking sector, limited number of studies has been conducted so far in Bangladesh. Hossain and Shahiduzzaman (2002) focused on the importance of non-banking sector as a vehicle for the economic development of the country and identifies the underlying problems existed within the sector. Sufian (2007) opine that BFIs and NBFIs enhance the overall growth of the economy with the support of efficient money and capital market and NBFIs plays important role in providing complementary facilities offered by the commercial banks. Sufians (2007) also opine that with the development of health of NBFIs,
health of capital market is also increase. He also added that as the key player in the development of capital market efficient and productive NBFIs lead the market based economy move forward. Ahmed and Chowdhury (2007) opine that NBFIs intensify the country’s financial system and contributing to the economic development of the country through diversified financial services in the market. They deal with different features, contribution, and challenges faced by NBFIs in Bangladesh. At the same time they also focus on performance analysis of NBFIs by adopting traditional financial indicators like current ratio, debt-equity ratio, productivity ratio, return on equity, etc. and report that in spite of the presence of several constraints existed in the sector NBFIs have been performing considerably well.

Many theoretical and empirical works suggest that financial development may influence economic growth through some channels such as capital accumulation which is related to the volume of investment and the productivity which is related to the efficiency of investment (Beck et al., 2000; Rioja and Valev, 2004). The fundamental intermediary function of the financial system is to mobilize the resources from the savers and make the pooled resources available for investment projects. By doing so, financial system also influences resource allocation and technological innovations. Efficiency in the allocation of resources depends on how well financial system acquires and processes information on the prospective investment project so that the costs involved could be reduced. On the other hand,
development of endogenous growth theory focuses much on innovation as an important determinant of economic growth where finance is a crucial factor and hence its role as a driving force of the real economy (Blum, et al., 2002). Thus innovations, capital formation and factor productivity are important mechanisms through which financial system stimulates growth.

Empirically, the two channelling mechanisms (capital accumulation and factor productivity) through which financial development may affect economic growth have been tested in many studies. The results suggest relevance of both channels. For example, Benhabib and Spiegel (2000) examined the relationship between financial development and growth by decomposing into two components (capital accumulation and total factor productivity). Their results suggest that the indicators of financial development contribute to growth through both total factor productivity and physical capital accumulation.

Beck et al., (2000) provided empirical evidence that financial development affects growth mainly through productivity growth. In a recent, Rioja and Valev (2004) investigated the channels through which financial development influence economic growth in a panel of 74 countries during 1961-1995. Their investigation provided evidence that finance affects economic growth predominantly through productivity growth in more developed economies while the effect of finance on output growth occurs
predominantly through capital accumulation rate in relatively less developed economies. The important point that we observe from the empirical works is that financial development contributes to growth through both channels but the contribution may vary based on a country’s relative position of development. Capital accumulation tends to be stronger channel in less developed economies and factor productivity growth is stronger in more developed economies. Apart from banking sector development impact on growth, there are some studies also investigated the impact of stock market development on economic growth. Empirical studies in this line generally suggest a positive linkage between stock market development and economic growth (Beck and Levine, 2004; Neusser and Kugler, 1998; Levine and Zervos, 1998 etc). As stated earlier that although in many rapidly growing economies NBFIs forms an important part of the financial sector development, studies on the impact of NBFIs development on economic growth are scant. The lack of adequate focus on the development of NBFIs has thus limited the availability of literature as well as statistical information on this subject. Observations made in the seminal work of Goldsmith (1969) indicate that the financial superstructure tends to expand as economic development proceeds. In other words, the link between financial development and economic growth is reflected in an increasing diversity both in the types of financial intermediaries and in the varieties of instruments in which they specialize. Regarding the evolution of financial
structure over time is prominent. According to their view, at the early stages of development, commercial banks tend to dominate the financial structure. However, as the economies make progress, the share of banks in the total financial assets tends to diminish and a corresponding rise in the share of specialized financial intermediaries (e.g., non-bank institutions such as thrift intermediaries, insurance companies, government and private retirement funds, investment companies, finance companies) and equity markets develop. Although, the ideas of Goldsmith, Gurley and Shaw are too general which did not provide clarification about the channels through which the newer financial intermediaries may help economy to expand and prosper, they do have theoretical insights and practical implications. The implication is well noted in many developed countries like the U.S., France, U.K, Switzerland and the Netherlands where the importance of non-bank financial intermediaries in different forms such as pension funds, mutual funds and insurance premiums is growing rapidly (Grais and Kantur, 2003). The declining financial intermediary role of commercial banks in the U.S. has been documented since 1920”s. Today, NBFIs and financial market play the key role in feeding the economy in the U.S. Similar trend is also observed in the U.K. and France as highlighted in Schmidt and Hackethal (1999). It is estimated that contractual savings mobilized through institutional investors amounted to more than 400 per cent of GDP in the Netherlands, the U.K., and Switzerland in 1997 (Grais and Kantur, 2003).
2.8. Non-Bank Financial Institutions on Local Economic Growth

In the long-running debate on the relationship between finance and growth, an early line of argument claimed financial institutions for the most part react to growth expectations. In recent years, a rather convincing body of evidence has been marshaled to suggest that financial sector development has actively contributed to growth of developed economies (e.g. Levine, 2004), but the evidence for developing countries remains mixed. Finance appears to have promoted growth in some Latin American countries (Haber, 1991 and 1997), while the role of financial institutions in China, the world’s largest developing economy, has proven difficult to assess. Even so, study of the finance-growth connection in China offers two tantalizing bonuses. First, China suffers from relatively weak legal and financial systems like most transition economies, so it is plausible that the Chinese experience provides relevant lessons for other countries with similar growth potential and financial systems.

Second, given the globalization of trade and increase in international capital flows, the sustainability of China’s growth has become an issue important for the entire world. Discussion of finance and growth in China focuses on how Chinese firms are financed and monitored. Some observers contend the Chinese legal system and formal financial sector are too weak to enforce sound governance, so the nexus of law, finance, and growth cannot hold (Allen et al., 2005; Boyreau-Debray, 2003). Others propose that banks in
China, despite their relative weakness, contribute to growth (Hasan et al., 2006; Ayyagari et al., 2007).

This dispute could probably be resolved with convincing micro data, but construction of the appropriate datasets would be costly and time-consuming as longer time series are essential to capturing growth dynamics. We propose an indirect, less elegant approach based on China’s publicly available macro data that first formally links financial reforms to financial development and then assesses the impact on growth. It is expected that financial institutions that benefited from government reforms in the mid-1990s aimed at improving the efficiency of financial institutions will show greater efficiency in allocating capital and consequently make a greater contribution to growth.

To our knowledge, this study is the first to include both bank and non-bank financial institutions in assessing the relationship of finance and growth in China. Previous studies focus on banks, which dominate the Chinese financial sector. Nevertheless, we believe including non-bank financial institutions can contribute to our understanding of economic growth in China as non-bank financial institutions serve as an important financing channel for small, private firms. Moreover, cross-country political and cultural variations, as well as differences in accounting standards make it difficult to directly compare Chinese banks to their international
counterparts. In this case, China’s non-bank financial institutions serve as a more appropriate reference group.

In identifying the causality between finance and growth, the best case would be one where the difference between banks and non-bank institutions lies solely in the reforms they have implemented. Assuming that successful reforms lead to greater efficiency, our testable hypothesis would be that the financial development of institutions that have benefited most from reforms correlates most strongly with growth. Indeed, China’s banks typically benefited earlier and more extensively from the reform process than their non-bank counterparts. However, they also typically lend to large or mid-sized firms. This is particularly interesting as small, private firms are routinely heralded as the engine of China’s growth. In any case, a statistically and economically significant correlation between banking development and growth should reveal the role of financial reforms in enhancing finance and promoting growth.

Most non-bank financial institutions in China limit their operations to a single province, while banks, especially state-owned banks, operate in a number of provinces and may even maintain national headquarters. Even so, banks rarely engage in cross-province lending due to rules imposed by the People’s Bank of China (PBoC). For this reason, it appears reasonable to compare the performance of banks and non-bank financial institutions at the
provincial level. Financial development at the province level can be measured conventionally according to the ratios of local savings and loans to GDP and deposit market concentration. Our panel dataset covers the reform period of 1995-2003, which helps alleviate the reverse impact from growth to financial reforms. Specifically, the concern that financial reforms were initiated exactly at the time that the economy was expected to boom should be less of a concern. Moreover, growth rates show a decreasing trend throughout the period as the Chinese government engineered a “soft landing” of the economy. Our results reveal a clear difference between the impacts of financial development of banks and non-bank financial institutions on growth. Banks contribute significantly to local growth. This effect is most pronounced in provinces with foreign entry. In contrast, non-bank financial institutions, which grant most of their loans to small, but fast growing firms, seem less important for local growth. Our results are robust across different specifications controlling for omitted variables and reverse causality. We attribute the difference to the fact that banks relative to non-bank financial institutions have benefited far more from China’s ongoing financial reforms – particularly commercialization of state-owned banks, deregulation for foreign entry, and liberalization of interest rates. Our results suggests that, despite the relatively weak Chinese financial sector, the efficiency of banks has improved over the years, allowing them to play important roles in allocating funds and spurring growth.

A number of arguments have been advanced as to why financial development plays a key role in growth. These include: Financial intermediation economizes the costs associated with mobilizing savings (Boyd and Smith, 1992; Sirri and Tufano, 1995), and therefore increases capital accumulation. Financial intermediaries evaluate firms, managers and market conditions in order to reallocate capital to its best use (Boyd and Prescott, 1986; Greenwood and Jovanovic, 1990; and Allen, 1990). Financial intermediaries monitor firms and exert control to overcome agency problems (Townsend, 1979; Gale and Hellwig, 1985; and Boyd and Smith, 1994). Financial intermediation makes it possible to diversify investment risks, which enhances output and economic growth (Gurley and Shaw, 1955; Greenwood and Jovanovic, 1990; and Acemoglu and Zilibotti, 1997). Under this view, differences in the quantity and quality of services provided by financial institutions partly explain why countries grow at different rates (Goldsmith, 1969 and Shaw, 1973). Financial intermediaries can evaluate, finance, and monitor potential entrepreneurs in their innovative activities. In integrating financial development into an innovation-based growth models, King and Levine (1993b) suggest the relationship between finance and growth is likely to be dynamic and endogenous.
Empirical evidence employing cross-country datasets also suggest finance correlates positively with growth. King and Levine (1993a) use data on 80 countries over the period 1960–1989 to establish that the level of financial development determines long-run economic growth, capital accumulation, and productivity growth. Levine and Zervos (1998) find that initial stock market liquidity and banking development are both positively correlated with future rates of economic and productivity growth in a sample of 42 countries over the period 1976–1993. While early cross-country studies suffer from simultaneity bias, more recent studies carefully attempt to remove the exogenous part of financial development when dealing with the issue of causality. La Porta et al. (1998) link the legal legacy of a country to its financial development. Their empirical results suggest that differences among legal systems (e.g. British, French, German and Scandinavian law) in terms of protecting the rights of shareholders and creditors and in terms of legal enforcement may account for differences in financial development. Indeed, a substantial body of aggregate, industry-level and firm-level analysis based on legal legacies and cross-country datasets suggest that financial development promotes economic growth (e.g. Levine, Loayza, and Beck 2000; and Demirgüç-Kunt and Maksimovic, 1998). For this reason, we use the dynamic system GMM panel estimator proposed by Arellano and Bover (1995) to extract the impact of financial development on economic growth by controlling for potential endogeneity. A straightforward way to
avoid cross-country differences is to focus on a single country. Jayaratne and Strahan (1996) study the effect of financial deregulation in the early 1970s on 35 states in the USA as an exogenous shock to local financial development. The endogeneity problem is tackled by keeping effects other than financial development constant. Their findings indicate that in the 30 years following deregulation, the economy grew faster in deregulated states than in regulated states. They test and reject the hypothesis that deregulation occurred solely in anticipation of future financing needs, observing that lending did not skyrocket after deregulation. Thus, they attribute higher economic growth in the deregulated states to the improvements in loan quality. Guiso, Sapienza, and Zingales (2004) study the effects of differences in local financial development on economic activity in Italy. They find that local financial development enhances the likelihood that individuals will start businesses, increases industrial competition, and spurs growth of companies.

Only a handful of studies consider developing countries. Haber (1991, 1997) examines the role of financial liberalization for economic growth in Brazil and Mexico, contending that financial liberalization allows a greater number of firms access to external finance. He argues that political institutions play an important role in determining the degree of financial liberalization, and concludes that Brazil did better in financial liberalization than Mexico due to better political institutions.
The finance and growth issue in China has only recently received attention, so as yet there is no consensus on the impact of financial development. One view holds that finance promotes growth in China. Employing a province-level dataset for the period 1985–1998, Liu and Li (2001) find that growth of provincial aggregate output is positively related to the growth in lending of the largest banks and self-raised funds. They attribute the positive correlation to an improvement in the efficiency of capital reallocation during liberalization of the financial and real sectors of the economy. Hasan et al. (2006), analyze the issue more broadly, using panel data covering 31 Chinese provinces for the period 1986–2002. They find that the extent of development of financial markets is associated with growth (along with the legal environment, awareness of property rights, and political pluralism).

The recent study of Ayyagari et al. (2007) examines finance and growth in China using micro-level data. Employing the World Bank 2003 survey data covering 2,400 firms, they find that despite its weaknesses, higher growth of firms is associated with financing from the formal financial system, and that fund-raising from alternative channels is not. Other papers take the view that China is a counterexample of the finance-growth nexus (e.g. Allen et al., 2005; and Boyreau-Debray, 2003). Allen et al., observing the coexistence of weak legal and financial systems and high economic growth in China, question whether development of financial institution actually plays much of a role in China’s growth. Through a close examination of the relationship of
law, finance and growth in China, they reveal that the relatively poor legal system and the underdeveloped financial sector contribute little to private-sector growth, the oft-touted motor of China’s growth. Allen et al. conclude that the private sector must have access to alternative financing channels besides financial institutions.

Jafor Ali Akhan (2010) covers the financial intermediaries including commercial banks, regional rural banks, cooperative banks and Non-Banking Financial Companies in India. The book is good source in getting information on businesses, classification, management of assets, risk coverage, etc of the NBFCs in India. Shailendra Bhushan Sharma and Lokesh Goel (2012) Non-Banking Financial Companies do offer all sorts of banking services, such as loans and credit facilities, retirement planning, money markets, underwriting and merger activities. These companies play an important role in providing credit to the unorganized sector and to the small borrowers at the local level. Hire purchase finance is by far the largest activity of NBFCs. The rapid growth of NBFCs has led to a gradual blurring of dividing lines between banks and NBFCs, with the exception of the exclusive privilege that commercial banks exercise in the issuance of cheques. This study provides an exhaustive account of the functioning of and recent reforms pertaining to NBFCs in India.
Subina Syal and Menka Goswami (2012) the Indian financial system consists of the various financial institutions, financial instruments and the financial markets that facilitate and ensure effective channelization of payment and credit of funds from the potential investors of the economy. Non-banking financial institutions in India are one of the major stakeholders of financial system and cater to the diversified needs by providing specialized financial services like investment advisory, leasing, asset management, etc. Non-banking financial sector in India has been a considerable growth in the recent years. The aim of the present study is to analyze the financial performance and growth of non-banking financial institutions in India in the last 5 years. The study is helpful for the potential investors to get the knowledge about the financial performance of the non-banking financial institutions and be helpful in taking effective long-term investment decisions.

Sornaganesh and Maria Navis Soris (2013) B the study was made to analyze the performance of five NBFCs in India. The annual reports of these companies are evaluated so as to ascertain investments, loans disbursed, growth, return, risk, etc. To sum up, the study is concluded that the NBFCs are earning good margins on all the loans and their financial efficiency is good. Taxmann’s (2013) the rules and laws governing the kinds of businesses undertaken by different types of NBFCs are also discussed. Amit Kumar and Anshika Agarwal (2014) In Indian Economy, there are two
major Financial Institutions, one is banking and other is Non-Banking. The Non-Banking Financial Institutions plays an important role in our economy as they provide financial services on wide range, they also work to offer enhanced equity and risk-based products, along with this they also provide short to long term finance to different sectors of the economy, and many other functions. This study examines the latest trends in Non-Banking Financial Institutions. This paper analyzes the growth and enhanced prosperity of financial institutions in India.

Dash Saroj K, et al (2014) Non-Banking Financial Corporation (NBFC) in each of the countries involved in the business of lending mortgage loans took stock of their policies and terms & conditions while disbursement of loans. Critics and some experts might argue that given the technologically advanced systems in place to do credit scoring, it is enough to have certain set of quantitative parameters to do a check. The parameters, which are discussed in the credit scoring software, are primarily quantitative parameters and some qualitative features whose measurements are also quantified.

Naresh Makhijani (2014) Over the last few years the Non Banking Finance Companies (NBFC) sector has gained significant advantages over the banking system in supplying credit under-served and unbanked areas given their reach and niche business model. However, off late the Reserve Bank of
India has introduced and suggested various changes in the existing regulatory norms governing NBFCs with a view to bring NBFCs regulations at par with the banks. The ongoing and proposed regulatory changes for the NBFCs in terms of increased capital adequacy, tougher provision norms, removal from priority sector status and changes in securitization guidelines could bring down the profitability and growth of the NBFC sector. NBFCs will need to introspect and rethink their business models as they will now not only have to combat stringent regulatory norms but also have to face the challenge of rising cost of funds, scare capital and direct competition from banks.

Ravi Puliani and Mahesh Puliani (2014) discussed the glossary of terms that are used in banking operations and non-banking activities. The book covers the circulars and directions issued by Reserve Bank of India from time to time to control, manage and regulate the business of NBFCs. Shail Shakya (2014) Non-Banking Financial Companies are pioneer in their cash deployment, accessibility to the markets and others to count. NBFCs are known for their higher risk taking capacity than the banks. Despite being an institution of attraction for the investors, NBFCs have played a significant role in the financial system. Many specialized services such as factoring, venture capital finance, and financing road transport were championed by these institutions. NBFC sector has more significantly seen a fair degree of consolidation, leading to the emergence of large companies with diversified
activities. However, the recent financial crisis has highlighted the importance of widening the focus of NBFC regulations to take particular account of risks arising from the regulatory gaps, from arbitrage opportunities and from inter-connectedness of various activities and entities associated with the financial system. The regulatory regime is lighter and different than the banks. The steady increase in bank credit to NBFCs over the recent years means that the possibility of risks being transferred from more lightly regulated NBFC sector to the banking sector in India can’t be ruled out.

Thilakam and Saravanan (2014) Financial intermediation is a crucial function of Banks, Non Banking financial companies (NBFCs) and Development Financial Institutions (DFIs) the post reform period in India is characterized by phenomenal growth of NBFCs complementing the role of banks in mobilizing funds and making it available for investment purposes. During the last decade NBFCs have undergone wide volatility and change as an industry and have been witnessing considerable business upheaval over the last decade because of market dynamics, public sentiments and regulatory environment. To evaluate the soundness of NBFCs in Tamil Nadu over a decade, the authors made an attempt of CAMEL criteria for analysis of selected Companies. Based on findings the suggestions were offered to overcome the difficulties face by selected NBFCs in their development.
The SOM (Self-organising Map) algorithm was used extensively in assessing comparatively companies’ financial performance. There are two pioneer works of applying the SOM to companies’ financial performance assessment. One is Martín-del-Brío and Serrano Cinca (1993) followed by Serrano Cinca (1996, 1998a, 1998b). Martín-del-Brío and Serrano Cinca (1993) proposed SOM as a tool for financial analysis. The sample dataset contained 66 Spanish banks, of which 29 went bankrupt. Martín-del-Brío and Serrano Cinca (1993) used nine financial ratios, among which there were three liquidity ratios: current assets/total assets, (current assets cash and banks)/total assets, and current assets/loans; three profitability ratios: net income/total assets, net income/total equity capital, and net income/loans; and three other ratios: reserves/loans, cost of sales/sales, and cash flows/loans. A solvency map was constructed, and different regions of low liquidity, high liquidity, low profitability, high cost of sales, etc. were highlighted on the map. Serrano Cinca (1996) extended the applicability of SOM to bankruptcy prediction. The data contain five financial ratios taken from Moody’s Industrial Manual from 1975 to 1985 for a total of 129 firms, of which 65 are bankrupt and the rest are solvent. After a preliminary statistical analysis the last ratio (sales/total assets) was eliminated because of its poor ability to discriminate between solvent and bankrupt firms. Again, a solvency map is constructed and, using a procedure to automatically extract the clusters, different regions of low liquidity, high debt, low market values,
high profitability, etc. are revealed. Serrano Cinca (1998a, 1998b) extended the scope of the Decision Support System proposed in the earlier studies by addressing, in addition to corporate failure prediction, problems such as: bond rating, the strategy followed by the company in relation to the sector in which it operated based on its published accounting information, and comparison of the financial and economic indicators of various countries.

The other major SOM financial application is Back et al. (1998), which is an extended version of Back et.al. (1996). Back et al. (1998) analysed and compared more than 120 pulp-and-paper companies between 1985 and 1989 based on their annual financial statements. The authors used nine ratios, of which four were profitability ratios (operating margin, profit after financial items/total sales, return on total assets, return on equity), one was an indebtedness ratio (total liabilities/total sales), one denoted the capital structure (solidity), one was a liquidity ratios (current ratio), and two were cash flow ratios (funds from operations/total sales, investments/total sales). The maps were constructed separately for each year and feature planes were used to interpret them. An analysis over time of the companies was possible by studying the position each company had in every map. As a result the authors claimed that there were benefits in using SOM to manage large and complex financial data in terms of identifying and visualizing the clusters.
Eklund et al. (2003) investigated the suitability of SOM for financial benchmarking of world-wide pulp-and-paper companies. The dataset consists of seven financial ratios calculated for 77 companies for six years (1995-2000). Eklund et al. (2003) constructed a single map for all the years and found clusters of similar financial performance by studying the feature plane for each ratio. Next, the authors used SOM visualisation capabilities to show how the countries’ averages, the five largest companies, the best performers and the poorest performers evolved over time according to their position in the newly constructed financial performance clusters. Karlsson et al. (2001) used SOM to analyse and compare companies from the telecommunication sector. The dataset consists of seven financial ratios calculated for 88 companies for five years (1995-1999). Karlsson et al. (2001) used a similar approach to Eklund et al. (2003) and built a single map. The authors identify six financial performance clusters and show the movements over time of the largest companies, countries’ averages and Nordic companies. Both Eklund et al. (2003) and Karlsson et al. (2001) used quantitative financial data from the companies’ annual financial statements. The ratios were chosen based on Lehtinen’s (1996) study of the validity and reliability of ratios in an international comparison. Kloptchenko (2003) used the prototype matching method (Visa et al., 2002; Toivonen et al., 2001; Back et al., 2001) to analyse qualitative (text) data from telecom companies’ quarterly reports. Kloptchenko et al. (2004) combined data and text-mining
methods to analyse quantitative and qualitative data from financial reports, in order to see if the textual part of the reports could offer support for what the figures indicated and provided possible future hints. The dataset used was from Karlsson et al. (2001). C-Means algorithm was applied on the problem of financial performance benchmarking in conjunction with other techniques. For example, Ong and Abidi (1999) applied SOM to a 1991 World Bank dataset that contained 85 social indicators in 202 countries finding clusters of similar performance. Here, the different performance regions were constructed objectively by applying C-Means on the trained SOM. Vesanto and Alhoniemi (2000) compared basic SOM clustering with different partitive (C-Means) and agglomerative (single linkage, average linkage, complete linkage) clustering methods. At the same time, the authors introduced a two-stage SOM clustering (similar with our SOM clustering approach) which consisted of, firstly, applying the basic SOM to obtain a large number of prototypes (“raw” clusters) and, secondly, clustering these prototypes to obtain a reduced number of data clusters (“real” clusters). The partitive and agglomerative clustering methods were used to perform the second phase of the two-stage clustering. In other words, these methods were used to group the prototypes obtained by SOM into “real” clusters. The comparisons were made using two artificial and one real-world datasets. The comparisons between the basic SOM and other clustering methods were based on the computational cost. SOM clearly outperformed the
agglomerative methods (e.g., average linkage needed 13 hours to directly cluster the dataset III, whereas SOM needed only 9.5 minutes). The clustering accuracy (in terms of conditional entropies) was used to compare the direct partitioning of data with the two-stage partitioning. The results show that partitioning based on the prototypes of the SOM is much more evenly distributed (approximately an equal number of observations are obtained in each cluster). At the same time, the two-stage clustering results were comparable with the results obtained directly from the data. The use of fuzzy clustering especially the Fuzzy C-Means (FCM) algorithm in assessing comparatively companies’ financial performance is relatively scarce. The fuzzy logic approach can also deal with multi-dimensional data and model non-linear relationships among variables. It has been applied to companies’ financial analysis, for example, to evaluate early warning indicators of financial crises (Lindholm & Liu, 2003).

One of the pioneer works in applying discriminant analysis (DA) to assess comparatively companies’ financial performance was Altman (1968). Altman calculated discriminant scores based on financial statement ratios such as working capital/total assets, retained earnings/total assets, earnings before interest and taxes/total assets, market capitalisation/total debt, sales/total assets. Ohlson (1980) was one of the first studies to apply logistic regression (LR) to predict the likelihood of companies’ bankruptcy. Since it is less restrictive than other statistical techniques (e.g., DA), LR has been
used intensively in financial analysis. De Andres (2001) provided a comprehensive list of papers that used LR for models of companies’ financial distress. Induction techniques such as Quinlan’s C4.5/C5.0 decision-tree algorithm were also used in assessing companies’ financial performance. Shirata (2001) used a C4.5 decision-tree algorithm together with other techniques to tackle two problems concerning Japanese firms: prediction of bankruptcy and prediction of going concern status. For the first problem, the authors chose 898 firms that went bankrupt with a total amount of debt more than ¥10 million. For the going concern problem, 300 companies were selected out of a total of 107,034 that had a stated capital of more than ¥30 million. The financial ratios used were: retained earnings/total assets, average interest rate on borrowings, growth rate of total assets, and turnover period of accounts payable. As a conclusion of the study, the author underlined that decisions concerning fund raising can create grave hazards to business and, therefore, in order to be successful, managers had to adapt to the changing business environments. Supervised learning artificial neural networks (ANNs) were extensively used in financial applications, the emphasis being on bankruptcy prediction. A comprehensive study of ANNs for failure prediction can be found in O’Leary (1998). The author investigated 15 related papers for a number of characteristics: what data were used, what types of ANN models, what software, what kind of network architecture, etc. Koskivaara (2004)
summarised the ANN literature relevant to auditing problems. She concluded that the main auditing application areas of ANNs were as follows: material error, going concern, financial distress, control risk assessment, management fraud, and audit fee, which were all, in our opinion, linked with the financial performance assessment problem. Coakley and Brown (2000) classified ANN applications in finance by the parametric model used, the output type of the model and the research questions.

Kantawala (2002) in her study revealed that financial system comprises of many financial institutions. The financial markets and instruments play a very important role in development of an economy. The presence of the non-banking institutions is a great medium for the movement of the funds from savers to investors. Seema Saggar (1995) studied the financial performance of 10 leasing companies at the disaggregate level and compared it with other groups of NBFCs for a period of 5 years from 1985-90. Her study being limited to only 10 companies did not reflect the correct status of performance of NBFCs on the whole. Harihar T.S. (1998) in his paper highlighted the performance of all NBFCs on the basis of terms of cost of debt, operating margin, net profit margin, return on net worth, asset turnover ratio etc. Due to the limited parameters, the study could not reveal much about the performance of all the NBFCs. Raghuvanshi (1997) in his article highlighted the complexities involved in the business of NBFCs, it further brought to light the laws governing the NBFCs and the actions
available against the NBFCs in noncompliance with the norms prescribed by different regulators.

In addressing the finance-high-growth rate nexus, we deal with the impact of different financial institutions – bank and non-bank financial institutions. Banks typically are state-owned, large, operate nationwide, and have many branches. Non-bank financial institutions, in contrast, operate locally within the province and are much smaller. Banks are generally technologically more advanced, better developed and dominate the financial system. Banks, however, are known for their reluctance to grant loans to small private companies (Allen et al., 2005 and Boyreau-Debray, 2003), while most non-bank institution loans are extended to the non-state-owned sector (Xie, 1998). Bank and non-bank financial institutions show clear differences calling for a separate treatment. Employing a generalized “difference-in-differences” method, we compare the impact of the development of bank and non-bank financial institutions on Chinese provinces’ growth rates over the period 1995-2003. Our results indicate that only bank loans exert a statistically and economically significant positive impact on local economic growth. The distinct performances of bank and non-bank financial institutions can mainly be attributed to the differences in their geographical scope, size and organization, and efficiency. However, we also find that the presence of non-bank financial institutions stimulates competition in the local banking market. Specifically, the positive impact of banks’
development on growth becomes more pronounced when the local financial sector is less concentrated.

The relationship between finance and growth has been debated for a long time. Recent cross-country studies provide evidence that greater financial development leads to higher growth (King and Levine (1993a), Levine and Zervos (1998), Berger, Hasan, and Klapper (2004); more details are in our literature review section). However, the evidence from cross-country regressions may be plagued by omitted variable problems, and therefore must be viewed with some skepticism (Jayaratne and Strahan (1996)). For example, cross-country differences in political institutions, accounting standards, and legal systems may drive both economic growth and financial development, but are not easily controlled for. Within-country studies suffer less from this problem and their inferences therefore should be more convincing. For instance, Jayaratne and Strahan (1996) document that after the relaxation of bank branch restrictions in the United States, the growth in income and output increased significantly (see our literature review section for other studies). However, whether those inferences also apply to developing economies that are in a different phase of the growth path than the developed ones is not clear. Direct evidence from developing economies on the finance high growth rate nexus is scarce. As China is one of the most important developing countries, China’s experience may be relevant also for other countries having the potential of exhibiting similar growth as China.
The Chinese finance-growth nexus only recently received attention, but no consensus on the role of finance has been reached yet. One strand of papers argues that financial development matters for economic growth by observing that local growth is significantly correlated with financial development (Li and Liu (2001) and Zhou and Wang (2002)). Another strand of papers holds the opinion that China is a counterexample to the current findings of the finance and growth literature. For instance, Allen et al. (2005) conclude that there exist other financing channels for the private sector than those of financial institutions. Our paper provides new evidence and insights on the finance-high-growth rate nexus in China. Identifying the effects of financial development on economic growth is a challenging task in that financial development may react to the expectation of enhanced future economic growth; hence economies with good growth prospects develop institutions to provide funds necessary to support those good prospects (Robinson (1952). The Chinese case allows us to make progress in controlling for this reverse causality. First, the Chinese economy with its different types of financial institutions allows us to take a generalized “difference-in-differences” method, which helps us identify the causation. The rationale for this approach stems from the following reasoning. Theory argues that financial institutions efficiently allocate capital to where it can generate better returns and therefore promote growth. If this theory applies, banks with better efficiency relative to non-bank financial institutions may
be better at selecting fast growing firms. Empirically we should observe a stronger correlation between bank development and future economic growth.

However, if finance simply follows growth, the huge demand for funds from the non-state-owned enterprises due to their growing needs will make the development of non-bank financial institutions show a stronger correlation with future growth. Second, we choose the period over 1995-2003, immediately after the Chinese government tried to “soft land” the economy. The economic growth rates had shown a decreasing trend during our sample period. When economic growth leads finance, the situation should be less severe during the downswing of the business cycle. Typically, we find that the fastest growing provinces in our sample are not those that exhibit the greatest increase in financial development. Our findings highlight that banking development via bank loans exerts a significantly positive impact on local growth, both statistically and economically. As a comparison, non-bank financial institutions, while granting most of their loans to the non-state-owned sector, seem to be less important for local growth. This suggests that the efficiency of financial institutions still plays an important role in the allocation of funds, and in turn spurs growth. We find little evidence that fast growing provinces also had experienced a fast developing financial sector during our sample period. In conclusion, our results are less likely driven by reserve causality. How to reconcile these results with Allen et al.
(2005), who argue that growth in China mainly stems from the private sector? First, Chinese banks may enjoy a better pool of borrowers as they have a larger geographical scope, face fewer restrictions in attracting deposits and therefore can establish stronger bank-firm relationships, and finance both large and small firms. Non-bank financial institutions may have a restricted choice due to their smaller nature. We notice that the state-owned sector still contributes around 40% of GDP growth in recent years (Sun, 2003). Banks therefore can easily allocate the capital to the most profitable state-owned enterprises. Second, bank loans and especially short-term loans to the non-state-owned sector, had grown considerably during our sample period. This suggests that banks increased their relative exposure towards the financing of private firms, even though most financed private firms were large ones. This noticeable change is also documented by two recent surveys, which indicate that Chinese banks are more likely to discriminate borrowers with respect to their sizes rather than ownership. Third, another plausible explanation is that bank loans may be transmitted to the private sector through state-owned enterprises. Lu and Yao (2004) argue that given the weak legal enforcement, Chinese banks may prefer to grant loans to state-owned enterprises that reinvest bank loans in the private sector.

Theory has studied the relationship between finance and growth. In general there are two schools of thought with contrasting views. One school holds
the idea that financial development follows rather than spurs economic growth. Robinson (1952) argues that finance does not cause growth, but reacts to the demand from the real sector. Hence economies with good growth prospects develop institutions to provide the necessary funds to support those good prospects. Some empirical evidence supports this idea. For instance, Shan and Morris (2002) study data from 19 OECD countries and China, and document that there is no clear evidence that finance Granger causes growth.

The other school argues that financial development plays a key role for growth. First, financial intermediation economizes the costs associated with mobilizing savings (Boyd and Smith (1992) and Sirri and Tufano (1995)), and therefore increases capital accumulation. Second, financial intermediation evaluates firms, managers and market conditions, and reallocates capital to its best use (Boyd and Prescott (1986), Greenwood and Jovanovic (1990), or Allen (1990)). Moreover, financial intermediaries monitor firms and exert control to overcome agency problems (Townsend (1979), Gale and Hellwig (1985), and Boyd and Smith (1994)). Financial intermediation meanwhile diversifies investment risks, which enhances the output and in turn economic growth (Gurley and Shaw (1955), Greenwood and Jovanovic (1990) and Acemoglu and Zilibotti (1997)). In their view, differences in the quantity and quality of services provided by financial institutions partly explain why countries grow at different rates (Goldsmith
The recent literature also well integrates financial development in innovation-based growth models. For instance, King and Levine (1993a) suggest that financial intermediaries can evaluate, finance and monitor potential entrepreneurs in their innovative activities. They also show that the relationship between finance and growth is likely to be dynamic and endogenous. Aghion, Howitt and Mayer-Foulkers (2003) show why the existence of technological transfers is not sufficient to put all countries on parallel long-run growth rate paths. They find that it is not just financial constraints that make some countries poor but rather that financial constraints inhibit a technological transfer and thus lead to an ever increasing technology gap.

Recent empirical evidence employing cross-country datasets document that finance is positively correlated with growth. King and Levine (1993a) use data on 77 countries over the period 1960-1989, to document that the level of financial development determines long-run economic growth, capital accumulation, and productivity growth. Levine and Zervos (1998) refine this and find that initial stock market liquidity and banking development are both positively correlated with future rates of economic and productivity growth in a sample of 42 countries over the period 1976-1993. The initial cross-country studies, however, are likely to suffer from simultaneity bias. More recent studies therefore focus on finding proper instruments to extract the
exogenous part of financial development when trying to settle the issue of causality.

La Porta et al (1998) link the legal origin of a country to its financial development. Their empirical results suggest that a variety of legal origins (British, French, German or Scandinavian laws) differing in protecting the rights of both shareholders and creditors and in the efficiency of legal enforcement, reasonably lead to different levels of financial development. Based upon the above legal origin-finance instruments and using cross-country datasets, a substantial body of empirical work further shows that financial development promotes economic growth in aggregate, industry and firm level analysis (Levine, Loayza, and Beck, (2000) or Demirgüç-Kunt and Maksimovic (1998)). Next to instruments such as legal origin, economists also rely on improved econometric techniques to instrument endogenous variables. Authors employ the dynamic system GMM panel estimator proposed by Arellano and Bover (1995), to extract the impact of financial development on economic growth by controlling for potential endogeneity. One way to control for cross-country differences such as legal origin is to focus on one country only. Jayaratne and Strahan (1996) tackle the endogeneity problem by keeping effects other than financial development constant. They use financial deregulation in the early 1970s in 35 U.S.-states as an exogenous shock to local financial development. They find that in the 30 years after the deregulation, the economy grew faster in
the deregulated states than in the other states. They also test the hypothesis of deregulation happening only due to expectation about the future needs of financing. They reject this hypothesis by observing that the loans after deregulation did not explode. Therefore, they attribute the relatively faster economic growth in the deregulated states to the improvements in loan quality. Guiso, Sapienza and Zingales (2004) study the effects of differences in local financial development on economic activity in Italy. They find that local financial development enhances the probability that an individual starts a business, increases industrial competition, and in turn spurs firm growth. Only few studies consider developing countries. Haber (1991, 1997) carefully examines the role of financial liberalization for economic growth in Brazil and Mexico. He documents that financial liberalization allows more firms to have better access to external finance. He argues that political institutions play an important role in determining the degree of financial liberalization, and concludes that Brazil did better in financial liberalization due to its better political institutions.

The finance and growth issue in China has only received attention recently but no consensus has been reached yet. One strand of papers holds the view that finance promotes growth in China. Employing a province-level dataset for the period 1985-1998, Liu and Li (2001) find that growth of provincial aggregate output is positively related to the growth of the loans of the largest banking institutions and self raised funds. They attribute the positive
correlation to the improvement in the efficiency of capital reallocation during the liberalization in both financial and real sectors. Zhou and Wang (2002) study the impact of local financial development on economic growth, using a provincial dataset over the period 1978-2000, and find that local financial development is highly correlated with economic growth. Moreover, the provinces with relatively low initial level of financial development show slower growth rates afterwards. Particularly, they attribute the significant correlation between finance and growth to the openness of local financial markets, which improves the competition as well as the efficiency of financial institutions. However, those papers do not formally deal with the endogeneity of finance and growth and hence to some extent their conclusion of the causality is less convincing. The other strand of papers holds the opinion that China is a counterexample of the law finance growth nexus. More specifically, they question whether financial development plays an important role for China’s growth, as they observe the coexistence of weak Chinese legal and financial systems and fast economic growth. Allen et al. (2005) examine closely the relationship between law, finance and growth in China. Their analysis reveals that the relatively poor legal system and the underdeveloped financial sector contribute little to the growth of the private sector, which is known as the most important component of China’s fast growth. Hence, Allen et al. (2005) argue that
there exist other financing channels for the private sector than those of financial institutions.

2.10. Research Gap

Many empirical studies found that the NBFIs in India rather than the service quality of Non-Banking Financial Institutions. Hence the researcher could empirically examine the service quality of NBFIs in India with reference to Tamilnadu.

2.11. Conclusion

This chapter has covered a review of relevant literature regarding the constructs of the proposed model. The chapter began with reviews of the Empirical studies on effects of regulations, followed by the studies on overall performance; financial ratio approach, shareholders’ wealth in financial institutions, cost control, earnings, risk management, and finally, macroeconomic and corporate earnings.